

Ward Level Summary Measures of Indices of Deprivation 2010

Intelligence Update 01-2012

Introduction

This Update presents a ward level analysis of the Indices of Deprivation 2010 (ID2010) from the Department for Communities and Local Government (CLG) as they relate to London. These Indices update the Indices of Deprivation 2007 and like them were produced to identify areas of need at a small area level. There are three Indices. The main one is the Index of Multiple Deprivation (IMD), which uses a complex series of statistical procedures to combine information on a range of aspects of deprivation into a single measure. Alongside this are two supplementary indices, which concentrate on the proportion of particular population groups living in low-income households. Measures summarising the IMD at local authority level have been published by CLG, but no information has been published at ward level. A Briefing 'English Indices of Deprivation 2010: A London Perspective' giving further details of the Indices at small area level for London is also published by the Greater London Authority, Intelligence Briefing 2011-06.

This Update presents for all wards in London, summary measures¹ of the small area Indices corresponding to those published by CLG at the Local Authority level, as far as is practicable and appropriate, and additional summary information which may be useful. Ward level and Local Authority level versions of the supplementary indices – Income Deprivation Affecting Children Index and Income Deprivation Affecting Older People Index are published in a separate Intelligence Update 02-2012.

The Indices

The Index of Multiple Deprivation is based on the concept of measuring distinct dimensions of deprivation separately and then combining these to give an overall score. It is an area based measure, rather than an individual based measure, so it measures the extent of each type of deprivation within the area and then combines these to give a figure taking into account the extent of each type of deprivation. It does this by using statistical techniques to combine information on economic and social issues to produce scores for small areas across the whole of England. These are then used to rank the areas according to their relative level of deprivation.

Seven distinct dimensions or 'domains' of deprivation are included in the IMD2010, made up of 37 separate indicators. The domains are:

- Income deprivation
- Employment deprivation
- Health deprivation and disability
- Education, skills and training deprivation
- Barriers to housing and services
- Living environment deprivation
- Crime

¹ Calculated by the Greater London Authority

These seven domains have been produced for each small area, and are then combined to produce a single score for each area in the country. These are then ranked to compare the areas across England. The Indices are based mainly on data relating to 2008, although in some cases data relating to several years has been combined to improve robustness and in other cases the only reliable data at the small area level comes from the 2001 Census.

Geography

The purpose of the Indices is to measure multiple deprivation, or identify areas of need, at the small area level, so each of the three indices is produced for small areas known as Lower Layer Super Output Areas (LSOAs). These are geographical areas devised, following the 2001 Census of Population, to be of a consistent size, generated in a consistent way across the whole of England. Each area had a total population size of around 1,500 people. These areas are nested, as far as possible, within electoral wards (as they existed in 2002). There are exceptions to this, such as in the City of London, where ward populations are so small that this is not possible. The LSOAs were created to be “fixed” geographical zones used for statistical purposes. Thus population sizes of LSOAs are likely to have greater variation over time.

LSOAs therefore have advantages over wards for identifying areas of need in that they are of a more consistent population size across the country and they are generally smaller than wards, particularly in urban areas. While it would be possible to construct the IMD at ward level, only the Social Disadvantage Research Centre at the University of Oxford (which constructed the Indices on behalf of CLG) can do so from first principles, as only they have access to all the original, unrounded data.

Local Authority level summary measures

The IMD is created for small areas because that is considered the best way to identify the areas of need. However, it is sometimes necessary to consider higher geographical levels for painting a picture of a wider area to make comparisons or for funding decisions. Most of these higher areas are fairly arbitrary in their geography and exist for administrative or political purposes. Summary measures of the IMD have been published by CLG for a selection of such areas, including local authority areas, so borough level figures have been produced for London. Six different measures of the IMD have been created for local authorities, each focusing on different, but equally valid aspects of multiple deprivation in the district. Therefore no single measure is favoured over another and all should be taken into account. The six measures are:

- *Average of LSOA Scores* describes the overall position of people in the district by taking the population-weighted average of the scores for each LSOA within the district.
- *Average of LSOA Ranks* again summarises the district as a whole, taking into account the population-weighted ranks of both the deprived and less deprived LSOAs.
- *Extent* depicts how widespread high levels of deprivation are in a district by considering the proportion of the district's population living in the most deprived LSOAs in England.
- *Concentration* identifies districts' 'hot spots' of deprivation by looking at the (population-weighted) average rank of the most deprived LSOAs containing ten per cent of the district's population.
- *The Income Scale* gives the **number** of people in the district who are income deprived.
- *The Employment Scale* gives the **number** of people in the district who are employment deprived.

