

**LOCAL AREA DATA****2004****CONTENTS**

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## **SECTION 1: INTRODUCTION AND SOURCES**

### **Introduction**

The Labour Force Survey is a key source of information at a local level - providing data annually. The sample was initially boosted in England from 2000 and in Wales from 2001, providing significantly more robust results. This was due to the increased amount of data provided in England through the English Local Labour Force Survey (ELLFS), and in Wales through the Welsh Local Labour Force Survey (WLLFS). The ELLFS is a partnership product from ONS, Dept. for Work and Pensions (DWP) and Dept. for Education and Skills (DfES). The WLLFS is a partnership product from ONS and the National Assembly for Wales (NAW).

In March 2003, a boost was introduced in Scotland for the first time. As a result, more robust results are now available for Scotland due to the increased amount of data provided through the Scottish Local Labour Force Survey (SLFS) – a partnership product from ONS and the Scottish Executive (SE).

Local area information may also be obtained from the quarterly LFS, however this is less robust due to its smaller sample size.

### **Quarterly data**

Data for local areas on a quarterly basis are available via tables on Nomis and on request from ONS. Where quarterly data are not reliable enough to provide estimates, but more up to date local area information is required than is available from the annual dataset an average for the latest year for example can be calculated.

The quarterly data does not contain the boosted samples for England, Wales and Scotland. It should also be noted that the quarterly LFS weighting procedure is not designed to give the best results at local level.

### **Annual data**

Annualised local area data was available in database form from 1994/95 to 1999/2000. From 2000/01, tables only are available. The databases held key LFS variables alongside a local area indicator allowing cross-sectional analysis of data below county level. The database uses the Unitary Authority/Local Authority boundaries that were in force on the 1<sup>st</sup> of April of each year. A full range of data from 1999/2000 is available through Nomis® including the enhanced data for 2000/01 onwards. A more limited range of information is available through Nomis from 1996/7 onwards. From 2000/01, a set of local authority fact sheets is available from the National Statistics Website, along with an overall summary publication.

### **Tabulated data**

As mentioned above LFS tabulations for small areas are available via Nomis. The Nomis system allows the flexibility to aggregate estimates for several geographies to give a figure for a larger area and several variables can be combined to give an estimate for a larger group of interest.

### **Best practice**

Annual LFS data should be used for local areas wherever possible as the increased sample size provides more accurate estimates.

### **Forthcoming changes**

From 2006 onwards, the reporting period for the LFS and the boosts to the Labour Force Survey will be moved from 'seasonal' to 'calendar' quarters which will mean that January-March 2006 will be the first calendar quarter. Annual data will, as a result, run from January to December in 2006. At present annual data sets run from March in one year to February in the next.

## SECTION 2: ANNUAL DATA

### Main features

A single LFS quarter collates data from around 60,000 households in the UK. For small population groups this does not provide a large enough sample to give reliable results in detailed cross-tabulations of several variables. In order to provide more reliable information the annual local area database (LADB) was developed, based on 96,000 households. For 2000/01 this was further increased by 39,000 households in England as a result of the first English Local Labour Force Survey (ELLFS) boost, and for 2001/02 to over 156,000 households as a result of the WLFS contributing over 16,000 additional households. For 2003/04 the Scottish Local Labour Force Survey (SLFS) boost will be contributing over 20,000 additional households to increase the total number of households to approximately 172,000.

As well as providing an increased sample size and therefore more reliable estimates, annualising the data helps smooth out seasonal variations evident in the quarterly data.

The 2003/04 annual database is derived from four successive quarters of the regular quarterly LFS database plus boost data for England, Wales and Scotland. In total, it holds about 390,000 records with over 306,000 for persons aged sixteen and over. This compares with a single quarter's database of about 100,000 records for persons aged 16 and over (spring 2004 quarter).

The ELLFS is designed in such a way to give an expected minimum sample size of 875 economically active adults in each LEA (450 in London Boroughs and 300 in Rutland). The WLFS is designed to have an expected minimum sample size of 875 economically active adults in each unitary authority (700 for Anglesey and Ceredigion, 575 for Blaenau Gwent and 500 in Merthyr Tydfil). The sample size in each UA in Scotland is boosted to produce an expected minimum of 875 economically active adults. However to avoid saturation sampling, this figure is reduced to 300 in Clackmannanshire, 600 in Stirling, 700 in Inverclyde and Midlothian and 800 in East Lothian and East Renfrewshire.

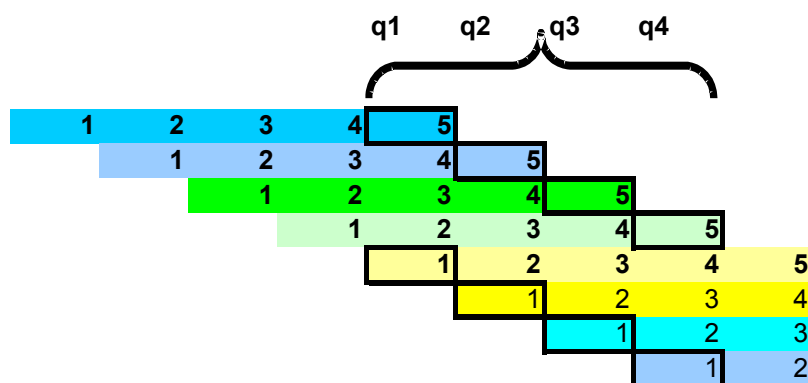
Each household in the boost sample is interviewed annually for four years. To build up the sample, in 2000/01 for England and 2001/02 for Wales, the sample was divided into four groups or waves. Over the following three years they drop out one by one so that only one of the original four waves will actually be in the survey for all four years. A new wave will be sampled every year. A similar sample was designed for Scotland in 2003/4.

More information on the methodology behind the ELLFS is available in articles on the National Statistics Website and in the May 2000 issue of *Labour Market Trends*, pp195-199 and the January 2002 issue of *Labour Market Trends*, pp33-41.

### Design

Each quarter's LFS sample of about 60,000 households is made up of 5 waves, each of approximately 12,000 private households. Each wave is interviewed in 5 successive quarters, such that in any one quarter, one wave will be receiving their first interview, one wave their second, and so on, with one receiving their fifth and last interview (see diagram below). An annual database is created by taking waves 1 and 5 from each of four consecutive quarters to obtain an annually representative sample. Over the period of four consecutive quarters waves one and five will never contain the same households and so this avoids the inclusion of responses from any household more than once. This design also gives an approximate average across the waves similar to that on the main quarterly database.

## Wave structure of the LFS



In addition to this, the boosted data (from the ELLFS, WLLFS and the SLLFS) is combined with the sample derived from combining waves 1 and 5 to give an enhanced sample.

### Date coverage

Each database spans the period of March to February. This is because the design is based on the quarters of the quarterly LFS database and begins with the spring quarter (March-May). This quarter was chosen as the start point because it is then that most revisions to variables of the database take place and so any discontinuities or additions of new variables in the annual database will come into effect at the start of the LFS year.

### Weighting

An important element of the database design is the procedure used to weight the sample surveyed to the total population. For the local area database it has been desirable to improve the 'grossed totals' at the local area level. For the 1994/95 to 1999/2000 databases this was done by using mid-year population estimates for local authorities to gross the survey data. The use of more detailed population estimates meant that the population data used for weighting would enhance the quality of the grossing factors. The methodology used for grossing remained the same as for the quarterly LFS database. More information on this grossing procedure can be found in volume 1 of the user guide.

The 2003/04 database has been weighted to the post-2001 Census population estimates. In addition, in 2003 all previous annual LFS databases and outputs were reweighted to post-2001 Census population estimates and published on March 17<sup>th</sup> 2004.

Census population estimates were first published in September 2002 and estimated the UK population to be approximately one million less than had previously been estimated. In March 2003, revised estimates were published for the UK and the regions, and it is on this basis the weighting system was developed. These revised population estimates allocated about 300,000 of the one million revision to estimation errors in the 1991 Census and most of the remaining 700,000 to the net migration element in the population series.

The procedures adopted for weighting the English, Welsh, and the Scottish boosts act independently of each other and are as follows:

#### English weighting procedure

Stage 1: Design weights are required in England as the sampling fractions are different between different LEAs and also during the year. Unboosted areas have the same initial weight.

Stage 2: Total population in weighting areas (see Table A below) by five-year age bands by sex.

Stage 3: Total population in each UA/LAD by three working-age/sex groups (Males aged 16-64/Females aged 16-59/All other except in a couple of small UA/LADs where a simple sex split was used).

Stage 4: Inner London/Rest of England by single year of age for 16-24 and one group of 25 and over, and sex.

Stages 2 - 4 are then iterated until the weights converge.

**Welsh weighting procedure**

For Wales, a similar system was developed but modified to take advantage of the larger sample sizes in Welsh UAs.

Stage 1: Design weights are required as the sampling fractions are different between Welsh UAs

Stage 2: Total population in ten weighting areas (see Table B below) by five-year age bands by sex.

Stage 3: Total population in each UA by age/sex groups - males: 0-15; 16-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75 and over, females: 0-15; 16-24; 25-34; 35-44; 45-59; 60-74; 75 and over.

Stage 4: Total population in the 2 NUTS2 areas (West Wales and the Valleys; East Wales) by single year of age for 16-24 and one group of 25 and over, and sex.

Stages 2 - 4 are then iterated until the weights converge.

**Scottish weighting procedure**

In 2003/04 the weighting procedure for Scotland was as follows:

For Scotland, as in Wales, the weighting procedure took into consideration that, for a few of the more remote areas in Scotland, particularly the island groups UAs, the sample size targets were substantially reduced.

Stage 1: Design weights are required at person and UA level. Note that for West Dunbarton UA, the sample size was increased from week 33 so the design weight will not be constant.

Stage 2: Total population in Glasgow UA group/other (see Table C below) by Fine age groups (25) by sex.

The Glasgow UA group comprises East Dunbartonshire, North Lanarkshire, Inverclyde, Glasgow City, North Ayrshire, East Renfrewshire and Renfrewshire.

Fine age groups; 0-4; 5-9; 10-15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 25-29; 30-34; 35-39; 40-44; 45-49; 50-54; 55-59; 60-64; 65-69; 70-74; 75-79; 80-84; 85+.

Stage 3: Total population in the 28 Large UAs by Medium age/sex groups - males: 0-15; 16-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75 and over, females: 0-15; 16-24; 25-34; 35-44; 45-59; 60-74; 75 and over.

Total population in the small UAs (Shetland, Orkney and the Western Isles) by Course age/sex groups – males: 0-15; 16-39; 40-64; 65+, females: 0-15; 16-39; 40-59; 60+,

Stages 2 - 3 are then iterated until the weights converge.

**Weighting areas**

For England, the weighting areas are either individual LEAs or groups of LEAs.

