Updating the English Indices of Deprivation

Government Response to Consultation
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Section 1 Introduction

1.1 Introduction

1.1.1 The Department for Communities and Local Government is updating the English Indices of Deprivation, including the Index of Multiple Deprivation, for publication in summer 2015. The work is being carried out by Oxford Consultants for Social Inclusion.

1.1.2 The department carried out a consultation between 13 November and 19 December 2014 seeking views on the final proposals for updating the Indices. In total, 100 responses were received. The department wishes to thank everyone who took part.

1.1.3 This document summarises the consultation responses and provides the Government’s response. In summary, the majority of respondents agreed with the proposed changes to indicators for this update of the Indices and the department will implement these changes. Notably, these changes include two new indicators on:

- claimants of Carer’s Allowance
- English language proficiency

1.1.4 Consultees were invited to make general comments on indicators or statistical methods, and to raise issues or make suggestions for the future development of the Indices. These responses have been considered and are summarised in this document. They will be revisited for any future update of the Indices.

1.1.5 The department also asked for views on dissemination and outputs, which are summarised here. Over the coming months, the department will explore ways of meeting the needs that were expressed by users.

1.1.6 During the consultation period, the department held three events for users to learn about the proposals for updating the Indices. These were attended by 150 users. Attendees discussed how the outputs and dissemination could be improved and gave their thoughts on the Indices of the future. While these discussions are not summarised in this document, they have given the department a deeper understanding of users’ needs to complement consultation responses.

1.1.7 This response to the consultation is structured to follow the order of the nine consultation questions and is grouped into three sections: Outputs and dissemination (Section 2), Indicators of deprivation (Section 3) and General comments (Section 4).

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2 Section 3 only contains information on indicators about which a consultation question was asked. The remaining domains and indicators will be updated as set out in the Report for Consultation and its accompanying Technical Annex.
1.1.8 The department has carefully considered all the responses received, but it has not been possible to respond to each comment in this document. The most commonly raised issues (usually shared by five or more respondents) have been summarised under each question.

1.1.9 The updated Indices of Deprivation will be published in summer 2015, with a provisional release month of July. The department will confirm the exact publication date of the Indices of Deprivation 2015 at least four weeks in advance. This is in line with the National Statistician’s guidance. The date will be posted on the [gov.uk statistics release calendar](https://www.gov.uk/government/publications/gov-uk-statistics-release-calendar) and the [indices collection webpage](https://www.gov.uk/government/collections/indices-collection). An email alert will be sent to registered users once the date is announced. Users can choose to register for e-mail alerts via the [indices collection webpage](https://www.gov.uk/government/collections/indices-collection).

1.2 Types of respondents

1.2.1 The table below shows the number of responses received by type of organisation. Almost three-quarters of responses were from local authorities. Among others, membership organisations, Voluntary and Community Sector organisations, and government departments were also represented.

<table>
<thead>
<tr>
<th>Organisation type</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local authority</td>
<td>74</td>
</tr>
<tr>
<td>Membership organisation</td>
<td>6</td>
</tr>
<tr>
<td>Voluntary and Community Sector organisation</td>
<td>6</td>
</tr>
<tr>
<td>Government department or arms-length body</td>
<td>5</td>
</tr>
<tr>
<td>Housing Association</td>
<td>2</td>
</tr>
<tr>
<td>Local Enterprise Partnership</td>
<td>2</td>
</tr>
<tr>
<td>Parish council</td>
<td>2</td>
</tr>
<tr>
<td>Educational institution</td>
<td>1</td>
</tr>
<tr>
<td>Religious organisation</td>
<td>1</td>
</tr>
<tr>
<td>Not applicable: individual</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

1.2.2 The following table gives the size of the organisation. The majority of responses were from large organisations (over 1,000 people), reflecting the large proportion of responses from local authorities. Just over 10% of responses came from smaller organisations (fewer than 50 people).

