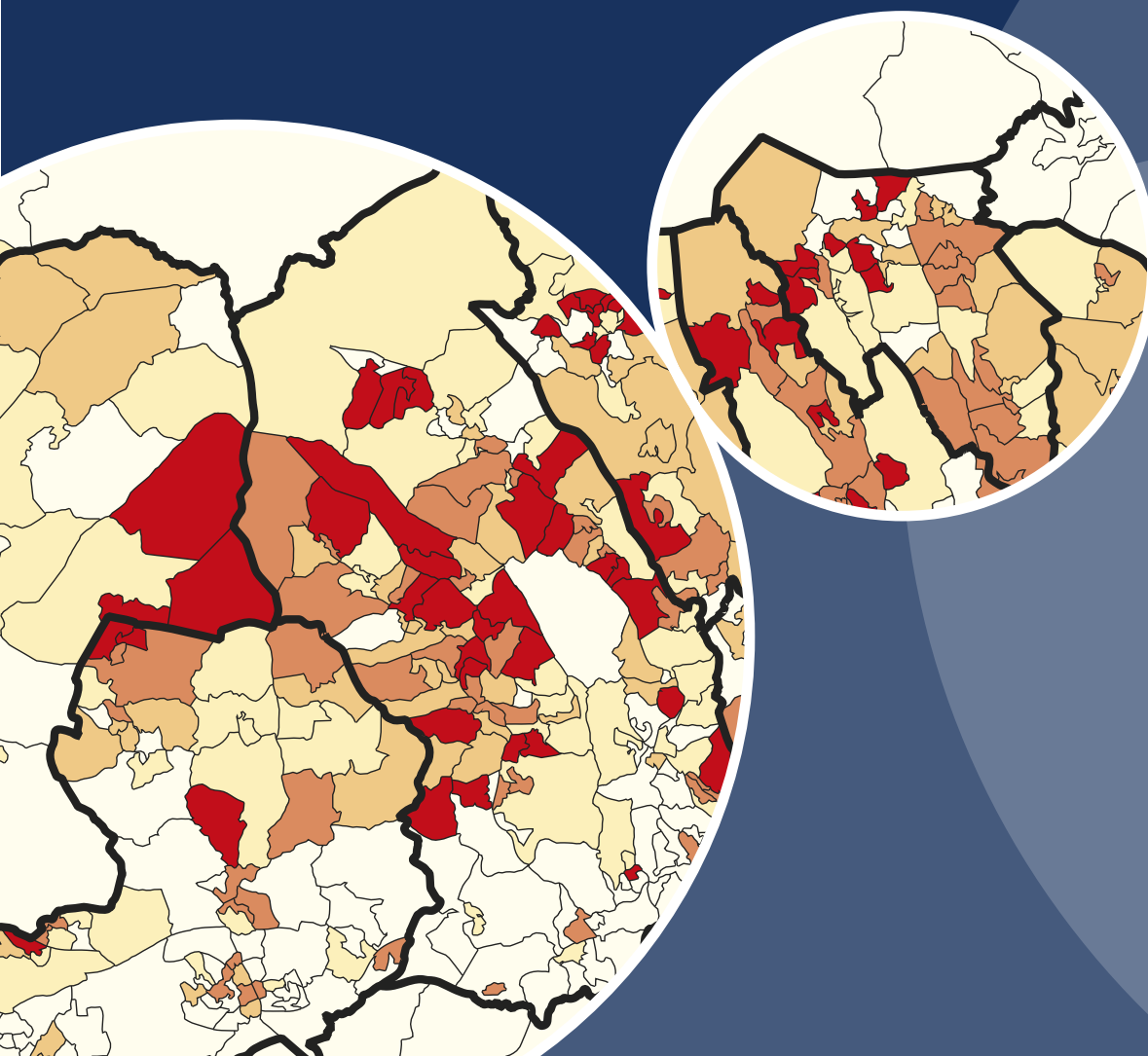


# Welsh Index of Multiple Deprivation (WIMD) 2014

Revised



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### Note

(r) Chapters 2 and 3 were substantially revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP). For more information on the effect of these revisions on WIMD 2014 please see the [Information Note](#).

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# 1 Welsh Index of Multiple Deprivation (WIMD) Background (r)

WIMD is the Welsh Government's official measure of relative deprivation for small areas in Wales. It is designed to identify those small areas where there are the highest concentrations of several different types of deprivation. As such, WIMD is a measure of multiple deprivation that is both an area-based measure and a measure of relative deprivation. These key terms are defined more fully below.

## 1.1 What does WIMD measure?

WIMD is currently made up of eight separate domains (or types) of deprivation. Each domain is compiled from a range of different indicators.

- Income
- Employment
- Health
- Education
- Access to Services
- Community Safety
- Physical Environment
- Housing

Deprivation is the lack of access to opportunities and resources which we might expect in our society. The domains listed above relate to both material and social aspects of deprivation. Material deprivation is having insufficient physical resources – food, shelter, and clothing – necessary to sustain a certain standard of life. Social deprivation refers to the ability of an individual to participate in the normal social life of the community.

Multiple Deprivation refers to more than one type of deprivation. An area is multiply deprived if, for more than one of these domains, the area has a concentration of people experiencing that type of deprivation. Generally speaking, the greater the number of domains for which there are high concentrations of deprivation, the greater the overall deprivation in an area. This does not necessarily mean that the *same* people suffer multiple types of deprivation in the area, although we would expect there to be significant overlap.

Area-based measure: WIMD is calculated for all Lower layer Super Output Areas (LSOAs) in Wales. Following the 2011 Census, 1,909 LSOAs were defined in Wales and they have an average population of 1,600 people. Further information on LSOAs is provided in Annex B, including information on their revision following the 2011 Census. WIMD is based on indicators that consider the aggregate characteristics of the people living in the area as well as, in some cases, the characteristics of the area itself (for example the physical environment domain).

Relative measure: The Index provides a way of identifying areas in the order of most to least deprived. It does not provide a measure of the level of deprivation in an area,

but rather whether an area is more or less deprived relative to all other areas in Wales. We can identify which areas are more (or less) deprived than others, but not by how much. The reason for taking such an approach is that this allows the different domains to be combined together.

Index: An index is a group of separate measurements which are combined into a single number. They are designed to show changes in a complicated variable like industrial output, prices or in this case deprivation. An index then allows comparisons between different values – in the case of WIMD, the comparison is between LSOAs.

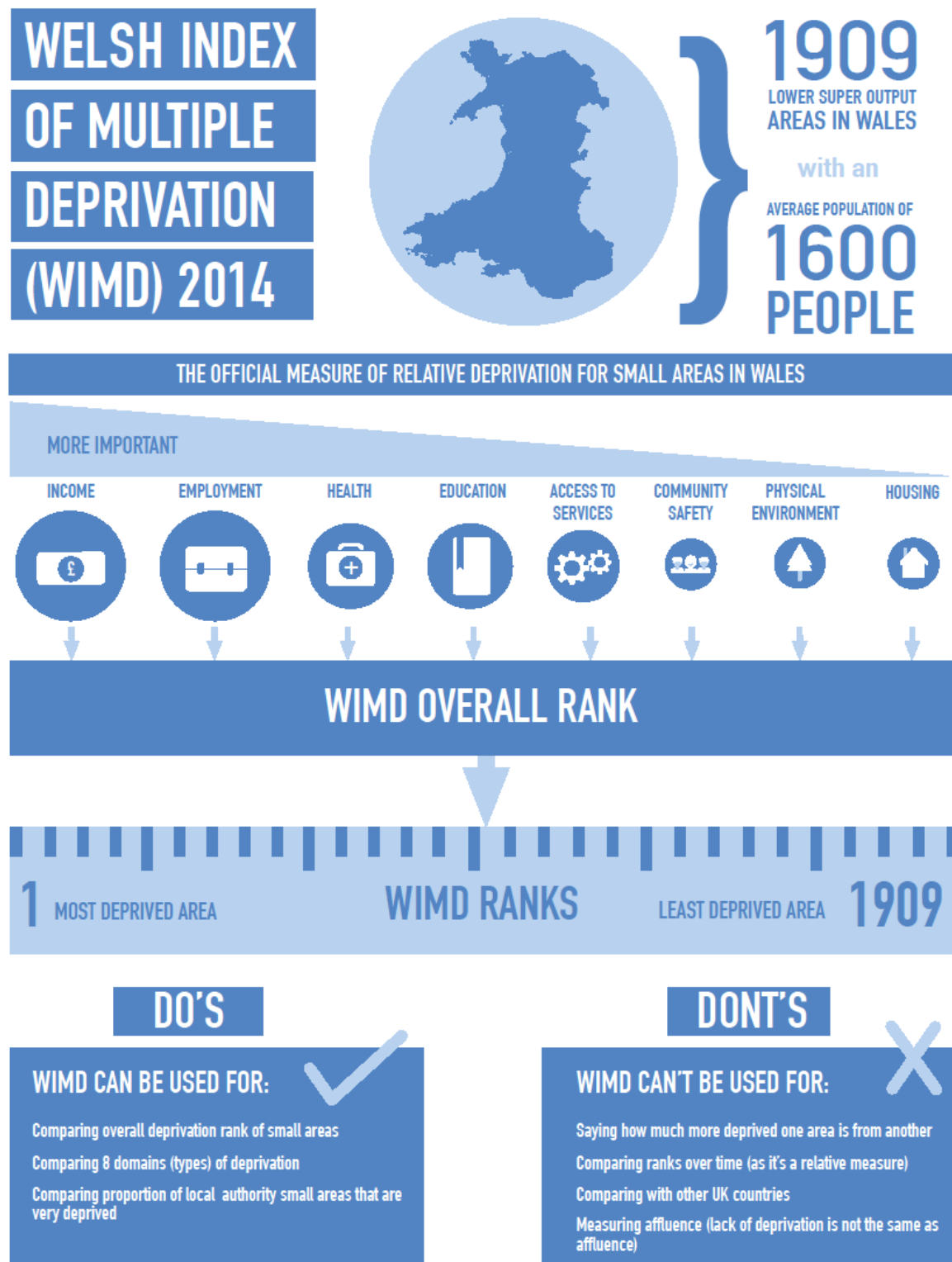
## **1.2 How the Index is constructed**

The Index has three main components:

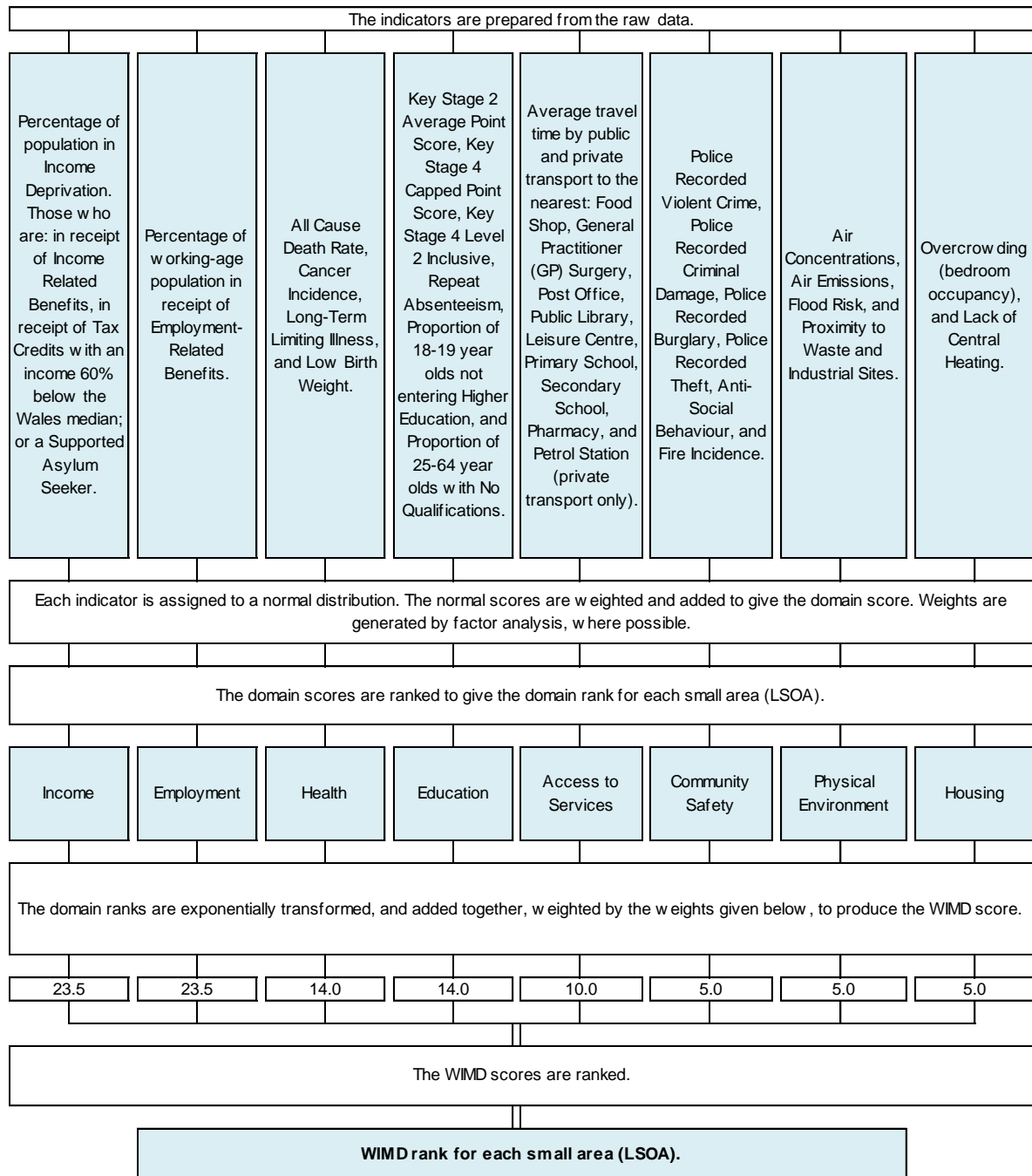
- the Index itself, which is a set of ranks;
- the ranks of the eight types of deprivation, or domains, from which the overall Index is constructed; and
- the underlying indicators, which are directly measurable, and which are combined to create the domain ranks. Many, but not all, of the indicators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

All of these components are calculated for each of the LSOAs in Wales. The overall 2014 WIMD ranks and the ranks of the eight domains of deprivation are published on the [StatsWales](#) website. Where available, the underlying indicator data is now published annually on StatsWales.

The following infographic provides a non-technical overview of how WIMD is calculated.



The following diagram provides a more detailed description of how WIMD is calculated.



WIMD 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 domain weights for WIMD 2014 are:

|                      |       |
|----------------------|-------|
| Income               | 23.5% |
| Employment           | 23.5% |
| Health               | 14.0% |
| Education            | 14.0% |
| Access to Services   | 10.0% |
| Community Safety     | 5.0%  |
| Physical Environment | 5.0%  |
| Housing              | 5.0%  |

The overall methodology used within WIMD 2014 is the same as used for WIMD 2011. The domains have also remained the same. There have been a small number of changes to individual indicators (or the inclusion of new indicators) within the Income, Education, Access to Services, Community Safety, Physical Environment and Housing domains; as well as some technical changes to some of the individual domains.

A full list of the indicators included in WIMD 2014 can be found in Annex C.

Detailed technical information on the indicators and WIMD methodology (and changes from WIMD 2011) can be found in the [WIMD 2014 Technical Report](#).

### **1.3 Development of WIMD 2014**

In 2013, a conceptual review of WIMD was undertaken with support from external academics. The purpose of the review was to clarify the conceptual basis and definitions used in WIMD. The outcomes of this review have been incorporated with the definitions sections of this report.

In order to develop indicator proposals for public consultation, statisticians at the Welsh Government worked with seven expert topic groups to review indicators used in WIMD 2011 and to consider potential new indicators. Each topic group included analytical experts from the Welsh Government, local authorities, other public bodies (e.g. Natural Resources Wales, Public Health Wales) and policy representatives from the Welsh Government.

A consultation on proposed indicators for WIMD 2014 was held between November 2013 and February 2014. The purpose of this consultation was to expose proposals for the domains and indicators for WIMD 2014 to critical review. The consultation document is available [here](#).

29 responses were received from a range of different organisations. All consultation responses and the views of other user groups were carefully considered. In light of the responses, additional work was undertaken to further investigate and assess the feasibility of new indicators.

A response to the consultation was published in June 2014. This provided a summary of the responses to the consultation, a summary of recent work and outlined changes made in light of consultation responses. The response to the consultation is available [here](#).

#### **1.4 What can WIMD be used for?**

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

WIMD can be used for:

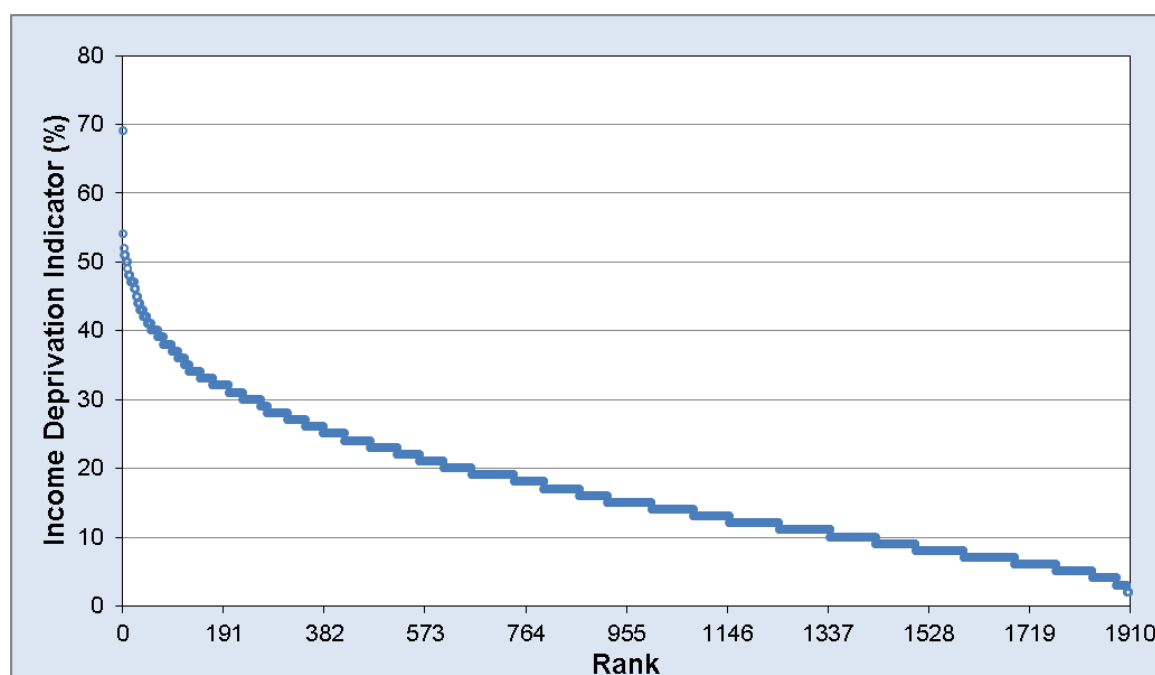
- identifying areas of greatest deprivation using the ranks. For example, the most deprived 10 per cent of LSOAs in Wales are those ranked 1-191 (inclusive). However, not all deprived people live in the most deprived places;
- comparing overall deprivation ranks for each small area or a group of them (like those in a Local Authority), so that they can be put in order from the most to the least deprived;
- comparing ranks among the separate domains of deprivation for the small areas;
- comparing two or more local authorities (or other groups of aggregated small areas) by looking at the proportion of the small areas in the Local Authority in the most deprived (say) 10 per cent in all of Wales; and
- by using the underlying indicator data (although not the WIMD rankings themselves), it is possible to analyse change over time (indicator data are published on StatsWales).

Chart 1.1 overleaf shows how the percentage of the population in income benefit households (the indicator used within the Income domain) is distributed by income domain rank in WIMD 2014. It is important to understand that:

- deprivation rates increase steeply at the most deprived end of the distribution;
- 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;
- 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. For example, there is a wide range in the percentage of people who are income deprived within the most deprived 10 per cent of LSOAs. The percentages range from 69 per cent for the most deprived LSOA to 32 per cent for the LSOA ranked 191).



**Chart 1.1: WIMD 2014 Income domain distribution (r)**



**Note**

(r) This graph was revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

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 eight different types of deprivation that make up the overall Index. These domain ranks can be used to understand the drivers for deprivation in an area. For example, the areas represented in Table 1.1 below are similar in their WIMD ranks, but the pattern of deprivation across their domains is quite different.

**Table 1.1: WIMD 2014 examples of deprivation patterns across domains (r)**

| <b>LSOA</b>               | <b>Pembroke: Monkton</b> | <b>Cwmbach 2</b>         | <b>Llanrumney 6</b> |
|---------------------------|--------------------------|--------------------------|---------------------|
| <b>Local Authority</b>    | <b>Pembrokeshire</b>     | <b>Rhondda Cynon Taf</b> | <b>Cardiff</b>      |
| WIMD 2014 Overall rank    | 80                       | 81                       | 84                  |
| Income rank               | 62                       | 185                      | 59                  |
| Employment rank           | 84                       | 55                       | 218                 |
| Health rank               | 59                       | 55                       | 228                 |
| Education rank            | 236                      | 253                      | 13                  |
| Access to services rank   | 498                      | 325                      | 1371                |
| Community safety rank     | 455                      | 126                      | 277                 |
| Physical environment rank | 1727                     | 162                      | 321                 |
| Housing rank              | 160                      | 970                      | 82                  |

**Note**

(r) Some figures in this table were revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

## **1.5 Adding contextual information**

The Index is most useful if it is used in conjunction with other information, either from the Index indicators, other published data or local information. References to potentially useful background/contextual information are included at the end of each domain analysis section in this report.

## **1.6 Examples of using WIMD**

Important applications of previous indexes include:

- development and monitoring of the Communities First programme;
- calculation of school families and as a contextual factor in annual school value added calculations;
- measurement of health inequalities;
- local government needs assessments; and
- planning of neighbourhood police resourcing.

## **1.7 Limitations of WIMD**

It is important to remember that WIMD is not the only way to measure deprivation. WIMD has been developed for a particular purpose, which is to measure concentrations of deprivation at a small area level.

Deprived individuals: There can be individuals in deprived areas that would not be considered deprived; and there can also be individuals that would be considered deprived in the least deprived areas. Around 1 in 5 of the people in income benefit households live in the most deprived 10 per cent of areas in Wales. This means that although it is true to say that deprivation is much more concentrated in some areas than others, 4 out of 5 people in income benefit households live outside these areas. This is important to remember when targeting resources, as targeting those 'most deprived' areas leads to some households in those areas who may not be deprived being included and many deprived households living in less deprived areas missing out.

Individuals who are deprived in several ways: WIMD does not identify individuals who are deprived in several ways, rather, it identifies areas where there are concentrations of several different types of deprivation. At present, we are not able to link the data included in the Index at an individual person level in order to understand the extent of multiple deprivation for individuals.

Absolute deprivation: WIMD doesn't give a measure of the amount of deprivation in an area. For example, it does not allow for statements such as "area A is twice as deprived as area B". The ranks can only be used to say "area A is more deprived than area B". This also means that even if an area's rank remains the same in successive WIMD publications, the level of deprivation in that area could have gone up or down, but not enough to affect the comparison with other areas. However, the analysis of the individual indicators within WIMD does allow for such comparisons between areas and over time.

Affluence: It is important to remember that a lack of deprivation is not the same as affluence. The least deprived area is not necessarily the most affluent area in Wales. This also means that the ability of WIMD to discriminate effectively between areas is strongest for the most deprived areas and extreme care should be taken in drawing conclusions about the differences between less deprived areas.

## **1.8 Comparisons 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.

WIMD indicator data is now published annually on StatsWales, where possible. As the indicators represent absolute levels of the various measures of deprivation, they can be used to monitor change over time.

## **1.9 Aggregating to larger geographies**

It is not possible to aggregate the ranks to larger geographies by taking an average of the ranks of the LSOAs. This is because of the way in which the Index is constructed. There are two ways of comparing larger geographies.

The first is to calculate the proportion of LSOAs in a larger geography which are in the most deprived (say) 10 or 20 per cent of areas in Wales. This has been done for local authorities in the analysis sections of this report and in the interactive product.

For example, if an area has more than 10 per cent of its LSOAs in the most deprived 10 per cent in Wales, it can be considered relatively deprived. If it has fewer than 10 per cent, then it can be considered relatively less deprived.

The second method of comparing larger geographies is to consider the underlying individual indicators, which can be aggregated (as published on StatsWales). The indicators are published not just at the small area level, but also for a range of other useful geographies, including local authorities, communities first areas and settlement types (which can be used to describe an area as rural or urban).

## **1.10 Deprivation scores**

The overall Index and domain ranks are the main output for WIMD. As part of the process for calculating these ranks, scores are produced. These are published for two reasons only:

- for transparency (so that users have access to all stages of construction); and
- so that users can experiment with different weighting systems for the Index, if required.

The WIMD scores are a stage in the construction of the Index and not a product. The scores do not represent a level of multiple deprivation (for example, if area A has twice the score of area B, this does not necessarily mean that area A is twice as deprived as area B). This means that scores do not contain any more information on levels of multiple deprivation than the ranks do. For levels of deprivation, underlying indicator data must be used.

## 1.11 Deprivation across the UK

England, Scotland and Northern Ireland all produce their own indexes of multiple deprivation. However, these are not directly comparable because:

- they are produced for different geographies (there is no suitable small area geography which is consistent across the four nations);
- there are differences between the indicators and not all data are collected consistently across the UK (for example, the justice and education systems are different from Wales, so many crime and education indicators are not comparable);
- the Indexes have developed according to the policy drivers in each of the countries; as devolution has evolved, these differences have grown; and
- the indexes are produced on different timescales, so they do not tend to refer to the same year of data across the UK; again, this is often driven by different policy requirements in the different countries.

However, users often want to compare deprivation across the UK, for example, to allocate funding. Further guidance on the issue of comparing IMDs across the UK can be found on the [Neighbourhood Statistics website](#).

## 1.12 Further Information

A package of products is available relating to WIMD 2014. These products are available at [www.gov.wales/wimd](http://www.gov.wales/wimd). A full list of relevant products is available in Annex A.

- Guidance materials, including:
  - Document explaining how WIMD can and can't be used
  - Infographic explaining how WIMD is constructed
  - Frequently Asked Questions
- WIMD Summary of results, including:
  - Main publication summarising results
  - Executive summary of main publication
- Interactive tool (new) – this will allow users to allow users to view results for a selection of areas
- WIMD Data on StatsWales
- Deprivation in Rural areas
  - Statistical Article on Deprivation in Rural Areas
  - Technical paper on 'Exploration of unemployment in Wales by settlement type for small areas'.

For further information please contact [stats.inclusion@gov.wales](mailto:stats.inclusion@gov.wales) or 0300 025 8099.

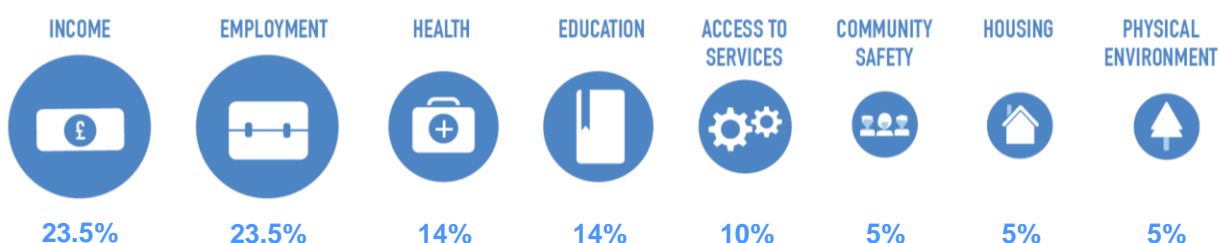
## 2 WIMD 2014 Overall Index

### 2.1 Methodology: Overall Index

For a complete description of the construction of the Index, its domains, and the underlying indicators, please see the [WIMD 2014 Technical Report](#).