**Table A: Weighting Areas by LEAs for England**

<b>Weighting area</b>	<b>Local Education Authorities</b>
Cleveland	Hartlepool, Middlesbrough, Redcar and Cleveland, Stockton-on-Tees.
Durham and Northumberland	Darlington, County Durham, Northumberland.
Tyne and Wear	Gateshead, Newcastle-upon-Tyne, North Tyneside, South Tyneside, Sunderland
Cheshire	Cheshire, Halton, Warrington.
Cumbria	Cumbria.
Greater Manchester	Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford, Wigan.
Lancashire	Blackburn with Darwen, Blackpool, Lancashire.
Merseyside	Knowsley, Liverpool, St. Helens, Sefton, Wirral
Humberside	East Riding of Yorkshire, Kingston upon Hull, City of, North East Lincolnshire, North Lincolnshire.
North Yorkshire	North Yorkshire, York.
West Yorkshire	Bradford, Calderdale, Kirklees, Leeds, Wakefield.
South Yorkshire	Barnsley, Doncaster, Rotherham, Sheffield.
Derbyshire	Derby, Derbyshire
Leicestershire, Rutland and Northamptonshire	Leicester, Leicestershire, Northamptonshire, Rutland.
Lincolnshire	Lincolnshire
Nottinghamshire	Nottingham, Nottinghamshire.
Herefordshire, Worcestershire and Warwickshire	Herefordshire, Warwickshire, Worcestershire.

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Shropshire	Shropshire, Telford and Wrekin.
Staffordshire	Staffordshire, Stoke-on-Trent.
West Midlands	Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall, Wolverhampton.
Bedfordshire	Bedfordshire, Luton.
Cambridgeshire	Cambridgeshire, Peterborough.
Essex	Essex, Southend-on-Sea, Thurrock.
Hertfordshire	Hertfordshire
Norfolk	Norfolk
Suffolk	Suffolk
NW Inner London	Hammersmith and Fulham, Kensington and Chelsea, Westminster.
NE Inner London	City of London, Camden, Hackney, Haringey, Islington, Newham, Tower Hamlets.
S Inner London	Lambeth, Lewisham, Southwark, Wandsworth.
NW Outer London	Barnet, Brent, Ealing, Harrow, Hillingdon, Hounslow.
NE Outer London	Barking, Enfield, Havering, Redbridge, Waltham Forest.
SW Outer London	Croydon, Lambeth, Merton, Richmond-upon-Thames, Sutton.
SE Outer London	Bexley, Bromley, Greenwich.
Berkshire	Bracknell Forest, Reading, Slough, West Berkshire, Windsor and Maidenhead, Wokingham.
Buckinghamshire and Oxfordshire	Buckinghamshire, Milton Keynes, Oxfordshire.
East Sussex	Brighton and Hove, East Sussex.
Hampshire and Isle of Wight	Hampshire, Isle of Wight, Portsmouth, Southampton.
Kent	Kent, Medway
Surrey	Surrey
West Sussex	West Sussex
Avon and Somerset	Bath and North East Somerset, Bristol, City of, North Somerset, Somerset, South Gloucestershire.
Devon and Cornwall	Cornwall, Devon, Plymouth, Torbay.
Dorset	Bournemouth, Dorset, Poole.
Gloucestershire	Gloucestershire
Wiltshire	Swindon, Wiltshire.

The weighting areas in Wales were based on the 12 NUTS3 areas with the Isle of Anglesey and Powys merged with neighbouring areas because of small sample sizes.

**Table B: Weighting Areas for Wales**

<b>Weighting area</b>	<b>Unitary Authorities</b>
Gwynedd / Isle of Anglesey	Gwynedd and Isle of Anglesey
Conwy and Denbighshire	Conwy and Denbighshire
South West Wales	Carmarthenshire, Ceredigion and Pembrokeshire
Central Valleys	Merthyr Tydfil and Rhondda, Cynon, Taff
Gwent Valleys	Blaenau Gwent, Caerphilly and Torfaen
Bridgend and Neath Port Talbot	Bridgend and Neath Port Talbot
Swansea	Swansea
Monmouthshire and Newport	Monmouthshire and Newport
Cardiff and Vale of Glamorgan	Cardiff and Vale of Glamorgan
Flintshire and Wrexham / Powys	Flintshire, Powys and Wrexham

The weighting areas in Scotland for 2003/4 were based on a slightly modified set of NUTS2 regions, based entirely on the UAs.

**Table C: Weighting Areas for Scotland**

<b>Unitary Authorities</b>
Glasgow City
Edinburgh City of
Fife
North Lanarkshire
South Lanarkshire
Aberdeenshire
Aberdeen City
Highland
Renfrewshire
West Lothian
Dumfries and Galloway
Falkirk
Dundee City
North Ayrshire
Perth and Kinross
East Ayrshire
South Ayrshire
Angus
Scottish Borders The
East Dunbartonshire
West Dunbartonshire
East Lothian
East Renfrewshire
Argyll & Bute
Moray
Stirling
Inverclyde
Midlothian
Clackmannanshire
Eilean Siar (Western Isles)
Shetland Islands
Orkney Islands

### **Confidentiality**

Simply adding local area identifiers to the regular database could mean that the confidentiality of individual records is compromised. The addition of such an indicator makes the characteristics of respondents more likely to be unique increasing their chances of identification.

Historically confidentiality was maintained on the annual database by restricting the range of variables made available. However, software designed to link records from different sources for the same people has improved considerably meaning that the risk of identifiability has also increased. Although the risk for most respondents remains negligible the National Statistician has taken the decision to no longer make available databases with local area identifiers. Users of LFS data can contact the Tabulation Service for tables. Thus there have been no publicly accessible Annual databases since 2002/03. This will remain the case unless and until a suitable solution to this issue can be found.

**Sampling variability**

All LFS data is subject to sampling variability. Sampling variability is dependent on several factors, including the size of the sample, the size of the estimate as a proportion of the population, and the effect of the design of the sample in the variable of interest.

The sampling fraction is also important in determining sampling variability. A sampling fraction is the proportion of households in an area that are interviewed. For example, if there are 10,000 households and 50 of these are interviewed the sampling fraction would be 50/10,000 or 1/200. The smaller the sampling fraction the larger the sample size and the more reliable the estimate.

The sampling fraction of the main LFS is consistent across Great Britain. However, the design of the boosts means that from 2000/01 sampling fractions may vary between Local Education Authorities in England, from 2001/02, between UAs in Wales, and from 2003/04, between Scottish UAs, on the annual database. English LEAs and Scottish and Welsh UAs receiving a large boost will have a higher sampling fraction. Northern Ireland will see no change.

As a result of the different sampling fractions in each area it is not possible to provide a table of size of estimate against standard error. However, there is a simple formula that can be used to derive the standard errors of estimates and levels.

**SE estimates**

An approximation to the standard error for an estimate of M thousand ( $M_T$ ) from the LADB up to and including 1999/2000 can be given by

$$\sqrt{(M_T * 0.22)} \quad (1)$$

For boosted areas a conservative approximation to the standard error for an estimate can be given as

$$\sqrt{(M_T * G_i/1000)} \quad (2)$$

where  $G_i$  is the average grossing factor for area i. For 2000/01 the formula given at (2) only applies to England. For 2001/02 and 2002/03 the formula (2) can be used for England and Wales only, and for 2003/04 onwards the formula can be used for England, Wales and Scotland. As there has never been a boost in Northern Ireland the formula given at (1) should be applied to all annual data.

Average grossing factors for UA/LADs area given in Annex A. If the area of interest spans several UA/LADs then the average grossing factor for several areas G can be given by

$$G = \frac{\sum_i g_i s_i}{\sum_i s_i} \quad (3)$$

where  $g_i$  is the average grossing factor for area i and  $s_i$  is the 16+ sample size in area i. Sample sizes by UA/LAD are also given in Annex A.

The 95 per cent confidence interval for an estimate of M thousand ( $M_T$ ) is given by

$$M_T \pm 1.96 * \text{s.e.} \quad (4)$$

Approximate standard errors for estimates from the 1999/2000 onwards are available on Nomis.



A simple formula for producing standard errors (assuming a simple random sample) is

$$\sqrt{p(1-p)/n}$$

For instance, in the 2003/4 annual local area dataset, 62.5% of people in the UK aged 16 and over are estimated to be economically active. The number of people aged 16 and over in the UK sample is 306,344. The standard error, 0.08% is calculated as

$$\sqrt{((0.63 * 0.37)/306,344)}$$

ONS methodologists have produced more precise standard errors allowing for the design of the LFS including the different sampling fractions. Annex B shows estimates of sampling errors in 2003/4 for economic activity.

### SE levels

The standard error of the level of the estimate is simply the standard error of the proportion (or rate) multiplied by the population aged 16 and over

$$0.08\% * 46,764,834 = 37,412$$

### Thresholds

As a result of the enhancement it is possible to generate a wider range of data for more areas in England, Wales and Scotland. It also meant that the threshold of 6,000 that applies to all LADs prior to 2000/01 was different for many areas in England from 2000/01, for Wales from 2001/02 and for Scotland from 2003/04. Thresholds are set in order to ensure that analyses using the LFS meet a certain level of reliability. The more detailed analysis undertaken the smaller the estimates and the larger the associated sampling errors become relative to these estimates. The minimum thresholds are designed to guide people on the lowest appropriate level of analysis that can be undertaken.

The nature of the enhancement is such that some areas have seen a very large increase in sample size, and other areas very small or no increase. This means that a single lower threshold for all areas is not appropriate.

For England, each area is allocated to one of three threshold bands - 2,000, 4,000 or 6,000. Annex C contains details of how this allocation has been made and Annex D contains details of which UA/LADs fall into which band.

For Wales from 2001/02, each UA was given its own threshold. These ranged from 1,000 to 4,000.

From 2003/04, each UA in Scotland has been given its own threshold ranging from 1,000 to 5,000.

It should be noted that when applying thresholds to the data ONS practice is to first round the data and then suppress. So, for example where the threshold is 6,000 an estimate of 5,700 would first be rounded to six thousand and would therefore not be suppressed. An estimate of 5,300 would be rounded to five thousand and suppressed.

### Ethnic Thresholds

It has long been known that the design effects for ethnic group and for totals segregated by ethnic group can be substantially greater than one. For the annual LFS-based surveys it seems more appropriate to base new ethnic thresholds on design effects for local estimates. These may be different from the regional and national deffs because of local variations in household size and because of variations in the proportions of households in multi-occupied dwellings in different areas.

It is recommended for the ALALFS datasets in England that a single multiplier of 2.5 is applied to the general thresholds for most ethnic estimates<sup>1</sup>. A separate analysis for the Welsh Local Labour Force Survey recommended a multiplier of 4.0 in Cardiff and 2.5 in the rest of Wales. The SLLFS uses the same multipliers of the standard thresholds as in England. Thus a multiplier of 2.5 is applied to the existing threshold.

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<sup>1</sup> A larger multiplier of 3.5 is recommended for totals of individual minority ethnic groups – e.g. the multiplier 3.5 would apply to the total Indian adults in Birmingham, whereas a multiplier of 2.5 would apply to the total unemployed Indian adults in Birmingham.

## SECTION 3: QUARTERLY DATA

### General

Whilst there is a range of data available for small areas from the quarterly LFS users are advised to use annual data wherever possible as the estimates are more reliable. If more up to date data are required than is available from the annual data then users should consider using an average of four quarters.

Local area LFS tabulations covering the following subjects are available via Nomis and on request from the Sub National Data Service.

- Individual demographics
- Family characteristics
- Employment (by age groups)
- Employees
- Self-employed
- ILO unemployed (by age groups)
- Economically active (by age groups)
- Economically inactive (by age groups)
- Industry Sectors (by Standard Industrial Classification codes)
- Occupations (by Standard Occupational Classification codes)
- Ethnic minorities
- Full-time education
- Qualifications
- Job Related Training
- Health

A full list of the variables is available on Nomis or on request from ONS. Readers should note that some variables are not generally publishable for local areas where the estimates are based on samples too small to be reliable.