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<table>
<thead>
<tr>
<th>Organisation size*</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 10 people</td>
<td>5</td>
</tr>
<tr>
<td>Between 10 and 49 people</td>
<td>7</td>
</tr>
<tr>
<td>Between 50 and 99 people</td>
<td>1</td>
</tr>
<tr>
<td>Between 100 and 999 people</td>
<td>17</td>
</tr>
<tr>
<td>1,000 or more people</td>
<td>66</td>
</tr>
<tr>
<td>Not known</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4 Note: a minority of responses were on behalf of a team rather than a whole organisation. In some instances where this was the case, the size is likely to reflect the number of people in the team rather than the whole organisation. In addition, membership organisations may or may not have included their members. These figures should therefore be seen as indicative.
Section 2 Outputs and dissemination

Consultees were asked the following question:
1. For the Indices of Deprivation 2010, the department published a statistical release, guidance note and technical report alongside the data. Do you have any comments on how these documents could be improved?

Summary of responses

2.1.1 There were 75 responses to this question. Almost a third stated that they found the documents useful.

2.1.2 There were a number of suggestions for improved guidance including production of different versions for non-technical audiences and more experienced users. Thirty-three respondents suggested that a short layman’s guide to the Indices would be valuable, with prominently displayed caveats about using or interpreting the data. Twelve felt that infographics would help convey information more simply.

2.1.3 A number of requests were made for specific guidance:

- 17 sought clarity on the comparability of the Indices over time, in light of changes since the previous Indices to indicators and Lower-layer Super Output Area boundaries, and local government reorganisation. Many acknowledged that the Indices could not be compared over time but wanted this to be clearly expressed.
- seven commented that more information on interpreting summary measures for higher-level geographies such as local authority districts would be useful
- seven remarked that further guidance on aggregating the data to higher-level geographies would be welcome.

Government’s response

2.1.4 Section 2 of the Report for Consultation set out the department’s intended outputs for the Indices of Deprivation 2015. This included clearer guidance on: using and interpreting the Indices; interpreting the summary measures for higher-level geographies, and aggregating data to other geographies. The department welcomes the range of additional suggestions from users for improved documentation. These comments will be considered as part of the review of the reports produced for the Indices of Deprivation 2010 (referred to in paragraph 2.2.2 of the Report for Consultation) and will be acted upon where feasible.

Consultees were asked the following question:
2. Is there anything you try to do with Indices of Deprivation data that could be made easier?
Summary of responses

2.1.5 There were 81 responses to this question. A number of suggestions were made for improvements to spreadsheets containing Indices data. The most common was to publish percentiles alongside ranks. This would allow users to see at a glance whether areas fell into the most deprived deciles, such as the most deprived 10% of neighbourhoods nationally. Requests were also made for the inclusion of the rank and/or score from the previous version of the Indices and additional information about the Lower-layer Super Output Area including its name, code and the name of the higher-level geography that it nests within e.g. the local authority.

2.1.6 In terms of additional outputs:

- there were 19 requests for data to be published at ward level, and some requests for other geographies including Middle-layer Super Output Areas and Clinical Commissioning Groups
- six respondents commented that local authority district level domain and sub-domain summaries would be valuable
- five respondents requested an index reflecting the working-age population.

2.1.7 Eighteen requests were made for publication of the underlying data to allow users to ascertain how measures had been derived and overall scores calculated. Many commented that it would be most helpful if underlying indicators were published at the same time as the Indices.

2.1.8 A number of suggestions were made about improving accessibility to the data. The most common was that the data could usefully be made available on Nomis\(^5\) or another web-based platform which would enable users to download Indices data for particular areas along with other datasets.

2.1.9 Finally, there were suggestions for different tools to make the data more user-friendly. Examples included a tool showing deprivation levels on a map, a tool supplying deprivation levels for a list of postcodes, and a tool allowing users to creating their own index of multiple deprivation with different domain weights.

Government’s response

2.1.10 The department welcomes the range of comments and suggestions made about improving dissemination of the Indices and its outputs. Over the coming months, the department will explore possible means of meeting users’ needs through working with others, exploring existing platforms and tools, and identifying where better signposting may help.