#### Domains

WIMD 2014 is made up of eight separate domains (or types) of deprivation. Each domain is compiled from a range of different indicators. The weights for the eight domains are given below:



#### Methodological changes between WIMD 2011 and WIMD 2014

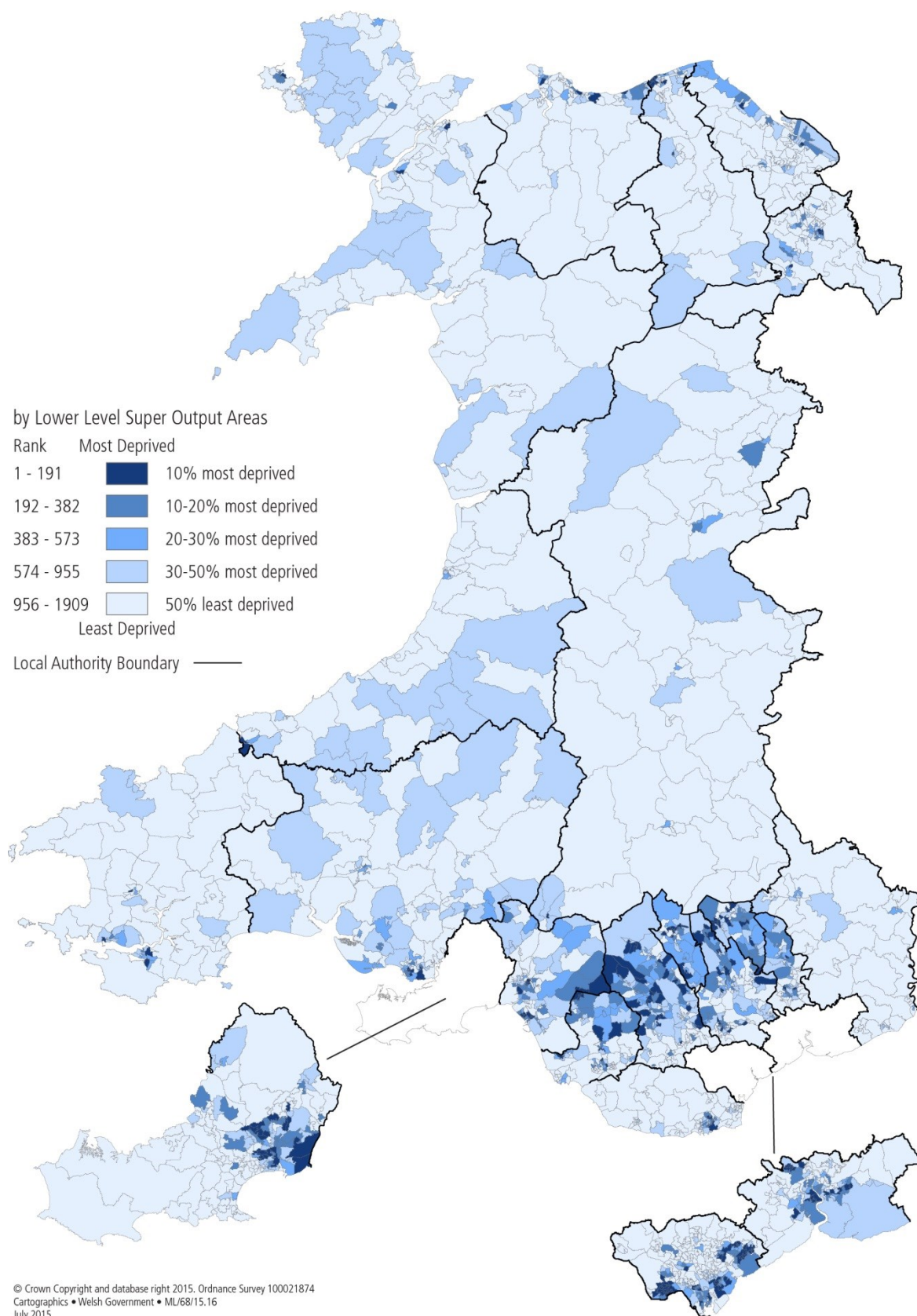
The overall methodology for constructing WIMD 2014 is the same as for WIMD 2011. There are, however, changes to some of the indicators within the domains. These are described in the relevant domain chapters, and in the [WIMD 2014 Technical Report](#).

### 2.2 Overall Index key results

- In WIMD 2014, there were pockets of high relative deprivation in the South Wales valleys and large cities, and in some North Wales coastal and border towns.
- The overall picture is similar to that of WIMD 2011, with six of the ten most deprived LSOAs from WIMD 2011 remaining in the ten most deprived areas in WIMD 2014.
- The most deprived LSOA in Wales in WIMD 2014 was St James 3, Caerphilly (it was ranked 2 in WIMD 2011).
- The local authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales in WIMD 2014 was Blaenau Gwent (23.4 per cent), while Monmouthshire had no LSOAs in the most deprived 10 per cent.

The map on the following page shows the Overall Index.

# Welsh Index of Multiple Deprivation



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Cartographics • Welsh Government • ML/68/15.16  
July 2015

**Note:** This map was revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

## 2.3 Comparison of Overall Index between WIMD 2011 and WIMD 2014

WIMD cannot be used to compare deprivation for one area with its deprivation in a previous edition of the Index. However, the following analysis provides an illustration of how the deprivation groups of WIMD 2014 compare with WIMD 2011. A similar approach has been used in the other analysis sections.

Table 2.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 2.1: Deprivation group movements for the Overall Index, between WIMD 2011 and WIMD 2014 (r)**

|           |   | WIMD 2014                          |   |   |   |   |            |                          |
|-----------|---|------------------------------------|---|---|---|---|------------|--------------------------|
|           |   | 10% most deprived<br>(ranks 1-191) | 10-20% most deprived<br>(ranks 192-382) | 20-30% most deprived<br>(ranks 383-573) | 30-50% most deprived<br>(ranks 574-955) | 50% least deprived<br>(ranks 956-1,909) | Old LSOAs* | Total<br>(ranks 1-1,909) |
| WIMD 2011 | 10% most deprived<br>(ranks 1-190)      | <b>166</b>                         | 21                                      | 0                                       | 0                                       | 0                                       | 3          | 190                      |
|           | 10-20% most deprived<br>(ranks 191-380) | 22                                 | <b>131</b>                              | 31                                      | 1                                       | 0                                       | 5          | 190                      |
|           | 20-30% most deprived<br>(ranks 381-570) | 0                                  | 33                                      | <b>114</b>                              | 39                                      | 0                                       | 4          | 190                      |
|           | 30-50% most deprived<br>(ranks 571-950) | 0                                  | 0                                       | 39                                      | <b>281</b>                              | 51                                      | 9          | 380                      |
|           | 50% least deprived<br>(ranks 951-1,896) | 0                                  | 0                                       | 1                                       | 51                                      | <b>866</b>                              | 28         | 946                      |
|           | New LSOAs*                              | 3                                  | 6                                       | 6                                       | 10                                      | 37                                      | 0          | 62                       |
|           | Total<br>(ranks 1-1,896)                | 191                                | 191                                     | 191                                     | 382                                     | 954                                     | 49         | <b>1,958</b>             |

**Note:**(r) – Some figures in this table were revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

\* - These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.



Most LSOAs have remained in the same deprivation group between WIMD 2011 and WIMD 2014 (on the diagonal). Only two LSOAs have changed by more than one deprivation group. However, it should be highlighted that the ranks are relative, and no conclusion about changes to the levels of deprivation can be drawn from changes to the Index ranks. The underlying indicators, which measure various types of deprivation, can be analysed in order to understand how levels of deprivation have changed in individual areas.

Of the two areas that have moved by two deprivation groups, one moved from the 50 per cent least deprived group in WIMD 2011 to the 20-30 per cent most deprived group in WIMD 2014. This LSOA is Mold Broncoed 2, which is located in Flintshire, and its overall rank changed from 1046 in 2011 to 470 in 2014. It became relatively more deprived in all eight domains, in the following order of greatest to smallest change: Community Safety, Income, Housing, Health, Education, Employment, Access to Services and Physical Environment.

The other LSOA in question moved from the 10-20 per cent most deprived group in WIMD 2011 to the 30-50 per cent most deprived group in WIMD 2014. This LSOA is Castle 8 in Swansea, and its overall Index rank changed from 289 in 2011 to 614 in 2014. It became relatively less deprived in five of the domains, in the following order of greatest to smallest change: Physical Environment, Education, Employment, Income and Health. However, it became relatively more deprived in: Access to Services, Community Safety and Housing.



## 2.4 WIMD 2014 Overall LSOA analysis

The index and domain ranks (WIMD 2014) and indicators (WIMD: annual indicator data) can be downloaded from the Welsh Government's [StatsWales](http://stats.wales.gov.uk) web pages. The following sub-section describes some of the changes occurring to LSOAs in the Index since WIMD 2011.

Table 2.2 below lists the ten most deprived LSOAs in Wales, as determined by WIMD 2014, together with four LSOAs that were ranked between 1 and 10 in WIMD 2011, but have moved out of that group in WIMD 2014.

**Table 2.2: WIMD 2014 Overall most deprived LSOA ranks (r)**

| LSOA      | Local Authority   | LSOA Name           | WIMD 2011 Rank | WIMD 2014 Rank |
|-----------|-------------------|---------------------|----------------|----------------|
| W01001421 | Caerphilly        | St. James 3         | 2              | 1              |
| W01000240 | Denbighshire      | Rhyl West 2         | 1              | 2              |
| W01000413 | Wrexham           | Queensway 1         | 9              | 3              |
| W01001874 | Cardiff           | Splott 6            | 36             | 4              |
| W01001274 | Rhondda Cynon Taf | Tylorstown 1        | 10             | 5              |
| W01000991 | Bridgend          | Caerau (Bridgend) 1 | 8              | 6              |
| W01001428 | Caerphilly        | Twyn Carno 1        | 3              | 7              |
| W01001303 | Merthyr Tydfil    | Merthyr Vale 2      | 17             | 8              |
| W01001222 | Rhondda Cynon Taf | Pen-y-waun 2        | 15             | 9              |
| W01001662 | Newport           | Pillgwenlly 4       | 27             | 10             |
| W01001308 | Merthyr Tydfil    | Penydarren 1        | 4              | 14             |
| W01001209 | Rhondda Cynon Taf | Penrhiwceiber 1     | 5              | 15             |
| W01000862 | Swansea           | Townhill 1          | 6              | 29             |
| W01000239 | Denbighshire      | Rhyl West 1         | 7              | 11             |

**Note:**(r) Some figures in this table were been revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

- St. James 3, Caerphilly was the most deprived small area in Wales (it was ranked 2 in WIMD 2011).
- Six of the ten most deprived areas in WIMD 2011 remained in the most deprived ten areas in WIMD 2014.
- Four areas have moved out of the most deprived ten areas since WIMD 2011. All ten of the most deprived areas in WIMD 2014 are in Communities First areas.

Note that WIMD does not measure the level of deprivation in a small area, but rather whether an area is more or less deprived relative to all other small areas in Wales. It is not possible to determine from a change in rank alone whether deprivation has improved or not in an area – the underlying indicators must be used for this.

We can look at the ten most deprived LSOAs in greater detail. Note that none of these LSOAs have undergone any changes in geographical boundary since WIMD 2011.

### **1. St. James 3, Caerphilly**

St. James 3 is the most deprived LSOA in the Education domain. It lies within the 10 most deprived LSOAs for the Income, Employment, Health and Education domains, which have a combined weight of 75 per cent in the overall Index. It also lies within the 10 per cent most deprived LSOAs for the Community Safety domain. The LSOA has changed little in overall rank since WIMD 2011, but its relative deprivation has increased substantially in the Housing and Access to Services domains. A similar pattern can be seen in the Education domain, with the domain rank moving from 24 in WIMD 2011 to 1 in WIMD 2014.

### **2. Rhyl West 2, Denbighshire**

Rhyl West 2 is the most deprived LSOA in the Income, Employment and Health domains, and also lies within the 10 per cent most deprived LSOAs for the Education, Housing and Community Safety domains. Collectively, all these domains have a combined weight of 85 per cent in the overall Index. The LSOA has changed little in overall rank since WIMD 2011, but its relative deprivation has decreased substantially in the Physical Environment domain, decreased slightly in the Education domain, and increased substantially in the Access to Services domain.

### **3. Queensway 1, Wrexham**

Queensway 1 lies within the 10 most deprived LSOAs for the Income and Education domains, and within the 10 per cent most deprived LSOAs for the Employment, Health, Housing and Community Safety domains. Collectively, all these domains have a combined weight of 85 per cent in the overall index. The LSOA has changed little in overall rank since WIMD 2011, but its relative deprivation has decreased substantially in the Physical Environment domain and, to some extent, in the Housing domain. Its relative deprivation has increased substantially in the Access to Services domain, and increased slightly in the Health domain.

### **4. Splott 6, Cardiff**

Splott 6 lies within the 50 most deprived LSOAs for all of its domains, except Access to Services. Collectively, all these domains have a combined weight of 90 per cent in the overall Index. The LSOA has entered the 10 most deprived overall LSOAs since WIMD 2011, having moved rank substantially (becoming relatively more deprived). This could be attributed to its relative deprivation having increased substantially in the Employment and Education domains (domains with high weightings within the index), and also relative changes to other LSOAs. Its relative deprivation has also increased substantially in the Access to Services and Community Safety domains. In fact, it became relatively more deprived in all domains compared with WIMD 2011.

This is an example of an LSOA where the overall WIMD rank is lower (more deprived) than each of the individual domain ranks. This is primarily driven by the differing relative deprivation distributions of Splott 6 in relation to similarly ranked LSOAs. The relative deprivation of Splott 6 is substantially higher in Community Safety, Physical Environment and Housing than the other LSOAs close to it.

### **5. Tylorstown 1, Rhondda Cynon Taf**

Tylorstown 1 lies within the 10 most deprived LSOAs for the Income and Employment domains, and within the top 20 most deprived LSOAs for the Health and Education domains. Collectively, all these domains have a combined weight of

75 per cent in the overall index. The LSOA also lies within the 10 per cent most deprived LSOAs for the Community Safety domain. Tylorstown 1 has changed little in overall rank since WIMD 2011, but its relative deprivation has increased substantially in the Access to Services domain, increased slightly in the Health domain, and decreased in the Housing domain. It has also become relatively more deprived in the Income domain, with a rank of 11 in WIMD 2011 and a rank of 4 in WIMD 2014.

#### **6. Caerau (Bridgend) 1, Bridgend**

Caerau (Bridgend) 1 lies within the 10 most deprived LSOAs for the Employment and Health domains, and within the 10 per cent most deprived LSOAs for the Income, Education and Community Safety domains. Collectively, all these domains have a combined weight of 80 per cent in the overall Index. The LSOA has changed little in overall rank since WIMD 2011, but has become relatively more deprived in the Income domain. Its relative deprivation has decreased substantially in the Housing and Access to Services domains, and to a lesser extent in the Physical environment and Community Safety domains.

#### **7. Twyn Carno 1, Caerphilly**

Twyn Carno 1 lies within the 10 most deprived LSOAs for the Employment and Education domains, and within the 10 per cent most deprived LSOAs for the Income, Health and Community Safety domains. Collectively, all these domains have a combined weight of 80 per cent in the overall index. The LSOA has changed little in overall rank since WIMD 2011, but its relative deprivation has increased substantially in the Housing and Access to Services domains, while it has decreased slightly in the Income domain.

#### **8. Merthyr Vale 2, Merthyr Tydfil**

Merthyr Vale 2 lies within the 10 most deprived LSOAs for the Health domain, and within the 10 per cent most deprived LSOAs for the Income, Employment, Education and Housing domains. Collectively, all these domains have a combined weight of 80 per cent in the overall Index. The LSOA has entered the 10 most deprived overall LSOAs since WIMD 2011. In particular, this could be attributed to it becoming relatively more deprived in the Income domain (which has a high weighting within the Index), as well as in the Education, Housing, Physical Environment and Access to Services domains.

#### **9. Pen-y-waun 2, Rhondda Cynon Taf**

Pen-y-waun 2 lies within the 10 most deprived LSOAs for the Education domain, and within the 20 most deprived LSOAs for the Income, Employment and Health domains. Collectively, all these domains have a combined weight of 75 per cent in the overall Index. The LSOA has entered the 10 most deprived overall LSOAs since WIMD 2011. This is mainly due to it becoming relatively more deprived in the Income, Employment and Education domains (domains with high weightings within the Index), as well as in the Housing, Physical Environment and Access to Services domains.

## **10. Pillgwenlly 4, Newport**

Pillgwenlly 4 lies within the top 10 per cent most deprived LSOAs for the Income, Employment, Education, Health, Housing and Community Safety domains. Collectively, these domains have a combined weight of 85 per cent in the overall index. Pillgwenlly 4 has moved from rank 27 in 2011 to 10 in 2014. In particular, this could be attributed to it becoming relatively more deprived in the Income and Employment domains (which have a high weighting within the Index), as well as in the Health, Education, Housing, and Access to Services domains.

## **Penydarren 1, Merthyr Tydfil**

Penydarren 1 changed overall rank from 4 to 14, so left the ten most deprived LSOAs in WIMD 2014. This can be attributed to the LSOA become relatively less deprived in the Income, Employment and Health domains (domains with high weightings within the Index), as well as in the Access to Services and Community Safety domains. It is worth noting that despite the overall change, the LSOA is still the fourth most deprived in the Education domain, and that it still lies within the most deprived 35 LSOAs for the Income, Employment and Health domains.

## **Penrhiwceiber 1, Rhondda Cynon Taf**

Penrhiwceiber 1 changed overall rank from 5 to 15, so left the ten most deprived LSOAs in WIMD 2014. This can be attributed to the LSOA become relatively less deprived over a broad set of domains: Employment, Health, Education, Housing, Physical Environment and Community Safety. Its relative deprivation has increased substantially in the Access to Services domain. It is worth noting that despite the overall change, the LSOA is still the second most deprived in the Health domain, and that it still lies within the most deprived 25 LSOAs for the Income, Employment and Education domains.

## **Townhill 1, Swansea**

Townhill 1 changed rank from 6 to 29, so left the ten most deprived LSOAs in WIMD 2014. This can be attributed to the LSOA becoming relatively less deprived in the Income, Employment and Education domains (domains with high weightings within the Index). The LSOA also became relatively less deprived in the Housing, Access to Services and Community Safety domains, while becoming relatively more deprived in the Health and Physical Environment domains. It is worth noting that despite the overall change, the LSOA is currently the fourth most deprived in the Health domain, and it also lies within the 10 per cent most deprived LSOAs for the Income, Employment, Education and Community Safety domains.

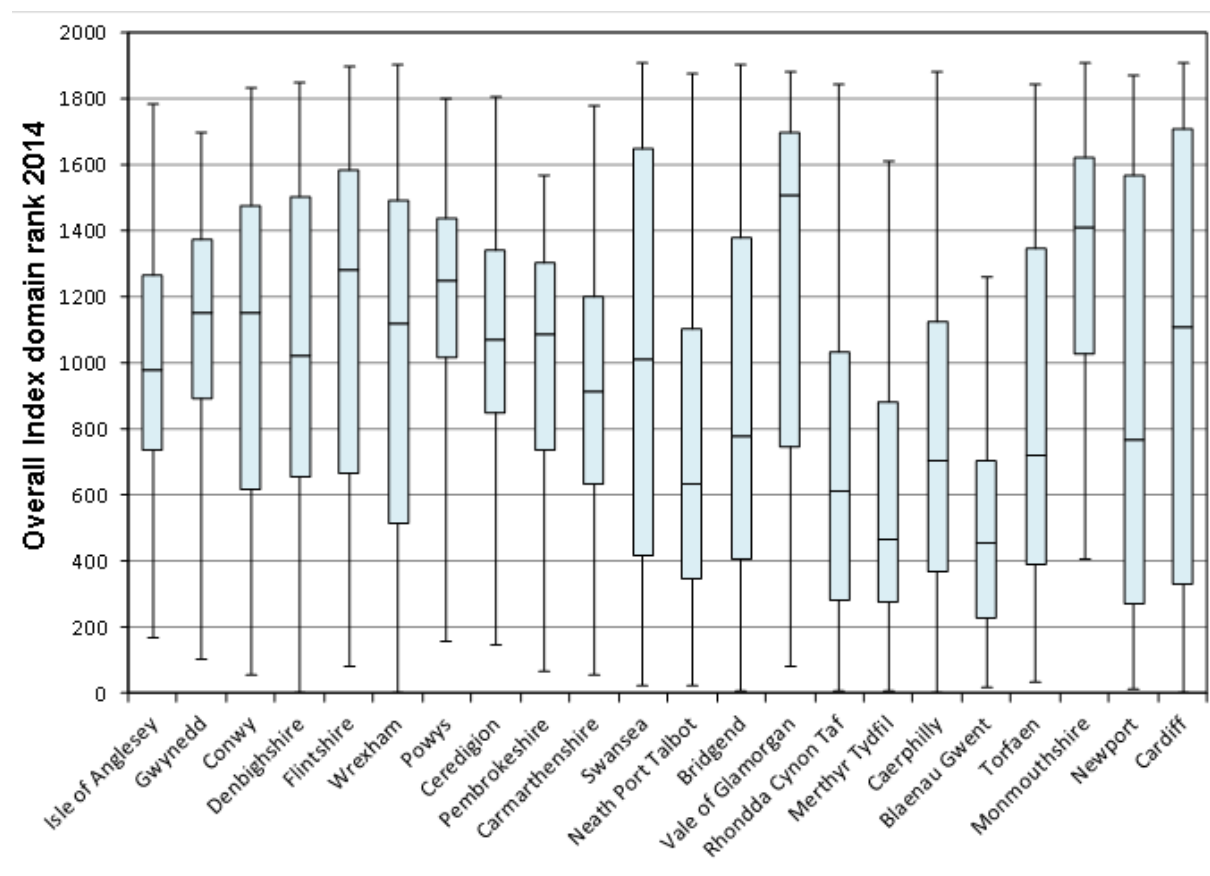
## **Rhyl West 1, Denbighshire**

Rhyl West 1 changed rank from 7 to 11, so left the ten most deprived LSOAs in WIMD 2014. Its relative deprivation has decreased in the Housing, Physical Environment and Community Safety domains, and changed little or not at all in the domains with the largest weighting, the Income and Employment domains. It became relatively more deprived in the Health, Education and Access to Services domains. It still lies within the 10 most deprived LSOAs for the Income and Employment domains and within the 10 per cent most deprived LSOAs for the Health, Education, Housing and Community Safety domains. .

## 2.5 WIMD 2014 Overall local authority analysis

Chart 2.1 below shows the spread of WIMD 2014 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 lines show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).

**Chart 2.1: Box plot of WIMD 2014 Overall ranks, by local authority (r)**



### Note

(r) This graph was revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

Table 2.3 below shows, for the WIMD 2014 overall Index, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent of Wales (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) LSOAs in Wales.

**Table 2.3: WIMD 2014 Overall deprived LSOAs, by local authority (r)**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 2.3                                      | 15.9                                     | 18.2                                     | 45.5                                     |
| Gwynedd           | 73                                 | 4.1                                      | 4.1                                      | 5.5                                      | 34.2                                     |
| Conwy             | 71                                 | 5.6                                      | 14.1                                     | 23.9                                     | 42.3                                     |
| Denbighshire      | 58                                 | 13.8                                     | 15.5                                     | 20.7                                     | 46.6                                     |
| Flintshire        | 92                                 | 2.2                                      | 12.0                                     | 19.6                                     | 34.8                                     |
| Wrexham           | 85                                 | 5.9                                      | 12.9                                     | 27.1                                     | 43.5                                     |
| Powys             | 79                                 | 1.3                                      | 3.8                                      | 11.4                                     | 20.3                                     |
| Ceredigion        | 46                                 | 2.2                                      | 2.2                                      | 6.5                                      | 39.1                                     |
| Pembrokeshire     | 71                                 | 5.6                                      | 8.5                                      | 15.5                                     | 36.6                                     |
| Carmarthenshire   | 112                                | 4.5                                      | 10.7                                     | 22.3                                     | 52.7                                     |
| Swansea           | 148                                | 12.2                                     | 25.0                                     | 28.4                                     | 48.6                                     |
| Neath Port Talbot | 91                                 | 13.2                                     | 29.7                                     | 40.7                                     | 67.0                                     |
| Bridgend          | 88                                 | 10.2                                     | 22.7                                     | 42.0                                     | 56.8                                     |
| Vale of Glamorgan | 79                                 | 5.1                                      | 15.2                                     | 19.0                                     | 36.7                                     |
| Rhondda Cynon Taf | 154                                | 16.9                                     | 29.9                                     | 47.4                                     | 72.1                                     |
| Merthyr Tydfil    | 36                                 | 22.2                                     | 30.6                                     | 61.1                                     | 80.6                                     |
| Caerphilly        | 110                                | 12.7                                     | 28.2                                     | 39.1                                     | 67.3                                     |
| Blaenau Gwent     | 47                                 | 23.4                                     | 46.8                                     | 66.0                                     | 85.1                                     |
| Torfaen           | 60                                 | 5.0                                      | 25.0                                     | 40.0                                     | 56.7                                     |
| Monmouthshire     | 56                                 | 0.0                                      | 0.0                                      | 7.1                                      | 21.4                                     |
| Newport           | 95                                 | 14.7                                     | 30.5                                     | 38.9                                     | 56.8                                     |
| Cardiff           | 214                                | 17.8                                     | 27.6                                     | 36.4                                     | 46.3                                     |
| <b>Wales</b>      | <b>1,909</b>                       | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

**Note**

(r) Some figures in this table were revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales in WIMD 2014 was Blaenau Gwent (23.4 per cent).
- Monmouthshire had none of its LSOAs in the most deprived 10 per cent.
- Only 20.3 per cent of the LSOAs in Powys were in the most deprived 50 per cent in Wales.
- Blaenau Gwent had the highest percentage of LSOAs in the most deprived 50 per cent in Wales (85.1 per cent). The next highest is Merthyr Tydfil, with 80.6 per cent of its LSOAs in the most deprived half of Wales.
- In general, the valleys and urban local authorities have higher concentrations of multiple deprivation. This is discussed further in the Statistical Article '[Welsh Index of Multiple Deprivation 2014: A guide to analysing deprivation in rural areas](#)', published as part of the WIMD 2014 package.

### 3 Income Domain (r)

#### 3.1 Introduction

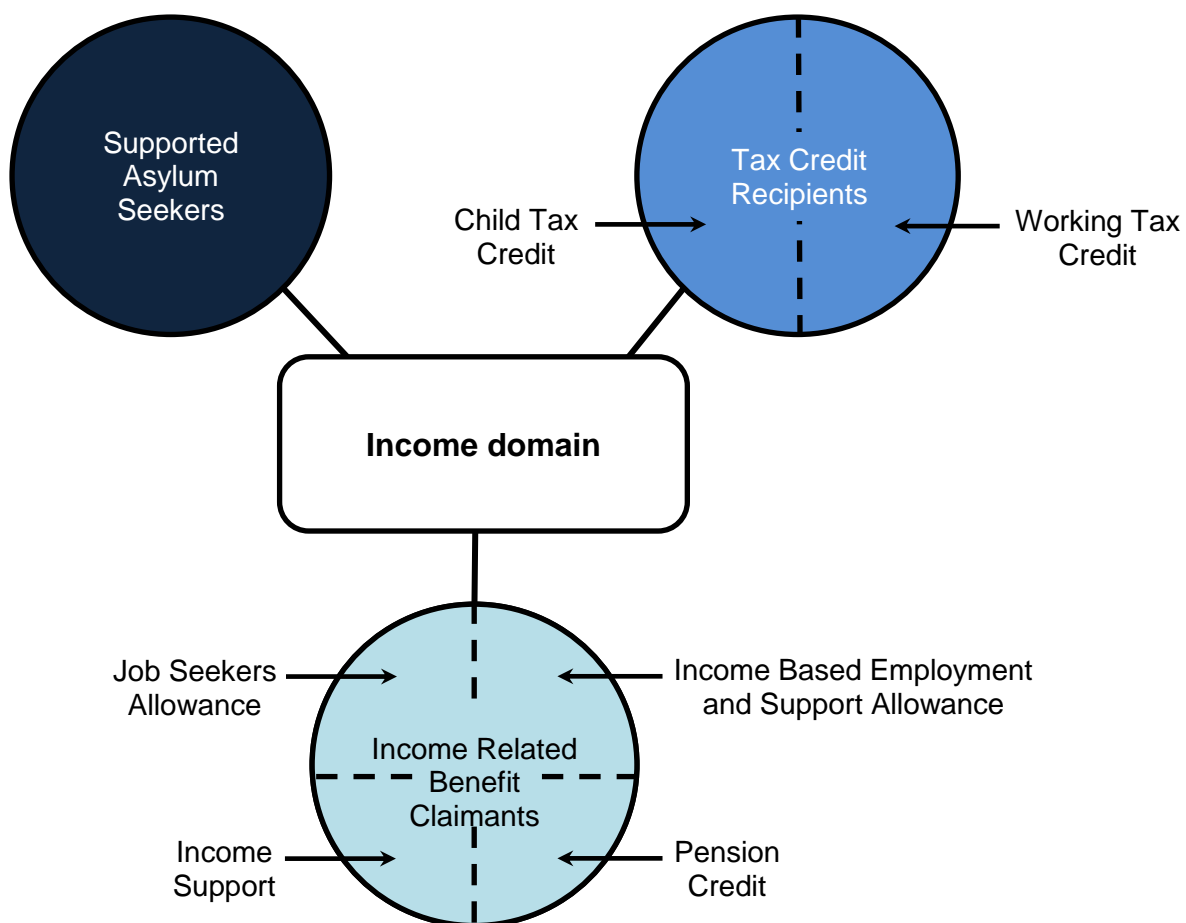
The income domain focuses on the proportion of people with income below a defined level. For a complete description of the construction of the Income domain, please see the [WIMD 2014 Technical Report](#).



The income domain has a weight of 23.5 per cent in the Overall Index.

#### 3.2 Income domain indicators

The income domain has one indicator, made up of three elements.



Each element of this indicator is summed together, and then divided by the residential population of the LSOA, to form a single indicator. Individuals who are in receipt of multiple benefits and/or tax credits are only counted once within the indicator. The introduction of Universal Credit did not affect these analyses.

- The income related benefits data are sourced from the Department for Work and Pensions (DWP). The data are based on an average of the individuals who were in receipt of these benefits during November 2012, February 2013, May 2013 and August 2013.