The range of quarterly tabulations will match those available annually in the near future.

### Design and Coverage

The quarterly data are drawn from the main quarterly LFS. Further information about these aspects of the datasets can be found in Volume 1 of the User Guide.

## Using the Data

### (i) *Size of areas and estimates*

Many of the sub-regional areas for which data are being made available are fairly small. Consequently, sample numbers can become quite small at this level (in spite of the relatively large size of the LFS compared with other household surveys). To reflect the imprecision that arises from sampling variability, LFS estimates are always rounded to the nearest thousand and estimates of less than 10,000 are suppressed. These rules are followed in the LFS local area quarterly outputs, so that: (a) the base population for each area is rounded to the nearest thousand; and (b) any proportion based on an estimate of less than 10,000 is suppressed.

### (ii) *Sampling errors and confidence intervals of estimates of levels*

The LFS is a sample survey and hence the estimates it provides are subject to sampling variability. In general, the larger the group the more precise, proportionately, is the estimate. Section 5 of Volume 1 of this guide has a more detailed explanation of sampling errors and confidence intervals for the main LFS data. In general this is equally applicable to data at a local area level. It should be noted, however, that although the 95% confidence interval approximation works best for relatively small estimates, this refers to the estimate in relation to the size of the area sample population and not the total population, i.e. when considering estimates for relatively small areas ('local areas') it does not necessarily follow that the estimates for that area are small in relation to the population of that area. Table D shows confidence intervals for the quarterly database.

### (iii) *Aggregation of data*

The establishment of the level of suppression at 10,000 is a concern at sub-regional level. It is possible, though, to merge geographical areas, or where applicable, two or more age bands to obtain more reliable estimates. Although it may be possible to determine estimates of below 10,000 by subtraction, this should not be done, as the estimates derived are unreliable. It is possible to aggregate quarterly data over time to improve the estimates. Details are provided in Volume 1 (Background & Methodology), Section 8.

### (iv) *Analyses over time*

It has already been noted that the LFS estimates are subject to sampling variability. A very important consequence of this is that estimates are likely to fluctuate from quarter to quarter, irrespective of any actual change in the true figures. In addition, no LFS local area data are seasonally adjusted (partly because of the lack of a long series of data), so changes observed from one quarter to the next may, at least partially, be due to seasonal factors. Users of the data are advised therefore to take great care when attempting to monitor changes over time in variables, especially for small areas or small groups. Local area LFS data generally give reasonable estimates for a particular quarter, rather than reliable estimates of change from one quarter to the next. Users should also bear in mind that estimates for successive quarters in a local area are not drawn from independent samples.

### (v) *Sampling errors and confidence intervals of estimates of changes.*

For changes in estimates of local area data it is not possible to apply the same criteria as those used for changes in estimates at the national level (see Volume 1, Section 5). Standard errors of 'change' are dependent on the correlation between quarters for particular variables. It is likely that this correlation will vary across time and geographic areas. Further explanation of this is being developed and it is intended that a range of correlations and corresponding confidence intervals will be included in this guide in future.

**Table D - Confidence Intervals for Quarterly database**

<b>Number</b>	<b>95 per cent confidence intervals +/-</b>	<b>Confidence intervals as percentage of estimate +/-</b>
10,000	3,900	39
12,000	4,200	35
15,000	4,700	32
20,000	5,500	27
25,000	6,100	24
30,000	6,700	22
35,000	7,200	21
40,000	7,700	19
45,000	8,200	18
50,000	8,600	17
75,000	10,600	14
100,000	12,200	12
150,000	14,900	10
200,000	17,200	9
250,000	19,300	8
500,000	27,100	5
1,000,000	38,200	4

### **Averaging of four quarters**

Where estimates from quarterly databases are small, and no figures are available from the annual data, users can derive their own annual estimates by averaging estimates over four successive quarters. Section 20 of Volume 1 of the LFS User Guide provides information on averaging several quarters. The recommended threshold for four quarter averages of 6,000 is the same as that for unboosted areas of the annual data.

Users should be aware that although the results from the two databases are similar they are not identical. The differences may arise for several reasons:

- the method by which the data are weighted to the population is different
- the annual data include interviews taken at waves 1 and 5 only from the quarterly LFS
- the annual data include an additional sample of interviews designed to improve the annual estimates.

In addition to this, methodological work carried out in the past has shown that estimates of employment based on wave 1 interviews tend to be lower than those based on interviews taken at waves 2 to 5. Further work on more recent data has also indicated differences between quarterly averages and annual data in employment, particularly amongst women. Methodological research is currently investigating ways of reducing this effect.

Users should use the annual database for local area data wherever possible. When making comparisons between data for local areas and other geographies the same source should be used for all estimates.

## SECTION 4: ACCESSING LOCAL AREA DATA

Local area LFS data are available via four routes:

### (i) National Statistics website

Fact sheets (downloadable Excel spreadsheets) for LEAs and UA/LADs containing data for 2001/02 and 2002/03 are available from the National Statistics website, [www.statistics.gov.uk/lfs](http://www.statistics.gov.uk/lfs). A summary publication, the annual *Labour Market Trends* article, a Guide to Regional and Local Labour Market Statistics and this user guide are also available.

### (ii) Nomis

Nomis contains tables of both annual and quarterly LFS data for a wide range of geographies. To access this data visit [www.nomisweb.co.uk](http://www.nomisweb.co.uk) to register for an account.

The most recent annual data on Nomis allows some additional functionality. In particular you can combine several variables to give a wider population of interest, or output standard errors alongside the data. All LFS datasets on Nomis allow users to combine data for several geographic areas to obtain data for a wider area of interest.

### (iii) ONS local area LFS tabulation service

For confidentiality reasons, ONS withdrew direct access to micro-databases containing sub-regional identifiers. To request a table from this service or to obtain more information about the service e-mail [lfs.utable@ons.gov.uk](mailto:lfs.utable@ons.gov.uk). A pro-forma is available for specifying tabulations that covers which LFS variables, as specified in the User Guides, are to be tabulated and details of filters and coverage required.

### (iv) Sub-National Data Service

The sub-national data service offers users a tabulation service for local area LFS data not available any other way. For example, if a table for an unusual geography is required this can be produced by adding an additional geographic code. There is a charge for this service. To request a table from this service or obtain more information about the service e-mail [snds@ons.gov.uk](mailto:snds@ons.gov.uk)

### Further Information

For general information about LFS local area data please telephone the Labour Market Statistics Helpline on 020 7533 6094, e-mail [labour.market@ons.gov.uk](mailto:labour.market@ons.gov.uk).

For news on developments and future plans for small area labour market statistics please contact Nick Maine, Room B3/08, 1 Drummond Gate, London SW1V 2QQ, Tel: 020 7533 6130. e-mail [nick.maine@ons.gov.uk](mailto:nick.maine@ons.gov.uk).

For more information on methodology issues please contact Alex Clifton-Fearnside, Room B2/04, 1 Drummond Gate, London SW1V 2QQ, Tel: on 020 7533 6140, e-mail [alex.clifton-fearnside@ons.gov.uk](mailto:alex.clifton-fearnside@ons.gov.uk).

For further information about the ONS tabulation services contact Mark Rowland, Room D2/01, 1 Drummond Gate, London SW1V 2QQ, Tel: 020 7533 5437, e-mail [lfs.dataservice@ons.gov.uk](mailto:lfs.dataservice@ons.gov.uk).

For Nomis® details contact Nomis® Unit 1L, Mountjoy Research Centre, University of Durham, Durham, DH1 3SW, Tel: 0191 374 2468, e-mail [info@nomisweb.co.uk](mailto:info@nomisweb.co.uk)

## **SECTION 5: GEOGRAPHIES**

### **Unitary Authorities**

#### England

The introduction of UAs in England took place in several stages: 1 UA was introduced in April 1995, 12 UAs were introduced in April 1996 with a further 13 in April 1997. The final phase occurred in April 1998. At the same time, a revised two-tier system of counties and Local Authority Districts (LADs) was introduced for the rest of England.

#### Wales and Scotland

The results of the Local Government re-organisation in Wales and Scotland have been extensive and were introduced en-masse from 1 April in 1996.

ONS moved the local area annual database to a UA basis by including those unitary authorities for which general population data (which is required for grossing purposes) are available at the time of the database's production.

### **Government Office Regions**

The Government Statistical Service moved to using GORs as the primary classification for regional statistics from April 1 1997. The LFS made this transition from the summer 1996 quarter's data onwards (covering June-August 1996 data, first released in October 1996). Data are published on a GOR basis, however the LFS quarterly database continued to include variables to identify standard statistical regions and counties (ceremonial).

### **Local Education Authorities**

Local education authorities (LEAs) are the bodies responsible for the local administration of education services in Great Britain. They are matched to UAs, London boroughs, metropolitan districts and counties.

### **Parliamentary Constituencies**

There are 659 parliamentary constituencies (PCs) in the UK. They are defined by the Parliamentary Boundary Commission. The current boundaries are 1995-based. They are generally smaller and not coterminous with UA/LADs. As for TTWAs, ONS publishes estimates of rates as the LFS is not grossed to PCs and this may introduce bias to estimates of levels, but not to estimates of rates.

### **Travel-to-Work Areas**

Travel-to-work areas (TTWAs) are approximations to self-contained labour markets based on commuting to work patterns. The current TTWA boundaries were published in 1998 based on 1991 Census data. TTWAs are groups of 1991-based wards. Rates only are available for TTWAs as the LFS is grossed to UA/LADs and not to TTWAs. This may introduce bias to estimates of levels, but not to estimates of rates.

### **Other areas**

#### England

There are 101 Learning Partnerships (LPs) in England, based mainly on LEAs. LPs are responsible for post-16 and lifelong learning.

There are 47 Learning and Skills Councils (LSCs) in England which are groups of LEAs. LSCs succeeded Training and Enterprise Councils (TECs) from April 2000. They are responsible for meeting local learning and training needs for everyone aged over 16 who are not at university.

#### Scotland

There are 22 Local Enterprise Companies (LECs) in Scotland.



### Wales

From April 2001, 4 National Council - ELWa regions replaced the 4 TECs in Wales. The boundaries were maintained. The National council -ELWa is responsible for all post-16 education and learning with the exception of Higher Education.

They work with the 20 Community Consortia for Education and Training (CCETs). Their primary role is to achieve more efficient delivery of education and training and promote collaboration between schools, FE and training providers and others to meet the needs of individuals and employers more effectively and coherently.

### **Construction of a Local Area**

The sample for the LFS is a systematic unclustered sample of delivery points (DPs) extracted from the Post Office's small users Postcode Address File (PAF) which includes all DPs who receive no more than 25 items of mail daily. The PAF is updated every 6 months and includes revisions to remove derelict addresses and add new addresses etc. In addition ONS remove addresses that are identified as small businesses.

The geographical definitions of local areas come from the Gridlink® All Fields Postcode Directory. This is produced by a consortium of ONS, Ordnance Survey, Royal Mail, the General Register Office for Scotland and the Ordnance Survey of Northern Ireland. It contains each unit postcode has a grid reference and geographical codes. Postcodes don't correspond with administrative or other boundaries and it is possible that a postcode may overlap two areas. Traditionally, area assignments were derived using first addresses but under Gridlink® grid references are based on the address closest to the postcode mean. For more details, see [www.statistics.gov.uk/geography/afpd.asp](http://www.statistics.gov.uk/geography/afpd.asp).