Ward level summary measures

There has been a demand within the GLA and from partner agencies for a ward level analysis based on 2010 scores and this Update attempts to address that need. No attempt has been made to produce actual IMD scores but instead this Update presents an analysis at ward level summarising individual LSOA scores within wards to replicate, as far as possible, the local authority level measures published by CLG and gives alternative and additional measures.

The ward level summary measures replicating those at LA level produced here are:

- *Average of LSOA Scores*
- *Average of LSOA Ranks*
- *Extent*
- *The Income Scale*
- *The Employment Scale*

The calculations for these are as close as possible to those for the LA level measures and full detail of the calculations is given below.

The *Average of LSOA Scores* measure describes the ward as a whole and is a population-weighted average for the ward. This is calculated by first multiplying the IMD score for each LSOA by the population estimate for that LSOA. These figures are then summed across all LSOAs within the ward and the result is divided by the total population for that ward (the sum of the LSOA population estimates). This measure takes into account the full range of scores within the ward and the number of people affected by the level of deprivation in each LSOA.

The *Average of LSOA Ranks* measure again takes into account the full range of deprivation across each ward, but using the ranks of LSOAs rather than the scores. Again it is calculated using the population figures to take account of variation in LSOA sizes, so it is a population-weighted average of LSOA ranks within each ward, but with the ranks reversed, so that the most deprived LSOA is ranked 32482 and the least deprived is ranked 1, so that a higher figure represents higher levels of deprivation.

The *Extent* measure aims to show how widespread significant levels of deprivation are within each ward. Thus, it counts the people in the most deprived LSOAs only. It counts the total population for any LSOA ranked in the top ten per cent in England, and then, in order to avoid a crude cut-off, it also includes a portion of the population in the next 19 per cent on a graduated scale, so that 95 per cent of the population count for LSOAs with a rank between the tenth and eleventh percentiles is included, 90 per cent of the population count for LSOAs with a rank between the eleventh and twelfth percentiles etc down to five per cent of the population count for LSOAs with a rank between the twenty-eighth and twenty-ninth percentiles. None of the population in areas ranked lower than this is included on this measure.

The *Income Scale* measure gives a count of the actual number of people living in households in income deprivation. It is calculated by multiplying the income score for each LSOA by the population for that LSOA. These are then summed across LSOAs within each ward to give the income score for the ward.

The *Employment Scale* measure gives a count of the actual number of people experiencing employment deprivation. It is calculated by multiplying the employment score for each LSOA by the working age population for that LSOA. These are then summed across LSOAs within each ward to give the income score for the ward.

The LA level *Concentration* measure cannot be sensibly reproduced at ward level, since it is based on ten per cent of the area's population, which is in most cases less than a single LSOA. Instead, a summary measure *Highest ranked LSOA in ward* has been included. This effectively answers the same question of "how deprived are the most deprived people in the area?"

Additionally, this Update includes the total number of LSOAs in each ward and gives a count of how many LSOAs are included among the more deprived areas in England. Four such counts are given – the five per cent most deprived, ten per cent, 20 per cent and 50 per cent, or above average.

Results – the ward level summary measures of IMD 2010

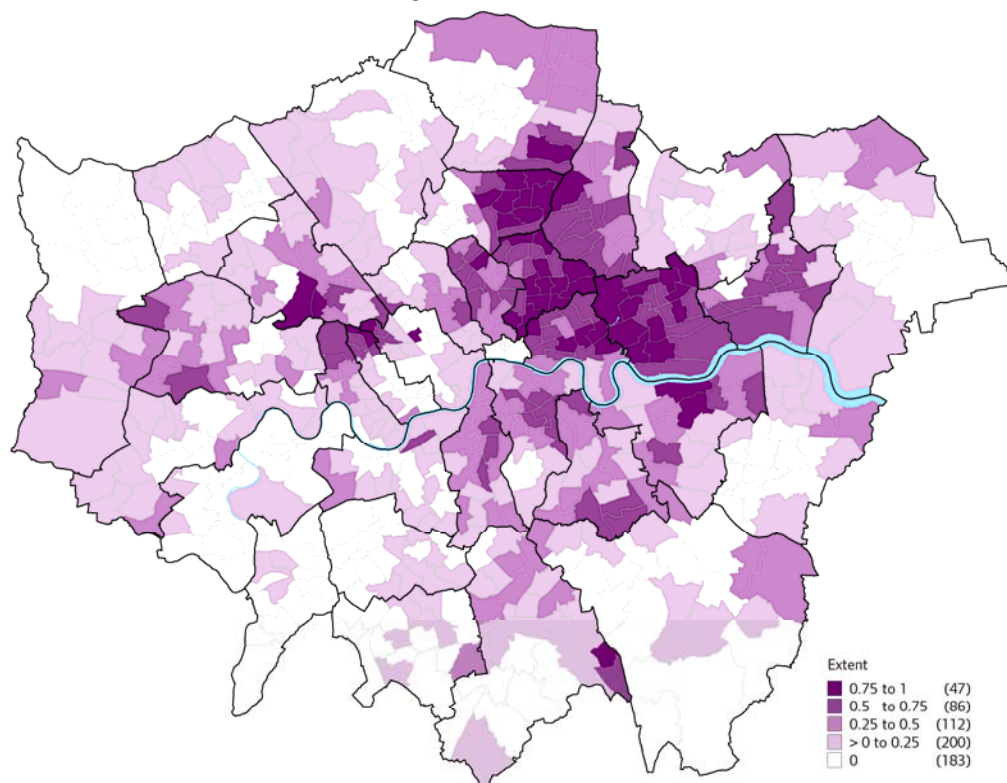
Tables giving the top and bottom wards on each summary measure and maps showing the distribution are given in this section. The full results for all wards are available separately in spreadsheet form, showing the scores and ranks on each summary measure.