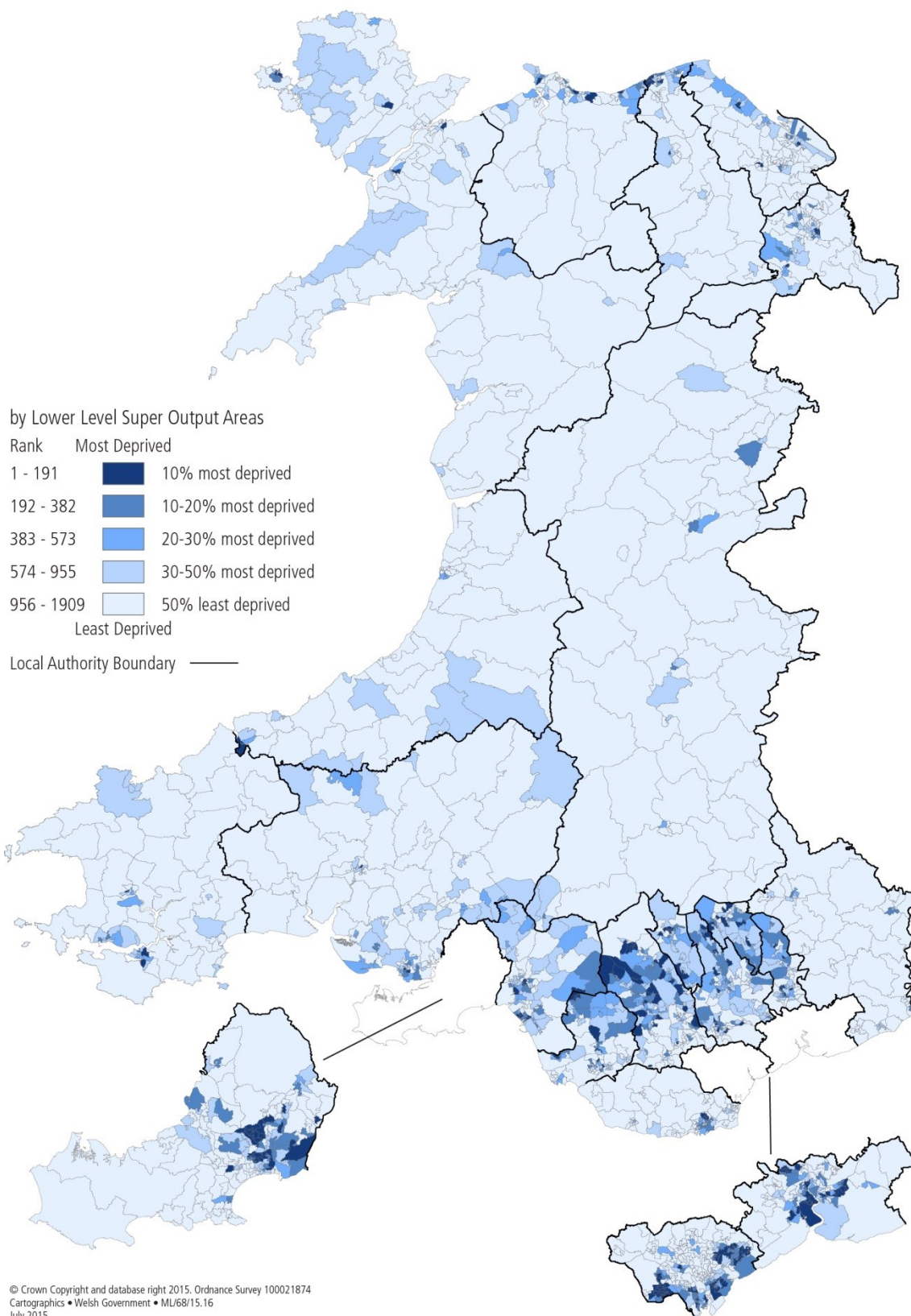


- The tax credits data are sourced from Her Majesty's Revenue and Customs (HMRC) using 2012/13 tax credits data at 31<sup>st</sup> August 2012. This includes the number of Children and Adults within families who are in receipt of Working Tax Credits and Child Tax Credits with an income 60 per cent below the median income for Wales (Before Housing Costs).
- The Supported Asylum Seekers data were sourced from the Home Office. This includes those who were supported under Section 95, at 1<sup>st</sup> September 2014.
- The residential population estimates are sourced from the Mid-2012 Small Area Population Estimates, published by the Office for National Statistics.

### **3.3 Income domain key results**

- In the WIMD 2014 income domain, there were pockets of high deprivation in the South Wales valleys and large cities, and in some North Wales coastal towns.
- The local authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales, for the income domain, was Newport (20.0 per cent). Powys and Monmouthshire had no LSOAs in the most deprived 10 per cent.
- For the income domain, the most deprived LSOA in Wales was Rhyl West 2, Denbighshire.
- The overall patterns of income deprivation in WIMD 2014 are similar to those for WIMD 2011.
- 21.7 per cent of people who are income deprived are in the most deprived 10 per cent of small areas for the income domain (the LSOAs ranked 1–191).
- Around half of those people who are income deprived are in the most deprived 30 per cent of LSOAs for the income domain.

## Income Domain



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July 2015

### Notes

(r) This map was revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

### 3.4 Income domain comparison between WIMD 2011 and WIMD 2014

The full set of domain ranks from WIMD 2014 and the underlying indicators (Annual WIMD Indicator Data) 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 WIMD 2011.

Table 3.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 3.1: Deprivation group movements for the Income domain between WIMD 2011 and WIMD 2014 (r)**

| Income domain 2014 |  |  |  |  |   |               |                          |       |
|--------------------|--|--|--|--|---|---------------|--------------------------|-------|
|                    | 10% most<br>deprived<br>(ranks<br>1-191)       | 10-20%<br>most<br>deprived<br>(ranks<br>192-382) | 20-30%<br>most<br>deprived<br>(ranks<br>383-573) | 30-50%<br>most<br>deprived<br>(ranks<br>574-955) | 50% least<br>deprived<br>(ranks<br>956-1,909) | Old<br>LSOAs* | Total (ranks<br>1-1,909) |       |
| Income domain 2011 | 10% most<br>deprived<br>(ranks 1-190)          | 159  | 28   | 1  | 0   | 2             | 190                      |       |
|                    | 10-20% most<br>deprived<br>(ranks 191-380)     | 29   | 119  | 35   | 2   | 5             | 190                      |       |
|                    | 20-30% most<br>deprived<br>(ranks 381-570)     | 0  | 35   | 102  | 50  | 3             | 190                      |       |
|                    | 30-50% most<br>deprived<br>(ranks 571-950)     | 1  | 4  | 45   | 262   | 10            | 380                      |       |
|                    | 50% least<br>deprived<br>(ranks 951-<br>1,896) | 0  | 0  | 2  | 60  | 29            | 946                      |       |
|                    | New LSOAs*                                     | 2  | 5  | 6  | 8   | 41            | 0                        | 62    |
|                    | Total<br>(ranks 1-1 896)                       | 191  | 191  | 191  | 382   | 954           | 49                       | 1,958 |

**Note:** (r) Some figures in this table were revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

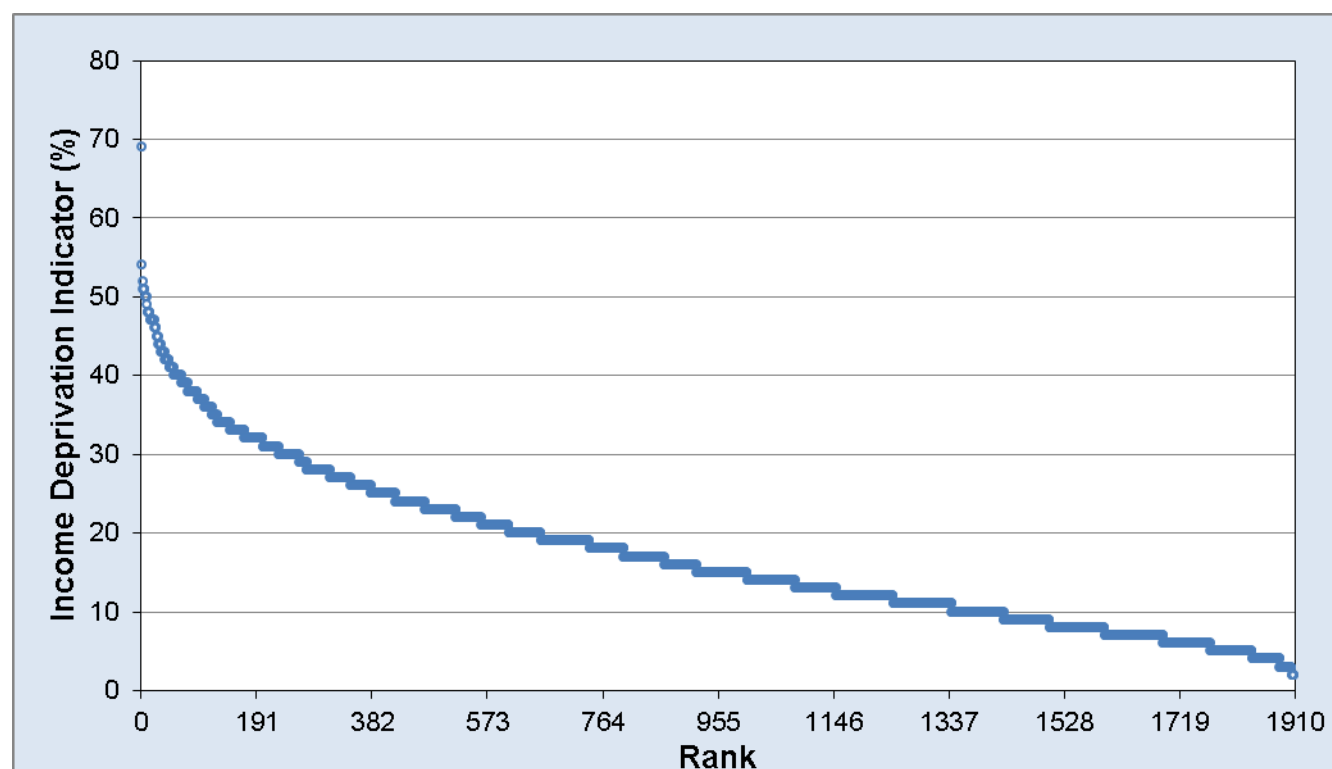
\* - These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.

Table 3.1 shows that there were no major changes between WIMD 2011 and WIMD 2014. However, it should be noted that the percentage of people considered income deprived in Wales as a whole has decreased slightly, from 17.8 per cent in WIMD 2011 to 17.1 per cent in WIMD 2014. Care should be taken in comparing the data over time as recent changes to the welfare system mean that eligibility thresholds and criteria for some benefits have changed.

### 3.5 Distribution of the Income deprived population in WIMD 2014

Chart 3.1 below shows the ranks and indicator values for the income domain in WIMD 2014.

**Chart 3.1: WIMD 2014 Income domain distribution (r)**



**Note**

(r) This graph was revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

The plot shows that, at the most deprived end of the distribution, there is a steep increase in the percentage of people that are income deprived. There is a wide range in the percentage of people who are income deprived within the most deprived 10 per cent of LSOAs. The percentages range from 69 per cent for Rhyl West 2, Denbighshire (the LSOA ranked 1), to 32 per cent for Cwmtillery 1, Blaenau Gwent (the LSOA ranked 191).

Table 3.2 below puts these numbers into context. The most deprived 10 per cent of LSOAs contains 21.7 per cent of people who are income deprived within Wales. Just over half of people who are income deprived can be found in the most deprived 30 per cent of LSOAs for the income domain.

**Table 3.2: Distribution of the Income deprived population, WIMD 2014 (r)**

| Percentage of all income deprived people | Percentage of Welsh LSOAs | Income domain ranks |
|--|---------------------------|---------------------|
| 21.7                                     | most-deprived 10%         | 1 - 191             |
| 38.1                                     | most-deprived 20%         | 1 - 382             |
| 50.0                                     | most-deprived 28.7%       | 1 - 548             |
| 6.9                                      | least-deprived 20%        | 1529 - 1909         |

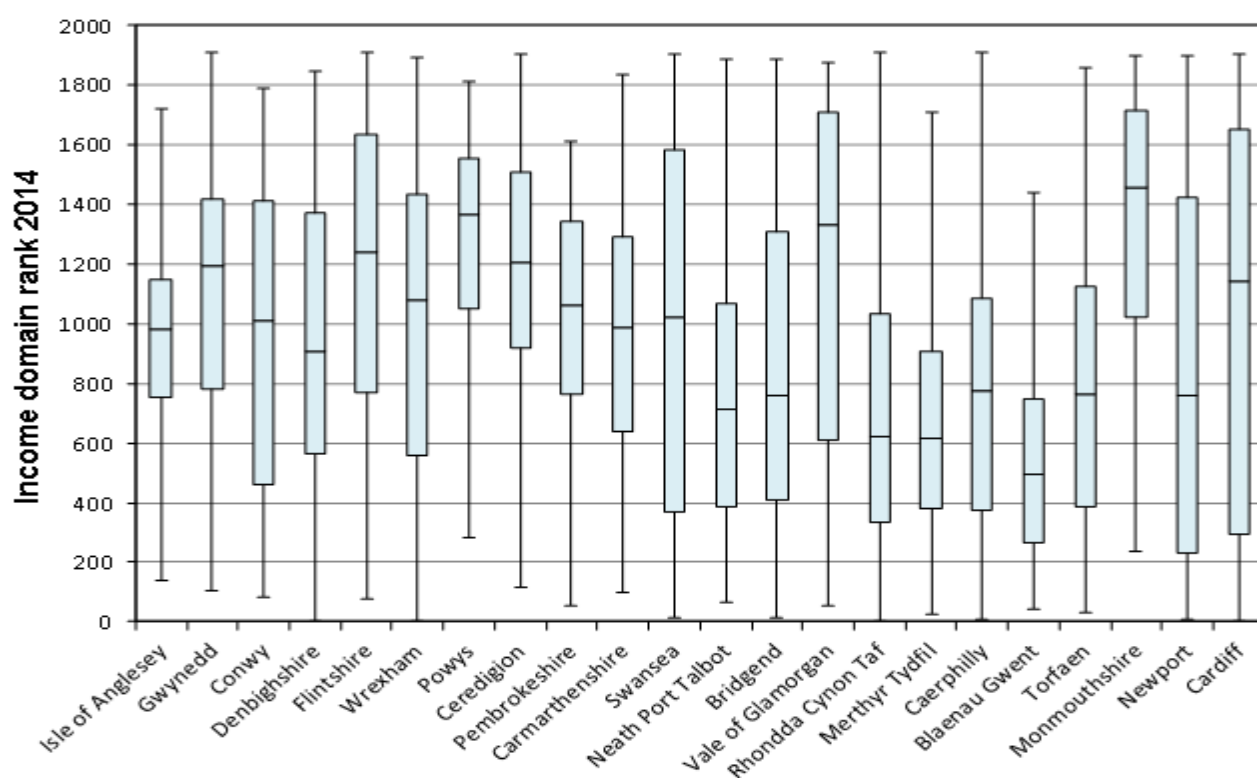
**Note**

(r) Some figures in this table were revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

### 3.6 WIMD 2014 Income domain local authority analysis

Chart 3.2 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 lines show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).

**Chart 3.2: Box plot of WIMD 2014 Income domain ranks, by local authority (r)**



**Note:** (r) This graph was revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

Table 3.3 below shows, for the income domain of WIMD 2014, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) of LSOAs in Wales.

**Table 3.3: WIMD 2014 Income domain deprived LSOAs, by local authority (r)**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 6.8                                      | 15.9                                     | 18.2                                     | 43.2                                     |
| Gwynedd           | 73                                 | 4.1                                      | 4.1                                      | 6.8                                      | 31.5                                     |
| Conwy             | 71                                 | 5.6                                      | 14.1                                     | 31.0                                     | 46.5                                     |
| Denbighshire      | 58                                 | 13.8                                     | 17.2                                     | 25.9                                     | 53.4                                     |
| Flintshire        | 92                                 | 4.3                                      | 9.8                                      | 18.5                                     | 33.7                                     |
| Wrexham           | 85                                 | 5.9                                      | 14.1                                     | 25.9                                     | 45.9                                     |
| Powys             | 79                                 | 0.0                                      | 7.6                                      | 10.1                                     | 19.0                                     |
| Ceredigion        | 46                                 | 2.2                                      | 2.2                                      | 8.7                                      | 28.3                                     |
| Pembrokeshire     | 71                                 | 4.2                                      | 8.5                                      | 15.5                                     | 42.3                                     |
| Carmarthenshire   | 112                                | 2.7                                      | 8.9                                      | 21.4                                     | 46.4                                     |
| Swansea           | 148                                | 14.2                                     | 27.0                                     | 29.7                                     | 48.0                                     |
| Neath Port Talbot | 91                                 | 11.0                                     | 25.3                                     | 39.6                                     | 69.2                                     |
| Bridgend          | 88                                 | 9.1                                      | 21.6                                     | 40.9                                     | 56.8                                     |
| Vale of Glamorgan | 79                                 | 5.1                                      | 16.5                                     | 24.1                                     | 39.2                                     |
| Rhondda Cynon Taf | 154                                | 14.9                                     | 28.6                                     | 46.8                                     | 69.5                                     |
| Merthyr Tydfil    | 36                                 | 16.7                                     | 25.0                                     | 44.4                                     | 80.6                                     |
| Caerphilly        | 110                                | 10.0                                     | 25.5                                     | 36.4                                     | 68.2                                     |
| Blaenau Gwent     | 47                                 | 17.0                                     | 34.0                                     | 51.1                                     | 85.1                                     |
| Torfaen           | 60                                 | 10.0                                     | 23.3                                     | 40.0                                     | 63.3                                     |
| Monmouthshire     | 56                                 | 0.0                                      | 5.4                                      | 7.1                                      | 21.4                                     |
| Newport           | 95                                 | 20.0                                     | 34.7                                     | 44.2                                     | 58.9                                     |
| Cardiff           | 214                                | 19.2                                     | 30.8                                     | 37.4                                     | 45.3                                     |
| <b>Wales</b>      | <b>1,909</b>                       | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

Note

(r) Some figures in this table were revised on 12 August 2015 following provision of revised data by the Department for Work and Pensions (DWP).

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for income was Newport (20.0 per cent).
- Powys and Monmouthshire had no LSOAs in the most deprived 10 per cent for the income domain. Only 19.0 per cent of the LSOAs in Powys were in the most deprived 50 per cent in Wales.
- Blaenau Gwent had the highest proportion of LSOAs in the most deprived 50 per cent in Wales (85.1 per cent). The next highest was Merthyr Tydfil, with 80.6 per cent of its LSOAs in the most deprived half of Wales.

### **3.7 Income domain methodological changes between WIMD 2011 and WIMD 2014**

There were no methodological changes in the income domain between WIMD 2011 and WIMD 2014. However, recent changes to the welfare system mean that eligibility thresholds and criteria for some benefits have changed.

### **3.8 Income domain background information**

#### **Income estimates**

Small area income estimates are a potential measure of income deprivation; however there is no suitable data source at the LSOA level. The Office for National Statistics (ONS) currently produces [Middle-layer Super Output Area \(MSOA\) modelled income estimates](#).

#### **Households Below Average Income (HBAI) report**

Households Below Average Income (HBAI) is an annual report, produced by the Department for Work and Pensions (DWP). It gives an insight into the standard of living of the household population in the United Kingdom, focusing on the lower part of income distribution. The HBAI also provides the headline figures for poverty in Wales.

[Key results for Wales](#) can be found on the Welsh Government website.

A copy of the full HBAI report can be found [here](#).

#### **Persistent claimants**

Information on the duration of benefit claims is available from the Work and Pensions Longitudinal Study (WPLS). These data are available from the [DWP tabulation tool](#).

## 4 Employment Domain

### 4.1 Introduction

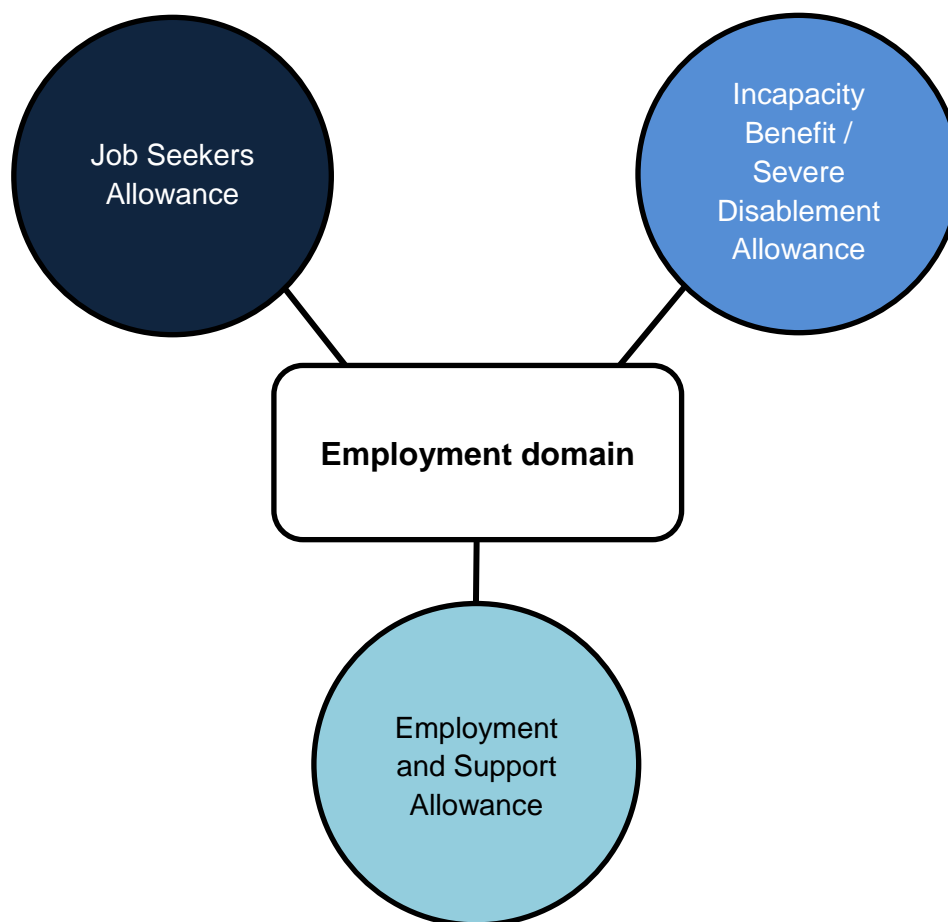
The purpose of the employment domain is to capture lack of employment. This covers involuntary exclusion of the working age population from work, including those who cannot work due to ill-health or who are unemployed but are actively seeking work. For a complete description of the construction of the employment domain, please see the [WIMD 2014 Technical Report](#).



The employment domain has a weight of 23.5 per cent in the Overall Index.

### 4.2 Employment domain indicators

The employment domain contains one indicator, employment related benefits, made up of three elements.



Each element of this indicator is summed together, and then divided by the working age population of the LSOA, to form a single indicator. Individuals who are in receipt of multiple benefits are only counted once within the indicator.

While changes are being introduced to these benefits as a result of welfare reform, the data used for WIMD 2014 was prior to the roll-out of Universal Credits in Wales.



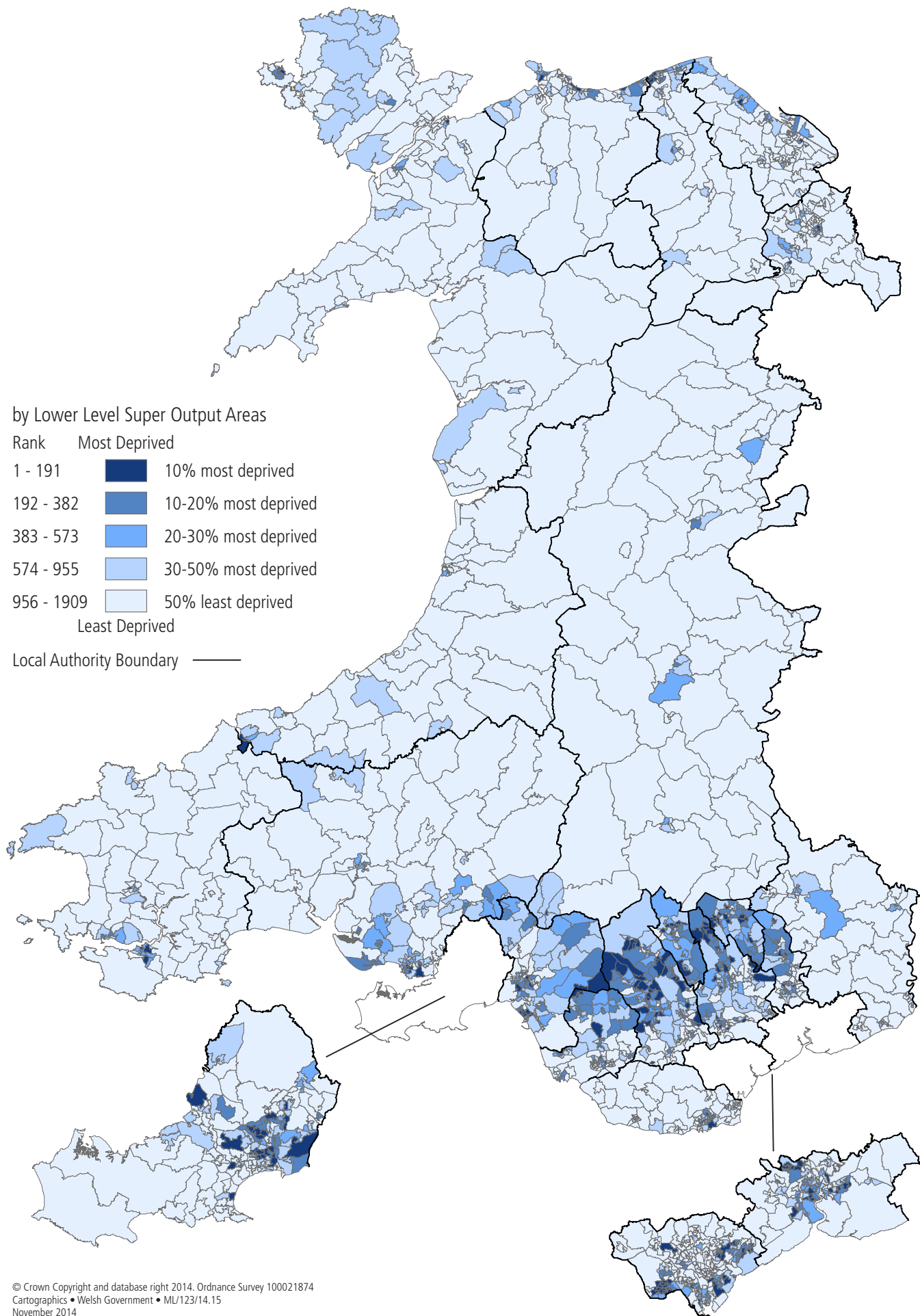
- The data are sourced from the Department for Work and Pensions (DWP) and are based on an average of the individuals who were in receipt of these benefits during November 2012, February 2013, May 2013 and August 2013.
- The residential population estimates are sourced from the Mid-2012 Small Area Population Estimates, published by the Office for National Statistics.

### **4.3 Employment domain key results**

- In the WIMD 2014 employment domain, there were pockets of high deprivation in the South Wales valleys and large cities, and in some North Wales coastal towns.
- The local authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for the employment domain was Merthyr Tydfil (25.0 per cent). Monmouthshire had no LSOAs in the most deprived 10 per cent.
- For the employment domain, the most deprived LSOA in Wales was Rhyl West 2, Denbighshire.
- The overall patterns of employment deprivation in WIMD 2014 are similar to those for WIMD 2011.
- 20.1 per cent of people who are employment deprived are in the most deprived 10 per cent of small areas for the employment domain (the LSOAs ranked 1–191).
- Just under half of those people who are employment deprived are in the most deprived 30 per cent of LSOAs for the employment domain.

Welsh Index of Multiple Deprivation 2014

# Employment Domain



#### 4.4 Employment domain comparison between WIMD 2011 and WIMD 2014

The full set of domain ranks from WIMD 2014 and the underlying indicators (Annual WIMD Indicator Data) 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 employment domain since WIMD 2011.

Table 4.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 4.1: Deprivation group movements for the Employment domain between WIMD 2011 and WIMD 2014**

|                        | Employment domain 2014                           |  |  |  |   |               | Total<br>(ranks<br>1-1,909) |
|------------------------|--|--|--|--|---|---------------|-----------------------------|
|                        | 10% most<br>deprived<br>(ranks<br>1-191)         | 10-20%<br>most<br>deprived<br>(ranks<br>192-382) | 20-30%<br>most<br>deprived<br>(ranks<br>383-573) | 30-50%<br>most<br>deprived<br>(ranks<br>574-955) | 50% least<br>deprived<br>(ranks<br>956-1,909) | Old<br>LSOAs* |                             |
| Employment domain 2011 | 10% most<br>deprived<br>(ranks 1-222)            | <b>160</b>                                       | 52   | 4  | 0   | 6             | 222                         |
|                        | 10-20% most<br>deprived<br>(ranks 223-399)       | 26   | <b>97</b>  | 48   | 3   | 3             | 177                         |
|                        | 20-30% most<br>deprived<br>(ranks 400-584)       | 2  | 38   | <b>86</b>  | 56  | 1             | 185                         |
|                        | 30-50% most<br>deprived<br>(ranks 585-<br>1,021) | 0  | 2  | 43   | <b>295</b>                                    | 90            | 437                         |
|                        | 50% least<br>deprived<br>(ranks 1,022-<br>1,896) | 0  | 0  | 1  | 21  | <b>822</b>    | 875                         |
|                        | New LSOAs*                                       | 3  | 2  | 9  | 7   | 41            | 62                          |
|                        | Total<br>(ranks 1-1,896)                         | 191  | 191  | 191  | 382   | 954           | <b>1,958</b>                |

\* These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.

Table 4.1 above shows that there were no major changes between WIMD 2011 and WIMD 2014. However, it should be noted that the percentage of people considered employment deprived has decreased in Wales as a whole, from 14.7 per cent in WIMD 2011 to 13.2 per cent in WIMD 2014. Care should be taken in comparing the indicator data over time as recent changes to the welfare system mean that eligibility thresholds and criteria for some benefits have changed.

#### 4.5 Distribution of the Employment deprived population in WIMD 2014

Chart 4.1 below shows the ranks and indicator values for the employment domain in WIMD 2014.