## ANNEX A - Average grossing factors and sample sizes for 16+, UA/LAD, England, Wales & Scotland - 2003/04.

### England

	Sample size	Average Grossing Factor	Average Grossing Factor/1000		Sample size	Average Grossing Factor	Average Grossing Factor/1000
Adur	182	268	0.27	Camden	811	205	0.20
Allerdale	291	267	0.27	Cannock Chase	263	285	0.28
Alnwick	188	132	0.13	Canterbury	354	301	0.30
Amber Valley	347	272	0.27	Caradon	318	217	0.22
Arun	423	282	0.28	Carlisle	327	242	0.24
Ashfield	335	268	0.27	Carrick	294	254	0.25
Ashford	296	275	0.28	Castle Morpeth	277	141	0.14
Aylesbury Vale	501	252	0.25	Castle Point	239	280	0.28
Babergh	212	324	0.32	Charnwood	424	293	0.29
Barking and Dagenham	693	178	0.18	Chelmsford	473	261	0.26
Barnet	734	350	0.35	Cheltenham	336	265	0.26
Barnsley	1810	95	0.09	Cherwell	405	262	0.26
Barrow-in-Furness	211	266	0.27	Chester	316	300	0.30
Basildon	426	309	0.31	Chesterfield	286	286	0.29
Basingstoke and Deane	489	239	0.24	Chester-le-Street	174	245	0.25
Bassetlaw	333	239	0.24	Chichester	351	249	0.25
Bath and North East Somerset	1737	79	0.08	Chiltern	261	257	0.26
Bedford	515	225	0.22	Chorley	300	269	0.27
Berwick-upon-Tweed	134	164	0.16	Christchurch	161	237	0.24
Bexley	686	256	0.26	City of London	8	925	0.92
Birmingham	2380	315	0.31	Colchester	458	271	0.27
Blaby	289	253	0.25	Congleton	266	277	0.28
Blackburn with Darwen	1631	63	0.06	Copeland	214	261	0.26
Blackpool	1625	69	0.07	Corby	106	374	0.37
Blyth Valley	453	143	0.14	Cotswold	257	253	0.25
Bolsover	212	261	0.26	Coventry	2045	117	0.12
Bolton	1420	144	0.14	Craven	152	280	0.28
Boston	139	339	0.34	Crawley	273	281	0.28
Bournemouth	1755	74	0.07	Crewe and Nantwich	295	298	0.30
Bracknell Forest	1464	60	0.06	Croydon	843	310	0.31
Bradford	1713	210	0.21	Dacorum	428	250	0.25
Braintree	381	282	0.28	Darlington	1367	57	0.06
Breckland	364	273	0.27	Dartford	246	279	0.28
Brent	848	241	0.24	Daventry	153	374	0.37
Brentwood	183	324	0.32	Derby	1581	112	0.11
Bridgnorth	249	171	0.17	Derbyshire Dales	225	236	0.24
Brighton and Hove	1514	135	0.13	Derwentside	247	275	0.28
Bristol, City of	1393	217	0.22	Doncaster	1618	139	0.14
Broadland	352	268	0.27	Dover	305	275	0.28
Bromley	703	337	0.34	Dudley	1274	193	0.19
Bromsgrove	291	240	0.24	Durham	229	322	0.32
Broxbourne	236	290	0.29	Ealing	828	293	0.29
Broxtowe	321	270	0.27	Easington	294	246	0.25
Burnley	196	346	0.35	East Cambridgeshire	193	295	0.30
Bury	1358	106	0.11	East Devon	353	287	0.29
Calderdale	1378	108	0.11	East Dorset	357	194	0.19
Cambridge	268	329	0.33	East Hampshire	330	261	0.26

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	Sample size	Average Grossing Factor	Average Grossing Factor/1000		Sample size	Average Grossing Factor	Average Grossing Factor/1000
East Hertfordshire	359	295	0.30	Islington	633	228	0.23
East Lindsey	397	257	0.26	Kennet	257	218	0.22
East Northamptonshire	222	289	0.29	Kensington and Chelsea	859	162	0.16
East Riding of Yorkshire	1543	167	0.17	Kerrier	333	228	0.23
East Staffordshire	319	254	0.25	Kettering	164	410	0.41
Eastbourne	299	243	0.24	King's Lynn and West Norfolk	365	317	0.32
Eastleigh	383	248	0.25	Kingston upon Hull, City of	1535	123	0.12
Eden	126	319	0.32	Kingston upon Thames	651	183	0.18
Ellesmere Port and Neston	224	285	0.28	Kirklees	1460	205	0.21
Elmbridge	293	353	0.35	Knowsley	1658	70	0.07
Enfield	687	313	0.31	Lambeth	640	331	0.33
Epping Forest	292	333	0.33	Lancaster	379	282	0.28
Epsom and Ewell	162	329	0.33	Leeds	2115	276	0.28
Erewash	311	285	0.29	Leicester	1686	127	0.13
Exeter	275	316	0.32	Lewes	360	212	0.21
Fareham	335	256	0.26	Lewisham	703	275	0.27
Fenland	245	283	0.28	Lichfield	257	276	0.28
Forest Heath	96	451	0.45	Lincoln	265	255	0.26
Forest of Dean	280	232	0.23	Liverpool	1682	202	0.20
Fylde	208	282	0.28	Luton	1641	85	0.09
Gateshead	1738	89	0.09	Macclesfield	444	269	0.27
Gedling	355	261	0.26	Maidstone	452	248	0.25
Gloucester	309	277	0.28	Maldon	152	313	0.31
Gosport	207	285	0.28	Malvern Hills	254	222	0.22
Gravesham	278	273	0.27	Manchester	1741	177	0.18
Great Yarmouth	254	282	0.28	Mansfield	294	266	0.27
Greenwich	820	205	0.20	Medway	1553	125	0.13
Guildford	361	278	0.28	Melton	163	224	0.22
Hackney	742	213	0.21	Mendip	310	268	0.27
Halton	1595	57	0.06	Merton	690	225	0.22
Hambleton	276	241	0.24	Mid Bedfordshire	508	197	0.20
Hammersmith and Fulham	702	199	0.20	Mid Devon	212	267	0.27
Harborough	248	252	0.25	Mid Suffolk	204	335	0.34
Haringey	742	233	0.23	Mid Sussex	392	259	0.26
Harlow	210	278	0.28	Middlesbrough	1683	61	0.06
Harrogate	417	283	0.28	Milton Keynes	1444	111	0.11
Harrow	562	299	0.30	Mole Valley	216	307	0.31
Hart	265	245	0.25	New Forest	519	268	0.27
Hartlepool	1652	42	0.04	Newark and Sherwood	296	285	0.28
Hastings	263	248	0.25	Newcastle upon Tyne	1768	117	0.12
Havant	375	253	0.25	Newcastle-under-Lyme	337	299	0.30
Havering	714	259	0.26	Newham	883	207	0.21
Herefordshire, County of	1790	80	0.08	North Cornwall	266	258	0.26
Hertsmere	272	258	0.26	North Devon	228	302	0.30
High Peak	230	305	0.31	North Dorset	201	245	0.25
Hillingdon	796	249	0.25	North East Derbyshire	293	263	0.26
Hinckley and Bosworth	273	305	0.30	North East Lincolnshire	1661	72	0.07
Horsham	376	254	0.25	North Hertfordshire	356	268	0.27
Hounslow	825	202	0.20	North Kesteven	318	256	0.26
Huntingdonshire	429	292	0.29	North Lincolnshire	1478	82	0.08
Hyndburn	212	304	0.30	North Norfolk	267	307	0.31
Ipswich	307	296	0.30	North Shropshire	259	172	0.17
Isle of Wight	1829	58	0.06	North Somerset	1604	94	0.09

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	Sample size	Average Grossing Factor	Average Grossing Factor/1000		Sample size	Average Grossing Factor	Average Grossing Factor/1000
North Tyneside	1712	87	0.09	Solihull	1700	92	0.09
North Warwickshire	167	305	0.30	South Bedfordshire	433	210	0.21
North West Leicestershire	244	279	0.28	South Bucks	213	226	0.23
North Wiltshire	420	235	0.23	South Cambridgeshire	368	286	0.29
Northampton	409	367	0.37	South Derbyshire	254	271	0.27
Norwich	339	284	0.28	South Gloucestershire	1420	138	0.14
Nottingham	1714	123	0.12	South Hams	245	276	0.28
Nuneaton and Bedworth	312	307	0.31	South Holland	217	313	0.31
Oadby and Wigston	145	315	0.32	South Kesteven	385	257	0.26
Oldham	1287	128	0.13	South Lakeland	291	286	0.29
Oswestry	178	181	0.18	South Norfolk	362	249	0.25
Oxford	346	314	0.31	South Northamptonshire	189	366	0.37
Pendle	188	379	0.38	South Oxfordshire	445	225	0.22
Penwith	218	236	0.24	South Ribble	316	262	0.26
Peterborough	1564	79	0.08	South Shropshire	211	168	0.17
Plymouth	1644	115	0.12	South Somerset	457	275	0.28
Poole	1471	76	0.08	South Staffordshire	289	300	0.30
Portsmouth	1462	104	0.10	South Tyneside	1965	62	0.06
Preston	329	317	0.32	Southampton	1452	123	0.12
Purbeck	171	215	0.22	Southend-on-Sea	1597	81	0.08
Reading	1424	78	0.08	Southwark	697	270	0.27
Redbridge	803	235	0.23	Spelthorne	238	305	0.30
Redcar and Cleveland	1838	60	0.06	St. Albans	392	256	0.26
Redditch	225	274	0.27	St. Edmundsbury	299	260	0.26
Reigate and Banstead	340	288	0.29	St. Helens	1355	105	0.11
Restormel	344	218	0.22	Stafford	376	245	0.24
Ribble Valley	162	267	0.27	Staffordshire Moorlands	298	263	0.26
Richmond upon Thames	610	237	0.24	Stevenage	235	261	0.26
Richmondshire	155	250	0.25	Stockport	1183	194	0.19
Rochdale	1476	107	0.11	Stockton-on-Tees	1558	88	0.09
Rochford	226	276	0.28	Stoke-on-Trent	1610	118	0.12
Rossendale	140	359	0.36	Stratford-on-Avon	312	292	0.29
Rother	315	221	0.22	Stroud	331	257	0.26
Rotherham	1685	117	0.12	Suffolk Coastal	331	275	0.27
Rugby	227	317	0.32	Sunderland	1881	117	0.12
Runnymede	190	339	0.34	Surrey Heath	226	275	0.27
Rushcliffe	307	288	0.29	Sutton	682	207	0.21
Rushmoor	234	298	0.30	Swale	361	266	0.27
Rutland	613	46	0.05	Swindon	1182	123	0.12
Ryedale	180	228	0.23	Tameside	1315	125	0.12
Salford	1452	115	0.12	Tamworth	185	326	0.33
Salisbury	342	273	0.27	Tandridge	212	291	0.29
Sandwell	1816	118	0.12	Taunton Deane	274	295	0.30
Scarborough	304	297	0.30	Teesdale	78	247	0.25
Sedgefield	272	253	0.25	Teignbridge	302	324	0.32
Sedgemoor	343	252	0.25	Telford and Wrekin	1575	79	0.08
Sefton	1834	122	0.12	Tendring	368	315	0.31
Selby	252	229	0.23	Test Valley	334	270	0.27
Sevenoaks	313	269	0.27	Tewkesbury	244	253	0.25
Sheffield	1517	271	0.27	Thanet	301	343	0.34
Shepway	293	268	0.27	Three Rivers	249	259	0.26
Shrewsbury and Atcham	452	160	0.16	Thurrock	1474	78	0.08
Slough	1625	57	0.06	Tonbridge and Malling	336	245	0.25