Table 1 Most deprived London wards on Extent measure

Ward name	Borough	Extent	Rank of extent (within London) 1=most deprived
Northumberland Park	Haringey	1.00	1
Golborne	Kensington & Chelsea	0.99	1
White Hart Lane	Haringey	0.98	3
Canning Town North	Newham	0.98	4
Canning Town South	Newham	0.96	5
Stonebridge	Brent	0.96	6
East India and Lansbury	Tower Hamlets	0.96	7
Wick	Hackney	0.95	8
Hackney Central	Hackney	0.95	9
Bromley-by-Bow	Tower Hamlets	0.94	10
Little Ilford	Newham	0.92	11
Tottenham Green	Haringey	0.92	12
Noel Park	Haringey	0.92	13
Weavers	Tower Hamlets	0.91	14
Queen's Park	Westminster	0.90	15
Queensbridge	Hackney	0.90	16
Stratford and New Town	Newham	0.90	17
Chatham	Hackney	0.88	18
Mile End East	Tower Hamlets	0.87	19
Harlesden	Brent	0.87	20
St Dunstan's and Stepney Green	Tower Hamlets	0.86	21
Hoxton	Hackney	0.86	22
Forest Gate South	Newham	0.86	23
Tottenham Hale	Haringey	0.85	24
Woolwich Common	Greenwich	0.85	25

Source: GLA Calculations based on the Department for Communities and Local Government, *Indices of Deprivation 2010*

These 25 wards all have an Extent measure of 85 per cent or more. There is just one London ward which has all its LSOAs within the ten per cent most deprived LSOAs nationally and therefore an Extent measure of 1.00 or 100 per cent. 183 wards out of 629 have no LSOAs in the top 29 per cent nationally and therefore 0.00 Extent score.

Map 1 Extent ward level summary of IMD2010 for Greater London

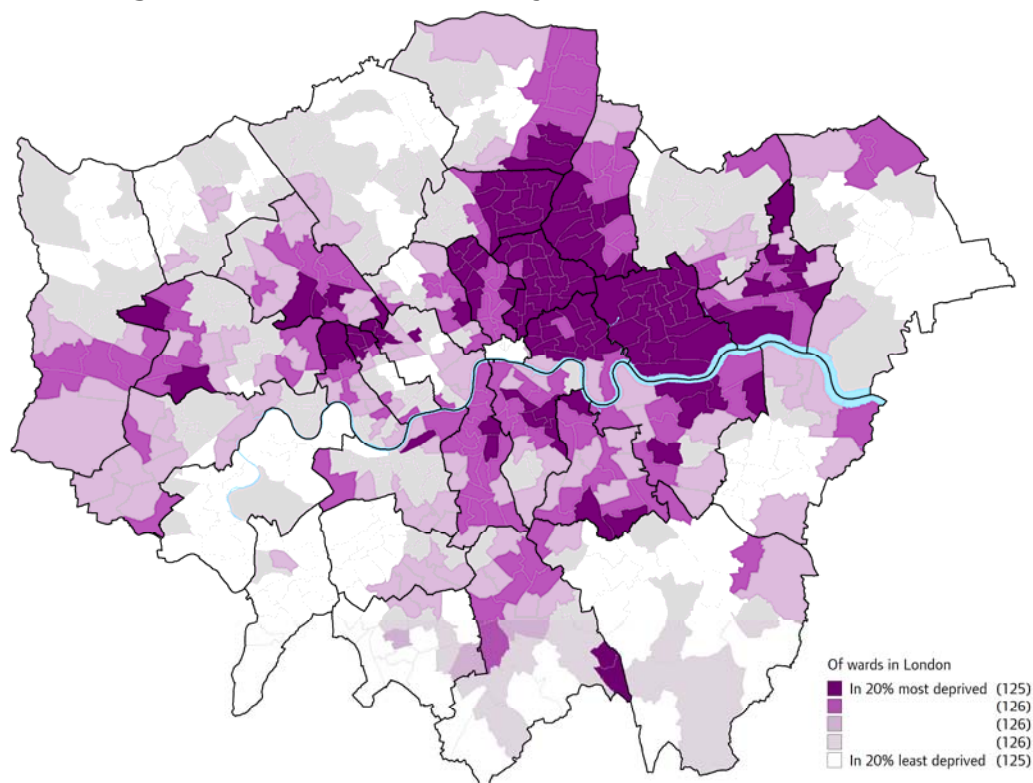
Source: Department for Communities and Local Government, Indices of Deprivation 2010
The map is © Crown copyright and database right 2012. Ordnance Survey 100032216 GLA.

