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Acknowledgements

Centre for Thriving Places

The Thriving Places Index is produced by the Centre for Thriving Places (CTP).

Founded in 2010, Centre for Thriving Places helps put the wellbeing of people and planet at the heart of decision making in towns, cities and regions across the UK. Our key strength is in helping show what’s possible and providing practical pathways to getting there. We do this through place-based strategic consulting, research and data and evidence-based measurement tools and frameworks including the Thriving Places Index and the Happiness Pulse.

Our team

We would like to acknowledge the involvement of the following team members, associates and interns:

Mel Cairns, Saamah Abdallah, Cristiana Veloso, Lisa Muller, Soraya Safazadeh, Liz Zeidler, Wren Aigaki-Lander, Laura Steele, Dave Forman, Marc George.

This methodology was authored by Mel Cairns and Saamah Abdallah, building on previous work by Soraya Safazadeh and Lisa Muller.

Data gathering

We would like to acknowledge our continued partnership with Duncan MacKenzie and his team at Data Cymru for their work on gathering the indicator data and conducting indicator calculations for Wales and, in 2021, for England.

Data acknowledgements

Office for National Statistics (ONS)

The good jobs, lifelong learning, and Social Fragmentation Index indicators were produced using statistical data from ONS (Labour Force Survey). ONS generated the data needed for these indicators as part of an ad hoc user request. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of
the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

Understanding Society Survey
The neighbourhood trust, organisation membership and safety at dark indicators were produced using data from the Understanding Society Survey. Understanding Society is an initiative funded by the Economic and Social Research Council and various Government Departments, with scientific leadership by the Institute for Social and Economic Research, University of Essex, and survey delivery by NatCen Social Research and Kantar Public. The research data are distributed by the UK Data Service.

Planning Statistics
The dataset used to obtain land use change statistics for the land use change indicator was provided by the Ministry of Housing, Communities & Local Government. Our use of this data is covered under an End User License agreement.

Tree cover
Currently the best estimates of total tree cover across all local authorities in England and Wales is produced by Bluesky International Limited. We obtained this data via Friends of the Earth; Bluesky provided the data to Friends of the Earth free of charge. Bluesky created National Tree Map™ using a combination of vertical aerial survey data, height data and colour infrared imagery to map all trees over 3m high across England and Wales. Local authorities use this to map tree preservation orders, prioritise leaf-clearing schedules, and target areas for tree planting, as well as other uses. For more detail visit Bluesky.

Social Fragmentation Index (SFI)
The social fragmentation index was calculated based on a methodology developed by Sir Peter Congdon, Queen Mary University.


Congdon combined four components to create the index: % living alone; % living as a couple; % privately renting; and % who have moved home in the last year.

Green land cover
The dataset used to calculate the green land cover indicator was produced by Professor Alasdair Rae, University of Sheffield.
Acronyms

LA = Local authority
ONS = Office for National Statistics
PHE = Public Health England
RSA = Royal Society for arts, manufactures and commerce
TPI = Thriving Places Index
USS = Understanding Society Survey
1. GENERAL METHODOLOGY

1.1. Selecting indicators

Each year, indicators are selected in order to:

- Replace indicators that are no longer suitable
- Add new indicators for gaps that could not previously be filled
- Drop indicators that are no longer suitable if a replacement cannot be found

We first and foremost search for new indicators on the Office for National Statistics, gov.uk, and Public Health England fingertips websites.

The following criteria are used in the selection of indicators:

1. Timeliness - More recent data is favoured.
2. Frequency - Datasets that are regularly updated are favoured.
3. Reputability - We look for data from reputable sources such as the Office for National Statistics, government departments, and Public Health England. Otherwise we interrogate the methodology used more carefully.
4. Availability - Data must be available for the vast majority of upper-tier LAs. We favour data that is also available for second-tier LAs and available for Welsh LAs.
5. Public - We favour datasets that are available to the public. We make exceptions only if an indicator is needed to fill a gap in the TPI framework that can only be filled by using data that is not published for public use.

