
2019
THRIVING PLACES INDEX
FULL REPORT 2019
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CONTENTS

Foreword

Welcome to the Thriving Places Index (TPI) in-depth report 2019. This report, now in its second year, with an immense body of data and analysis behind it, is designed to put the wellbeing of people, place and planet at the heart of decision-making across the UK.

It is said that 'if we measure the wrong things, we strive for the wrong things'[1]. For too long our economic model has defined the purpose of politics, business and society in terms of measuring and striving for more and more consumption, to drive 'growth' and in turn to drive 'progress'.

This logic is like saying that the purpose of a train is to use ever more fuel. A train may require fuel and many working parts, but we measure its success not on its capacity to consume fuel, but on whether it gets us to where we need to be.

So it is with the purpose of government, business and all of human endeavour, which is not to consume more stuff and grow wealth, but to grow our capacity to thrive. Until we focus on that goal and measure our progress against that, we will continue to strive for, and deliver the wrong outcomes – including ever-rising levels of inequality and injustice and the increasingly visible and devastating consequences of climate change.

The TPI is designed to provide practical support to help local decision-makers act towards this greater goal. It answers the fundamental question:

Are we doing what we can to grow the CONDITIONS for people to thrive – in a fair and sustainable way?

What would be different if our urban planners and policymakers assessed all their decisions based on the capacity to support community connection and belonging, clean air and biodiversity, and equitable access to education, health and housing for all?

What would be different if big businesses competed with each other on growing their social impact, cutting their carbon footprint and delivering meaningful, respectful and fairly paid jobs?

What would be different if more citizens judged their leaders on whether they were growing equality of opportunity, social trust and intergenerational wellbeing – and the media supported them in scrutinising that?

[1] Joseph Stiglitz, ex chief economist at the World Bank. 2008

How would each of us as citizens act if we could quickly see the answers to these questions for ourselves in the places we live and work?

Now we can see just that. Right now, on thrivingplacesindex.org you can explore the results for your area (and all others in England and Wales) against a range of criteria that combine to show whether the conditions are in place for people to thrive – in a fair and sustainable way that supports current and future generations.

For the past decade the amazing team here at Happy City and our exceptional band of associates, partners and funders, have worked with leading academics, global experts, local policymakers and thousands of citizens to make it easy for you to use the TPI today to help us all push for real change.

Explore it. Share it. Debate it. Use it. And get in touch to discuss ways we can work together to shift the compass, place by place, towards the wellbeing of people and planet.

We can change the course of our own actions, and in doing so, the course of society. We hope this report and the Thriving Places Index itself, will help you on that journey.

Liz Zeidler
Chief Executive

1.0 Report overview

This report intends to provide an overview of the purpose of the Thriving Places Index (TPI), a detailed description of the TPI methodology, and in-depth analysis of the 2019 results.

This year, the TPI has an improved indicator set with expanded Sustainability and Equality elements. Scores now cover all districts in England allowing two-tier local authorities to compare and contrast the results of district councils within their area.

With these improvements in mind, the analysis section cuts the TPI data in different ways to provide valuable insights that highlight the wellbeing strengths and weaknesses of local authorities grouped in different ways.

The report also provides a taste of how the TPI can be used to investigate particular themes and topics of interest. Over the next 12 months, Happy City will continue to publish further analyses online at www.thrivingplacesindex.org. To stay informed, sign up for updates via email.

2.0 Overview of the Thriving Places Index

2.1 Why is the Thriving Places Index needed

The Thriving Places Index (TPI) helps make what matters count.

It is a framework that radically challenges the current paradigm that defines progress in purely economic and financial terms and points to a new direction that puts the wellbeing of people, place and planet above profit.

The TPI is a new approach to understanding the places where we live. It helps citizens and decision-makers see more clearly what is working well and what has fallen behind in terms of what is needed for fair and sustainable wellbeing. It helps focus attention on what might need to happen to make meaningful and lasting change, for everyone.

It's clear that we need a new economic system, and urgently, but it's not always clear what that new economic model would look like or how it would shape the places we live in. The TPI aims to show that clearly and comprehensively, setting out an accessible vision of what a truly thriving place looks like.

It helps us start where we are, giving us greater insight and understanding of how the places we live in affect our wellbeing presently, and how they will affect the wellbeing of future generations. This clarity is an essential first step to creating a better, fairer, healthier economy that works for the people who create and populate it – all of us.

It is a radically new lens through which to measure progress.

2.2 What it measures

The TPI framework (Figure 1) measures the local conditions for wellbeing, and whether those conditions are being delivered fairly and sustainably. It consists of a broad set of indicators grouped into these three headline domains, from datasets produced by established national data agencies such as the Office for National Statistics (ONS), Public Health England (PHE) and the Index of Multiple Deprivation (IMD). By using national data available at local authority level, the TPI provides a framework that can be consistently applied across the country, painting a clear picture of the local conditions for wellbeing in 373 local authority areas of England and Wales, and showing whether those conditions are being delivered equitably and sustainably. We focus on the topics that local areas can influence through local policy and action.

This year, we have significantly enhanced the TPI. In particular, we have strengthened the sustainability and equality domains to underline the vital importance of delivering the conditions for wellbeing in a way that challenges current power imbalances and recognises the rights of future generations.

In addition the TPI is now available for all upper and second tier local authority areas in England AND Wales – a growth of 217% coverage from 2018 (172 to 373 LA areas) – painting a more detailed picture of how the UK is growing places for citizens to thrive.

It is the most comprehensive guide to local wellbeing economics available worldwide – the first nationally consistent indicator framework that measures local progress on supporting the wellbeing of all citizens, now and in the future.

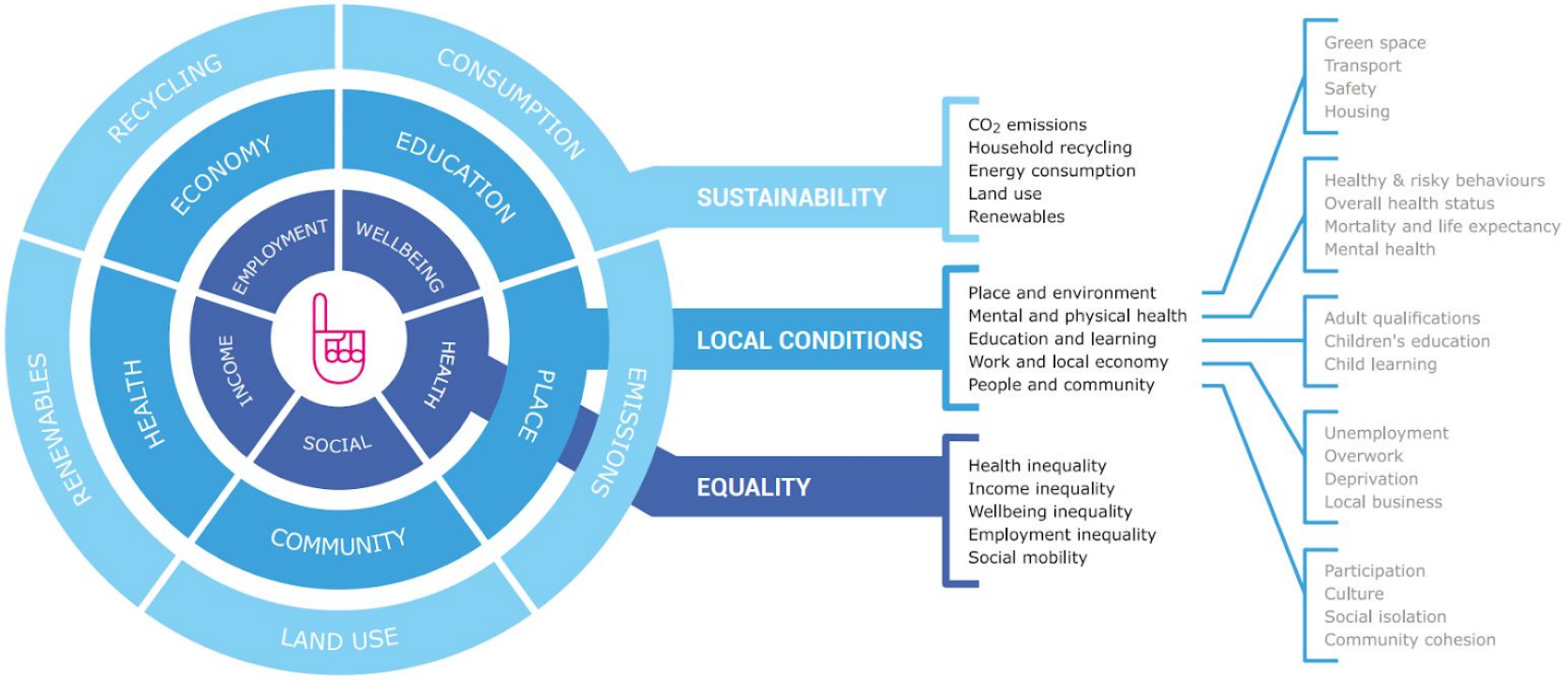


Figure 1. The Thriving Places Index framework

The TPI is arranged into three headline elements:

- SUSTAINABILITY
- LOCAL CONDITIONS
- EQUALITY

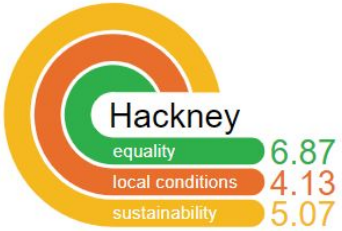
These headline elements support a broad dialogue about whether an area is creating the conditions for people to thrive, within environmental limits and in a socially just way and helping us to produce an easy to understand scorecard.

We then use a layered approach to drill down to the detail: within each headline element there are domains and sub-domains. We select indicators that we know measure, or provide a proxy for, something that is known to have an influence on subjective wellbeing. The indicator data topic must also be something that is within the remit of a local area to influence through policy and action.

This layered approach helps make the breadth of information the TPI holds accessible to citizens and statisticians alike, and supports the cross-sector use of the framework as a roadmap for collaborative change.

Each local authority area has a unique scorecard and results page on the website where they can explore and compare their data.
This is an example scorecard showing results for Hackney, London.

Headline element	Domain	Sub-domain	Hackney
Local conditions			4.13
	Place and environment domain score		4.04
		Local environment	2.89
		Transport	7.33
		Safety	3.46
		Housing	2.48
	Mental and physical health domain score		3.82
		Healthy & risky behaviours	4.66
		Overall health status	3.89
		Mortality and life expectancy	3.43
		Mental health	3.31
	Education and learning domain score		4.58
		Adult education	4.04
		Children's education	5.11
	Work and local economy domain score		4.74
		Unemployment	3.35
		Employment	4.02
		Basic needs	3.22
		Local business	8.37
	People and community domain score		3.47
		Participation	3.22
		Culture	5.77
		Community cohesion	1.40
Sustainability			5.07
		C02 emissions	7.69
		Household recycling	2.37
		Energy consumption per capita	9.16
		Renewables	1.61
		Land use	4.53
Equality			6.87
		Health Inequality	7.39
		Income Inequality - Overall	7.23
		Income Inequality - Gender	7.85
		Employment inequality	5.04
		Social mobility	9.33
		Wellbeing inequality	4.38



All scores are given on a 0-10 scale, colour-coded for easy reading:

The headline graphic above shows for example that Hackney scores 6.87 for Equality. The full scorecard provides greater detail, showing that Hackney has a very high score of 7.39 on Health Inequality, but a below average score of 4.38 on Wellbeing Inequality.
You can find the headline results and scorecards for all included upper tier and district Local Authority areas across England on our website: www.thrivingplacesindex.org.

You can use the TPI to:

- Understand what needs to be in place to create a fair, sustainable area that supports both individual and societal wellbeing
- Compare how areas are doing across different dimensions or compare different areas with your own to get a comprehensive sense of how things are going
- Focus on what would have the most impact in improving wellbeing and celebrate what's already going well
- Share ideas and inspiration for change across different sectors, organisations, groups and communities.

2.3 Key features of the Thriving Places Index

The TPI approach is:

Consistent
The TPI is a set of 60+ indicators, all collected by highly respected national and international data agencies and bodies, brought together against rigorous guidelines for inclusion. They are chosen for being the very best indicators consistently available at a local level across the country that are: evidence-based drivers of wellbeing, robust and valid (sample sizes and representative), current and amenable to local action, asset based, broad and balanced. The data can be trusted, and the story it tells is tried and tested. It provides a consistent and hence comparable way of agreeing, measuring and tracking progress towards shared goals.

Comprehensive
The TPI does not underestimate the complexity of the questions it poses. There is no single answer to how to shift to an economic model that delivers intergenerational equitable wellbeing. But the TPI does bring together complex, connected issues and presents them as part of an integrated whole. Instead of it merely being the job of one department or one organisation to deliver the conditions in their 'silo', the TPI helps leaders think through their actions and decisions through a more systems focused lens: How do green spaces influence physical and mental health? How does access to transport affect income inequality? Why do levels of locally-owned businesses matter to community trust or the health of our children? No single tool can answer all these questions but the TPI allows the complexity of positive place-based change to be seen in a single unifying framework.

Challenging
There is a radical challenge at the heart of the TPI. It does not shy away from shining a light on the impact of inequality on power and access, nor use wellbeing as a way to 'soft-focus' some of our entrenched local and global challenges. It supports leaders in all sectors to recalibrate their organisations towards long term and real prosperity of people and planet.

Local, Collaborative and Practical
The TPI is at its most powerful when it becomes a shared set of key performance indicators (KPIs) for cross-sector visions and plans for change. The local level data it presents enables those ideas and visions to emerge at a scale that makes sense. Lots of different people influence places – from tiny community groups to big businesses and local government departments – and the TPI provides a shared perspective to coordinate change across a whole local authority area.

3.0 Our methodology

3.1 The overall framework

The TPI is a set of indicators that can be used to measure how well each local authority is creating the local conditions for people to flourish, in a sustainable way that benefits everyone equally.

The indicator set is structured as three 'headline' elements: Local Conditions, Sustainability and Equality. Within these headline elements, we further segment indicators into domains and sub-domains. This helps to create a clear narrative about wellbeing and also enables users of the TPI to see the patterns of strengths and weaknesses more easily.

The TPI comprises three data sets – two in England and one in Wales. The headline elements, domains and sub-domains remain the same, but the number of indicators and in some instances the indicators themselves vary according to the availability of the data, as this differs between home countries and also between local authority tiers.

England:

Upper tier (150 councils): 62 indicators
Second tier (201 councils): 44 indicators

Wales:

Single tier (22 councils): 54 indicators

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The TPI is made up of data for the individual indicators, but we present it in a scorecard format by applying a conversion calculation which produces a score between 0-10. Each of the 27 sub-domains within the TPI receives a score, which is averaged to create a domain score and also a headline score for each of the headline elements.

The number of indicators that make up the TPI reflects the fact that we wanted to strike a balance between creating an index that is as comprehensive as possible, without it being too difficult to make sense of and to use.

The TPI measures the drivers of wellbeing, rather than wellbeing itself. Subjective wellbeing data is available at local authority level and is included in our datasets to complement the TPI, as we expect TPI scores to correlate with and have an impact upon subjective wellbeing.

At the same time, it does not measure the inputs that local authorities invest in improving wellbeing. So, for example, the TPI includes an indicator which shows the percentage of adults doing regular physical activity, but it does not include an indicator which shows the amount local authorities spend on physical activity programmes.

The TPI provides data at both upper tier and second tier local authority levels. Not all the data and indicators available at upper tier level are available at second tier level. This gives us a greater choice of indicators, for example it allows us to take advantage of national survey data available at local authority level, such as data from the Labour Force Survey.

Being able to include such survey data in the TPI distinguishes it from indices like the IMD by including:

- Asset-based measures
    - The TPI measures assets, not just deficits. So it measures the percentage of people in good jobs (based on data from the Labour Force Survey), rather than just the percentage of people in employment.

- Subjective measures
    - Many determinants of wellbeing are too complex to be measured using objective administrative data alone. For example, as well as measuring income inequality and health inequality, we also measure inequality in subjective wellbeing. This is useful because there are many factors that determine inequality within a local authority, and including subjective wellbeing inequality allows us to show some of those less easily captured factors.

3.2 Thriving Places Indicators

3.22 Selecting indicators

We started our development of the 2019 TPI by taking the 2018 TPI as our starting point.

For each 2018 indicator, we:

- Checked for more recent data from the same source – ie had the data been updated since 2018
- Searched for more recent data from an alternative source – was there a more recent data set covering the same topic available elsewhere
- Searched for data that better reflects what we want to capture – where we used a proxy indicator in 2018 we searched for improved, more relevant indicators
- Having done all of the above, we decided whether to drop an indicator if it was no longer fit for purpose (e.g. if the data is now too old, or if a superior replacement was found).

We also searched for data that could be used to add indicators that are entirely new to the TPI. When assessing an indicator for inclusion we use the following criteria:

1. **Availability**. First and foremost, the TPI is a resource that can be used. Therefore, we have drawn on data that is already available, rather than creating a wishlist of ideal indicators. All the indicators included are available for all (or almost all) English and Welsh local authorities. Of course, this rules out any data that local authorities choose to collect themselves – for example through resident surveys. Nevertheless, the TPI is intended to be forward-looking, and the selection of domains and sub-domains is intended to signal the direction of travel where new national indicators are needed, ie when currently available data is far from ideal. For example, the only indicator on social isolation at present refers only to people who are carers rather than the population as a whole. In contrast, in Wales we have been able to include an indicator of loneliness for the population as a whole as the National Survey Wales includes such an indicator – we hope that such an indicator will become available in England in the future.
2. **Related to subjective wellbeing.** The TPI measures the drivers of wellbeing. One key requirement for indicators is that they measure, or are a good proxy for something which is known to influence subjective wellbeing.

3. **Validity.** We only include indicators that are robust. For example, when we use survey data we only use surveys with sample sizes large enough to provide estimates at the local authority level. Almost all indicators come from pre-existing national data sets from sources such as the ONS, government departments, PHE, and the IMD.
4. **Regularly updated.** The TPI is updated annually. For that to happen , the constituent indicators need to be updated regularly – ie annually or bi-annually – so as to be current and relevant. This is not the case for all indicators – for example a small number are based on census data which is only updated every ten years.
5. **Amenable to local action.** As noted, the TPI is intended to be used by local authorities and their partners to improve local wellbeing. As such, the indicators included reflect things that can be influenced by council policy and local action.

The full indicator set for the 2019 TPI was evaluated to ensure that it reflects the overall place-based conditions for people to thrive, and that it strikes a balance between using the best data available and keeping it comparable to the 2018 TPI.

All of these steps were carried out with the aim of creating a comprehensive picture of the conditions needed for people to thrive. Table 1 shows the headline elements, domains and sub-domains that make up the TPI 2019 in England and Wales, and marks the sub-domains that are made up of single indicators. The full 2019 upper tier indicator list can be found in Appendix A.

Table 1. The TPI 2019 headline elements, domains and sub-domains. Sub-domains comprising a single indicator are marked with an asterisk.

Headline element	Domain	Sub-domain
Local Conditions	Place and environment	Local Environment
		Housing
		Transport
		Safety
		Housing
	Mental and physical health	Healthy & risky behaviours
		Overall health status
		Mortality and life expectancy

		Mental health
	Education and Learning	Adult education
		Children's education
	Work and local economy	Unemployment*
		Employment*
		Basic needs
		Local business*
	People and community	Participation
		Culture
		Community cohesion
Sustainability		CO_2 emissions*
		Household recycling*
		Energy consumption per capita*
		Renewables*
		Land use*
Equality		Health Inequality*
		Income Inequality - Overall*
		Income Inequality - Gender*
		Employment inequality*
		Social mobility*
		Wellbeing inequality

3.23 New indicators

As mentioned in the previous section, an important part of the development of the 2019 TPI was to search for the most recent data and data that is most relevant to the topics within the sub-domains the TPI. Appendix B provides information on all of the indicators that are brand new to the 2019 TPI.

3.3 Calculating the Thriving Places Index

3.31 Gathering the indicator data

Raw values from sources

For each indicator, we downloaded the relevant data from the online source. Common sources include the ONS and PHE's Fingertips website.

Raw TPI values

In many cases, the data downloaded from the source provided the exact values that go into our raw dataset.
In some cases, we performed some calculations to derive the values that form our raw dataset. The types of calculations carried out were:

- Standardising the data to make it comparable between local authorities, e.g. calculating 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 data provided by the Department for Transport, we were able to calculate the percentage of working people who commute to work by public transport. For a full description of these calculations, please refer to Appendix C.

3.32 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 zero and a standard deviation of one:

$$z_{ij} = \frac{raw_{ij} - \overline{raw_i}}{SD_i}$$

(raw value – national mean) / national standard deviation

Where necessary indicators were reversed so that all positive z-scores represent performance better than the national average.
Calculating z-scores allows 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 one standard deviation below the English mean for the former, but two standard deviations below the mean for the latter – suggesting that the second indicator may be more of a priority for the local authority.
Note that, in future years, to allow better comparison over time, it will be possible to calculate 'pseudo z-scores' where the data for new years is benchmarked against the mean and standard deviation from a prior iteration of the TPI. That means that while for this year and last year the average z-score for any indicator is by definition zero, in future years the average could rise or fall.

3.33 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.

3.34 Calculating sub-domain, domain and headline element scores (creating the scorecards)

Combining

- 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 sub-domain values within the corresponding headline element.

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 five 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 three 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. 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.

3.35 Presentation

As well as calculating 0-10 scores, we also use a colour scheme for presenting scores (Figure 2). The thresholds were chosen to ensure a reasonable spread across the colours. So for example, 15% of sub-domain scores are in the bottom category, 21% in the second category, 29% in the third category, and so on.