**Chart 4.1: WIMD 2014 Employment domain distribution**

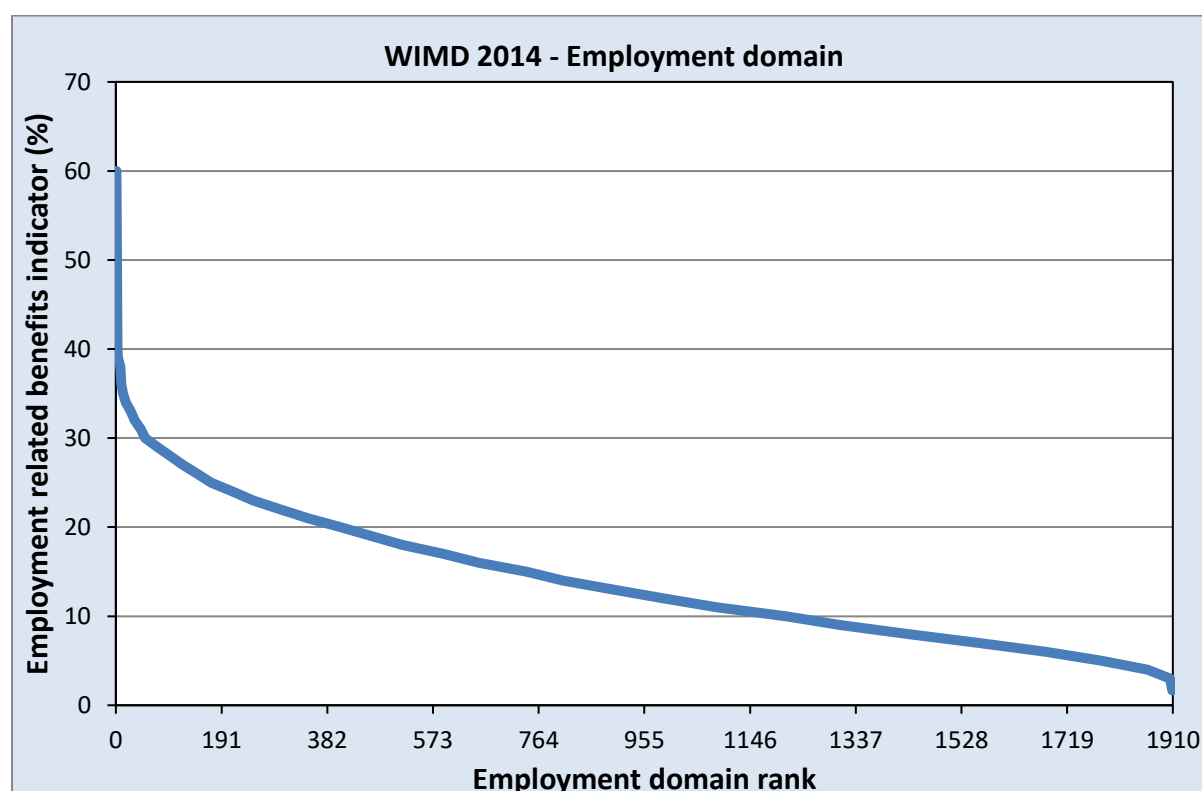


Chart 4.1 shows that, at the most deprived end of the distribution, there is a steep increase in the percentage of people in employment deprivation. There is a wide range in the percentage of people who are employment deprived within the most deprived 10 per cent of LSOAs. The percentages range from 60 per cent for Rhyl West 2, Denbighshire (the LSOA ranked 1), to 24 per cent in Cadoc 1, Vale of Glamorgan (the LSOA ranked 191).

Table 4.2 below puts these numbers into context. The most deprived 10 per cent of LSOAs contains 20.1 per cent of those who are employment deprived within Wales. Just under half of those who are employment deprived can be found in the most deprived 30 per cent of LSOAs for the employment domain.

**Table 4.2: Distribution of the Employment deprived population, WIMD 2014**

| Percentage of all<br>Employment deprived people | Percentage of<br>Welsh LSOAs | Employment<br>domain ranks |
|---|------------------------------|----------------------------|
| 20.1  | most-deprived 10.0%          | 1 – 191                    |
| 36.0  | most-deprived 20.0%          | 1 – 382                    |
| 50.0  | most-deprived 30.2%          | 1 – 548                    |
| 7.8   | least-deprived 20.0%         | 1,529 – 1,909              |

#### 4.6 WIMD 2014 Employment domain local authority analysis

Chart 4.2 below shows the spread of employment 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 lines show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).

**Chart 4.2: Box plot of WIMD 2014 Employment domain ranks, by local authority**

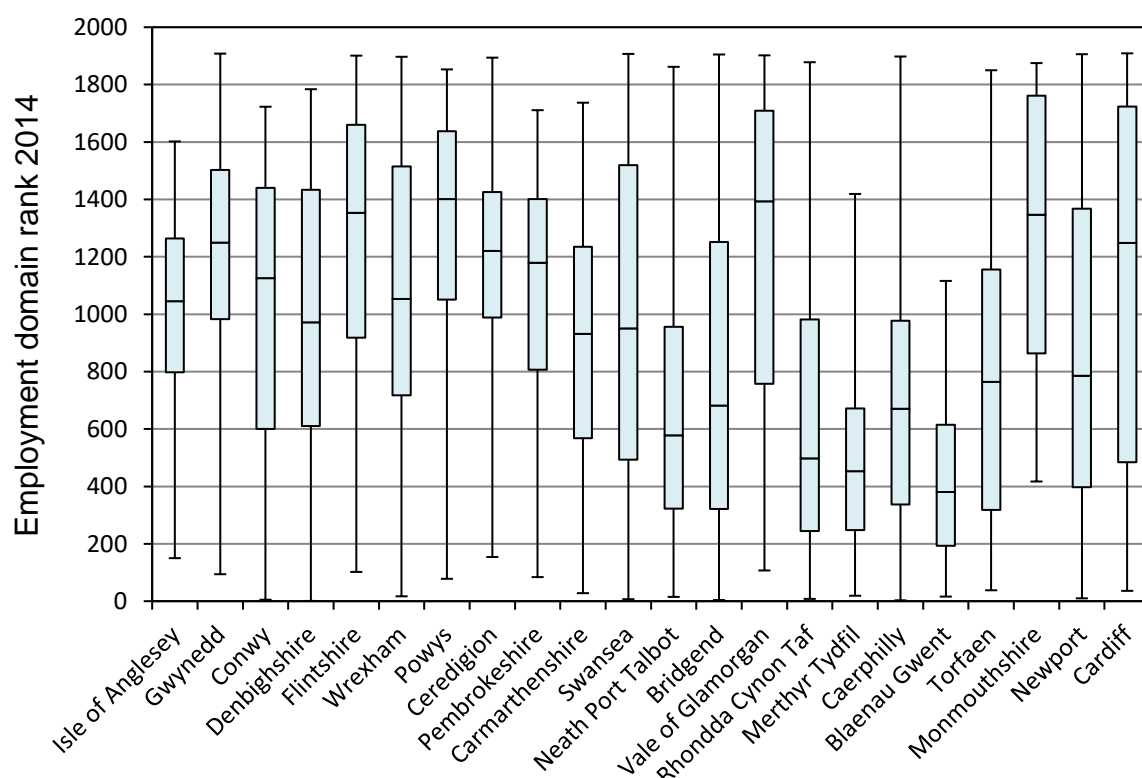


Table 4.3 below shows, for the employment domain of WIMD 2014, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) of LSOAs in Wales.

**Table 4.3: WIMD 2014 Employment domain deprived LSOAs, by local authority**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 4.5                                      | 15.9                                     | 15.9                                     | 45.5                                     |
| Gwynedd           | 73                                 | 1.4                                      | 2.7                                      | 5.5                                      | 21.9                                     |
| Conwy             | 71                                 | 5.6                                      | 14.1                                     | 23.9                                     | 46.5                                     |
| Denbighshire      | 58                                 | 12.1                                     | 19.0                                     | 24.1                                     | 50.0                                     |
| Flintshire        | 92                                 | 2.2                                      | 5.4                                      | 14.1                                     | 27.2                                     |
| Wrexham           | 85                                 | 3.5                                      | 8.2                                      | 14.1                                     | 38.8                                     |
| Powys             | 79                                 | 1.3                                      | 5.1                                      | 8.9                                      | 21.5                                     |
| Ceredigion        | 46                                 | 2.2                                      | 2.2                                      | 6.5                                      | 23.9                                     |
| Pembrokeshire     | 71                                 | 5.6                                      | 8.5                                      | 18.3                                     | 35.2                                     |
| Carmarthenshire   | 112                                | 4.5                                      | 13.4                                     | 26.8                                     | 53.6                                     |
| Swansea           | 148                                | 12.8                                     | 21.6                                     | 26.4                                     | 50.7                                     |
| Neath Port Talbot | 91                                 | 15.4                                     | 33.0                                     | 48.4                                     | 74.7                                     |
| Bridgend          | 88                                 | 9.1                                      | 34.1                                     | 43.2                                     | 62.5                                     |
| Vale of Glamorgan | 79                                 | 6.3                                      | 10.1                                     | 17.7                                     | 34.2                                     |
| Rhondda Cynon Taf | 154                                | 20.8                                     | 38.3                                     | 57.1                                     | 73.4                                     |
| Merthyr Tydfil    | 36                                 | 25.0                                     | 41.7                                     | 66.7                                     | 88.9                                     |
| Caerphilly        | 110                                | 16.4                                     | 29.1                                     | 41.8                                     | 72.7                                     |
| Blaenau Gwent     | 47                                 | 23.4                                     | 51.1                                     | 70.2                                     | 95.7                                     |
| Torfaen           | 60                                 | 8.3                                      | 30.0                                     | 43.3                                     | 63.3                                     |
| Monmouthshire     | 56                                 | 0.0                                      | 0.0                                      | 8.9                                      | 26.8                                     |
| Newport           | 95                                 | 14.7                                     | 24.2                                     | 35.8                                     | 55.8                                     |
| Cardiff           | 214                                | 12.1                                     | 20.1                                     | 29.0                                     | 39.7                                     |
| <b>Wales</b>      | <b>1,909</b>                       | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for employment was Merthyr Tydfil (25.0 per cent), closely followed by Blaenau Gwent (23.4 per cent).

- Monmouthshire had no LSOAs in the most deprived 10 per cent. Only 21.5 per cent of the LSOAs in Powys were in the most deprived 50 per cent in Wales, closely followed by Gwynedd with 21.9 per cent.
- Blaenau Gwent had the highest proportion of LSOAs in the most deprived 50 per cent in Wales (95.7 per cent). The next highest was Merthyr Tydfil, with 88.9 per cent of its LSOAs in the most deprived half of Wales.

#### **4.7 Employment domain methodological changes between WIMD 2011 and WIMD 2014**

New Deal participants are no longer included in this domain. This programme was replaced by the Work Programme, which requires a participant to be claiming either Job Seekers Allowance or Employment and Support Allowance. Both of these benefits are already included in the indicator. In addition to this, changes to the welfare system mean that eligibility thresholds and criteria for some benefits have changed.

#### **4.8 Employment domain background information**

##### **Workless households**

Workless household are those where none of the adults aged 16 to 64 are in employment. The data are sourced from the Annual Population Survey (APS) and Labour Force Survey (LFS). These data enable household analyses to be carried out at a local authority level, including details of people in workless households, children in workless households, lone parents and housing tenure.

Key results for Wales can be found in the Labour Market Statistics for Households [statistical bulletin](#).

The headline LFS estimates in the bulletin are published by the Office for National Statistics (ONS) in their [Workless Households Statistical Bulletin](#).

##### **Persistent claimants**

Information on the duration of benefit claims is available from the Work and Pensions Longitudinal Study (WPLS). These data are available from the [DWP tabulation tool](#).

## 5 Health Domain

### 5.1 Introduction

The purpose of this domain is to measure lack of good health. For a complete description of the construction of the health domain, please see the [WIMD 2014 Technical Report](#).

HEALTH

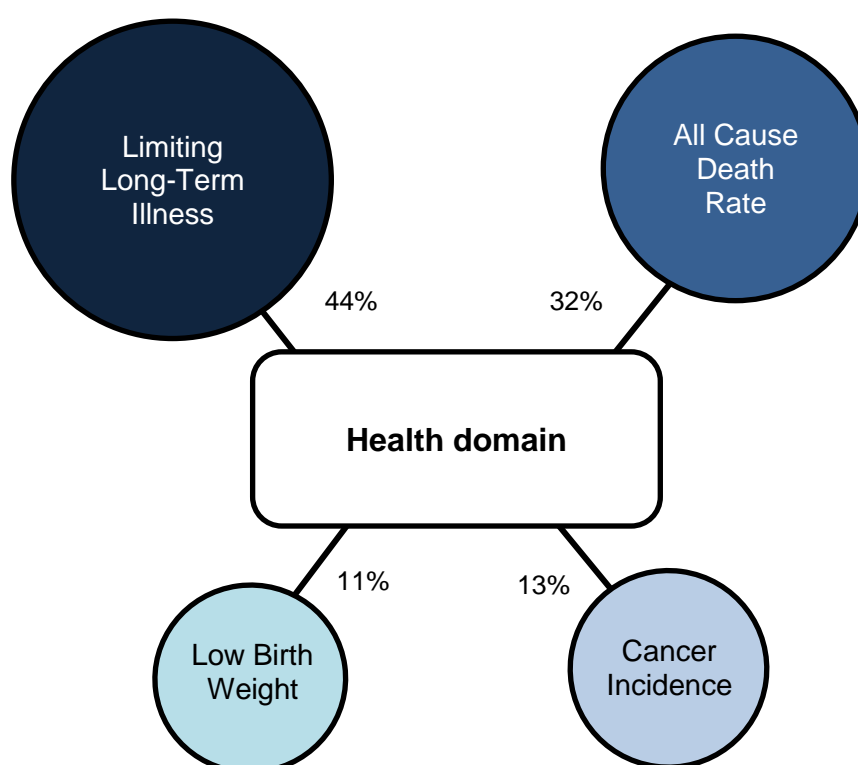


14%

The health domain has a weight of 14 per cent in the Overall Index.

### 5.2 Health domain indicators

The health domain contains 4 indicators, weighted as shown below (using factor analysis to calculate the weights).



- The indicator on Limiting Long-Term Illness measures the number of people with a limiting long-term illness per 100,000 people, and is based on 2011 Census data (ONS).
- The indicator on All Cause Death Rate measures the number of deaths per 100,000 people, and is based on the 2004-2013 average (ONS).
- The indicator on Cancer Incidence measures the number of incidences per 100,000 people, and is based on the 2003-2012 average (Welsh Cancer Intelligence and Surveillance Unit, Velindre NHS Trust).
- The indicator on Low Birth Weight measures the percentage of live single births less than 2.5 kg, and is based on the 2004-2013 average (ONS).

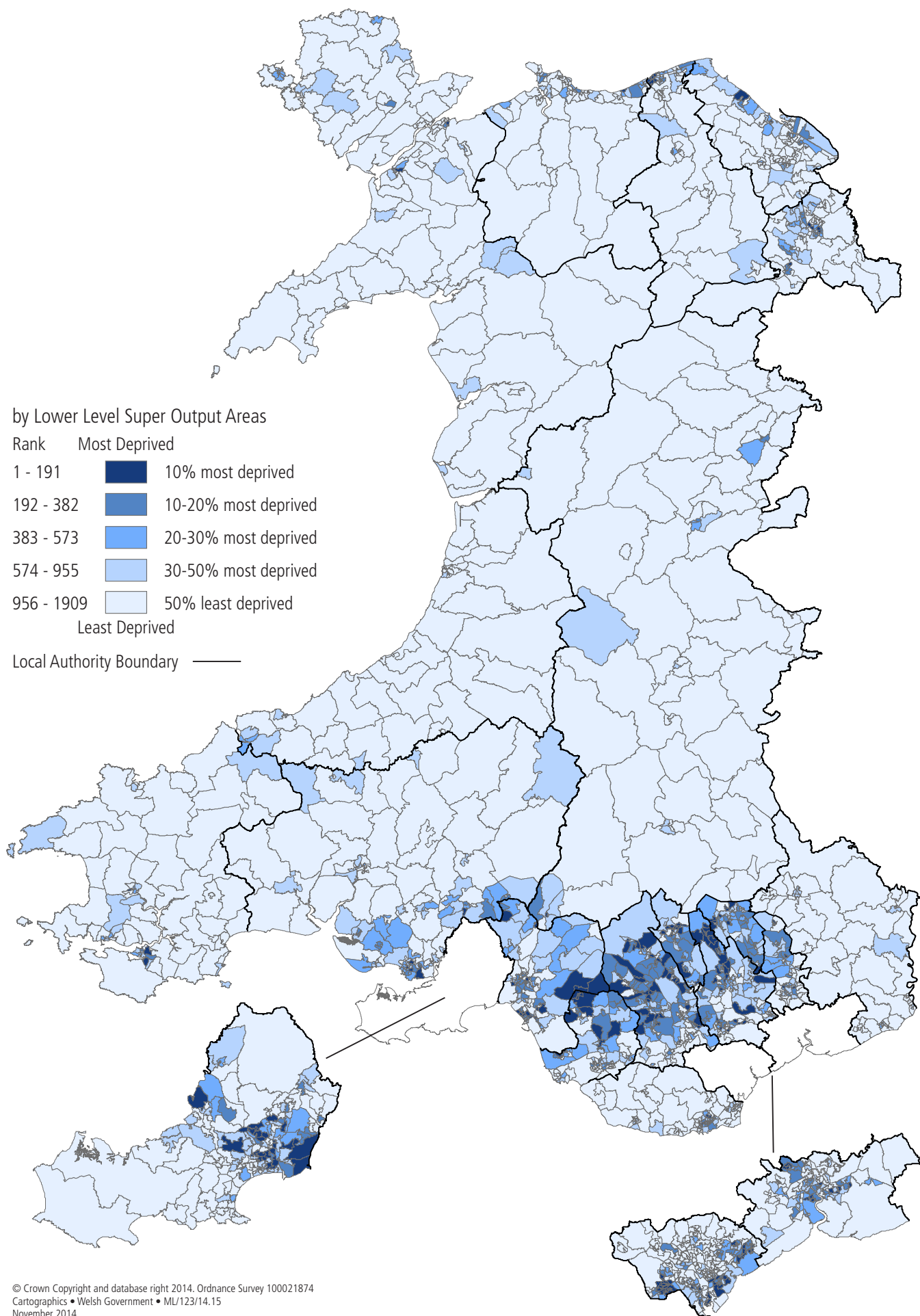


### **5.3 Health domain key results**

- In the WIMD 2014 health domain, there were pockets of high deprivation in the South Wales valleys and large cities, and in some North Wales coastal and border towns.
- The local authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for the health domain was Merthyr Tydfil. The Isle of Anglesey, Ceredigion and Monmouthshire had no LSOAs in the most deprived 10 per cent.
- For the health domain, the most deprived LSOA in Wales was Rhyl West 2, Denbighshire.
- The overall patterns of health deprivation in WIMD 2014 are similar to those for WIMD 2011.

Welsh Index of Multiple Deprivation 2014

# Health Domain



## 5.4 Health domain comparison between WIMD 2011 and WIMD 2014

The full set of domain ranks from WIMD 2014 and the underlying indicators (Annual WIMD Indicator Data) 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 WIMD 2011.

Table 5.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 5.1: Deprivation group movements for the Health domain between WIMD 2011 and WIMD 2014**

|                    |  | Health domain 2014              |                                      |                                      |                                      |                                     | Old LSOAs* | Total (ranks 1-1909) |
|--------------------|--|---------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|-------------------------------------|------------|----------------------|
|                    |  | 10% most deprived (ranks 1-191) | 10-20% most deprived (ranks 192-382) | 20-30% most deprived (ranks 383-573) | 30-50% most deprived (ranks 574-955) | 50% least deprived (ranks 956-1909) |            |                      |
| Health domain 2011 | 10% most deprived (ranks 1-190)          | <b>136</b>                      | 42                                   | 4                                    | 4                                    | 0                                   | 4          | 190                  |
|                    | 10-20% most deprived (ranks 191-380)     | 38                              | <b>87</b>                            | 49                                   | 13                                   | 0                                   | 3          | 190                  |
|                    | 20-30% most deprived (ranks 381-570)     | 12                              | 42                                   | <b>66</b>                            | 62                                   | 5                                   | 3          | 190                  |
|                    | 30-50% most deprived (ranks 571-950)     | 2                               | 17                                   | 60                                   | <b>219</b>                           | 75                                  | 7          | 380                  |
|                    | 50% most least deprived (ranks 951-1896) | 0                               | 1                                    | 4                                    | 73                                   | <b>836</b>                          | 32         | 946                  |
|                    | New LSOAs*                               | 3                               | 2                                    | 8                                    | 11                                   | 38                                  | 0          | 62                   |
|                    | Total (ranks 1-1896)                     | 191                             | 191                                  | 191                                  | 382                                  | 954                                 | 49         | <b>1958</b>          |

\* These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.

2 LSOAs (Cockett 2, Swansea and Rhydfelen Central/Llan 1, Rhondda Cynon Taf) moved from the 30-50 per cent most deprived group of small areas in WIMD 2011 to the most deprived 10 per cent group in WIMD 2014. A single LSOA (Morriston 6, Swansea) moved from the 50 per cent least deprived group to the 10-20 per cent most deprived group. These movements were mainly due to increases in the all cause death rate and cancer incidence indicators.

4 LSOAs (Plasnewydd 4, Cardiff; Castle 6, Swansea; Glyncorrwg and Neath South 1, Neath Port Talbot) moved from the most deprived 10 per cent of small areas in WIMD 2011 to the 30-50 per cent most deprived in WIMD 2014. Plasnewydd 4 had decreases in the limiting long-term illness and low birth weight indicators. Castle 6 had decreases in the cancer incidence and, to a lesser extent, low birth weight and all cause death rate indicators. Both named Neath Port Talbot LSOAs had decreases in the cancer incidence and all cause death rate indicators. Glyncorrwg also had a decrease in the low birth weight indicator.

## 5.5 WIMD 2014 Health domain local authority analysis

Chart 5.1 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 lines show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).

**Chart 5.1: Box plot of WIMD 2014 Health domain ranks, by local authority**

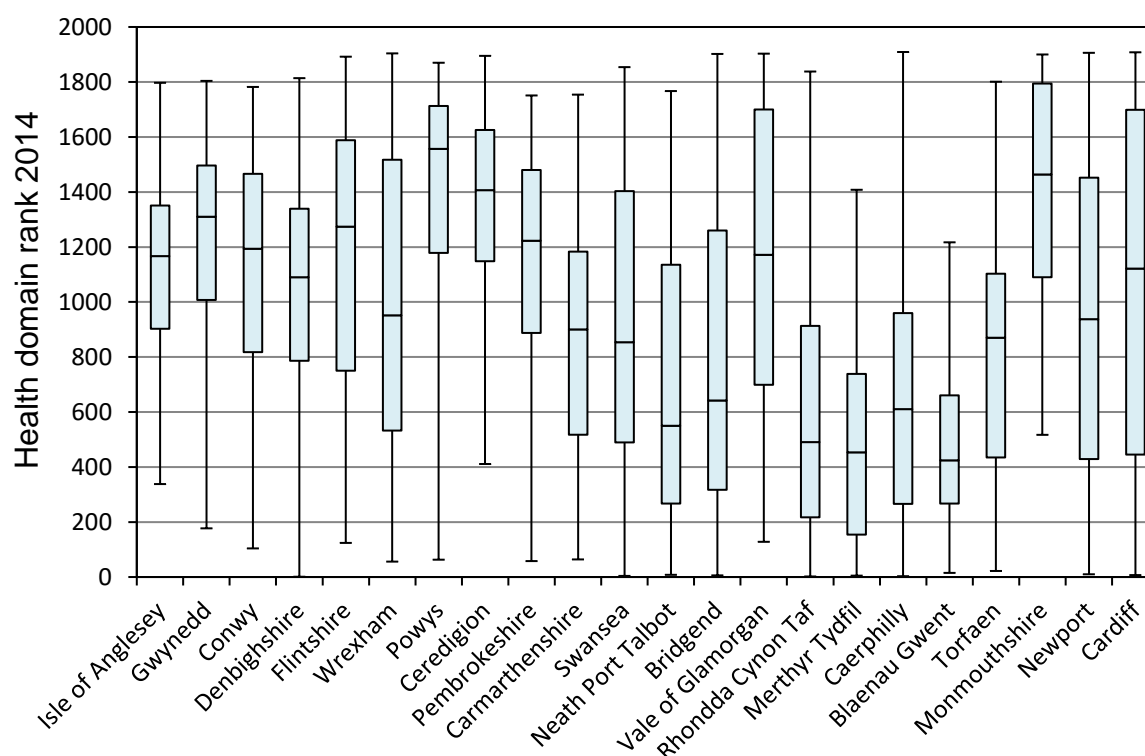


Table 5.2 below shows, for the health domain of WIMD 2014, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) of LSOAs in Wales.

**Table 5.2: WIMD 2014 Health domain deprived LSOAs, by local authority**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 0.0                                      | 4.5                                      | 15.9                                     | 29.5                                     |
| Gwynedd           | 73                                 | 2.7                                      | 4.1                                      | 5.5                                      | 19.2                                     |
| Conwy             | 71                                 | 1.4                                      | 7.0                                      | 15.5                                     | 31.0                                     |
| Denbighshire      | 58                                 | 10.3                                     | 15.5                                     | 22.4                                     | 37.9                                     |
| Flintshire        | 92                                 | 2.2                                      | 8.7                                      | 17.4                                     | 34.8                                     |
| Wrexham           | 85                                 | 4.7                                      | 16.5                                     | 27.1                                     | 50.6                                     |
| Powys             | 79                                 | 1.3                                      | 5.1                                      | 8.9                                      | 19.0                                     |
| Ceredigion        | 46                                 | 0.0                                      | 0.0                                      | 4.3                                      | 15.2                                     |
| Pembrokeshire     | 71                                 | 4.2                                      | 7.0                                      | 12.7                                     | 31.0                                     |
| Carmarthenshire   | 112                                | 4.5                                      | 11.6                                     | 29.5                                     | 55.4                                     |
| Swansea           | 148                                | 14.2                                     | 20.9                                     | 29.7                                     | 54.7                                     |
| Neath Port Talbot | 91                                 | 17.6                                     | 36.3                                     | 50.5                                     | 72.5                                     |
| Bridgend          | 88                                 | 12.5                                     | 29.5                                     | 45.5                                     | 61.4                                     |
| Vale of Glamorgan | 79                                 | 3.8                                      | 11.4                                     | 17.7                                     | 41.8                                     |
| Rhondda Cynon Taf | 154                                | 21.4                                     | 43.5                                     | 56.5                                     | 77.3                                     |
| Merthyr Tydfil    | 36                                 | 30.6                                     | 47.2                                     | 58.3                                     | 86.1                                     |
| Caerphilly        | 110                                | 20.0                                     | 32.7                                     | 45.5                                     | 74.5                                     |
| Blaenau Gwent     | 47                                 | 14.9                                     | 40.4                                     | 61.7                                     | 95.7                                     |
| Torfaen           | 60                                 | 6.7                                      | 21.7                                     | 33.3                                     | 61.7                                     |
| Monmouthshire     | 56                                 | 0.0                                      | 0.0                                      | 1.8                                      | 17.9                                     |
| Newport           | 95                                 | 8.4                                      | 22.1                                     | 33.7                                     | 52.6                                     |
| Cardiff           | 214                                | 14.5                                     | 22.0                                     | 29.9                                     | 44.4                                     |
| <b>Wales</b>      | <b>1909</b>                        | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for health was Merthyr Tydfil (30.6 per cent). This was due to a high proportion of LSOAs in Merthyr Tydfil being among the most deprived for many of the health domain indicators.

- Isle of Anglesey, Ceredigion and Monmouthshire had no LSOAs in the most deprived 10 per cent. Only 15.2 per cent of the LSOAs in Ceredigion were in the most deprived 50 per cent in Wales.
- Blaenau Gwent had the highest proportion of LSOAs in the most deprived 50 per cent in Wales (95.7 per cent). The next highest was Merthyr Tydfil, with 86.1 per cent of its LSOAs in the most deprived half of Wales.

## **5.6 Health domain methodological changes between WIMD 2011 and WIMD 2014**

There were no methodological changes in the health domain between WIMD 2011 and WIMD 2014.

## **5.7 Health domain background information**

The information below provides a list of sources of health statistics for Wales.

### **Welsh Government Health and Social Care Statistics**

The Welsh Government publishes a [comprehensive set of information on health, health services and social services in Wales](#). These statistics cover a wide range of topics including NHS primary and community activity, waiting times and NHS staff.

### **Public Health Wales**

#### **Public Health Wales Observatory**

The [Public Health Wales Observatory](#) assists local and national partners by providing meaningful information to address public health issues, to improve health and health services and to reduce health inequalities. They aim to provide information, signposting and guidance at the appropriate contextual level. They also work with others to improve the quality of information available on health and health services in Wales.

#### **Communicable Disease Surveillance Centre**

The [Public Health Wales Communicable Disease Surveillance Centre](#) (CDSC) is the epidemiological investigation arm of the National Public Health Service for Wales. It protects the population from infection through surveillance of infectious disease, support for outbreak investigation, provision of health intelligence and applied research.

#### **Welsh Cancer Intelligence & Surveillance Unit (WCISU)**

The [Welsh Cancer Intelligence & Surveillance Unit](#) (WCISU) is the National Cancer Registry for Wales and its primary role is to record, store and report on all incidence

of cancer for the resident population of Wales wherever they are treated. Cancer registration in Wales began almost five decades ago and today's electronic database which holds records going back to 1972 contains in the region of 686,000 records.