Table 2 Most and Least deprived London wards on Average Score measure

Ward name	Borough	Average Score	Rank of average score (within London) 1=most deprived 628=least deprived
<i>Most deprived</i>			
Northumberland Park	Haringey	54.78	1
East India and Lansbury	Tower Hamlets	52.30	2
Canning Town North	Newham	51.68	3
Stonebridge	Brent	51.63	4
Wick	Hackney	50.63	5
Canning Town South	Newham	50.31	6
White Hart Lane	Haringey	49.92	7
Hoxton	Hackney	49.14	8
Queen's Park	Westminster	47.98	9
Haggerston	Hackney	47.97	10
Golborne	Kensington & Chelsea	47.87	11
Bromley-by-Bow	Tower Hamlets	47.78	12
Chatham	Hackney	47.52	13
Edmonton Green	Enfield	47.15	14
Spitalfields and Banglatown	Tower Hamlets	46.95	15
<i>Least deprived</i>			
East Sheen	Richmond upon Thames	7.26	614
St Margarets and North Twickenham	Richmond upon Thames	7.26	615
Tudor	Kingston upon Thames	7.14	616
South Twickenham	Richmond upon Thames	7.08	617
Teddington	Richmond upon Thames	7.05	618
West Barnes	Merton	6.99	619
Hayes and Coney Hall	Bromley	6.95	620
West Wickham	Bromley	6.64	621
Dundonald	Merton	6.56	622
Shortlands	Bromley	6.53	623
Aldersgate	City of London	6.16	624
Upminster	Havering	5.98	625
Village	Merton	5.95	626
Chelsfield and Pratts Bottom	Bromley	5.92	627
Petts Wood and Knoll	Bromley	4.88	628

Source: GLA Calculations based on the Department for Communities and Local Government, Indices of Deprivation 2010

Map 2 Average Scores ward level summary of IMD2010 for Greater London



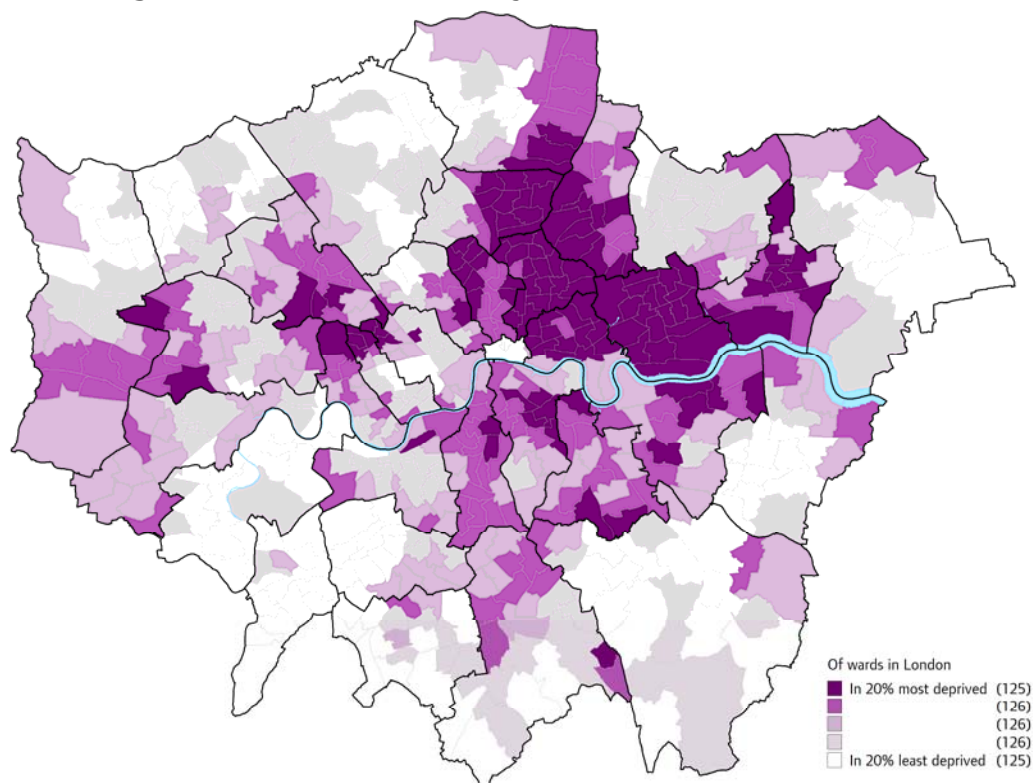
Source: Department for Communities and Local Government, Indices of Deprivation 2010
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Table 3 Most and Least deprived London wards on Average Rank measure