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	Sample size	Average Grossing Factor	Average Grossing Factor/1000		Sample size	Average Grossing Factor	Average Grossing Factor/1000
Torbay	1785	58	0.06	West Devon	135	305	0.31
Torridge	171	285	0.29	West Dorset	318	248	0.25
Tower Hamlets	984	156	0.16	West Lancashire	327	259	0.26
Trafford	1423	118	0.12	West Lindsey	238	278	0.28
Tunbridge Wells	300	275	0.27	West Oxfordshire	262	300	0.30
Tynedale	335	137	0.14	West Somerset	97	276	0.28
Uttlesford	223	252	0.25	West Wiltshire	369	250	0.25
Vale of White Horse	321	298	0.30	Westminster	1043	152	0.15
Vale Royal	338	292	0.29	Weymouth and Portland	201	258	0.26
Wakefield	1470	166	0.17	Wigan	1388	170	0.17
Walsall	1554	125	0.12	Winchester	345	243	0.24
Waltham Forest	790	213	0.21	Windsor and Maidenhead	1652	66	0.07
Wandsworth	961	226	0.23	Wirral	1661	145	0.14
Wansbeck	354	142	0.14	Woking	269	265	0.27
Warrington	1258	122	0.12	Wokingham	1434	84	0.08
Warwick	301	357	0.36	Wolverhampton	1547	120	0.12
Watford	256	250	0.25	Worcester	287	256	0.26
Waveney	301	302	0.30	Worthing	271	280	0.28
Waverley	295	295	0.30	Wychavon	391	227	0.23
Wealden	479	236	0.24	Wycombe	473	271	0.27
Wear Valley	199	229	0.23	Wyre	364	230	0.23
Wellingborough	149	365	0.36	Wyre Forest	301	262	0.26
Welwyn Hatfield	266	290	0.29	York	1587	93	0.09
West Berkshire	1404	80	0.08				

**Wales**

	Sample size	Average Grossing Factor	Average Grossing Factor/1000
Anglesey, Isle of	1475	37	0.04
Blaenau Gwent	1355	41	0.04
Bridgend	1685	60	0.06
Caerphilly	1746	76	0.08
Cardiff	1811	133	0.13
Carmarthenshire	1879	74	0.07
Ceredigion	1502	43	0.04
Conwy	1537	58	0.06
Denbighshire	1436	53	0.05
Flintshire	1493	79	0.08
Gwynedd	2006	47	0.05
Merthyr Tydfil	1199	37	0.04
Monmouthshire	1712	40	0.04
Neath Port Talbot	2201	49	0.05
Newport	1644	65	0.06
Pembrokeshire	2116	43	0.04
Powys	1543	67	0.07
Rhondda, Cynon, Taff	1843	98	0.10
Swansea	1669	107	0.11
Torfaen	1789	40	0.04
Vale of Glamorgan, The	1790	52	0.05
Wrexham	1452	71	0.07

**Scotland**

	<b>Sample size</b>	<b>Average Grossing Factor</b>	<b>Average Grossing Factor/1000</b>
Aberdeen City	1264	133	0.13
Aberdeenshire	1306	138	0.14
Angus	1354	63	0.06
Argyll & Bute	1322	55	0.05
Clackmannanshire	605	62	0.06
Dumfries and Galloway	1676	71	0.07
Dundee City	1496	77	0.08
East Ayrshire	1483	64	0.06
East Dunbartonshire	1441	61	0.06
East Lothian	1318	56	0.06
East Renfrewshire	1181	61	0.06
Edinburgh, City of	1439	256	0.26
Eilean Siar (Western Isles)	281	74	0.07
Falkirk	1298	90	0.09
Fife	1567	180	0.18
Glasgow City	1530	302	0.30
Highland	1395	118	0.12
Inverclyde	1278	51	0.05
Midlothian	1045	62	0.06
Moray	1204	56	0.06
North Ayrshire	1711	63	0.06
North Lanarkshire	1498	170	0.17
Orkney Islands	391	39	0.04
Perth and Kinross	1291	84	0.08
Renfrewshire	1415	96	0.10
Scottish Borders, The	1525	57	0.06
Shetland Islands	321	52	0.05
South Ayrshire	1461	62	0.06
South Lanarkshire	1513	159	0.16
Stirling	1196	58	0.06
West Dunbartonshire	1474	49	0.05
West Lothian	1322	97	0.10

**ANNEX B - Sampling variability**

	Economic activity						Employment						ILO unemployment						Inactivity		
	Total	SE	RSE (%)	Rate (%) (16-59/64)	SE	RSE (%)	Total	SE	RSE (%)	Rate (%) (16-59/64)	SE	RSE (%)	Total	SE	RSE (%)	Rate (16+)	SE	RSE (%)	Total	SE	RSE (%)
		(+/-)			(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
Aberdeen City	108	1.9	2	79.7	1.4	2	104	2.0	2	76.8	1.5	2	4	0.7	18	3.6	0.6	18	59	1.9	3
Aberdeenshire	123	1.9	2	82.9	1.2	1	118	2.1	2	79.1	1.3	2	5	0.8	15	4.4	0.7	15	57	1.9	3
Adur	29	1.5	5	82.0	3.7	5	29	1.5	5	81.3	3.9	5	*	*	100	*	*	100	20	2.2	11
Allerdale	48	1.5	3	84.1	2.6	3	46	1.8	4	80.8	3.1	4	*	*	46	*	*	46	30	2.3	8
Alnwick	15	0.8	5	79.1	3.9	5	15	0.8	5	77.5	3.9	5	*	*	100	*	*	100	9	1.0	11
Amber Valley	58	2.1	4	77.9	2.7	3	55	2.0	4	74.8	2.7	4	*	*	34	*	*	33	36	2.9	8
Angus	52	0.9	2	78.8	1.4	2	49	1.0	2	74.2	1.6	2	3	0.4	15	5.7	0.9	15	33	0.9	3
Antrim	24	1.9	8	81.8	4.4	5	23	1.8	8	78.1	4.6	6	*	*	52	*	*	50	12	2.0	16
Ards	35	2.4	7	69.7	3.3	5	34	2.4	7	67.3	3.3	5	*	*	44	*	*	44	26	2.2	8
Argyll & Bute	44	0.8	2	80.2	1.3	2	42	0.9	2	75.6	1.5	2	2	0.4	16	5.4	0.9	16	28	0.8	3
Armagh	26	1.6	6	72.5	3.3	4	24	1.6	7	67.3	3.5	5	2	0.5	30	6.9	2.1	30	16	1.5	10
Arun	65	2.4	4	79.5	2.8	4	62	2.5	4	75.3	2.9	4	3	1.0	31	4.9	1.5	31	54	3.1	6
Ashfield	58	2.1	4	80.8	2.9	4	53	2.5	5	74.2	3.4	5	5	1.3	27	8.0	2.2	28	32	3.0	9
Ashford	52	2.1	4	80.1	3.1	4	50	2.1	4	77.9	3.3	4	*	*	44	*	*	44	30	2.8	10
Aylesbury Vale	92	2.1	2	85.1	1.8	2	89	2.3	3	82.5	2.1	2	3	0.9	32	3.0	1.0	32	35	3.0	9
Babergh	47	1.7	3	90.2	2.5	3	46	1.7	4	87.9	2.6	3	*	*	55	*	*	55	21	2.5	12
Ballymena	30	1.7	6	78.3	2.9	4	30	1.7	6	76.8	3.0	4	*	*	57	*	*	57	14	1.3	9
Ballymoney	12	1.2	10	69.8	5.2	7	11	1.2	11	65.7	5.7	9	*	*	60	*	*	59	9	1.2	14
Banbridge	20	1.5	8	72.1	4.7	7	19	1.5	8	69.3	4.8	7	*	*	49	*	*	48	11	1.5	14
Barking and Dagenham	71	2.4	3	70.9	2.3	3	65	2.4	4	64.8	2.4	4	6	1.1	19	8.3	1.5	18	52	2.8	5
Barnet	165	4.2	3	75.0	1.9	3	158	4.5	3	71.6	2.0	3	7	1.5	21	4.3	0.9	21	92	5.0	5
Barnsley	98	1.8	2	72.0	1.3	2	94	1.8	2	68.6	1.3	2	5	0.7	15	4.6	0.7	15	73	2.4	3
Barrow-in-Furness	31	1.5	5	70.7	3.6	5	29	1.5	5	66.5	3.6	5	*	*	39	*	*	39	25	2.2	9
Basildon	84	2.4	3	80.0	2.3	3	78	2.8	4	74.1	2.7	4	6	1.4	23	7.1	1.7	24	47	3.4	7
Basingstoke and Deane	85	2.3	3	85.1	2.1	2	83	2.3	3	83.1	2.1	2	*	*	36	*	*	35	32	2.6	8
Bassetlaw	48	2.2	5	72.7	3.3	4	46	2.3	5	69.3	3.5	5	*	*	37	*	*	37	31	3.0	10
Bath and North East Somerset	88	1.4	2	80.4	1.3	2	86	1.5	2	77.8	1.3	2	3	0.5	18	3.1	0.6	18	48	1.9	4
Bedford	79	1.9	2	82.8	1.9	2	75	2.0	3	79.0	2.1	3	4	0.9	25	4.5	1.1	25	37	2.7	7
Belfast	107	4.4	4	65.1	2.1	3	98	4.4	4	59.9	2.2	4	8	1.4	17	7.8	1.3	17	105	4.6	4
Berwick-upon-Tweed	13	1.2	9	79.5	4.0	5	12	1.1	9	75.6	4.6	6	*	*	77	*	*	76	9	1.2	13
Bexley	112	2.6	2	80.5	1.8	2	107	2.7	3	77.2	1.9	2	4	1.1	25	4.0	1.0	25	64	3.9	6
Birmingham	434	7.2	2	71.3	1.2	2	395	7.8	2	64.8	1.3	2	38	3.6	9	8.9	0.8	9	315	9.1	3
Blaby	50	1.7	3	85.4	2.6	3	50	1.7	4	84.5	2.7	3	*	*	71	*	*	71	23	2.2	10
Blackburn with Darwen	62	1.2	2	73.6	1.4	2	59	1.2	2	69.9	1.5	2	3	0.5	15	4.9	0.8	15	40	1.5	4
Blackpool	64	1.2	2	75.6	1.4	2	60	1.3	2	70.0	1.6	2	5	0.6	14	7.1	1.0	14	48	1.7	3
Blaenau Gwent	29	0.7	2	68.6	1.6	2	27	0.7	3	63.5	1.7	3	2	0.3	14	7.4	1.0	13	26	0.7	3
Blyth Valley	43	1.2	3	81.2	2.3	3	40	1.3	3	75.7	2.5	3	3	0.7	24	6.6	1.6	24	22	1.6	8
Bolsover	35	1.7	5	77.0	3.6	5	33	1.8	5	71.8	3.8	5	*	*	38	*	*	38	20	2.1	10
Bolton	126	2.3	2	77.1	1.4	2	120	2.5	2	72.9	1.5	2	7	1.1	16	5.3	0.8	16	78	3.4	4
Boston	25	1.6	7	75.0	4.7	6	25	1.6	7	73.3	4.7	6	*	*	97	*	*	96	22	2.2	10
Bournemouth	82	1.3	2	80.5	1.2	2	78	1.3	2	77.2	1.3	2	3	0.5	16	4.0	0.6	16	49	1.8	4
Bracknell Forest	63	0.8	1	85.1	1.1	1	61	0.9	1	82.6	1.2	1	2	0.3	19	2.8	0.5	19	25	1.1	5
Bradford	221	4.0	2	75.0	1.3	2	209	4.2	2	71.1	1.4	2	12	1.6	14	5.2	0.7	14	139	5.1	4
Braintree	73	2.1	3	83.3	2.3	3	72	2.2	3	81.7	2.4	3	*	*	45	*	*	45	34	2.8	8
Breckland	60	1.9	3	82.1	2.4	3	58	1.9	3	78.9	2.4	3	*	*	34	*	*	33	39	2.9	7
Brent	125	3.6	3	70.6	2.0	3	115	3.8	3	65.5	2.1	3	9	1.6	17	7.5	1.3	17	80	4.1	5
Brentwood	36	1.7	5	80.9	3.5	4	36	1.8	5	80.1	3.7	5	*	*	101	*	*	101	23	2.3	10
Bridgend	59	1.1	2	74.9	1.3	2	57	1.1	2	72.0	1.4	2	2	0.4	17	3.9	0.7	17	42	1.1	2