### **Office for National Statistics**

The Office for National Statistics also publishes [supplementary health statistics](#). Please see the Office for National Statistics website for further information:

## 6 Education Domain

EDUCATION



14%

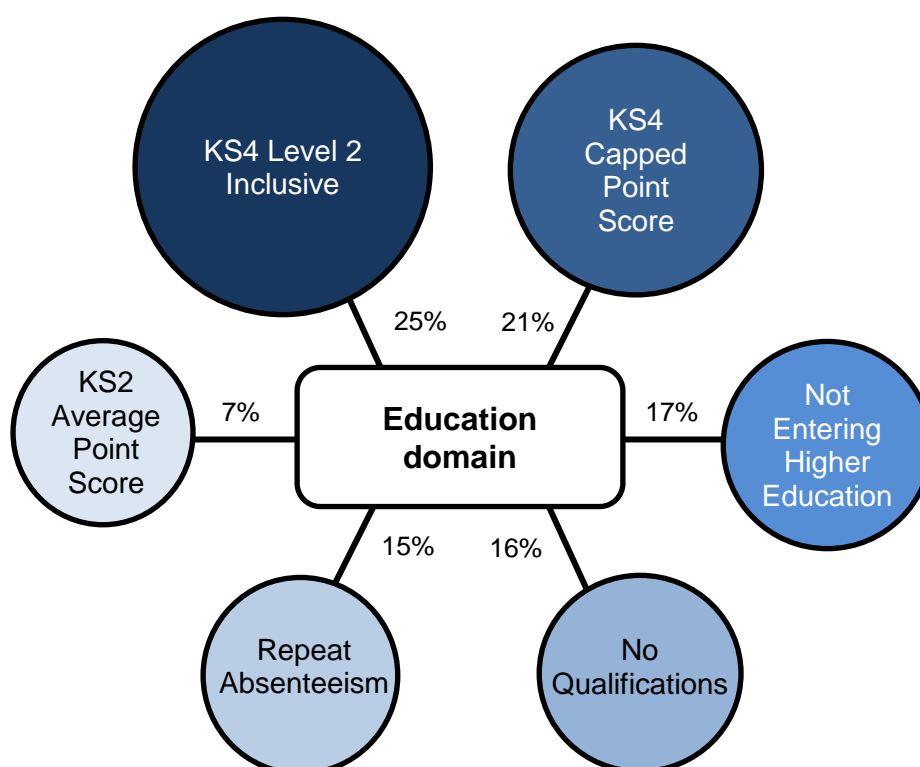
### 6.1 Introduction

Conceptually, the purpose of the education domain is to capture the extent of deprivation relating to education, training and skills. It is designed to reflect educational disadvantage within an area in terms of lack of qualifications and skills. For a complete description of the construction of the education domain, please see the [WIMD 2014 Technical Report](#).

The education domain has a weight of 14 per cent in the Overall Index.

### 6.2 Education domain indicators

The education domain contains 6 indicators, weighted as shown below (using factor analysis to calculate the weights).



Four of these indicators focus on capturing low attainment among children and young people:

- The indicator on Key Stage 4 (KS4) Level 2 Inclusive measures the proportion of 15 year olds achieving the equivalent of 5 A\*-C grades at GCSE (including maths and English/Welsh), and is based on a three-year average (academic years 2010/11- 2012/13). The data are derived from PLASC (Pupil Level Annual School Census) and WED (Welsh Examinations Database), Welsh Government.
- The indicator on KS4 Capped Point Score measures the average points per 15 year old for all qualifications at all grades achieved up to the equivalent of 8 GCSEs (i.e. the 'best 8 GCSEs or equivalent'), and is based on a three-year



average (academic years 2010/11-2012/13). The data are derived from PLASC and WED, Welsh Government.

- The indicator on Repeat Absenteeism measures the percentage of pupils missing 15 per cent or more of school sessions, and is based on a three-year average (academic years 2010/11-2012/13). The data are derived from by PLASC, Welsh Government.
- The indicator on KS2 Average Point Score measures the average point scores of pupils as assessed by teachers in the final year of primary school, and is based on a three-year average (academic years 2010/11-2012/13). The data are derived from NPD (National Pupil Database), PLASC and NDC (National Data Collection), Welsh Government.

The other two indicators focus on capturing the lack of qualifications and skills in adults:

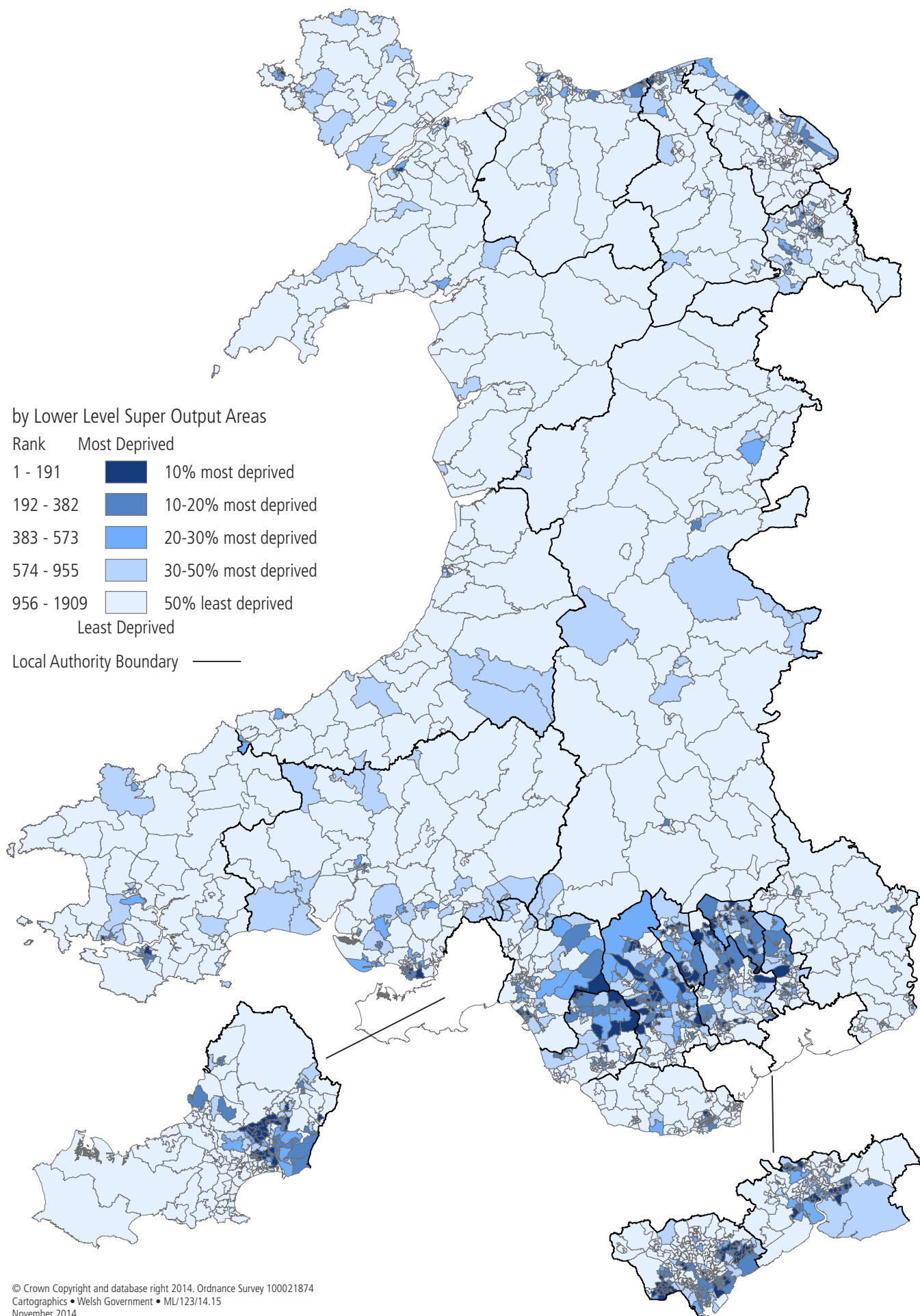
- The indicator on Not Entering Higher Education measures the proportion of people not entering higher education aged 18-19, and is based on a six-year average (academic years 2005/06-2010/11). The data are provided by HEFCW (Higher Education Funding Council for Wales).
- The indicator on No Qualifications measures the number of adults aged 25-64 with no qualifications, and is based on 2011 Census data.

### **6.3 Education domain key results**

- The overall patterns for the WIMD 2014 education domain are largely similar to those in WIMD 2011.
- The local authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for the education domain was Blaenau Gwent (27.7 per cent). Powys, Ceredigion and Monmouthshire had no LSOAs in the most deprived 10 per cent.
- For the education domain, the most deprived LSOA in Wales was in St James 3, Caerphilly.
- The overall KS2 Average Point Score in Wales increased from 82 in 2011 to 84 in 2014.
- The percentage of adults with no qualifications in Wales decreased from 29.2 in 2008 (used for WIMD 2011) to 19.6 in 2014

Welsh Index of Multiple Deprivation 2014

# Education Domain



## 6.4 Education domain comparison between WIMD 2011 and WIMD 2014

The full set of domain ranks from WIMD 2014 and the underlying indicators (Annual WIMD Indicator Data) 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 WIMD 2011.

Table 6.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 6.1: Deprivation group movements for the Education domain between WIMD 2011 and WIMD 2014**

|                       |                                      | Education domain 2014           |                                      |                                      |                                      |                                      | Old LSOAs* | Total (ranks 1-1,909) |
|-----------------------|--------------------------------------|---------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|------------|-----------------------|
|                       |                                      | 10% most deprived (ranks 1-191) | 10-20% most deprived (ranks 192-382) | 20-30% most deprived (ranks 383-573) | 30-50% most deprived (ranks 574-955) | 50% least deprived (ranks 956-1,909) |            |                       |
| Education domain 2011 | 10% most deprived (ranks 1-190)      | <b>146</b>                      | 39                                   | 1                                    | 0                                    | 0                                    | 4          | 190                   |
|                       | 10-20% most deprived (ranks 191-380) | 39                              | <b>99</b>                            | 42                                   | 5                                    | 0                                    | 5          | 190                   |
|                       | 20-30% most deprived (ranks 381-570) | 0                               | 37                                   | <b>84</b>                            | 62                                   | 3                                    | 4          | 190                   |
|                       | 30-50% most deprived (ranks 571-950) | 1                               | 7                                    | 56                                   | <b>234</b>                           | 75                                   | 7          | 380                   |
|                       | 50% least deprived (ranks 951-1,896) | 0                               | 0                                    | 4                                    | 71                                   | <b>842</b>                           | 29         | 946                   |
|                       | New LSOAs*                           | 5                               | 9                                    | 4                                    | 10                                   | 34                                   | 0          | 62                    |
|                       | Total (ranks 1-1,896)                | 191                             | 191                                  | 191                                  | 382                                  | 954                                  | 49         | <b>1,958</b>          |

\* These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.

Only one LSOA has moved substantially between deprivation groups between WIMD 2011 and WIMD 2014. The LSOA Cathays 3, Cardiff, moved from the 30-50 per cent most deprived group in WIMD 2011 to the 10 per cent most deprived group in WIMD 2014. This appears to be due to low scores for the Key Stage 4 indicators influencing the LSOA's rank, which may be linked to children in the area who are new to English-medium education.

## 6.5 WIMD 2014 Education domain local authority analysis

Chart 6.1 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 lines show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).

**Chart 6.1: Box plot of WIMD 2014 Education domain ranks, by local authority**

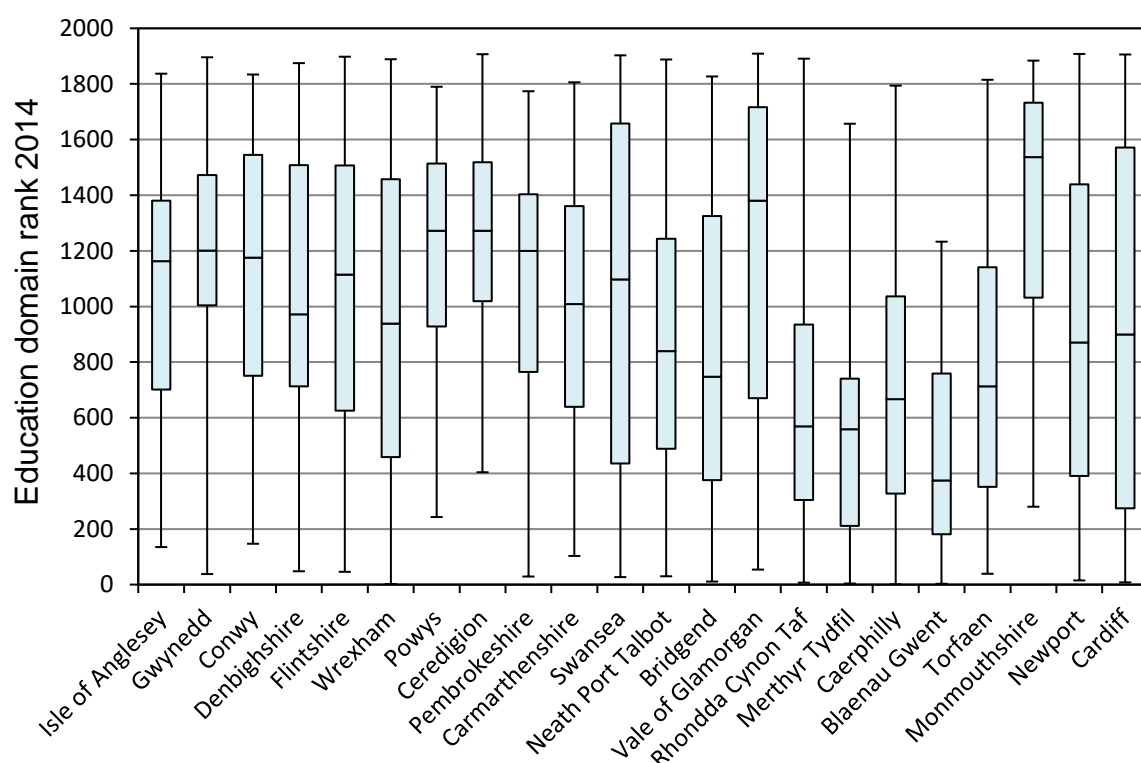


Table 6.2 below shows, for the education domain of WIMD 2014, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent of Wales (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) LSOAs in Wales.

**Table 6.2: WIMD 2014 Education domain deprived LSOAs, by local authority**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 2.3                                      | 6.8                                      | 15.9                                     | 36.4                                     |
| Gwynedd           | 73                                 | 4.1                                      | 4.1                                      | 8.2                                      | 21.9                                     |
| Conwy             | 71                                 | 4.2                                      | 8.5                                      | 19.7                                     | 33.8                                     |
| Denbighshire      | 58                                 | 8.6                                      | 12.1                                     | 20.7                                     | 50.0                                     |
| Flintshire        | 92                                 | 4.3                                      | 12.0                                     | 20.7                                     | 37.0                                     |
| Wrexham           | 85                                 | 8.2                                      | 20.0                                     | 31.8                                     | 50.6                                     |
| Powys             | 79                                 | 0.0                                      | 3.8                                      | 7.6                                      | 26.6                                     |
| Ceredigion        | 46                                 | 0.0                                      | 0.0                                      | 6.5                                      | 21.7                                     |
| Pembrokeshire     | 71                                 | 4.2                                      | 11.3                                     | 15.5                                     | 39.4                                     |
| Carmarthenshire   | 112                                | 4.5                                      | 9.8                                      | 20.5                                     | 47.3                                     |
| Swansea           | 148                                | 13.5                                     | 23.6                                     | 29.1                                     | 44.6                                     |
| Neath Port Talbot | 91                                 | 7.7                                      | 17.6                                     | 31.9                                     | 57.1                                     |
| Bridgend          | 88                                 | 11.4                                     | 26.1                                     | 40.9                                     | 61.4                                     |
| Vale of Glamorgan | 79                                 | 3.8                                      | 12.7                                     | 20.3                                     | 35.4                                     |
| Rhondda Cynon Taf | 154                                | 16.2                                     | 31.8                                     | 50.0                                     | 75.3                                     |
| Merthyr Tydfil    | 36                                 | 25.0                                     | 38.9                                     | 55.6                                     | 80.6                                     |
| Caerphilly        | 110                                | 15.5                                     | 28.2                                     | 40.9                                     | 67.3                                     |
| Blaenau Gwent     | 47                                 | 27.7                                     | 53.2                                     | 68.1                                     | 93.6                                     |
| Torfaen           | 60                                 | 10.0                                     | 28.3                                     | 36.7                                     | 65.0                                     |
| Monmouthshire     | 56                                 | 0.0                                      | 5.4                                      | 7.1                                      | 23.2                                     |
| Newport           | 95                                 | 13.7                                     | 24.2                                     | 35.8                                     | 51.6                                     |
| Cardiff           | 214                                | 17.3                                     | 31.3                                     | 40.7                                     | 54.7                                     |
| <b>Wales</b>      | <b>1,909</b>                       | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for education was Blaenau Gwent (27.7 per cent). Merthyr Tydfil has a similar proportion, with 25.0 per cent of its LSOAs in the most

deprived 10 per cent in Wales. This appears to have been partly caused by the Key Stage 4 and adults with no qualifications scores in the authorities.

- Powys, Ceredigion and Monmouthshire had no LSOAs in the most deprived 10 per cent. Only 21.7 per cent of the LSOAs in Ceredigion were in the most deprived 50 per cent in Wales, and only 21.9 per cent of those in Gwynedd were in the most deprived 50 per cent in Wales.
- Blaenau Gwent also had the highest proportion of LSOAs in the most deprived 50 per cent in Wales (93.6 per cent). The next highest is Merthyr Tydfil, with 80.6 per cent of its LSOAs in the most deprived half of Wales.

## **6.6 Education domain methodological changes between WIMD 2011 and WIMD 2014**

Three of the six indicators in the WIMD 2014 education domain were present in WIMD 2011:

- Key Stage 2 Average Point Score
- Proportion of people not entering Higher Education aged 18-19
- Number of Adults aged 25-64 with No Qualifications

Of these, the age specification of the adults with no qualifications indicator has changed slightly, since the retirement age for women has been increased from 59 to 64 years old. The other two remained unchanged.

The Key Stage 3 indicator from WIMD 2011 has been removed, and in place of the Key Stage 4 Average Wider Point Score indicator, there are now the two Key Stage 4 indicators, as described previously.

The two absenteeism indicators have been replaced with a single indicator on Repeat Absenteeism that covers both primary and secondary absenteeism. This indicator has been constructed using a new methodology and therefore is not comparable with the previous indicators used in WIMD 2011.

## **6.7 Education domain background information**

### **National Tests**

National Reading and Numeracy Tests (for those in school years 2-9) were introduced in 2013. They provide an annual measure of children's performance in literacy and numeracy. There is currently insufficient historical data available to determine the suitability of this data for an area based measure of deprivation in 2014. This is a potentially rich source of data for subsequent versions of WIMD, as all school pupils in years 2-9 sit the tests annually.

Data and further information on the results of these tests in Wales can be found [here](#).

Further information on the tests themselves can be found [here](#).

### **Young People Not In Education, Employment or Training (NEET)**

Conceptually, a measure of young people not in education, employment or training would be a suitable measure of educational deprivation, as it fits closely with the purpose of the domain.

The headline estimates of young people who are NEET come from the Statistical Release '[Participation of young people in education and the labour market](#)'. This is available at Wales level only.

Additionally, data from the Annual Population Survey are published quarterly through [this](#) page. Whilst the survey is a potential source of data for local authorities, due to the sample size involved at this level of detail it is not considered robust enough for regular publication.

Therefore, it has not been possible to derive such an indicator at a small area level because:

- the headline source of data on young people who are NEET is only available at Wales level, and the additional source which would allow analysis by areas collected from a sample survey; and
- the number of those who are NEET is relatively low.

Hence this indicator was not included in WIMD 2014, but will be considered for future versions, as the data further develop in this area.

### **Adult Numeracy and Literacy data**

The [National Survey of Adult Skills in Wales](#) presents data by gender, age, employment, household income, qualification level, Welsh language and literacy and numeracy levels. The survey was carried out during 2010, and assessed overall literacy and numeracy skills of adults (aged 16-65) in Wales (through English medium), and Welsh medium literacy skills of Welsh-speaking adults in Wales. The data from this survey do not provide small area estimates, and hence are not suitable for inclusion in WIMD 2014.

## 7 Access to Services Domain

### 7.1 Introduction

The purpose of the access to services domain is to capture deprivation as a result of a household's inability to access a range of services considered necessary for day-to-day living. This covers both material deprivation (for example, not being able to get food) and social aspects of deprivation (for example, not being able to attend after school activities).

ACCESS TO  
SERVICES



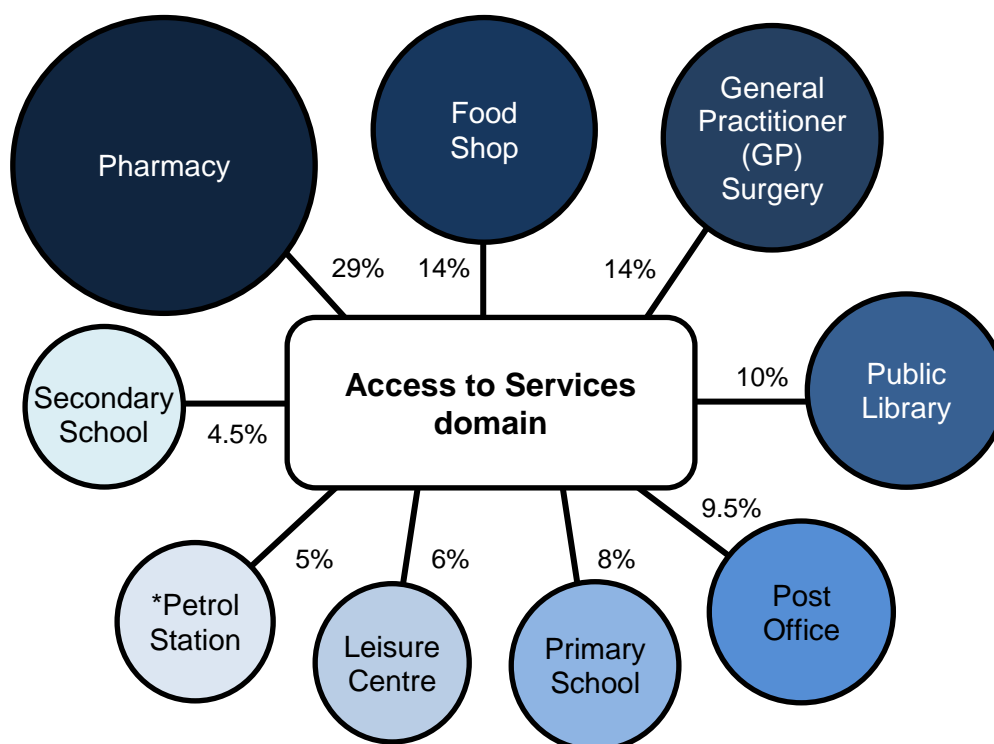
10%

The access to services domain measures travel times to a range of services as a proxy for wider access to services. This domain does not take into account whether individuals are able to access these services (e.g. availability of GP appointments), nor does it take into account an individual's personal choice in accessing certain services (e.g. if someone would prefer to be educated at a faith school). Poor access to services is a factor which can compound other types of deprivation that exist in an area.

The access to services domain has a weight of 10 per cent in the Overall Index. The indicators are weighted as shown below (using factor analysis to calculate the weights). For a complete description of the construction of the access to services domain, please see the [WIMD 2014 Technical Report](#).

### 7.2 Access to Services domain indicators

The access to services domain contains 9 indicators. Each indicator is a weighted average of the travel time (in minutes) by public and private transport to the service.



\*The average travel time to a Petrol Station indicator only considers private transport.



The access to services domain measures travel times to 9 services, typically considered necessary for day-to-day living, using private transport and public transport. Public transport includes travel by: public bus, public train, foot, and national coach. Private transport is considered to be transport by private car. The introduction of private transport indicators is new for WIMD 2014.

The calculation of these indicators is based on real-time traffic speed data for private transport, and public transport timetables for the public transport.

The weights to combine the public and private transport times together are calculated for each LSOA using data from the 2011 Census on car ownership and the number of adults aged 17 and over.

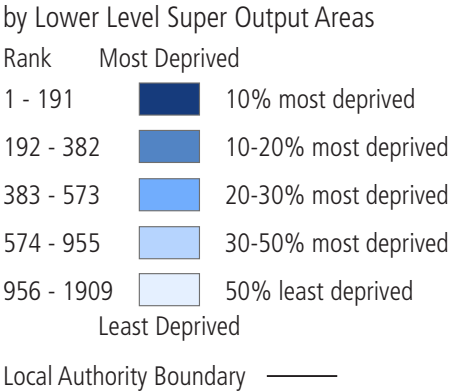
For a full explanation of how these indicators are calculated and combined together, please see the [WIMD 2014 Technical Report](#).

### **7.3 Access to Services domain key results**

- In the WIMD 2014 access to services domain, high deprivation was widespread across rural areas of Wales. There were also some deprived pockets near large urban areas.
- The local authorities with the highest proportion of LSOAs in the most deprived 10 per cent were Powys (46.8 per cent) and Ceredigion (43.5 per cent). Blaenau Gwent, Bridgend, Caerphilly, Cardiff and Torfaen had no LSOAs in the most deprived 10 per cent.
- For the access to services domain, the most deprived LSOA in Wales was Cynwyl Gaeo, Carmarthenshire.
- The overall patterns of access to services deprivation in WIMD 2014 are similar to those for WIMD 2011.

Welsh Index of Multiple Deprivation 2014

# Access to Services Domain



## 7.4 Access to Services domain comparison between WIMD 2011 and WIMD 2014

The full set of domain ranks from WIMD 2014 and the underlying indicators (Annual WIMD Indicator Data) can be downloaded from the Welsh Government's [StatsWales](http://stats.wales.gov.uk) web pages. The following sub-section describes some of the changes occurring to LSOAs in the access to services domain since WIMD 2011.

Table 7.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 7.1: Deprivation group movements for Access to Services domain between WIMD 2011 and WIMD 2014**

| Access to Services domain 2014 |   |   |   |   |  |            |                         |
|--------------------------------|---|---|---|---|--|------------|-------------------------|
|                                | 10% most deprived<br>(ranks 1-191)      | 10-20% most deprived<br>(ranks 192-382) | 20-30% most deprived<br>(ranks 383-573) | 30-50% most deprived<br>(ranks 574-955) | 50% least deprived<br>(ranks 956-1909) | Old LSOAs* | Total<br>(ranks 1-1909) |
| Access to Services domain 2011 | 10% most deprived<br>(ranks 1-190)      | <b>152</b>                              | 23                                      | 3                                       | 2                                      | 0          | 10                      |
|                                | 10-20% most deprived<br>(ranks 191-380) | 26                                      | <b>81</b>                               | 34                                      | 37                                     | 4          | 8                       |
|                                | 20-30% most deprived<br>(ranks 381-570) | 2                                       | 29                                      | <b>37</b>                               | 67                                     | 48         | 7                       |
|                                | 30-50% most deprived<br>(ranks 571-950) | 1                                       | 36                                      | 58                                      | <b>117</b>                             | 159        | 9                       |
|                                | 50% least deprived<br>(ranks 951-1896)  | 1                                       | 17                                      | 51                                      | 149                                    | <b>713</b> | 15                      |
|                                | New LSOAs*                              | 9                                       | 5                                       | 8                                       | 10                                     | 30         | 0                       |
|                                | Total<br>(ranks 1-1896)                 | 191                                     | 191                                     | 191                                     | 382                                    | 954        | 49                      |
|                                |   |   |   |   |  |            | <b>1958</b>             |

\* These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.

Caution should be used in interpreting the Table 7.1. Significant changes to the methodology mean that it is difficult to interpret changes between WIMD 2011 and WIMD 2014. Comparisons are provided for indicative purposes only.

There are 6 LSOAs that are now three or more deprivation groups higher (less deprived) in WIMD 2014 than they were in WIMD 2011, and 19 LSOAs that are three or more deprivation groups lower (more deprived) for the access to services domain. However, significant changes to the methodology mean that it is difficult to interpret changes between WIMD 2011 and WIMD 2014. Most of the LSOAs that appear to have changed markedly are from urban areas. Reasons for these changes include:

- the inclusion of private transport in WIMD 2014;
- the inclusion of new services (e.g. pharmacy and petrol station) and removal of services (e.g. NHS dentist and public transport stop) for WIMD 2014;
- the opening and closure of services since 2008 (as WIMD 2011 used the same data as WIMD 2008);
- changes in public transport since 2008 (as WIMD 2011 used the same data as WIMD 2008);
- changes to LSOA boundaries in a small number of areas; and
- changes to the methodology used to calculate the travel times by public transport.

## 7.5 WIMD 2014 Access to Services domain local authority analysis

Chart 7.1 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 lines show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).

**Chart 7.1: Box plot of WIMD 2014 Access to Services domain ranks, by local authority**

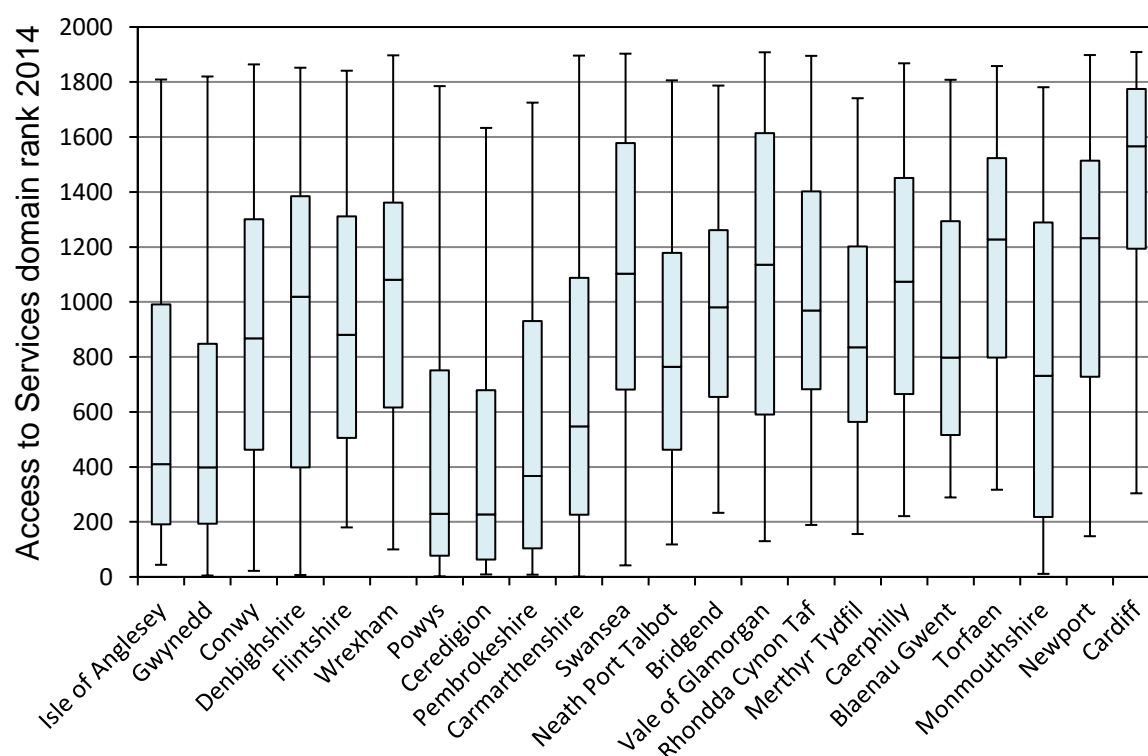


Table 7.2 below shows, for the access to services domain of WIMD 2014, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) of LSOAs in Wales.