Ward name	Borough	Average Rank	Rank of average rank (within London) 1=most deprived 628=least deprived
<i>Most deprived</i>			
Northumberland Park	Haringey	1560	1
East India and Lansbury	Tower Hamlets	2033	2
Stonebridge	Brent	2126	3
Canning Town North	Newham	2171	4
White Hart Lane	Haringey	2305	5
Canning Town South	Newham	2341	6
Wick	Hackney	2356	7
Golborne	Kensington & Chelsea	2640	8
Bromley-by-Bow	Tower Hamlets	2797	9
Queen's Park	Westminster	2914	10
Hoxton	Hackney	2926	11
Chatham	Hackney	3027	12
Tottenham Green	Haringey	3074	13
Haggerston	Hackney	3142	14
Queensbridge	Hackney	3149	15
<i>Least deprived</i>			
Farnborough and Crofton	Bromley	27358	614
St Margarets and North Twickenham	Richmond upon Thames	27370	615
Tudor	Kingston upon Thames	27478	616
West Barnes	Merton	27615	617
Hayes and Coney Hall	Bromley	27664	618
Teddington	Richmond upon Thames	27665	619
South Twickenham	Richmond upon Thames	27696	620
West Wickham	Bromley	27989	621
Shortlands	Bromley	28143	622
Dundonald	Merton	28270	623
Upminster	Havering	28626	624
Village	Merton	28785	625
Aldersgate	City of London	28814	626
Chelsfield and Pratts Bottom	Bromley	28847	627
Petts Wood and Knoll	Bromley	29811	628

Source: GLA Calculations based on the Department for Communities and Local Government, Indices of Deprivation 2010

Map 3 Average Rank ward level summary of IMD2010 for Greater London

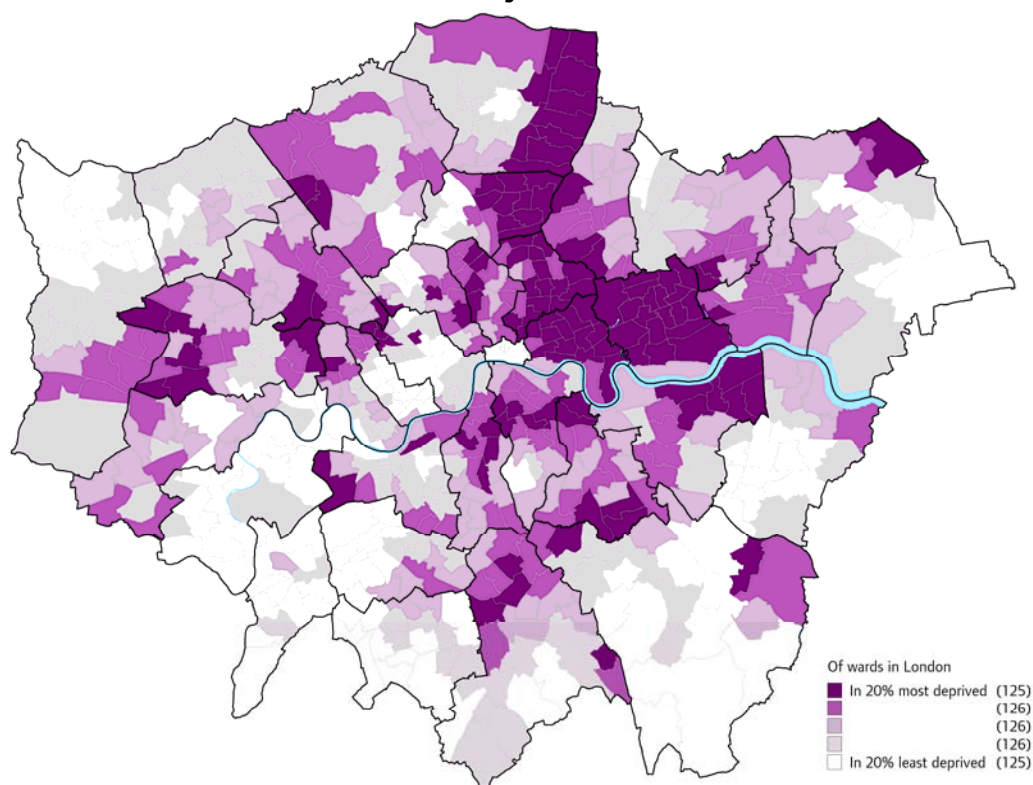


Source: Department for Communities and Local Government, Indices of Deprivation 2010
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Table 4 Most and Least deprived London wards on Income Scale measure