1.2. Modifying the TPI framework

The TPI framework is somewhat iterative; it is occasionally modified when new subdomains or domains are able to be added. This is particularly true for the sustainability and equality elements as we continue to develop these and more relevant datasets become available.

1.3. Data gathering

The process of gathering raw data for the TPI is different depending on the type or status of the indicator. There are 5 types:

**New**: An indicator that is new to the current iteration of the TPI. I.e. it was not in the TPI the previous year.
Replacement: An indicator that is new to the current iteration of the TPI, but has replaced an indicator that was in the TPI the previous year.

Updated: An indicator that was in the TPI the previous year and is also included in the current iteration. New data is available so the indicator values are updated in the dataset.

Same as last year: An indicator that was in the TPI the previous year and is also included in the current iteration. There is no new data

Dropped: An indicator that was in the TPI the previous year, and is not in the current iteration.

For new, replacement, and updated indicators:
Raw data is obtained from the sources used, such as the ONS website.

For indicators that are the same as last year:
As these indicators cannot be updated, the raw values are simply copied over from the previous version of the index. The average for England and standard deviation used for standardisation (see ‘standardising the raw values’) are also copied from the previous version of the index.

1.4. Calculating indicator values

1.4.1. Raw TPI values

Some indicator values are ready ‘off-the-shelf’ from the data source. This is true for many of the Public Health England indicators we use.

In some cases, we perform calculations to derive the values that form our raw dataset. The types of calculations carried out include:

- Standardising the data to make it comparable between local authorities (e.g. calculate a value per 1000 residents).
- (Thriving Places England only) Deriving values for upper tier local authorities where the data was provided at district local authority level only. We took weighted averages to aggregate the data to upper tier local authority level.
- Basic bespoke calculation. For example, from Understanding Society Survey data, we were able to calculate the percentage of people who agree or strongly agree that the people in their neighbourhood can be trusted. See the separate indicator calculations document for a full description of these calculations.

1.4.2. Standardising the raw values

After gathering data for all indicators, we standardised the raw values by transforming them to z-scores using the following formula, so that all indicator values had a mean of 0 and a standard deviation of 1:
Where necessary indicator values were reversed so that all positive z-scores indicate values that are better than average.

Calculating z-scores allow us to compare a local authority’s performance on two indicators even if they are measured on different scales. If a local authority scores -1.0 on one indicator, and -2.0 on another, this means that it is 1 standard deviation below the English mean for the former, but 2 standard deviations below the mean for the latter – indicating that the second indicator may be more of a priority for the local authority.

Note that upper tier and district values are held in separate datasets. The mean and standard deviation for upper tier local authorities is used for standardising both data sets.

1.4.3. Capping the standardised values

To avoid extreme values affecting the overall spread of scores on the scorecards, we then capped the z-scores at -5 and +5, so that z-scores below -5 become -5, and scores above 5 become 5.

1.5. Calculating the TPI scores

1.5.1. Combining indicators

To calculate sub-domain values, we averaged the z-scores for indicators within each sub-domain.
To calculate Local Conditions domain values, we averaged the sub-domain values within each domain.
To calculate Local Conditions headline element values, we averaged the domain values within Local Conditions.
To calculate Sustainability and Equality headline element values, we averaged the domain values within each headline element.

1.5.2. Re-scaling

To make the scores easier to interpret, we rescale the sub-domain, domain and headline element values to fall on a 0-10 scale, with 5 representing the average national score for the current year. We do this using the following formula: $Recalibrated_{ij} = z_{ij} + 5$
Scores are also capped at 0 and 10, so that scores below 0 become 0 and scores above 10 become 10.
The formula was designed purely to ensure a reasonable spread of scores between 0 and 10. With this formula, any variation beyond 3 standard deviations away from the mean is ignored. So, for example a LA which has a z-score of 3.1 on a particular domain would get 10/10, as would a local authority which had a z-score of 7.1. For example in 2019, out of the 9446 sub-domain scores for the 150 local authorities, only 138 z-scores fell beyond the ±3 range, and were therefore capped.