**Table 7.2: WIMD 2014 Access to Services domain deprived LSOAs, by local authority**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 25.0                                     | 50.0                                     | 56.8                                     | 72.7                                     |
| Gwynedd           | 73                                 | 24.7                                     | 49.3                                     | 60.3                                     | 78.1                                     |
| Conwy             | 71                                 | 12.7                                     | 18.3                                     | 35.2                                     | 56.3                                     |
| Denbighshire      | 58                                 | 13.8                                     | 24.1                                     | 29.3                                     | 44.8                                     |
| Flintshire        | 92                                 | 3.3                                      | 15.2                                     | 27.2                                     | 54.3                                     |
| Wrexham           | 85                                 | 5.9                                      | 14.1                                     | 22.4                                     | 42.4                                     |
| Powys             | 79                                 | 46.8                                     | 62.0                                     | 68.4                                     | 79.7                                     |
| Ceredigion        | 46                                 | 43.5                                     | 60.9                                     | 67.4                                     | 82.6                                     |
| Pembrokeshire     | 71                                 | 36.6                                     | 52.1                                     | 66.2                                     | 77.5                                     |
| Carmarthenshire   | 112                                | 23.2                                     | 38.4                                     | 51.8                                     | 69.6                                     |
| Swansea           | 148                                | 2.0                                      | 8.1                                      | 16.2                                     | 37.2                                     |
| Neath Port Talbot | 91                                 | 4.4                                      | 18.7                                     | 31.9                                     | 61.5                                     |
| Bridgend          | 88                                 | 0.0                                      | 8.0                                      | 21.6                                     | 48.9                                     |
| Vale of Glamorgan | 79                                 | 5.1                                      | 13.9                                     | 24.1                                     | 41.8                                     |
| Rhondda Cynon Taf | 154                                | 0.6                                      | 9.7                                      | 19.5                                     | 48.7                                     |
| Merthyr Tydfil    | 36                                 | 2.8                                      | 16.7                                     | 27.8                                     | 63.9                                     |
| Caerphilly        | 110                                | 0.0                                      | 4.5                                      | 20.0                                     | 40.0                                     |
| Blaenau Gwent     | 47                                 | 0.0                                      | 10.6                                     | 31.9                                     | 61.7                                     |
| Torfaen           | 60                                 | 0.0                                      | 3.3                                      | 13.3                                     | 31.7                                     |
| Monmouthshire     | 56                                 | 21.4                                     | 37.5                                     | 46.4                                     | 67.9                                     |
| Newport           | 95                                 | 3.2                                      | 11.6                                     | 16.8                                     | 33.7                                     |
| Cardiff           | 214                                | 0.0                                      | 0.9                                      | 4.7                                      | 15.4                                     |
| <b>Wales</b>      | <b>1909</b>                        | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for access to services was Powys (46.8 per cent). Ceredigion was the next highest, with 43.5 per cent of its LSOAs in the most deprived 10 per

cent. This is because these local authorities are large and sparsely populated, with many small rural settlements.

- Blaenau Gwent, Bridgend, Caerphilly, Cardiff and Torfaen had no LSOAs in the most deprived 10 per cent. Only 15.4 per cent of the LSOAs in Cardiff were in the most deprived 50 per cent in Wales.
- Ceredigion had the highest proportion of LSOAs in the most deprived 50 per cent in Wales (82.6 per cent). The next highest is Powys, with 79.7 per cent of its LSOAs in the most deprived half of Wales.

## **7.6 Access to Services domain methodological changes between WIMD 2011 and WIMD 2014**

In WIMD 2014, for the first time, average travel times using private transport have been incorporated into the access to services domain indicators. These were weighted together using 2011 Census data on car ownership and the number of people aged 17 and over. A paper detailing the methodology can be found on the WIMD 2014 web pages.

There have been some changes in the services considered. NHS dentists and Transport nodes were included in WIMD 2011, but not WIMD 2014, as they were considered not necessary for day-to-day living. The indicators average travel time to a pharmacy and average travel time to a petrol station (private transport only) are new to WIMD 2014 as considered necessary for day-to-day living.

For previous versions of WIMD, the average travel time to the 10 nearest service providers was used, whereas WIMD 2014 considers only the nearest provider. For a more detailed description of methodological changes, see the [WIMD 2014 Technical Report](#).

## **7.7 Access to Services background information**

### **Welsh Government Transport Statistics**

Further data on [transport statistics for Wales](#) can be found on the Welsh Government website.

### **Deprivation in Rural Areas**

As part of the process of developing WIMD 2014, a public consultation was held on indicators for the Index. A statistical article '[Welsh Index of Multiple Deprivation 2014: A guide to analysing deprivation in rural areas](#)' has been produced as part of the wider WIMD dissemination package in order to address some of the issues raised in the consultation. The purpose of this article is to provide a starting point for discussions and work on analysing deprivation in rural areas.

The article:

- discusses definitions for 'rural Wales' and 'deprivation in rural areas';

- provides guidance on how WIMD and its indicators can, and can't be used to analyse deprivation in rural areas (including examples);
- explains and reference WIMD indicator data that has been published by settlement type and context categories;
- assesses the suitability of using data for very small areas (Output Area level) as an alternative method of identifying deprivation in rural areas; and
- references useful reports and analysis.



## 8 Community Safety Domain

### 8.1 Introduction

The purpose of this domain is to consider deprivation relating to living in a safe community. It covers actual experience of crime and fire, as well as perceptions of safety whilst out and about in the local area. For a complete description of the construction of the community safety domain, please see the [WIMD 2014 Technical Report](#).

COMMUNITY  
SAFETY

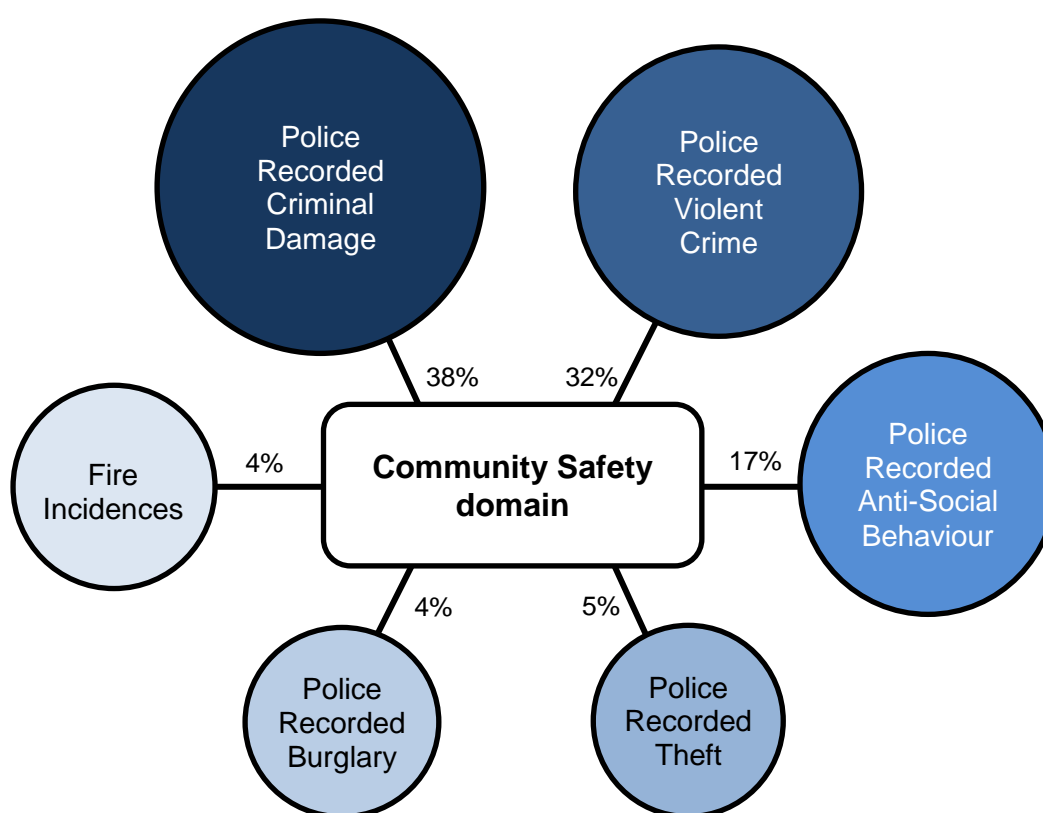


5%

The community safety domain has a weight of 5 per cent in the Index.

### 8.2 Community Safety domain indicators

The community safety domain contains 6 indicators, weighted as shown below.



Five of these indicators are derived from Police Recorded Crime data:

- The indicator on Police Recorded Criminal Damage measures the number of reported incidents of criminal damage as a percentage of the resident population, excluding the prison population, and is based on a two-year (2012-13 and 2013-14) average.
- The indicator on Police Recorded Violent Crime measures the number of reported incidents of violent crime as a percentage of the resident population, excluding the prison population, and is based on a two-year (2012-13 and 2013-14) average.

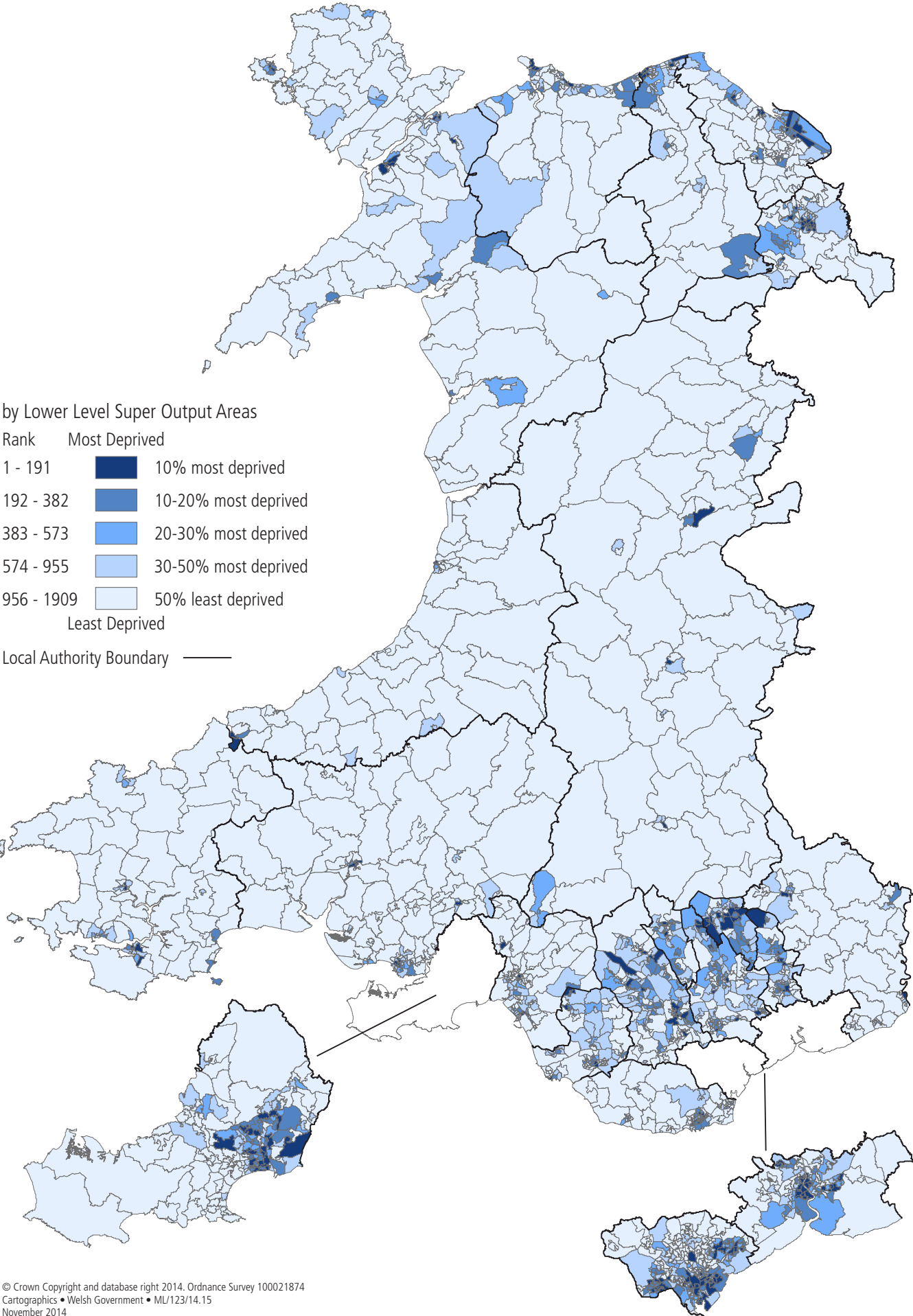
- The indicator on Police Recorded Theft measures the number of reported incidents of theft as a percentage of the resident population, excluding the prison population, and is based on a two-year (2012-13 and 2013-14) average.
- The indicator on Police Recorded Burglary measures the number of reported incidents of burglary as a percentage of the number of dwellings and business addresses, and is based on a two-year (2012-13 and 2013-14) average.
- The indicator on Anti-Social Behaviour incidences measures the number of reported incidents of anti-social behaviour as a percentage of the resident population, excluding the prison population, and is based on a two-year weighted average.
- The indicator on Fire Incidences measures the number of fire incidents attended as a percentage of the resident population, and is based on a two-year (2012-13 and 2013-14) average. The data are derived from the Fire and Rescue Services (FRS) reporting, compiled by Welsh Government.

### **8.3 Community Safety domain key results**

- In the WIMD 2014 community safety domain, there were pockets of high deprivation in the South Wales valleys, South Wales large cities, and North Wales coastal and border towns.
- The local authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for the community safety domain was Blaenau Gwent (23.4 per cent). Powys had the lowest proportion of LSOAs in the most deprived 10 per cent (3.8 per cent).
- For the community safety domain, the most deprived LSOA in Wales was Cathays 10, Cardiff.
- The overall patterns of community safety deprivation in WIMD 2014 are similar to those for WIMD 2011.

Welsh Index of Multiple Deprivation 2014

# Community Safety Domain



## 8.4 Community Safety domain comparison between WIMD 2011 and WIMD 2014

The full set of domain ranks from WIMD 2014 and the underlying indicators (Annual WIMD Indicator Data) 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 WIMD 2011.

Table 8.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 8.1: Deprivation group movements for the Community Safety domain between WIMD 2011 and WIMD 2014**

| Community Safety domain 2014 |  |  |  |  |   |            |                          |       |
|------------------------------|--|--|--|--|---|------------|--------------------------|-------|
|                              | 10% most<br>deprived<br>(ranks<br>1-191)       | 10-20%<br>most<br>deprived<br>(ranks<br>192-382) | 20-30%<br>most<br>deprived<br>(ranks<br>383-573) | 30-50%<br>most<br>deprived<br>(ranks<br>574-955) | 50% least<br>deprived<br>(ranks<br>956-1,909) | Old LSOAs* | Total (ranks<br>1-1,909) |       |
| Community Safety domain 2011 | 10% most<br>deprived<br>(ranks 1-190)          | 103  | 56   | 21   | 7   | 0          | 3                        | 190   |
|                              | 10-20% most<br>deprived<br>(ranks 191-380)     | 39   | 55   | 49   | 39  | 2          | 6                        | 190   |
|                              | 20-30% most<br>deprived<br>(ranks 381-570)     | 21   | 44   | 43   | 61  | 20         | 1                        | 190   |
|                              | 30-50% most<br>deprived<br>(ranks 571-950)     | 16   | 26   | 56   | 163   | 109        | 10                       | 380   |
|                              | 50% least<br>deprived<br>(ranks 951-<br>1,896) | 2  | 6  | 18   | 103   | 788        | 29                       | 946   |
|                              | New LSOAs*                                     | 10   | 4  | 4  | 9   | 35         | 0                        | 62    |
|                              | Total<br>(ranks 1-1,896)                       | 191  | 191  | 191  | 382   | 954        | 49                       | 1,958 |

\* These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.

For the community safety domain, 24 LSOAs have moved three or more deprivation groups higher (more deprived) and 9 LSOAs have moved three or more deprivation groups lower (less deprived) compared with WIMD 2011. However, caution needs to be taken when making comparisons between WIMD 2011 and WIMD 2014 due to changes to the methodology (see Section 8.6).

### **LSOAs with increased relative deprivation**

Of the 24 LSOAs that increased in relative deprivation by three or more deprivation groups, 16 LSOAs moved from the 30-50 per cent most deprived group to the 10 per cent most deprived group; a quarter of these were within Cardiff.

There were 6 LSOAs that moved from the 50 per cent least deprived group to the 10-20 per cent most deprived. These were:

- Bodelwyddan, Denbighshire
- Mold East, Flintshire
- Tenby South 2, Pembrokeshire
- Llansamlet 2, Swansea
- Talbot Green, Rhondda Cynon Taf
- Plasnewydd 3, Cardiff

There were 2 LSOAs that moved from the 50 per cent least deprived group to the 10 per cent most deprived group. These were:

- Stow Hill 2, Newport
- Heath 2, Cardiff

The 24 LSOAs that increased in relative deprivation by three or more deprivation groups are likely to have been affected by the removal of the non-resident working population from the denominator (for theft, burglary and violent crime indicators), as each contained at least one of the following: hospitals, business parks; industrial estates, offices and shops. This caused a decrease in the denominator, resulting in an increase in the LSOA indicator values and, therefore, contributing to the increases in relative deprivation.

### **LSOAs with decreased relative deprivation**

Of the 9 LSOAs that moved by three or more groups, 7 LSOAs moved from the 10 per cent most deprived group to the 30-50 per cent most deprived group. These were:

- Brackla 3, Bridgend
- Cornelly 4, Bridgend
- Cwm Clydach 1, Rhondda Cynon Taf
- Tonyrefail East 1, Rhondda Cynon Taf
- Bettws (Newport) 4, Newport

- Pentwyn 2, Cardiff
- Rumney 6, Cardiff

There were 2 LSOAs that moved from the 10-20 per cent most deprived group to the 50 per cent least deprived group. These were:

- Llanelly Hill 2, Monmouthshire
- Beechwood 4, Newport

## 8.5 WIMD 2014 Community Safety domain local authority analysis

Chart 8.1 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 lines show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).

**Chart 8.1: Box plot of WIMD 2014 Community Safety domain ranks, by local authority**

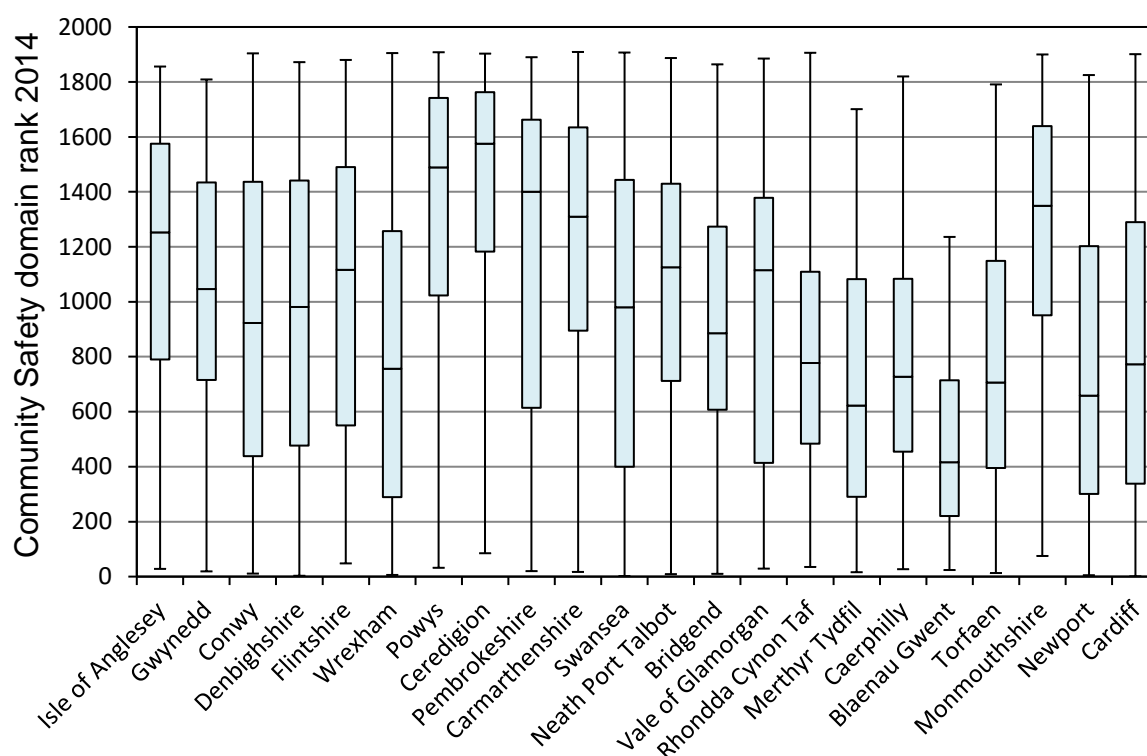


Table 8.2 below shows, for the community safety domain of WIMD 2014, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) of LSOAs in Wales.

**Table 8.2: WIMD 2014 Community Safety domain deprived LSOAs, by local authority**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 4.5                                      | 11.4                                     | 20.5                                     | 34.1                                     |
| Gwynedd           | 73                                 | 8.2                                      | 15.1                                     | 23.3                                     | 38.4                                     |
| Conwy             | 71                                 | 7.0                                      | 22.5                                     | 31.0                                     | 52.1                                     |
| Denbighshire      | 58                                 | 13.8                                     | 19.0                                     | 27.6                                     | 48.3                                     |
| Flintshire        | 92                                 | 8.7                                      | 18.5                                     | 27.2                                     | 38.0                                     |
| Wrexham           | 85                                 | 17.6                                     | 27.1                                     | 42.4                                     | 58.8                                     |
| Powys             | 79                                 | 3.8                                      | 8.9                                      | 12.7                                     | 24.1                                     |
| Ceredigion        | 46                                 | 6.5                                      | 8.7                                      | 10.9                                     | 21.7                                     |
| Pembrokeshire     | 71                                 | 7.0                                      | 14.1                                     | 21.1                                     | 38.0                                     |
| Carmarthenshire   | 112                                | 6.3                                      | 9.8                                      | 14.3                                     | 27.7                                     |
| Swansea           | 148                                | 12.2                                     | 24.3                                     | 35.1                                     | 49.3                                     |
| Neath Port Talbot | 91                                 | 5.5                                      | 11.0                                     | 15.4                                     | 36.3                                     |
| Bridgend          | 88                                 | 6.8                                      | 18.2                                     | 22.7                                     | 58.0                                     |
| Vale of Glamorgan | 79                                 | 8.9                                      | 22.8                                     | 30.4                                     | 41.8                                     |
| Rhondda Cynon Taf | 154                                | 7.1                                      | 18.2                                     | 33.8                                     | 64.9                                     |
| Merthyr Tydfil    | 36                                 | 8.3                                      | 30.6                                     | 47.2                                     | 66.7                                     |
| Caerphilly        | 110                                | 8.2                                      | 19.1                                     | 34.5                                     | 68.2                                     |
| Blaenau Gwent     | 47                                 | 23.4                                     | 46.8                                     | 61.7                                     | 89.4                                     |
| Torfaen           | 60                                 | 11.7                                     | 25.0                                     | 40.0                                     | 65.0                                     |
| Monmouthshire     | 56                                 | 5.4                                      | 7.1                                      | 12.5                                     | 25.0                                     |
| Newport           | 95                                 | 16.8                                     | 28.4                                     | 42.1                                     | 62.1                                     |
| Cardiff           | 214                                | 15.4                                     | 27.6                                     | 39.7                                     | 61.7                                     |
| <b>Wales</b>      | <b>1,909</b>                       | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for community safety was Blaenau Gwent (23.4 per cent). This

was due to a high proportion of LSOAs in Blaenau Gwent being among the most deprived for many of the community safety domain indicators.

- The local authority with the lowest proportion of LSOAs in the most deprived 10 per cent in Wales was Powys (3.8 per cent).
- The local authority with the highest proportion of LSOAs in the most deprived 50 per cent in Wales was Blaenau Gwent (89.4 per cent). The next highest was Caerphilly, with 68.2 per cent.
- The local authority with the lowest proportion of LSOAs in the most deprived 50 per cent in Wales was Ceredigion (21.7 per cent). The next lowest was Powys, with 24.1 per cent.

## **8.6 Community Safety domain methodological changes between WIMD 2011 and WIMD 2014**

The inclusion of the Anti-Social Behaviour Incidences indicator in WIMD 2014 has replaced the Percentage of Youth Offenders indicator and the Percentage of Adult Offenders indicator from WIMD 2011.

The denominator for the Police Recorded Theft, Violent Crime and Criminal Damage indicators has changed for WIMD 2014 compared with WIMD 2011, with the removal of the non-resident working population. More information can be found under the Background Section of the [WIMD webpages](#).

## **8.7 Community Safety domain background information**

The UK Statistics Authority carried out an assessment of statistics based on police recorded crime data in January 2014, and found they did not meet the required standard for designation as National Statistics. The full assessment report (no. 268) can be found on the [UK Statistics Authority website](#). Her Majesty's Inspectorate of Constabulary (HMIC) carried out an inspection into the way the 43 police forces in England and Wales record crime data between December 2013 and August 2014. The HMIC final report 'Crime-recording: making the victim count – The final report of an inspection of crime data integrity in police forces in England and Wales', was published on November 18<sup>th</sup> 2014 and can be found on the [HMIC website](#).

As a result of the de-designation of police recorded crime statistics from National Statistics status and the HMIC final report, the Welsh Government will continue to monitor and assess the use of police recorded crime for WIMD. However, for WIMD 2014 it was considered and agreed by the Community Safety Domain Group that police recorded crime data was the best source of crime data available at the small area level.

## **Additional Crime Data: The Crime Survey for England and Wales**

The Crime Survey for England and Wales measures the extent of crime in England and Wales by asking people whether they have experienced any crime in the past year. The Crime Survey records crimes that may not have been reported to the



police and it is therefore used alongside the police recorded crime figures to show a more accurate picture of the level of crime in the country.

An additional element that the Crime Survey provides is information on perceptions of crime and anti-social behaviour. This is a key element of community safety deprivation, in terms of feeling safe whilst out and about in your local area.

Data and further information on the Crime Survey for England and Wales can be found [here](#). These data are not included in WIMD 2014, as the data are not statistically robust below a Wales level.

### **Feeling unsafe – National Survey for Wales**

The National Survey for Wales asks about feeling unsafe after dark in your local area. Perceptions of safety are included in the definition of community safety deprivation. Local area maps and data can be found [here](#).

### **Road traffic accidents**

Being involved in a road accident is a negative experience, but the effect of living in an area with a high prevalence of accidents may also affect perceptions of safety. Typically, pedestrian and cyclists casualties are considered to show the strongest link to community safety deprivation, in your local area. The Welsh Government publishes [road safety data for Wales, Police Force Areas, and Local Authorities](#).

## 9 Physical Environment Domain

### 9.1 Introduction

The purpose of this domain is to measure factors in the local area that may impact on the wellbeing or quality of life of those living in an area. For a complete description of the construction of the physical environment domain, please see the [WIMD 2014 Technical Report](#).

PHYSICAL  
ENVIRONMENT

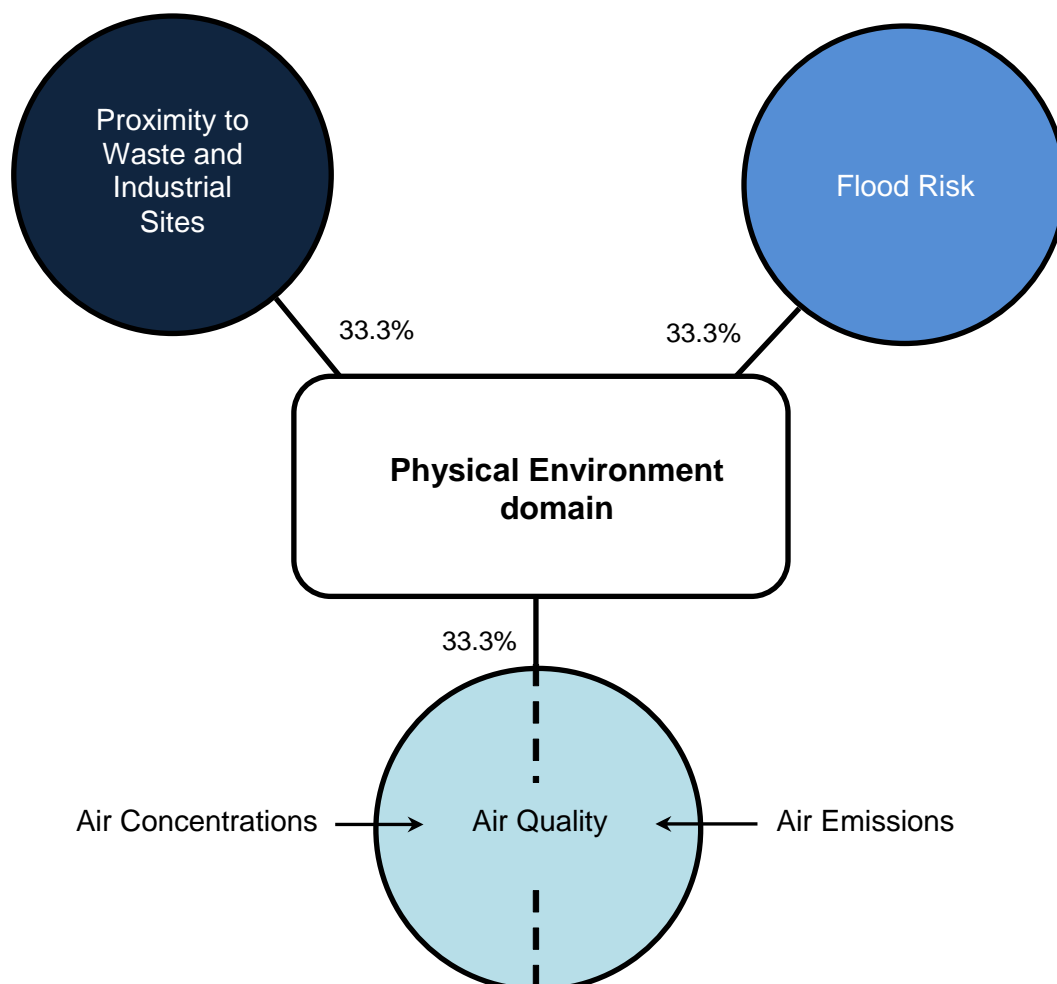


5%

The physical environment domain has a weight of 5 per cent in the Overall Index.

