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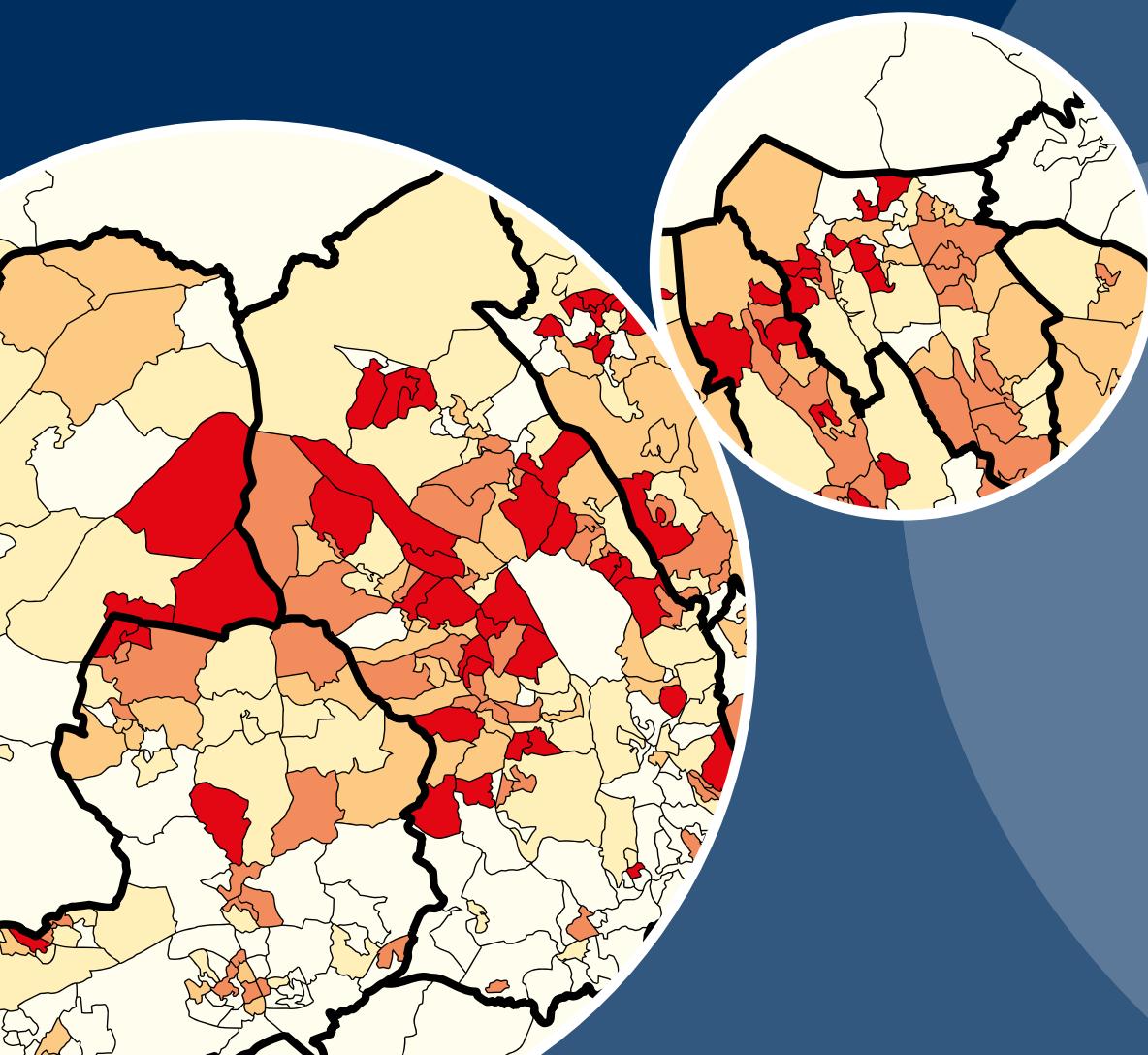


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Welsh Index of Multiple Deprivation Child Index 2011

Summary Report



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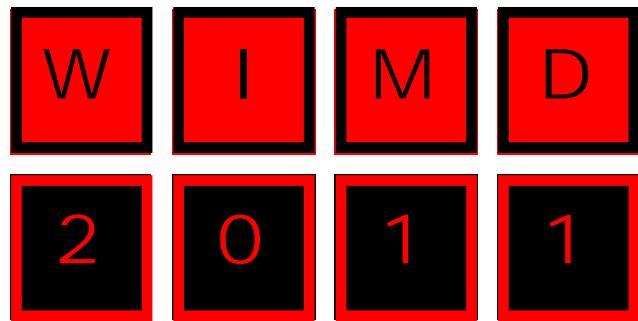
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Welsh Index of Multiple Deprivation
Child Index

Welsh Index of Multiple Deprivation: Child Index 2011

Summary Report



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introduction

The Welsh Index of Multiple Deprivation – Child Index

The Welsh Index of Multiple Deprivation 2011: Child Index is the official measure of **relative deprivation** for **small areas** in Wales for children. The indicators included in the Child Index are focussed on the child population and the types of deprivation which might be expected to affect them. It was produced by the Welsh Government. The Child Index was developed as a tool to identify and understand deprivation in children in Wales, so that funding, policy, and programmes can be effectively focussed on children in the most disadvantaged communities. The Child Index 2011 updates the Child Index published in 2008, without imposing methodological changes, except where data provision makes this unavoidable.

Deprivation is a wider concept than poverty. Poverty is usually considered to be a lack of money, whereas deprivation includes a lack of the opportunities and resources to which we might expect have access in our society, for example, good health, protection from crime, a clean and safe environment. ‘Multiple’ deprivation therefore refers to the different types of deprivation that might occur. Seven types of deprivation, or domains, are included in the Child Index. These are: income, education, health, community safety, geographical access to services, housing and physical environment. It should be noted that, due to the nature of the area-based data from which the Index is constructed, we do not know whether children are multiply deprived, or if different children are suffering different types of deprivation. At present, we are not able to link the data included in the Child Index in order to understand this.

It is important to remember that a lack of deprivation is not the same as affluence. The least-deprived area may not also be the most affluent area in Wales.

The Child Index is produced as a set of ranks, with a rank of 1 assigned to the most deprived area. Ranks are a **relative** system of measurement; we can know which areas are more (or less) deprived than others, but not by how much. This is because of the way that the Index must be constructed. The construction of the Index is described in more detail below.

The ranks of the Index are calculated for each of the 1896 lower layer super output areas (LSOAs) of Wales. Although the *geographical* size of these **small areas** varies quite widely, and depends on the local population density, the *populations* are intended to be roughly the same in each LSOA, with an average population of 1500 people. LSOAs were designed by the Office for National Statistics to have consistent population sizes and stable geographies, so that statistical comparisons of small areas over time can be carried out. However, it should be noted that the distribution of children is not uniform across LSOAs, as the proportion of children in an LSOA can vary from around half to almost zero.

How the Child Index is constructed

The Child Index has three main components:

- the Child Index itself, which is a set of ranks;
- the ranks of the seven types of deprivation, or domains, from which the Child Index is constructed; and
- the underlying indicators, which are directly measurable, and which are combined to create the domain ranks. Many, but not all, of the indicators are produced as rates. The units depend on what is being measured.

All of these components are calculated for each of the 1896 small areas (LSOAs) of Wales, and are published on the Welsh Government's [StatsWales](#) web pages. An overview of the construction of the Index is given in the diagram below.

The Index is constructed from a weighted sum of the deprivation score for each domain. The weights reflect the importance of the domain as an aspect of deprivation, and the quality of the indicators available for that domain. The domains and their weights for the Child Index 2011 are:

income	35.3%	community safety	6.1%
health	17.1%	physical environment	6.1%
education	17.1%	housing	6.1%
geographical access to services	12.2%		

A detailed analysis of the weighting system can be found in [Paper 6 presented to the Steering Group on 22 October 2010](#).

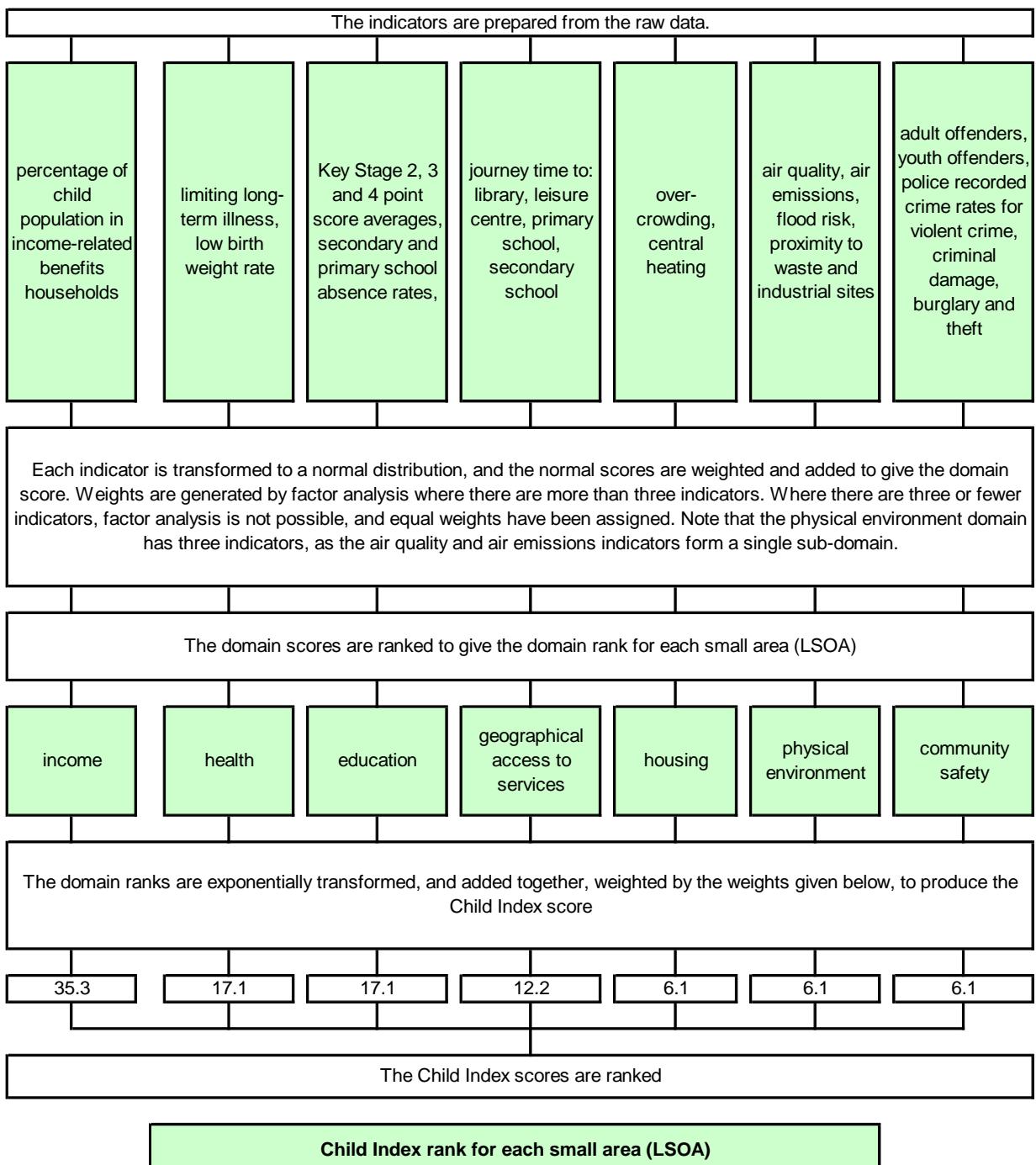
The domains are in turn built up from sets of indicators, which are the measurable quantities which capture the concept of deprivation for each domain, e.g. Key Stage scores in the education domain; crime rates in the community safety domain, etc.. Indicators must be robust at the small area level and consistent across Wales. In practice, this means that the Child Index is based largely on administrative data, with a limited number of Census variables where appropriate administrative data are not available.

A full list of the indicators included in the Child Index in 2011, together with their domains, is given in Annex A.

A complete description of the construction of the indicators, their combination into the domains, and the combination of the domains into the Index is presented in the WIMD: Child Index 2011 Technical Report.

A summary of the methodological changes in the 2011 Child Index is given in Annex B.

An overview of the construction of the Child Index and its domains. For a full description of the indicators see Annex A, and for the methodology, please see the Child Index 2011 Technical Report.



How to use the Index

This section describes how to use the Index, its domains and indicators to carry out some typical analyses.

1. Read the first two sections in this Summary Report

The first two sections of this report (*The Welsh Index of Multiple Deprivation: Child Index, and How the Child Index is constructed*) give an overview of the Child Index, and how it is constructed. It is also recommended that users look at the list of indicators and domains given in Annex A, to understand what data are used to create the Index, and are available for downloading.

2. Using the deprivation scores

The Child Index and domain scores are provided in an annex to the WIMD: Child Index 2011 Technical Report, and are published for only two purposes, i) for transparency, so that users have access to all the stages of the construction of the Child Index, and ii) so that users can experiment with different weighting systems for the Index if they so wish. The scores should generally be seen as a stage in the construction of the Index rather than a product in themselves. For all purposes other than the two outlined above, the ranks should be used.

Because of the way in which the Child Index must be constructed, the scores do not represent a *level* of multiple deprivation. If, for example, area A has twice the score of area B, it does not necessarily mean that area A is twice as deprived as area B. This means that the scores do not in fact contain any more information on levels of multiple deprivation than the ranks do. The constraints on constructing an index mean that we can only produce a *relative* measure of deprivation. For *levels* of deprivation, the underlying indicator data must be used.

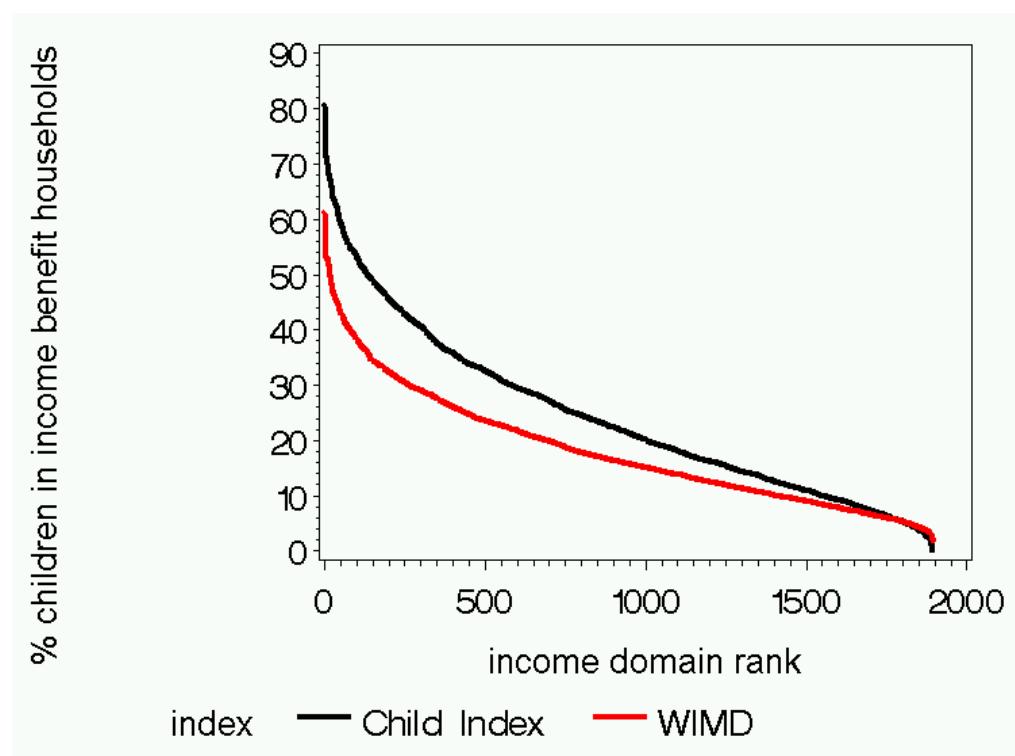
3. Identifying areas of need

Understanding how disadvantaged children are distributed through Wales by carrying out the following kind of analysis is important when developing area-based policies, programmes and funding.

The simplest use of the Child Index is to identify the areas of greatest deprivation using the Child Index ranks. For example, the most deprived 10% of areas in Wales are those ranked 1 – 190 (inclusive). However, it should be understood that not all deprived children live in the most-deprived areas. More than one in four of the children living in income-benefits households live in the most-deprived 10% of areas in Wales. This means that, although it is true to say that deprivation is much more concentrated in some areas than others, three out of four children in income-benefits households live outside these areas, and this should be borne in mind when developing policy.

The figure below shows how the percentage of children living in income-benefit households are distributed by their income domain rank in the Child Index 2011. The percentage for all people (adults and children) in income benefits households is over-plotted in red. The plot shows that:

- deprivation rates increase steeply for the most deprived areas;
- deprived people live outside the most deprived areas;
- the 's-curve' shape of the distribution is seen to a greater or lesser extent in all the indicators of deprivation;
- the rates of income deprivation are higher for the child population than the whole population, except for the areas ranked the least deprived;
- around one in five of all of those in income benefits households are in the most income-deprived 10% of areas in Wales, as defined by the WIMD income domain. However, more than one in four children in income benefits households reside in the most income-deprived 10% of areas, as defined by the Child Index income domain;
- at the most deprived end of the distribution, the steep curve means that large changes in the indicator value may only result in small changes to ranks. At the less deprived end, where the curve is flatter, the opposite is true, and small changes to the indicator values could result in large movements in the ranks.