\(^5\) The Office’s for National Statistics’ official labour market statistics website: [www.nomisweb.co.uk/](http://www.nomisweb.co.uk/)
2.1.11 In terms of the additional outputs suggested by respondents:

- As outlined in the Report for Consultation, summary measures for higher-level geographies will be provided for each of the domain indices as well as the two supplementary Indices.
- The department had already committed to publishing summary measures for local authority districts, county councils and Local Enterprise Partnerships. In response to demand, and to enable users to find a range of summary statistics in one place, the department will also produce summary measures for Clinical Commissioning Groups. The methodology will follow the approach used by the Office for National Statistics, with Clinical Commissioning Groups formed from groups of Lower-layer Super Output Areas.
- The department will not be publishing ward level figures as an additional output. Lower-layer Super Output Areas are a more suitable small area geography than wards for measuring relative deprivation. The department’s view is that it would be unhelpful to have two small area measures of deprivation released in parallel, as this would lead to confusion and could be potentially misleading.
- But the department is sympathetic to those who wish to calculate estimates for alternative geographies, which many users already calculate for themselves. The department will be producing guidance on aggregating data to other geographies such as wards, to help users to produce these on a consistent basis.
- An index reflecting the working-age population cannot be produced for this update as production is too advanced at this stage, but such an index could theoretically be produced for any future update of the Indices. This would be similar to the Income Deprivation Affecting Children Index and the Income Deprivation Affecting Older People Index.

2.1.12 Underlying data will be provided for as many indicators as possible, subject to the following principles:

a) individual indicators will be published insofar as they are non-disclosive and they are not otherwise available in the public domain.

b) publication will also be contingent on permission being obtained from data suppliers. For example, due to sensitivity of the data in respect of both asylum seekers and benefit/tax credit recipients, only the overall income domain numerator can be published.

c) in respect of modelled indicators, only the final indicator will be published and not the data created in the intermediate steps.

2.1.13 Although the department’s priority is to publish the Index of Multiple Deprivation and domain indices as soon as they are ready, it is our intention to publish the individual indicators at the same time.

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6 Wards are much larger than Lower-layer Super Output Areas, vary greatly in size and are prone to regular boundary changes, making them unsuitable as a unit of analysis or for identifying pockets of deprivation. In contrast Lower-layer Super Output Areas are smaller, of roughly even population size and, in the majority of instances, their boundaries are stable between Censuses.
Section 3 Indicators of deprivation

3.1 Employment Deprivation Domain

Consultees were asked the following question:

3. Do you agree with the proposal to include a new indicator on **claimants of Carer’s Allowance**?

<table>
<thead>
<tr>
<th>Summary of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response:</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Don’t know or no opinion</td>
</tr>
<tr>
<td>Mixed (yes with no/don’t know)</td>
</tr>
<tr>
<td>Number of respondents</td>
</tr>
<tr>
<td>Number of comments</td>
</tr>
</tbody>
</table>

3.1.1 The majority of respondents, 86 out of 98 (88%), agreed with this proposal. The bulk of comments further emphasised support for this new indicator.

**Government’s response**

3.1.2 The department will include a new indicator on claimants of Carer’s Allowance in the Indices of Deprivation 2015.
3.2 Education, Skills and Training Deprivation Domain

Consultees were asked the following question:

4. Do you agree with the proposal to include a new indicator on English language proficiency?

Summary of responses

<table>
<thead>
<tr>
<th>Response</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>81</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td>Don’t know or no opinion</td>
<td>13</td>
</tr>
</tbody>
</table>

Number of respondents 97
Number of comments 41

3.2.1 The majority of respondents, 81 out of 97 (84%), agreed with this proposal. Almost half of the comments further demonstrated support for this new indicator.

3.2.2 Twenty respondents made a wider point about use of Census data in the Indices. The main concern related to future updates of the Indices in that Census data may become outdated, and respondents wanted to know how the indicator would be updated. Some were concerned that the self-reported nature of the Census may affect the accuracy of the data and that the figures may omit residents who have not taken part in the Census.

Government’s response

3.2.3 The department will include a new indicator on English language proficiency in the Indices of Deprivation 2015. As well as being supported by respondents, the department sees English language proficiency as important. It removes barriers to learning and disadvantage in the labour market and allows people to fulfil their potential and to play a full part in society.

3.2.4 The department acknowledges concerns about updating indicators based on Census data. Census data is used in a minority of indicators where alternatives are not available. Data from the 2011 Census provides the best measure of English language proficiency available for small areas. Any future update of the Indices would review the merits of including Census data, even if outdated, against the availability of alternative data sources.