Score	Label
< 3.5	Lowest
3.5 - 4.5	Low
4.5 - 5.5	Average
5.4 - 6.5	High
> 6.5	Highest

Figure 2. Bands of scores and colours used to aid interpretation of the TPI.

3.36 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 the missing data points are few and far between we do not employ any data imputation techniques.

Missing data is a marginally bigger issue for districts. As districts are smaller, data is more likely to be suppressed. The indicator with the most missing data points is Household Recycling for districts; data is missing for 10 of 201 districts (4.98%).If missing data becomes a bigger issue in future iterations of the TPI, imputation techniques may be employed. However we want the data to be as true to reality as possible, rather than an estimation, so this would be a last resort.

3.4 District councils methodology

In addition to collecting data for upper tier local authorities, the 2019 TPI also includes second tier local authorities, also known as districts. In creating the TPI for districts, the upper tier local authority methodology is replicated, including all calculations. Where the methodology for districts somewhat differs is in the collection of indicator data. Some indicators available at upper tier level are not available for district councils. For example, the mental health sub-domain has no indicators in it as mental health data is not reported at district level. Five of eight of the indicators in the Equality headline element are also unavailable for district councils. Information on the availability of each indicator at second tier is provided in the full indicator list (Appendix A).

3.5 Thriving Places Wales methodology

Data Cymru, in partnership with Happy City, use the TPI methodology to create the Thriving Places Wales Index, which produces scorecards for the 22 councils in Wales. Twenty-five indicators available for England are also available for Wales. Where this is the case, the same indicator is used for the Thriving Places Wales. If an indicator used in the TPI for England is not available for Wales, the best equivalent for Wales is used. In some cases, useful and relevant indicator data for Wales is not available for England at local authority level (two examples are a subjective indicator for social isolation, and voter turnout at local election level). In these cases, the indicator is included in the Thriving Places Wales, and should the data became available for England in the future it will be added to the TPI for England. The overall methodology and the calculations involved in obtaining the TPI scores from the raw indicator data are the same in both England and Wales. For more information on Thriving Places Wales visit www.thrivingplaces.wales.

3.6 Quality assurance

To assure the quality of our datasets, the following processes are followed in developing the TPI:

- Carefully checking all the formulas used in the calculation of TPI scores
- At least two data analysts carry out the data collection process in full to identify any errors
- Spot checking process
- Interrogation of any scores which intuitively may not feel right (face validity).

4.0 Results and analysis of the 2019 TPI for England

4.1 Introduction to the results and analysis sections

The TPI is not designed to be used only as a league table. It is a discussion and action tool for change. The results are intended to guide action priorities, and encourage sharing of good practice.

The results visualisations and analysis therefore come with a reminder – the TPI is a place-based tool, designed to be used by individual places to explore their own strengths and weaknesses, to guide decision-making and to set priorities around a shared framework of progress. Comparisons with other areas have only a certain degree of usefulness – to see different patterns and distributions of scores, to see what is being done well and less well, and to benchmark targets and progress against agreed outcomes.

The following pages offer a range of ways of visualising and exploring the wealth of data the TPI provides. Please note that no analysis of the Thriving Places Wales is provided in this report. For more information on the results for the Welsh version of the index, please refer to www.thrivingplaces.wales.

4.1.1 Outline

Section 4.2 presents results visually:
4.21 Maps of England showing Local Conditions, Sustainability and Equality scores.
4.22 Headline highlights map of some key results.
4.23 Table of ranking highlights and lowlights by domain.

Section 4.3 outlines results based on ranking all the local authorities in England by their scores.

Section 4.4 presents results for local authorities grouped into different clusters:
4.4.1 Results by region
4.4.2 Results for core cities
4.4.3 Results by combined authority
4.4.4 Results for two tier local authorities

4.4.5 Results by rural/urban categorisation

Section 4.5 includes analysis of changes in upper tier local authority scores in 2019 compared to 2018, for comparable indicators only.
Section 4.6 compares and contrasts the Local Conditions headline element to the Index of Multiple Deprivation (IMD).
Section 4.7 presents results of correlational and linear regression analyses.
Section 4.8 gives a taste of how the TPI can be used as a resource for performing analyses related to current affairs.

Local Authorities (LAs)

There are 152 upper tier local authorities in England. 125 of these are single tier councils, and 27 are two tier county councils, comprised of second tier district councils, sitting under the county council.
There are 201 district councils in England.

Two of the 152 upper tier councils – Isles of Scilly and City of London – do not have scorecards, due to their very small population sizes.

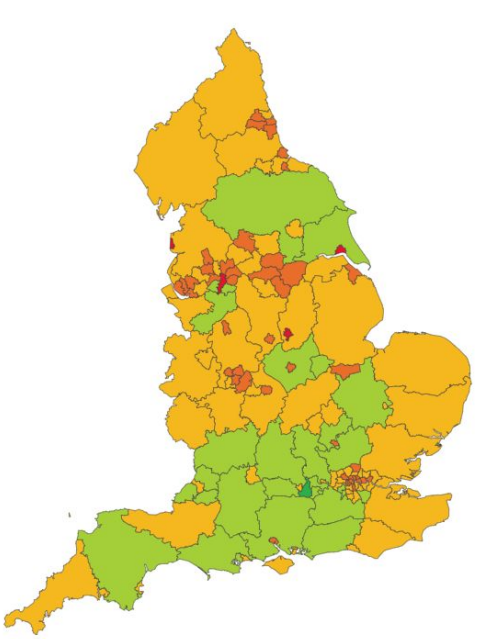
4.1.2 Statistical Methods

The analysis of the TPI presented in this report is largely descriptive. This is appropriate for the type of data contained in the TPI which comes from numerous sources and time points, and is cross sectional. Some correlations and regressions are used to explore relationships between different aspects of the TPI, as well as relationships between the TPI and other measures such as personal wellbeing and the IMD. The regressions are to be treated purely as exploratory analysis; we do not encourage drawing strong conclusions from the regression results but intend to highlight potential areas for further research.

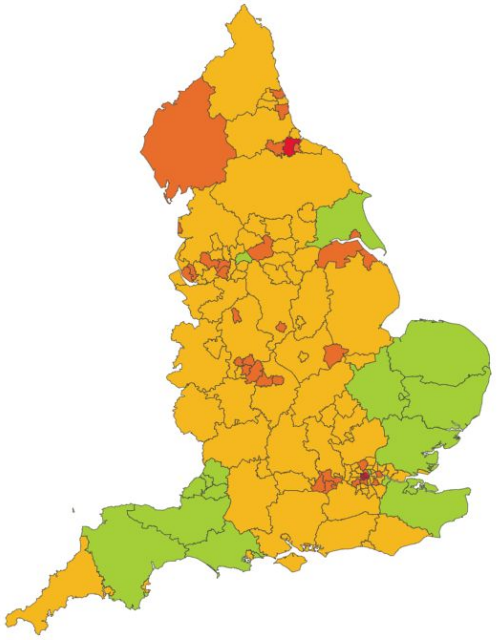
4.2 Visual overview

4.2.1. Headline element results maps for England

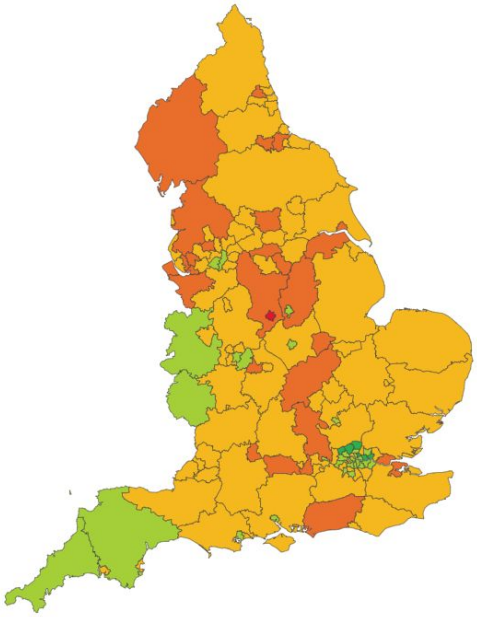
Local Conditions



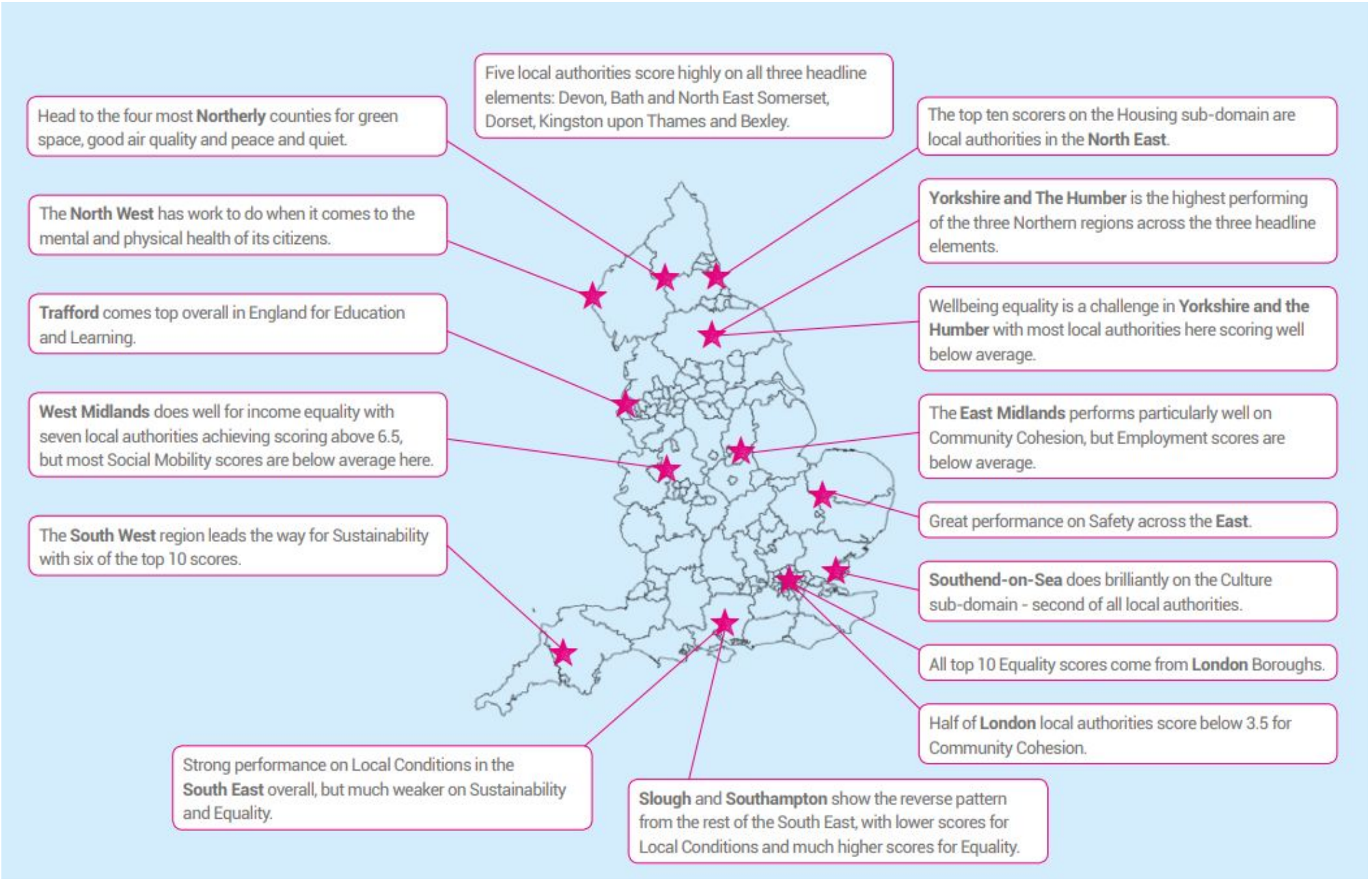
Sustainability



Equality



4.2.2. Headline highlights for England



4.2.3. Highest and lowest scores for England

Table 1 and Table 2 identify the places that are doing particularly well or particularly poorly on the headline elements and domains by presenting the five highest and five lowest scores for each.

Table 2. Headline elements – highest and lowest 5 rankings for upper tier local authorities

		LOCAL CONDITIONS		SUSTAINABILITY		EQUALITY	
HIGHEST	1	Wokingham	6.58	Islington	5.98	Harrow	6.99
	2	Buckinghamshire	6.37	Devon	5.80	Hackney	6.87
	3	Richmond upon Thames	6.33	South Gloucestershire	5.79	Newham	6.83
	4	Windsor and Maidenhead	6.28	Kent	5.76	Barking and Dagenham	6.75
	5	Surrey	6.17	East Riding of Yorkshire	5.75	Barnet	6.68
	146	Sandwell	3.53	Middlesbrough	3.53	Wirral	3.90
	147	Kingston upon Hull	3.48	Hammersmith and Fulham	3.38	Cumbria	3.86
	148	Nottingham	3.35	Westminster	3.31	West Berkshire	3.78
	149	Manchester	3.35	Stockton-on-Tees	3.07	Swindon	3.76
LOWEST	150	Blackpool	3.19	Kensington and Chelsea	2.06	Derby	2.97

Table 3. Local Conditions domains – bottom and top 5 rankings for upper tier local authorities

		Place and Environment		Mental and Physical Health		Education and Learning		Work and Local Economy		People and Community	
HIGHEST	1	Bracknell Forest	6.02	Wokingham	7.41	Trafford	6.83	Wokingham	7.60	Rutland	7.07
	2	City of York	5.87	Richmond upon Thames	7.28	Richmond upon Thames	6.70	West Berkshire	7.12	Wokingham	6.54
	3	Blackburn with Darwen	5.75	Buckinghamshire	7.08	Westminster	6.65	Harrow	7.00	Worcestershire	6.26
	4	Wirral	5.72	Windsor and Maidenhead	7.02	Torbay	6.62	Buckinghamshire	6.97	West Berkshire	6.22
	5	Sefton	5.69	Rutland	7.00	Buckinghamshire	6.50	Windsor and Maidenhead	6.80	Buckinghamshire	6.02
	146	Southwark	3.91	Middlesbrough	2.41	Oldham	3.32	Stoke-on-Trent	2.58	Hammersmith and Fulham	3.21
	147	Islington	3.77	Liverpool	2.40	Bury	3.28	Sunderland	2.52	Manchester	3.21
	148	Lambeth	3.62	Manchester	2.21	Leicester	3.19	Blackpool	2.10	Camden	3.14
	149	Kensington and Chelsea	2.83	Knowsley	2.15	Wolverhampton	3.06	Nottingham	2.07	Westminster	2.75
LOWEST	150	Westminster	2.82	Blackpool	1.25	Sandwell	2.19	Kingston upon Hull	1.38	Lambeth	2.63

4.3 Results based on rankings

Headline elements

Upper tier local authorities

Local Conditions

The South of England performs well on Local Conditions. Of the top ten local authorities, eight are in the South, and seven of these are in the South East region. One Northern local authority features in the top ten; Trafford (North West) is 9th.

Of the bottom ten, none are in the South, three are core cities, and six of the ten LAs are part of Combined Authorities. This may suggest that being part of a Combined Authority provides an advantage for improving local conditions in local authority areas, perhaps due to the extended policy-making and financial powers bestowed on combined authorities.

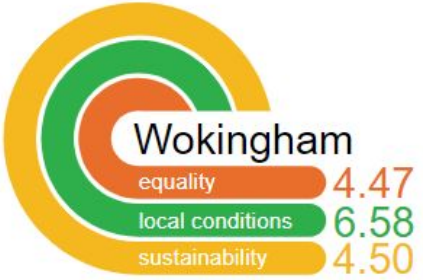
The bottom 48 scores are all for Predominantly Urban local authorities, suggesting that urban areas are less likely to have very good local conditions. This may be due to issues that urban LAs are more likely to face such as less green land cover, higher pollution levels, more transport-related noise and noise complaints, more traffic accidents and poorer safety.

Sustainability

The South of England also performs well on Sustainability. Of the top ten local authorities, eight are in the South and six of these are in the South West region. The South West is often seen as leading the way nationally on green issues and this is appears to be borne out by the TPI scores for Sustainability.
Five of the bottom ten local authorities are in London, suggesting that London has some improvements to make in terms of sustainability. The bottom ten are all predominantly urban local authorities, therefore it may be more difficult for urban areas to cover the wider range of sustainability indicators – - for example there is less physical space for renewable energy installations.

Case Study: Wokingham

Wokingham is a predominantly urban upper tier local authority in the South East region of England. Wokingham stands out on the TPI 2019 as it has a very high score of 6.58 on the Local Conditions headline element, making it the only local authority to score above 6.5 on this element.



Looking at the domains within Local Conditions, Wokingham performs exceptionally well on Mental and Physical Health, Work and Local Economy, and People and Community, scoring above 6.5 on all of these. It also scores above 5.5 on Place and Environment and Education and Learning.

Digging into the sub-domains within Local Conditions, it appears that Wokingham has no weak areas within Mental and Physical Health, scoring above 7.0 on all sub-domains within this domain. This is also the case for the Working and Local Economy domain.

A weaker area for Wokingham is the Culture sub-domain within People and Community, where it scores 4.38, ranking 122nd of all upper tier local authorities. Wokingham performs well below average on the two indicators that make up the Culture sub-domain, which both come from the RSA Heritage Index. The indicators are of heritage assets and participation in heritage. This does not have much of an impact on its overall People and Community score as Wokingham has above average general election voter turnout and rates of sport-related volunteering, as well as below average social fragmentation.

Wokingham's other weaker scores are on the following sub-domains: Local Environment, Transport and Adult Education. It has a below average percentage of land covered by green urban and natural green space, commuters using public and active transport to get to work, and number of new apprenticeship starts. It has an above average percentage of adults with no qualifications.

Equality

London performs exceptionally well on the Equality headline element. The top 11 local authorities are in London, with the top six scoring above 6.5. Of the top 25, 19 are London Boroughs. London is unique in that it has very high levels of diversity, ethnic and otherwise. This may lead its local authorities to prioritise equality in policy-making more than in other parts of the country. The top 14 local authorities are Predominantly Urban, again pointing to greater equality in more ethnically diverse areas. Interestingly, the top core city is at 25th place, which is Nottingham. There is no notable trend in the bottom five; these local authorities are mixed in terms of type of local authority and region.

District councils

Table 4. Headline elements - District councils ranked highest and lowest.

	Rank	LOCAL CONDITIONS		SUSTAINABILITY		EQUALITY	
HIGHEST	1	Chiltern	7.00	Suffolk Coastal	6.07	West Somerset	9.74
	2	South Bucks	6.90	Maldon	6.03	Harlow	8.40
	3	Winchester	6.89	Swale	5.98	Watford	7.82
	4	South Cambridgeshire	6.77	Canterbury	5.98	Maldon	7.72
	5	Epsom and Ewell	6.73	Rochford	5.88	West Devon	7.68
	146	Mansfield	3.91	Tamworth	3.68	Horsham	1.28
	147	Thanet	3.89	Newark and Sherwood	3.51	Ribble Valley	1.25
	148	Tendring	3.87	Cambridge	3.22	South Bucks	1.13
	149	Lincoln	3.85	Chiltern	3.21	Gravesham	1.12
LOWEST	150	Great Yarmouth	3.60	Eden	2.73	Stratford-on-Avon	0.23

Looking at the highest and lowest five in Table 4, the top five districts in England perform extremely well on Local Conditions, all scoring above 6.5, and the bottom five districts score no less than 3.6, poor scores but not in the lowest scoring band.

On Sustainability (Table 4), the top five districts perform less well than the top five do on the other headline elements, achieving scores above 5.5 which fall into the second highest scoring band.

The top three districts for Local Conditions are in the South East region, as is the fifth. Three of the top five (Chiltern, South Bucks, Epsom and Ewell) are all near London. In the bottom five for Local Conditions, Tendring, Thanet and Great Yarmouth are all coastal districts, which may suggest that coastal areas struggle more with creating positive local conditions.

Districts in the East region have the best performance on Sustainability, taking the top and second spots. Districts in the South East also feature in the top five for Sustainability, with Swale and Canterbury coming third and fourth.

The bottom and top five district table (Table 4) highlights the need for including measures of sustainability and equality in indices of local progress and performance. Although Chiltern is one of the top performing districts on Local Conditions, they feature in the bottom five on Sustainability. Conditions in an area may be excellent, without being at all sustainable. Similarly, South Bucks is second on Local Conditions, yet it is in the bottom five for Equality.

Local Conditions domains and sub-domains

Upper tier

The Local Conditions headline element is made up of five domains. Looking at the five domains in overall, the South East is the best performing region: in four of the five domains, LAs from this region feature more frequently in the top ten than other regions.

Place and Environment

Seven of the top ten local authorities on this domain are in the North of England. Four of these are in North West. The top ten are mixed in terms of type of place from North West Metropolitan Boroughs (Blackburn with Darwen) to mixed rural/urban areas such as Wirral and Sefton. It appears that having a nice physical environment (e.g. forests in Bracknell, coastline in the Wirral) boosts scores on Place and Environment. Physical aesthetics and nature matter.

The top five in the local environment sub-domain comprise the four most Northern English councils – Cumbria, Northumberland, County Durham and North Yorkshire.

The bottom 14 local authorities on this domain are all in London. Although London benefits from good public transport, this is offset by high levels of exposure to traffic related noise and NO_2 emissions.

Mental and Physical Health

The TPI indicates that health is better in the South of England than the North. Eight of top ten local authorities on the Mental and Physical Health domain are in the South, and six of these are in the South East. None of the bottom ten are in the South whereas six are in the North West.

The West Midlands are prominent in the bottom five of the Healthy and Risky Behaviours subdomain, with Sandwell, Wolverhampton and Stoke all featuring.