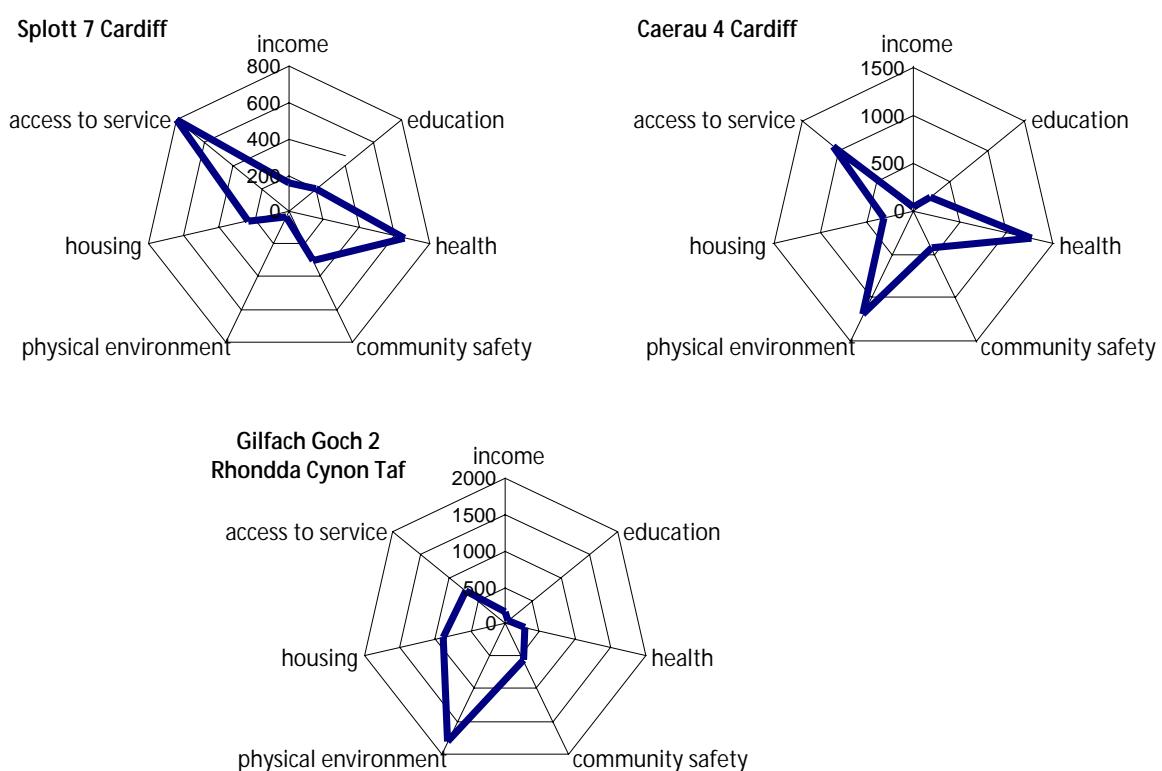


4. Understanding local areas using the domain ranks

One of the strengths of the Index is that, in addition to providing a rank for overall relative multiple deprivation for the small areas of Wales, ranks are also calculated for the seven different types of deprivation that make up the Child Index. These domain ranks can be used to understand the drivers for deprivation in an area. For example, the three areas presented in the table and radar charts below are consecutive in their Child Index ranks, but the pattern of deprivation across their domains is quite different.

LSOA	W01001875	W01001705	W01001179
LSOA name	Splott 7	Caerau 4	Gilfach Goch 2
local authority	Cardiff	Cardiff	Rhondda Cynon Taf
Child Index 2011 rank	152	153	154
income rank	159	39	163
education rank	193	228	65
health rank	652	1246	278
community safety rank	300	416	563
physical environment rank	41	1173	1817
housing rank	233	326	870
access to services rank	798	1066	702

Radar plots for three areas with consecutive Child Index 2011 ranks, showing the different contributions from the domain ranks for each area, which nevertheless contribute to consecutive Child Index ranks. Note that deprivation increases towards the centre of the plots, and scales vary on the radar plots.



5. Aggregating to larger geographies

It is not possible to aggregate the ranks of either the Child Index or the domains to larger geographies or non-geographic groups by taking an average of the ranks (or scores) of the small areas which make up the larger area. This is because of the way in which the Index is constructed. We can know if one area is more or less deprived, but not by how much, so taking an average does not make sense. However, if larger geographies (or non-geographic groups) are to be compared, there are two methods for doing this.

The first method is to calculate the percentage of the small areas in the larger geography which are in the most-deprived 10 (ranks 1-190) or 20 (ranks 1-380) per cent of areas in Wales. This has been done for the local authorities, and the results are presented in the Child Index and domain chapters of this report, with a summary in Appendix D. The data are also available from the [StatsWales](#) web pages (Local Authority Analysis).

In general, the method for calculating the percentage for larger geographies is:

- count the number of LSOAs in the area of interest – n_LSOA;
- count the number of LSOAs ranked 1-190 (for the most-deprived 10%) in the area of interest – n_10%
- calculate the percentage of LSOAs in the most-deprived 10% - p_10%:
$$p_{10\%} = 100 \times (n_{10\%} / n_{LSOA})$$

If an area has more than 10% (20%) of its small areas in the most-deprived 10% (20%) it can be considered relatively deprived. If it has fewer than 10% (20%), then it can be considered relatively undeprived.

The second method is to use the individual indicators, which **can** be aggregated. Since March 2011, the indicators have been published not just at the small area level, but also for a range of other useful groups, including local authorities and Community First areas. These can simply be downloaded from the WIMD: indicator analysis folder on [StatsWales](#). A full list of the available aggregations can be found in Annex A.

6. Monitoring change over time

A ranking system cannot be used to monitor change over time. This is because it is not known whether a change in rank for an area is due to changes in that area itself, or to other areas moving up or down the ranks, changing its position without actual change in the area.

However, the indicator data offer a solution. The WIMD: indicator analysis will be updated annually, or as frequently as data are available. As the indicators represent absolute levels of the various measures of deprivation, they can be used to monitor change over time. The natural variability of small area statistics has been mitigated

by the use of mean values over several years where appropriate, but care should still be taken with the interpretation of small number statistics. Annual updates to the indicator analysis will be carried out for all the available aggregations which were first published in March 2011, starting with the WIMD 2011 indicators in the autumn, 2011.

7. Adding contextual information

The Child Index is most useful if it is used in conjunction with other information, either from the Child Index indicators, other published data, or local information. Contextual information could include: the location of existing programmes or services; the number of people affected by a particular aspect of deprivation, for example, the number in receipt of benefits, or the number affected by a particular health issue; the Defra rural-urban class; broadband access, and so on. Exploring the indicators and using additional information ensures that a complete understanding of the challenges in individual areas are adequately understood.

How to download the Child Index, its domains and indicators

This section presents a step-by-step introduction to downloading Child Index data from the Welsh Government's StatsWales web site.

- go to the [StatsWales](#) web pages;
- Child Index data can be found under Social Inclusion -> Welsh Index of Multiple Deprivation;
- select required data set, e.g. WIMD: Child Index 2011 for the 2011 publication of the Index, WIMD: indicator analysis, for indicator data. See Annex A for a list of available data;
- click on the data set of interest, and view the table of data;
- to explore the table:
 - click on '**Area**' to select areas of interest, and then '**Show table**' to return to the edited table;
 - use the **arrows** at the top of the table, next to '**other**', to view different data sets;
 - click on the '**i**' icons for more information;
 - to download data, click on the **open folder** symbol, at the top left of the page, and download as an Excel or csv spreadsheet;
 - to change the LSOA labels, from names (e.g. Braint) to codes (e.g. W01000008 or 008A), click on '**Area**', and then the label icon, fourth from the left, top left of the table. '**View alternate labels**' will appear as you hover over the correct icon. Then click on '**Show table**'.
- The figure below shows the location of the icons listed above.

Screenshots of StatsWales tables, with useful icons marked.

download data

STATSWALES

[006028] Welsh Index of Multiple Deprivation 2008 (Revised 13/07/2010 and 29/03/2011)

Measure	Rank	Deprivation score
Area	↑↓	↑↓
Isle of Anglesey	-	-
Aberffraw & Rhosneigr 1 (W01000001)	(r) 616	(r) 24.7
Aberffraw & Rhosneigr 2 (W01000002)	(r) 772	(r) 21.0
Amlwch Port (W01000003)	(r) 155	(r) 20.7

Report Table Chart

Other: Domain - Overall Index

read information

select geographical areas

explore data sets

view alternate labels

display edited table

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Item selection

Show table

[006028] Welsh Index of Multiple Deprivation 2008 (Revised 13/07/2010 and 29/03/2011)

Table size
1918 rows by 2 columns

COLUMNS:

- Measure

ROWS:

- Area

Other:

- Domain

Select range

- Isle of Anglesey
 - Aberffraw & Rhosneigr 1 (W01000001)
 - Aberffraw & Rhosneigr 2 (W01000002)
 - Amlwch Port (W01000003)
 - Amlwch Rural (W01000004)
 - Beaumaris (W01000005)
 - Bodffordd (W01000006)
 - Bodorgan (W01000007)
 - Braint (W01000008)
 - Bryngwran (W01000009)

Further guidance and information

The Welsh Index of Multiple Deprivation [web pages](#) host further information on the Index, including:

WIMD: Child Index 2011 Technical Report

WIMD: Child Index 2011 Quality Report

A summary of methodological changes in the WIMD: Child Index 2011

[Papers and minutes from the Index governance groups](#)



The Child Index

Child Index methodology

For a complete description of the construction of the Index, its domains, and the underlying indicators, please see the WIMD: Child Index 2011 Technical Report.

Domains

The Child Index contains seven domains, which contribute to the overall score with the following weights:

domain	weight / %
income	35.3
education	17.1
health	17.1
community safety	6.1
geographical access to services	12.2
housing	6.1
physical environment	6.1

The housing domain and the geographical access to services domain were not updated in 2011, because new data were not available. The 2008 ranks for these domains were used to construct the 2011 Child Index.

Methodological changes

There are no methodological changes in the construction of the Child Index from its domains. There are some minor changes to some of the domains and their indicators. These are described in the relevant domain chapters, and in Annex B: a summary of methodological changes in the Child Index 2011.

Index results and analysis

The Index and domain ranks (Child Index 2011) and indicators (WIMD: indicator analysis) can be downloaded from the Welsh Government's [StatsWales](#) web pages.

The table below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2008 and 2011. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are the numbers of areas which have moved from a more to a less deprived group. Below the diagonal are the numbers of areas which have moved from a less to a more deprived group.

Child Index 2008	Child Index 2011						total ranks 1-1896
	10% most deprived ranks 1-190	10-20% most deprived ranks 191-380	20-30% most deprived ranks 381-570	30-50% most deprived ranks 571 - 950	50% least deprived ranks 951 - 1896		
10% most deprived ranks 1-190	161	29	0	0	0	190	
10-20% most deprived ranks 191-380	27	121	40	2	0	190	
20-30% most deprived ranks 381-570	1	36	100	53		190	
30-50% most deprived ranks 571-950	1	3	47	262	67	380	
50% least deprived ranks 951-1896	0	1	3	63	879	946	
total ranks 1-1896	190	190	190	380	946	1896	

It should be remembered that the ranks are *relative*, and no conclusion about changes to the overall *level* of deprivation can be drawn from the Child Index ranks. The underlying indicators, which measure levels of various types of deprivation, must be analysed in order to understand how levels of deprivation have changed in individual areas.

The table below lists the ten most deprived areas in Wales, as determined by the 2011 Child Index, together with the four areas that were ranked between 1 and 10 in the Child Index 2008, but have moved out of that group in 2011.

LSOA	local authority	LSOA name	Child Index 2011	Child Index 2008
W01000237	Denbighshire	Rhyl South West 2	1	2
W01000240	Denbighshire	Rhyl West 2	2	7
W01000862	Swansea	Townhill 1	3	1
W01001308	Merthyr Tydfil	Penydarren 1	4	6
W01000241	Denbighshire	Rhyl West 3	5	29
W01001661	Newport	Pillgwenly 3	6	13
W01000864	Swansea	Townhill 3	7	4
W01001739	Cardiff	Ely 3	8	9
W01001300	Merthyr Tydfil	Gurnos 2	9	30
W01000991	Bridgend	Caerau 1	10	17
W01000239	Denbighshire	Rhyl West 1	13	3
W01001738	Cardiff	Ely 2	14	5
W01001689	Newport	Tredegar Park 2	33	8
W01000413	Wrexham	Queensway 1	12	10

- Parts of Rhyl in Denbighshire remain amongst the most deprived areas in Wales.
- The drivers for the change in Child Index ranks are different in different areas. For example, Tredegar Park 2 has improved from Child Index rank = 8 in 2008 to 33 in 2011 driven by improved ranking in the health and community safety domains. Rhyl West 1 has a strong rise in its education ranking.
- It should however be remembered that an analysis of the underlying indicators is required in order to understand whether changes in ranks for an area are due to real changes in the level of the underlying indicators, and what the scale of that change is. For example, although Townhill 1 has risen by only two places in the Child Index ranks, from the most deprived area in Wales to the third most deprived area, it has seen a sizeable change in the income indicator. The percentage of children living in income-benefit households has fallen by 15.7 percentage points from 79.3% in the Child Index 2008 to 63.6% in 2011.

Local authority analysis

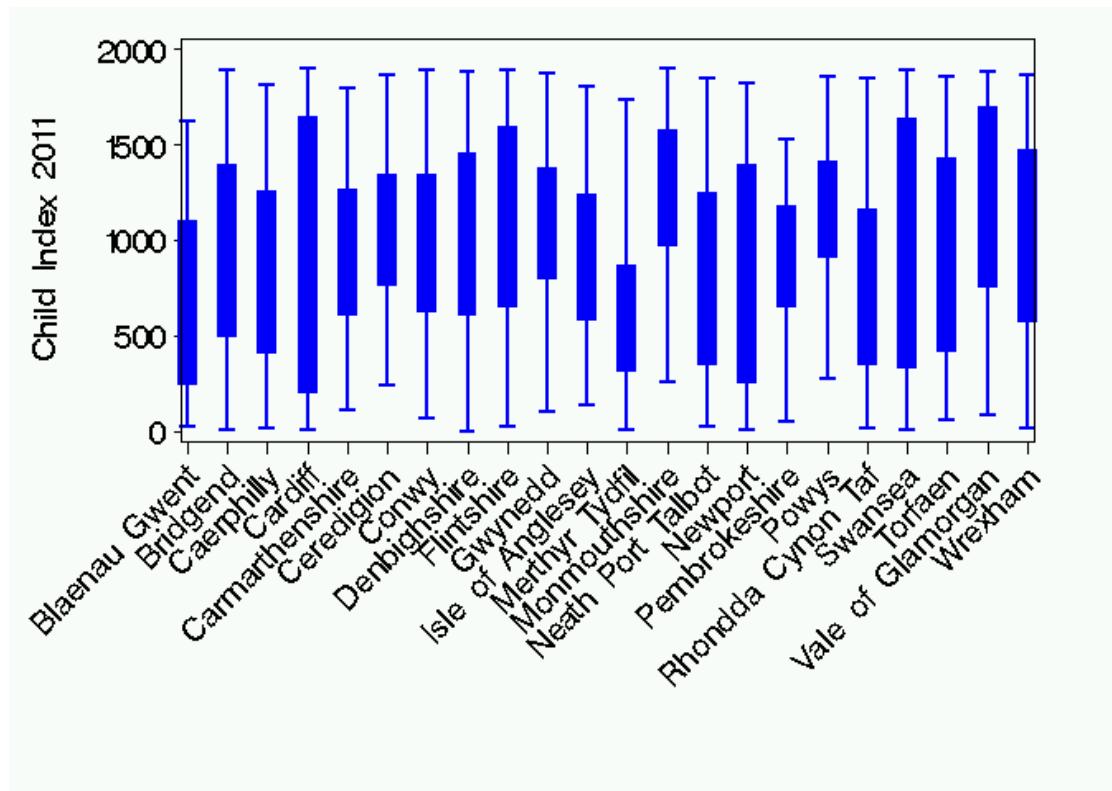
The table below shows, for WIMD 2011, the percentage of small areas (LSOAs) in each local authority which are in the most deprived 10% (ranks 1-190), 20% (ranks 1-380), 30% (ranks 1-570) and 50% (ranks 1-950) LSOAs in Wales.

In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation.

- The local authorities with the highest percentage of their LSOAs in the most deprived 10% in Wales, as determined by the Child index 2011, are Cardiff (22.2%), Newport (18.1 %), and Merthyr Tydfil (16.7%).
- Powys, Ceredigion, Monmouthshire have none of their LSOAs in the most deprived 10% in Wales, and Monmouthshire (24.1) and Powys (26.3) have only around one in four of their LSOAs in the most deprived half in Wales.
- Merthyr Tydfil (77.8%), Blaenau Gwent (72.3%), and Rhondda Cynon Taf (67.8%) have the highest percentages of their LSOAs in the most deprived half in Wales;
- although Cardiff has the highest percentage of its LSOAs in the most deprived 10% in Wales, it has only about half (51.7%) in the most deprived 50% in Wales. Urban areas tend to host the extremes of the relative deprivation distribution because urban areas tend to be the most socio-economically segregated, and hence have the highest concentrations of deprived (or non-deprived) people.