Consultees were asked the following question:

5. Do you agree with the proposal to extend the upper age band of the adult skills indicator from age 54 to retirement age*?

(*where ‘retirement age’ = 59 for women and 64 for men)
Summary of responses

<table>
<thead>
<tr>
<th>Response</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>91</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>Don’t know or no opinion</td>
<td>6</td>
</tr>
<tr>
<td>Number of respondents</td>
<td>98</td>
</tr>
<tr>
<td>Number of comments</td>
<td>52</td>
</tr>
</tbody>
</table>

3.2.5 The majority of respondents, 91 out of 98 (93%), agreed with this proposal. Almost half of the comments further emphasised support for the change proposed to this indicator.

3.2.6 Ten commented on the need to consider updating this indicator in future, particularly given the ongoing changes to retirement ages. Eight suggested that the age range should be expanded, with some requesting use of a consistent retirement age for men and women in the indicator.

Government’s response

3.2.7 The department will extend the upper age band of the adult skills indicator from age 54 to retirement age in the Indices of Deprivation 2015, as set out in the consultation documents.

3.2.8 In terms of updating this Census-based indicator in the future, the same principles apply as given in paragraph 3.2.4 for the new indicator on English language proficiency.

3.2.9 For consistency, this domain will use the same definition of retirement age as is used in the Employment Deprivation Domain: 59 for women and 64 for men. As explained in the Report for Consultation Technical Annex (paragraph 3.4.4), only a small proportion of females aged 60 to 64 were eligible for working-age benefits at the data time-point of the Employment Deprivation Domain. For this reason, the decision was made to retain the upper age threshold for women at 59, thereby excluding employment deprived females aged 60 to 64.
3.3 Barriers to Housing and Services Domain

Consultees were asked the following question:

6. Do you agree with the changes proposed to enhance the housing affordability indicator?

3.3.1 The information presented for this consultation question is more detailed than for the other consultation questions. This reflects that the housing affordability indicator is one of the most complex measures in the Indices, was subject to the largest number of proposed changes, and drew comments across a range of issues.

Summary of proposals put to consultation

3.3.2 For ease of reference the proposed changes are presented here. Further details on the changes proposed can be found in the Report for Consultation Technical Annex (paragraphs 7.2.17 - 7.2.21).

3.3.3 For the Indices of Deprivation 2015, housing affordability is defined as: difficulty of access to owner-occupation or the private rental market, expressed as the inability to afford to enter owner-occupation or the private rental market. This is a modelled estimate based on range of sources for 2012.

3.3.4 The following changes were proposed to enhance this indicator and put to consultation:

- broadening the measure to include affordability of the private rental market, in addition to the owner-occupied sector
- producing an indicator at Lower-layer Super Output Area level of the inability of people in that area to afford housing within their local Housing Market Area, an area that reflects commuting and migration patterns - these are changes from the local authority level indicator produced for the Indices of Deprivation 2010
- improving the income estimation methodology
- improving the indicator reliability, by increasing the upper age cut-off from age 35 to age 40 to increase the sample size available for the statistical modelling.

3.3.5 The resulting indicator would combine with equal weight the two underlying components: affordability of owner-occupation and affordability of private rented accommodation.

Summary of responses

<table>
<thead>
<tr>
<th>Response</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>78</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
</tr>
<tr>
<td>Don’t know or no opinion</td>
<td>11</td>
</tr>
<tr>
<td>Mixed (yes with no/don’t know)</td>
<td>5</td>
</tr>
<tr>
<td>Number of respondents</td>
<td>98</td>
</tr>
<tr>
<td>Number of comments</td>
<td>61</td>
</tr>
</tbody>
</table>
3.3.6 The majority of respondents, 78 of 98 (80%), agreed with the changes proposed to the housing affordability indicator. Although a number of comments were made about the indicator’s constituent parts, support for the principle of expanding the indicator to reflect the private rented sector was widespread. There were forty such supportive comments.

Government’s response

3.3.7 The department has carefully considered all the comments made by respondents and will implement all the changes proposed to this indicator in the consultation documents.