South Tyneside and Liverpool score below four across the sub-domains within Mental and Physical Health. They perform poorly on most of indicators within the sub-domains, although they both have above average self-reported general health at 15 years, and South Tyneside has a below average suicide rate.

Education and Learning

Seven of the top ten are in the South, and three of these are in the South East. However, Trafford comes second on the Children's Education sub-domain.

None of the bottom ten local authorities are in the South. Four are in the West Midlands and four are in the North West. All bottom five are Northern Metropolitan Boroughs, and Sandwell is in the bottom five of both sub-domains.

Bath and North East Somerset score above six on both Adult Education and Children's Education sub-domains, although it does have a below average rate of apprenticeship starts.

Work and Local Economy

Areas in and around London do particularly well on this domain. Eight of top ten are in the South, five in the South East, and three in London. All of the local authorities in the top ten are in or around London. There is no clear regional trend in the bottom ten local authorities, although all are predominantly urban.

Blackpool and Kingston upon Hull score below three on all sub-domains within the Work and Local Economy domain, and have below average scores on all the indicators within these sub-domains, such as the percentage of people unwillingly out of work.

LAs in the North East perform poorly on the Local Business sub-domain, e.g. Newcastle, Gateshead, Sunderland, suggesting there are fewer small independent businesses that are perhaps giving way to large chains. In contrast, London Boroughs perform well, with Hackney coming top.

People and Community

There isn't as clear a regional trend in the top ten for this domain. Rutland in the East Midlands comes top. Five of the top ten local authorities are in the South, four of these being in the South East. The North, South, East and Midlands all feature in the top ten.

Nine of the bottom ten scores on this domain come from London boroughs. The bottom 29 are predominantly urban local authorities.

Cambridgeshire, Rutland and Worcestershire score above 5.5 on all sub-domains within the People and Community domain. Cambridgeshire and Worcestershire perform well on all of the indicators within this sub-domain, and Rutland only falls short on number of conservation organisations, a proxy for volunteering.

Seaside towns (Southend, Portsmouth, Torbay) do well on the Culture sub-domain, likely due to their heritage. Kensington and Chelsea also does well, perhaps unsurprising with its many museums and galleries.

Nine upper tier local authorities score below 4.5 on all sub-domains within People and Community. One of the nine, Birmingham, is a core city. Three of the LAs are London boroughs, as well as Slough which is next to London. Digging into the indicators within this sub-domain, the six largest Social Fragmentation Index values are by London Boroughs. Higher values on this indicator represent greater social fragmentation.

Table 5. Bottom performing upper tier local authorities on the sub-domains of the People and Community domain.

	Salford	Slough	Hounslow	Birmingham	Lambeth	Leicester	Newcastle upon Tyne	Coventry	Lewisham
Participation	2.76	3.35	3.38	3.45	3.83	3.87	3.91	4.01	4.15
Culture	4.44	4.32	4.49	4.30	2.89	3.84	3.45	3.79	4.03
Community Cohesion	3.37	4.23	4.05	4.02	1.15	3.67	2.59	3.78	2.61

Looking across the Local Conditions domains, some LAs stand out. Wokingham is in the top five for Mental and Physical Health, People and Community, and Work and Local Economy. Buckinghamshire and Windsor and Maidenhead both feature in the top five for both Mental and Physical Health and Work and Local Economy. Blackpool features in the bottom five for both Work and Local Economy and Mental and Physical Health.

Sustainability sub-domains

The Sustainability headline element is made up of five sub-domains, all of which are comprise single indicators (Table 6). Three London boroughs are in the top five for CO_2 emissions (indicating low emissions). The London Borough of Westminster is in the bottom five. The bottom four scores on CO_2 emissions are particularly poor; the very high raw values on the CO_2 indicator, ranging from 8.52 to 10.00 CO_2 (kt) per capita, were capped at 0 on the TPI 0-10 scale. North Lincolnshire has the

highest level of CO_2 emissions, likely due to heavy industry in parts of the LA. In contrast, Tower Hamlets and Newham's low raw values on the energy consumption indicator, 0.319 and 0.366 average domestic consumption per capita (tonnes of oil equivalent) respectively, meant they were capped at 10. Their outstanding performance on energy consumption may reflect energy reduction schemes in place in these areas [2, 3].

The top five LAs on energy consumption are all London boroughs. Interestingly, the bottom five LAs on Renewables, which measures renewable energy generation, are also all London boroughs. This highlights how contrasting the different elements of the Sustainability headline element are. It is a challenge to perform well on all elements of sustainability, and it appears that focusing on one aspect does not necessarily lead to improvements in others. Newham, for example, is a top performer on Energy Consumption, but has a very low score on Land Use.

Equality sub-domains

Looking at the top and bottom five, several local authorities perform quite inconsistently, which is an interesting pattern. Windsor and Maidenhead is the top performer on Health Inequality, but it is in the bottom five for Overall Income Inequality. Lambeth is in the top five for Health Inequality and Income Inequality –Gender, yet it also features in the bottom five for Employment Inequality. Kingston upon Hull is in the top five for Overall Income Inequality, yet it is in the bottom five for Wellbeing Inequality. Kensington and Chelsea is the bottom performer on Overall Income Inequality, and comes top on Social Mobility. These results highlight that, whilst the headline element scores provide a quick overview of how well places are doing on the TPI, the additional layers of scores provide greater detail and can reveal complexity.

The bottom four scores on Overall Income Inequality are by London boroughs, but the top five for Social Mobility are all London boroughs.
Wokingham which is the top performer on the Local Conditions headline element has one of the lowest scores on Income Inequality – Gender, as it has a large gender pay gap.

A very large number of local authorities score below 3.5 on the Wellbeing Inequality sub-domain - 40 in total, quite the contrast to just 14 LAs scoring below 3.5 on Social Mobility.

Table 6. Sustainability sub-domains - bottom and top five rankings for upper tier local authorities.

		CO_2 Emissions		Household Recycling		Energy Consumption		Renewables		Land Use	
TOP	1	Hackney	7.69	East Riding of Yorkshire	8.76	Tower Hamlets	10.00	North East Lincolnshire	7.89	Islington	9.86
	2	Waltham Forest	7.66	Trafford	8.08	Newham	10.00	North Lincolnshire	7.82	Cheshire West and Chester	6.82
	3	Harrow	7.58	Dorset	7.76	Southwark	9.28	East Riding of Yorkshire	7.80	Doncaster	6.68
	4	Redbridge	7.55	Rutland	7.74	Hackney	9.16	Lancashire	7.52	West Berkshire	6.66
	5	Lewisham	7.54	Stockport	7.71	Barking and Dagenham	9.09	Norfolk	7.51	Oldham	6.56
	146	North Yorkshire	1.82	Hammersmith and Fulham	1.73	Surrey	2.30	Camden	1.54	Liverpool	0.85
	147	Westminster	0.00	Wandsworth	1.51	North Yorkshire	2.24	Lambeth	1.40	Kingston upon Hull	0.44
	148	Stockton-on-Tees	0.00	Lewisham	0.82	Windsor and Maidenhead	2.14	Wandsworth	1.34	Wolverhampton	0.33
	149	Rutland	0.00	Westminster	0.76	Cheshire East	2.05	Kensington and Chelsea	0.89	Middlesbrough	0.00
BOTTOM	150	North Lincolnshire	0.00	Newham	0.21	Cumbria	1.80	Hammersmith and Fulham	0.87	Newham	0.00

Table 7. Equality sub-domains – bottom and top five rankings for upper tier local authorities

		Health Inequality		Income Inequality – Overall		Income Inequality– Gender		Employment Inequality		Social Mobility		Wellbeing Inequality	
HIGHEST	1	Windsor and Maidenhead	8.60	Blackpool	8.26	Sutton	9.74	Luton	10.00	Kensington and Chelsea	9.53	Enfield	8.77
	2	Shropshire	8.34	Kingston upon Hull	7.92	Barking and Dagenham	8.62	Hartlepool	10.00	Westminster	9.43	Cheshire East	8.48
	3	Richmond upon Thames	8.13	Barking and Dagenham	7.90	Lambeth	8.52	Kensington and Chelsea	9.48	Newham	9.38	Harrow	8.40
	4	Bath and North East Somerset	8.00	Portsmouth	7.68	Brighton and Hove	8.32	North East Lincolnshire	9.17	Hackney	9.33	Warwickshire	8.16
	5	Lambeth	7.87	Sunderland	7.57	Warrington	8.17	Bexley	8.80	Tower Hamlets	9.30	Wokingham	7.87
	146	Derby	1.33	Buckinghamshire	0.68	Brent	2.20	Hampshire	2.62	Stockton-on-Tees	3.04	Kingston upon Hull	1.54
	147	Wirral	1.07	Richmond upon Thames	0.67	Solihull	1.83	West Sussex	2.56	Isle of Wight	3.01	Rotherham	1.53
	148	Bolton	0.81	Windsor and Maidenhead	0.44	North Lincolnshire	1.78	Rutland	2.18	Derby	2.85	Sunderland	1.30
	149	Stockton-on-Tees	0.20	Camden	0.00	Wokingham	0.46	Sutton	1.99	Doncaster	2.63	Knowsley	0.83
LOWEST	150	Middlesbrough	0.20	Kensington and Chelsea	0.00	Derby	0.24	Lambeth	1.45	North East Lincolnshire	2.62	Liverpool	0.40

4.4 Overall top and bottom performers

Headline elements

Upper tier

The overall top performer in the TPI 2019 is Devon, the only LA to achieve scores above 5.5 across all three headline elements.

Six LAs achieve scores of above 5.5 on two headline elements, and above five on the remaining element. These LAs are shown in Table 8. Devon's weaker areas are noted in the case study on page 38. Bexley does less well on the Local Conditions headline element. This does not appear to be driven by a particular domain or sub-domain; it has fairly average scores across the board. Poole performs less well on the Sustainability headline element, but in fact it performs well on the CO_2 emissions and Household Recycling sub-domains, here scoring above 5.5. Kingston upon Thames also does less well on the Sustainability headline element, dragged down by its poor performance on the Renewables sub-domain on which it scores less than 3.5. Bath and North East Somerset performs less well on Equality than the other headline elements, however it does not do particularly badly on any of the sub-domains and in fact does very well on Health Inequality and Wellbeing Inequality. Dorset also performs less well on Equality than the other headline elements; its score is negatively impacted by a poor performance on the Employment Inequality sub-domain.

Table 8. Upper tier LAs with the highest scores taking all three headline elements into account.

	Local conditions	Sustainability	Equality
Devon	5.57	5.80	5.98
Kingston upon Thames	5.70	5.15	6.21
Bath and North East Somerset	5.70	5.65	5.49
Poole	5.63	5.11	5.59
Dorset	5.57	5.71	5.36
Bexley	5.12	5.68	5.74

Case study: Devon

Headline element	Domain	Sub-domain	Devon
Local conditions			5.57
	Place and environment domain score		5.47
		Local environment	6.54
		Transport	4.11
		Safety	6.43
		Housing	4.78
	Mental and physical health domain score		5.92
		Healthy & risky behaviours	6.71
		Overall health status	5.75
		Mortality and life expectancy	6.00
		Mental health	5.24
	Education and learning domain score		5.80
		Adult education	6.33
		Children's education	5.26
	Work and local economy domain score		4.97
		Unemployment	6.02
		Employment	3.11
		Basic needs	5.39
		Local business	5.35
	People and community domain score		5.67
		Participation	6.88
		Culture	4.79
		Community cohesion	5.35
Sustainability			5.80
		CO2 emissions	3.98
		Household recycling	7.15
		Energy consumption per capita	5.61
		Renewables	6.36
		Land use	5.92
Equality			5.98
		Health Inequality	6.65
		Income Inequality - Overall	6.28
		Income Inequality - Gender	5.74
		Employment inequality	5.44
		Social mobility	4.85
		Wellbeing inequality	6.91

This year, Devon is the only upper-tier authority to do well on all three headline elements. It ranks 27th of 150 for Local Conditions, 15th for Equality and second overall for Sustainability, behind the London Borough of Islington.

Devon does well across four of the five Local Conditions domains, ranking 20th for Place and Environment, 22nd for Education and Learning, 27th for Mental and Physical Health and 30th for People and Community. Particular strong points are in Local Environment (seventh), Participation (seventh), Adult Education (tenth), Safety (12th) and Healthy & Risky Behaviours (14th). The Local Environment score is brought up by very low air pollution: for example NO_2 concentrations are less than half the English average. Meanwhile, high levels of physical activity contribute to both healthy behaviours and participation (Devon has the third highest levels of volunteering related to sport and activity, with 20% of the population reporting having done so twice within a year).

Devon's weakest domain is Work and Local Economy, where it sits firmly in the middle of the table for England (74th). Although there is a low rate of people unwillingly out of work, and material deprivation scores are generally low, it scores very low on the Employment sub-domain (indicator: quality jobs), with less than 50% meeting the four criteria for this indicator. Unsurprisingly, whilst the county does well on Place and Environment overall, its worst sub-domain is Transport, ranking 12th from bottom. In particular the average journey time to key services using public transport is 17½ minutes, the fifth highest value in England.

Like most places, Devon's Sustainability score mixes very good performances on some indicators with poorer performances on others. It ranks 19th best for Renewable Energy production, producing 1.2MWh per capita, and 35th for Land Use change. However it also ranks 123rd for CO_2 Emissions – this pattern is typical of rural areas. However, unlike other rural areas, it does not do so badly on energy consumption per capita – ranking 49th, which is similar to more urban areas such as Hammersmith & Fulham, or Sheffield. And it ranks tenth for Recycling, with 56% of waste sent for reuse, recycling or compost, compared to 43% across England.

On Equality, Devon does consistently well, with all except one of six indicators scoring well above average. Wellbeing and Health Inequality are particularly low – with Devon ranking 13th best in England for the former. The only score where Devon falls slightly below average is for Social Mobility.

Derby and Kingston upon Hull have a score of below 4.5 across the headline elements and below 3.5 on one of the three (Table 9). Knowsley scores below 4.5 across all the headline elements. Derby's weakest areas of Equality are health inequality and a large gender pay gap. Areas of the TPI that it performs well on are the Adult Education and Energy Consumption sub-domains, on which it scores above 5.5. Kingston upon Hull's weakest areas of Local Conditions are the Mental and Physical Health and Work and Local Economy domains, with particularly poor self-reported general health at 15 years old, high average years of potential life lost, and low proportion of local businesses. Kingston upon Hull performs well on some aspects of Local Conditions, scoring above 5.5 on Transport and Adult's Education. It also performs well on the Household Recycling and Energy Consumption sub-domains of Sustainability, on which it scores above 5.5. It has an excellent score on Overall Income Inequality, above 7.5.

Table 9. Upper tier LAs with the lowest scores taking all three headline elements into account.

	Local conditions	Sustainability	Equality
Derby	4.39	4.38	2.97
Kingston upon Hull	3.48	4.37	4.17
Knowsley	4.17	4.48	3.90

District councils

The overall top performing district councils are shown in Table 10. There is not a clear overall top performer; arguably the top district council is Mid Devon as it scores above 5.5 across all three headline elements, and scores more than Taunton Deane on Local Conditions and Sustainability. It is worth highlighting that Mid Devon has a very poor score below 3.5 on the Transport sub-domain within Local Conditions. Mid Devon also has a score below 4.5 on the CO_2 emissions sub-domain of Sustainability, whereas Taunton Deane scores above 5.5 across all Sustainability sub-domains. Both Taunton Deane and Mid Devon score below 4.5 on the Employment sub-domain.

Maldon and Dover are the only district councils to both score above 6.5 on Equality and above 5.5 on another headline element, but they do have only average scores on Local Conditions.

Table 10. English district councils with the lowest scores taking all three headline elements into account.

	Local conditions	Sustainability	Equality
Mid Devon	5.98	5.79	6.27
Taunton Deane	5.62	5.81	6.02
Maldon	5.01	6.03	7.72
Dover	4.81	5.73	6.57

No district councils score below 4.5 on all three headline elements. Two district councils score below 4.5 on two headline elements and have an average score on the remaining element. These are Corby and Copeland. Arguably these two councils are the bottom performing districts, but as their scores do not fall into the 'poor' range for all three elements their performances are not altogether negative.

Local Conditions domains

Upper tier

Using the TPI score bands, we can look across the five Local Conditions domains to pick out the local authorities that have the highest and lowest scores overall.

Of the upper tier local authorities, Wokingham is the top performer across the domains, scoring above 5.5 in all five (Table 11). Four local authorities score below 4.5 in all five domains. Manchester has the poorest scores overall, with three domain scores below 3.5.

Including Manchester, three of the upper tier overall bottom performers on the domains within Local Conditions are core cities (Table 12). Nottingham and Manchester's lowest scores are on the Mental and Physical Health and Work and Local Economy domains. The core cities score on the low side in the Local Conditions domains. Looking at the rankings overall, the majority of core city Local Conditions domain scores fall into the bottom 50 spots. There is a single score above 5.5, Sheffield on the Place and Environment domain.

Table 11. Overall top and bottom performing upper tier local authorities on the five domains within the Local Conditions headline element.

	Place and environment	Mental and physical health	Education and learning	Work and local economy	People and community
Wokingham	5.64	7.41	5.69	7.60	6.54
Tower Hamlets	4.18	3.90	4.33	3.54	3.39
Manchester	4.22	2.21	4.04	3.07	3.21
Birmingham	4.42	3.84	3.60	3.59	3.92
Nottingham	4.48	2.87	3.77	2.07	3.57

District councils

Of the district councils, eight of them are clear top performers on the domains within Local Conditions. Three districts score above 6.5 in three of the Local Conditions domains and at least 5.5 in the remaining two domains. A further five districts score above 6.5 in two Local Conditions domains and at least 5.5 in the remaining three domains. Six of the top performing districts are in the South of England, and three of these are all part of Surrey. The remainder of the top performers are all part of different upper tier local authorities.

Of course, even the best performing districts have areas of weakness. None of these districts do well on the Transport sub-domain, most scoring less than 4.5 and Elmbridge doing a little better with an average score. Stroud, South Lakeland and Surrey Heath have poor scores of less than 3.5 on the Employment sub-domain. Mid Sussex and Harrogate score below 4.5 on Culture, Elmbridge scores below 4.5 on Unemployment, and Purbeck scores below 4.5 on Participation.

Seven district councils are clearly the bottom performers on the domains within Local Conditions. Two of these districts score below 3.5 in three domains, and the remainder score less than 3.5 in two domains. Three of the bottom performers are in the East region, but none are part of the same upper tier local authority.

Most of the bottom performers score well on some areas of Local Conditions. Mansfield and Waveney score above 5.5 on Community Cohesion. Tamworth performs excellently on Community Cohesion, scoring above 6.5, and also does well on the Safety and Housing domains, scoring above 5.5. Great Yarmouth and Tendring do not perform well on any part of Local Conditions, although the former performs well on the Sustainability element. Hastings achieves scores of above 5.5 on the Local Environment and Transport subdomains. Burnley has an excellent score of above 6.5 on Local Environment, and also scores above 5.5 on Adult Education and Culture.

Table 12. Overall top and bottom performing district local authorities on the five domains within the Local Conditions headline element.

		Place and environment	Mental and physical health	Education and learning	Work and local economy	People and community
TOP	Stroud	5.52	6.63	6.65	5.96	7.03
	Waverley	5.94	7.75	6.54	6.82	6.09
	Elmbridge	5.60	7.59	6.62	6.65	5.52
	Harrogate	5.65	7.07	7.84	5.94	6.05
	Mid Sussex	5.78	7.59	5.86	6.55	5.65
	Purbeck	5.85	6.51	7.46	5.84	5.71
	South Lakeland	6.09	6.66	6.05	5.82	6.53
	Surrey Heath	5.75	6.92	6.66	6.33	6.08
BOTTOM	Hastings	4.70	3.43	3.25	3.42	5.42
	Great Yarmouth	4.59	3.27	2.19	2.94	4.98
	Tendring	4.99	3.65	3.11	3.29	4.29
	Mansfield	4.73	2.90	3.74	2.92	5.26
	Waveney	5.10	4.45	3.07	3.45	4.85
	Tamworth	5.12	4.20	2.70	3.47	5.40
	Burnley	5.20	2.47	3.37	4.10	5.01

4.5. Balanced Performers

The majority of upper tier local authorities do not perform consistently across the sub-domains within Sustainability and Equality. Therefore it is interesting to pull out the few local authorities that do have quite balanced scores within these elements.

Sustainability

No council scores well in every area of Sustainability, reflecting how challenging it is for councils to cover all bases locally on sustainability issues. The most balanced performers across all five indicators are shown in Table 13. It tends to be the more average performers that score consistently across the sub-domains. Generally places that do really well at some aspects of sustainability do not do really well across the board. South Gloucestershire has the most consistently positive performance across the Sustainability sub-domains, with scores above 5.5 on all sub-domains other than CO_2, on which it has an average score. Places that do really poorly at some aspects do not do really poorly across the board. This is with the exception of Kensington and Chelsea, which scores red across all the Sustainability sub-domains.

Table 13. Upper tier local authorities with relatively balanced performance across the Sustainability sub-domains.

	CO2 emissions	Household recycling	Energy consumption per capita	Renewables	Land use
Isle of Wight	5.74	5.62	4.73	5.87	5.24
Hampshire	4.74	4.80	4.64	5.37	5.93
City of York	5.39	4.95	4.87	4.80	5.27
Leeds	5.45	4.19	4.77	4.62	5.10
South Gloucestershire	5.12	6.07	6.29	5.65	5.83
Poole	5.51	6.12	4.65	4.64	4.65
St.Helens	4.77	4.35	4.84	4.86	5.11
Stoke-on-Trent	4.00	3.67	4.96	4.06	3.81
Kensington and Chelsea	3.36	2.14	2.78	0.89	1.12

Equality

As with Sustainability, no local authorities do well in every area of the Equality headline element (Table 14), possibly because they are quite contrasting elements and it is therefore quite a challenge to address them all. It is worth noting that the TPI does not include some important aspects of Equality such as equality across ethnic groups, because the required data is simply not provided at a local authority level. Again it tends to be the more average performers that have more balanced scores. Notable exceptions are Nottinghamshire which scores below 4.5 on four of the six sub-domains, and Birmingham which scores above 5.5 on three of the six.