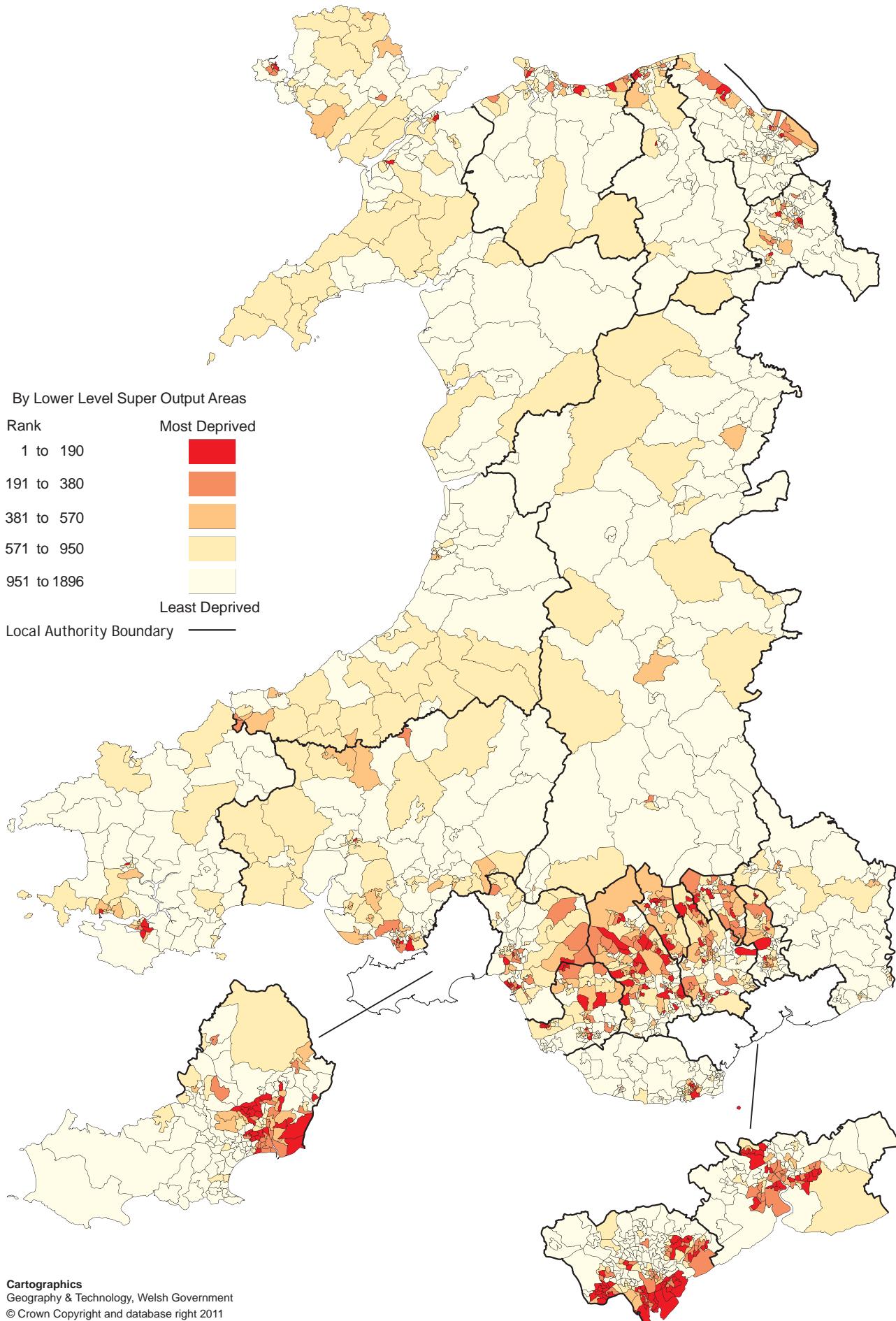
local authority	number of LSOAs in local authority	% LSOAs in most-deprived 10% ranks 1-190	% LSOAs in most-deprived 20% ranks 1-380	% LSOAs in most-deprived 30% ranks 1-570	% LSOAs in most-deprived 50% ranks 1-950
Isle of Anglesey	44	4.5	13.6	22.7	54.5
Gwynedd	75	4.0	4.0	6.7	41.3
Conwy	71	4.2	15.5	22.5	47.9
Denbighshire	58	10.3	15.5	24.1	43.1
Flintshire	92	4.3	14.1	22.8	32.6
Wrexham	85	7.1	17.6	24.7	40.0
Powys	80	0.0	1.3	5.0	26.3
Ceredigion	47	0.0	2.1	14.9	46.8
Pembrokeshire	71	7.0	8.5	19.7	46.5
Carmarthenshire	112	3.6	9.8	22.3	53.6
Swansea	147	14.3	26.5	35.4	47.6
Neath Port Talbot	91	9.9	26.4	35.2	61.5
Bridgend	85	11.8	21.2	31.8	52.9
Vale of Glamorgan	78	5.1	11.5	17.9	34.6
Cardiff	203	22.2	35.0	40.9	51.7
Rhondda Cynon Taf	152	15.8	27.0	46.1	67.8
Merthyr Tydfil	36	16.7	33.3	52.8	77.8
Blaenau Gwent	47	10.6	36.2	53.2	72.3
Caerphilly	110	10.9	21.8	37.3	60.9
Monmouthshire	58	0.0	1.7	10.3	24.1
Torfaen	60	6.7	20.0	36.7	55.0
Newport	94	18.1	38.3	44.7	57.4
Wales	1896	10.0	20.0	30.0	50.0

The box plot below shows the spread of Index ranks for each local authority in Wales. The blue boxes contain half the total number of LSOAs in each local authority, centred on the median (middle) rank for each local authority and the ‘whiskers’ show the full range of ranks in that local authority. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).



Welsh Index of Multiple Deprivation 2011: Child Index

Welsh Index of Multiple Deprivation





Income domain methodology

The income domain has a weight of 35.3% in the Child Index. This domain is the highest weighted component of the Child Index, as it is a key driver of deprivation. For a complete description of the construction of the income domain, please see the WIMD: Child Index 2011 Technical Report.

Indicators

The income domain contains one indicator:

indicator	units	denominator	indicator year(s)	data source
children in income-related benefits households		LSOA population aged 0 – 18 years	2009/10	DWP
children in households receiving Tax Credits with income less than 60% of the Wales median	%		2009/10	HMRC

The income-related benefits included in the indicator are the de-duplicated total of children in households in receipt of: Income Support, Jobseekers Allowance, Pension Credit, Income-Based Employment and Support Allowance.

Methodological changes

The Employment and Support Allowance (ESA) has replaced Incapacity Benefit for new claimants since October 2008. The Income Support element of Incapacity Benefit is replaced with the income-based element of ESA.

Income domain results and analysis

The full set of domain ranks (WIMD: Child Index 2011) and indicators (WIMD: Indicator analysis) can be downloaded from the Welsh Government's [StatsWales](#) web pages. The following sub-section describes some of the changes occurring to LSOAs in the income domain since the Child Index 2008.

The table below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2008 and 2011. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are the numbers of areas which have moved from a more to a less deprived group. Below the diagonal are the numbers of areas which have moved from a less to a more deprived group.

income domain 2011						
	10% most deprived ranks 1-190	10-20% most deprived ranks 191-380	20-30% most deprived ranks 381-570	30-50% most deprived ranks 571 - 950	50% least deprived ranks 951 - 1896	total ranks 1-1896
income domain 2008	10% most deprived ranks 1-190	156	29	4	1	0 190
	10-20% most deprived ranks 191-380	31	106	45	9	0 190
	20-30% most deprived ranks 381-570	1	48	82	51	7 190
	30-50% most deprived ranks 571-950	2	7	53	240	78 380
	50% least deprived ranks 951-1896	0	0	6	79	861 946
	total ranks 1-1896	222	177	185	437	875 1896

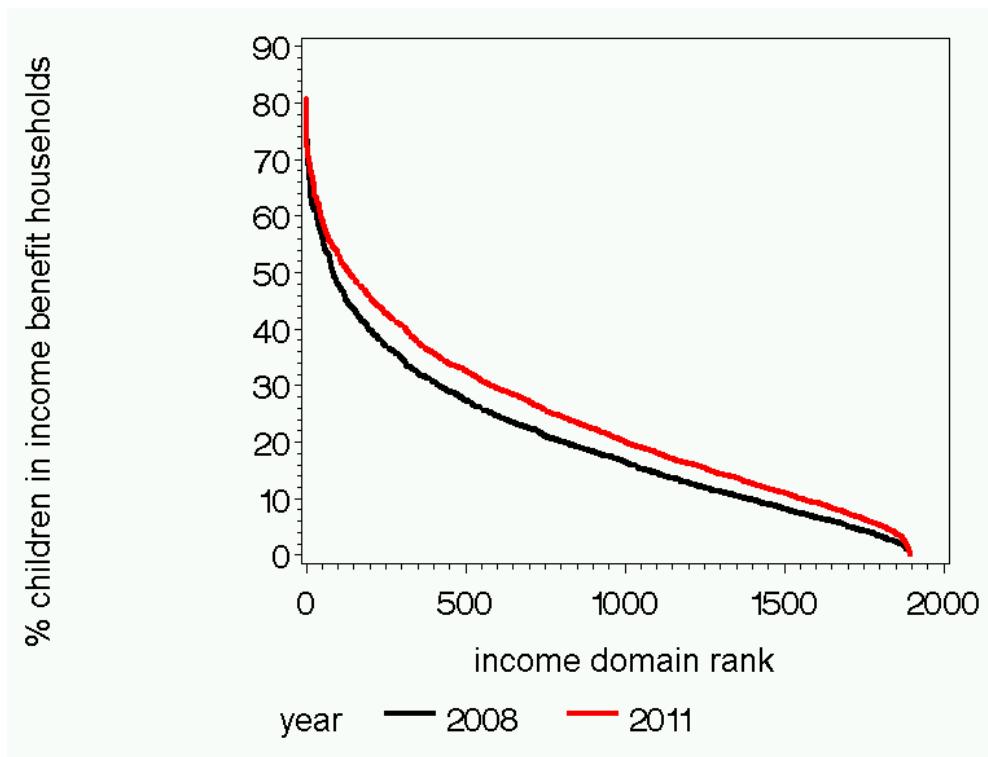
The table below lists those areas which have climbed or fallen groups the most.

- Two areas, Cathays 1 and Plasnewydd 11 have fallen by three groups, from the fourth group to the most deprived group.
- One area, Cathays 7, has climbed by three groups, with a drop in the percentage of children in income benefits households of 19.2% points, from 45.9% in 2008 to 26.7% in 2011. This is the biggest improvement in terms of percentage points.
- The biggest increase in the percentage of children in income benefits households was in Caerau 4, Cardiff. The percentage rose from 31.7 in the Child Index 2008, to 62.3 in the 2011 publication, an increase of 30.6 percentage points. This represents a change in income domain ranks from 370 in 2008 to 39 in the Child Index 2011.
- This compares with Cathays 1 with an increase of 26.4 percentage points, and Plasnewydd 11, with an increase of 23.5 percentage points.

	LSOA	LSOA name	local authority	income 2011	income 2008
biggest fallers	W01001718	Cathays 1	Cardiff	146	683
	W01001839	Plasnewydd 11	Cardiff	169	614
highest climber	W01001724	Cathays 7	Cardiff	712	122

The distribution of deprived population in the income domain

The plot below shows the income domain ranks and indicator values for the income domain in WIMD 2011.



The plot shows that at the most deprived end of the distribution there is a steep increase in the percentage of people receiving income benefits. The percentage falls by half in the first 307 ranks, from 80.7% at rank = 1, to 40.3% at rank = 307.

The table below puts some numbers to the plot above. Around half of those children in income-benefits households are found in the most-deprived quarter of LSOAs in Wales. More than one in four (25.8%) are found at a rank less than or equal to 190, that is, in the most deprived 10% of areas in Wales.

% of total number of deprived children	% of Welsh LSOAs	domain ranks
25.8	most-deprived 10%	1 - 190
43.6	most-deprived 20%	1 - 380
50	most-deprived 24.6%	1 - 466
5.32	least-deprived 20%	1516 - 1896

Local authority analysis

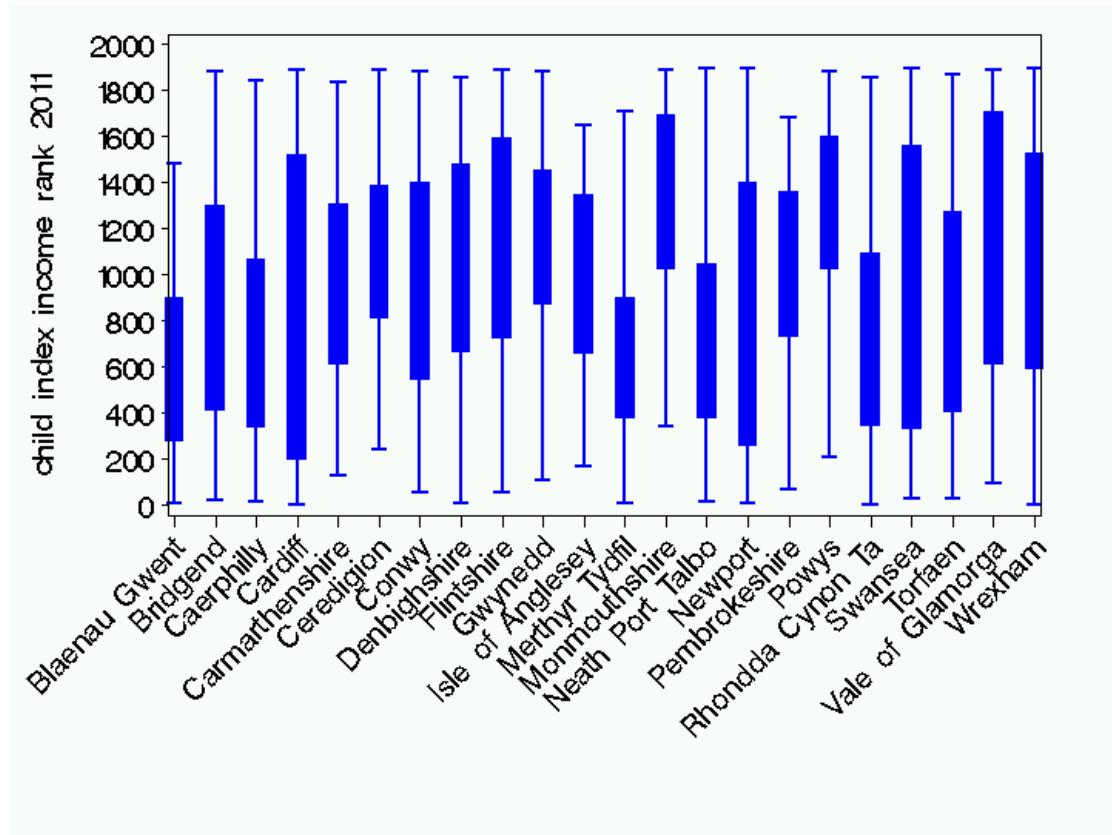
The table below shows, for the income domain of WIMD 2011, the percentage of small areas (LSOAs) in each local authority which are in the most deprived 10% (ranks 1-190), 20 % (ranks 1-380), 30% (ranks 1-570) and 50% (ranks 1-950) LSOAs in Wales.

In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation.

- Cardiff (23.2%) has the highest percentage of its LSOAs in the most deprived 10% in Wales. Blaenau Gwent (17.0%), Newport (17.0%) and Merthyr Tydfil (16.7%) have the next highest percentages.
- Although Cardiff has a high proportion of its LSOAs in the most deprived 10% in Wales, only 53.2% of its LSOAs are in the most deprived 50%, and for Newport, the figure is 54.3%. For both these local authorities, this is about the expected number if deprivation was distributed uniformly in Wales. This compares with much higher percentages for Blaenau Gwent (78.7%) and Merthyr Tydfil (77.8%). These figures demonstrate the mixed nature of urban areas, which tend to host the areas at the extremes of the relative deprivation distribution.
- Powys, Ceredigion and Monmouthshire have none of their LSOAs in the most deprived 10% of areas in Wales.
- These three local authorities also have the lowest proportion of their LSOAs in the most deprived half in Wales: Powys – 18.8%, Monmouthshire – 24.1% and Ceredigion – 31.9%.

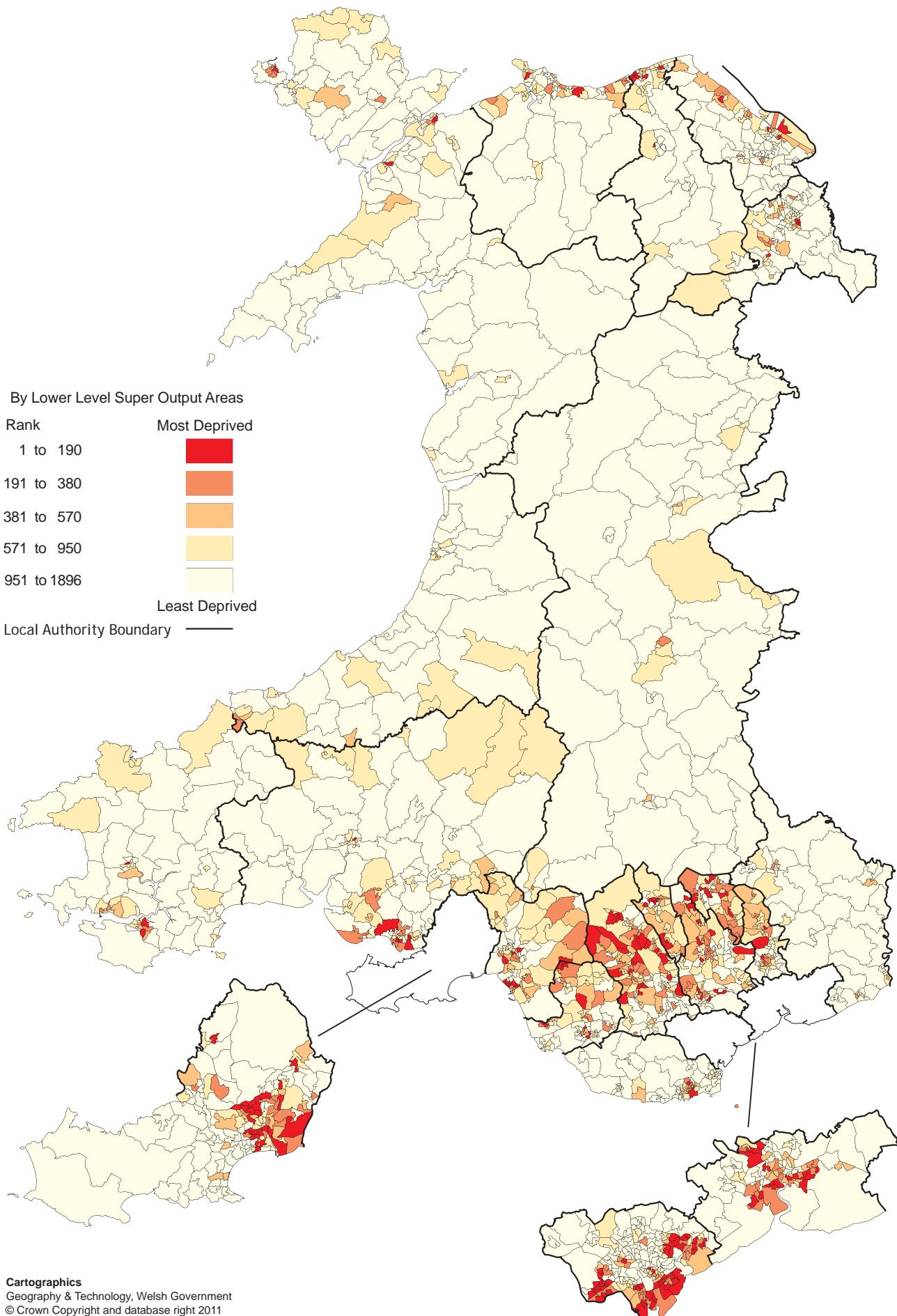
local authority	number of LSOAs in local authority	% LSOAs in most-deprived 10% ranks 1-190	% LSOAs in most-deprived 20% ranks 1-380	% LSOAs in most-deprived 30% ranks 1-570	% LSOAs in most-deprived 50% ranks 1-950
Isle of Anglesey	44	2.3	13.6	18.2	38.6
Gwynedd	75	4.0	5.3	6.7	29.3
Conwy	71	2.8	14.1	26.8	46.5
Denbighshire	58	13.8	13.8	20.7	46.6
Flintshire	92	4.3	10.9	22.8	35.9
Wrexham	85	5.9	11.8	23.5	41.2
Powys	80	0.0	3.8	6.3	18.8
Ceredigion	47	0.0	2.1	8.5	31.9
Pembrokeshire	71	4.2	8.5	15.5	43.7
Carmarthenshire	112	5.4	14.3	18.8	46.4
Swansea	147	15.6	26.5	34.7	48.3
Neath Port Talbot	91	12.1	24.2	41.8	70.3
Bridgend	85	9.4	22.4	31.8	56.5
Vale of Glamorgan	78	2.6	10.3	21.8	37.2
Cardiff	203	23.2	35.0	41.4	53.2
Rhondda Cynon Taf	152	13.8	29.6	44.7	70.4
Merthyr Tydfil	36	16.7	25.0	41.7	77.8
Blaenau Gwent	47	17.0	42.6	55.3	78.7
Caerphilly	110	11.8	25.5	42.7	66.4
Monmouthshire	58	0.0	3.4	8.6	24.1
Torfaen	60	5.0	21.7	36.7	66.7
Newport	94	17.0	31.9	46.8	54.3
Wales	1896	10	20	30	50

The box plot below shows the spread of income domain ranks for each local authority in Wales. The blue boxes contain half the total number of LSOAs in each local authority, centred on the median (middle) rank for each local authority and the 'whiskers' show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).