Ward name	Borough	Income Scale	Rank of income scale (within London) 1=most deprived 628=least deprived
<i>Most deprived</i>			
Edmonton Green	Enfield	6814	1
St Dunstan's and Stepney Green	Tower Hamlets	6378	2
East India and Lansbury	Tower Hamlets	6338	3
Stonebridge	Brent	6230	4
Northumberland Park	Haringey	5508	5
Upper Edmonton	Enfield	5423	6
Bromley-by-Bow	Tower Hamlets	5388	7
White Hart Lane	Haringey	5322	8
Lower Edmonton	Enfield	5267	9
Little Ilford	Newham	5251	10
Loxford	Redbridge	5189	11
Coldharbour	Lambeth	5146	12
Limehouse	Tower Hamlets	5123	13
Harlesden	Brent	5059	14
Woolwich Common	Greenwich	5034	15
<i>Least deprived</i>			
Brompton	Kensington & Chelsea	466	614
Courtfield	Kensington & Chelsea	465	615
South Twickenham	Richmond upon Thames	464	616
Ickenham	Hillingdon	455	617
Dundonald	Merton	444	618
East Sheen	Richmond upon Thames	420	619
Campden	Kensington & Chelsea	390	620
Darwin	Bromley	352	621
Queen's Gate	Kensington & Chelsea	302	622
Village	Merton	287	623
Portsoken	City of London	272	624
Cripplegate	City of London	191	625
Knightsbridge and Belgravia	Westminster	129	626
Farringdon Without	City of London	104	627
Aldersgate	City of London	19	628

Source: GLA Calculations based on the Department for Communities and Local Government, Indices of Deprivation 2010

Map 4 Income Score ward level summary of IMD2010 for Greater London

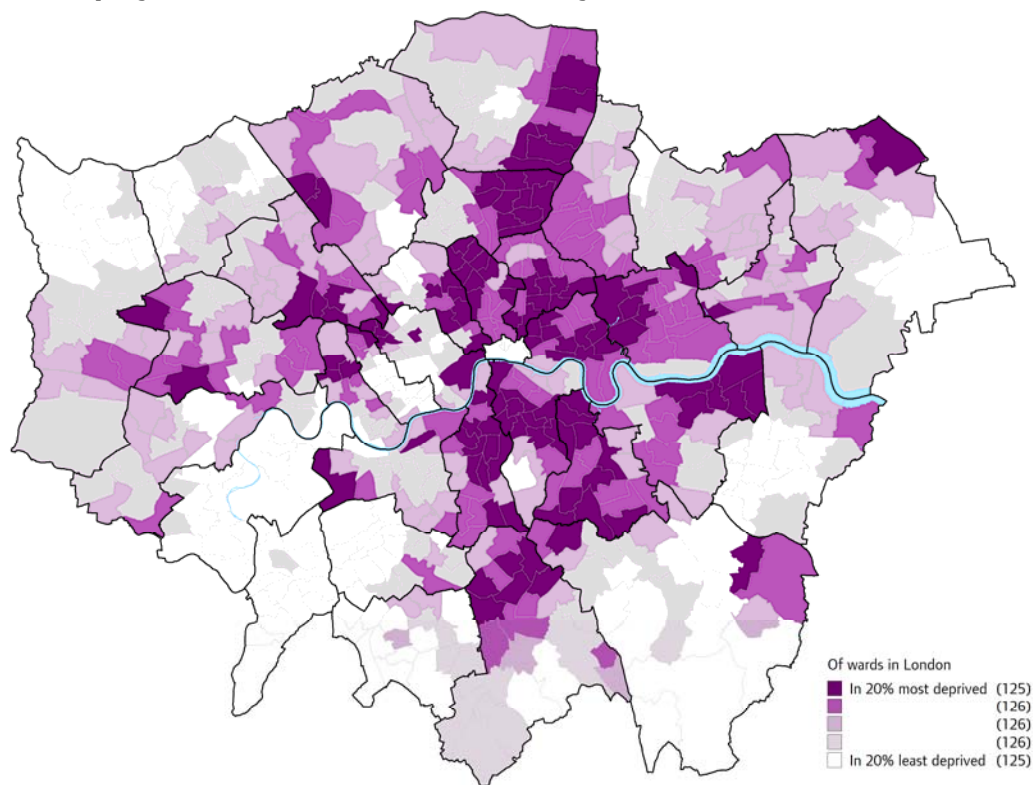
Source: Department for Communities and Local Government, Indices of Deprivation 2010
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Table 5 Most and Least deprived London wards on Employment Scale measure