Table 14. Upper tier local authorities with relatively balanced performance across the Equality sub-domains.

	Health Inequality	Income Inequality – Overall	Income Inequality – Gender	Employment inequality	Social mobility	Wellbeing inequality
Nottinghamshire	4.49	4.72	5.07	3.84	3.58	4.06
Lancashire	3.71	4.94	5.15	3.71	4.96	4.49
Gloucestershire	4.97	4.91	4.68	3.50	3.91	5.46
Suffolk	6.31	5.20	4.53	4.94	4.53	4.55
Birmingham	4.92	5.47	5.55	6.49	6.28	5.10

4.4 Analysis by local authority grouping

4.4.1 Regional analysis

The TPI can be used to examine regional trends in creating the conditions to thrive. This section examines TPI scores for each of the nine regions of England in turn, highlighting the strengths and weaknesses of each.

North West

The North West is made up of 23 local authorities, including the two core cities of Manchester and Liverpool. The majority of local authorities in the North West score below average on Local Conditions, two of which are the lowest scoring areas in England for Local Conditions – Blackpool and Manchester. Manchester and Blackpool score below 3.5. However, Trafford, Cheshire East, and Stockport achieve scores above 5.5.

The top ranking local authorities in the North West for each headline element are Trafford at ninth for Local Conditions, Oldham at 16th for Sustainability and Manchester at 35th for Equality. Knowsley is the only local authority to score below average on all three headline elements. None of the local authorities score above average across the headline elements.

Most of the local authorities have an average performance on Sustainability. Just one local authority, Oldham, scores above 5.5, and none score red below 3.5. Most North West local authorities have average scores for Equality. Trafford and Manchester stand out, scoring above 5.5.

Cumbria is the top scorer of all English local authorities on the Local Environment sub-domain, with 7.93/10. Nine local authorities score well on the Safety sub-domain (above 6.5), although three score below 3.5 (Liverpool, Manchester, Blackpool). The majority of LAs (12 of 21) score well on the Housing sub-domain (above 6.5). The North West scores poorly on the Mental and Physical Health domain – 17 local authorities score below average and ten of these score below 3.5/10. Scores are low across all four sub-domains in Mental and Physical Health, particularly Mortality and Life Expectancy (three indicators: life expectancy, years of potential life lost and preventable mortality rate). Manchester has recorded a 0.00/10 score for Mortality and Life Expectancy. Twelve of 21 LAs achieve scores above 6.5 on Community Cohesion (SFI). Only four score below 3.5; these are Salford, Liverpool, Manchester and Blackpool.

Cumbria, Cheshire East and Cheshire West and Chester are interesting to compare as they are the only LAs in the region that are not predominantly urban. Of these three areas, Cheshire East performs the best on the headline elements overall, and achieve a score of 5.68 on Local Conditions. Cheshire East also performs best overall of the three LAs on the Equality sub-domains, achieving a particularly good score of 8.48 on Wellbeing Inequality. However, looking at the Sustainability sub-domains, Cheshire West and Chester perform best overall of the three LAs, scoring above 6.5 on both Household Recycling and Land Use.

North East

The North East region is made up of 12 local authorities, including the core city of Newcastle upon Tyne. It also includes LAs that are part of the Tees Valley and North East Combined Authorities. Analysis of the combined authorities can be found in section 4.4.3. This region has the lowest profile of scores across the three headline elements of all nine English regions, and the scores fall within a very narrow range: Local Conditions – the 12 councils score between 3.57-5.13/10; in Sustainability between 3.07 and 5.00/10 and Equality the range is 3.16 to 5.43/10. There is no score above 5.43. The highest ranking LAs in the North East for each element are Northumberland at 61st for Local Conditions, County Durham at 70th for Sustainability and Gateshead at 42nd for Equality. Stockton-on-Tees is the only LA in this region with a score below 3.5 on a headline element, scoring 3.07 on Sustainability.

Of the Local Conditions domains, the North East does best on Place and Environment on which Redcar and Cleveland, County Durham and Northumberland score above 5.5. This is driven by the North East's excellent performance on the Local Environment and Housing sub-domains. All LAs score above 5.5 on these sub-domains. Northumberland comes second of all upper tier LAs in England on Local Environment, and County Durham comes third. The top ten scoring local authorities on the Housing sub-domain are all in the North East, with Sunderland coming top. However, the North East performs poorly on the Safety sub-domain; all scores are below 4.5.

The North East performs well on the Children's Education sub-domain, with six LAs scoring above 5.5. The Local Conditions domain the North East struggles with is Mental and Physical Health and Work and Local Economy, with 5/12 and 4/12 scores below 3.5 respectively. However, it is worth noting that Newcastle upon Tyne is one of the top five performers of all English local authorities on the Employment sub-domain, ranking fourth. In contrast, the region performs particularly badly on the Local Business sub-domain, with all but one LA scoring below 3.5, ranking 118th and below. Newcastle upon Tyne comes second to bottom of all LAs on Local Business. Northumberland stands out in the Participation sub-domain. All the other LAs in the North East score below 4.5, whereas Northumberland achieves a score above 5.5 and comes 20th of all English LAs. Newcastle upon Tyne stands out as a poor performer on Community Cohesion, the only LA in the North East to score below 4.5 with a score of 2.59.

Looking at the sub-domains within Sustainability, the North East performs best on Renewables, particularly Northumberland and Redcar and Cleveland which score above 6.5. The sub-domain this region performs most poorly on is Household Recycling, with four scores below 3.5. Looking at the sub-domains within Equality, the North East has an outstanding performance on Employment Inequality. Six of the 12 LAs score above 6.5, and Hartlepool's score is so high that it has been capped at 10/10. This region's performance on Wellbeing Inequality is almost the complete opposite, with six of 12 LAs scoring below 3.5.

Yorkshire and the Humber

Yorkshire and the Humber is made up of 15 local authorities, including the core cities of Sheffield and Leeds. Analysis of the core cities can be found in section 4.4.2.
Yorkshire and the Humber is the highest performing of the three Northern regions across the three headline elements, thanks to the predominantly rural county councils of East Riding of Yorkshire and North Yorkshire. Both those areas score over 5.5/10 in Local Conditions, with City of York not far behind with 5.48/10. All three make it into the top 35 overall scores for Local Conditions. In contrast, Kingston upon Hull is a low scorer with 3.48/10, and is one of the overall bottom performers on the TPI (see section 4.4). East Riding of Yorkshire also has a high score in Sustainability, and is fifth overall. Equality scores are marginally lower across the 15 councils in this region.

Looking just at the headline elements, East Riding of Yorkshire is the best performing LA in Yorkshire and the Humber. The highest ranking LAs in Yorkshire and the Humber for the headline elements are North Yorkshire at 14th for Local Conditions, East Riding of Yorkshire at fifth for Sustainability and Kirklees at 45th for Equality.

Looking just at the Local Conditions domains, this region does well on Place and Environment and Education and Learning, with several scores above 5.5. Looking at the Place and Environment sub-domains, the Safety sub-domain seems to differentiate the LAs, with North Yorkshire scoring above 6.5 while four other LAs score less than 3.5 (Table 15).

North Yorkshire and Calderdale are both in the top five overall for England on the Local Environment sub-domain. Bradford is the only LA in the region to score below 3.5 on the Adult Education sub-domain. Most LAs in this region perform quite well on this sub-domain, with six scoring above 5.5. Scores on the sub-domains of People and Community are quite varied. North Yorkshire scores above 6.5 on Participation, North East Lincolnshire on Culture, and East Riding of Yorkshire on Community Cohesion. Rotherham has a score below 3.5 for Participation, as does Kingston upon Hull. Kingston upon Hull also scores below 3.5 for Community Cohesion.

Looking at the Sustainability sub-domains, there is not a clear trend for this region. On each sub-domain there are some LAs that perform well and others that perform less well. Nevertheless, of the Sustainability sub-domains, Yorkshire and the Humber performs best on Renewables, with four LAs scoring above 6.5 and none scoring less than 3.5.

Looking at the Equality sub-domains, again the picture in this region is quite mixed, although less so. This region struggles most with Wellbeing Inequality, on which nine of the 15 LAs score below 3.5. North Yorkshire stands out on this sub-domain,

Table 15. Safety sub-domain scores for local authorities in the Yorkshire and the Humber region

	Safety scores
Kirklees	3.52
Calderdale	2.93
North Yorkshire	7.17
Bradford	2.01
City of York	6.26
East Riding of Yorkshire	5.01
Sheffield	4.19
Doncaster	4.67
North East Lincolnshire	4.30
Wakefield	4.03
Barnsley	4.86
North Lincolnshire	4.59
Leeds	3.10
Kingston upon Hull	2.28
Rotherham	5.01

achieving a good score of 5.63. The best sub-domain for this region is overall Income Inequality; Kingston upon Hull, Wakefield and Calderdale have excellent scores above 6.5, and a further six LAs score above 5.5.

West Midlands

The West Midlands region is made up of 14 local authorities, including Birmingham which is one of the core cities. Other than Shropshire and Herefordshire, this region is predominantly urban. Looking at the headline elements, the West Midlands region falls very much into the average range or slightly lower in Local Conditions, where the pattern of scores reflects the profiles of its councils which tend to be either large urban and metropolitan areas or more rural county councils. Wolverhampton, Stoke-on-Trent and Sandwell are some of the bottom ten performers overall on Local Conditions in England. Of the three headline elements, the West Midlands performs best on Equality. Overall the Equality scores are average or above, with only Solihull scoring below 4.5. The overall Income Inequality sub-domain may be driving this good performance, as seven LAs score above 6.5. Scores on the Social Mobility sub-domain are quite low, with the majority of LAs (9/12) scoring below 4.5. The region scores noticeably lower overall for Sustainability, with the scores again reflecting the urban-rural pattern of strengths and weaknesses. The top ranking LAs in the West Midlands for the headline elements are Warwickshire at 37th for Local Conditions, Shropshire at 31st for Sustainability and Shropshire at 20th for Equality. Based on this, Shropshire is the overall top performer in this region.

Looking at the domains within Local Conditions, there is a notably wide range of scores in the Mental and Physical Health sub-domain; Mental and Physical Health seems to vary across the West Midlands (Table 16). This is similar for the Work and Local Economy domain.

Four LAs in the West Midlands are in the bottom five overall on the Healthy and Risky Behaviours sub-domain. These are Walsall, Wolverhampton, Stoke-on-Trent and Sandwell. Stoke-on-Trent and Sandwell are also in the bottom five for Overall Health. In contrast, Shropshire is in the top 20, achieving an excellent score above 6.5.

The West Midlands performs well on the Community Cohesion sub-domain. Solihull and Dudley are two of the top five performers in England, and score above 6.5. A further eight LAs score above 5.5. Coventry and Birmingham lag behind, scoring below 4.5.

Table 16. Mental and Physical Health domain scores for the 14 local authorities in the West Midlands.

	Mental and Physical Health
Stoke-on-Trent	2.59
Sandwell	2.83
Wolverhampton	3.21
Walsall	3.48
Birmingham	3.84
Coventry	3.90
Dudley	4.33
Telford and Wrekin	4.39
Staffordshire	5.18
Warwickshire	5.50
Worcestershire	5.63
Herefordshire	5.79
Solihull	5.81
Shropshire	6.01

The LAs in the West Midlands have a wide range of scores on all of the Sustainability sub-domains, therefore there is no clear best or worst sub-domain. On Land Use, four LAs perform poorly with scores below 3.5. Yet six LAs achieve good scores above 6.5. On Household Recycling, Coventry and Birmingham score below 3.5, whereas Warwickshire and Worcestershire achieve excellent scores above 6.5.

East Midlands

The East Midlands is made up of nine local authorities, and is a mixture of predominantly urban and rural areas. There are no core cities in this region and no combined authorities. Performance on the Local Conditions headline element varies across the East Midlands. Rutland and Leicestershire do well, scoring above 5.5. In contrast, Nottingham has one of the lowest scores on Local Conditions, coming 148th of 150. The East Midlands has average scores on the Sustainability element. Most of the East Midlands performs below average on Equality and Derby has the lowest score of all upper tier local authorities on this headline element. However, Leicester and Nottingham do well on Equality, scoring above 5.5.

Table 17. Scores on the TPI Sustainability sub-domains for local authorities in the East Midlands.

SUSTAINABILITY	CO_2 emissions	Household recycling	Energy consumption	Renewable energy	Land use
Rutland	0.00	7.74	2.64	5.54	5.29
Derby	5.23	3.75	5.53	4.62	2.78
Nottinghamshire	4.12	5.23	3.43	6.18	4.69
Derbyshire	3.62	5.92	3.31	5.22	5.82
Leicester	5.89	4.64	6.88	3.81	2.88
Nottingham	6.02	2.83	7.10	3.88	4.44
Leicestershire	3.85	6.15	3.81	5.89	4.92
Northamptonshire	3.64	6.23	4.69	6.23	5.65
Lincolnshire	3.95	5.65	4.31	7.51	5.86

Looking at the Local Conditions domains, Rutland comes top of all local authorities on People and Community. Performance on the Mental and Physical Health domain varies widely across the East Midlands – Rutland achieves a score above 6.5, coming fifth of all local authorities. Nottingham scores less than 3.5, coming 141st. The East Midlands performs poorly on the Employment sub-domain; most scores are below average. Derby, Leicester and Rutland score below 3.5. Most of the East Midlands performs particularly well on the Community Cohesion sub-domain, with six local authorities scoring 5.5-6.5. Across many of the sub-domains within Local Conditions, Rutland is the stand-out performer in the East Midlands. However, it comes bottom of all local authorities on our indicator of good jobs (forming the Employment sub-domain) and performs very poorly on two sub-domains within Sustainability: CO_2 Emissions and Energy Consumption.

It is important to highlight that although LAs in this region have average scores on the Sustainability headline element, scores on the sub-domains within Sustainability are very mixed (Table 17). LAs don't do consistently well or consistently poorly on the Sustainability sub-domains; every LA scores above 5.5 on at least one of the indicators, and sometimes above 6.5, but there are also may scores below 3.5. This is a good illustration of the difficulty LAs appear to have with performing well on the many elements of sustainability.

East

The East region of England consists of 11 local authorities, a mixture of predominantly urban and rural. Looking at the headline elements, the East performs well overall, with only three scores below 4.5: Luton scores 4.44 on Local conditions, Peterborough scores 4.15, and Thurrock scores 4.30 on Equality. The East's best element is Sustainability, on which all scores are average or better – Norfolk, Suffolk, Essex and Cambridgeshire all achieve scores above 5.5 on Sustainability. The top scoring LAs in the East by headline element are Central Bedfordshire at 13th for Local Conditions, Suffolk at seventh for Sustainability and Luton at 12th for Equality. Compared to the other headline elements, Luton is somewhat let down by its predominantly average scores on Equality.

LAs in the East have no scores below 3.5 and few scores below 4.5 across the domains within Local Conditions. The East performs very consistently on Place and Environment. All scores on this domain are average. The best domain for the East is Work and Local Economy, on which Central Bedfordshire and Hertfordshire achieve excellent scores above 6.5, featuring in the overall top ten in England. A further three LAs score above 5.5 on this domain. The domain the East performs worst on is Education and Learning, on which four LAs score below 4.5. Most LAs in the region have average scores on this domain, but Southend-on-Sea stands out with a score above 5.5, placing it 33rd in the country.

Scores on the Local Conditions sub-domains in the East vary quite largely. This is most striking for the Healthy & Risky Behaviours, Unemployment and Local Business sub-domains. Scores for Healthy and Risky Behaviours are shown in Table 18. The East performs very well on Community Cohesion, with six LAs scoring above 5.5,

Table 18. Scores on the Healthy and Risky Behaviours sub-domain for local authorities in the East region.

	Healthy and Risky Behaviours
Luton	3.14
Peterborough	3.19
Thurrock	3.97
Southend-on-Sea	4.20
Norfolk	5.13
Bedford	5.27
Essex	5.48
Suffolk	5.76
Hertfordshire	6.30
Central Bedfordshire	6.36
Cambridgeshire	7.00

and Central Bedfordshire scoring over 6.5. The East performs exceptionally well on the Safety sub-domain, with 10/11 LAs scoring above 5.5.

Looking at the Sustainability sub-domains, the variation between LAs in the East is also striking for the CO_2 emissions indicator. Cambridgeshire scores less than 3.04, Luton and Southend-on-Sea score above 6.5, and the remaining LAs scores fall in the 3.5-5.5 range. Most LAs in the East do very well on Renewables, with four LAs scoring above 6.5. Poor Renewables scores of below 3.5 by Southend-on-Sea and Luton stand out. The East's most consistent Sustainability sub-domain is Land Use, on which most LAs score above 5.5.

Looking at the sub-domains within Equality, the East performs best on Wellbeing Inequality, on which five of the LAs score above 5.5, and two (Bedford and Central Bedfordshire) score above 6.5. The East does not perform well on the Social Mobility sub-domain; six LAs score below 4.5. Here Hertfordshire and Luton stand out as they achieve scores above 5.5. Scores on other Equality sub-domains are more mixed across the East.

London

The London region is made up of 32 local authorities which are London boroughs. On the headline elements, six boroughs have a score above 6.5, and for all six of these it is Equality: Harrow, Hackney, Newham, Barking and Dagenham, Barnet and Enfield. However, Barking and Dagenham do score below 3.5 on the Wellbeing Inequality sub-domain. Three boroughs have a score below 3.5 on a headline element (Westminster, Kensington and Chelsea, Hammersmith and Fulham), and all of these are for Sustainability (Figure 3). Note that these three LAs also score below 4.5 on Local Conditions. The top scoring London boroughs by headline element are Richmond upon Thames at fourth for Local Conditions, Islington which comes first for Sustainability, and Harrow which is first for Equality.

London region scores gravitate towards the average range for Local Conditions (Figure 3), with only Richmond upon Thames (third overall nationally), Kingston upon Thames (20th) and Bromley (15th) scoring above 5.5. In Local Conditions domains, the most notable pattern is that People and Community scores are lower across the board than the other four domains. This is driven by particularly low scores of below 3.5 on the Community Cohesion sub-domain, on which half of all London LAs score below 3.5. At sub-domain level some scores are not surprising – lower for Local Environment and higher for Transport for example. The Local Business sub-domain has some very high scores within it. Overall scores across the Physical and Mental Health sub-domains are higher than in the closest equivalent metropolitan areas nationally, especially those in the North. Scores are especially consistent in the Overall Health Status sub-domain.

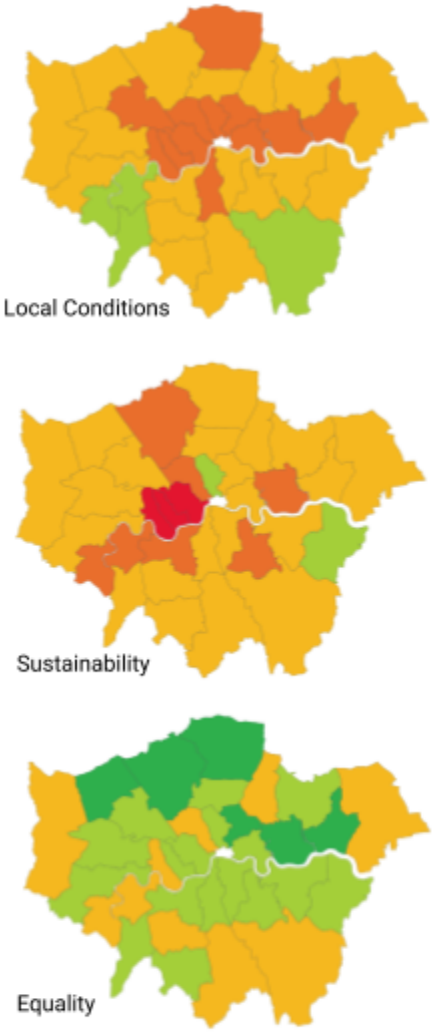


Figure 3. Map of London Borough scores on the TPI headline elements.

There is a little more variety within the Sustainability element, with Islington and Bexley scoring high – Islington is top in England overall. There are also three boroughs scoring under 3.5 – Hammersmith and Fulham, Kensington and Chelsea and Westminster. Kensington and Chelsea notably scores under 3.5 in all of the five Sustainability sub-domains. In Sustainability, performance on the CO_2 Emissions sub-domain is very good, indicated by high scores (exceptions are Kensington and Chelsea and Westminster). In contrast, Renewables sub-domain scores are very low (exception: Havering). In Equality the most notable scores are in the Social Mobility sub-domain, where all but four councils have very high scores (for example Newham 9.38/10 and Tower Hamlets 9.30/10). Havering is the only outlier, scoring 4.51.

London is the best performing region on Equality by a significant margin (Figure 3) – 70% of the 32 London boroughs score over 5.5. The top ten local authorities nationally for this headline element are all London boroughs, and six of these achieve scores above 6.5. Harrow is top overall. London has a consistently excellent performance on the Social Mobility sub-domain, on which 28 of the 32 boroughs score above 6.5. Havering stands out as it scores less than 4.5 on the Social Mobility sub-domain. There is a wide range of scores on the other Equality sub-domains, with scores that fall into all of the TPI scoring bands, but the large number of LAs in this region provide more opportunity for scores to vary. Of the Equality sub-domains, London performs worst on Income Inequality –Overall, as the distribution of scores is more skewed towards low scores, with eight LAs scoring below 3.5.