1.5.3. Presentation of scores

As well as calculating 0-10 scores, we also use a colour scheme for presenting scores:

<table>
<thead>
<tr>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;3.5</td>
<td>3.5-4.5</td>
<td>4.5-5.5</td>
</tr>
<tr>
<td></td>
<td>5.5-6.5</td>
<td>&gt;6.5</td>
</tr>
</tbody>
</table>

1.6. Data checking

Indicator values of 0 are checked to verify that they are true zeroes and not a missing value that has been incorrectly formatted. Missing values are also checked to verify that they should be missing. Calculations for any brand new or updated indicators are checked independently by two data analysts. The final dataset is then sense checked.

1.7. Missing data

There are few missing data points in the TPI dataset as complete data is one of our criteria for selecting indicators. However, occasionally an indicator has a small number of missing data points. As there is a small proportion of missing data points we do not employ any data imputation techniques. Missing data is more of an issue for districts than upper tier local authorities. As districts are smaller, data is more likely to be suppressed. See notes and cautions (section 2.7) for details on which indicators have missing data points.
1.8. TPI Wales

Data Cymru calculates the Thriving Places Wales using the same general methodology covered here. Centre for Thriving Places also checks the dataset produced by Data Cymru. See the Thriving Places Wales website for further information: www.thrivingplaces.wales.

1.9. Further information

If you have any further questions about the TPI methodology, please email us at: hello@centreforthrivingplaces.org

2. CHANGES IN THE TPI 2021

This section covers TPI methodology specific to the TPI 2021. General methodology is covered in section 1.

2.1. Geographical scope

The Thriving Places Index 2021 provides scores for 337 Local Authorities (LAs) in England. 149 of these are upper tier LAs, including unitary and two-tier LAs. 188 of these are district, second-tier LAs. Isles of Scilly and City of London are excluded as most data is unavailable for these small sui generis local authorities.

2.2. Changes to local authorities

2.2.1. Description of changes as of April 2019

There were three sets of changes to the structure of local authorities made as of April 2019. Firstly, five of the six districts in Dorset county were combined to form a new Unitary Authority (UA): Dorset UA. The remaining district - Christchurch - was combined with the two pre-existing urban UAs within the county - Bournemouth and Poole - to produce a single new UA: Bournemouth, Christchurch and Poole UA (abbreviated on the TPI website to Bournem., Christch. and Poole).
Secondly, four former districts in Suffolk were combined into two larger districts - Suffolk Coastal and Waveney became East Suffolk, and Forest Heath and St. Edmunds became West Suffolk. The changes reduced the number of districts in the Suffolk two-tier LA from seven to five.

Lastly, two former districts in the Somerset two-tier LA - Taunton Deane and West Somerset were combined into one larger district - Somerset West and Taunton. This change reduced the number of districts in Somerset from five to four.

The changes are summarised in the tables below.

**Pre-April 2019**

<table>
<thead>
<tr>
<th>Upper-tier</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bournemouth Poole Dorset (two-tier LA)</td>
<td>Christchurch East Dorset North Dorset Purbeck West Dorset Weymouth and Portland</td>
</tr>
</tbody>
</table>

**Post April-2019 (TPI 2020 and 2021)**

<table>
<thead>
<tr>
<th>Tier</th>
<th>LA</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>Bournemouth, Christchurch &amp; Poole</td>
<td>Replaces the now defunct Bournemouth and Christchurch upper-tier Local Authorities, and Christchurch district.</td>
</tr>
<tr>
<td>Upper</td>
<td>Dorset</td>
<td>Replaces the now defunct districts: East Dorset, North Dorset, Purbeck, West Dorset, Weymouth and Portland.</td>
</tr>
<tr>
<td>Upper</td>
<td>Somerset West and Taunton</td>
<td>Replaces the now defunct districts West Somerset and Taunton Deane.</td>
</tr>
<tr>
<td>District</td>
<td>East Suffolk</td>
<td>Replaces the now defunct districts: Suffolk Coastal and Waveney.</td>
</tr>
<tr>
<td>District</td>
<td>West Suffolk</td>
<td>Replaces the now defunct districts: Forest Heath and St Edmunds.</td>
</tr>
</tbody>
</table>
2.2.2. Description of changes as of April 2020