Welsh Index of Multiple Deprivation 2011: Child Index

Income Domain





Education domain methodology

The education domain has a relative weight of 14% in the Index. For a complete description of the construction of the education domain, please see the WIMD 2011 Technical Report.

Indicators

The education domain contains five indicators. These indicators are the same as in WIMD 2011, but the Child Index does not include the indicators for the percentage of adults with no qualifications or the proportion of 18 – 19 years olds not entering higher education. This means that the weights determined by the factor analysis are different, and that the resulting set of domain ranks are different from WIMD 2011.

indicator	units	denominator	indicator year(s)	data source	weight
Key Stage 2 average point scores	points score	number of KS2 pupils	2008-10		0.11
Key Stage 3 average point scores	points score	number of KS3 pupils	2008-10		0.33
Key Stage 4 average point scores	points score	number of KS4 pupils	2009-10	National Pupil Database / Pupil-Level Annual School Census / National Data Collection	0.17
percentage primary school half day absence	%	number of half day school sessions	2008/9-2009/10		0.17
percentage secondary school half day absence	%	number of half day school sessions	2008/9-2009/10		0.22

All the education indicators in the education domain were updated for the Child Index 2011.

Methodological changes

Pupil postcodes are now available for both primary and secondary absences. This is an improvement over WIMD 2008, where the school-level data had to be apportioned to postcodes. The Key Stage 4 (GCSE-level) points scoring system changed in 2008, and it also now includes qualifications other than GCSEs. Data are no longer available for the old points system. The inclusion of qualifications other than GCSE improves this indicator, but both the level and the ratio between

successive grades are changed, which may lead to differences in the ranking.

Education domain results and analysis

The full set of domain ranks (Child Index 2011) and indicators (WIMD: indicator analysis) can be downloaded from the Welsh Government's [StatsWales](#) web pages. The following sub-section describes some of the changes occurring to LSOAs in the education domain since the Child index 2008.

The table below shows the number of small areas (LSOAs) in each of the Child Index deprivation groups for 2008 and 2011. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are the numbers of areas which have moved from a more to a less deprived group. Below the diagonal are the numbers of areas which have moved from a less to a more deprived group.

education domain 2008	education domain 2011					total ranks 1-1896
	10% most deprived ranks 1-190	10-20% most deprived ranks 191-380	20-30% most deprived ranks 381-570	30-50% most deprived ranks 571 - 950	50% least deprived ranks 951 - 1896	
10% most deprived ranks 1-190	145	39	6	0	0	190
10-20% most deprived ranks 191-380	39	84	45	19	3	190
20-30% most deprived ranks 381-570	3	47	57	76	7	190
30-50% most deprived ranks 571-950	2	19	72	187	100	380
50% least deprived ranks 951-1896	1	1	10	98	836	946
total ranks 1-1896	190	190	190	380	946	1896

The table below lists the biggest climbers and fallers in the education domain, between WIMD 2008 and WIMD 2011. It should be noted that:

- across all the LSOAs, Key Stage 2 and 3 LSOA average point scores have, on average remained fairly constant, although of course there will be differences in the changes to individual LSOAs;
- LSOA average secondary and primary school absences have fallen slightly;
- as the scoring system for Key Stage 4 has changed, we cannot compare the Child Index 2008 data with the 2011 data directly, although we can compare changes in individual LSOAs with the average change across all the LSOAs;

- although there is no clear single driver for the highest climbers listed below, all the LSOAs which have improved their position have better than average increases in their Key Stage 4 scores, and improvement in their primary or secondary absences, or a combination of those three indicators. They have all seen improvements in Key Stage 3 average point scores;
- the biggest fallers have all seen an above average drop in their Key Stage 4 performances, or a fall in Key Stage 3 scores compared with the Child Index 2008 indicators. They have also seen an increase in primary absences and / or secondary absences. The Key Stage 4 performance of Plasnewydd 4 is particularly poor.

	LSOA	LSOA name	local authority	education 2011	education 2008
biggest fallers	W01001832	Plasnewydd 4	Cardiff	12	1452
	W01000743	Castle 2	Swansea	39	886
	W01001256	Trallwng 1	Rhondda Cynon Taf	289	1204
highest climbers	W01001263	Treforest 2	Rhondda Cynon Taf	1	601
	W01001215	Pentre 3	Rhondda Cynon Taf	1007	307
highest climbers	W01001713	Canton 5	Cardiff	1012	240
	W01001835	Plasnewydd 7	Cardiff	964	217

Local authority analysis

The table below shows, for the education domain of WIMD 2011, the percentage of small areas (LSOAs) in each local authority which are in the most deprived 10% (ranks 1-190), 20% (ranks 1-380), 30% (ranks 1-570) and 50% (ranks 1-950) LSOAs in Wales.

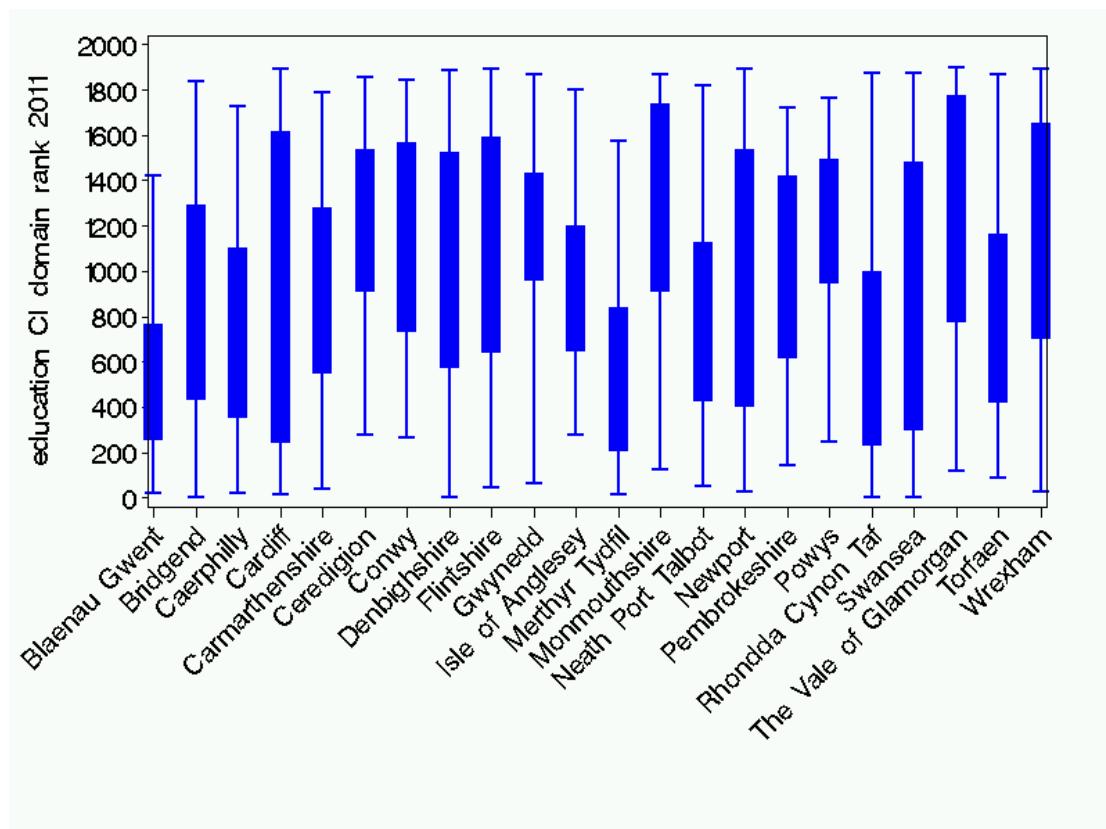
In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation.

- The most deprived local authority in the education domain is Merthyr Tydfil with 22.2% of its LSOAs in the most deprived 10% in Wales. Cardiff (19.7%) and Rhondda Cynon Taf (19.1%) have the next highest percentages of their LSOAs in the most deprived 10% in Wales.
- However, Cardiff has about half (51.2%) of its LSOAs in the most deprived half in Wales. Caerphilly has 83.0% and Merthyr Tydfil 80.6%.
- The least deprived local authorities in the education domain are the Isle of Anglesey, Conwy, Powys and Ceredigion, with none of their LSOAs in the most deprived 10% in Wales.

- Gwynedd, Powys, Ceredigion and Monmouthshire have only around one in four of their LSOAs in the most deprived half of LSOAs in Wales.

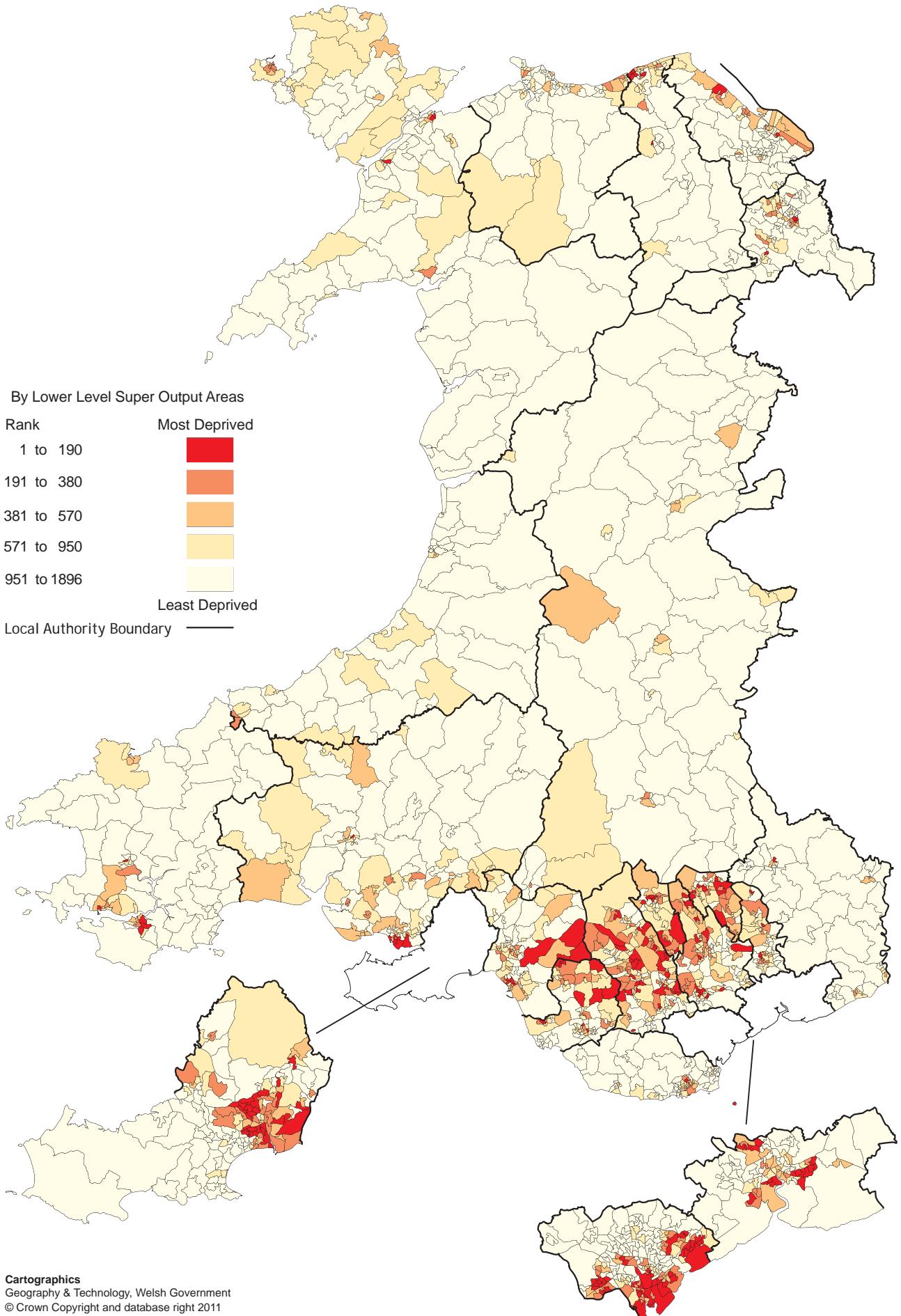
local authority	number of LSOAs in local authority	% LSOAs in most-deprived 10% ranks 1-190	% LSOAs in most-deprived 20% ranks 1-380	% LSOAs in most-deprived 30% ranks 1-570	% LSOAs in most-deprived 50% ranks 1-950
Isle of Anglesey	44	0.0	11.4	20.5	54.5
Gwynedd	75	4.0	6.7	9.3	24.0
Conwy	71	0.0	4.2	12.7	36.6
Denbighshire	58	12.1	17.2	24.1	50.0
Flintshire	92	2.2	12.0	21.7	35.9
Wrexham	85	4.7	16.5	20.0	35.3
Powys	80	0.0	2.5	8.8	25.0
Ceredigion	47	0.0	2.1	4.3	25.5
Pembrokeshire	71	7.0	11.3	23.9	39.4
Carmarthenshire	112	5.4	9.8	25.9	52.7
Swansea	147	16.3	29.9	40.1	53.1
Neath Port Talbot	91	9.9	20.9	34.1	61.5
Bridgend	85	11.8	23.5	34.1	60.0
Vale of Glamorgan	78	1.3	9.0	16.7	35.9
Cardiff	203	19.7	32.5	39.9	51.2
Rhondda Cynon Taf	152	19.1	35.5	48.0	73.7
Merthyr Tydfil	36	22.2	38.9	52.8	80.6
Blaenau Gwent	47	12.7	26.4	40.9	66.4
Caerphilly	110	14.9	40.4	59.6	83.0
Monmouthshire	58	6.7	20.0	30.0	63.3
Torfaen	60	1.7	3.4	12.1	25.9
Newport	94	17.0	24.5	37.2	48.9
Wales	1896	10.0	20.0	30.0	50.0

The box plot below shows the spread of education domain ranks for each local authority in Wales. The blue boxes contain half the total number of LSOAs in each local authority, centred on the median (middle) rank for each local authority and the 'whiskers' show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).



Welsh Index of Multiple Deprivation 2011: Child Index

Education, Skills and Training Domain



Cartographics

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Health domain methodology

The health domain has a relative weight of 17.1% in the Child Index. For a complete description of the construction of the health domain, please see the WIMD: Child index 2011 Technical Report.

Indicators

The health domain contains two indicators:

domain	indicator	denominator	indicator year(s)	data source	weight
percentage of live single births < 2.5kg	%	number of live single births	2000-2009	ONS	0.50
limiting long-term illness (children)	number per 100,000	LSOA population aged 0 – 18 years old	2001	Census, ONS	0.50

The limiting long-term illness indicator was not updated for the Child Index 2011, because Census 2011 data were not yet available.

Methodological changes

There are no methodological changes in this domain.

Health domain results and analysis

The full set of domain ranks (Child index 2011) and indicators (WIMD: indicator analysis) can be downloaded from the Welsh Government's [StatsWales](#) web pages. The following sub-section describes some of the changes occurring to LSOAs in the health domain since the Child Index 2008.

The table below shows the number of small areas (LSOAs) in each of the Child Index deprivation groups for WIMD 2008 and 2011. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are the numbers of areas which have moved from a more to a less deprived group. Below the diagonal are the numbers of areas which have moved from a less to a more deprived group.

	health domain 2011					total ranks 1-1896
	10% most deprived ranks 1-190	10-20% most deprived ranks 191-380	20-30% most deprived ranks 381-570	30-50% most deprived ranks 571 - 950	50% least deprived ranks 951 - 1896	
health domain 2008	10% most deprived ranks 1-190	138	37	12	3	190
	10-20% most deprived ranks 191-380	38	84	44	22	2 190
	20-30% most deprived ranks 381-570	12	48	62	63	5 190
	30-50% most deprived ranks 571-950	2	18	65	196	99 380
	50% least deprived ranks 951-1896		3	7	96	840 946
	total ranks 1-1896	190	190	190	380	946 1896

The table below lists the biggest climbers and fallers in the health domain between 2008 and 2011. Between 2008 and 2011:

- two LSOAs have fallen from the fourth group to the most deprived group, and three from the least to the second-most deprived group;
- three LSOAs have improved from the most to the fourth-most deprived group, and two have moved from the second-most deprived group into the least-deprived group;
- as the limiting long-term illness indicator was not updated for the Child Index 2011, all of these changes are driven by changes to the low birth weight indicator.