Table 19. Scores on the Wellbeing Inequality sub-domain for local authorities in the South West region. Higher scores indicate greater equality.

	Wellbeing Inequality
Devon	6.91
Bath and North East Somerset	6.85
Poole	6.55
Dorset	6.30
Bournemouth	6.30
Somerset	6.00
South Gloucestershire	5.94
Wiltshire	5.58
Gloucestershire	5.46
North Somerset	4.97
Cornwall	4.37
Swindon	3.96
Torbay	3.41
Bristol	3.41
Plymouth	3.29

South West

The South West region is made up of 15 local authorities, including Bristol which is a core city. Bath and North East Somerset was the top performer on the 2018 TPI. This year, Devon is the top performer, being the only LA to score above 5.5 across all three headline elements. For analysis of Devon's performance, please refer to the case study on page 38. Both Dorset and Bath and North East Somerset are also in the top five scoring councils across all three headline elements.

The South West LAs have no scores below 3.5 on the headline elements. The only headline element score below 4.5 is by Swindon, which scores 3.76 on Equality. Of the headline elements, this region performs least well on Equality, on which the majority of scores are average. The top scoring LAs in the South West by headline element are South Gloucestershire at tenth for Local Conditions, Devon at second for Sustainability and Devon at 15th for Equality.

Of the Local Conditions domains, the South West performs best on the Education and Learning domain, with all scores above 4.5. Eight of the 15 LAs achieve good scores above 5.5, and Torbay has an excellent score above 6.5. Two LAs have particularly poor scores on the Work and Local Economy domain. These are Torbay and Plymouth, scoring below 3.5. Looking at the sub-domains that comprise Local Conditions, the South West performs particularly well on Healthy & Risky behaviours, with six scores above 6.5 and a further five LAs achieving scores above 5.5. This region also performs particularly well on the Adult Education sub-domain, with Plymouth scoring above 6.5 and placed third overall in England, and a further ten LAs scoring above 5.5. There is a wide range of scores on the Employment sub-domain. Torbay, Plymouth, Devon and Cornwall have particularly poor scores below 3.5, while six LAs achieve very good scores above 5.5. North Somerset stands out as it achieves an excellent score above 6.5.

Looking at the Equality sub-domains, performance on some sub-domains is quite varied, whereas for others performance across the South West LAs is largely similar. The variation in scores is most pronounced for Wellbeing Inequality, shown in Table 19. The South West performs poorly on Social Mobility, with most LAs scoring below 4.5. Swindon does particularly poorly with a score below 3.5. North Somerset stands out on this sub-domain with a score above 5.5. The Equality sub-domain this region performs best on is Health Inequality, on which six LAs score above 6.5.

Looking at the Sustainability sub-domains, there are consistently good scores for Land Use; Plymouth is an outlier scoring below 3.5. Household Recycling is the sub-domain of Sustainability that this region performs best on, with six excellent scores above 6.5. Again, Plymouth bucks the trend by scoring less than 3.5.

South East

The South East contains 19 local authorities and is an interesting region as it contains a mix of predominantly rural and urban LAs. The South East is one of the best performing regions on the Local Conditions headline element. Wokingham scores above 6.5 on Local Conditions (coming top overall on this element in England), and a further eight LAs score above 5.5. Of the top ten best performing LAs on Local Conditions in England, six are in the South East. The top scorers in this region on the headline elements are Wokingham which comes top for Local Conditions, Kent which comes fourth for Sustainability and Southampton at 14th for Equality.

Of the domains within Local Conditions, the South East performs best on Mental and Physical Health, with seven of 19 LAs scoring above 6.5, an excellent performance. Indeed, the South East performs well on the Local Conditions domains overall. In each of the five domains, at least two of the top ten performing LAs in England are in the South East. The only red score for a domain is given to Southampton, which scores 3.35 on Work and Local Economy. However, there are some notable poor scores within the Mental Health sub-domain. Brighton and Hove score just 1.15 on the Mental Health sub-domain, one of four LAs in the South East to score below 3.5 on this sub-domain.

Within the Place and Environment domain, the South East performs best on Safety, with seven LAs scoring above 6.5. Southampton scores less than 3.5 on this sub-domain. The South East also performs well on the Employment sub-domain, with nine LAs scoring above 6.5.

On the Sustainability and Equality sub-domains, scores for the LAs in the South East vary widely; the LAs perform very differently from one another. For example, on the Energy Consumption sub-domain, four LAs achieve excellent scores above 6.5, while five LAs have very poor scores below 3.5. There are no notably best or worst Sustainability sub-domains for this region. Arguably, the South East performs better on the Health Inequality sub-domain compared to the other areas of Equality, as nine scores are above 5.5 and only three LAs have below average scores. Reading has a very low score below 3.5 on this sub-domain. The worst sub-domain for this region is Social Mobility, on which 13 LAs have below average scores, and two of these (West Berkshire and Isle of Wight) score below 3.5. Slough stands out as it achieves an excellent score above 6.5.

4.4.2 Core Cities analysis

Headline elements

Table 20. 2019 TPI headline element scores for the eight core cities in England.			
	Local Conditions	Sustainability	Equality
Nottingham	3.36	4.85	5.68
Bristol	4.81	5.69	4.96
Manchester	3.41	5.31	5.51
Liverpool	3.75	3.88	4.56
Sheffield	4.75	4.93	4.94
Newcastle upon Tyne	4.16	4.52	4.26
Birmingham	3.89	4.29	5.63
Leeds	4.72	4.83	4.17

The headline element scores for the core cities are shown in Table 20. The top scoring core cities on the headline elements are: Bristol with 4.81 on Local Conditions, Bristol with 5.69 on Sustainability, and Nottingham with 5.68 on Equality. Referring to the TPI score bands, Bristol is the top performing core city overall.

Manchester and Nottingham score below 3.5 on Local Conditions, two of only eight headline element scores below 3.5 on the TPI overall. However both of these places score pale green for Equality. Four of the eight core cities score below five across all three headline elements: Sheffield, Liverpool, Newcastle upon Tyne, and Leeds. Liverpool and Birmingham both score dark orange on Local Conditions and Sustainability. Bristol is the only core city to score above 5.5 on Sustainability.

Local Conditions domains

Of the Local Conditions domains, the core cities perform worst on Mental and Physical Health, with three cities scoring below 3.5 (Nottingham, Manchester, and Liverpool). The core cities do not perform particularly well on any of the domains within Local Conditions. The only score above 5.5 is by Sheffield on Place and Environment.

Local Conditions sub-domains

Within Place and Environment, the core cities score well on Transport. Five of eight score above 5.5, and Bristol scores above 6.5. In contrast, the core cities do not do well on Safety; six of the eight score red.

Within Mental and Physical Health, five of eight core cities score less than 3.5 on Mortality and Life Expectancy. Manchester does particularly poorly on this sub-domain with a negative score capped at 0. Four of eight core cities score below 3.5 on Mental Health. There is only one score above 5.5 across the sub-domains of Mental and Physical Health – Bristol's score of 6.19 on Healthy & Risky Behaviours.

At least four of eight core cities have scores below 3.5 and none above 5.5 on the following sub-domains: Safety, Mortality & Life Expectancy, Mental Health, Children's Education, Unemployment, Basic Needs, Local Business, Community Cohesion.

The core cities achieve three sub-domain scores above 6.5: Bristol and Leeds on Unemployment and Newcastle upon Tyne on Employment.

Sustainability

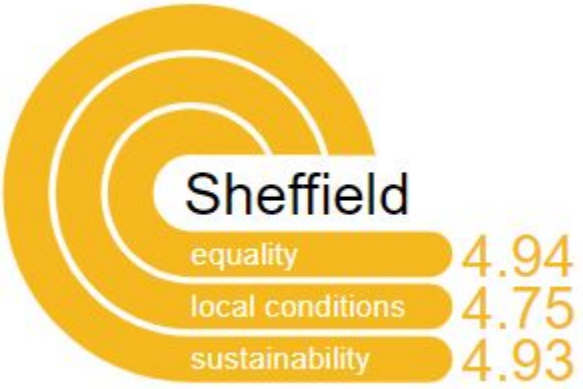
The core cities do well on some elements of Sustainability, and poorly on others. Five of eight core cities score 5.5-6.5 on CO_2 emissions. Four of eight core cities score above 6.5 on energy consumption; and two score above 5.5. Four of eight core cities score below 3.5 on household recycling.

Equality

Four of eight core cities score: below 3.5 on health inequality, above 6.5 on employment inequality, and below 3.5 on wellbeing inequality. The wide range of scores on Income Inequality - Overall is of note. Newcastle upon Tyne scores less than 3.5, in contrast to Bristol and Nottingham which score above 6.5. The remaining core cities have either average scores, or scores above 5.5.

Case Study: Sheffield

Looking just at its overall scores, Sheffield may not seem remarkable, ranking in the middle of the table for all three headline elements. However, it is important to remember that Sheffield is a city of over half a million. Its score on Local Conditions is one of the highest of the eight English core cities, though it is not as high as the scores for smaller cities such as Stockport, Poole or City of York, nor indeed some more wealthy metropolitan areas such as Richmond upon Thames in London, or Trafford in Greater Manchester.



Perhaps the most noteworthy domain for Sheffield is Place & Environment, where it ranks 17th out of 150, placing it among more rural areas such as Lancashire and Devon. Unusually for a city, this is primarily driven by its high score on Local Environment, the ninth highest in England, which in turn is driven particularly by the city's large green spaces: 47% of the borough being covered by green urban and natural green space. This is only beaten by three other local authorities: Richmond upon Thames, Cumbria and Calderdale, and no doubt contributes to the low levels of particulate matter – 8.0 parts per million, compared to 9.1 for Leeds, or 9.2 for Liverpool.

Combined with good scores for Transport and Housing, these figures contribute to Sheffield's high score on Place & Environment. The city also does very well for People & Community – ranking 28th overall. This is particularly down to a high Culture score – ranking ninth overall, with widespread participation in heritage activities. A further strong point for Sheffield is Adult Education, with 26% of adults participating in education or training in the last four weeks, and a high level of apprenticeship starts.

Sheffield's lowest scoring domain is Work & Local Economy, where it ranks 122nd. In particular it comes fifth from bottom for Unemployment, 15% of the adult population being unwillingly out of work (compared to only 7% in nearby Leeds).

Sheffield performs moderately well on Sustainability. Most noteworthy is its high ranking on renewable energy production per capita. Ranking 39th is very good for a large city. Indeed, Sheffield is the urban area that produces the most renewable energy in England: 395 GWh, only surpassed by large counties with lots of acreage for the production of renewable energy. Energy Consumption Per Capita is also well below average for England, although so is Household Recycling.

For Equality, the picture is mixed. Whilst Income Inequality and Gender Inequality are low, Health Inequality and Wellbeing Inequality are both higher. As a result, Sheffield does not do as well on Equality as some of the other core cities, including Birmingham, Manchester or Nottingham.

4.4.3 Combined Authorities

Some local authorities in England are part of Combined Authorities (CAs), legal bodies set up that allow groups of councils to pool responsibility. There are currently nine CAs in England.

North East Combined Authority

Table 21. Noteworthy sub-domain scores by the four local authorities within the North East Combined Authority

	Local Environment	Housing	Overall Health	Mortality & Life Expectancy	Local Business
Gateshead	5.99	6.18	3.25	3.03	1.20
Sunderland	5.73	6.68	2.74	2.90	1.24
County Durham	7.30	6.37	3.07	3.59	2.86
South Tyneside	5.61	6.44	3.39	3.16	3.47

This CA is made up of four local authorities, none of which achieve scores above 5.5 on the headline elements. Two LAs in this CA achieve scores above 5.5 on the Local Conditions domain:; County Durham for Place and Environment and Sunderland for Education and Learning.

Within Local Conditions, the LAs in this combined authority score particularly well on the Local Environment and Housing sub-domains, and particularly poorly on Overall Health, Mortality and Life Expectancy, and Local Business, as shown in Table 21. Scores on the sub-domains within Sustainability for this CA are quite varied; there is no noticeable pattern. Within Equality, the LAs in this CA score particularly well on Income Inequality (above 5.5), and particularly poorly on Wellbeing Inequality, all scoring below 3.5.

West Yorkshire Combined Authority

This CA is made up of five LAs which are all predominantly urban, and they all achieve quite average scores across the headline elements. Within Local Conditions, the only score above 5.5 is by Kirklees on Work and Local Economy.

Looking within Local Conditions, three of six LAs score below 3.5 on Safety, and all the LAs score below 4.5 on Transport. Three LAs in this CA do well on Local Environment and on Housing, scoring above 5.5. Scores on the other Local Conditions sub-domains are quite varied between the LAs in the West Yorkshire CA. Three of six LAs score below 3.5 on Health Inequality, and on Wellbeing Inequality.

Liverpool City Region

This CA consists of six predominantly urban LAs, one of which is a core city (Liverpool). The CA does quite poorly overall on the headline elements, particularly Knowsley (see section 4.4). Sefton has the best performance, with average scores on the three headline elements.

Looking at the domains within Local Conditions, this combined authority performs poorly on Mental and Physical Health, all scoring less than 4.5 on this domain.

The only domain scores above 5.5 are by Sefton and the Wirral on Place and Environment. The CA performs generally well on the Housing sub-domain, with all LAs but one scoring above 5.5. Halton scores below 4.5. This combined authority performs poorly on the sub-domains within Mental and Physical Health, notably Overall Health Status, and Mortality & Life Expectancy, on which the same four of six LAs score below 3.5: Liverpool, Halton, St. Helens, and Knowsley. In Equality, this combined authority performs particularly poorly on Health Inequality and Wellbeing Inequality, on which all LAs score below 3.5.

Tees Valley

Tees Valley CA is made up of five LAs which are all predominantly urban, except for Redcar and Cleveland which is categorised as Urban with Significant Rural.

The CA has average to poor scores on the headline elements (Table 22). Stockton-on-Tees is the only LA in Tees Valley with a headline element score below 3.5, for Sustainability. Looking at the domains within Local Conditions, there is only one score above 5.5, Redcar and Cleveland's score on Place and Environment. The majority of domain scores are average at best. Interestingly, all LAs in this CA perform well on the Local Environment and Housing sub-domains, scoring above 5.5. In contrast, all LAs have very poor scores of below 3.5 on the Local Business sub-domain. Within Equality, this CA has notably high scores on Employment Inequality: all LAs score above 7.5, and Hartlepool has the maximum score of 10/10. Scores on the other sub-domains of Equality are mixed.

Table 22. Headline element scores for the local authorities in Tees Valley Combined Authority.

	Local Conditions	Sustainability	Equality
Hartlepool	4.13	4.55	5.36
Redcar and Cleveland	4.55	4.69	4.81
Middlesbrough	3.61	3.53	4.70
Stockton-on-Tees	4.69	3.07	4.49
Darlington	4.67	4.39	3.96

Greater Manchester

Table 23. Unemployment sub-domain scores for the local authorities in Greater Manchester Combined Authority.

	Unemployment
Rochdale	2.30
Bolton	2.62
Manchester	2.91
Oldham	3.01
Tameside	3.53
Salford	4.58
Stockport	5.66
Wigan	5.99
Trafford	6.39
Bury	6.51

This CA is made up of ten predominantly urban LAs. Most headline element scores by this CA are about average or below 4.5, although there are a few scores above 5.5. The only very poor score of below 3.5 is by Manchester, for Local Conditions, perhaps unsurprising as it is a large city. This CA has a notably worse performance on the Mental and Physical Health domain than the other domains within Local Conditions, with all scores below average, and three LAs score below 3.5 (Rochdale, Salford, Manchester). Stockport outperforms the other LAs on the domains within Local Conditions, scoring above 5.5 on three of the five domains, and achieving average scores on Place and Environment and Mental and Physical Health.

All but one LA scores below 4.5 on Healthy & Risky Behaviours. Six of ten LAs score below 3.5 on Mortality & Life Expectancy, the worst sub-domain for this CA. This CA has a wide range of scores on most other sub-domains. This is particularly pronounced for Unemployment (Table 23).

Looking at the sub-domains within Sustainability, Greater Manchester CA performs particularly well on CO_2 emissions, with Oldham scoring above 6.5 and all other LAs scoring above 5.5. In contrast, all LAs score below average on Renewables. Scores on other sustainability indicators are quite mixed.

Looking at the Equality sub-domains, four LAs have poor scores of less than 3.5 on Health Inequality, as do four LAs on Wellbeing Inequality. However, Greater Manchester CA performs well on Income Inequality – Overall and Income Inequality– Gender, with the vast majority of scores above 5.5.

Sheffield City Region

This CA is made up of four predominantly urban local authorities. All scores for the headline elements are either average or below 4.5. Looking at the domains within Local Conditions, the four LAs have quite similar performances. Most similar is the Education and Learning domain on which all LAs score below 4.5. There are a few very poor scores below 3.5: Rotherham on Mental and Physical Health; Doncaster and Barnsley on Work and Local Economy.

Looking at the TPI sub-domains, this CA performs well across those within Place and Environment. However, they perform poorly across the Mental and Physical health sub-domains, particularly Overall Health, with four of five LAs scoring below 3.5. This CA scores low across the Work and Local Economy sub-domains. On Unemployment, Employment, and Local Business, three of four LAs score below 3.5, and all LAs score below 4.5 on Basic Needs. In contrast, Sheffield City Region performs well on the Community Cohesion sub-domain – three of four LAs score above 5.5. Sheffield stands out with a poor score below 4.5.

Looking at the Sustainability sub-domains, scores by this CA are mixed. Their best performance is on Renewables; three of four LAs score above 5.5. Scores on the Equality sub-domains are also generally mixed, although three of four LAs score above 5.5 on overall income inequality, and all LAs score below 3.5 on Wellbeing Inequality.

West Midlands

Table 24. Employment sub-domain scores for the LAs in West Midlands Combined Authority.

	Employment
Sandwell	3.30
Birmingham	4.49
Wolverhampton	3.00
Walsall	3.32
Dudley	7.41
Coventry	4.16
Solihull	4.95

This CA is made up of seven predominantly urban local authorities. The LAs perform poorly on Local Conditions and Sustainability, on which the majority of scores are below 4.5. Scores on Equality are more varied, with two LAs scoring above 5.5: Sandwell and Birmingham.

Looking at the Local Conditions domains, the CA has mostly average scores on Place and Environment, and a little below average on People and Community. The CA has a generally poor performance on the remaining three domains, with several scores below 3.5. Solihull stands out as it has the best score in this CA on a Local Conditions domain, scoring above 5.5 on Mental and Physical Health.

Looking at sub-domains within Mental and Physical Health, this CA performs poorly on Healthy & Risky Behaviours, and Mortality & Life Expectancy; the majority of scores are below 3.5. Most scores on the Children's Education sub-domain are also below 3.5. There is a particularly wide range of scores on the Employment sub-domain (table 24). In contrast, there is a very narrow range of scores on Local Business, ranging between 3.86 and 4.55.

Considering the Sustainability sub-domains, this CA performs well on CO_2 emissions. All LAs score above 5.5 on this sub-domain, with the exception of Solihull which scores below 4.5. Scores on other indicators quite mixed, although four out of seven LAs score below 3.5 on Land Use.

Looking at the sub-domains within Equality, this CA has a mixed performance across the Equality indicators. It has a notably good performance on Income Inequality (overall), with four of seven LAs scoring above 6.5, although Solihull lags behind with a poor score below 3.5. West Midlands CA performs excellently on the Employment Inequality sub-domain - six of seven LAs score above 5.5.

Cambridgeshire & Peterborough

This CA is made up of the five districts within Cambridgeshire County Council, and Peterborough. This CA does well overall on the Local Conditions headline element. South Cambridgeshire stands out with a score above 6.5. Fenland does not do as well as the other areas, scoring below 4.5.

Most local authorities in this CA have an average score on Sustainability. However Cambridge does much worse with a score below 3.5, and East Cambridgeshire does better with a score above 5.5. The CA has quite mixed scores on the Equality element. Fenland performs very well with a score above 6.5, and Huntingdonshire also does well, scoring above 5.5. South Cambridgeshire has a very poor score of less than 3.5.

Looking at the domains within Local Conditions, most of the CA performs very well on Mental and Physical Health, and quite well on People and Community.

Within Sustainability, most of the CA performs very poorly on CO^2 emissions. This is with the exception of Cambridge which has an average score. In contrast, the CA performs well on Renewables, with most LAs scoring above 6.5. Cambridge lags behind with a poor score of less than 4.5.

As this CA is mostly made up of districts, we cannot explore all elements of Equality, only Income Inequality (Overall and Gender). Scores on these sub-domains are quite varied. Fenland sticks out as it scores above 5.5 on both sub-domains. In contrast, South Cambridgeshire scores below 3.5 on both of these sub-domains.

West of England

The West of England CA is made up of three local authorities in the South West region. South Gloucestershire and Bristol are Predominantly Urban; Bath and North East Somerset (BANES) is Urban with Significant Rural. Looking at the headline elements, all three LAs score above 5.5 on Sustainability. South Gloucestershire and BANES score above 5.5 on Local Conditions.

Looking at the domains within Local Conditions, the CA has an average performance on Place and Environment. Bristol has the bottom score on all domains, although this is unsurprising for a core city. South Gloucestershire stands out on the Mental and Physical Health domain, achieving a score above 6.5, placing it 9th in the country overall for this domain.

Table 25. Scores on two of the TPI Equality sub-domains for local authorities in the West of England Combined Authority.