3.3.8 A summary of the main issues raised by respondents, and the department’s response to each issue, is presented below.

Use of Housing Market Areas

3.3.9 Summary of responses: There were seven supportive comments about using Housing Market Areas\(^7\) in the calculation of housing affordability at Lower-layer Super Output Area level. Nineteen respondents expressed concerns: mainly that they were too large in size or were outdated, being based on data from the 2001 Census. Some of those who commented that Housing Market Areas were outdated proposed that alternatives should be considered, namely Broad Rental Market Areas\(^8\).

3.3.10 Government’s response: The department will use lower-tier Housing Market Areas as proposed in the consultation documents. Because they reflect migration and commuting patterns, lower-tier Housing Market Areas are the most suitable geographies available for identifying a realistic area within which households are likely to move. There are 277 such areas in England, as depicted in the Annex (pages 21 and 22). Broad Rental Market Areas were explored as a potential alternative but were deemed unsuitable because they are a less comprehensive measure: they were constructed in relation to the rental market only and do not take into account travel to work patterns. Also, Broad Rental Market Areas are generally larger than Housing Market Areas (except in London). A further consideration is that the possibility of using this alternative measure has not been put to wider consultation.

3.3.11 The department acknowledges that any future update of the Indices would review the suitability of using Housing Market Areas against the availability of alternative data sources, including taking into account their timeliness.

\(^7\) Lower-tier Housing Market Areas taken from Jones, Coombes and Wong (2010) The Geography of Housing Market Areas in England, undertaken for the former National Housing and Planning Advice Unit and published by the Department for Local Government and Communities: www.gov.uk/government/publications/housing-market-areas. For further details see: www.ncl.ac.uk/curds/research/defining/NHPAU.htm

\(^8\) Broad Rental Market Areas are the areas within which housing benefit is set and are constructed by the Valuation Office Agency. They are defined as ‘an area where a person could reasonably be expected to live taking into account access to facilities and services’: www.gov.uk/government/publications/understanding-local-housing-allowances-rates-broad-rental-market-areas
Implementing an upper age cut-off

3.3.12 Summary of responses: The proposal for this indicator was to consider the ability of those aged under 40 to afford housing in the private rented or owner-occupied sectors. Twenty comments were made, with the majority stating that there should not be an upper age cut-off in the private rented sector component, or at least that it should be extended to working age. Respondents felt that all age groups in the private rental sector are subject to the same prices and conditions.

3.3.13 Government's response: Returning to the indicator definition, the purpose of this indicator is to measure the extent to which new entrants are able to access the housing market. The age threshold of under 40 is used as a proxy for this group of new entrants. The department will therefore retain the upper age cut-off of 40 for both the owner-occupied and private rental components of the indicator.

Weighting the two components

3.3.14 Summary of responses: There were nine concerns about the proposal to combine the owner-occupied and private rented sector components with equal weight. Given that in many areas the proportion of households in the private rented sector is smaller than in the owner-occupied sector, respondents felt that the two components should be weighted to reflect this.

3.3.15 Government's response: The department acknowledges that there is variation in the proportion of younger age groups living in the private rented sector at a sub-national level, but adjusting the weight of the two components to reflect this variation would be inconsistent with the approach taken in the Indices as whole.

3.3.16 Again revisiting the principle of the indicator, its purpose is to measure ability to enter the owner-occupied or the private rented sector. The department will therefore give equal weighting to the owner-occupied and private rented components. The principle is also consistent with the comparable number of private renters and owner-occupiers aged under 40 at the national level.

Further details about the indicator

3.3.17 Summary of responses: Thirteen respondents commented that further information was needed on how the indicator would be constructed, the methods used and the rationale for decisions such as the age cut-off. There were some requests for further transparency about the plans to model small area income estimates and for a peer review. Some requested that the underlying data, particularly the small area income estimates, be published.

3.3.18 Government's response: The department intends to include more details about how this indicator is constructed in the Indices of Deprivation 2015 technical report.