	LSOA	LSOA name	local authority	health 2011	health 2008
biggest fallers	W01000754	Clydach 5	Swansea	188	626
	W01000852	St. Thomas 4	Swansea	139	667
	W01001241	Taffs Well 2	Rhondda Cynon Taf	212	1018
	W01001673	Rogerstone 5	Newport	353	1064
	W01001722	Cathays 5	Cardiff	329	1879
highest climbers	W01001330	Aber Valley 1	Caerphilly	620	128
	W01001440	Beaufort 1	Blaenau Gwent	814	100
	W01001620	Bettws 4	Newport	576	175
	W01001172	Cymmer 2	Rhondda Cynon Taf	1148	342
	W01001205	Mountain Ash East 2	Rhondda Cynon Taf	1128	362

Local authority analysis

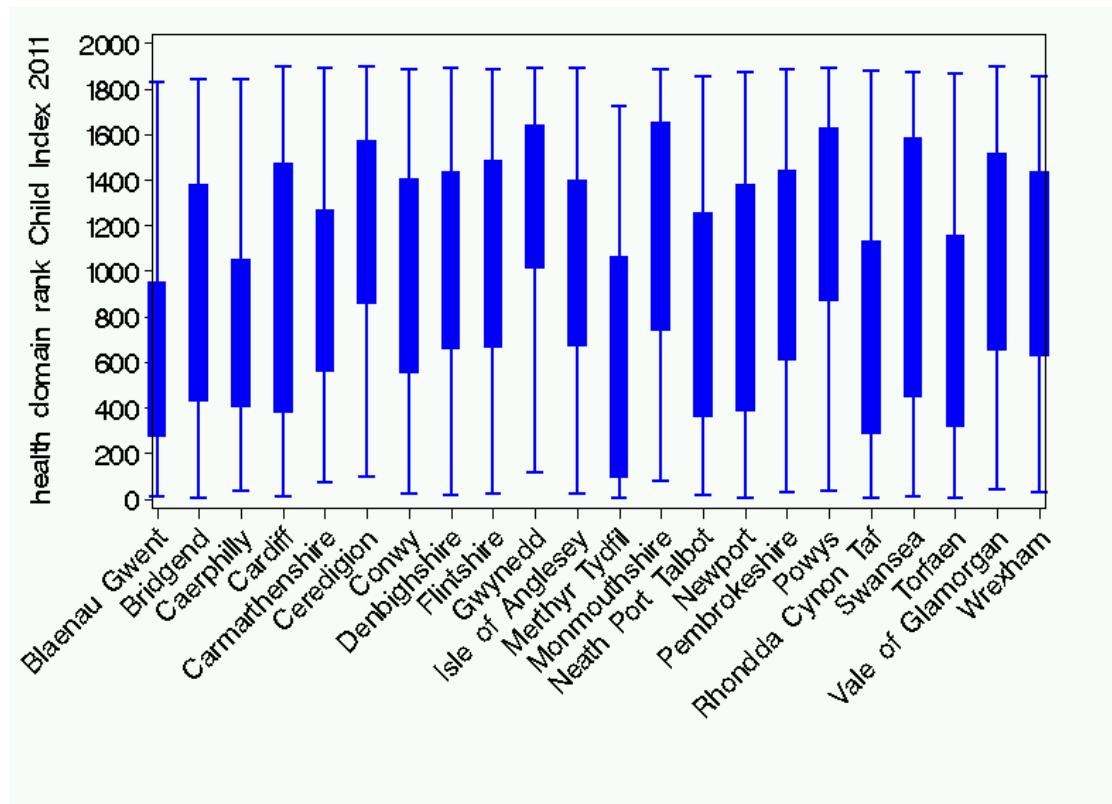
The table below shows, for the health domain of the Child Index 2011, the percentage of small areas (LSOAs) in each local authority which are in the most deprived 10% (ranks 1-190), 20% (ranks 1-380), 30% (ranks 1-570) and 50% (ranks 1-950) LSOAs in Wales.

In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation.

- The most deprived local authority in the health domain is Merthyr Tydfil, with more than one in three (36.1%) of its LSOAs in the most deprived 10% in Wales. Neath Port Talbot is the next most deprived, with just under one in four (18.7%) of its LSOAs in the most deprived 10% in Wales.
- The least deprived local authorities in the health domain are Gwynedd and Powys, each with only one LSOA (1.3%) in the most deprived 10% in Wales.
- Blaenau Gwent (76.6%) and Merthyr Tydfil (72.2%) both have around three quarters of their LSOAs in the most deprived half of LSOAs in Wales.
- The Valleys contain the most deprived local authorities in the health domain, and rural local authorities are the least deprived by this measure.

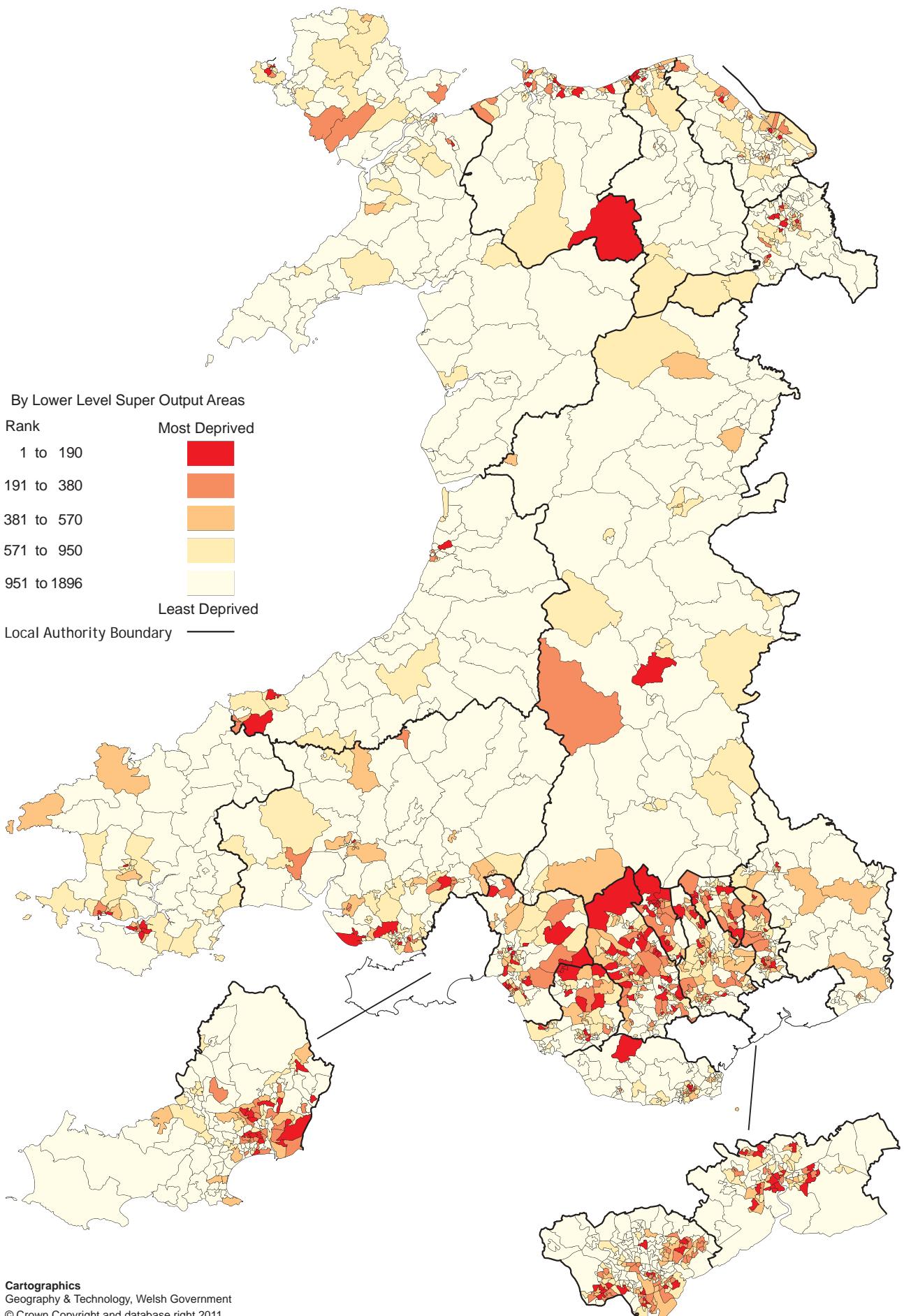
local authority	number of LSOAs in local authority	% LSOAs in most-deprived 10% ranks 1-190	% LSOAs in most-deprived 20% ranks 1-380	% LSOAs in most-deprived 30% ranks 1-570	% LSOAs in most-deprived 50% ranks 1-950
Isle of Anglesey	44	4.5	13.6	18.2	47.7
Gwynedd	75	1.3	5.3	6.7	21.3
Conwy	71	11.3	21.1	25.4	46.5
Denbighshire	58	12.1	13.8	22.4	41.4
Flintshire	92	4.3	12	22.8	41.3
Wrexham	85	8.2	14.1	22.4	44.7
Powys	80	1.3	2.5	8.8	28.8
Ceredigion	47	6.4	12.8	14.9	29.8
Pembrokeshire	71	8.5	12.7	23.9	52.1
Carmarthenshire	112	5.4	14.3	25.9	50.9
Swansea	147	9.5	23.1	32	46.3
Neath Port Talbot	91	18.7	26.4	42.9	61.5
Bridgend	85	15.3	22.4	31.8	56.5
Vale of Glamorgan	78	6.4	11.5	19.2	39.7
Cardiff	203	7.4	24.1	36	51.2
Rhondda Cynon Taf	152	17.1	34.2	47.4	65.8
Merthyr Tydfil	36	36.1	52.8	63.9	72.2
Blaenau Gwent	47	14.9	36.2	38.3	76.6
Caerphilly	110	10	20.9	42.7	65.5
Monmouthshire	58	1.7	5.2	15.5	31
Torfaen	60	11.7	31.7	40	65
Newport	94	17	24.5	34	54.3
Wales	1896	10.0	20.0	30.0	50.0

The box plot below shows the spread of health domain ranks for each local authority in Wales. The blue boxes contain half the total number of LSOAs in each local authority, centred on the median (middle) rank for each local authority and the ‘whiskers’ show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).



Welsh Index of Multiple Deprivation 2011: Child Index

Health Domain



Cartographics

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Community safety

Community safety domain methodology

For a complete description of the construction of the community safety domain, please see the WIMD: Child Index 2011 Technical Report. This domain is the same as the WIMD domain.

Indicators

The community safety domain contains seven indicators:

indicator	units	denominator	indicator year(s)	data source	weight
percentage of adult offenders	%	resident population age 18+, less prison population age 18+	2008/9 – 2009/10	Wales Probation Trust	0.20
police recorded burglary	%	number of dwellings, plus total number of business addresses	2008/9 – 2009/10	Welsh Police Forces	0.06
police recorded criminal damage	%	resident population excluding prisoners, plus total non-resident workplace population	2008/9 – 2009/10	Welsh Police Forces	0.35
fire incidence	%	resident population	2009/10 – 20010/11	Welsh Government	0.04
police recorded theft	%	resident population excluding prisoners, plus total non-resident workplace population	2008/9 – 2009/10	Welsh Police Forces	0.07
police recorded violent crime	%	resident population excluding prisoners, plus total non-resident workplace population	2009/10	Welsh Police Forces	0.19
percentage of youth offenders	%	resident population age 10-17, less prison population age 10-16	2008/9 – 2009/10	Ministry of Justice	0.08

Methodological changes

In the Child Index 2011, the violent crime rate is based on a single year (2009/10) of data, instead of the average over two years of data. This is due to a crime coding issue in the 2008/9 data year.

Community safety domain results and analysis

The full set of domain ranks (Child Index 2011) and indicators (WIMD: indicator analysis) can be downloaded from the Welsh Government's [StatsWales](#) web pages. The following sub-section describes some of the changes occurring to LSOAs in the community safety domain since the Child Index 2008.

The table below shows the number of small areas (LSOAs) in each of the Child Index deprivation groups for the Child Index 2008 and 2011. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are the numbers of areas which have moved from a more to a less deprived group. Below the diagonal are the numbers of areas which have moved from a less to a more deprived group.

community safety domain 2008	community safety domain 2011					total ranks 1-1896
	10% most deprived ranks 1-190	10-20% most deprived ranks 191-380	20-30% most deprived ranks 381-570	30-50% most deprived ranks 571 - 950	50% least deprived ranks 951 - 1896	
10% most deprived ranks 1-190	141	41	8	0	0	190
10-20% most deprived ranks 191-380	33	85	48	24	0	190
20-30% most deprived ranks 381-570	13	36	73	65	3	190
30-50% most deprived ranks 571-950	3	27	55	201	94	380
50% least deprived ranks 951-1896	0	1	6	90	849	946
total ranks 1-1896	190	190	190	380	946	1896

The table below lists the biggest fallers in the community safety domain, between the Child Index 2008 and 2011. It should be noted that:

- no area climbed by more than two deprivation groups;
- four areas fell by three groups;
- Abercynon2 (Rhondda Cynon Taf), Cwm 2 and Cwmtillery 1 (both in Blaenau Gwent) all fell from the fourth deprivation group (ranks 571 – 950) to the most deprived group (ranks 1 – 190);
- Grangetown 2, Cardiff, fell from the least deprived group (ranks 951 – 1896) to the second most deprived group (ranks 191 – 380).

- The fall in ranks for this domain in these areas is driven largely by increases in violent crime and criminal damage rates. Criminal damage was a less important driver for Cwmtillery 1, and an increase in youth offending was a significant factor for Abercynon 2.

	LSOA	LSOA name	local authority	community safety 2011	community safety 2008
biggest fallers	W01001144	Abercynon 2	Rhondda Cynon Taf	166	684
	W01001451	Cwm 2	Blaenau Gwent	148	734
	W01001453	Cwmtillery 1	Blaenau Gwent	125	615
	W01001760	Grangetown 2	Cardiff	366	1096

Local authority analysis

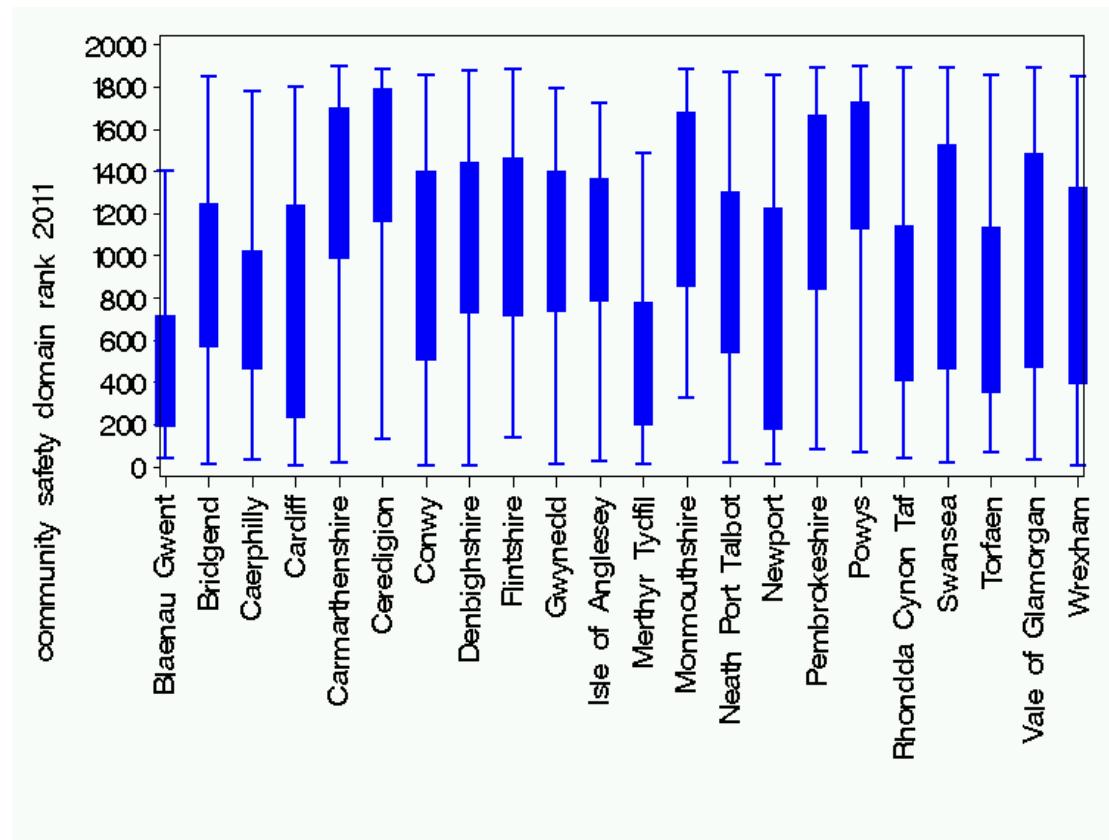
The table below shows, for the community safety domain of the Child Index 2011, the percentage of small areas (LSOAs) in each local authority which are in the most deprived 10% (ranks 1-190), 20% (ranks 1-380), 30% (ranks 1-570) and 50% (ranks 1-950) LSOAs in Wales.

In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation.

- The most deprived local authority in the community safety domain is Newport, with 25.5% of its LSOAs in the most deprived 10% in Wales, with Merthyr Tydfil next, with 25.0% of its LSOA in the most deprived 10%.
- Merthyr Tydfil has 88.9% and Blaenau Gwent 87.2% of their LSOAs in the most deprived 50% in Wales.
- The least deprived local authority in the community safety domain is Monmouthshire, with no LSOAs in the most deprived 10% in Wales.
- In general, rural local authorities tend to be less deprived in this domain than the local authorities of urban and Valleys regions.