Ward name	Borough	Employment Scale	Rank of employment scale (within London) 1=most deprived 628=least deprived
<i>Most deprived</i>			
Coldharbour	Lambeth	1771	1
Woolwich Riverside	Greenwich	1677	2
Northumberland Park	Haringey	1666	3
Edmonton Green	Enfield	1636	4
Stonebridge	Brent	1634	5
Woolwich Common	Greenwich	1610	6
Kilburn	Brent	1572	7
East India and Lansbury	Tower Hamlets	1567	8
Harlesden	Brent	1550	9
Church Street	Westminster	1484	10
Westbourne	Westminster	1472	11
St Pancras and Somers Town	Camden	1468	12
Queen's Park	Westminster	1466	13
Glyndon	Greenwich	1461	14
Finsbury Park	Islington	1459	15
<i>Least deprived</i>			
Shortlands	Bromley	202	614
Hillside	Merton	201	615
Brompton	Kensington & Chelsea	194	616
Dundonald	Merton	188	617
East Sheen	Richmond upon Thames	187	618
Royal Hospital	Kensington & Chelsea	177	619
Camden	Kensington & Chelsea	163	620
Queen's Gate	Kensington & Chelsea	138	621
Darwin	Bromley	131	622
Village	Merton	122	623
Cripplegate	City of London	105	624
Farringdon Without	City of London	100	625
Portsoken	City of London	87	626
Knightsbridge and Belgravia	Westminster	64	627
Aldersgate	City of London	22	628

Source: GLA Calculations based on the Department for Communities and Local Government, Indices of Deprivation 2010

Map 5 Employment Score ward level summary of IMD2010 for Greater London



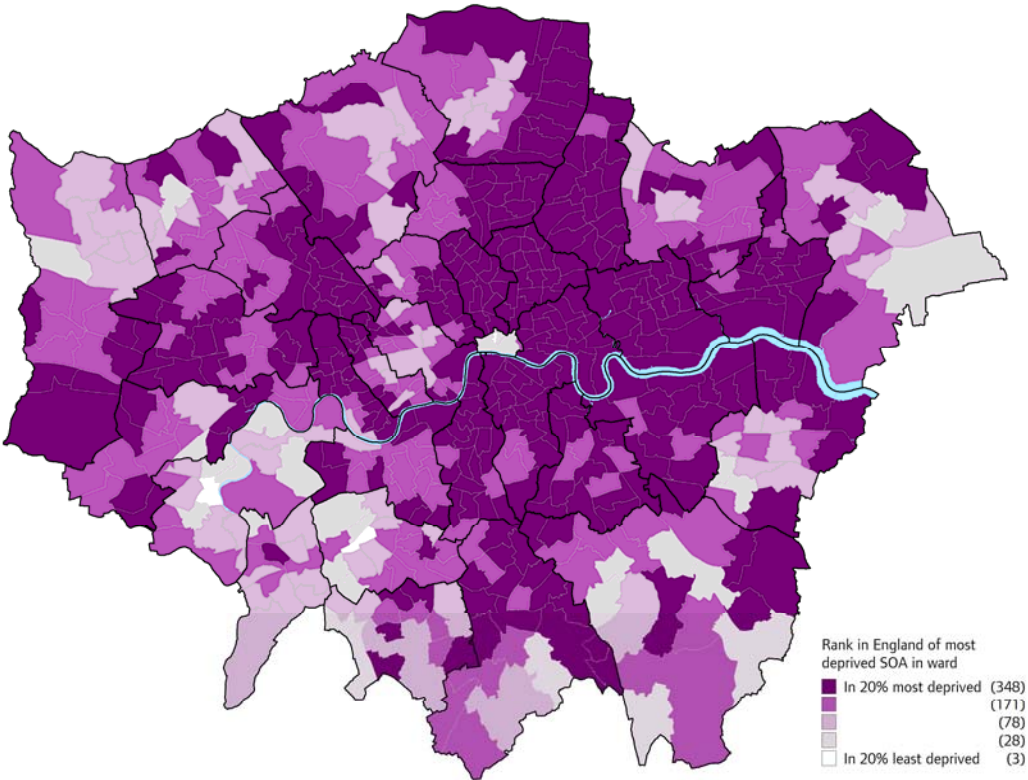
Source: Department for Communities and Local Government, Indices of Deprivation 2010
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Table 6 London wards with highest and lowest ranked LSOAs