One further change occurred in April 2020 and is therefore reflected in the TPI 2021 but, unlike the changes mentioned in section 2.2.1, not the TPI 2020. Buckinghamshire unitary Local Authority was created in April 2020 and covers the same areas as the previous Buckinghamshire county (upper tier) and the four lower tier districts that comprised it: Aylesbury Vale, Chiltern, South Bucks and Wycombe.

Pre-April 2020

<table>
<thead>
<tr>
<th>Upper-tier</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buckinghamshire (county)</td>
<td>Aylesbury Vale</td>
</tr>
<tr>
<td></td>
<td>Chiltern</td>
</tr>
<tr>
<td></td>
<td>South Bucks</td>
</tr>
<tr>
<td></td>
<td>Wycombe</td>
</tr>
</tbody>
</table>

Post April-2019 (TPI 2020 and 2021)

| All the above now replaced by the single-tier Buckinghamshire unitary LA |

2.2.3 Description of changes as of April 2021

In April 2021, the upper-tier Northamptonshire (county) LA was abolished, as were the seven districts that comprised it. All of these were replaced by two new unitary authorities as shown in the tables below. These changes came into effect after work on the TPI 2021 had already begun, and after it would ordinarily be launched, so scores are provided for the now defunct LAs only.

Pre-April 2021

<table>
<thead>
<tr>
<th>Upper-tier</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northamptonshire</td>
<td>Corby</td>
</tr>
<tr>
<td></td>
<td>Daventry</td>
</tr>
<tr>
<td></td>
<td>East Northamptonshire</td>
</tr>
<tr>
<td></td>
<td>Kettering</td>
</tr>
<tr>
<td></td>
<td>Northampton</td>
</tr>
<tr>
<td></td>
<td>South Northamptonshire</td>
</tr>
<tr>
<td></td>
<td>Wellingborough</td>
</tr>
</tbody>
</table>
Post April-2021 (NOT REFLECTED in TPI 2021)

<table>
<thead>
<tr>
<th>Tier</th>
<th>LA</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>North Northamptonshire</td>
<td>Replaces the now defunct Northamptonshire LA and these districts: Corby East Northamptonshire Kettering Wellingborough</td>
</tr>
<tr>
<td>Upper</td>
<td>West Northamptonshire</td>
<td>Replaces the now defunct Northamptonshire LA and these districts: Daventry Northampton South Northamptonshire</td>
</tr>
</tbody>
</table>

2.2.4 Implications for the TPI

The TPI 2020 and 2021 uses the new, post-April 2019 LA structure. Given that much of the indicator data is from pre-April 2019, some indicator values for new post-April 2019 LAs were calculated by combining data for defunct LAs- for example aggregating data from the old districts to calculate a value for the new district. Such aggregation was always conducted with consideration of the denominator used for the indicator in question. This usually involved taking a weighted average of the district values, weighting them based on their overall population, although there were some exceptions where the denominator was not a population.

Furthermore, data was not available for all indicators used in the Upper Tier data set for Christchurch, as it was previously a district (and several indicators are only available for Upper Tier LAs). Where Christchurch data was not available, we omitted Christchurch from the Bournemouth, Christchurch and Poole UA and used the old Dorset council values (which included Christchurch) for the new Dorset UA. Where this had to be done, there will of course be small errors. Given that Christchurch only represents around 12% of the population of Bournemouth, Christchurch and Poole, and only 11% of the former Dorset County, this is unlikely to have had a major effect on results.