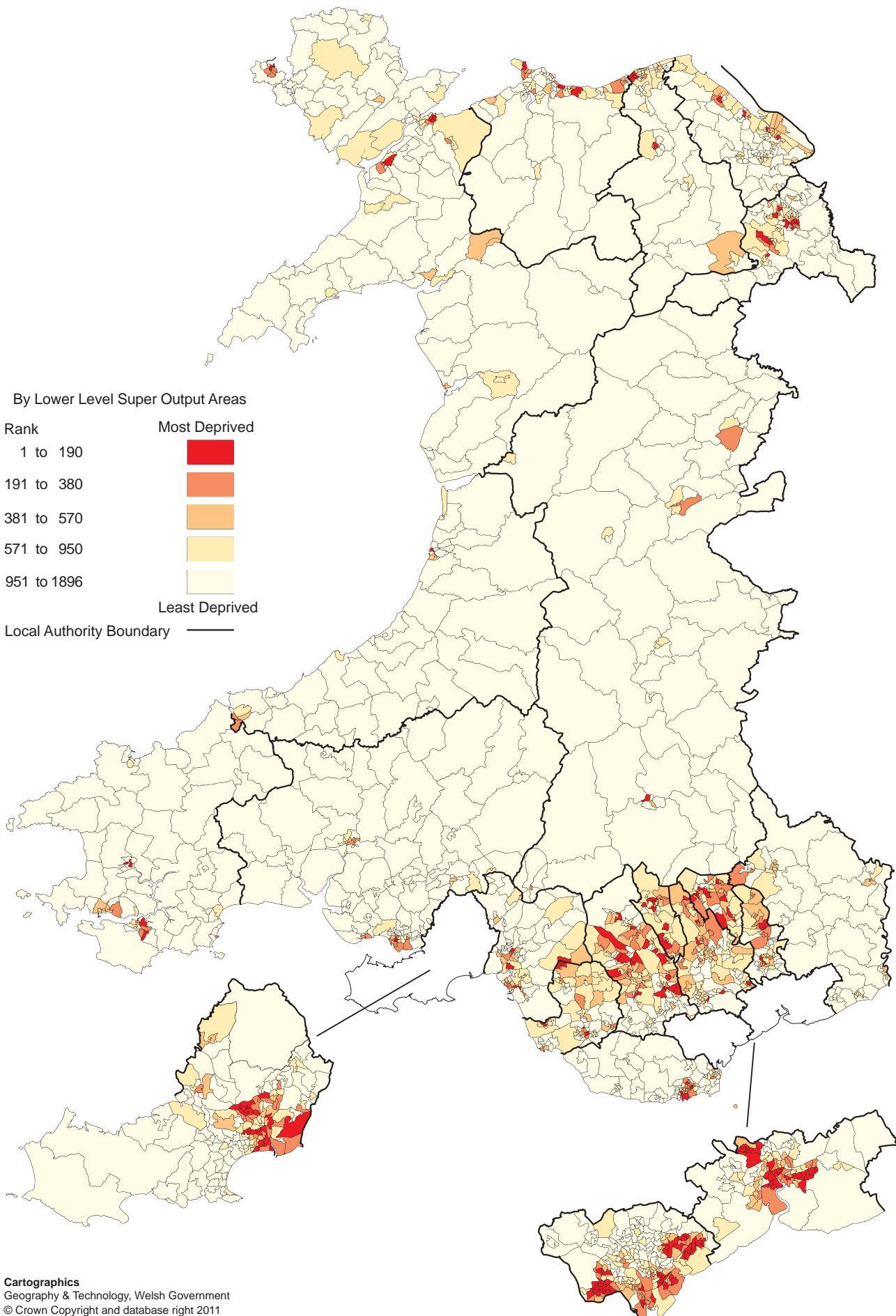
local authority	number of LSOAs in local authority	% LSOAs in most-deprived 10% ranks 1-190	% LSOAs in most-deprived 20% ranks 1-380	% LSOAs in most-deprived 30% ranks 1-570	% LSOAs in most-deprived 50% ranks 1-950
Isle of Anglesey	44	4.5	13.6	18.2	34.1
Gwynedd	75	8.0	12.0	17.3	34.7
Conwy	71	5.6	18.3	28.2	49.3
Denbighshire	58	10.3	13.8	20.7	44.8
Flintshire	92	4.3	8.7	21.7	43.5
Wrexham	85	15.3	22.4	29.4	52.9
Powys	80	1.3	7.5	8.8	17.5
Ceredigion	47	2.1	6.4	10.6	19.1
Pembrokeshire	71	5.6	12.7	19.7	28.2
Carmarthenshire	112	1.8	8.9	14.3	23.2
Swansea	147	10.2	21.8	29.9	48.3
Neath Port Talbot	91	5.5	16.5	26.4	45.1
Bridgend	85	7.1	16.5	25.9	55.3
Vale of Glamorgan	78	6.4	20.5	29.5	42.3
Cardiff	203	20.7	33.5	43.3	62.6
Rhondda Cynon Taf	152	11.8	23.0	38.8	65.8
Merthyr Tydfil	36	25.0	44.4	55.6	88.9
Blaenau Gwent	47	23.4	44.7	55.3	87.2
Caerphilly	110	6.4	17.3	37.3	70.9
Monmouthshire	58	0.0	1.7	12.1	36.2
Torfaen	60	8.3	26.7	46.7	65.0
Newport	94	25.5	38.3	51.1	68.1
Wales	1896	10.0	20.0	30.0	50.0

The box plot below shows the spread of community safety domain ranks for each local authority in Wales. The blue boxes contain half the total number of LSOAs in each local authority, centred on the median (middle) rank for each local authority and the 'whiskers' show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).



Welsh Index of Multiple Deprivation 2011: Child Index

Community Safety Domain



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Geographical access to services

Access to services domain methodology

The geographical access to services domain was not updated for the Child Index 2011. Therefore, it is exactly the same as the domain in 2008. It has a weight of 12.2% in the Child Index.

For a complete description of the construction of the access to services domain, please see the WIMD: Child Index 2011 Technical Report.

Indicators

The access to services domain contains four indicators:

indicator	units	denominator	indicator year(s)	data source	weight
mean bus + walking journey time to leisure centre				Public Transport & Road Network	0.40
mean bus + walking journey time to library	minutes	number of journeys	2008	Postal Address File,	0.17
mean bus + walking journey time to primary school				Ordnance Survey	0.17
mean bus + walking journey time to secondary school					0.26

Access to services domain results and analysis

The full set of domain ranks (Child index 2011) and indicators (WIMD: indicator analysis) can be downloaded from the Welsh Government's [StatsWales](#) web pages.

Local authority analysis

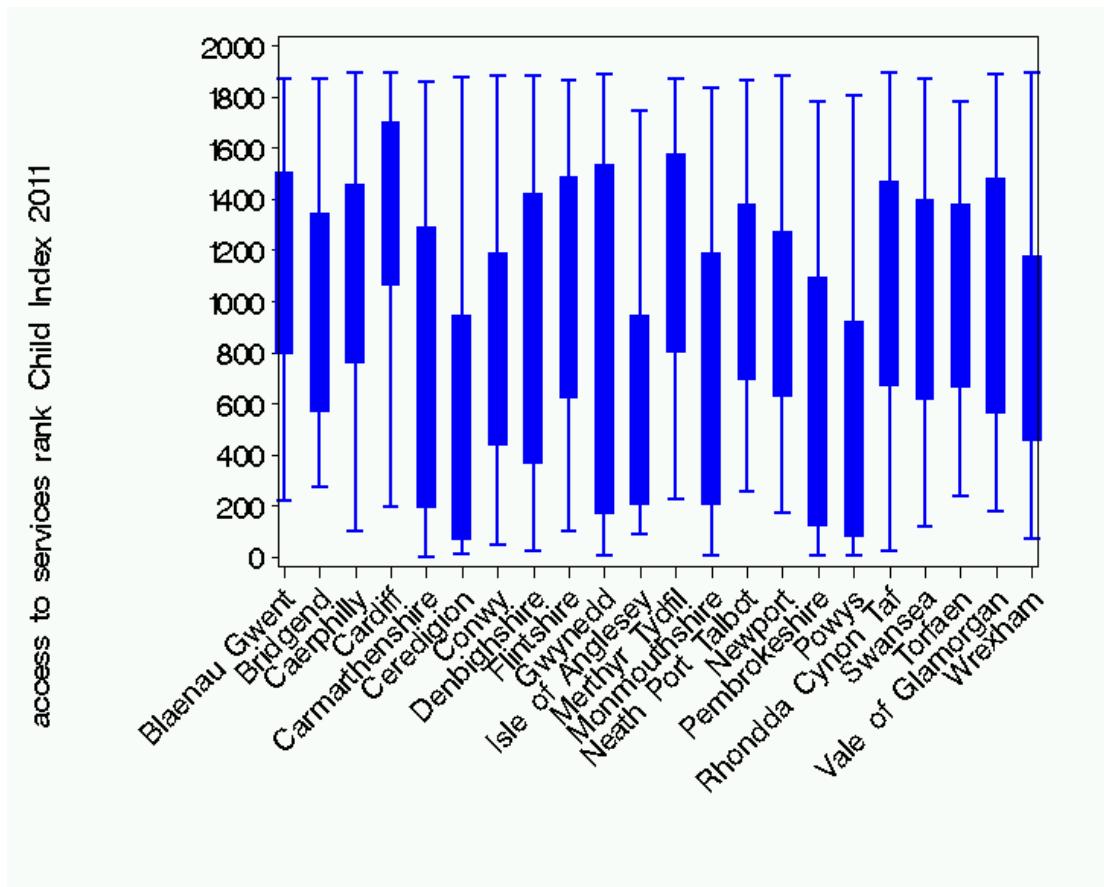
The table below shows, for the access to services domain of the Child index 2011, the percentage of small areas (LSOAs) in each local authority which are in the most deprived 10% (ranks 1-190), 20% (ranks 1-380), 30% (ranks 1-570) and 50% (ranks 1-950) LSOAs in Wales.

In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation.

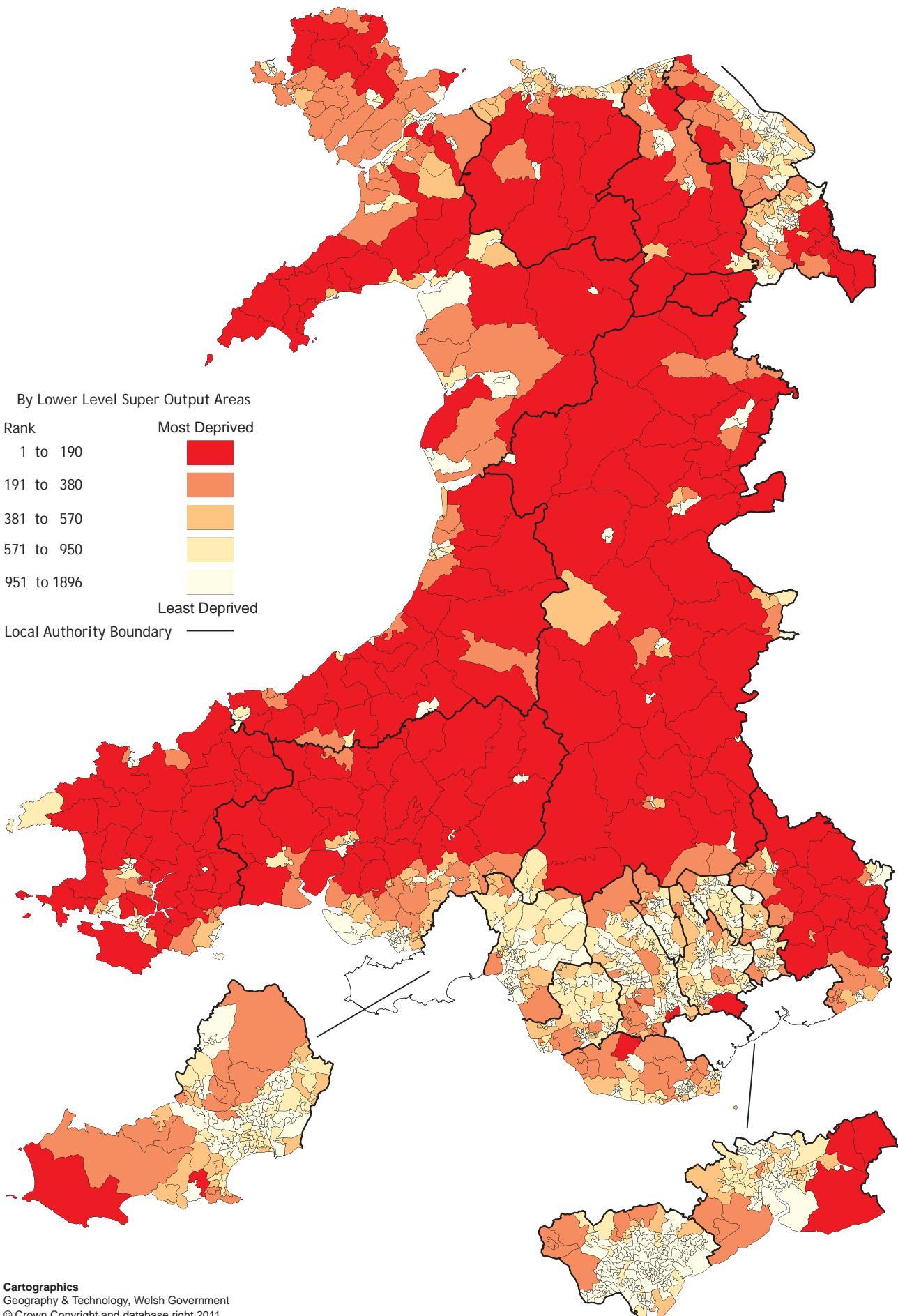
- The most deprived local authority in the access to services domain is Powys, with nearly half (48.8%) of its LSOAs in the most deprived 10% in Wales. The second most deprived is Ceredigion, with 42.6% of its LSOAs in the most deprived 10% in Wales.
- The least deprived local authorities in the access to services domain are Neath Port Talbot, Cardiff, Bridgend, Merthyr Tydfil, Blaenau Gwent and Torfaen, none of which have any of their LSOAs in the most deprived 10% in Wales. Cardiff has only 17.7% of its LSOAs in the most deprived 50% of LSOAs in Wales.
- In general, in the access to services domain, the urban and Valleys areas tend to be considerably less deprived than rural local authorities.

local authority	number of LSOAs in local authority	% LSOAs in most-deprived 10% ranks 1-190	% LSOAs in most-deprived 20% ranks 1-380	% LSOAs in most-deprived 30% ranks 1-570	% LSOAs in most-deprived 50% ranks 1-950
Isle of Anglesey	44	15.9	61.4	63.6	75.0
Gwynedd	75	28.0	44.0	52.0	62.7
Conwy	71	11.3	18.3	40.8	62.0
Denbighshire	58	13.8	25.9	36.2	51.7
Flintshire	92	3.3	16.3	21.7	43.5
Wrexham	85	8.2	17.6	31.8	57.6
Powys	80	48.8	62.5	68.8	75.0
Ceredigion	47	42.6	59.6	61.7	78.7
Pembrokeshire	71	40.8	52.1	60.6	70.4
Carmarthenshire	112	24.1	38.4	55.4	61.6
Swansea	147	1.4	10.9	22.4	52.4
Neath Port Talbot	91	0.0	5.5	15.4	42.9
Bridgend	85	0.0	5.9	25.9	55.3
Vale of Glamorgan	78	1.3	12.8	25.6	42.3
Cardiff	203	0.0	3.9	6.4	17.7
Rhondda Cynon Taf	152	1.3	7.9	19.1	43.4
Merthyr Tydfil	36	0.0	13.9	19.4	30.6
Blaenau Gwent	47	0.0	2.1	6.4	42.6
Caerphilly	110	0.9	4.5	12.7	40.0
Monmouthshire	58	22.4	44.8	53.4	63.8
Torfaen	60	0.0	6.7	21.7	53.3
Newport	94	2.1	7.4	19.1	52.1
Wales	1896	10.0	20.0	30.0	50.0

The box plot below shows the spread of access to services domain ranks for each local authority in Wales. The blue boxes contain half the total number of LSOAs in each local authority, centred on the median (middle) rank for each local authority and the 'whiskers' show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).



Geographical Access to Services Domain



Cartographics

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Housing

Housing domain methodology

The housing domain has a weight of 6.1% in the Child Index. The housing domain was not updated for the Child Index 2011. The domain is based on Census data, and new data were not yet available from Census 2011. The domain remains exactly the same as in the Child Index 2008 and 2005. Caution is therefore advised, as changes to the housing stock are likely to have taken place over the last ten years, and the impact of this on the housing domain will not be established until the Census 2011 data are released.

For a complete description of the construction of the housing domain, please see the WIMD: Child Index 2011 Technical Report.

Indicators

The housing domain contains two indicators:

indicator	units	denominator	indicator year(s)	data source	weight
percentage of children living in households with no central heating	%	LSOA population aged 0 – 18 years old	2001	Census, ONS	0.5
percentage of children living in overcrowded households	%				0.5

Housing domain results and analysis

The full set of domain ranks (Child Index 2011) and indicators (WIMD: indicator analysis) can be downloaded from the Welsh Government's [StatsWales](#) web pages.

Local authority analysis

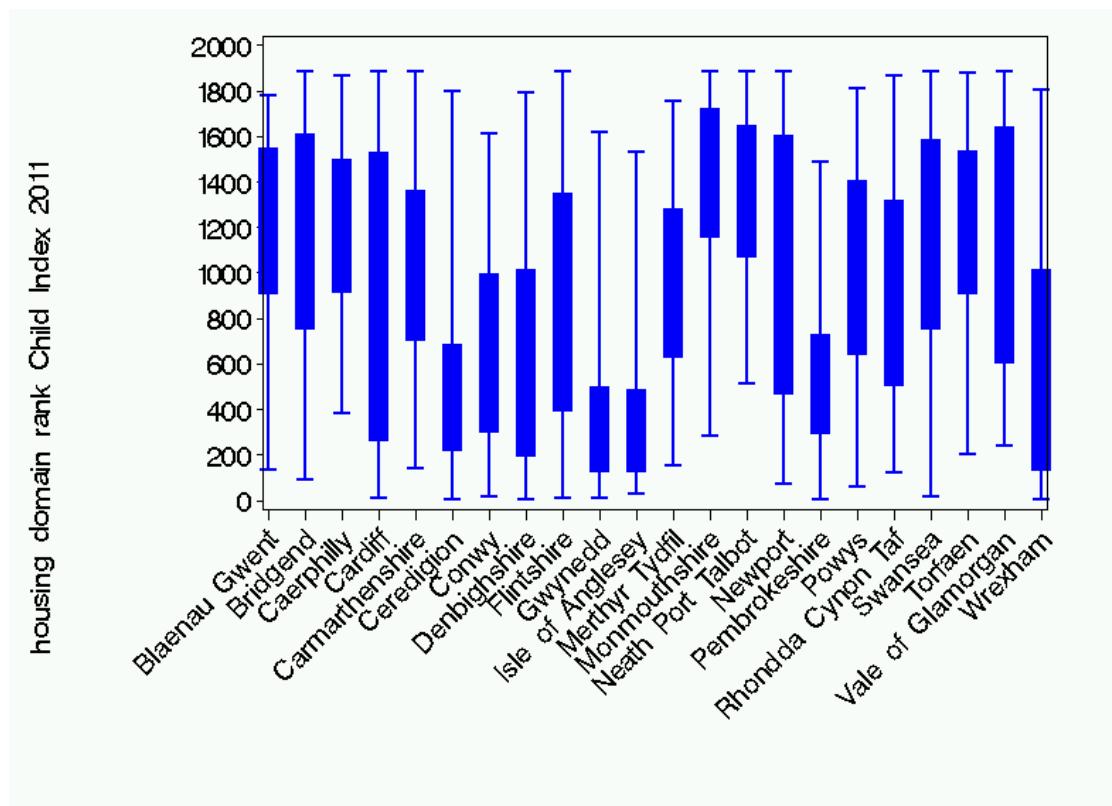
The table below shows, for the housing domain of the Child Index 2011, the percentage of small areas (LSOAs) in each local authority which are in the most deprived 10% (ranks 1-190), 20% (ranks 1-380), 30% (ranks 1-570) and 50% (ranks 1-950) LSOAs in Wales.