	Wellbeing inequality	Income inequality (overall)
South Gloucestershire	5.94	6.33
Bristol	3.41	6.63
Bath and North East Somerset	6.85	2.70

On some of the sub-domains within Local Conditions, the three LAs in this CA perform quite differently. There is a striking mix of scores on the Community Cohesion sub-domain, on which Bristol scores below 3.5, BANES below 5.5, and South Gloucestershire achieves a score of 6.4, placing it at 11th overall in the country. The three LAs all have average scores on the Local Environment and Culture sub-domains. On the following sub-domains the CA has consistently good performance, with all LAs scoring over 5.5: Mental and Physical Health, Adult Education, and Unemployment. There are some highly ranked scores, suggesting this CA is

performing quite well overall on the sub-domains: Bristol is ninth for Transport, BANES is first for Healthy & Risky Behaviours; South Gloucestershire is second for Mental Health and ninth for Mortality and Life Expectancy.

This CA performs well across the Sustainability sub-domains, with no scores below 4.5. Looking at the Equality sub-domains, West of England CA has room for improvement on the Social Mobility sub-domain, on which all three LAs score below 4.5. There is a particularly wide range of scores on the Wellbeing Inequality and overall Income Inequality sub-domains (Table 25); Bristol has the most wellbeing inequality, whereas BANES has little. Bristol has the most equal distribution of income, whereas BANES has the least. South Gloucestershire has the most consistent performance across these two sub-domains, scoring above 5.5 on both.

4.4.4 Two tier local authorities

There are 27 two tier local authorities in England (Figure 4), made up of between four and 11 district councils. The two tier upper tier local authorities and their corresponding districts are shown in Table 26.

Table 26. Breakdown of two tier local authorities in England.

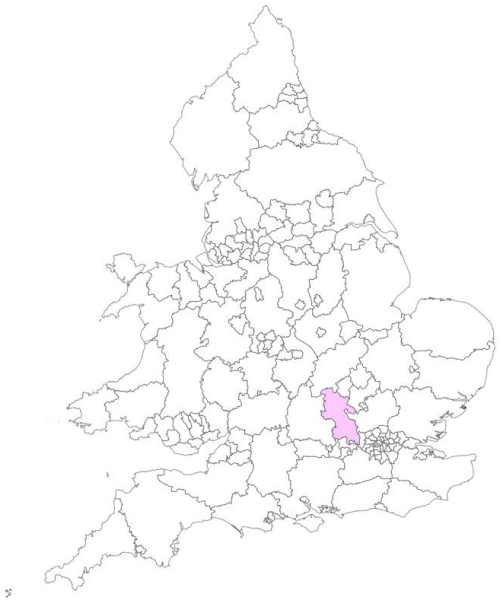
Region	Upper Tier	Number of districts
North West	Cumbria	6
	Lancashire	12
Yorkshire and the Humber	North Yorkshire	7
East Midlands	Lincolnshire	7
	Nottinghamshire	7
	Derbyshire	8

Figure 4. Map of the two tier local authorities in England.

	Leicestershire	7
	Northamptonshire	7
West Midlands	Staffordshire	8
	Warwickshire	5
	Worcestershire	6
East	Norfolk	7
	Cambridgeshire	5
	Suffolk	7
	Essex	12
	Hertfordshire	10
South West	Devon	8
	Somerset	5
	Dorset	6
	Gloucestershire	6
South East	Oxfordshire	5
	Buckinghamshire	4
	Surrey	11
	Hampshire	11

	West Sussex	7
	East Sussex	5
	Kent	12

Case Study: Buckinghamshire



Buckinghamshire is a two tier county council in the South East of England, made up of four district councils: Chiltern, South Bucks, Aylesbury Vale, and Wycombe.

All districts in Buckinghamshire have high scores of above six on Local Conditions, with Chiltern coming top of all districts in England, and South Bucks coming a close second (Table 4).

Scores on Sustainability are much more mixed. Chiltern has a very low score on Sustainability of less than 3.5, second from the bottom of all districts in England. In contrast, Aylesbury Vale scores above 5.5 on Sustainability, a good score. Wycombe's score is close to the average for England and South Bucks' score is somewhat below average.

The Buckinghamshire districts score poorly on Equality. South Bucks is third from the bottom of all districts. Wycombe and Chiltern also have low scores of less than 3.5. Aylesbury Vale performs somewhat better, with a score of 3.93.

Digging into the sub-domains within Local Conditions, the districts perform well on the majority of sub-domains but with weaker scores on Local Environment and Transport. Culture is also a weak area, although South Bucks scores above 5.5. Aylesbury Vale performs worse than the other districts on Adult Education, with a score below 5.5. Wycombe scores notably better than the other districts on Housing, with a score above 5.5.

The Sustainability sub-domains are quite mixed. The districts perform well on Household Recycling, scoring above 6 (note that a score for Chiltern is not available). The districts all perform poorly on Energy Consumption, although Aylesbury Vale does somewhat better than the other districts. Wycombe performs better than the other districts on CO_2 Emissions. South Bucks and Aylesbury Vale perform very well on Renewables, whereas Wycombe has a below average score, and Chiltern has a very low score of below 3.5. Wycombe and Aylesbury Vale do well on Land Use, Chiltern has an average score, and South Bucks has a very low score below 3.5.

On the two Equality sub-domains available at district level (Income Inequality – Overall, Income Inequality –Gender), all districts perform quite poorly. Overall income inequality appears to be particularly poor in Chiltern and South Bucks, where negative scores have been capped at 0 on the 0-10 scale.

Case Study: Suffolk

Suffolk is a two tier county council in the East region of England, made up of seven districts. Interestingly, headline element scores between these districts are quite mixed, especially for Equality (Table 27).

Table 27. Headline element scores for the district local authorities within Suffolk.

	Local Conditions	Sustainability	Equality
Mid Suffolk	5.67	5.13	5.57
St Edmundsbury	5.61	4.85	5.59
Suffolk Coastal	5.58	6.07	2.85
Babergh	5.26	4.64	3.65
Forest Heath	4.77	4.91	4.10
Ipswich	4.37	5.78	5.62
Waveney	4.18	5.39	6.48

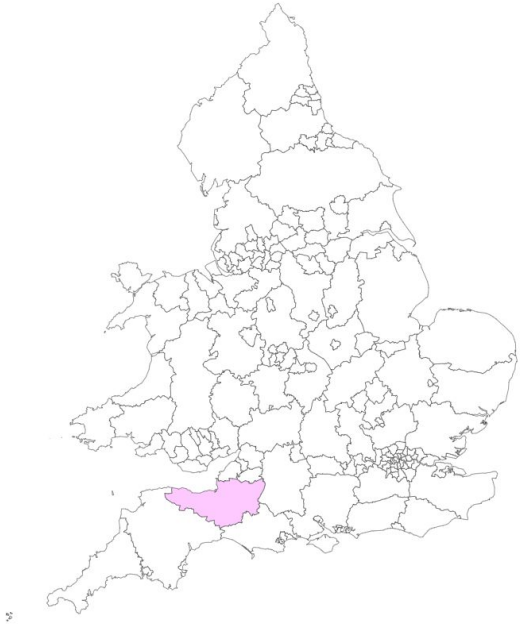
Digging into the domains, all the districts have scores around average on Place and Environment. On Education and Learning, most districts have average scores, whereas Forest Heath and Waveney have low scores of below 3.5. Babergh outperforms the other Suffolk districts on Mental and Physical Health, scoring above 6.5.

Looking at the sub-domains, Mid Suffolk and Babergh perform more poorly than the other districts, scoring below 3.5, whereas Ipswich outperforms the others with a score above 5.5. On Safety, most of the districts achieve good scores of above 5.5, whereas Waveney has an average score and Ipswich has a much poorer score below 3.5. There are many contrasting scores on other sub-domains, highlighting the value of comparing districts within a two tier local authority.

Looking at the sub-domains within Sustainability, all districts have good scores above 5.5 on Land Use; this is something that Suffolk is doing well in as a whole. In contrast, four districts have poor scores below 3.5 on CO_2 Emissions, whereas Ipswich has an excellent score of above 6.5. Scores on the other sub-domains are mixed but none are below 3.5.

The districts within Suffolk all perform very differently on the two Equality sub-domains available at district level. Of note, Mid Suffolk and Waveney achieve high scores of above 6.5 on overall Income Inequality. Suffolk Coastal have scores below 3.5 on both sub-domains.

Case Study: Somerset



Somerset is a two tier county council in the South West of England which at the time of creating the 2019 TPI was made up of five district councils. Looking at the headline elements, Taunton Deane is the most consistent good performer with scores above 5.5 on all three headline elements. Mendip has average scores across the three elements. West Somerset performs exceptionally well on Equality, with a score of 9.73. The lowest headline element score is Sedgemoor's score on Equality of less than 4.5.

Looking at the domains within Local Conditions, all West Somerset districts have average scores on Place and Environment and Education and Learning. Scores are mixed on Work and Local Economy; South Somerset scores above 5.5 whereas West Somerset scores below 3.5.

There are some notable scores on sub-domains within Local Conditions. West Somerset performs more poorly on the Transport sub-domain than the other districts, with a score below 3.5. Taunton Deane outperforms the other districts on Healthy and Risky Behaviours, scoring above 6.5.

Looking at the Sustainability sub-domains, the districts in Somerset all score very well on Land Use, with scores above 5.5. Most score poorly on CO_2 Emissions, although Taunton Deane outperforms the others scoring above 5.5. Mendip and Sedgemoor do exceptionally well on Renewables, with scores above 6.5.

Scores on the two available Equality sub-domains are quite mixed in Somerset. Mendip and West Somerset achieve scores above 6.5, on Income Inequality – Gender, whereas Sedgemoor has a poor score below 4.5.

Case Study: Kent

Figure 5. Headline element scores for the districts in Kent.

Kent is a two tier county council in the South East of England. It is made up of 12 district councils, the most of any two tier county.

The best performing district overall is Dover, which scores over 6.5 on Equality, over 5.5 on Sustainability, and has an average score on Local Conditions. As can be seen in Figure 5, there is a large range of scores on the Equality headline element with Gravesham and Folkestone and Hythe scoring below 3.5. This contrast is also apparent for Local Conditions and Sustainability, although it is less pronounced.

Looking at the domains within Local Conditions, there is a very wide range of scores on the Education and Learning domain. This is driven by contrasting scores on the indicator of children's educational attainment. The average GCSE attainment 8 score per pupil ranges from 37.6 in Sevenoaks to 54.3 in Tunbridge Wells, with others such as Gravesham's score of 45.8 falling closer to the England average (46.4). All districts but Thanet have an average score on the Place and Environment domain. Districts in Kent have a very wide range of scores on the Employment sub-domain. This sub-domain is made up of one indicator of job quality, which assesses whether residents are on suitable contracts, working a suitable number of hours and are being paid a living wage. Five districts have an above average percentage of residents with good quality jobs, five districts have a below average percentage. Swale stands out as it has a particularly low percentage of residents with good quality jobs, just 49% compared to 58% in England on average.

Looking within Sustainability, the majority of districts in Kent perform well on Land Use, scoring above 5.5. As previously noted, the Equality element for districts is made up of two indicators: overall income inequality and gender pay gap. Some districts perform quite similarly on both indicators, such as Gravesham which scores below 3.5 on both. The gender pay gap in Gravesham, given as the difference between median gross hourly earnings, is 42.4%. Dover scores above 6 on both sub-domains, and has a gender pay gap of 13.4%. However, other districts score very differently on these two indicators, such as Sevenoaks which scores extremely well on overall income inequality (above 7.5) and very poorly on Income Inequality – Gender (below 3.5).

4.4.5 Rural and Urban areas

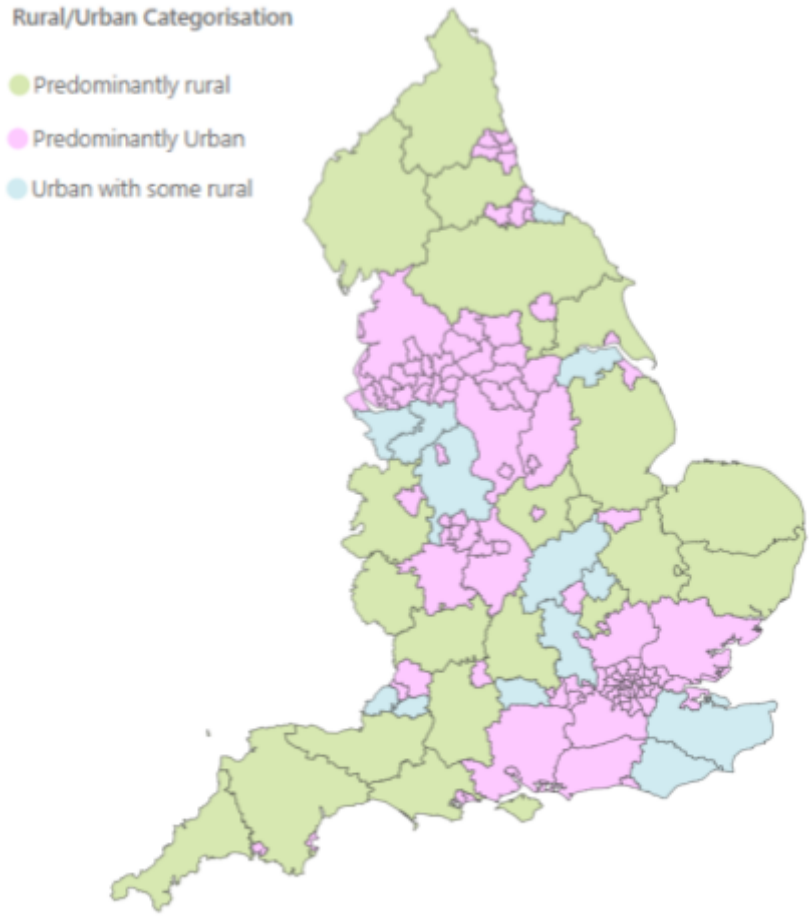


Figure 6. Map of the upper tier local authorities in England colour coded by rural/urban categorisation.

Devon, which is predominantly rural, is the only local authority to achieve a green score across all three headline elements. However, the three top scoring local authorities on all headline elements are urban – Wokingham for Local Conditions, Harrow for Equality, and Islington for Sustainability.

No rural local authorities have a score above 6.5 on a headline element, whereas six urban local authorities do achieve scores above 6.5. on Equality, and Wokingham scores over 6.5 on Local Conditions.

The bottom scoring local authority on each headline element is urban. Only two rural local authorities have scores well below average on the headline elements –Cumbria for Sustainability and Equality and Rutland for Sustainability and Equality.

Rutland, a rural area, is the top scoring local authority on the People and Community domain, achieving an excellent score above 6.5. The top ten for this domain is a mixture of urban and rural areas. The top scoring local authority on the other domains within Local Conditions are all urban. However, the bottom ten scoring local authorities in all of the Local Conditions domains are also urban. Rural areas have no scores below 3.5 across the domains within Local Conditions, and few scores below than 4.5.

Two thirds of rural local authorities perform well above average on the Community Cohesion sub-domain, and the remainder have average scores. Overall, urban areas perform poorly on the Community Cohesion sub-domain, with a third of local authorities scoring well below average and two scores (Westminster and Kensington and Chelsea) capped at zero.

In general, the rural local authorities perform poorly on CO_2 Emissions. In contrast, nearly 25% of urban local authorities achieve dark green scores on CO_2 Emissions. However, rural local authorities perform very well on Household Recycling, Renewables and Land Use, whereas, overall, urban local authorities do not.

4.5 Changes in TPI scores in 2019 compared to 2018

The following analyses are based on the change in indicator z-scores between the 2019 and 2018 versions of the TPI. The z-scores are examined as opposed to the raw indicator values because they are on the same measurement scale; they all have a mean of 0 and standard deviation of 1, meaning that changes on different indicators can be compared. As mentioned in section X, the indicator z-scores are calculated by subtracting the average indicator value for England from the raw value for a given local authority, and dividing the result by the standard deviation for England. As such, a change in z-score for any given local authority reflects a change in *relative* performance (compared to the rest of England) rather than a change in absolute performance. In other words, it is theoretically possible, for example, that a local authority's life expectancy goes up in absolute terms, but its z-score for life expectancy goes down. That would happen if the increase in life expectancy in that local authority was smaller than the increase for England overall. Only indicators that feature in both versions of the index and are comparable (i.e. were calculated in the same way) are included.

Headline elements

For each comparable indicator, we calculated the difference between the 2019 z-score and the 2018 z-score, then took the average of the differences for each headline element. Within Equality, there is only one indicator (income inequality) that is comparable so an average was not taken.

Local Conditions

Tables 28 and 29 list the ten local authorities with the largest increases and decreases in average z-score. There is no clear regional trend in z-score changes, though it is worth noting that four of the biggest increases are in London, whilst five of the biggest decreases are in the South West.

Tables 28 and 29 also attempt to determine the individual indicators which appear to be driving the changes in average z-score, by identifying which indicators had the biggest changes. Most of the increases are driven by reductions in Primary Youth Offender and Suicide rates (Table 28), whilst the decreases are mostly driven by decline in Adult Education rates, and increases in Suicide Rates (Table 29).

Table 28. Largest increases in Local Conditions (z-scores) in the 2019 TPI compared to the 2018 TPI. Only comparable indicators are included.		
Local Authority	Z-score change	Biggest increases in indicator z-scores
Rochdale	0.21	Primary Youth Offenders : 2.19, Adults with no qualifications : 0.47, Adult education : 0.85
Bristol	0.20	Primary Youth Offenders: 1.41, Child obesity rate: 0.55, Suicide rate: 0.87.
Blackpool	0.20	Crime Severity Index: 0.21, Suicide rate: 0.79, Long term mental health: 0.49.
Islington	0.17	Primary Youth Offenders: 0.77, Depression and anxiety prevalence: 0.76, Adults with No Qualifications: 0.86, Adult education: 1.65.
Cheshire East	0.16	Primary Youth Offenders: 0.52, Suicide Rate: 0.84, Adult education: 1.53.
Cornwall	0.16	Child obesity: 0.49,

		Suicide rate: 0.60, Adult education: 1.39.
Brighton and Hove	0.16	Primary Youth Offenders: 0.61, Adult education: 2.30.
Camden	0.16	Primary Youth Offenders: 0.72, Long term mental health: 0.81, Suicide rate: 0.66.
Barking and Dagenham	0.15	Long term mental health: 0.49, Adults with no qualifications: 0.55, Adult education: 0.40, Suicide rate: 0.33.
Haringey	0.15	Depression and anxiety prevalence: 0.54, Long term mental health: 0.42, Adults with no qualifications: 0.39

Table 29. Largest decreases in Local Conditions (z-scores) in the 2019 TPI compared to the 2018 TPI. Only comparable indicators are included.

Local Authority	Z-score change	Biggest decreases in indicator z-scores
City of York	-0.28	Noise Complaints: -0.51, Depression and anxiety prevalence: -1.43,

		Long term mental health: -0.54, Adult education: -1.77
Bournemouth	-0.28	Primary youth offenders: -0.78, Child obesity rate: -0.90, Depression and anxiety prevalence: -1.69, Suicide rate: -1.45
Torbay	-0.23	Depression and anxiety prevalence: -2.17, Long term mental health: -0.95, Suicide rate: -0.85
Halton	-0.22	Primary youth offenders: -2.23, Crime severity index: -0.56, Suicide rate: -0.99, School readiness: -0.87
Dorset	-0.21	Primary youth offenders: -1.10, Suicide rate: -0.87, School readiness: -0.74.
Lambeth	-0.20	Primary youth offenders: -1.32, Adult education: -1.84.
Portsmouth	-0.19	Primary youth offenders: -1.16, Long term mental health: -1.48, Adult education: -1.46.

Plymouth	-0.19	Adult education: -2.26, Child obesity rate: -0.56.
Knowsley	-0.18	Child obesity rate: -0.69, Long term mental health: -0.90, Suicide rate: -1.74.
Bracknell Forest	-0.18	Primary youth offenders: -0.56, Suicide Rate: -1.25, Adult education: -0.97.

Sustainability

Overall Sustainability scores improved in urban areas relative to rural areas, although typically not the 'most' urban areas, but rather urbanised counties such as Hampshire and Derbyshire. By a long way, the biggest improvement was in Stockton-on-Tees in the North East. Although no London boroughs feature in the top ten increases, London boroughs significantly improved in terms of sustainability relative to the rest of the country. Most increases appear to be driven by increases in Household Recycling (Table 30), although the biggest increase (that for Stockton-on-Tees) was related to a decrease in CO_2 emissions. Absolute increases in CO_2 emissions also explain the reduction in Sustainability scores for Hartlepool and Trafford – indeed these two local authorities were amongst only five in England that saw absolute increases in CO_2 emissions – all of them being in the North.

Table 30. Largest increases in Sustainability (z-scores) in the 2019 TPI compared to the 2018 TPI. Only comparable indicators are included.

	Z-score change	Largest indicator z-score increases
Stockton-on-Tees	0.47	CO_2 emissions: 1.24

Nottinghamshire	0.38	Household recycling: 0.84
Hampshire	0.31	Household recycling: 1.09
Barnsley	0.27	Household recycling: 0.81
Doncaster	0.24	Household recycling: 0.75
Derbyshire	0.23	Household recycling: 0.41
Devon	0.22	Household recycling: 0.86
Cumbria	0.21	Household recycling: 0.70
Rotherham	0.20	Energy consumption per capita: 0.54
Lancashire	0.20	Household recycling: 0.57.

Table 31. Largest decreases in Sustainability (z-scores) in the 2019 TPI compared to the 2018 TPI. Only comparable indicators are included.

	Z-score change	Largest indicator z-score decrease
Hartlepool	-0.17	CO_2 emissions: -0.66
Trafford	-0.16	CO_2 emissions: -0.57
Oxfordshire	-0.16	Energy consumption per capita: -0.30

Cheshire West and Chester	-0.12	CO_2 emissions: -0.29
Central Bedfordshire	-0.11	Energy consumption per capita: -0.32

Equality

As noted earlier, change was only possible to assess for one equality indicator - overall income inequality. For this indicator the differences between the 2018 and 2019 TPI were very minor and so we do not present a table. The biggest increases in income inequality were only 1.8% increases, seen in Hackney and Oldham. The biggest decrease in income inequality was a 2.0% decrease in Camden.