The TPI 2019 data for pre-April 2019 LAs is still available on the TPI website.

In addition, because of the changes in Buckinghamshire, we found there was missing data for a large proportion of indicators for the four defunct districts and therefore we have not included them in the TPI 2021. Scorecards from 2020 and prior can still currently be seen on...
the TPI website. Moreover, the new Buckinghamshire unitary authority has a separate scorecard page (showing only TPI 2021 scores) to the defunct Buckinghamshire county page (showing only TPI 2020 scores and prior). Although some of the data that has contributed to the TPI 2021 scores pre-dates the local authority changes and therefore was reported as Buckinghamshire county, the area covered is the same for both old county and new unitary authority.

Finally, the timing of the changes in Northamptonshire means they are not reflected in the TPI 2021; scores for the pre-2021 LAs are available on the TPI website. If scores for the new unitary LAs (North Northamptonshire and West Northamptonshire) are required, please email us at hello@centreforthrivingplaces.org.

2.3. Indicator list

You can download the complete TPI 2021 indicator list on the TPI ‘How we measured this’ page (visit www.thrivingplacesindex.org). The list includes a description for each indicator, the source of the data, the time period the indicator pertains to, and whether we performed further calculations to arrive at the final TPI indicator values. Note that not all indicators are available at district level. Whether an indicator is available at district level is shown in the indicator list.

2.4. Summary of changes to TPI 2021

This section summarises the differences between the TPI 2021 and TPI 2020.

2.4.1. New indicators

The following indicators have been added to the TPI dataset:

<table>
<thead>
<tr>
<th>Domain/ sub-domain</th>
<th>Indicator</th>
<th>Description</th>
<th>Source</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local environment</td>
<td>Private outdoor space</td>
<td>Percentage of addresses with access to private outdoor space.</td>
<td>Office for National Statistics</td>
<td>This indicator of access to private outdoor space has been added to complement green land cover and access to woodland in serving as proxies for use of green space. Private outdoor space would not necessarily have been</td>
</tr>
</tbody>
</table>
2.4.2. Dropped indicators

No indicators have been removed from the TPI 2021 dataset.

2.4.3. Replacement indicators

No indicators have been replaced with new indicators in the TPI 2021. There have been changes to the data source for a few indicators; these are noted in section 2.7 below.

2.5. New indicator calculations

Please see the TPI indicator calculations document for full details.

2.6. Personal wellbeing

While the Thriving Places Index shows what is important for wellbeing at the local level, other measures capture the personal wellbeing of individuals. Each LA results page on the TPI website includes annual average personal wellbeing scores at Local Authority level, which are National Statistics. These are measured by four questions known as the ONS4, which are asked in a national survey. The TPI website presents the average ONS4 alongside the TPI scorecard for ease of reference.
2.7. Indicator notes and cautions

This section includes notes and cautions pertaining to individual indicators in the TPI.

**Exposure to transport related noise:**
The data from Public Health England is modelled data - no actual noise measurements were made. Values are missing for Bournemouth, Christchurch and Poole UA for 2016. No values are available from the source for Bournemouth and Poole LAs (now defunct).

**Primary youth offenders**
This indicator was populated using data from Public Health England for the TPI 2020 and prior. However, this data was not available from PHE at the time of compiling the TPI 2021, so Ministry of Justice data has been used. PHE used Ministry of Justice data to calculate the ‘First time entrants to the youth justice system’ indicator that was used in the TPI previously. The data used in the TPI 2021 is defined as: ‘First time entrants to the youth justice system’ and specifically ‘Rate of 10-17 year olds receiving their first youth caution or court sentence recorded on the Police National Computer per 100,000 10-17 year olds in the population.’ The PHE definition was ‘Rate of 10-17 year olds receiving their first reprimand, warning or conviction per 100,000 population [of 10-17 year olds].’ The value for Rutland is missing (suppressed).