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9 Whilst the age-bands used by the Census do not align with the upper age-cut off of 40 used for this indicator, in 2011 there were 1.4 million owner-occupiers and 1.8 million private renters aged under 35, and 5.5 million owner-occupiers and 3.1 million private renters under 50 (including those aged under 35).
3.3.19 As stated in the Report for Consultation Technical Annex (paragraph 7.2.20), the income estimates will follow a similar approach to that undertaken by the Improvement Service for Scottish local government. This work estimated income and poverty measures for small areas in Scotland and was subjected to an informal peer review.

3.3.20 The department acknowledges the request for publication of the underlying data. As outlined in paragraph 2.1.12, in respect of modelled indicators only the final indicator will be published and not the data created in the intermediate steps.
3.4 Living Environment Deprivation Domain

Consultees were asked the following question:

7. Recognising that there is limited scope to change the approach, do you have any comments on the proposal to enhance the **housing in poor condition** indicator?

**Summary of responses**

3.4.1 The consultation did not ask respondents to agree or disagree with this proposal given the limited scope to change the approach, but invited comments. Forty comments were received and there was general support for the changes proposed: 24 supportive comments were made.

**Government’s response**

3.4.2 The department will enhance the housing in poor condition indicator as described in the consultation documents.
Section 4 General comments

Consultees were asked the following question:

8. Do you have any additional general comments on the update of the Indices of Deprivation, relating to:
   a. indicators, or
   b. statistical methods?

Summary of responses

4.1.1 There were 69 general comments which spanned a range of issues and covered indicators within each of the domains as well as statistical methods. The most commonly raised issues are summarised below. Twelve respondents expressed their agreement that the department should make only modest changes to the Indices in this update. They emphasised the value of consistency and continuity with previous versions of the Indices.

4.1.2 Of the domains, the Income Deprivation Domain drew the largest number of general comments (16). The majority related to use of benefits data within the domain. The following issues were raised:
   a) concerns that the domain was at risk of not fully capturing income deprived people due to changes to the eligibility criteria for benefits.
   b) concerns that the domain relies on the take-up of benefits rather than eligibility, and about differential rates of take-up between areas.
   c) some suggestions that additional/alternative data sources or methods should be used in the domain such as the use of synthetic income estimates.

4.1.3 There were 10 comments relating to the Barriers to Housing and Services Domain, particularly the Geographical Barriers sub-domain. Respondents were concerned that ‘distance to services’ was not an accurate measure of deprivation. The comments covered both rural and urban perspectives. Some respondents felt that alternative indicators such as access to public transport and car ownership would be better measures.

4.1.4 There were 10 comments on the statistical methods used in compiling the Indices and most of these related to shrinkage estimation. Some respondents were concerned that shrinkage estimation might mask pockets of deprivation in otherwise less deprived areas.

Government’s response

4.1.5 The department has considered these general comments, some of which would entail making significant changes to the Indices outside the scope of this update. With regard to the forthcoming Indices of Deprivation 2015, we will not be making any changes to proposals but comments will be revisited for any future update of the Indices.
4.1.6 Taking each of the comments on the Income Deprivation Domain in turn:

a) The department is aware that the eligibility criteria for benefits change over time and that the measure will not capture all income deprived people. However, the department’s view is that receipt of income related benefits is a good proxy for income deprivation.

b) Although in theory it would be desirable to adjust the domain to take into account any spatial variation in benefit take-up, there is no adequate data which would either indicate differential take-up or allow such an adjustment (more detail is given in the Report for Consultation Technical Annex, paragraphs 2.4.2 - 2.4.5).

c) Although it would be preferable to have a direct measurement of income deprivation at small area level, rather than one based on the receipt of benefits, there is currently no such data available. Whereas there has been acceptance of modelled indicators in certain domains, the department does not consider it appropriate to base an entire, highly weighted, domain on modelled estimates.

4.1.7 With regard to comments on the Barriers to Housing and Services Domain, consideration was given to adjusting the indicators in the Geographical Barriers sub-domain, from measures of road distance to services, to measures of travel time to services. This would have included travel times by car and public transport. However, as set out in the Report for Consultation Technical Annex (paragraphs 7.4.1 - 7.4.2), this measure was deemed unsuitable because the vast majority (97-99%) of all Lower-layer Super Output Areas were within five minutes of key services based on this dataset.