4.6 Analysis alongside the IMD

The Index of Multiple Deprivation (IMD) has been calculated since 2007 and was last released in 2011. It provides an authoritative assessment of areas in the UK that suffer deprivation. The fact that it can do so down to the Lower Super Output Area means it is a very powerful tool for local authorities. The TPI is not intended to replace the IMD, but offers a more asset-based approach to comparing places. It can help identify thriving places, instead of focusing only on deprivation. It includes assets, rather than just deficits.

Higher IMD scores indicate greater deprivation. There is a very strong negative correlation between Local Conditions and IMD for upper tier LAs: N =150, r = -.947, p < .001; more deprived places have lower scores on Local Conditions. IMD scores are also significantly negatively correlated with all of the domains within Local Conditions, as shown in Table 32.

Table 32. Correlations between the Local Conditions domains and IMD ranks for the upper tier local authorities in England.

Domain	*r*
Place and Environment	-.376
Mental and Physical Health	-.929
Education and Learning	-.625
Work and Local Economy	-.809
People and Community	-.642

*All correlations are significant, p < .001.

The majority of upper tier local authorities rank similarly on Local Conditions and the IMD. The Local Conditions rank for 90 local authorities is within +/-10 of their IMD rank, and for 58 of these local authorities the Local Conditions rank is within +/-5 of the IMD rank. However, this leaves 60 upper tier local authorities that rank differently on the IMD compared to Local Conditions by more than ten spaces. The largest differences between rank on TPI Local Conditions (2019) compared to the IMD (2011) are shown in Table 35. In many cases, the People and Community domain drives the differences, which makes sense as this domain distinguishes Local Conditions from the IMD, capturing topics such as volunteering and culture.

Table 33. Largest differences between rank on TPI Local Conditions (2019) compared to the IMD (2011), and drivers of these differences.

	Local Authority	IMD rank	TPI Local Conditions rank	Difference	What drives this difference?
Perform better on the TPI	Waltham Forest	122nd	74th	48 spaces higher on TPI	Good score on Work and Local Economy domain.
	Southend-on-Sea	84th	45th	39 spaces higher on TPI	Good score on People and Community domain (top 10).
	Torbay	114th	77th	37 spaces higher on TPI	Excellent score on Education and Learning domain (top 5). Good score on People and Community.
	Wirral	98th	64th	34 spaces higher on TPI	Good scores on Place and Environment (top 5) and People and Community domains.
	Haringey	127th	94th	33 spaces higher on TPI	Average scores on Mental and Physical Health, Education and Learning, and Work and Local Economy domains.
	Cornwall	81st	50th	31 spaces higher on TPI	Good scores on Education and Learning and People and Community domains.
Perform better on the IMD	Kensington and Chelsea	76th	108th	32 spaces lower on TPI	Bottom scorer on the Local Environment and Housing sub-domains.
	Hounslow	71st	100th	29 spaces lower on TPI	Very poor scores on Local Environment (bottom 5), Healthy & Risky Behaviours, and Participation sub-domains.
	Southampton	97th	124th	27 spaces lower on TPI	Very poor scores on the Unemployment and Local Business sub-domains.
	Swindon	43rd	69th	26 spaces lower on TPI	Average scores on all domains within Local Conditions. Very poor score on the Local Business sub-domain.
	Bexley	34th	60th	26 spaces lower on TPI	Average scores on all domains within Local Conditions. Very poor score on the Employment sub-domain.

4.7 Correlations and Regressions

All analyses reported in this section are at the Upper Tier level unless otherwise stated.

Correlations between headline elements

Overall, Sustainability scores are weakly correlated with Local Conditions scores (r = 0.301, $p < 0.001$), but neither correlate with Equality scores. This means that places that do well in terms of Local Conditions often also do well in terms of Sustainability, but that there is no guarantee that good local conditions benefit all people equally.

Correlations between domains within Local Conditions

Table 34. Correlations between Work and Local Economy sub-domains and Mental and Physical Health sub-domains, all $p < .001$.

	Unemployment	Employment	Basic Needs	Local Business
Healthy and Risky Behaviours	.510	.411	.792	.370
Overall Health Status	.579	.433	.891	.531
Mortality and Life Expectancy	.495	.373	.882	.612
Mental Health	.492	.295	.678	.553

Some of the previous analyses in this report suggest that there is a relationship between the Mental and Physical Health and Work and Local Economy domains. Indeed, there is a strong positive correlation between scores on these domains ($r = .729$, $p < .001$). To further investigate this relationship, correlations between the sub-domains were examined (Table 34). There are some particularly strong relationships that drive the overall correlation between the domains. There are strong positive correlations between the Basic Needs sub-domain and Overall Health Status ($r = .891$, $p < .001$), Mental Health ($r = .678$, $p < .001$), and Mortality and Life Expectancy ($r = .882$, $p < .001$). These relationships make sense as deprivation greatly affects general physical and mental health.

Correlations with Subjective (Overall) Wellbeing

Subjective Wellbeing is not included as an indicator in the TPI because it is seen as the outcome of creating the conditions to thrive. However, for analysis purposes we also collect data at local authority level related to personal wellbeing.

We collect the average scores on the ONS4 per local authority. The ONS4 are four measures of personal wellbeing included in national surveys, measuring life satisfaction, feeling that life is worthwhile, anxiety, and happiness. We also include an indicator of child wellbeing. Applying our usual transformations (z-scores, averaging and recalibration) produces an overall wellbeing score out of ten.

Headline elements

Of the three headline elements,Local Conditions is most strongly correlated with overall wellbeing scores ($r = .489$, $p < .001$). By contrast, there is also a weak *negative* correlation between scores on Equality and overall wellbeing ($r = -0.276$, $p = 0.001$). In other words places with better equality actually have lower average subjective wellbeing. This will be discussed later in this section.

Local Conditions domains

Figure 7 shows the correlations between each domain and overall wellbeing. The strongest correlation was with People & Community ($R=0.680$, $p < 0.001$), followed by Place & Environment. All correlations were significant. Figure X also shows the correlations between each domain and subjective wellbeing inequality. The pattern is quite different, with Mental and Physical Health being the most important domain, followed by Work and Local Economy. When it comes to wellbeing inequality, Place & Environment has no significant effect.

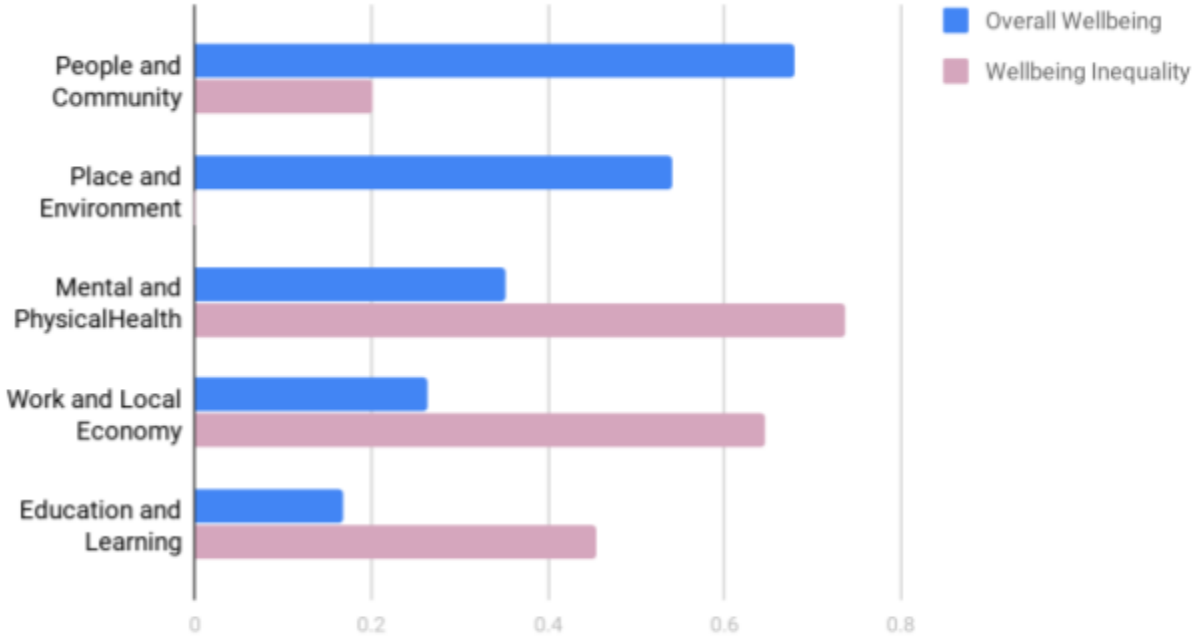


Figure 7. Correlations between the five Local Conditions domains and Overall Wellbeing and Wellbeing Inequality.

Regressions

Predicting Wellbeing from the Local Conditions Domains

To assess whether particular aspects of Local Conditions may predict overall wellbeing better than others, a linear regression model predicting overall wellbeing from the domains of local conditions was carried out. The overall model was significant, $p < .001$. Place and Environment (B = .589, $p = .003$) and People and Community (B = .815, $p < .001$) domains were significant predictors. When IMD was added to the model, Place and Environment was no longer a significant predictor, but People and Community remained highly significant (B = .764, $p < .001$) and IMD was a significant predictor (-0.80, $p = .022$). When rurality was added to the model, People and Community remained highly significant, and IMD remained significant. Rurality was not a significant predictor. These results suggest that of the Local Conditions domains People and Community is the best predictor of overall personal wellbeing, and this is not just because those places with higher People and Community scores also tend to more rural.

To look at whether the Local Conditions domains predict individual aspects of personal wellbeing, each of the ONS4 was regressed onto the five domains within local conditions. Place and Environment (B=.561, $p = .031$) and People and Community (B = .924, $p < .001$) predicted Life Satisfaction. When IMD scores were added to the model, Place and Environment was no longer a significant predictor, but People and Community remained highly significant (B = .882, $p < .001$).

Mental and Physical Health (B=.425, $p = .047$) and People and Community (B=.475, $p = .031$) predicted Happiness, but when IMD was added to the model Mental and Physical Health was no longer a significant predictor. Place and Environment (B=.534, $p = .037$) and People and Community (B=1.170, $p < .001$) also predict Worthwhile. Although Place and Environment is no longer a significant predictor when IMD is added to the model, People and Community remains highly significant (B=1.144, $p < .001$). Place and Environment (B=.644, $p = .028$), Education and Learning (B=-.690, $p < .001$) and People and Community (B=.770, $p = .001$) predict Anxiety. Education and Learning (B=-.768, $p < .001$) and People and Community (B=.706, $p = .002$) remain significant predictors after adding IMD to the model. Based on these results, it appears that the People and Community domain predicts all aspects of personal wellbeing captured by the ONS4. However, Education and Learning also predicts average anxiety scores, independently of deprivation.

Predicting Wellbeing from the headline elements

To investigate whether the headline elements predict wellbeing, overall wellbeing was regressed onto them. The overall model was significant, $p < .001$. Local Conditions (B = .766, $p < .001$) and Equality are significant predictors (B = -.414, $p = .002$), Sustainability is marginally significant (B=.297, p = 0.055). Pitting IMD against Local Conditions, collinearity means that neither indicator is significant. A model which substitutes IMD for Local Conditions is similar in its predictive capacity, indicating that IMD and Local Conditions play a very similar role in predicting overall wellbeing.

The negative relationship between Equality and Wellbeing is surprising. Although evidence on a link between income inequality and wellbeing is mixed - with some finding income inequality to be negatively associated with wellbeing but others finding it to be *positively* related, most research comparing areas *within* countries in wealthy counties, would suggest that income inequality within a local area is normally bad for subjective wellbeing [2]. So why is it that we find the opposite?

To better understand this finding, we first unpicked the Equality headline element, and looked at the relationship between each indicator within it and Overall Wellbeing. The results are shown in Table 35.

Table 35: Correlations between Overall Wellbeing and each indicator within the Inequality headline element (coded so that positive correlation indicates that greater equality is associated with higher wellbeing)

Indicator	Correlation
Health inequality (Slope index of inequality of life expectancy), inversed	0.07
Income equality (80/20 percentile ratio), inversed	0.06
Gender inequality (income difference between males and females), inversed	-0.28**
Disability inequality (gap in employment rate for people with learning disabilities), inversed	-0.30**
Social mobility (due to education)	-0.45**
Wellbeing inequality, inversed	0.21*

* $p < 0.05$, ** $p < 0.01$

The results shows that there are three indicators which correlate negatively – that is to say where more unequal local authorities have higher average wellbeing: gender inequality, disability inequality and social mobility. Meanwhile, wellbeing inequality correlates positively – that is to say that places with lower wellbeing inequality have higher wellbeing overall, which is consistent with previous research.[3] We find no relationship for income inequality and health inequality.

[2] For a review, see Schneider S (2016) 'Income inequality and subjective wellbeing: Trends, challenges and research directions' *Journal of Happiness Studies* 17:1719-1739.
[3] Abdallah S, Wheatley H & Quick A (2017) 'Measuring wellbeing inequality in Britain' What Works Wellbeing.

This analysis suggests that the negative relationship between Equality and Overall Wellbeing may be spurious, and being determined by another factor. In particular, we know that London boroughs have substantially higher scores on the three indicators where a negative correlation was found, and have lower Overall Wellbeing. Controlling for a variable which coded London boroughs as 1, and other local authorities as 0, the negative correlation between Equality and Overall Wellbeing immediately disappears, as does the negative correlation between social mobility and Overall Wellbeing. When one also controls for Local Conditions scores the other two negative correlations (with Gender inequality and Disability inequality) also disappear. Indeed income inequality even begins to have a positive effect, with local authorities that have greater income inequality having higher overall wellbeing (B=0.210, p =0.001, once we have controlled for Local Conditions and London boroughs).

4.8 Using the TPI as a research resource - topical analysis

The wealth of local authority data gathered to form the TPI can be used to carry out analyses against interesting topical studies and reports produced by other organisations. We investigate the link between green space and mental wellbeing as demonstrated by the TPI data, supporting findings by the What Works Centre for Wellbeing [4]. We will be continuing to carry out analyses related to interesting topics at regular intervals throughout the next 12 months on the TPI website: www.thrivingplacesindex.org .

Green space and mental wellbeing

Evidence of the association between green space and mental wellbeing is mixed, as shown by a systematic review undertaken by What Works Wellbeing which is summarised on their blog [4].

We can examine whether the 2019 TPI provides evidence of the relationship between green space and mental wellbeing at a local authority level. To do so, correlations between the following indicators were examined for upper tier local authorities: percentage of green land cover, depression and anxiety prevalence, prevalence of long term mental health problems, prevalence of severe mental illness and suicide rate. Correlations of these indicators with anxiety as measured by the ONS4 were also examined. It was found that there is a significant correlation between green land cover and severe mental illness ($r = -.318$, $p < .01$). There is also a significant correlation between green land cover and ONS4 anxiety scores ($r = -.200$, $p < .05$). Green land cover was not found to be significantly correlated with depression and anxiety prevalence, suicide rate, or prevalence of long term mental health problems. These correlations show that, at upper tier local authority level, a higher percentage of green land cover is related to a lower prevalence of some severe mental illnesses, as well as lower average self-reported anxiety ratings.

Therefore the TPI provides some evidence that a higher percentage of green space is associated with mental wellbeing. However, it should be noted that percentage of green land cover does not take into account public accessibility to green spaces; we cannot be sure that living in a local authority with much higher green land cover necessarily equates to more frequent visits to green spaces.

It may be that the benefits of green space for wellbeing plateau above a certain percentage of green land cover. A possible hypothesis is that the relationship between green spaces and mental wellbeing is stronger in places with less green space. To test this, examining the correlations between green land cover and indicators of mental health was repeated for the 74 upper tier local authorities with percentage of green land cover falling below the England average of 20.19%. In this sub-group of local authorities, green land cover was significantly correlated with depression and anxiety prevalence ($r = -.378$), prevalence of long term mental health problems ($r = -.377$), and prevalence of severe mental illness ($r = -.347$), all $p < .001$. The correlation between green land cover and ONS4 anxiety scores remained roughly the same ($r = -.240$, $p < .05$). These correlations show that, in upper tier local authorities with below average levels of green land cover, more green land cover is related to fewer people self-reporting depression, anxiety, or long-term mental health problems; lower prevalence of severe mental illnesses, and lower average self-reported anxiety ratings. The relationship between green land cover and severe mental illness prevalence is stronger in local authorities with below average green land cover. The relationship between green land cover and depression and anxiety prevalence is present only for local authorities with below average green land cover. This supports the hypothesis that the relationship between green spaces and mental wellbeing is stronger in places with less green space.

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[4] https://whatworkswellbeing.org/blog/bringing-cities-to-life-the-complex-relationship-between-green-space-and-mental-wellbeing

Appendix A.

Full indicator list for upper tier local authorities. The list also shows whether or not the indicators are available at district level.

Domain	Sub-domain	Indicator	Description	Better for wellbeing - higher or lower value?	District level	Year	Status	Source
Place and environment	Local Environment	Green land cover	Sum of % cover of green urban and natural green space (Corine land cover classification)	Higher	Yes	2012	New	Prof Alasdair Rae
		Air pollution: fine particulate matter (PM2.5)	Annual concentration of human-made fine particulate matter at an area level, adjusted to account for population exposure.	Lower	Yes	2016	Replacement	PHE
		NO_2	Average annual mean nitrogen dioxide concentrations per capita	Lower	Yes	2016	Replacement	Defra
		Exposure to transport related noise	The average of daytime and nighttime percentages of the population exposed to road, rail and air transport noise of 65 dB(A) or more, LAeq,16h per local authority	Lower	No	2011	New	PHE
	Transport	Percentage using Public Transport	% respondents who go to work by public transport	Higher	Yes	2011	Updated	ONS
		Percentage using Active Transport	% respondents who go to work through active travel	Higher	Yes	2011	Updated	ONS
		Car Traffic	Car vehicle traffic thousand vehicle miles	Lower	No	2017	Updated	DFT

			per capita					
		Journey times to key services	Average journey time by public transport or walking to schools (average of primary and secondary), food store, and GP	Lower	Yes	2016	Replacement	DfT
		Traffic Accidents Rate	Road traffic accidents rate (per 1000 resident and workplace population)	Lower	No	2017	Replacement	DfT
	Safety	Primary Youth Offenders	First time entrants to the youth justice system (per 100,000)	Lower	No	2017	Updated	PHOF
		Crime Severity Index	Crime severity scores from the ONS Crime Severity Index	Lower	Yes	2017-2018	Updated	ONS
		Domestic abuse rates	Rate (per 1000 people) of domestic abuse-related offences recorded by the police, by police force area	Lower	No	2017	New	ONS
	Housing	Noise Complaints	Noise complaints (per year per local authority about noise per thousand population)	Lower	Yes	2015/16	Updated	PHOF
		Poor Housing	Social and private housing in poor condition (proportion)	Lower	Yes	2015	Same as 2018 TPI	IMD
		Housing Affordability Ratio	Ratio of median house price to median gross annual (where available) workplace-based earnings	Lower	Yes	2017 (annual)	Replacement	ONS
		Homelessness Numbers	Numbers accepted as being homeless and in priority need PLUS Eligible Homeless People Not In Priority need (per 1000 households)	Lower	Yes	2018	Updated	DCLG, PHE
Mental and physical	Healthy & risky behaviours	Child Obesity Rate	% obesity and overweight in children in Year 6 (2014/15)	Lower	Yes	2016-2017	Updated	PHE

health		Conceptions in under 18s	Rate of conceptions per 1,000 females aged 15-17	Lower	Yes	2016	Replacement	PHE
		Physical Activity	Percentage of adults (aged 19+) that meet CMO recommendations for physical activity (150+ moderate intensity equivalent minutes per week).	Higher	Yes	2016-17	Replacement	PHE
	Overall health status	Subjective Disability	% of those with a reported long term illness disability (that limits day-to-day activities a lot)	Lower	Yes	2011	Updated	NOMIS
		Subjective Health	% of people aged 15+ reporting good or very good general health	Higher	Yes	2017-2018	Replacement	APS
		Self-reported general health at 15	The percentage of 15 year olds who responded to Q1 in the What About YOUth survey ("How is your health in general? Would you say it was…") with the answer "Excellent".	Higher	No	2014/15	New	PHE
		Older person's health status	Average health status score for adults aged 65 and over as measured using the EQ-5D scale. Derived from responses to Q34 on the GP Patient Survey, which asks respondents to describe their health status using the five dimensions of the EuroQuol 5D (EQ-5D) survey instrument	Higher	Yes	2016-17	New	PHE / GP patient's survey
		Illness and Disability	Comparative Illness and Disability Ratio – an age and sex standardised measure of morbidity and disability	Lower	Yes	2015 IMD, 2013 data	Same as 2018 TPI	IMD
	Mortality and life expectancy	Life Expectancy	Life expectancy at birth (years) AVERAGE	Higher	Yes	2014-2016	Updated	PHE