**Crime Severity Index**
Many Community Safety Partnerships cover more than one local authority area. In these cases, the areas are assigned the same crime severity score. For some county LAs, Police Force Area data was used. Values are missing for ten local authorities because no values were reported for Greater Manchester Police. The value for Somerset West and Taunton district is also missing.

**Domestic abuse**
Many police force areas cover more than one local authority area. In these cases, the areas are assigned the same domestic abuse rate. Values are missing for ten local authorities because no values were reported for Greater Manchester Police.

**Safety at dark**
Values suppressed for LAs due to small sample sizes (below 50): Hartlepool, Thurrock, Hammersmith and Fulham, Rutland, Kensington and Chelsea.

**Homelessness numbers**
This indicator was populated using PHE data for ‘numbers accepted as being homeless and in priority need PLUS Eligible Homeless People Not In Priority need’ per 1000 households for the TPI 2020. However, in 2021 the latter indicator was not updated by PHE. Therefore, we have used data from the Ministry for Housing, Communities and Local Government for ‘households assessed as homeless’ per 1000 households for the TPI 2021. Values for three local...
authorities and seven lower-tier districts are missing. Unusually for the TPI, in 2021 this indicator has been calculated using data from one quarter of 2020 only (Oct-Dec).

**Child obesity rate**
Values for five local authorities and nine lower-tier districts are missing.

**Physical activity**
Values for seven lower-tier districts are missing.

**Healthy eating / 5-a-day**
Values for two local authorities and seven lower-tier districts are missing.

**Suicide rate**
Values for one local authority (Rutland) and two lower-tier districts are missing.

**Adults with no qualifications**
For 23 districts no values were provided by NOMIS for the percentage with no qualifications due to disclosure rules (i.e. samples were too small) or boundary changes (defunct districts in Northamptonshire). For 22 of these districts we used the figure for the previous available year (2018). In one case (Torridge), the previous year was also not available, so we used the 2017 figure.

**Adult education**
The value for one lower-tier district (Oadby and Wigston) is missing.

**Apprenticeship starts**
We have amended the denominator used to calculate the rate of apprenticeship starts. In TPI 2019, total population was used; we have changed this to the working age population (16+) in the TPI 2020 and 2021. Unusually for the TPI, and in a further change since the TPI 2020, data for the whole year has not been used in the TPI 2021. Instead, data from August 2019 to April 2020 has been used as this was the most recent available data.

**Educational attainment of children**
This indicator was populated using data from the Department of Education (DfE) for the TPI 2020 and prior. However, in the TPI 2021, data from PHE has been used, although it is drawn from the same DfE dataset.

It should be noted that the Department of Education advises that "Given the unprecedented change in the way GCSE results were awarded in 2020 and the resulting significant change to
the distribution of the grades received, pupil level attainment in 2019/20 and 2018/19 is not comparable.” Further information is available at the link in the footnote.

**Unwillingly out of work:**
For some districts, the proportion "economically inactive but want a job” value needed to calculate this indicator is missing. We impute these by creating a regression model using the percentage economically active and percentage unemployed. The value for one local authority (Norfolk) is missing.

**Good jobs**
Values for ten local authorities and fifty lower-tier districts are missing.

**Percentage with low income**
This indicator is calculated using the Annual Survey of Household Earnings (ASHE), which provides data on weekly pay at each decile across the income distribution for each local authority (and the first and fourth quartiles). To estimate the percentage in each local authority earning below the defined threshold (70% of UK median income), a best fit line is estimated for each local authority. For smaller local authorities, there is some missing data, with values not available at the highest and sometimes lowest deciles. We used as much data as was available, which included at a minimum seven data points.

**Volunteering related to sport**
In the TPI 2021, data from the Active Lives survey 2019/20 has been used. Sample sizes were smaller this year than for previous years and therefore there are many missing data points at local authority level. Instead, data at the Active Partnership level has been used. This means that where multiple LAs sit within an Active Partnership area, all these LAs have been assigned the same value for that Active Partnership. Values for three local authorities are missing.