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	Economic activity						Employment						ILO unemployment						Inactivity		
	Total	SE	RSE (%)	Rate (%) (16-59/64)	SE (%)	RSE (%)	Total	SE	RSE (%)	Rate (%) (16-59/64)	SE (%)	RSE (%)	Total	SE	RSE (%)	Rate (16+)	SE	RSE (%)	Total	SE	RSE (%)
	(+/-)			(+/-)			(+/-)			(+/-)			(+/-)			(+/-)			(+/-)		
Bridgnorth	24	1.3	5	75.2	3.9	5	23	1.3	6	70.5	3.9	5	*	*	33	*	*	32	19	1.6	9
Brighton and Hove	139	2.2	2	82.1	1.3	2	132	2.3	2	78.1	1.4	2	7	0.9	14	4.7	0.7	14	65	2.8	4
Bristol, City of	204	3.4	2	81.1	1.3	2	196	3.6	2	77.7	1.4	2	8	1.5	18	4.0	0.7	18	99	4.3	4
Broadland	62	2.2	4	81.3	2.6	3	59	2.3	4	77.9	2.8	4	2	0.8	32	4.0	1.3	32	33	2.9	9
Bromley	151	3.7	2	79.7	1.8	2	143	3.9	3	75.3	2.0	3	8	1.8	22	5.5	1.2	22	86	4.7	5
Bromsgrove	45	1.7	4	82.1	2.9	4	44	1.8	4	80.4	3.1	4	*	*	50	*	*	50	25	2.4	10
Broxbourne	48	1.6	3	86.2	2.3	3	47	1.7	4	83.3	2.6	3	*	*	44	*	*	44	20	1.9	10
Broxtowe	54	2.0	4	79.2	2.9	4	54	2.0	4	78.8	2.9	4	*	*	100	*	*	100	32	3.0	9
Burnley	45	2.0	4	80.9	3.2	4	43	2.2	5	77.3	3.5	5	*	*	40	*	*	41	22	2.7	12
Bury	93	1.6	2	80.0	1.3	2	89	1.7	2	76.2	1.4	2	4	0.8	18	4.6	0.8	18	50	2.3	4
Caerphilly	74	1.4	2	70.8	1.3	2	70	1.5	2	67.1	1.4	2	4	0.5	14	5.2	0.7	14	58	1.4	2
Calderdale	95	1.7	2	77.7	1.4	2	91	1.9	2	74.2	1.5	2	4	0.7	17	4.5	0.8	17	54	2.3	4
Cambridge	61	3.3	5	79.1	4.4	6	58	3.3	6	75.5	4.4	6	*	*	43	*	*	42	28	3.7	13
Camden	112	2.8	3	75.8	1.8	2	103	3.1	3	69.0	2.0	3	9	1.5	16	8.5	1.3	16	54	2.9	5
Cannock Chase	50	1.8	4	80.6	2.7	3	48	1.8	4	77.9	2.7	4	*	*	41	*	*	40	25	2.5	10
Canterbury	64	2.8	4	74.9	3.4	4	59	3.0	5	68.8	3.6	5	5	1.3	27	7.7	2.1	27	43	3.6	8
Caradon	42	1.3	3	83.3	2.4	3	41	1.4	4	80.8	2.8	3	*	*	41	*	*	41	27	2.0	8
Cardiff	149	2.8	2	75.3	1.4	2	140	2.9	2	70.7	1.4	2	9	1.2	13	5.9	0.8	13	93	2.8	3
Carlisle	48	2.0	4	75.7	3.1	4	47	2.1	4	72.9	3.2	4	*	*	39	*	*	39	31	2.6	9
Carmarthenshire	73	1.4	2	69.4	1.4	2	70	1.5	2	65.7	1.4	2	4	0.5	14	5.1	0.7	14	66	1.4	2
Carrick	40	1.8	5	75.0	3.3	4	39	1.9	5	73.2	3.4	5	*	*	44	*	*	44	34	2.4	7
Carrickfergus	19	1.7	9	80.0	4.1	5	19	1.7	9	77.8	4.5	6	*	*	71	*	*	71	10	1.4	14
Castle Morpeth	24	0.9	4	80.5	3.0	4	23	1.0	4	76.1	3.2	4	*	*	34	*	*	33	15	1.4	9
Castle Point	43	1.8	4	79.4	3.1	4	41	2.1	5	75.6	3.7	5	*	*	37	*	*	38	23	2.6	11
Castlereagh	32	2.3	7	83.9	3.3	4	31	2.3	7	81.9	3.3	4	*	*	58	*	*	58	18	2.4	13
Ceredigion	37	0.8	2	72.9	1.7	2	34	0.8	2	68.0	1.7	3	2	0.4	16	6.4	1.0	16	28	0.8	3
Charmwood	85	2.5	3	82.8	2.3	3	81	2.6	3	78.7	2.5	3	4	1.0	26	4.7	1.2	26	39	3.4	9
Chelmsford	82	2.0	2	82.3	1.9	2	80	2.1	3	80.1	2.1	3	*	*	35	*	*	35	41	3.0	7
Cheltenham	57	2.1	4	79.4	2.8	4	55	2.0	4	75.8	2.8	4	*	*	39	*	*	38	32	2.4	8
Cherwell	76	1.9	3	86.3	1.9	2	75	2.0	3	85.3	2.0	2	*	*	57	*	*	57	30	2.7	9
Chester	52	2.5	5	72.5	3.5	5	51	2.5	5	70.9	3.5	5	*	*	50	*	*	50	42	3.6	8
Chesterfield	54	1.9	4	83.8	2.9	3	49	2.1	4	77.0	3.3	4	4	1.2	27	8.3	2.2	27	28	2.8	10
Chester-le-Street	26	1.5	6	75.3	4.5	6	24	1.5	6	70.7	4.6	7	*	*	40	*	*	39	17	2.0	12
Chichester	51	1.9	4	79.3	2.7	3	50	1.9	4	77.3	2.8	4	*	*	44	*	*	44	37	2.7	7
Chiltern	48	1.7	4	86.4	2.6	3	46	1.8	4	83.6	2.7	3	*	*	41	*	*	41	19	2.2	11
Chorley	52	2.0	4	79.9	2.9	4	50	2.0	4	78.0	3.0	4	*	*	48	*	*	48	29	2.6	9
Christchurch	23	1.0	4	89.6	3.5	4	22	1.0	5	86.3	3.7	4	*	*	51	*	*	50	15	1.6	11
Clackmannanshire	23	0.6	3	76.9	2.1	3	21	0.7	3	71.9	2.3	3	1	0.3	20	6.4	1.3	20	15	0.6	4
Colchester	83	2.2	3	84.0	2.1	2	80	2.3	3	80.8	2.2	3	3	0.9	29	3.7	1.1	29	41	3.1	8
Coleraine	27	1.8	7	76.5	3.8	5	26	1.8	7	73.1	4.0	5	*	*	44	*	*	43	16	1.9	12
Congleton	52	1.5	3	88.5	2.4	3	50	1.6	3	85.4	2.6	3	*	*	39	*	*	39	22	2.4	11
Conwy	48	1.0	2	74.9	1.5	2	46	1.0	2	72.0	1.6	2	2	0.4	21	3.9	0.8	21	41	1.0	2
Cookstown	16	1.5	9	77.9	4.0	5	16	1.4	9	75.9	4.2	6	*	*	70	*	*	69	7	1.1	15
Copeland	34	1.4	4	78.3	3.4	4	31	1.6	5	71.6	3.9	6	3	1.0	36	8.2	2.9	36	22	2.0	9
Corby	24	1.6	7	75.9	5.1	7	24	1.7	7	74.9	5.2	7	*	*	99	*	*	99	15	2.4	16
Cotswold	39	1.9	5	78.1	3.5	4	38	1.8	5	76.1	3.5	5	*	*	50	*	*	49	26	2.3	9
Coventry	146	2.6	2	76.2	1.3	2	137	2.7	2	71.8	1.4	2	8	1.0	13	5.6	0.7	13	94	3.3	4
Craigavon	37	2.1	6	67.9	3.2	5	35	2.2	6	64.5	3.3	5	2	0.6	36	5.0	1.8	36	28	2.3	8
Craven	29	1.2	4	89.9	3.6	4	27	1.3	5	84.5	4.0	5	*	*	32	*	*	32	14	1.8	13
Crawley	55	1.7	3	85.3	2.3	3	53	1.8	3	83.2	2.5	3	*	*	44	*	*	44	22	2.1	10
Crewe and Nantwich	59	2.2	4	80.9	2.9	4	57	2.5	4	78.5	3.3	4	*	*	50	*	*	51	29	3.2	11
Croydon	176	4.3	2	80.2	1.9	2	165	4.5	3	75.1	2.0	3	11	1.9	17	6.4	1.1	17	85	5.3	6