### 9.2 Physical Environment domain indicators

The physical environment domain contains three sub-domains, each with an equal (33.3 per cent) weighting. The air quality sub-domain contains two indicators (air concentrations and air emissions) which are equally weighted within the sub-domain.



All physical environment indicators are scored between 0 and 100 and sourced from [Natural Resources Wales](#).

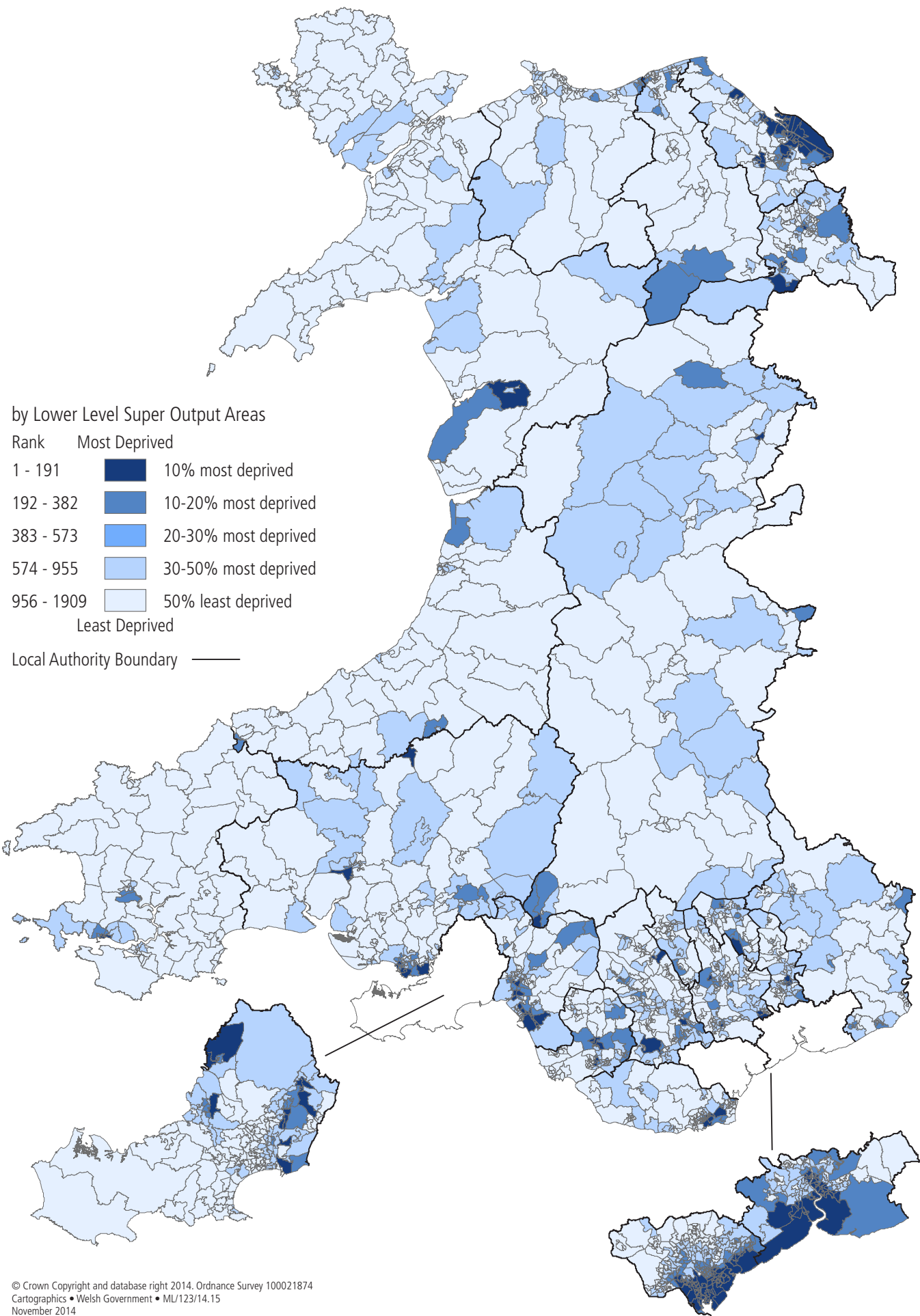
- The indicator on Proximity to Waste Disposal and Industrial Sites is based on the proportion of households within set distances of such sites in 2014.
- The indicator on Flood Risk is based on the proportion of households at risk of flooding from rivers and the sea (National Flood Risk Assessment, 2014).
- The indicator on Air Concentrations is based on pollutant levels from 2012 DEFRA grids.
- The indicator on Air Emissions is based on pollutant levels from National Atmospheric Emissions Inventory 2011 grids.

### **9.3 Physical Environment domain key results**

- In the WIMD 2014 physical environment domain, there were concentrations of physical environment deprivation in cities and industrial areas in South Wales. The most prominent pockets of physical environment deprivation in North Wales were in Dolgellau (primarily due to high flood risk values) and Deeside (due to a combination of factors which varied at the LSOA level).
- The local authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for the physical environment domain was Flintshire (34.8 per cent). Isle of Anglesey, Conwy, Ceredigion, Merthyr Tydfil and Monmouthshire had no LSOAs in the most deprived 10 per cent.
- For the physical environment domain, the most deprived LSOA in Wales was Queensferry, Flintshire.
- The overall patterns of physical environment deprivation in WIMD 2014 are broadly similar to those for WIMD 2011.

Welsh Index of Multiple Deprivation 2014

# Physical Environment Domain



## 9.4 Physical Environment domain comparison between WIMD 2011 and WIMD 2014

The full set of domain ranks from WIMD 2014 and the underlying indicators (Annual WIMD Indicator Data) 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 WIMD 2011.

Table 9.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 9.1: Deprivation group movements for the Physical Environment domain between WIMD 2011 and WIMD 2014**

|                                  |   | Physical Environment domain 2014         |  |  |  |   |               | Total<br>(ranks<br>1-1,909) |
|----------------------------------|---|--|--|--|--|---|---------------|-----------------------------|
|                                  |   | 10% most<br>deprived<br>(ranks<br>1-191) | 10-20%<br>most<br>deprived<br>(ranks<br>192-382) | 20-30%<br>most<br>deprived<br>(ranks<br>383-573) | 30-50%<br>most<br>deprived<br>(ranks<br>574-955) | 50% least<br>deprived<br>(ranks<br>956-1,909) | Old<br>LSOAs* |                             |
| Physical Environment domain 2011 | 10% most<br>deprived<br>(ranks 1-190)           | <b>105</b>                               | 40   | 17   | 16   | 3   | 9             | 190                         |
|                                  | 10-20% most<br>deprived<br>(ranks 191-380)      | 36                                       | <b>48</b>  | 47   | 32   | 21  | 6             | 190                         |
|                                  | 20-30% most<br>deprived<br>(ranks 381-570)      | 17                                       | 41   | <b>37</b>  | 55   | 40  | 0             | 190                         |
|                                  | 30-50% most<br>deprived<br>(ranks 571-950)      | 10                                       | 40   | 63   | <b>130</b>                                       | 127   | 10            | 380                         |
|                                  | 50% most least<br>deprived<br>(ranks 951-1,896) | 7  | 16   | 20   | 141  | <b>738</b>                                    | 24            | 946                         |
|                                  | New LSOAs*                                      | 16                                       | 6  | 7  | 8  | 25  | 0             | 62                          |
|                                  | Total<br>(ranks 1-1,896)                        | 191                                      | 191  | 191  | 382  | 954   | 49            | <b>1,958</b>                |

\* These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.

7 LSOAs have moved from the least deprived 50 per cent in WIMD 2011 to the 10 per cent most deprived group in WIMD 2014. An additional 16 LSOAs have moved from the least deprived 50 per cent in WIMD 2011 to the 10-20 per cent most deprived in WIMD 2014. These LSOAs are in urban areas, and the increases in deprivation are generally due to increased scores in the proximity to waste disposal and industrial sites and/or air quality indicators.

19 LSOAs have moved from the most deprived 10 per cent group in WIMD 2011 to either the 30-50 per cent most deprived or 50 per cent least deprived in WIMD 2014. These are mostly in urban areas, and are due to a combination of different changes in the underlying indicators. Most of the LSOAs in this category have had a marked decrease in the proximity to waste and industrial sites indicator score.

## 9.5 WIMD 2014 Physical Environment domain local authority analysis

Chart 9.1 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 lines show the full range of ranks. Deprivation increases with decreasing rank (that is, towards the bottom of the plot).

**Chart 9.1: Box plot of WIMD 2014 Physical Environment domain ranks, by local authority**

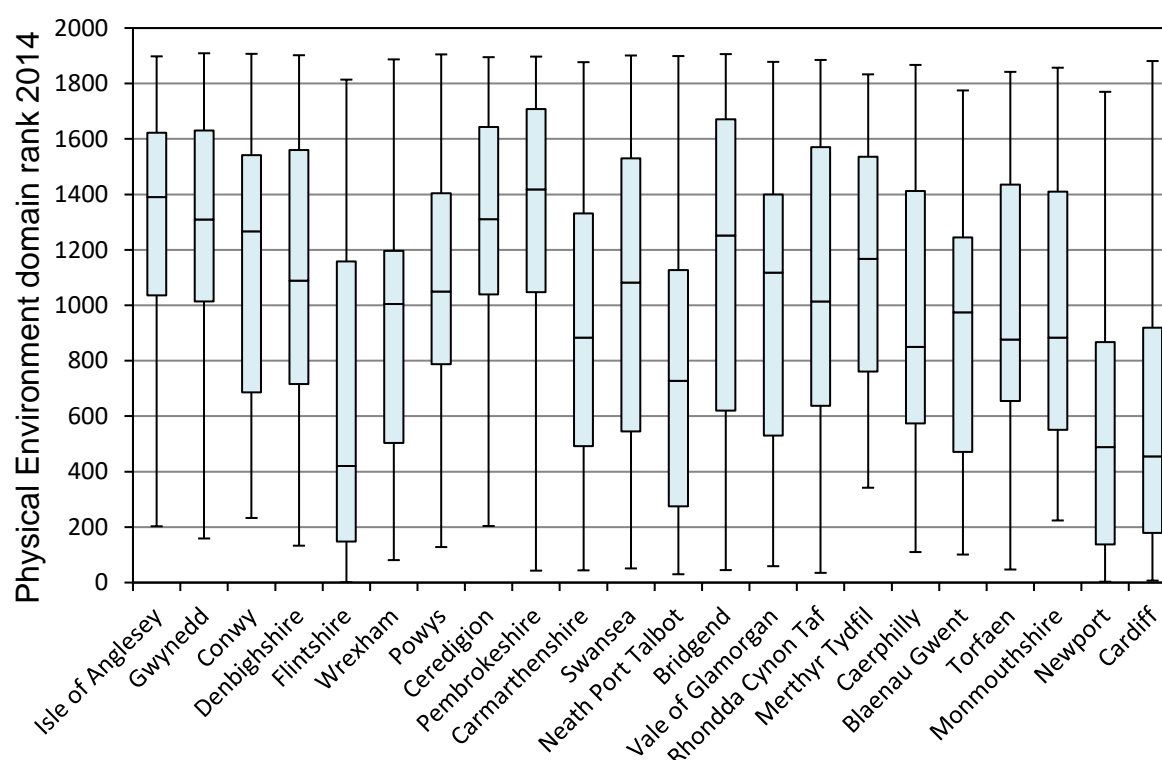


Table 9.2 below shows, for the physical environment domain of WIMD 2014, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) of LSOAs in Wales.

**Table 9.2: WIMD 2014 Physical Environment domain deprived LSOAs, by local authority**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 0.0                                      | 2.3                                      | 6.8                                      | 20.5                                     |
| Gwynedd           | 73                                 | 1.4                                      | 2.7                                      | 5.5                                      | 17.8                                     |
| Conwy             | 71                                 | 0.0                                      | 5.6                                      | 21.1                                     | 35.2                                     |
| Denbighshire      | 58                                 | 1.7                                      | 13.8                                     | 15.5                                     | 41.4                                     |
| Flintshire        | 92                                 | 34.8                                     | 48.9                                     | 58.7                                     | 68.5                                     |
| Wrexham           | 85                                 | 4.7                                      | 15.3                                     | 28.2                                     | 47.1                                     |
| Powys             | 79                                 | 2.5                                      | 7.6                                      | 17.7                                     | 38.0                                     |
| Ceredigion        | 46                                 | 0.0                                      | 6.5                                      | 13.0                                     | 23.9                                     |
| Pembrokeshire     | 71                                 | 4.2                                      | 11.3                                     | 16.9                                     | 23.9                                     |
| Carmarthenshire   | 112                                | 6.3                                      | 17.9                                     | 29.5                                     | 53.6                                     |
| Swansea           | 148                                | 7.4                                      | 14.2                                     | 26.4                                     | 43.9                                     |
| Neath Port Talbot | 91                                 | 17.6                                     | 33.0                                     | 39.6                                     | 69.2                                     |
| Bridgend          | 88                                 | 5.7                                      | 17.0                                     | 22.7                                     | 37.5                                     |
| Vale of Glamorgan | 79                                 | 11.4                                     | 20.3                                     | 27.8                                     | 43.0                                     |
| Rhondda Cynon Taf | 154                                | 2.6                                      | 10.4                                     | 18.2                                     | 45.5                                     |
| Merthyr Tydfil    | 36                                 | 0.0                                      | 2.8                                      | 11.1                                     | 36.1                                     |
| Caerphilly        | 110                                | 3.6                                      | 10.0                                     | 25.5                                     | 54.5                                     |
| Blaenau Gwent     | 47                                 | 4.3                                      | 17.0                                     | 31.9                                     | 48.9                                     |
| Torfaen           | 60                                 | 6.7                                      | 10.0                                     | 21.7                                     | 58.3                                     |
| Monmouthshire     | 56                                 | 0.0                                      | 14.3                                     | 32.1                                     | 51.8                                     |
| Newport           | 95                                 | 29.5                                     | 42.1                                     | 53.7                                     | 80.0                                     |
| Cardiff           | 214                                | 27.1                                     | 46.7                                     | 58.4                                     | 75.7                                     |
| <b>Wales</b>      | <b>1,909</b>                       | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for physical environment was Flintshire (34.8 per cent). This was due to a high proportion of LSOAs in Flintshire being among the most

deprived for a combination of most of the physical environment domain indicators.

- Isle of Anglesey, Conwy, Ceredigion, Merthyr Tydfil and Monmouthshire had no LSOAs in the most deprived 10 per cent. Only 17.8 per cent of the LSOAs in Gwynedd were in the most deprived 50 per cent in Wales.
- Newport had the highest percentage of LSOAs in the most deprived 50 per cent in Wales (80.0 per cent). The next highest was Cardiff, with 75.7 per cent of its LSOAs in the most deprived half of Wales. This is because many of the LSOAs in these local authorities were in the most deprived 50 per cent for air quality and at least one other physical environment indicator.

## **9.6 Physical Environment domain methodological changes between WIMD 2011 and WIMD 2014**

The methodology used to create the indicators for the physical environment domain is the same for WIMD 2014 as it was for WIMD 2011. However, there have been some technical improvements/changes to the air quality and flooding indicators.

As a result of changes to air quality regulations and methodological changes within Defra (who provide air concentrations grid data), a number of changes have been made to the air concentrations and air emissions indicators (e.g. the pollutants included in the indicators).

The flooding categories have changed since WIMD 2014. The accompanying weights given to the flooding categories have also changed.

Full details are available in the [WIMD 2014 Technical Report](#).

## **9.7 Physical Environment domain background information**

### **Air Quality**

Further Information on the National Atmospheric Emissions Inventory (which is used to source the air emissions indicator) is available [here](#).

Further Information on the UK Air Information Resource (which is used to source the data for the air concentration indicator) is available [here](#).

The air quality indicators used within WIMD use annual summary data. There are seasonal and yearly variations in air quality. Because of the data processing required to create the indicator we cannot use the latest air quality information. Real time information on air pollution levels are available from the [Welsh Air Quality website](#).

### **Fly-tipping**

Fly-tipping has a negative impact on the physical environment and deprives people of a good environment in which to live. This indicator was considered for inclusion in



previous indices, but rejected due to a lack of an appropriate data source for small areas. This is still the case.

Local Authority recorded fly-tipping statistics are available [here](#).

### **National Flood Risk Assessment**

More information on the National Flood Risk Assessment can be found on the [Natural Resources Wales](#) website.

## 10 Housing Domain

HOUSING

### 10.1 Introduction

Conceptually, the purpose of a housing domain is to capture deprivation through lack of adequate housing, in terms of physical condition, living conditions and availability. However, the lack of appropriate data means that it is not possible to fully measure housing deprivation according to this definition. For a complete description of the construction of the housing domain, please see the [WIMD 2014 Technical Report](#).

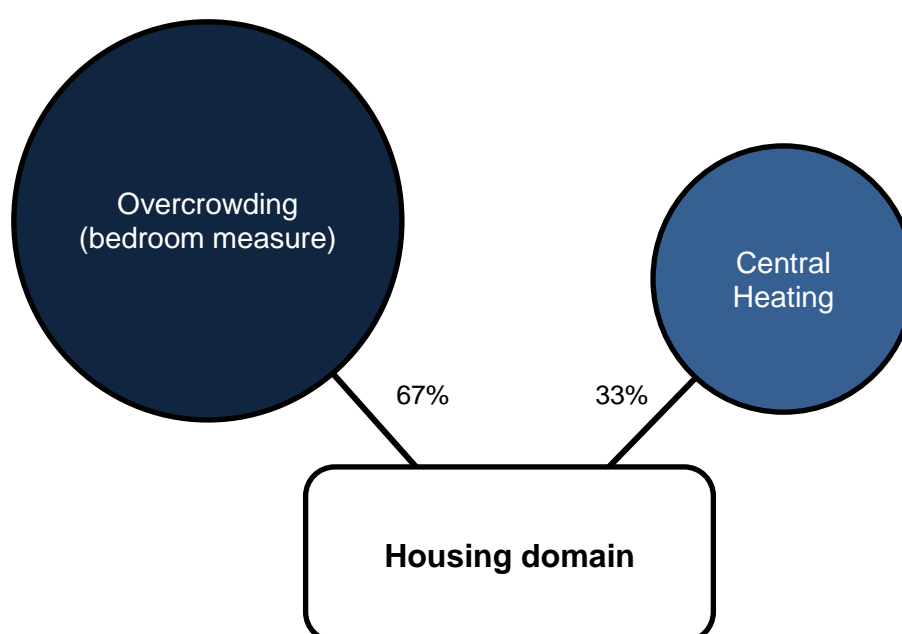


5%

The housing domain has a weight of 5 per cent in the Overall Index.

### 10.2 Housing domain indicators

The housing domain contains 2 indicators, weighted as shown below.



These weights differ from those used in WIMD 2011. See Section 10.6 for more details.

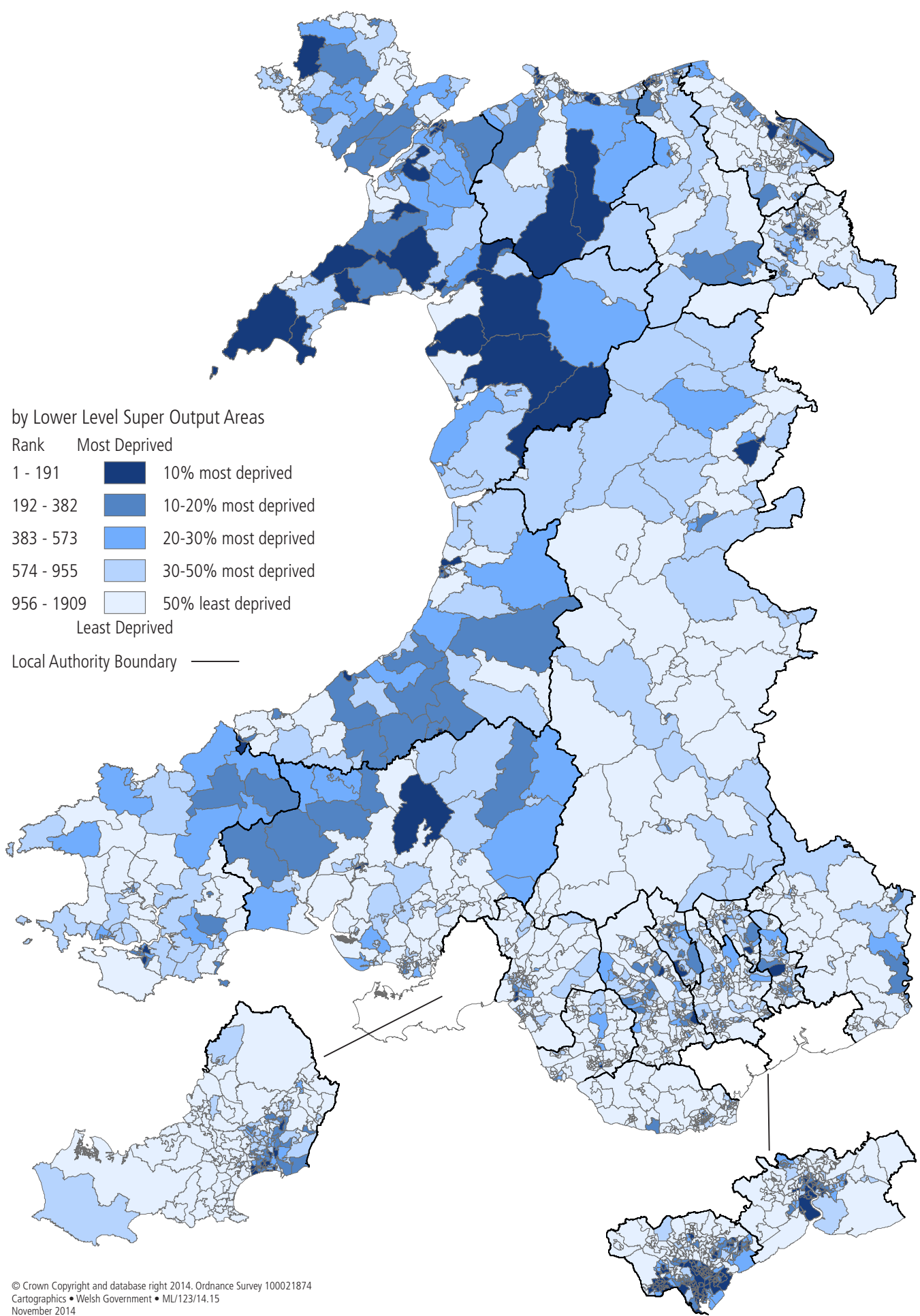
- The indicator on overcrowding measures the percentage of the population living in households with an occupancy rating of -1 or lower, based on 2011 Census data (ONS). See the technical report for further information on this.
- The indicator on central heating measures the percentage of the population in household with no central heating, and is based on 2011 Census data (ONS).

### 10.3 Housing domain key results

- In the WIMD 2014 housing domain, there were pockets of high housing deprivation in urban areas such as the large South Wales cities, and in more rural areas such as the North West.

- The local authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales was Cardiff (36.9 per cent). Monmouthshire and Caerphilly had no LSOAs in the most deprived 10 per cent.
- For the housing domain, the most deprived LSOA in Wales was Riverside 2, Cardiff.
- The changes in deprivation in more rural areas between WIMD 2011 and WIMD 2014 are mainly due to central heating:
  - a) there has been a decrease in the proportion of people living in households with no central heating; and
  - b) the weight of the central heating indicator has been reduced (from  $\frac{1}{2}$  to  $\frac{1}{3}$ ).
- The proportion of people living in households with no central heating, in Wales as a whole, decreased from 6 per cent in 2001 (used for WIMD 2011) to 1.8 per cent in 2011 (used for WIMD 2014).
- The overcrowding indicator changed to a bedroom measure for WIMD 2014, so is not directly comparable with the indicator from WIMD 2011 (please see the [WIMD 2014 Technical Report](#) for further information).

# Housing Domain



## 10.4 Housing domain comparison between WIMD 2011 and WIMD 2014

The full set of domain ranks from WIMD 2014 and the underlying indicators (Annual WIMD Indicator Data) 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 housing domain since WIMD 2011.

Table 10.1 below shows the number of small areas (LSOAs) in each of the WIMD deprivation groups for WIMD 2011 and WIMD 2014. The diagonal, in bold, shows the number of LSOAs which have remained in the same deprivation group. Above the diagonal are numbers of areas which have moved to a less deprived group. Below the diagonal are the numbers of areas which have moved to a more deprived group.

Note that these deprivation groups have been affected by recent changes in a small number of LSOA boundaries, following the 2011 Census. Those new LSOAs for which it is difficult to make a direct comparison with WIMD 2011 are excluded from the comparison. Numbers of old and new LSOAs are included in the table (in a separate column and row) for completeness. See Annex B for further information.

**Table 10.1: Deprivation group movements for the Housing domain between WIMD 2011 and WIMD 2014**

|                     |  | Housing domain 2014             |                                      |                                      |                                      |                                     | Old LSOAs* | Total (ranks 1-1909) |
|---------------------|--|---------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|-------------------------------------|------------|----------------------|
|                     |  | 10% most deprived (ranks 1-191) | 10-20% most deprived (ranks 192-382) | 20-30% most deprived (ranks 383-573) | 30-50% most deprived (ranks 574-955) | 50% least deprived (ranks 956-1909) |            |                      |
| Housing domain 2011 | 10% most deprived (ranks 1-190)          | <b>100</b>                      | 46                                   | 17                                   | 16                                   | 5                                   | 6          | 190                  |
|                     | 10-20% most deprived (ranks 191-380)     | 34                              | <b>37</b>                            | 34                                   | 44                                   | 31                                  | 10         | 190                  |
|                     | 20-30% most deprived (ranks 381-570)     | 19                              | 43                                   | <b>35</b>                            | 51                                   | 36                                  | 6          | 190                  |
|                     | 30-50% most deprived (ranks 571-950)     | 18                              | 44                                   | 61                                   | <b>119</b>                           | 135                                 | 3          | 380                  |
|                     | 50% most least deprived (ranks 951-1896) | 6                               | 17                                   | 37                                   | 141                                  | <b>721</b>                          | 24         | 946                  |
|                     | New LSOAs*                               | 14                              | 4                                    | 7                                    | 11                                   | 26                                  | 0          | 62                   |
|                     | Total (ranks 1-1896)                     | 191                             | 191                                  | 191                                  | 382                                  | 954                                 | 49         | <b>1958</b>          |

\* These LSOAs are not comparable between WIMD 2011 and WIMD 2014. Old LSOAs are those which were present in WIMD 2011 but have since been replaced by new LSOAs. New LSOAs are those which are new to WIMD 2014.

24 LSOAs have moved from the 30-50 per cent most deprived group and the least deprived 50 per cent group in WIMD 2011, to the 10 per cent most deprived group in WIMD 2014. An additional 17 LSOAs have moved from the least deprived 50 per cent of small areas in WIMD 2011 to the 10-20 per cent most deprived group in WIMD 2014. These are mostly in more urban areas and this is primarily due to the overcrowding indicator (relatively high values).

21 LSOAs have moved from the 10 per cent most deprived group in WIMD 2011 to either the most deprived 30-50 or least deprived 50 per cent of areas in WIMD 2014. Many of these are fairly rural areas and for WIMD 2011 they had a relatively high proportion of people without central heating. This proportion has now decreased significantly and, combined with a lower weighting for the central heating indicator and relatively low overcrowding, has led to these areas becoming less deprived in terms of housing.

### 10.5 WIMD 2014 Housing domain local authority analysis

Chart 10.1 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).

