Introduction
The English Indices of Deprivation 2015 (ID) are relative measures of multiple deprivation at small area level. Since the 1970s the Department for Communities and Local Government (DCLG) and its predecessors have calculated local measures of deprivation in England. Deprivation covers a broad range of issues and refers to unmet needs caused by a lack of resources of all kinds, not just financial.

This summary report provides an overview of the results from the Index of Deprivation for Lincolnshire, based on the new 2015 data, and briefly sets out some of the main differences in overall deprivation levels since the 2010 data set. A full report will be produced shortly that will seek to explain the reasons behind changes seen in Lincolnshire, and provide further in-depth analysis of the figures.

Headlines
- Lincolnshire’s coast stands out as being amongst the most deprived 10 percent of neighbourhoods nationally.
- Urban Areas and the East Coast of Lincolnshire show relatively higher levels of multiple deprivation in comparison with the rural areas of the county.
- A higher proportion of people in Lincolnshire are now officially ranked as living in England’s most deprived areas compared to the previous data release in 2010.
Overview of the Indices of Deprivation 2015

Since their original publication in 2000 the Indices have been used widely for a variety of purposes, including targeting resources, developing policy and strategy, to support funding bids, and as an evidence base to support commissioning by local authorities and health services.

The Indices of Deprivation 2015 provide a set of relative measures of deprivation for small areas (also known as neighbourhoods or Lower-layer Super Output Areas) across England, based on seven different domains of deprivation: Income Deprivation, Employment Deprivation, Education, Skills and Training Deprivation, Health Deprivation and Disability, Crime, Barriers to Housing and Services, Living Environment Deprivation.

Each domain is based on a number of component indicators specific to that domain. For example, the Barriers to Housing and Services domain would look at road distance to a primary school as well as other similar issues relating to access to housing whereas the Employment domain would include the claimants of job seekers allowance.

The Index of Multiple Deprivation (IMD) combines information from the seven domains to produce an overall score of relative deprivation and it is this measure which is most commonly used.

Using the IMD score, the 32,844 Lower-layer Super Output Areas are ranked and then divided into 10 equal-sized groups (i.e. each containing approx. 3285 neighbourhoods) known as deciles. Decile 1 represents the most deprived 10 per cent of areas nationally and decile 10 the least deprived 10 per cent of areas nationally.

Each LSOA therefore has a score, rank and decile which can be used for comparison purposes. The ranks (and deciles) are relative: they show that one area is more deprived than another but not by how much. For example, if an area has a rank of 1,000, it is not half as deprived as a place with a rank of 500.

This is the fourth release of Index of Multiple Deprivation Data with earlier releases in 2000, 2004, 2007 and 2010. However these releases cannot be treated as a time series. This is because of changes in area and population sizes and changes to the eligibility criteria for some of the indicators used (such as benefits). However, because a consistent methodology has been used, some limited comparisons can be made between the Indices of Deprivation 2015 and previous versions in terms of movement in rankings or deciles (see below).
**Geographies**

The Indices of Deprivation are designed primarily to be small-area measures of relative deprivation and are most accurate and useful at LSOA (Lower-layer Super Output Areas) geographies.

However the Indices are commonly used to describe relative deprivation at higher-level geographies. To facilitate this, a range of summary measures are available for local authority districts and upper tier local authorities, local enterprise partnerships and clinical commissioning groups. These summary measures are produced for the overall Index of Multiple Deprivation, each of the seven domains and the supplementary indices. For more information regarding the domains please see DCLG English Indices of Deprivation Technical Report.

As with the Lower-layer Super Output Area data, both ranks and scores are produced for these higher area geographies, with higher scores corresponding to higher levels of deprivation, and areas ranked so that a rank of 1 identifies the most deprived high-level area on that measure.

It is important to remember that the Lower-layer Super Output Area level data provides more detail than is available through the summaries. Lower-layer Super Output Areas are small, of roughly even population size and in the majority of instances their boundaries are stable between Censuses. Higher-level areas such as local authority districts or local enterprise partnerships can vary enormously in terms of geographical area and population size. Accordingly, the volume of deprivation, for example how many people are experiencing income or employment deprivation, should also be taken into account, as well as the intensity of deprivation.
The national picture
The Indices of Multiple Deprivation apply to England only and do not cover Wales, Scotland or Northern Ireland. Here the respective Assemblies or Parliament arrange for independent measures of deprivation to be conducted. The purpose of having individual measure of deprivation is to inform policies within that particular county. For this reason a direct comparison across different areas is not practical.