In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation.

- Neither Caerphilly nor Neath Port Talbot have any of their LSOAs in the most deprived 20% in Wales, making them the least deprived local authorities in the housing domain.
- The Vale of Glamorgan, Monmouthshire and Torfaen have none of their LSOAs in the most deprived 10% in Wales.
- The Isle of Anglesey is the most deprived local authority in this domain, with 38.6% of its LSOAs in the most deprived 10% in Wales.
- Both Ceredigion (93.6%) and Gwynedd (92.0%) have more than nine out of ten of their LSOAs in the most deprived half in Wales.

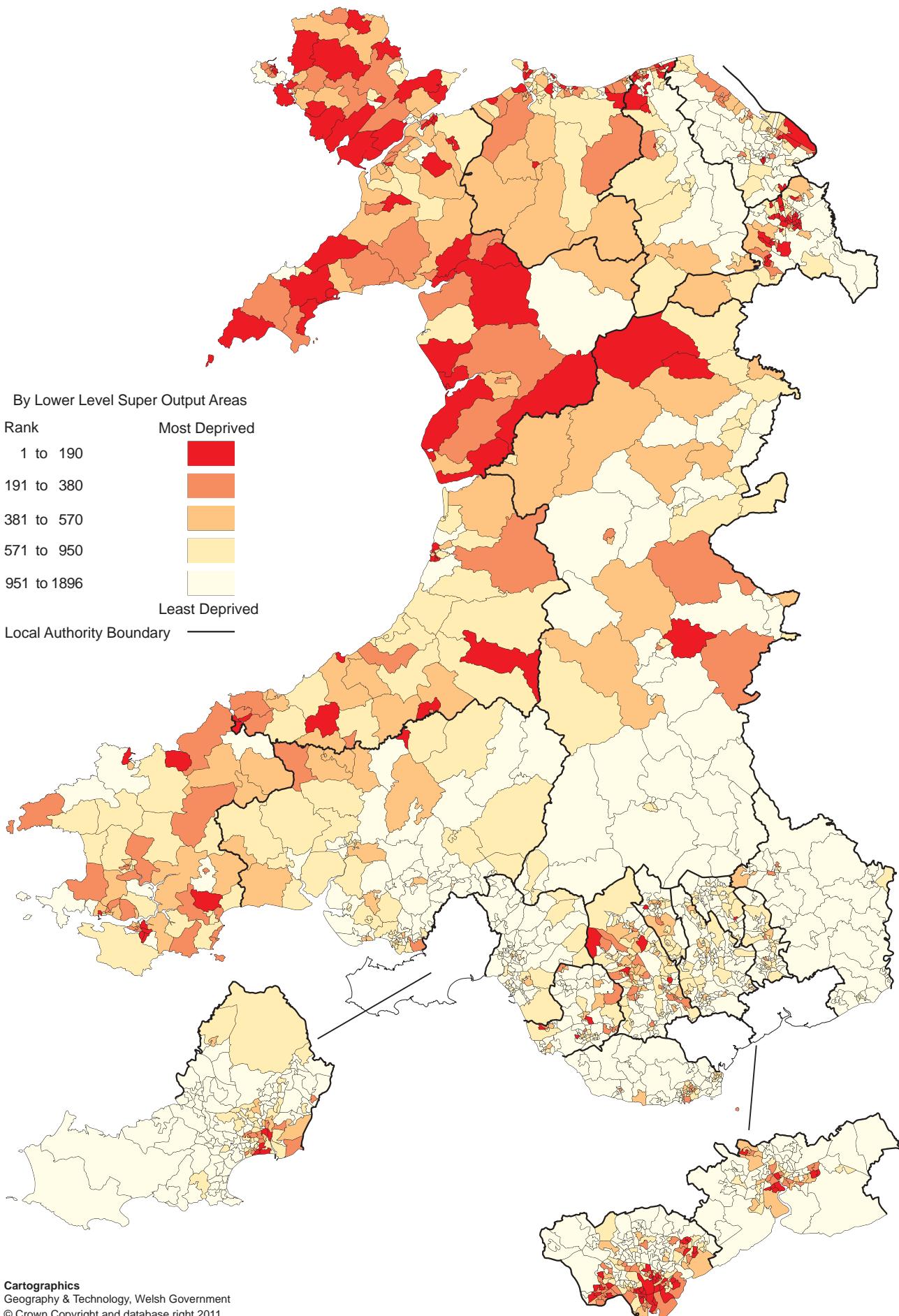
local authority	number of LSOAs in local authority	% LSOAs in most-deprived 10% ranks 1-190	% LSOAs in most-deprived 20% ranks 1-380	% LSOAs in most-deprived 30% ranks 1-570	% LSOAs in most-deprived 50% ranks 1-950
Isle of Anglesey	44	38.6	61.4	79.5	88.6
Gwynedd	75	37.3	61.3	84.0	92.0
Conwy	71	18.3	32.4	54.9	73.2
Denbighshire	58	24.1	36.2	46.6	72.4
Flintshire	92	8.7	22.8	30.4	48.9
Wrexham	85	36.5	44.7	52.9	69.4
Powys	80	3.8	8.8	21.3	45.0
Ceredigion	47	21.3	40.4	59.6	93.6
Pembrokeshire	71	11.3	39.4	59.2	85.9
Carmarthenshire	112	0.9	3.6	14.3	43.8
Swansea	147	3.4	10.2	14.3	34.0
Neath Port Talbot	91	0.0	0.0	2.2	18.7
Bridgend	85	3.5	10.6	18.8	35.3
Vale of Glamorgan	78	0.0	7.7	17.9	37.2
Cardiff	203	17.7	33.0	39.9	56.7
Rhondda Cynon Taf	152	2.6	15.1	29.6	53.9
Merthyr Tydfil	36	2.8	11.1	22.2	58.3
Blaenau Gwent	47	2.1	2.1	2.1	25.5
Caerphilly	110	0.0	0.0	6.4	28.2
Monmouthshire	58	0.0	3.4	5.2	13.8
Torfaen	60	0.0	3.3	6.7	31.7
Newport	94	7.4	18.1	29.8	42.6
Wales	1896	10.0	20.0	30.0	50.0

The box plot below shows the spread of housing domain ranks for each local authority in Wales. The blue boxes contain half the total number of LSOAs in each local authority, centred on the median (middle) rank for each local authority and the 'whiskers' show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).



Welsh Index of Multiple Deprivation 2011: Child Index

Housing Domain



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Physical environment

Physical environment domain methodology

The physical environment domain has a weight of 6.1% in the Child Index. For a complete description of the construction of the physical environment domain, please see the WIMD: Child index 2011 Technical Report. This domain is the same as the WIMD domain.

Indicators

The physical environment domain contains four indicators:

indicator	units	indicator year	data source	weight
air emissions	score	2008	Environment Agency	0.17
air quality	score	2008	Environment Agency	0.17
flood risk	score	2009	Environment Agency	0.33
proximity to waste disposal and industrial sites	score	2010	Environment Agency	0.33

All the indicators were updated for the Child Index 2011.

Methodological changes

The methodology used to create the indicators of the physical environment domain is the same for the Child Index 2011 as it was in 2008. However, there have been some improvements to the air emissions mapping, and the flood risk mapping.

Changes in flood risk between the Child Index 2008 and 2011 are largely due to the improved flood risk mapping. Although over 4,500 properties in Wales have benefited from reduced flood risk due to capital improvement and maintenance schemes since April 2005, half of these were in the last three years, and so not all of them will be included in the 2009 flood risk data used in the Child Index 2011.

Physical environment domain results and analysis

The full set of domain ranks (Child Index 2011) and indicators (WIMD: indicator analysis) can be downloaded from the Welsh Government's [StatsWales](#) web pages. The following sub-section describes some of the changes occurring to LSOAs in the physical environment domain since the Child Index 2008.

The table below shows the number of small areas (LSOAs) in each of the Child Index deprivation groups for 2008 and 2011. The diagonal, in bold, shows the number of

LSOAs which have remained in the same deprivation group. Above the diagonal are the numbers of areas which have moved from a more to a less deprived group. Below the diagonal are the numbers of areas which have moved from a less to a more deprived group.

	physical environment domain 2011					total ranks 1-1896
	10% most deprived ranks 1-190	10-20% most deprived ranks 191-380	20-30% most deprived ranks 381-570	30-50% most deprived ranks 571 - 950	50% least deprived ranks 951 - 1896	
physical environment domain 2008	10% most deprived ranks 1-190	113	48	14	14	190
	10-20% most deprived ranks 191-380	45	50	37	43	190
	20-30% most deprived ranks 381-570	14	38	42	67	190
	30-50% most deprived ranks 571-950	14	37	59	126	144
	50% least deprived ranks 951-1896	4	17	38	130	757
	total ranks 1-1896	190	190	190	380	946
						1896

The table below lists the biggest climbers and fallers in the physical environment domain, between the Child Index 2008 and 2011.

- W01000734, Tyisha 3 in Carmarthenshire, has fallen 955 ranks. This movement is largely driven by a decrease in air quality, and an increase in the flood risk indicator due to improved flood risk mapping.
- The fall from the least to the most deprived group by W01001422, St James 4 in Caerphilly, and W01000925, Glynneath 1, Neath Port Talbot, has been driven by a decrease in air quality. Glynneath 1 has also had a significant increase in its proximity to waste or industrial sites score.
- W01001087, Dinas Powys 2, Vale of Glamorgan, has seen significantly worsening air emissions since WIMD 2008, which has driven its fall to join the most deprived group.
- W01001037, Oldcastle 3, Bridgend, has improved air quality, and a reduced risk of flood compared with WIMD 2008.
- A few LSOAs have moved relative to other LSOAs within the proximity to regulated (waste and industrial) sites. This is either because a site has ceased to operate, or the site has moved from one OPRA band to another due to a change in environmental performance.

	LSOA	LSOA name	local authority	physical environment 2011	physical environment 2008
biggest fallers	W01000734	Tyisha 3	Carmarthenshire	40	995
	W01000925	Glynneath 1	Neath Port Talbot	106	1193
	W01001087	Dinas Powys 2	Vale of Glamorgan	85	1099
highest climbers	W01001422	St James 4	Caerphilly	185	1223
	W01001037	Oldcastle 3	Bridgend	1066	166

Local authority analysis

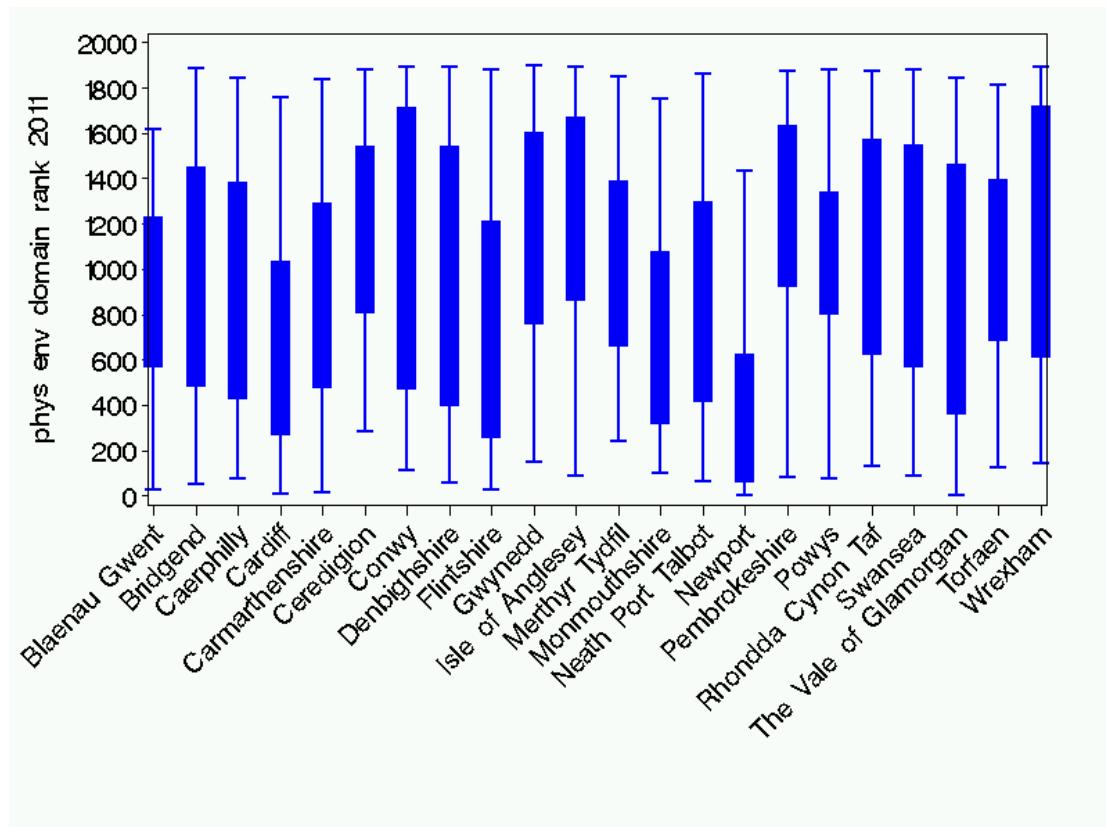
The table below shows, for the physical environment domain of the Child Index 2011, the percentage of small areas (LSOAs) in each local authority which are in the most deprived 10% (ranks 1-190), 20% (ranks 1-380), 30% (ranks 1-570) and 50% (ranks 1-950) LSOAs in Wales.

In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation.

- The most deprived local authority in the physical environment domain is Newport, with 43.6% of its LSOAs in the most deprived 10% in Wales. This is driven by Newport's poor air quality, and proximity to waste and industrial sites.
- This is almost twice as high as the next most deprived local authority, Flintshire, with 23.9% of its LSOAs in the most deprived 10% in Wales. Many Flintshire residents live in proximity to waste or industrial sites.
- The least deprived local authorities in the physical environment domain are Ceredigion and Merthyr Tydfil, with none of their LSOAs in the most deprived 10% in Wales.
- Newport also has the highest percentage of its LSOAs in the most deprived 50% of LSOAs in Wales (86.2%), followed by Cardiff (69.0%).
- The Isle of Anglesey has only 27.3% of its LSOAs in the most deprived half of Welsh LSOAs, and Ceredigion only 29.8%.

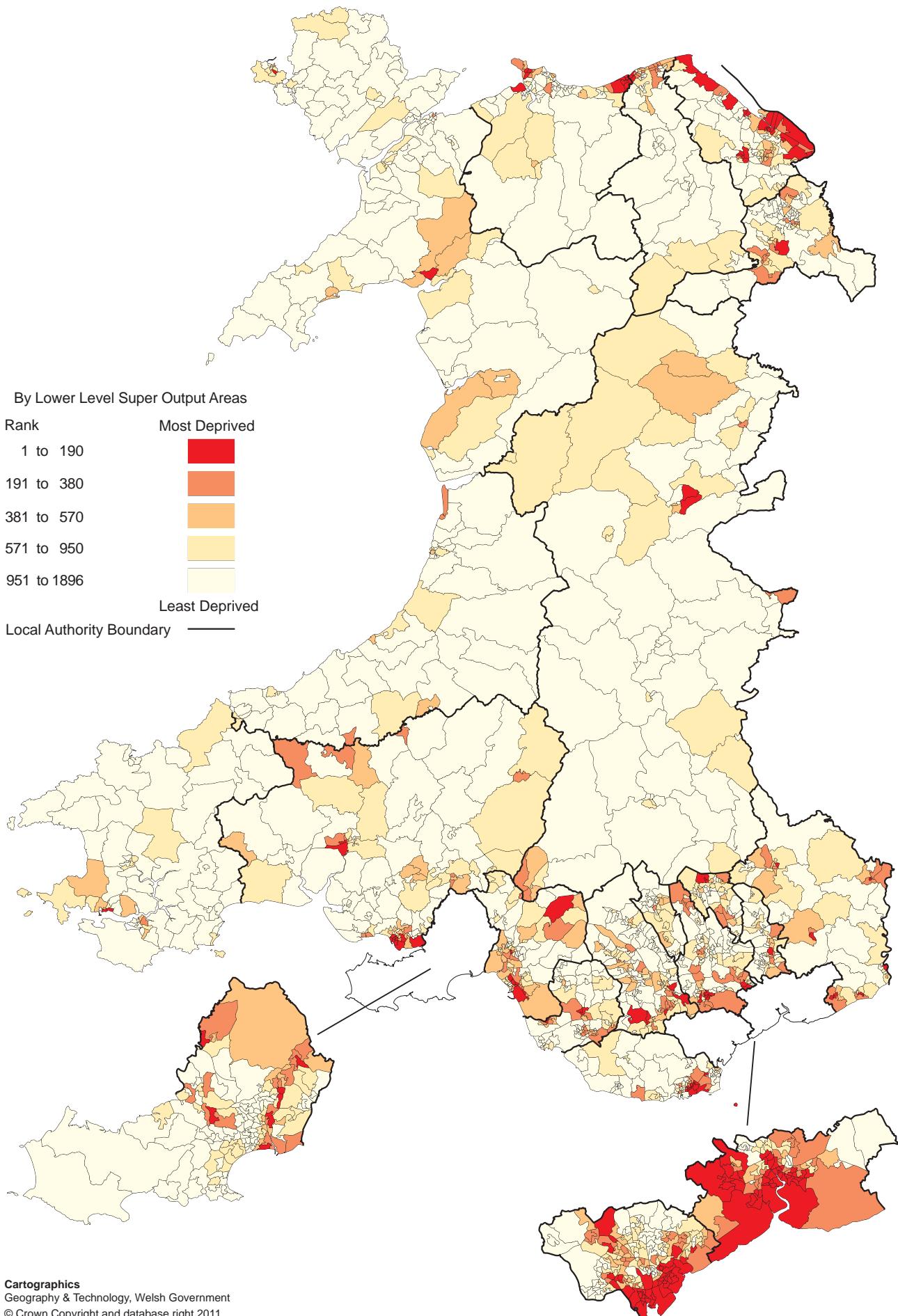
local authority	number of LSOAs in local authority	% LSOAs in most-deprived 10% ranks 1-190	% LSOAs in most-deprived 20% ranks 1-380	% LSOAs in most-deprived 30% ranks 1-570	% LSOAs in most-deprived 50% ranks 1-950
Isle of Anglesey	44	2.3	2.3	4.5	27.3
Gwynedd	75	1.3	2.7	12.0	29.3
Conwy	71	12.7	21.1	29.6	46.5
Denbighshire	58	5.2	22.4	31.0	39.7
Flintshire	92	23.9	30.4	42.4	59.8
Wrexham	85	1.2	15.3	23.5	36.5
Powys	80	2.5	7.5	13.8	38.8
Ceredigion	47	0.0	4.3	10.6	29.8
Pembrokeshire	71	2.8	4.2	12.7	26.8
Carmarthenshire	112	9.8	19.6	33.0	54.5
Swansea	147	4.8	15.6	23.8	45.6
Neath Port Talbot	91	8.8	20.9	36.3	63.7
Bridgend	85	3.5	18.8	29.4	47.1
Vale of Glamorgan	78	14.1	25.6	29.5	42.3
Cardiff	203	21.7	32.5	46.8	69.0
Rhondda Cynon Taf	152	3.3	10.5	23.0	43.4
Merthyr Tydfil	36	0.0	2.8	13.9	41.7
Blaenau Gwent	47	8.2	22.7	30.0	49.1
Caerphilly	110	4.3	12.8	23.4	59.6
Monmouthshire	58	1.7	8.3	21.7	43.3
Torfaen	60	12.1	27.6	39.7	67.2
Newport	94	43.6	64.9	71.3	86.2
Wales	1896	10.0	20.0	30.0	50.0

The box plot below shows the spread of physical environment domain ranks for each local authority in Wales. The blue boxes contain half the total number of LSOAs in each local authority, centred on the median (middle) rank for each local authority and the 'whiskers' show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).