Ward name	Borough	Highest LSOA rank (national)	Highest LSOA rank (within London) 1=most deprived 628=least deprived
<i>Most deprived</i>			
Spitalfields and Banglatown	Tower Hamlets	405	1
Canning Town North	Newham	423	2
Wick	Hackney	447	3
Tottenham Hale	Haringey	501	4
Hoe Street	Waltham Forest	508	5
Northumberland Park	Haringey	568	6
Hoxton	Hackney	598	7
Blackwall and Cubitt Town	Tower Hamlets	625	8
Beckton	Newham	643	9
Stonebridge	Brent	645	10
Canning Town South	Newham	656	11
Barnhill	Brent	716	12
Kilburn	Brent	727	13
Limehouse	Tower Hamlets	747	14
Whitechapel	Tower Hamlets	753	15
<i>Least deprived</i>			
Tudor	Kingston upon Thames	22119	614
Upminster	Havering	22410	615
Farringdon Without	City of London	22503	616
Cheam	Sutton	22824	617
Village	Merton	23173	618
Chelsfield and Pratts Bottom	Bromley	23417	619
Ickenham	Hillingdon	23622	620
Twickenham Riverside	Richmond upon Thames	24024	621
Hillside	Merton	24306	622
Selsdon and Ballards	Croydon	24476	623
Petts Wood and Knoll	Bromley	24621	624
East Sheen	Richmond upon Thames	25794	625
Dundonald	Merton	26409	626
South Twickenham	Richmond upon Thames	26761	627
Aldersgate	City of London	28814	628

Source: GLA Calculations based on the Department for Communities and Local Government, Indices of Deprivation 2010

Map 6 Highest LSOA rank on IMD2010 within ward for Greater London



Source: Department for Communities and Local Government, Indices of Deprivation 2010
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Table 7 Number of LSOAs in most deprived categories nationally

(ranked in order of proportion in top 5 per cent, then 10 per cent, then 20 per cent, then 50 per cent)

Ward name	Borough	Number of LSOAs				
		Total	Top 5 per cent	Top 10 per cent	Top 20 per cent	Top 50 per cent
<i>Most deprived</i>						
Stonebridge	Brent	11	7	10	11	11
East India and Lansbury	Tower Hamlets	8	5	7	8	8
Northumberland Park	Haringey	8	4	8	8	8
Canning Town North	Newham	8	4	5	8	8
Haggerston	Hackney	7	3	5	6	7
Hoxton	Hackney	7	3	4	6	7
Spitalfields and Banglatown	Tower Hamlets	5	2	3	4	5
Canning Town South	Newham	8	3	5	8	8
Queen's Park	Westminster	6	2	4	6	6
Gascoigne	Barking & Dagenham	6	2	2	5	6
Edmonton Green	Enfield	10	3	7	9	10
Wick	Hackney	7	2	5	7	7
Chatham	Hackney	7	2	4	6	7
Hackney Downs	Hackney	7	2	3	6	7
Markhouse	Waltham Forest	7	2	2	5	7
Limehouse	Tower Hamlets	8	2	5	6	8
Custom House	Newham	8	2	5	5	8
Victoria	Hackney	8	2	4	7	8
Norwood Green	Ealing	8	2	4	6	8
Royal Docks	Newham	4	1	2	3	4
Whitechapel	Tower Hamlets	8	2	4	5	8
New River	Hackney	8	2	3	8	8
Tottenham Hale	Haringey	8	2	3	8	8
Shadwell	Tower Hamlets	8	2	3	7	8
Caledonian	Islington	8	2	2	6	8
Woolwich Riverside	Greenwich	9	2	5	7	9
Kilburn	Brent	9	2	5	6	9
Bethnal Green South	Tower Hamlets	9	2	4	7	9
Beckton	Newham	9	2	3	7	9
Woolwich Common	Greenwich	10	2	5	9	10

Source: GLA Calculations based on the Department for Communities and Local Government, Indices of Deprivation 2010

In London there are 61 wards altogether that have no LSOAs ranked above average nationally, spread across 15 boroughs.

Access to further information

Further information on both the detail of how the indices are constructed and more regional analysis can be found in the full report of the ID2010, The English Indices of Deprivation 2010 published by Communities and Local Government, March 2011. This, together with a summary can be found on the CLG website at: <http://www.communities.gov.uk/publications/corporate/statistics/indices2010>

The report of the ID2004 can be found at:

<http://www.communities.gov.uk/publications/communities/englishindices>

The 2010 data for the whole of England can be downloaded from the CLG website (address given above) in Excel format. The individual indicators and the population denominators are also available at the same site.

A separate Intelligence Briefing 2011-06 'English Indices of Deprivation 2010: A London Perspective' giving an analysis of the published data for small areas and for local authorities within London is available, along with an Intelligence Update 02-2012 'Income Deprivation Affecting Children and Older People' giving ward and borough level scores for the supplementary indices at

<http://data.london.gov.uk/datastore/package/indices-deprivation-2010>. A spreadsheet giving the full ward level figures for London, along with all the other London data can also be downloaded from this site.

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