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	Economic activity						Employment						ILO unemployment						Inactivity		
	Total	SE	RSE (%)	Rate (%) (16-59/64)	SE (%)	RSE (%)	Total	SE	RSE (%)	Rate (%) (16-59/64)	SE (%)	RSE (%)	Total	SE	RSE (%)	Rate (16+)	SE (%)	RSE (%)	Total	SE	RSE (%)
		(+/-)			(+/-)		(+/-)			(+/-)			(+/-)			(+/-)			(+/-)		
North Lincolnshire	72	1.3	2	76.5	1.4	2	68	1.4	2	71.8	1.5	2	4	0.6	15	6.0	0.9	15	49	1.9	4
North Norfolk	43	2.2	5	75.2	3.6	5	42	2.2	5	71.8	3.6	5	*	*	44	*	*	43	39	2.7	7
North Shropshire	29	1.0	3	84.4	2.3	3	28	1.1	4	81.1	2.8	3	*	*	47	*	*	47	16	1.6	10
North Somerset	95	1.6	2	81.3	1.3	2	92	1.7	2	78.8	1.4	2	3	0.5	18	3.0	0.6	18	55	2.3	4
North Tyneside	90	1.5	2	76.9	1.3	2	86	1.7	2	73.4	1.4	2	4	0.7	16	4.5	0.7	16	59	2.2	4
North Warwickshire	32	1.5	5	80.4	3.8	5	31	1.7	5	77.0	4.2	5	*	*	60	*	*	60	19	2.4	13
North West Leicestershire	48	1.4	3	88.0	2.5	3	47	1.4	3	87.0	2.6	3	*	*	71	*	*	71	21	2.3	11
North Wiltshire	70	1.8	3	86.0	1.8	2	68	1.9	3	83.6	2.0	2	*	*	36	*	*	36	29	2.5	9
Northampton	100	3.7	4	79.8	2.9	4	96	4.0	4	76.5	3.2	4	4	1.3	32	4.0	1.3	32	50	4.8	10
Norwich	55	2.4	4	70.7	3.0	4	53	2.4	5	68.0	3.0	4	*	*	38	*	*	37	42	3.1	8
Nottingham	114	2.9	3	65.4	1.7	3	105	3.0	3	60.5	1.7	3	9	1.1	13	7.5	0.9	13	98	3.4	4
Nuneaton and Bedworth	60	2.4	4	79.1	2.9	4	58	2.3	4	76.0	2.8	4	*	*	36	*	*	35	36	3.2	9
Oadby and Wigston	29	1.5	5	82.2	4.1	5	27	1.6	6	77.3	4.6	6	*	*	43	*	*	43	17	1.9	11
Oldham	105	2.1	2	77.5	1.5	2	100	2.2	2	73.4	1.6	2	6	0.9	17	5.3	0.9	17	60	2.8	5
Omagh	22	1.8	8	70.2	3.7	5	20	1.8	9	62.0	4.1	7	2	0.7	28	11.0	3.0	27	15	1.6	11
Orkney Islands	10	0.3	3	85.1	2.2	3	10	0.3	3	83.9	2.3	3	*	*	57	*	*	57	5	0.3	6
Oswestry	20	0.9	4	86.2	3.5	4	19	0.9	5	82.2	3.7	4	*	*	48	*	*	48	12	1.2	10
Oxford	73	2.7	4	77.2	2.6	3	70	2.9	4	73.5	2.8	4	3	1.0	32	4.5	1.4	32	36	3.1	9
Pembrokeshire	52	0.9	2	74.4	1.2	2	49	0.9	2	70.3	1.3	2	3	0.4	13	5.3	0.7	13	39	0.9	2
Pendle	45	2.2	5	80.6	3.7	5	44	2.2	5	79.2	3.7	5	*	*	70	*	*	70	26	3.2	12
Penwith	29	1.5	5	76.8	4.0	5	27	1.6	6	71.3	4.2	6	*	*	39	*	*	38	22	2.2	10
Perth and Kinross	65	1.3	2	80.2	1.5	2	64	1.3	2	78.2	1.6	2	2	0.4	26	2.4	0.6	26	42	1.3	3
Peterborough	82	1.3	2	81.8	1.2	1	78	1.4	2	78.1	1.3	2	4	0.6	16	4.5	0.7	16	42	1.8	4
Plymouth	118	2.2	2	77.1	1.4	2	112	2.3	2	73.3	1.5	2	6	0.9	16	4.9	0.8	16	72	2.9	4
Poole	70	1.1	2	82.1	1.2	1	68	1.2	2	79.5	1.3	2	2	0.4	19	3.1	0.6	19	42	1.6	4
Portsmouth	100	1.8	2	81.7	1.4	2	95	1.9	2	77.7	1.5	2	5	0.7	14	4.8	0.7	14	51	2.3	4
Powys	63	1.1	2	79.3	1.3	2	61	1.1	2	76.5	1.4	2	2	0.3	16	3.4	0.5	16	40	1.1	3
Preston	64	2.3	4	78.6	2.6	3	59	2.8	5	72.3	3.3	5	5	1.5	28	8.3	2.3	28	40	3.0	8
Purbeck	23	1.3	6	83.4	3.5	4	22	1.3	6	79.7	3.8	5	*	*	49	*	*	49	14	1.5	11
Reading	79	1.3	2	81.7	1.3	2	74	1.4	2	77.0	1.4	2	4	0.7	15	5.6	0.8	15	32	1.7	5
Redbridge	119	3.1	3	75.4	1.9	3	113	3.1	3	71.7	1.9	3	6	1.2	21	4.7	1.0	21	70	3.7	5
Redcar and Cleveland	61	1.1	2	71.5	1.3	2	56	1.2	2	66.1	1.4	2	5	0.5	12	7.5	0.9	12	50	1.6	3
Redditch	40	1.7	4	78.4	3.4	4	39	1.8	5	76.3	3.6	5	*	*	49	*	*	50	22	2.2	10
Reigate and Banstead	66	1.8	3	83.5	2.2	3	65	1.9	3	81.7	2.3	3	*	*	51	*	*	50	32	2.8	9
Renfrewshire	84	1.6	2	78.1	1.4	2	80	1.7	2	74.2	1.5	2	4	0.7	17	4.9	0.8	17	52	1.6	3
Restormel	47	1.8	4	76.4	2.9	4	44	1.9	4	71.6	3.0	4	3	0.9	31	5.9	1.8	31	28	2.5	9
Rhondda Cynon Taff	99	1.9	2	70.5	1.3	2	92	2.1	2	65.5	1.5	2	7	0.9	13	7.0	0.9	13	82	1.9	2
Ribble Valley	28	1.3	4	82.8	3.5	4	28	1.3	5	80.4	3.6	4	*	*	57	*	*	56	15	2.0	13
Richmond upon Thames	95	2.6	3	77.4	2.0	3	91	2.7	3	74.2	2.1	3	4	1.0	27	4.0	1.1	26	50	3.2	6
Richmondshire	24	1.2	5	83.5	4.0	5	23	1.2	5	81.0	4.1	5	*	*	57	*	*	57	15	1.7	12
Rochdale	98	1.9	2	76.3	1.5	2	92	2.1	2	71.5	1.6	2	6	0.8	13	6.3	0.9	14	60	2.5	4
Rochford	41	1.8	4	80.3	3.0	4	40	1.8	5	79.0	3.1	4	*	*	70	*	*	70	22	2.3	11
Rossendale	36	1.1	3	88.9	2.8	3	35	1.2	3	87.1	3.0	3	*	*	70	*	*	70	14	2.3	16
Rother	39	1.6	4	82.4	3.1	4	38	1.6	4	78.5	3.2	4	*	*	38	*	*	38	30	2.4	8
Rotherham	118	1.9	2	76.2	1.2	2	113	2.0	2	73.0	1.3	2	5	0.7	15	4.3	0.6	15	79	2.9	4
Rugby	47	1.8	4	83.9	3.0	4	47	1.9	4	82.7	3.2	4	*	*	70	*	*	70	25	2.6	11
Runnymede	41	2.2	5	80.8	3.8	5	40	2.2	6	78.4	3.8	5	*	*	57	*	*	57	23	2.7	12
Rushcliffe	59	1.8	3	85.8	2.5	3	57	1.9	3	83.4	2.7	3	*	*	43	*	*	43	29	2.8	9
Rushmoor	52	1.7	3	87.3	2.5	3	50	1.7	3	85.0	2.7	3	*	*	50	*	*	50	18	2.2	12
Rutland	18	0.5	3	79.2	2.1	3	17	0.5	3	76.1	2.1	3	1	0.2	25	3.7	0.9	25	11	0.6	6
Ryedale	25	1.3	5	83.0	3.7	5	25	1.3	5	83.0	3.7	5	*	*	0	*	*	0	16	1.8	11
Salford	94	2.1	2	70.8	1.6	2	90	2.2	2	67.3	1.6	2	5	0.9	19	4.9	0.9	19	73	2.7	4





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	Economic activity						Employment						ILO unemployment						Inactivity		
	Total	SE	RSE (%)	Rate (%) (16-59/64)	SE (%)	RSE (%)	Total	SE	RSE (%)	Rate (%) (16-59/64)	SE (%)	RSE (%)	Total	SE	RSE (%)	Rate (16+)	SE (%)	RSE (%)	Total	SE	RSE (%)
		(+/-)			(+/-)		(+/-)			(+/-)			(+/-)			(+/-)			(+/-)		
West Oxfordshire	57	1.7	3	89.8	2.3	3	57	1.8	3	89.3	2.3	3	*	*	100	*	*	100	22	2.7	12
West Somerset	16	1.0	6	84.2	4.8	6	16	1.0	6	82.4	4.9	6	*	*	98	*	*	98	11	1.6	15
West Wiltshire	58	2.1	4	79.0	2.7	3	57	2.2	4	76.7	3.0	4	*	*	40	*	*	41	34	2.9	8
Westminster	96	2.5	3	68.6	1.8	3	88	2.7	3	63.2	2.0	3	7	1.1	15	7.8	1.2	15	63	2.9	5
Weymouth and Portland	31	1.6	5	80.9	4.1	5	29	1.8	6	76.9	4.7	6	*	*	37	*	*	39	21	2.1	10
Wigan	150	2.7	2	77.9	1.4	2	143	3.0	2	74.1	1.5	2	7	1.1	15	4.7	0.7	16	86	3.9	5
Winchester	52	2.2	4	76.8	3.0	4	51	2.3	4	74.7	3.1	4	*	*	41	*	*	41	32	2.6	8
Windsor and Maidenhead	71	1.1	2	80.7	1.2	1	69	1.1	2	78.1	1.2	2	2	0.4	17	3.3	0.5	17	38	1.4	4
Wirral	146	2.4	2	77.3	1.3	2	137	2.6	2	73.0	1.4	2	8	1.1	13	5.6	0.8	13	95	3.4	4
Woking	45	2.2	5	77.0	3.8	5	44	2.2	5	74.7	3.7	5	*	*	44	*	*	43	26	2.7	10
Wokingham	87	1.2	1	86.0	1.1	1	84	1.3	1	83.0	1.2	1	3	0.5	17	3.4	0.6	17	34	1.6	5
Wolverhampton	103	2.1	2	72.1	1.5	2	96	2.2	2	66.7	1.5	2	8	1.0	13	7.3	1.0	13	82	3.0	4
Worcester	49	1.6	3	81.6	2.4	3	47	1.6	3	78.2	2.4	3	*	*	33	*	*	33	24	2.3	10
Worthing	50	1.7	3	87.4	2.6	3	49	1.6	3	85.1	2.7	3	*	*	46	*	*	45	26	2.5	10
Wrexham	63	1.2	2	76.7	1.4	2	62	1.3	2	75.0	1.5	2	2	0.3	22	2.5	0.5	22	40	1.2	3
Wychavon	56	2.0	4	78.2	2.7	3	54	2.0	4	75.9	2.8	4	*	*	38	*	*	37	33	2.7	8
Wycombe	89	2.5	3	83.9	2.0	2	85	2.7	3	80.1	2.3	3	4	1.0	26	4.3	1.1	26	39	3.2	8
Wyre	50	1.6	3	82.3	2.6	3	49	1.6	3	80.5	2.6	3	*	*	49	*	*	48	33	2.7	8
Wyre Forest	47	2.1	4	76.8	3.2	4	44	2.1	5	72.9	3.3	5	2	0.8	36	4.9	1.8	36	32	2.9	9
York	96	1.5	2	82.6	1.3	2	92	1.6	2	79.1	1.3	2	4	0.7	17	4.0	0.7	17	52	2.3	4

## ANNEX C - Calculating thresholds for England, Wales & Scotland

This Annex explains the rationale behind having different thresholds for different areas for annual LFS data in GB. Annex D gives details of the thresholds applicable to the different areas in England, Wales and Scotland.