**Chart 10.1: WIMD 2014 Housing domain ranks, by local authority**

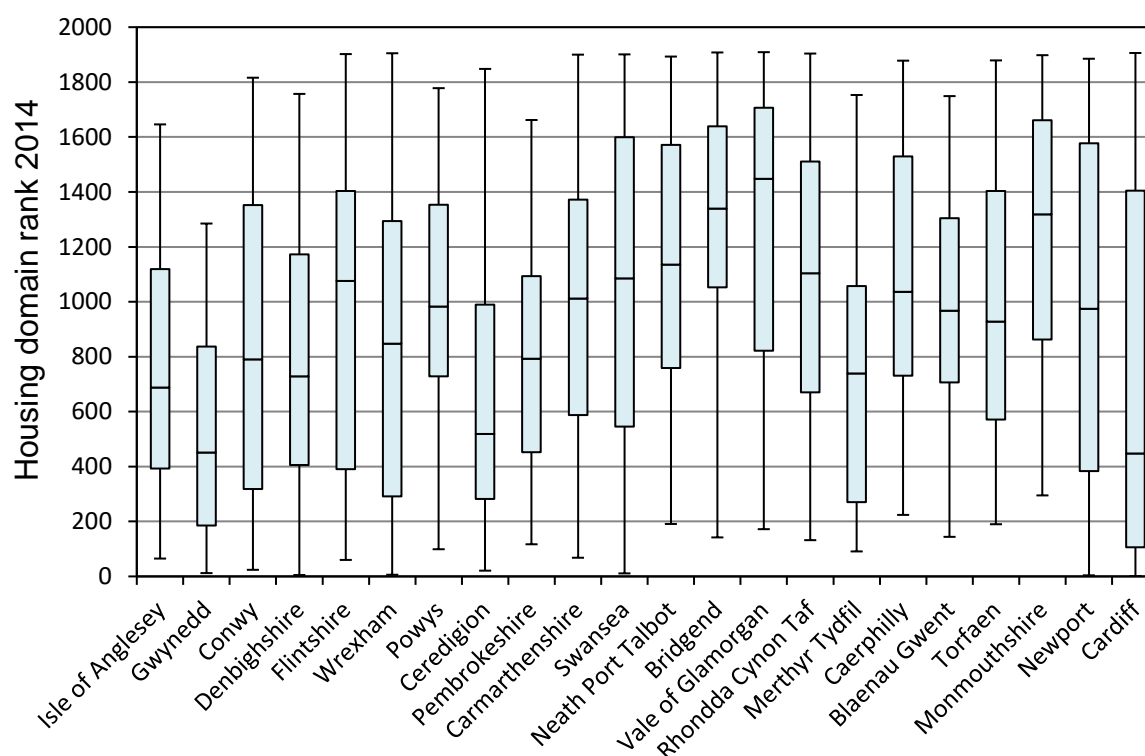


Table 10.2 below shows, for the housing domain of WIMD 2014, the percentage of small areas (LSOAs) in each local authority which were in the most deprived 10 per cent (ranks 1-191), 20 per cent (ranks 1-382), 30 per cent (ranks 1-573) and 50 per cent (ranks 1-955) of LSOAs in Wales.

**Table 10.2: WIMD 2014 Housing domain deprived LSOAs, by local authority**

| Local authority   | Number of LSOAs in local authority | % LSOAs in most-deprived 10% ranks 1-191 | % LSOAs in most-deprived 20% ranks 1-382 | % LSOAs in most-deprived 30% ranks 1-573 | % LSOAs in most-deprived 50% ranks 1-955 |
|-------------------|------------------------------------|--|--|--|--|
| Isle of Anglesey  | 44                                 | 2.3                                      | 25.0                                     | 40.9                                     | 63.6                                     |
| Gwynedd           | 73                                 | 27.4                                     | 43.8                                     | 63.0                                     | 84.9                                     |
| Conwy             | 71                                 | 15.5                                     | 28.2                                     | 38.0                                     | 60.6                                     |
| Denbighshire      | 58                                 | 13.8                                     | 24.1                                     | 36.2                                     | 56.9                                     |
| Flintshire        | 92                                 | 6.5                                      | 22.8                                     | 34.8                                     | 46.7                                     |
| Wrexham           | 85                                 | 15.3                                     | 29.4                                     | 37.6                                     | 58.8                                     |
| Powys             | 79                                 | 2.5                                      | 6.3                                      | 10.1                                     | 49.4                                     |
| Ceredigion        | 46                                 | 17.4                                     | 41.3                                     | 50.0                                     | 71.7                                     |
| Pembrokeshire     | 71                                 | 4.2                                      | 18.3                                     | 39.4                                     | 64.8                                     |
| Carmarthenshire   | 112                                | 1.8                                      | 11.6                                     | 24.1                                     | 46.4                                     |
| Swansea           | 148                                | 6.8                                      | 18.2                                     | 25.7                                     | 44.6                                     |
| Neath Port Talbot | 91                                 | 1.1                                      | 3.3                                      | 11.0                                     | 39.6                                     |
| Bridgend          | 88                                 | 1.1                                      | 2.3                                      | 6.8                                      | 17.0                                     |
| Vale of Glamorgan | 79                                 | 2.5                                      | 7.6                                      | 17.7                                     | 31.6                                     |
| Rhondda Cynon Taf | 154                                | 1.3                                      | 9.7                                      | 17.5                                     | 38.3                                     |
| Merthyr Tydfil    | 36                                 | 13.9                                     | 30.6                                     | 44.4                                     | 66.7                                     |
| Caerphilly        | 110                                | 0.0                                      | 2.7                                      | 12.7                                     | 42.7                                     |
| Blaenau Gwent     | 47                                 | 4.3                                      | 10.6                                     | 14.9                                     | 48.9                                     |
| Torfaen           | 60                                 | 1.7                                      | 13.3                                     | 25.0                                     | 50.0                                     |
| Monmouthshire     | 56                                 | 0.0                                      | 5.4                                      | 12.5                                     | 26.8                                     |
| Newport           | 95                                 | 14.7                                     | 25.3                                     | 35.8                                     | 49.5                                     |
| Cardiff           | 214                                | 36.9                                     | 47.7                                     | 57.5                                     | 65.0                                     |
| <b>Wales</b>      | <b>1909</b>                        | <b>10.0</b>                              | <b>20.0</b>                              | <b>30.0</b>                              | <b>50.0</b>                              |

One way of considering WIMD data at the local authority level is to look at the proportion of LSOAs within the local authority that are in the most deprived 10 per cent (or 20 per cent etc.) 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 authority with the highest proportion of LSOAs in the most deprived 10 per cent in Wales for housing was Cardiff (36.9 per cent). This is mainly due to a relatively high proportion of people living in overcrowded households in some parts of Cardiff.

- Monmouthshire and Caerphilly had no LSOAs in the most deprived 10 per cent. Only 17.0 per cent of the LSOAs in Bridgend were in the most deprived 50 per cent in Wales.
- Gwynedd had the highest percentage of LSOAs in the most deprived 50 per cent in Wales (84.9 per cent). The next highest is Ceredigion, with 71.7 per cent of its LSOAs in the most deprived half of Wales.

## **10.6 Housing domain methodological changes between WIMD 2011 and WIMD 2014**

In recognition of the fact that lack of central heating is becoming an increasingly poor indicator of housing quality over time, its weight within the domain has been lowered to 1/3. Correspondingly, the overcrowding indicator is now given a weight of 2/3.

The occupancy rating used to calculate the overcrowding indicator has changed from a measure of occupancy of rooms to a measure of occupancy of bedrooms. This is explained fully in the technical report.

## **10.7 Housing domain background information**

### **Homelessness**

Homelessness can be considered to be the most extreme form of deprivation in relation to access to housing. It is not possible to include data relating to homelessness in WIMD as it is currently only available at local authority level, as well as definition issues for a small area indicator (i.e. if someone is homeless which LSOA would they be allocated to).

Data relating to homelessness (down to local authority level) can be found [here](#).

### **Fuel Poverty**

This is defined as households whose fuel costs account for more than 10 per cent of their income (including Housing Benefit or Income Support for Mortgage Interest) in order to adequately heat their homes. This is considered to be an income issue, but is also linked to housing.

Fuel poverty data is modelled data based on Living in Wales data. The most recent modelled estimates can be found [here](#).

Recent data are not available at LSOA level.



## **Housing Quality**

Conceptually, poor quality housing is key to the conceptual purpose of the housing domain ('to capture deprivation through lack of adequate housing, in terms of housing physical condition, living conditions and availability'). However, there is currently a lack of data (at a Wales level) on this topic for the whole housing stock due to the lack of a recent national property survey in Wales.

Some information on the quality of social housing is available – i.e. the proportion of homes meeting the Welsh Housing Quality Standard (WHQS). Data relating to WHQS (at a Wales level) can be found [here](#).

Data are also available for the Housing Health and Safety Rating System (HHSRS). It is a risk-based evaluation tool to help local authorities identify and protect against potential risks and hazards to health and safety from any deficiencies identified in dwellings and used to determine whether residential premises are safe to live in or whether a hazard exists that may cause harm to the health and safety of a potential occupant. Whilst it covers all residential premises it is usually used to assess standards in private sector housing. Information is available [here](#).

## **Energy Efficiency**

Information on Standard Assessment Procedure (SAP) ratings could be regarded as a broad proxy for Housing quality. Homes with poor energy efficiency performance are more difficult/expensive to heat. An Energy Performance Certificate (EPC) is required for properties when constructed, sold or let. The EPC provides details on the energy performance of the property and what can be done to improve it. Work to assess the coverage, consistency and quality of EPC data was not completed in time to feed into the WIMD 2014 process.

Experimental statistics on Energy Performance of Buildings Certificates in England and Wales can be accessed [here](#).

## **Repossession**

Repossessions are considered to be an income issue, but are also linked to housing. [Data on mortgage and landlord possessions](#) are published by the Ministry of Justice to local authority level.

## 11 Annex A: WIMD Products

A package of products is available relating to WIMD 2014. These products can be accessed via [www.wales.gov.uk/wimd](http://www.wales.gov.uk/wimd)

### Main Publication

- Welsh Index of Multiple Deprivation (WIMD) 2014
- Welsh Index of Multiple Deprivation (WIMD) 2014 – Executive Summary

### Guidance materials

- Welsh Index of Multiple Deprivation (WIMD) 2014 – Guidance on use
- WIMD 2014 Infographic (How WIMD is Constructed)
- WIMD 2014 Frequently asked questions

### Data

- Spreadsheet – Overall and domain ranks for each LSOA
- [StatsWales](#) Data Cubes
  - WIMD 2014 Index
  - WIMD 2014 Local Authority analysis
  - WIMD Annual Indicator data: LSOA cube

### WIMD [Interactive Tool](#)

- Tool to allow users to allow users to view results for a selection of areas

### Technical Information

- Welsh Index of Multiple Deprivation (WIMD) 2014 – Technical Report
- Data Quality Report

### Deprivation in Rural Areas

- Statistical Article - WIMD 2014: A guide to analysing deprivation in Rural Areas
- Technical Papers:
  - Exploration of unemployment in Wales by settlement type for small areas – Summary
  - Exploration of unemployment in Wales by settlement type for small areas

## **12 Annex B: Description of LSOA/Geographical unit**

### **12.1 Geographic unit**

The geographic areas used in the calculation of WIMD 2014 are the 1,909 Lower layer Super Output Areas (LSOAs). LSOAs were used as the geographic unit in WIMD 2005, 2008 and 2011, and were designed for the reporting of small area statistics. The other three UK nations also calculate their indexes at the LSOA geographical unit.

### **12.2 Super Output Areas**

Following the 2001 Census of Population, the Office for National Statistics developed a geographic hierarchy called Super Output Areas (SOAs). They were designed to improve the reporting of small area statistics in England and Wales. Where possible, official statistics are now published at the SOA geography. There are three layers of SOA: Lower layer, Middle layer, and Upper layer. This is because disclosure requirements mean that some sets of data can be released for much smaller areas than others. To support a range of potential data requirements, it was decided to create these three SOA layers.

- A Lower Layer SOA must have a minimum population of 1,000. The mean size of all the Lower Layer SOAs must be close to 1,600. They are built from groups of Census Output Areas (usually between four and six).
- A Middle Layer SOA must have a minimum population of 5,000. The mean size of all the Middle Layer SOAs must be close to 7,200.

### **12.3 Changes between 2001 Census and 2011 Census**

SOA boundaries are revised following each Census, to take into account changes in the population. WIMD 2014 will be the first Welsh Index of Multiple Deprivation to use the revised boundaries, following the 2011 Census. In the 2001 Census, there were 1,896 LSOAs; 49 of these have been discontinued and 61 new LSOAs have been created.

There have been changes to LSOA boundaries where populations have:

- become too big, so an LSOA has been split into two or more areas;
- become too small, so an LSOA has been merged with an adjacent one; or
- changed in a complex way, so there has been a combination of the two cases above.

In some cases there have also been changes following the Output Geography Consultation, run by the Office for National Statistics in 2010. Where LSOAs have changed, the old code has been deleted and a new code has been assigned. To ensure ease of use, English and Welsh names have been allocated to each of the LSOA codes. Each LSOA name has been determined by the local authority to which the LSOA belongs.

In WIMD 2014, there are 1847 LSOAs with unchanged boundaries since WIMD 2011, 61 LSOAs with boundaries resulting from a merge with or split from an adjacent LSOA, and 12 LSOAs with boundaries resulting from more complex changes. A summary of LSOA boundary changes is provided in the table below.

**Table of LSOA changes between the 2001 Census and 2011 Census**

| <b>LSOA 2001</b> | <b>Local Authority</b> | <b>LSOA 2001 Name</b>                               | <b>LSOA 2011</b> | <b>LSOA 2011 Name</b>                | <b>Change</b> |
|------------------|------------------------|---|------------------|--------------------------------------|---------------|
| W01000045        | Gwynedd                | Aberdaron   | W01001932        | Aberdaron / Botwnnog & Tudweiliog    | M             |
| W01000046        | Gwynedd                | Aberdovey   | W01001933        | Aberdovey / Bryn-crug / Llanfihangel | M             |
| W01000055        | Gwynedd                | Botwnnog & Tudweiliog                               | W01001932        | Aberdaron / Botwnnog & Tudweiliog    | M             |
| W01000058        | Gwynedd                | Bryn-crug/Llanfihangel                              | W01001933        | Aberdovey / Bryn-crug / Llanfihangel | M             |
| W01000120        | Conwy                  | Abergele Pensarn                                    | W01001927        | Abergele Pensarn 1                   | S             |
| W01000120        | Conwy                  | Abergele Pensarn                                    | W01001928        | Abergele Pensarn 2                   | S             |
| W01000160        | Conwy                  | Llansanffraid 1                                     | W01001926        | Llansanffraid                        | M             |
| W01000161        | Conwy                  | Llansanffraid 2                                     | W01001926        | Llansanffraid                        | M             |
| W01000357        | Wrexham                | Dyffryn Ceiriog/Ceiriog Valley 1                    | W01001930        | Ceiriog Valley 3                     | M             |
| W01000358        | Wrexham                | Dyffryn Ceiriog/Ceiriog Valley 2                    | W01001930        | Ceiriog Valley 3                     | M             |
| W01000421        | Wrexham                | Smithfield  | W01001929        | Smithfield 2                         | S             |
| W01000421        | Wrexham                | Smithfield  | W01001931        | Smithfield 3                         | S             |
| W01000435        | Powys                  | Crickhowell 1                                       | W01001903        | Crickhowell                          | X             |
| W01000436        | Powys                  | Crickhowell 2                                       | W01001904        | Llangattock and Glangrwyney          | X             |
| W01000437        | Powys                  | Cwm-twrch   | W01001899        | Cwm-twrch                            | X             |
| W01000462        | Powys                  | Llangattock   | W01001904        | Llangattock and Glangrwyney          | X             |
| W01000463        | Powys                  | Llangors & Bwlch                                    | W01001905        | Llangors, Bwlch & Grwyney            | X             |
| W01000468        | Powys                  | Llanrhaeadr-ym-Mochnant                             | W01001906        | Llanrhaeadr-ym-Mochnant              | X             |
| W01000469        | Powys                  | Llanrhaeadr-ym-Mochnant/Llansilin                   | W01001907        | Llansilin                            | X             |
| W01000490        | Powys                  | St. John 1  | W01001901        | St. John 1                           | X             |
| W01000491        | Powys                  | St. John 2  | W01001902        | St. John 2                           | X             |
| W01000495        | Powys                  | Talybont-on-Usk                                     | W01001897        | Talybont-on-Usk                      | X             |
| W01000514        | Ceredigion             | Aberystwyth Gogledd/North                           | W01001934        | Penglais                             | M             |
| W01000520        | Ceredigion             | Borth 1   | W01001937        | Borth                                | M             |
| W01000521        | Ceredigion             | Borth 2   | W01001937        | Borth                                | M             |
| W01000526        | Ceredigion             | Faenor 2  | W01001934        | Penglais                             | M             |
| W01000530        | Ceredigion             | Llanbadarn Fawr - Padarn & Llanbadarn Fawr - Sulien | W01001935        | Llanbadarn Fawr South                | S             |
| W01000530        | Ceredigion             | Llanbadarn Fawr - Padarn & Llanbadarn Fawr - Sulien | W01001936        | Llanbadarn Fawr North                | S             |

**Table of LSOA changes between the 2001 Census and 2011 Census continued**

| <b>LSOA 2001</b> | <b>Local Authority</b> | <b>LSOA 2001 Name</b>                   | <b>LSOA 2011</b> | <b>LSOA 2011 Name</b>                  | <b>Change</b> |
|------------------|------------------------|---|------------------|--|---------------|
| W01000661        | Carmarthenshire        | Glanymor 3                              | W01001923        | Glanymor 3                             | S             |
| W01000661        | Carmarthenshire        | Glanymor 3                              | W01001924        | Glanymor 4                             | S             |
| W01000668        | Carmarthenshire        | Hengoed (Carmarthenshire) 2             | W01001925        | Hengoed 2                              | M             |
| W01000669        | Carmarthenshire        | Hengoed (Carmarthenshire) 3             | W01001925        | Hengoed 2                              | M             |
| W01000743        | Swansea                | Castle 2                                | W01001955        | Castle 2 North                         | S             |
| W01000743        | Swansea                | Castle 2                                | W01001958        | Castle 2 South                         | S             |
| W01000748        | Swansea                | Castle 7                                | W01001938        | Castle 7 East                          | S             |
| W01000748        | Swansea                | Castle 7                                | W01001957        | Castle 7 West                          | S             |
| W01000780        | Swansea                | Killay North 1                          | W01001956        | Killay 3                               | M             |
| W01000783        | Swansea                | Killay South 2                          | W01001956        | Killay 3                               | M             |
| W01000972        | Neath Port Talbot      | Ystalyfera 1                            | W01001900        | Ystalyfera 1                           | X             |
| W01000988        | Bridgend               | Bryntirion, Laleston and Merthyr Mawr 1 | W01001918        | Bryntirion Laleston and Merthyr Mawr 1 | S             |
| W01000988        | Bridgend               | Bryntirion, Laleston and Merthyr Mawr 1 | W01001919        | Bryntirion Laleston and Merthyr Mawr 4 | S             |
| W01000988        | Bridgend               | Bryntirion, Laleston and Merthyr Mawr 1 | W01001920        | Bryntirion Laleston and Merthyr Mawr 5 | S             |
| W01000988        | Bridgend               | Bryntirion, Laleston and Merthyr Mawr 1 | W01001921        | Bryntirion Laleston and Merthyr Mawr 6 | S             |
| W01001074        | The Vale of Glamorgan  | Castleland 2                            | W01001910        | Castleland 2G                          | S             |
| W01001074        | The Vale of Glamorgan  | Castleland 2                            | W01001911        | Castleland 2H                          | S             |
| W01001163        | Rhondda Cynon Taf      | Church Village 2                        | W01001915        | Church Village 2                       | S             |
| W01001163        | Rhondda Cynon Taf      | Church Village 2                        | W01001916        | Church Village 3                       | S             |
| W01001254        | Rhondda Cynon Taf      | Tonyrefail West 2                       | W01001914        | Tonyrefail West 2                      | S             |
| W01001254        | Rhondda Cynon Taf      | Tonyrefail West 2                       | W01001917        | Tonyrefail West 4                      | S             |
| W01001323        | Merthyr Tydfil         | Vaynor 1                                | W01001898        | Vaynor 1                               | X             |
| W01001544        | Monmouthshire          | Caldicot Castle 2                       | W01001908        | Dewstow                                | M             |
| W01001547        | Monmouthshire          | Croesonen                               | W01001909        | Croesonen                              | M             |
| W01001550        | Monmouthshire          | Dewstow & Green Lane 1                  | W01001908        | Dewstow                                | M             |
| W01001570        | Monmouthshire          | Mardy 1                                 | W01001909        | Croesonen                              | M             |
| W01001656        | Newport                | Marshfield 1                            | W01001912        | Marshfield 4                           | S             |
| W01001656        | Newport                | Marshfield 1                            | W01001913        | Marshfield 5                           | S             |

**Table of LSOA changes between the 2001 Census and 2011 Census continued**

| <b>LSOA 2001</b> | <b>Local Authority</b> | <b>LSOA 2001 Name</b> | <b>LSOA 2011</b> | <b>LSOA 2011 Name</b> | <b>Change</b> |
|------------------|------------------------|-----------------------|------------------|-----------------------|---------------|
| W01001700        | Cardiff                | Butetown 2            | W01001942        | Butetown 3            | S             |
| W01001700        | Cardiff                | Butetown 2            | W01001950        | Butetown 6            | S             |
| W01001700        | Cardiff                | Butetown 2            | W01001952        | Butetown 8            | S             |
| W01001701        | Cardiff                | Butetown 3            | W01001940        | Butetown 2            | S             |
| W01001701        | Cardiff                | Butetown 3            | W01001943        | Butetown 4            | S             |
| W01001701        | Cardiff                | Butetown 3            | W01001944        | Butetown 5            | S             |
| W01001701        | Cardiff                | Butetown 3            | W01001951        | Butetown 7            | S             |
| W01001723        | Cardiff                | Cathays 6             | W01001922        | Cathays 9             | S             |
| W01001723        | Cardiff                | Cathays 6             | W01001939        | Cathays 10            | S             |
| W01001723        | Cardiff                | Cathays 6             | W01001941        | Cathays 11            | S             |
| W01001763        | Cardiff                | Grangetown 5          | W01001945        | Grangetown 10         | S             |
| W01001763        | Cardiff                | Grangetown 5          | W01001947        | Grangetown 12         | S             |
| W01001763        | Cardiff                | Grangetown 5          | W01001946        | Grangetown 11         | S             |
| W01001801        | Cardiff                | Llanishen 11          | W01001949        | Llanishen 11          | S             |
| W01001801        | Cardiff                | Llanishen 11          | W01001953        | Llanishen 12          | S             |
| W01001845        | Cardiff                | Radyr 1               | W01001948        | Radyr & Morganstown 3 | S             |
| W01001845        | Cardiff                | Radyr 1               | W01001954        | Radyr & Morganstown 4 | S             |

M = merge, S = split, X = complex change

Further information on geographical boundary changes between the 2001 and 2011 Census can be found on the <https://webarchive.nationalarchives.gov.uk/20160105225829/http://www.ons.gov.uk/ons/guide-method/geography/products/census/index.html>.

The table below lists the number of LSOAs in each local authority in Wales.

| <b>Local Authority</b> | <b>Number of Lower Layer SOAs</b> |
|------------------------|-----------------------------------|
| Isle of Anglesey       | 44                                |
| Gwynedd                | 73                                |
| Conwy                  | 71                                |
| Denbighshire           | 58                                |
| Flintshire             | 92                                |
| Wrexham                | 85                                |
| Powys                  | 79                                |
| Ceredigion             | 46                                |
| Pembrokeshire          | 71                                |
| Carmarthenshire        | 112                               |
| Swansea                | 148                               |
| Neath Port Talbot      | 91                                |
| Bridgend               | 88                                |
| Vale of Glamorgan      | 79                                |
| Rhondda Cynon Taf      | 154                               |
| Merthyr Tydfil         | 36                                |
| Caerphilly             | 110                               |
| Blaenau Gwent          | 47                                |
| Torfaen                | 60                                |
| Monmouthshire          | 56                                |
| Newport                | 95                                |
| Cardiff                | 214                               |



## 13 Annex C: List of all indicators included in WIMD 2014

The following table provides a summary of the indicators included within WIMD 2014. Additional information is available in the [WIMD 2014 Technical Report](#).

| Indicator  | Units              | Denominator                    | Indicator Year(s)                | Data Source                                 |
|--|--------------------|--------------------------------|----------------------------------|---|
| <b>Income Domain</b>   |                    |                                |                                  |   |
| Percentage of population in income deprivation.<br>Defined as those who are either:  | Percentage         | Total population of LSOA       |                                  |   |
| (a) an adult, or dependent child of an adult, in receipt of income related benefits  |                    |                                | 2012/13                          | Department for Work and Pensions            |
| (b) an adult, or dependent child of an adult, in receipt of Working and Child Tax Credits, with income less than 60 per cent of the Wales median |                    |                                | 2012/13                          | Her Majesty's Revenue and Customs (HMRC)    |
| (c) an Asylum Seeker (as defined by section 95)  |                    |                                | 2014                             | Home Office (HO)                            |
| <b>Employment Domain</b>   |                    |                                |                                  |   |
| Percentage of working-age population in receipt of employment related benefits   | Percentage         | Working-age population of LSOA | 2012/13                          | Department for Work and Pensions (DWP)      |
| <b>Health Domain</b>   |                    |                                |                                  |   |
| Cancer Incidence (indirectly age-sex standardised)   | Number per 100,000 | LSOA population                | 2003-2012 average                | Velindre NHS Trust                          |
| Limiting Long-Term Illness (indirectly age-sex standardised)   | Number per 100,000 | LSOA population                | 2011                             | 2011 Census, Office for National Statistics |
| Low Weight single Births (live births less than 2.5 kg)  | Percentage         | LSOA population                | 2004-2013 average                | Office for National Statistics              |
| All Cause Death rate (indirectly age-sex standardised)   | Number per 100,000 | LSOA population                | 2004-2013 average                | Office for National Statistics              |
| <b>Education Domain</b>  |                    |                                |                                  |   |
| Key Stage 2 Average Point Score  | Points score       | Total number of KS2 students   | Academic Years 2010/11 - 2012/13 | PLASC, NDC                                  |
| Key Stage 4 Capped Point Score   | Points score       | Total number of KS4 students   | Academic Years 2010/11 - 2012/13 | PLASC, WED                                  |

| Indicator  | Units          | Denominator   | Indicator Year(s)                   | Data Source                                 |
|--|----------------|---|-------------------------------------|---|
| <b>Education Domain (Continued)</b>                              |                |   |                                     |   |
| Key Stage 4 Level 2 Inclusive                                    | Percentage     | Total number of KS4 students  | Academic Years<br>2010/11 - 2012/13 | PLASC, WED                                  |
| Repeat Absenteeism   | Percentage     | Number of primary and secondary school students                           | Academic Years<br>2010/11 - 2012/13 | PLASC                                       |
| Proportion of people not entering Higher Education aged 18-19    | Percentage     | Young population  | Academic Years<br>2005/06 - 2010/11 | HEFCE                                       |
| Number of Adults aged 25-64 with No Qualifications               | Percentage     | Total population aged 25-64   | 2011                                | 2011 Census, Office for National Statistics |
| <b>Access to Services Domain</b>                                 |                |   |                                     |   |
| Average of public and private travel times to food shops         | Minutes        | N/A (average time)  | 2014                                | Landmark InterestMap                        |
| Average of public and private travel times to GP surgeries       | Minutes        | N/A (average time)  | 2014                                | NHS Wales Directory                         |
| Average of public and private travel times to Primary schools    | Minutes        | N/A (average time)  | 2013/14                             | Welsh Government                            |
| Average of public and private travel times to Secondary schools  | Minutes        | N/A (average time)  | 2013/14                             | Welsh Government                            |
| Average of public and private travel times to Post office        | Minutes        | N/A (average time)  | 2014                                | Landmark InterestMap                        |
| Average of public and private travel times to Public library     | Minutes        | N/A (average time)  | 2014                                | Landmark InterestMap                        |
| Average of public and private travel times to Pharmacies         | Minutes        | N/A (average time)  | 2014                                | NHS Wales Directory                         |
| Private travel times to Petrol stations (private transport only) | Minutes        | N/A (average time)  | 2014                                | Landmark InterestMap                        |
| Average of public and private travel times to Leisure centre     | Minutes        | N/A (average time)  | 2014                                | Sports Wales                                |
| <b>Community Safety Domain</b>                                   |                |   |                                     |   |
| Police recorded burglary   | Rate (per 100) | The average of 2012 and 2013 : Number of dwellings and business addresses | 2012/13 - 2013/14                   | Welsh Police Forces                         |

| Indicator                                  | Units                        | Denominator   | Indicator Year(s)     | Data Source  |
|--|------------------------------|---|-----------------------|--|
| <b>Community Safety Domain (Continued)</b> |                              |   |                       |  |
| Police recorded criminal damage            | Rate<br>(per 100)            | Total resident population ( 2012 Small Area Population Estimates), excluding total 2012 prison population | 2012/13 - 2013/14     | Welsh Police Forces  |
| Police recorded theft                      | Rate<br>(per 100)            | Total resident population ( 2012 Small Area Population Estimates), excluding total 2012 prison population | 2012/13 - 2013/14     | Welsh Police Forces  |
| Police recorded violent crime              | Rate<br>(per 100)            | Total resident population ( 2012 Small Area Population Estimates), excluding total 2012 prison population | 2012/13 - 2013/14     | Welsh Police Forces  |
| Fire incidences                            | Rate<br>(per 100)            | Total resident population ( 2012 Small Area Population Estimates)   | 2012/13 - 2013/14     | Welsh Government   |
| Anti Social Behaviour (ASB)                | Rate<br>(per 100)            | Total resident population ( 2012 Small Area Population Estimates), excluding total 2012 prison population | July 2012 - June 2014 | Welsh Police Forces  |
| <b>Physical Environment Domain</b>         |                              |   |                       |  |
| Flood Risk                                 | Score<br>(between 0 and 100) | N/A   | 2014                  | National Flood Risk Assessment data, via Natural Resources Wales |

| Indicator  | Units                        | Denominator                           | Indicator Year(s) | Data Source  |
|--|------------------------------|---------------------------------------|-------------------|--|
| <b>Physical Environment Domain (Continued)</b>                           |                              |                                       |                   |  |
| Air Emissions  | Score<br>(between 0 and 100) | N/A                                   | 2011              | Natural Resources Wales (using Air emissions National Atmospheric Emissions Inventory 2011 Grids). |
| Air Concentration  | Score<br>(between 0 and 100) | N/A                                   | 2012              | Natural Resources Wales (using 2012 Air Concentration grids from Defra)                            |
| Proximity to Waste Disposal and Industrial Sites                         | Score<br>(between 0 and 100) | N/A                                   | 2014              | Natural Resources Wales  |
| <b>Housing Domain</b>  |                              |                                       |                   |  |
| Proportion of people living in overcrowded households (bedrooms measure) | Percentage                   | Number of people living in households | 2011              | 2011 Census, Office for National Statistics  |
| Proportion of population living in households with no central heating.   | Percentage                   | Number of people living in households | 2011              | 2011 Census, Office for National Statistics  |