Figure 1 - National distribution of deprivation

There are over 32,000 LSOAs in England. By mapping the LSOAs according to their decile we can see which fall into the most and least deprived categories. Figure 1 shows the national map with those LSOA that fall into the 10 percent most deprived areas coloured dark blue (Figure 1) and those that are the least deprived coloured bright yellow. Please note it should not be assumed that the least deprived LSOAs are the most affluent. The Index is a measure of deprivation not affluence. Similarly it should not be assumed that everyone within any given area will be equally deprived. There will be pockets of more or less deprivation even within relatively small areas.
The pattern of deprivation seen here is based on the overall IMD rankings but the individual domains need to be looked into more closely in order to fully understand the reasons why these areas have scored so low. Individual deprivation domains may well reveal a very different pattern, and in terms of identifying and evidencing deprivation those are just as valid.

**Changes since 2010**

As mentioned above, using current and previous versions of the Index as a time-series is problematic except in terms of comparing movement in relative ranking. Figure 3 presents an analysis of changes in the relative deprivation of neighbourhoods in Lincolnshire across deciles between the 2010 Index and the 2015 Index. It shows the proportion of neighbourhoods in each decile of the IMD 2015 that were in the same decile of the 2010 index.
For Lincolnshire, 66 percent of the most deprived decile of LSOA's in the 2015 index was in the same decile in 2010 as was 93 percent of the least deprived decile. Overall, there was least movement at the extreme ends of the distribution which follows the national trend.

Deprivation at Local Authority District Level
DCLG calculate an average rank for each local authority district based on their LSOA results, and then rank all 326 districts in the country against each other based on their average rank. Table 1 shows how the districts rank nationally. As you can see there are considerable differences across all the districts across Lincolnshire. Using the ranks to interpret the data, 1 would be most deprived up to 326 which would be least deprived.

Table 1 – District rankings based on rank of average rank

<table>
<thead>
<tr>
<th>East Lindsey</th>
<th>Lincoln</th>
<th>Boston</th>
<th>South Holland</th>
<th>West Lindsey</th>
<th>South Kesteven</th>
<th>North Kesteven</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>45</td>
<td>66</td>
<td>134</td>
<td>152</td>
<td>223</td>
<td>266</td>
</tr>
</tbody>
</table>
East Lindsey has the lowest rank of average rank but a very similar value to that of Lincoln. This is despite the fact that the areas are very different in terms of geography and population density with Lincoln being predominantly urban and landlocked and East Lindsey rural with a large area of coast. Individual deprivation domains may well reveal different pattern of deprivation impacting rural and urban areas differently.

Table 2 looks more closely at the extent of district deprivation

<table>
<thead>
<tr>
<th>Area</th>
<th>% persons living in most deprived areas</th>
<th>Change from IMD 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston</td>
<td>19.6</td>
<td>2.8</td>
</tr>
<tr>
<td>East Lindsey</td>
<td>29.8</td>
<td>7.9</td>
</tr>
<tr>
<td>Lincoln</td>
<td>31.9</td>
<td>2.1</td>
</tr>
<tr>
<td>North Kesteven</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>South Holland</td>
<td>2.1</td>
<td>1.0</td>
</tr>
<tr>
<td>South Kesteven</td>
<td>4.6</td>
<td>0.9</td>
</tr>
<tr>
<td>West Lindsey</td>
<td>13.1</td>
<td>3.6</td>
</tr>
</tbody>
</table>

The extent measure is a complementary summary of the proportion of the local population that live in areas classified as amongst most deprived three deciles of deprivation in the country. This measure gives a higher weight to the most deprived decile and gradually less weight to each individual percentile thereafter and therefore is designed to avoid a sharp cut off if a neighbourhood is just outside of the most deprived decile. As can be seen in Table 2 the percentage of people living in the most deprived areas has increased in all districts of Lincolnshire since 2010. East Lindsey has 29.8 percent of persons living in the most deprived areas, similar to Lincoln which has 31.9 percent living in the most deprived areas. This also demonstrates the pattern previously seen in table 2 which shows East Lindsey ranking similar to a smaller more urban area.

Using the extent summary measure, Lincoln has the largest proportion of people living in the most deprived areas closely followed by East Lindsey.

A further investigation of the individual domains of deprivation is necessary to understand the possible reasons for the levels of deprivation. As mentioned above, the Index score is calculated from a basket of indicators, which will impact different areas in different ways. A more detailed discussion of the domains will be covered in later papers.
Further Information
For further information about the Indices of Multiple Deprivation and how to interpret the data please see the links below.

DCLG English Indices of Deprivation Research Report
DCLG English Indices of Deprivation Technical Report
DCLG English Indices of Deprivation Home Page.

Produced by the Enterprise Data Warehouse & Business Intelligence Team for the LRO

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