Furthermore, the TPI indicator requires data for the percentage of adults volunteering in sport at least twice in the past year and in previous years the Active Lives dataset included this. In the latest release, used for the TPI 2021, this is not available. Therefore, percentages of people volunteering at three different frequencies in the past year were added together to obtain the percentage for ‘at least twice in the past year’.

**Organisation membership**

---
Values suppressed for LAs due to small sample sizes (below 50): Hartlepool, Rutland, Kensington and Chelsea.

**Neighbourhood trust**
Values suppressed for LAs due to small sample sizes (below 50): Hartlepool, Rutland, Kensington and Chelsea.

**Social Fragmentation Index (SFI)**
For the purposes of the TPI 2021, we recoded the components such that the index is *high* when the conditions for social fragmentation are low (so it is more a measure of conditions for social cohesion) - that means coding all the components negatively except for % living as a couple. For each component, for each local authority, a z-score was calculated based on the mean for England and standard deviation between local authorities. These z-scores were then averaged to produce the overall SFI. Data came from the Annual Population Survey. See further detail about this indicator in the Data Acknowledgements section and also in the Indicator Calculations list [here](#).

**Health inequality**
This indicator was populated using data from ONS in the TPI 2020 and prior. However, in the TPI 2021, data from PHE has been used. PHE conducted calculations using data from ONS and IMD to produce this. The value for one local authority (Rutland) is missing.

**Income inequality - 80/20 percentile ratio:**
This indicator is calculated using the Annual Survey of Household Earnings (ASHE), which provides data on weekly pay at each decile across the income distribution for each local authority (and the first and fourth quartiles). For LAs where the 80th percentile was not available, it was estimated using a logarithmic line of best fit. The 80th percentile was estimated using the 10th-75th percentiles, or the 10th-70th percentiles where the 75th percentile was not available. For LAs where the 70th percentile was not available, the 80th percentile was not estimated and hence the indicator value is missing for those LAs.

**Gender pay gap**
Negative values are capped at zero, such that LAs with ‘reverse’ gender gaps (where women are paid more than men) are given the same score as LAs with no gender gap. The value for one lower-tier district (Tandridge) is missing.

**BAME representation of councillors**
The data published by Operation Black Vote is for upper tier local authorities only, excluding counties. We were unable to calculate this indicator for county upper tier local authorities as the data is not available for these counties or their comprising district local authorities.
**Energy consumption**
Per capita energy consumption in the TPI 2021 was calculated using total population data, as it was in the TPIs prior to 2020. The TPI 2020 used adult population data instead.

**Household recycling and Household waste:**
Values missing for: Babergh. In the TPI 2021 the values for this indicator were calculated slightly differently using data from the same source as previous years.
From 2017/18, 6 local authorities started reporting as Somerset Waste Partnership. These are Somerset County Council, Mendip, Sedgmoor, South Somerset, Taunton Deane, West Somerset. These LAs are assigned the same value for this indicator.
Dorset LA is assigned the value for Dorset Waste Partnership.
Cambridge and South Cambridgeshire are assigned the value for Cambridge City and South Cambridgeshire Council.

**Renewable electricity generation**
Values for three local authorities and one lower-tier district (East Hertfordshire) are missing.

**Tree cover**
The tree cover data used is categorical, rather than a true percentage. For counties, furthermore, we estimated the tree cover % category using the data available for their comprising districts and the size of each district.

**ONS4 Happiness, Worthwhile, Life Satisfaction and Anxiety (personal wellbeing)**
Somerset West and Taunton has been assigned the value for Taunton Deane as the value for West Somerset is suppressed in the raw data from ONS. All four indicator values are missing for the same three lower-tier districts, as well as missing values for Anxiety for a further two districts.

**Further information**
If you have any further questions about the Thriving Places Index methodology, please contact Centre for Thriving Places via hello@centreforthrivingplaces.org.