It is the nature of sampling variability that the smaller the group whose size is being estimated, or from which an estimate is being derived, the less precise that estimate is relative to its size. Put another way, the size of the standard error increases with the level of the estimate, so that the larger the estimate the larger is the standard error. But the larger the estimate, the smaller the standard error in relative terms. The standard error as a proportion of the estimate is known as the relative standard error or coefficient of variation (c.v.).

LFS estimates below ten thousand from the quarterly survey and below six thousand for annual data prior to 2000/1 are not published, as they are likely to be unreliable. These thresholds equate to a sample size of about 30 and a relative standard error of about 20 per cent.

The boosted sample, which together with data from waves one and five from the main LFS, make up the annual LFS data for England, Wales and Scotland in 2003/04, is not spread evenly across the country. This means that for each local authority in England and for each unitary authority in Wales and Scotland, there may be a different sampling fraction. This in turn means that the relative standard errors for the same estimate may vary across local authorities, resulting in a requirement for individual thresholds for each area.

Approximate thresholds may be calculated for each local authority with the aim of providing a threshold value that ensures that the relative standard error is at most 20 per cent.

For a small subgroup from a large simple random sample, the subgroup sample size,  $n$ , is approximately distributed as a Poisson variable. For such a variable, the mean and the variance are equal and are estimated by  $n$ .

If  $G_i$  is the average grossing factor for cases in subgroup  $i$ , the value of the grossed estimate is  $G_i * n_i$ . Then ignoring the variable weights and the clustered design,

$$\text{Var}(E_i = G_i * n_i) = G_i^2 * n_i \quad (1)$$

The effect of both the grossing and the clustered design is reflected in the design effect,  $deff_i$ , and this has been calculated for the quarterly survey for a range of different estimates. These combined design effects vary substantially for different variables - for estimates of employment and economic activity they are substantially below one, whereas for unemployment they are greater than one.

So (1) should be modified to:

$$\text{Var}(E_i) = G_i^2 * n_i * deff_i \quad (2)$$

Thus

$$cv(E_i) = \sqrt{\frac{deff_i}{n_i}} \quad (3)$$

For the threshold for this variable, we must have

$$cv(E_i) < 0.2 \quad (4)$$

So from (3) and (4) we obtain

$$n_i > 25 * deff_i$$



or in terms of the grossed estimate

$$E_i > 25 * G_i * deff_i \quad (5)$$

The values of the right hand side of (5) provide the required thresholds.

$G_i$  for a particular local authority is the average grossing factor taken directly from the annual LFS data for 2003/04.

One result of including the design effect in the calculation is to lead to different thresholds for different variables. However, variables are often used in combination - e.g. a tabulation of employment by ethnicity. The design effect for employment is low, but the design effects for some ethnic groups are very high. This makes it very difficult to come up with design effects for every eventuality. For the quarterly LFS a design effect of one is assumed for all estimates except those for characteristics of minority ethnic groups, where a design effect of 2.5 is assumed. This assumption has been extended to the annual LFS data for the calculations used to determine the threshold bands attached at Annex D as they are intended to be applicable over a wide range of variables range of variables.

As noted above, this calculation leads to an individual threshold for each local authority. ONS recognises that this would be very complex to implement and recommend the use of one of three threshold bands - six thousand, four thousand or two thousand. The table below shows how the approximate thresholds have been used to assign areas to these bands.

Approximate threshold	Threshold band
5000 +	6000
3000 - 4999	4000
0 - 2999	2000

For Wales, the theoretical threshold for each unitary authority was not banded as above but simply rounded to the nearest thousand. This resulted in thresholds for the 23 UAs in Wales, as shown in Annex D, ranging from one thousand to four thousand.

For the 32 Scottish UAs, the ideal thresholds were rounded for the total employed and unemployed. Thresholds thus range from one thousand to five thousand.

**ANNEX D – 2003/04 Thresholds by UA/LAD, England, Wales & Scotland****England****Two thousand**

Barnsley	Hartlepool	Plymouth	Southend-on-Sea
Bath and North East Somerset	Herefordshire, County of	Poole	St. Helens
Blackburn with Darwen	Isle of Wight	Portsmouth	Stockton-on-Tees
Blackpool	Knowsley	Reading	Stoke-on-Trent
Bournemouth	Luton	Redcar and Cleveland	Sunderland
Bracknell Forest	Middlesbrough	Rochdale	Telford and Wrekin
Bury	Milton Keynes	Rotherham	Thurrock
Calderdale	Newcastle upon Tyne	Rutland	Torbay
Coventry	North East Lincolnshire	Salford	Trafford
Darlington	North Lincolnshire	Sandwell	West Berkshire
Derby	North Somerset	Slough	Windsor and Maidenhead
Gateshead	North Tyneside	Solihull	Wokingham
Halton	Peterborough	South Tyneside	Wolverhampton
			York

**Four thousand**

Alnwick	East Dorset	Nottingham	Tower Hamlets
Barking and Dagenham	East Riding of Yorkshire	Oldham	Tynedale
Berwick-upon-Tweed	Hammersmith and Fulham	Oswestry	Wakefield
Blyth Valley	Kensington and Chelsea	Sefton	Walsall
Bolton	Kingston upon Hull, City of	Shrewsbury and Atcham	Wansbeck
Bradford	Kingston upon Thames	South Gloucestershire	Warrington
Bridgnorth	Leicester	South Shropshire	Westminster
Brighton and Hove	Manchester	Southampton	Wigan
Castle Morpeth	Medway	Stockport	Wirral
Doncaster	Mid Bedfordshire	Swindon	
Dudley	North Shropshire	Tameside	

**Six thousand**

Adur	Bristol, City of	Chiltern	East Devon
Allerdale	Broadland	Chorley	East Hampshire
Amber Valley	Bromley	Christchurch	East Hertfordshire
Arun	Bromsgrove	City of London	East Lindsey
Ashfield	Broxbourne	Colchester	East Northamptonshire
Ashford	Broxtowe	Congleton	East Staffordshire
Aylesbury Vale	Burnley	Copeland	Eastbourne
Babergh	Cambridge	Corby	Eastleigh
Barnet	Camden	Cotswold	Eden
Barrow-in-Furness	Cannock Chase	Craven	Ellesmere Port and Neston
Basildon	Canterbury	Crawley	Elmbridge
Basingstoke and Deane	Caradon	Crewe and Nantwich	Enfield
Bassetlaw	Carlisle	Croydon	Epping Forest
Bedford	Carrick	Dacorum	Epsom and Ewell
Bexley	Castle Point	Dartford	Erewash
Birmingham	Charnwood	Daventry	Exeter
Blaby	Chelmsford	Derbyshire Dales	Fareham
Bolsover	Cheltenham	Derwentside	Fenland
Boston	Cherwell	Dover	Forest Heath
Braintree	Chester	Durham	Forest of Dean
Breckland	Chesterfield	Ealing	Fylde
Brent	Chester-Le-Street	Easington	Gedling

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Brentwood	Chichester	East Cambridgeshire	Gloucester
Gosport	Malvern Hills	Rugby	Taunton Deane
Gravesham	Mansfield	Runnymede	Teesdale
Great Yarmouth	Melton	Rushcliffe	Teignbridge
Greenwich	Mendip	Rushmoor	Tending
Guildford	Merton	Ryedale	Test Valley
Hackney	Mid Devon	Salisbury	Tewkesbury
Hambleton	Mid Suffolk	Scarborough	Thanet
Harborough	Mid Sussex	Sedgefield	Three Rivers
Haringey	Mole Valley	Sedgemoor	Tonbridge and Malling
Harlow	New Forest	Selby	Torridge
Harrogate	Newham	Sevenoaks	Tunbridge Wells
Harrow	Newark and Sherwood	Sheffield	Uttlesford
Hart	Newcastle-under-Lyme	Shepway	Vale of White Horse
Hastings	North Cornwall	South Bedfordshire	Vale Royal
Havant	North Devon	South Bucks	Waltham Forest
Havering	North Dorset	South Cambridgeshire	Wandsworth
Hertsmere	North East Derbyshire	South Derbyshire	Warwick
High Peak	North Hertfordshire	South Hams	Watford
Hillingdon	North Kesteven	South Holland	Waveney
Hinckley and Bosworth	North Norfolk	South Kesteven	Waverley
Horsham	North Warwickshire	South Lakeland	Wealden
Hounslow	North West Leicestershire	South Norfolk	Wear Valley
Huntingdonshire	North Wiltshire	South Northamptonshire	Wellingborough
Hyndburn	Northampton	South Oxfordshire	Welwyn Hatfield
Ipswich	Norwich	South Ribble	West Devon
Islington	Nuneaton and Bedworth	South Somerset	West Dorset
Kennet	Oadby and Wigston	South Staffordshire	West Lancashire
Kerrier	Oxford	Southwark	West Lindsey
Kettering	Pendle	Spelthorne	West Oxfordshire
King's Lynn and West Norfolk	Penwith/Isles of Scilly	St. Albans	West Somerset
Kirklees	Preston	St. Edmundsbury	West Wiltshire
Lambeth	Purbeck	Stafford	Weymouth and Portland
Lancaster	Redbridge	Staffordshire Moorlands	Winchester
Leeds	Redditch	Stevenage	Woking
Lewes	Reigate and Banstead	Stratford-on-Avon	Worcester
Lewisham	Restormel	Stroud	Worthing
Lichfield	Ribble Valley	Suffolk Coastal	Wychavon
Lincoln	Richmond upon Thames	Surrey Heath	Wycombe
Liverpool	Richmondshire	Sutton	Wyre
Macclesfield	Rochford	Swale	Wyre Forest
Maidstone	Rossendale	Tamworth	
Maldon	Rother	Tandridge	

**Wales**

One thousand	Two thousand	Three thousand
Anglesey, Isle of	Bridgend	Cardiff
Blaenau Gwent	Caerphilly	Swansea
Ceredigion	Carmarthenshire	
Conwy	Flintshire	
Denbighshire	Newport	
Gwynedd	Powys	
Merthyr Tydfil	Rhondda, Cynon, Taff	
Monmouthshire	Wrexham	
Neath Port Talbot		
Pembrokeshire		
Torfaen		
Vale of Glamorgan, The		

**Scotland**

<b>One thousand</b>	<b>Two thousand</b>	<b>Three thousand</b>	<b>Four thousand</b>	<b>Five thousand</b>
Angus	Dumfries & Galloway	Aberdeen, City	Fife	Edinburgh, City of
Argyll & Bute	Dundee, City	Aberdeenshire	North Lanarkshire	Glasgow, City
Clackmannanshire	Falkirk	West Lothian	South Lanarkshire	
East Ayrshire	Highland			
East Dunbartonshire	Perth & Kinross			
East Lothian	Renfrewshire			
East Renfrewshire				
Eilean Siar (Western Isles)				
Inverclyde				
Midlothian				
Moray				
North Ayrshire				
Orkney Islands				
Scottish Borders, The				
Shetland Islands				
South Ayrshire				
Stirling				
West Dunbartonshire				