4.1.8 In response to concerns about shrinkage estimation, this is a method for dealing with statistically unreliable scores, as explained in the Report for Consultation Section 4.2. If shrinkage or some other comparable technique were not applied then there is a risk that greater error could be introduced into the Indices. The statistical techniques, including shrinkage, have been reviewed as part of this update (see Report for Consultation Section 4). This concluded that there was no evidence that changes to the statistical methods would improve the Indices and, as a result, no changes were proposed.

Consultees were asked the following question:

9. Are there any issues you would like to raise for the future development of the Indices of Deprivation?

Summary of responses

4.1.9 There were 78 responses to this question. It was suggested that the department continues to investigate appropriate indicators and encourage other government departments and agencies to make suitable data available for future updates of the Indices. Of particular interest were potential new indicators on fuel poverty, digital exclusion and connection to the mains gas network.
4.1.10 Thirteen respondents commented that welfare reform, particularly the roll-out of Universal Credit, would likely impact on the Income and Employment Deprivation Domain indicators in future updates of the Indices. Some commented that a strategy was needed for updating Census-based indicators.

4.1.11 There were requests for more certainty regarding future updates of the Indices. Twenty-one respondents wanted a set timetable for updates at regular intervals, and some requested more frequent updates. There was some demand for a full review before a future update of the Indices particularly given the significant changes in the welfare system.

**Government’s response**

4.1.12 The department has considered the comments for the future development of the Indices. Building on the exploration of potential new indicators undertaken for this update and outlined in the consultation documents, the department will engage with potential data suppliers regarding the availability of suitable data in future. Some government departments are in the process of making data available at small area level which would potentially be suitable. For example, the Department for Energy and Climate Change is exploring whether it can improve small area data on fuel poverty.

4.1.13 Regarding Universal Credit, the department notes that this is being introduced in stages: it does not yet cover all areas of England or all circumstances. Any future update of the Indices would review the availability and suitability of Universal Credit data alongside the availability of alternative data sources. The department acknowledges concerns about updating Census-based indicators and has set out its position on this in paragraph 3.2.4.

4.1.14 The department recognises how valuable the Indices of Deprivation are to a wide range of bodies and will update users on the timetable for future updates as soon as circumstances allow.

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10 Universal Credit is a new single payment for people who are looking for work or on a low income. It replaces certain income related benefits. See: [www.gov.uk/government/collections/universal-credit-statistics](http://www.gov.uk/government/collections/universal-credit-statistics)
Annex: Housing Market Area geography

1. The map overleaf shows the Housing Market Area geography across Great Britain. Lower-tier Housing Market Areas, shown with black boundaries, will be used in producing the indicator of housing affordability. The resulting indicator will be at Lower-layer Super Output Area level.

2. Work to determine a geography for Housing Market Areas was carried out by Heriot-Watt University and the Universities of Manchester, Newcastle and Sheffield. The research was published by the Department in November 2010\(^\text{11}\).

3. The research sought to identify the optimal areas within which planning for housing should be carried out, since housing market dynamics and population changes do not respect administrative boundaries such as for local authorities. The resulting Housing Market Area geography took into account commuting and migration patterns using 2001 Census data, and the extent to which areas were ‘self-contained’\(^\text{12}\):

   i. Upper-tier Housing Market Areas, defined by a high level of commuting self-containment.

   ii. **Lower-tier Housing Market Areas** (277 areas in England). The upper-tier Housing Market Areas were further subdivided, with larger and more urban upper-tier areas with more localised housing market conditions divided according to migration patterns.

\(^{11}\) [www.gov.uk/government/publications/housing-market-areas](http://www.gov.uk/government/publications/housing-market-areas) with additional details on [www.ncl.ac.uk/curds/research/defining/NHPAU.htm](http://www.ncl.ac.uk/curds/research/defining/NHPAU.htm)

\(^{12}\) That is, the extent to which people live and work in the same area, or the extent to which people move house within the same area.
The upper and lower-tier Housing Market Area geography\textsuperscript{13}

Key:
Upper-tier - purple boundaries
Lower-tier - black boundaries nested within purple boundaries

\textsuperscript{13} Reproduced from the Geography of housing market areas: Executive summary, Department for Communities and Local Government, November 2010, p9 \url{www.gov.uk/government/publications/housing-market-areas}