Welsh Index of Multiple Deprivation 2011: Child Index

Physical Environment Domain





Annex A: the indicators

This section contains:

- table A1, a description of the indicators of the Welsh Index of Multiple Deprivation: Child Index 2011; and
- table A2, a list of the geographical and non-geographical aggregations of the indicator data available on the Welsh Government's [StatsWales](#) web pages.

Table A1: the indicators for the Welsh index of Multiple Deprivation: Child Index 2011. Indicators which have been updated in this publication are in bold.

domain	indicator	units	denominator	indicator year(s)	data source
geographical access to services	mean bus + walking journey time to leisure centre	minutes	number of journeys	2008	Public Transport & Road Network
	mean bus + walking journey time to library	minutes	number of journeys	2008	Postal Address File,
	mean bus + walking journey time to primary school	minutes	number of journeys	2008	Ordnance Survey
	mean bus + walking journey time to secondary school	minutes	number of journeys	2008	
			resident population		
community safety	percentage of adult offenders	%	age 18+, less prison population	2008/9 – 2009/10	Wales Probation Trust
	police recorded burglary	%	age 18+ number of dwellings, plus total number of business addresses	2008/9 – 2009/10	Welsh Police Forces
	police recorded criminal damage	%	resident population excluding prisoners, plus total non-resident workplace population	2008/9 – 2009/10	Welsh Police Forces
	fire incidence	%	resident population	2009/10– 20010/11	Welsh Government
			resident population excluding prisoners, plus total non-resident workplace population		
	police recorded theft	%	resident population	2008/9 – 2009/10	Welsh Police Forces

			resident population excluding prisoners, plus total non-resident workplace population		
	police recorded violent crime	%	resident population excluding prisoners, plus total non-resident workplace population	2009/10	Welsh Police Forces
	percentage of youth offenders	%	resident population age 10-17, less prison population	2008/9 – 2009/10	Ministry of Justice
education	Key Stage 2 average point scores	point score	number of KS2 pupils	2008-10	
	Key Stage 3 average point scores	point score	number of KS3 pupils	2008-10	National Pupil Database / Pupil-Level Annual
	Key Stage 4 average point scores	Point score	number of KS4 pupils	2009-10	School Census / National Data Collection
	percentage primary school half day absence	%	number of half day school sessions	2008/9-2009/10	National Data Collection
	percentage secondary school half day absence	%	number of half day school sessions	2008/9-2009/10	National Data Collection
physical environment	air emissions	score		2008	Environment Agency
	air quality	score		2008	Environment Agency
	flood risk	score		2009	Environment Agency
	proximity to waste disposal and industrial sites	score		2010	Environment Agency
health	percentage of live single births < 2.5kg	%	number of live single births	2000-2009	ONS
	limiting long-term illness (children)	number per 100,000	LSOA population aged 0 – 18 years old	2001	Census, ONS
housing	percentage of children living in households with no central heating	%	LSOA population aged 0 – 18 years old	2001	Census, ONS
	percentage of children living in overcrowded households	%	LSOA population aged 0 – 18 years old	2001	Census, ONS
income	children in income-related benefits households	%	LSOA population aged 0 – 18 years	2009/10	DWP
	children in households receiving Tax Credits with income less than 60% of the Wales median	%	LSOA population aged 0 – 18 years	2009/10	HMRC

Table A2: available aggregations for the indicators for the Child Index 2011

aggregation	description
Lower Layer Super Output Area (LSOA)	Lower-layer super output areas are part of the hierarchy of area building blocks designed to improve the reporting of small area statistics in England and Wales. They are designed to all be of a similar size in population terms and each contain a minimum population of 1,000 and a mean population of 1,500. They are an aggregation of adjacent Census Output Areas with similar social characteristics. Each LSOA typically contains between 4 and 6 Census Output Areas, and is constrained by the boundaries of the Standard Table (ST) wards used for the 2001 Census. In Wales there are 1,896 LSOAs.
Middle Layer Super Output Area (MSOA)	Middle-layer super output areas are part of the hierarchy of area building blocks designed to improve the reporting of small area statistics in England and Wales. They are designed to all be of a similar size in population terms and each contains a minimum population of 5,000 people and a mean population of around 7,200. MSOAs are an aggregation of adjacent LSOAs - each MSOA typically contains 4 to 5 LSOAs. In Wales there are 413 MSOAs.
Local Authority (LA)	The current arrangement of 22 local authorities in Wales date from 1996.
Strategic Regeneration Area (SRA)	Strategic Regeneration Areas have been established in areas of greatest need. They are in places which offer the greatest potential to benefit areas. They link physical and community regeneration with public and private funding, in a programme of change to tackle a range of social and economic issues affecting the most deprived communities.
Communities First Partnerships	In Wales there are 7 established Strategic Regeneration Areas: Aberystwyth Heads of the Valleys Mon a Menai North Wales Coast Swansea Western Valleys Barry Communities First is the Welsh Assembly Government's flagship programme to improve the living conditions and prospects for people in the most disadvantaged communities across Wales. The programme was launched in 2001 and initially worked with 142 communities comprising of the 100 most deprived wards from the Welsh Index of Multiple Deprivation (WIMD) 2000, 32 pockets of deprivation and 10 Communities of Interest (CoI). Following the publication of the WIMD 2005, a further 46 areas identified by the Index as being in the 10% most deprived in Wales and were invited to apply for inclusion in the Programme. After 2006 various partnerships were combined – at the time of publication, there are a total of 149 Communities First Partnerships.

Defra Urban/Rural Classification	<p>The Urban/Rural Classification was introduced in 2004 as a joint project between a number of government departments and was delivered by the Rural Evidence Research Centre at Birkbeck College (RERC).</p> <p>The Urban/Rural Classification below defines the rurality of Super Output Area-based geographies. Three settlement types are identified and assigned to either a 'sparse' or 'less sparse' regional setting to give the following six classes:</p> <ol style="list-style-type: none"> 1. large town (sparse) - settlements in the less densely populated areas with a population of at least 10,000 people; 2. small town and fringe (sparse) - towns and urban fringes that have fewer than 10,000 people, in less densely populated areas; 3. village, hamlet and isolated dwellings (sparse); 4. large town (less sparse) - settlements in the more densely populated areas with a population of at least 10,000 people; 5. small town and fringe (less sparse) - towns in densely populated areas that have fewer than 10,000 people. This category includes traditional small towns – for example Usk, Denbigh, Beaumaris and Monmouth – and also areas of urban fringe around the major settlements; 6. village, hamlet and isolated dwellings (less sparse).
WIMD deprivation tenths	<p>The 1896 Lower Layer Super Output Areas (LSOAs) in Wales were ranked according to their overall 2008 Index of Multiple Deprivation and were split into 10 groups (tenths) as listed below:</p> <ol style="list-style-type: none"> 1. 10% most deprived - LSOAs ranked 1 to 190 2. 10-20% most deprived - LSOAs ranked 191 to 380 3. 20-30% most deprived - LSOAs ranked 381 to 570 4. 30-40% most deprived - LSOAs ranked 571 to 760 5. 40-50% most deprived - LSOAs ranked 761 to 950 6. 40-50% least deprived - LSOAs ranked 951 to 1140 7. 30-40% least deprived - LSOAs ranked 1141 to 1330 8. 20-30% least deprived - LSOAs ranked 1331 to 1520 9. 10-20% least deprived - LSOAs ranked 1521 to 1710 10. 10% least deprived - LSOAs ranked 1711 to 1896
Defra Urban/Rural Classification in each Local Authority	<p>The Urban/Rural Classification was introduced in 2004 as a joint project between a number of government departments and was delivered by the Rural Evidence Research Centre at Birkbeck College (RERC).</p> <p>The Urban/Rural Classification below defines the rurality of Super Output Area-based geographies. Three settlement types are identified and assigned to either a 'sparse' or 'less sparse' regional setting to give the following six classes:</p> <ol style="list-style-type: none"> 1. large town (sparse) - settlements in the less densely populated areas with a population of at least 10,000 people; 2. small town and fringe (sparse) - towns and urban fringes that have fewer than 10,000 people, in less densely populated areas; 3. village, hamlet and isolated dwellings (sparse); 4. large town (less sparse) - settlements in the more densely populated areas with a population of at least 10,000 people; 5. small town and fringe (less sparse) - towns in densely populated areas that have fewer than 10,000 people. This category includes traditional small towns – for example Usk, Denbigh, Beaumaris and Monmouth – and also areas of urban fringe around the major settlements; 6. village, hamlet and isolated dwellings (less sparse).

Annex B: methodological changes



This section gives a summary of the methodological changes made to the Child Index in 2011. The purpose of the Child Index was to update the Child Index 2008, so methodological changes have been avoided, except where changes to data provision have made it unavoidable.

Income domain: Employment and Support Allowance (ESA) has replaced Incapacity Benefit for new claimants since October 2008. The Income Support element of Incapacity Benefit is replaced with the Income-Based element of ESA.

Community safety: in the Child Index 2011, the violent crime rate is based on a single year (2009/10) of data, instead of the average over two years of data. This is due to a crime coding issue in the 2008/9 data year.

Education: pupil postcodes are now available for both primary and secondary absences. This is an improvement over the Child Index 2008, where the school-level data had to be apportioned to postcodes. The Key Stage 4 (GCSE)-level points scoring system changed in 2008, and it also now includes qualifications other than GCSEs. Data are no longer available for the old points system. The inclusion of qualifications other than GCSE improves this indicator, but both the level and the ratio between successive grades are changed, which may lead to differences in the ranking.

Physical environment: the methodology used to create the indicators of the physical environment domain is the same for the Child Index 2011 as it was in 2008. However, there have been some improvements to the air emissions mapping, and the flood risk mapping.

Changes in flood risk between the Child Index 2008 and 2011 are largely due to the improved flood risk mapping. Although over 4,500 properties in Wales have benefited from reduced flood risk due to capital improvement and maintenance schemes since April 2005, half of these were in the last three years, and so not all of them will be included in the 2009 flood risk data used in the Child index 2011.



Annex C: uses and users

The Index and the Child Index are used extensively across the Welsh Government to inform policy and programmes focussed on deprivation and poverty. They are used widely by local authorities, other public bodies, the voluntary sector, and also by academics and students, in the private sector. Below are some examples of the uses of the Index and the Child Index. The list is not exhaustive.

Welsh Government

- The Index was used to identify areas for Communities First Programme, the flagship deprivation programme of the Welsh Government. The Index, its domains and indicators are used in understanding deprivation in these areas.
- The education domain is used to provide a deprivation uplift for funding allocations within the National Planning and Funding System. The funding model applies the uplift to provision undertaken by learners residing in areas that are in the most-deprived 30% of areas in the educational domain of the Index.
- The 'Flying Start' program focuses on 0 – 3 year olds, and aims to improve outcomes for disadvantaged children. Both the Index and, more recently, the Child Index have been used in identifying areas in which to put Flying Start services.
- The Index, with the health domain removed, has been used to assess health gain targets across different levels of deprivation.
- The Index is used in the creation of indicators used to monitor inequalities as part of the Welsh Government's Child Poverty Strategy.
- The Index, its domains and indicators are used to identify and understand deprivation in the Welsh Government's Strategic Regeneration Areas.
- Prior to 2009/10, a small percentage of Standard Spending Assessments was allocated on the basis of the Index.

Local Government

Local authorities and their partners find the Index a useful tool for targeting local resources and supporting funding bids. It is also useful in developing an understanding of their local areas and helping highlight issues and particular areas which need more study to fully identify local needs. The following is a list of some of the local government activities where the Index or Child Index has been used:

- needs assessments for health, social care & wellbeing; Children & Young People's Partnership and Community Safety Partnership (Cardiff CC);
- housing renewal initiatives;
- adult services commissioning;
- local profiles, funding bids (Ceredigion CC);

- identifying priority areas, framing discussions on deprivation (Flintshire CC);
- research and information in all its forms (City & County of Swansea);
- producing a poverty profile of Swansea, providing detailed info on child poverty to members / senior managers (City & County of Swansea);
- comparison of areas – used in deciding Flying Start areas etc. (Carmarthenshire CC);
- data requests and funding bids (Torfaen CBC);
- area profiles, deprivation analysis for children and young people (City & County of Swansea);
- ward profiles, illustration of small levels of deprivation, funding bids (Neath-Port Talbot CC);
- Welsh Local Government Association and health improvement work – concentrating policy efforts on areas of greatest deprivation; and
- funding bids & needs assessments (Monmouthshire CC).

Other public bodies

- The regulator OFWAT has used the index for looking at the relationship between deprivation and levels of debt.
- The Lottery Fund has used the Index to allocate funds to deprived areas.
- The Index has been used to support bids for European funding, targeting local services and in analysis of the links between localised deprivation and various problems including health issues.
- The Index has been used for public health research, assisting the understanding of wider social and environmental determinants of health and illness.
- Chief Medical Officer uses the Index in his Annual Reports on health in Wales.
- The Index is used by the Welsh Police Forces to plan neighbourhood police resourcing.
- The National Public Health Service for Wales uses the Index for population profiles, used to look at the health and well-being of defined populations.
- The Wales European Funding Office uses the Index when assessing project applications.
- Mid and West Wales Fire and Rescue Services use the Index for planning.

Voluntary sector

- The End Child Poverty Network Cymru group uses the Child Index to highlight deprivation in Wales, and intend to use it as an effective mechanism at a local level as guidance for Children and Young People's Partnerships in the development of Single Plans.
- Catch-22, a charity focussed on young adults, uses the Index to support funding bids, choosing localities to focus work in, and much more.
- The National Day Nurseries Association uses the Index.



Annex D: local authority analysis

In this analysis, the most deprived local authority is defined as the authority with the greatest fraction of its LSOAs in the most deprived 10% of all LSOAs in Wales. This method can be seen as identifying the concentration of the most deprived areas in a local authority, rather than an average level of deprivation. Entries in **bold** mark the most deprived local authority in each domain by this measure.

percentage of local authority LSOAs in the most-deprived 10% in Wales for the Child Index 2011 and its domains

local authority	Child Index 2011	income	education	health	access to services	community safety	housing	physical environment
Blaenau Gwent	10.6	17.0	14.9	14.9	0.0	23.4	2.1	4.3
Bridgend	11.8	9.4	11.8	15.3	0.0	7.1	3.5	3.5
Caerphilly	10.9	11.8	12.7	10.0	0.9	6.4	0.0	8.2
Cardiff	22.2	23.2	19.7	7.4	0.0	20.7	17.7	21.7
Carmarthenshire	3.6	5.4	5.4	5.4	24.1	1.8	0.9	9.8
Ceredigion	0.0	0.0	0.0	6.4	42.6	2.1	21.3	0.0
Conwy	4.2	2.8	0.0	11.3	11.3	5.6	18.3	12.7
Denbighshire	10.3	13.8	12.1	12.1	13.8	10.3	24.1	5.2
Flintshire	4.3	4.3	2.2	4.3	3.3	4.3	8.7	23.9
Gwynedd	4.0	4.0	4.0	1.3	28.0	8.0	37.3	1.3
Isle of Anglesey	4.5	2.3	0.0	4.5	15.9	4.5	38.6	2.3
Merthyr Tydfil	16.7	16.7	22.2	36.1	0.0	25.0	2.8	0.0
Monmouthshire	0.0	0.0	1.7	1.7	22.4	0.0	0.0	12.1
Neath Port Talbot	9.9	12.1	9.9	18.7	0.0	5.5	0.0	8.8
Newport	18.1	17.0	17.0	17.0	2.1	25.5	7.4	43.6
Pembrokeshire	7.0	4.2	7.0	8.5	40.8	5.6	11.3	2.8
Powys	0.0	0.0	0.0	1.3	48.8	1.3	3.8	2.5
Rhondda Cynon Taff	15.8	13.8	19.1	17.1	1.3	11.8	2.6	3.3
Swansea	14.3	15.6	16.3	9.5	1.4	10.2	3.4	4.8
Torfaen	6.7	5.0	1.3	11.7	0.0	8.3	0.0	14.1
Vale of Glamorgan	5.1	2.6	6.7	6.4	1.3	6.4	0.0	1.7
Wrexham	7.1	5.9	4.7	8.2	8.2	15.3	36.5	1.2



Annex E: glossary

Defra	Department for Environment, Food and Rural Affairs
DWP	Department for Work and Pensions
HEFCE	Higher Education Funding Council for England
HMRC	Her Majesty's Revenue and Customs
KS2, KS3, KS4	Key Stage 2, 3, 4
LSOA	lower-layer super output area - the small areas on which WIMD and the Child Index are based
NASS	National Asylum Support Service
ONS	Office for National Statistics
WIMD	Welsh Index of Multiple Deprivation