		Years of potential life lost	Years of Potential Life Lost – an age and sex standardised measure of premature death	Lower	Yes	2015 IMD, 2008-2012 data	Same as 2018 TPI	IMD
		Preventable Mortality	Age-standardised rate of mortality from preventable causes per 100,000 population	Lower	Yes	2015-2017	Updated	PHE
	Mental health	Depression and Anxiety Prevalence	% reporting depression or anxiety 2016/17 in GP survey question about state of health today	Lower	No	2016-2017	Updated	PHE
		Long Term Mental Health	% of respondents to GP Patient Survey reporting a long-term mental health problem	Lower	No	2016-2017	Updated	PHE
		Severe mental illness	Severe mental illness (psychosis etc) QOF prevalence 2016/17	Lower	No	2016-2017	New	PHE
		Suicide Rate	Age-standardised mortality rate from suicide and injury of undetermined intent per 100,000 population	Lower	No	2015-2017	Updated	PHE
Education and Learning	Adult education	Adults with no qualifications	% respondents with no qualifications of level unknown - aged 16-64	Lower	Yes	Jan 2017 - Dec 2017	Updated	NOMIS
		Adult education	% of adults who have participated in education or training in the last four weeks	Higher	Yes	2014 - 2016	Updated	Data: Labour Force Survey. Indicator developed by Saamah Abdallah
		Number of apprenticeship starts	Rate of apprenticeship starts	Higher	Yes	2016-17	New	DfE
	Children's education	Educational Attainment of Children	Average Attainment 8 Score per pupil	Higher	Yes	2016-17	Updated	ONS

		School Readiness	all children achieving a good level of development at the end of reception as a percentage of all eligible children.	Higher	No	2016/17	Updated	PHOF
		Nursery quality	% of nursery providers rated 'outstanding' or 'good' by Ofsted (3 year average)	Higher	No	2015-17	New	SMI, original source: Ofsted
Work and local economy	Unemployment	Unwillingly out of work	% of people over 16 who want a job, who are either unemployed or economically inactive	Lower	Yes	2017 - June 2018	Updated	NOMIS (from APS)
	Employment	Good jobs	% of people who are on permanent contracts (or on temporary contracts and not seeking permanent employment), who earn more than the Living Wage (Living Wage Foundation), and are not overworked (i.e. <49 hours a week), or underworked (unwillingly working part-time).	Higher	Yes	2014 - 2016	Updated	Data: Labour Force Survey. Indicator developed by Saamah Abdallah
	Basic needs	Income Deprivation Affecting Older People	Proportion of all those aged 60 or over who experience income deprivation	Lower	Yes	2015	Same as 2018 TPI	IMD
		Income Deprivation Affecting Children Index	Proportion of all children aged 0 to 15 living in income deprived families	Lower	Yes	2016	Same as 2018 TPI	IMD
		Percentage with low income	% of full-time employees with low relative income (less than 70% of UK median wage)	Lower	Yes	2017	Updated	ASHE
	Local business	Local Business	Ratio of enterprises to local units	Higher	Yes	2018	Updated	ONS
People and community	Participation	General Election Turnout	Total vote turnout (inc postal votes rejected and votes rejected at count) - General Election 2017	Higher	No	2017	Same as 2018 TPI	Parliament

		Conservation Organisation Numbers	Number of TCVs Organisations per 1000 people	Higher	Yes	2016	Same as 2018 TPI	RSA
		Volunteering related to sport and activity	Volunteering at least twice in the year to support sport / physical activity.	Higher	Yes	2016-2017	New	Sport England
		Clubs and societies	Combination of the following heritage index indicators: Youth archaeologist clubs, Nature Clubs for Kids, Civic societies	Higher	Yes	2016	Replacement	RSA
	Culture	Participation in heritage	Combination of the following heritage index indicators: participation - visiting heritage sites, museum participation rates, archive participation rate, heritage site participation rate, historic parks and gardens participation rate. Combines indicators from all domains of the heritage index	Higher	Yes	2011-2013	Replacement	Taking Part Survey indicators from RSA Heritage Index
		Heritage assets	Asset sub-domain of the heritage index	Higher	Yes	2016	Replacement	RSA
	Community cohesion	Social Fragmentation Index	A measure of social fragmentation calculated using a combination of: Percentage of adults who are not living as a couple Percentage of 1-person households Percentage of people renting privately Percentage of people who have moved to their current address within the last year	Lower	Yes	2011	Updated method	ONS/Nomis. Equation for social fragmentation developed Prof Peter Congdon
Sustainability	CO_2 emissions	CO_2 Emissions	Per capita local Authority CO_2 emissions estimates within the scope of influence of Local Authorities 2005-2016 (kt CO_2 : industry, domestic, and transport sectors.	Lower	Yes	2016	Updated	DECC

	Household recycling	Household Recycling	Percentage of household waste sent for reuse, recycling or composting (Ex NI192)	Higher	Yes	2014-2017	Updated	DEFRA
	Energy consumption per capita	Energy Consumption	Average domestic consumption per capita (tonnes of oil equivalent)	Lower	Yes	2016	Updated	BEIS
	Renewables	Renewable electricity generation	Renewable electricity generation (log KWh per person)	Higher	Yes	2017	New	ONS
	Land use change	Land use change	Ratio of non-developed land loss to non-built land stock (x100)	Lower	Yes	2016/2017	New	Ministry of HC&LG
Equality	Health Inequality	Health Inequality	Slope index of inequality (SII) in life expectancy at birth - average (SII years)	Lower	No	2009 - 2013	Same as 2017 TPI	ONS
	Income Inequality	Income Inequality	80/20 percentile weekly earnings difference	Lower	Yes	2017	Updated	ONS
		Gender pay gap	Gender pay gap (by workplace location) - Percentage: the absolute difference between median gross hourly earnings (excluding overtime) of men and women as a proportion of median gross hourly earnings (excluding overtime) of men. The value implies male earnings are greater than female earnings unless noted otherwise. Based on earnings by workplace location.	Lower	Yes	2017	New	PHE
	Employment inequality	Employment inequality for learning disabilities	Gap in the employment rate between those with a learning disability and the overall employment rate	Lower	No	2016/17	New	PHE

Social mobility	Social mobility enabled by education system	Average of the 10 standardised indicators from the Social Mobility Index that measure academic achievement and quality of nurseries and schools for those eligible for free school meals (FSM)	Higher	No	Index: 2017, Data: 2014-2016	New	SMC (original sources listed in their spreadsheet)
Wellbeing inequality	Wellbeing Inequality (SD)	Average SD for four personal wellbeing indicators in ONS4: Happiness, life satisfaction, worthwhile, and anxiety	Lower	No	2014 - 2015	Same as 2017 TPI	What Works Wellbeing
	Wellbeing Inequality (MPD)	Average MPD for four personal wellbeing indicators in ONS4 : Happiness, life satisfaction, worthwhile, and anxiety	Lower	No	2014 - 2015	Same as 2017 TPI	What Works Wellbeing

Appendix B.

Information on new or adapted indicators in the 2019 TPI.

As mentioned in the previous section, part of the development of the 2019 TPI was to search for more recent data and data that better reflects what the sub-domains of the TPI are intended to measure. Appendix B provides information on all of the indicators that are brand new to the 2019 TPI, or existed in the 2018 TPI but have been adapted.

Local Environment sub-domain

Indicator	Description	Available at district level?	Status	Comment
Green land cover	Sum of % cover of green urban and natural green space (Corine land cover classification)	Yes	New	Added in order to capture availability of green spaces.
Air pollution: fine particulate matter (PM2.5)	Annual concentration of human-made fine particulate matter at an area level, adjusted to account for population exposure.	Yes	Replacement	Replaced the 'combined air quality index' indicator which was too old (2012).
NO_2	Annual mean nitrogen dioxide concentrations from modelled annual mean oxides of nitrogen concentrations.	Yes	Replacement	Replaced the 'combined air quality index' indicator which was too old (2012).
Exposure to transport related noise	The average of daytime and nighttime percentages of the population exposed to road, rail and air transport noise of 65 dB(A) or more, LAeq,16h per local authority	No	New	Added to capture the impact of living next to noisy traffic.

Transport sub-domain

Indicator	Description	Available at district level?	Status	Comment
Percentage using Public Transport	% respondents who go to work by public transport	Yes	Updated method	*See indicator calculations section*
Percentage using Active Transport	% respondents who go to work through active travel	Yes	Updated method	*See indicator calculations section*
Journey times to key services	Average journey time by public transport or walking to schools (average of primary and secondary), food store, and GP	Yes	Replacement	We decided that journey time by public transport was a better reflection of journey times than distance to key services.
Traffic Accidents Rate	Road traffic accidents rate (per 1000 resident and workplace population)	No	Replacement	Replaced the IMD road traffic accidents rate (2015) as this source is newer (2017).

Safety sub-domain

Indicator	Description	Available at district level?	Status	Comment
Crime Severity Index	Crime Severity Index	Yes	Updated	Last year we calculated crime severity index scores ourselves. This year the ONS provides a crime severity tool and we took the scores directly from this tool.
Domestic abuse rates	Rate (per 1000 people) of domestic abuse-related offences recorded by the police, by police force area	No	New	We felt this was an important element of public safety to capture.

Housing sub-domain

Indicator	Description	Available at district level?	Status	Comment
Housing Affordability Ratio	Ratio of median house price to median gross annual (where available) workplace-based earnings	Yes	Replacement	This replaces the IMD housing affordability score (2015). This data is newer (2017).
Homelessness Numbers	Numbers accepted as being homeless and in priority need PLUS Eligible Homeless People Not In Priority need (per 1000 households)	Yes	Updated	We wanted to estimate the number of homeless as accurately as possible, and thus decided to add the number of eligible homeless people that were not deemed to be in priority need, rather than only those deemed to be in priority need.

Healthy & Risky Behaviours sub-domain

Indicator	Description	Available at district level?	Status	Comment
Conceptions in under 18s	Conceptions in those aged under 18s	Yes	Replacement	This replaces conceptions in under 16s which is not available at district level.
Physical Activity	Percentage of adults (aged 19+) that meet CMO recommendations for physical activity (150+ moderate intensity equivalent minutes per week).	Yes	Replacement	This replaces the previous indicator of the same name which gave the percentage of people aged 16+. The source (Public Health England Fingertips) now gives the percentage of adults aged 19+.

Overall Health Status sub-domain

Indicator	Description	Available at district level?	Status	Comment
Subjective Health	Self-reported state of health 15+	Yes	Replacement	This replaces the indicator of the same name which came from the 2011 census. This replacement uses more recent 2017-2018 data.
Self-reported general health at 15	The percentage of 15 year olds who responded to Q1 in the What About YOUth survey ("How is your health in general? Would you say it was…") with the answer "Excellent".	No	New	We added this indicator to capture health in younger people.
Older person's health status	Average health status score for adults aged 65 and over as measured using the EQ-5D scale. Derived from responses to Q34 on the GP Patient Survey, which asks respondents to describe their health status using the five dimensions of the EuroQuol 5D (EQ-5D) survey instrument	Yes	New	We added this indicator to capture health in the older people.

Mental Health sub-domain

Indicator	Description	Available at district level?	Status	Comment
Severe mental illness	Severe mental illness (psychosis etc) QOF prevalence 2016/17	No	New	This replaces the 'mental disorders' indicator (2012). This data is substantially more recent (2016-2017).

Adult's Education sub-domain

Indicator	Description	Available at district level?	Status	Comment
Number of apprenticeship starts	Rate of apprenticeship starts	Yes	New	This indicator was added to capture vocational education routes.

Children's Education sub-domain

Indicator	Description	Available at district level?	Status	Comment
Educational Attainment of Children	Average Attainment 8 Score per pupil	Yes	Updated	This indicator now uses the new GCSE grading system. An attainment 8 score is the average of a student's scores on 8 subjects.
Nursery quality	% of nursery providers rated 'outstanding' or 'good' by Ofsted (3 year average)	No	New	This indicator was added to capture early years education.

Participation sub-domain

Indicator	Description	Available at district level?	Status	Comment
Volunteering related to sport and activity	Volunteering at least twice in the year to support sport	Yes	New	This indicator was added to better capture rates of volunteering.

	/ physical activity.			
Clubs and societies	Combination of the following heritage index indicators: Youth archaeologist clubs, Nature Clubs for Kids, Civic societies	Yes	Replacement	This replaces the previous 'heritage index' indicator. This is a proxy for general participation in clubs and societies.

Culture sub-domain

Indicator	**Description**	**Available at district level?**	**Status**	**Comment**
Participation in heritage	Combination of the following heritage index indicators: participation - visiting heritage sites, museum participation rates, archive participation rate, heritage site participation rate, historic parks and gardens participation rate. Combines indicators from all domains of the heritage index	Yes	Replacement	This replaces the previous 'heritage index' indicator. *See indicator calculations section.*
Heritage assets	Asset sub-domain of the RSA heritage index	Yes	Replacement	This replaces the previous 'heritage index' indicator, capturing heritage assets as an important part of culture.

Community Cohesion sub-domain

Indicator	Description	Available at district level?	Status	Comment
Social Fragmentation Index	Social fragmentation index	Yes	Updated method	*See calculations section*

Sustainability element

Indicator	Description	Available at district level?	Status	Comment
CO_2 Emissions	Per capita local Authority CO_2 emissions estimates within the scope of influence of Local Authorities 2005-2016 (kt CO_2): industry, domestic, and transport sectors.	Yes	Updated	We updated the existing CO_2 emissions indicator by including emissions estimates that are within the scope of influence of Local Authorities only. This discounts CO_2 from motorways.
Renewable electricity generation	Renewable electricity generation (log KWh per person)	Yes	New	This indicator was added as renewables form an important part of sustainability that local authorities can influence.
Land use change	Ratio of non-developed land loss to non-built land stock (x100)	Yes	New	This indicator was added as land use is another important part of creating sustainable futures.

Equality

Indicator	Description	Available at district level?	Status	Comment
Gender pay gap	Gender pay gap (by workplace location) - Percentage: the absolute difference between median gross hourly earnings (excluding overtime) of men and women as a proportion of median gross hourly earnings (excluding overtime) of men. The value implies male earnings are greater than female earnings unless noted otherwise. Based on earnings by workplace location.	Yes	New	This indicator was added to capture the gender pay gap, an important element of gender inequality.
Employment inequality for learning disabilities	Gap in the employment rate between those with a learning disability and the overall employment rate	No	New	This indicator was added to capture inequalities in employment between the able and disabled.
Social mobility enabled by education system	Average of the 10 standardised indicators from the Social Mobility Index that measure academic achievement and quality of nurseries and schools for those eligible for free school meals (FSM)	No	New	This indicator was added as it captures a quantifiable aspect of social mobility.

Appendix C.

Details of the bespoke indicator calculations carried out for some indicators in the 2019 TPI.

Local Conditions

- NO_2 - New indicator
    - We downloaded NO_2 values for England, provided for 1x1km grid squares.
    - We obtained 2011 population estimates for each grid square.
    - We then multiplied the average population of a grid square by the NO_2 value for that grid square.
    - For each local authority, we took the sum of these population x pollution values to get a pollution total.
    - We then calculate the average pollution per person by dividing the pollution total by the population total.

- Percentage using public transport - Change in calculation
    - % of those who commute to work via public transport. Denominator - For each LA, we calculate the number of commuters by subtracting the number of people that work from home and number of people not in employment from the total number of people. Numerator - Sum of those who commute by bus, train or underground, metro, light rail, or tram.

- Percentage using active transport - Change in calculation
    - % of those who commute to work via active transport. For each LA, we calculate the number of commuters by subtracting the number of people that work from home and number of people not in employment from the total number of people. Numerator - Sum of those who commute by bicycle or on foot.

- Journey times to key services - Replacement indicator

- We combine average walking times to the following services: schools, GPs, and food stores by taking the average of walking times to primary schools and secondary schools (giving each type of school a weight of 0.5), and averaging this with walking times to the GPs and food stores.

- Homelessness rate - Change in calculation

  - For each local authority, we subtract the number of decisions classed as 'eligible, but not homeless' from the total decisions to obtain the number in priority need, non-priority need and intentionally homeless. We then calculate the number per 1000 households.
  - For some local authorities, the number of eligible but not homeless is suppressed, and the next largest category.
  - In these cases, if the total decisions was equal to the sum of the available values, we simply used the total decisions as the missing values must be equal to zero.
  - If the total decisions was not equal to the sum of the available values, we subtracted the available values from the total decisions, and if this number was small we assumed that half of this number were eligible but not homeless and the other half were in the missing homeless category. For example, for Burnley, of the 125 total decisions, 41 were priority need, and 77 were not in priority, leaving seven cases that were either intentionally homeless, or eligible but not homeless. We assumed that half of them (e.g. 3.5) were not homeless, meaning that the total number of homeless included in the TPI was 121.5 (125 - 3.5).
  - If the difference between the total decisions and the available values was larger than ten, we looked at figures for 2016-17 to see if we could identify a pattern. For example, for Darlington, out of 50 cases, 21 were in priority, and 17 were intentionally homeless, leaving 12 that were either homeless not in priority, or not homeless. In 2016-17 data, we saw that in that year, there were five not in priority need and 14 not homeless. This suggests that the not in priority figure had fallen below five, not the 'not homeless' figure. So we estimated the not in priority figure for Darlington as four, not homeless as eight. This process was followed for nine local authorities.
  - For some local authorities (e.g. Newark & Sherwood), the values had also been suppressed in 2016-17, or were too similar to be able to identify which category had fallen below five. In those cases, we split the unidentifiable cases equally across the two missing categories.
  - For 27 local authorities, more than two values were suppressed (e.g. Ribble Valley), meaning that cases had to be split between three or even four categories. However, we calculated the maximum theoretically possible error; the median value for this was six, meaning our estimates are at worst wrong by about six cases.

- Adult education - Same method as last year

- NOTE: This indicator was produced using statistical data from ONS. The use of the ONS statistical data in this indicator does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This indicator was produced using research datasets which may not exactly reproduce National Statistics aggregates.
- We use secure access data from the Labour Force Survey to create this indicator.
- For each local authority, we calculate the percentage of adults who have taken part in non-job related education or training in the last four weeks.

- Good jobs - Same method as last year

  - NOTE: This indicator was produced using statistical data from ONS. The use of the ONS statistical data in this indicator does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This indicator was produced using research datasets which may not exactly reproduce National Statistics aggregates.
  - We use secure access data from the Labour Force Survey to create this indicator.
  - For each local authority population, we calculate the percentage of people who are on permanent job contracts or on temporary contracts and not seeking permanent employment, who earn more than the current Living Wage (set by the Living Wage Foundation), work less than 49 hours a week, and are not unwillingly working part-time.

- Unwillingly out of work - Same method as last year, renamed from Unemployment rate

  - We subtract the number employed from number economically active to get the number of people who are 'economically active and unemployed'.
  - For the numerator, we add together 'economically inactive and want job' and 'economically active and unemployed'.
  - For the denominator, we add together 'economically active' and economically inactive and want job'.
  - For some districts, the 'economically inactive but want a job' value is suppressed. We estimate these values by creating a linear regression model using the data for available districts.

- Participation in heritage - New indicator

  - We combine the following indicators from the RSA heritage index:

% of local authority population visiting heritage site at least three times in last 12 months
% of local authority population visiting museum or gallery at least once in last 12 months

% of local authority population visiting industrial heritage site in last 12 months
% of local authority population visiting historic park or garden in last 12 months

    - We standardised the raw values by transforming them to z-scores, then we take the average of the four z-scores.

- Percentage with low income

    - We first calculate 70% of the UK median income as a threshold.
    - For each local authority we estimate a logarithmic best-fit line for the relationship between the income and the percentile.
    - We then use the best fit line to estimate what percentile the threshold lies in.

- Social Fragmentation Index - Change in calculation

    - The Social Fragmentation Index was developed by Professor Peter Congdon in 1996 to study the predictors of suicide. We calculated it at the local level using the following percentages drawn from census data:
        - percentage of 1-person household
        - percentage of people renting privately
        - percentage of people who have moved to their current address within the last year
        - percentage of people who are not living as a couple rate
    - Last year we used 2017 population estimates. We have corrected this this year, using 2011 (census year) population estimates.
    - Each percentage is transformed into a z-score using the mean and standard deviations from the formula originally used by Professor Congdon, which is based on the 1991 census, in effect benchmarking our index against levels of social fragmentation in 1991.

Sustainability

- Renewable electricity generation - New indicator

    - Starting from the total generation in MWh, we calculate the per capita value (KWh per person) for each local authority by multiplying the total generation by 1000 and dividing by the population. We then take the log of the per capita value.

- Land use change - New indicator

    - We use data obtained from Planning Statistics which required the signing of an End User License Agreement.
    - We calculate the net loss of non-developed land as a proportion of total green non-developed land, and multiply this by 100.

Equality

- Income Inequality - Same method as last year

    - We calculate the ratio of the 80th percentile of weekly earnings to the 20th percentile of weekly earnings. For local authorities where the 80th percentile is not available, we use the available percentiles to estimate the 80th percentile using an exponential function.

- Social mobility enabled by the education system –New indicator

    - We use data from the Government's Social Mobility Index. We combine ten indicators that form the index:

      % of children eligible for FSM achieving a 'good level of development' at the end of Early Years Foundation Stage
      % of children eligible for FSM attending a primary school rated 'outstanding' or 'good' by Ofsted
      % of children eligible for FSM attending a secondary school rated 'outstanding' or 'good' by Ofsted
      % of children eligible for FSM achieving at least the expected level in reading, writing and maths at the end of Key Stage 2
      Average attainment eight score per pupil for children eligible for FSM
      % of young people eligible for FSM that are not in education, employment or training (positive destination) after completing KS4
      Average points score per entry for young people eligible for FSM at age 15 taking A-level or equivalent qualifications
      % of young people eligible for FSM at age 15 achieving two or more A-levels or equivalent qualifications by the age of 19
      % of young people eligible for FSM at age 15 entering higher education at a selective university (most selective third by UCAS tariff scores) by the age of 19
      % of 19 year olds in 2016 qualified to level 3 by home Local Authority District (LAD) at academic age 15 (for those eligible for Free School Meals and in the state sector in England at academic age 15)

    - Nine of the indicators are given as z-scores. We transform the tenth indicator, % of 19 year olds in 2016 qualified to level 3 by home Local Authority District (LAD) at academic age 15, into a z-score. Then we take the average of the ten z-scores.