Impact on Urban Health – Urban Health Index methodology

Impact on Urban Health

By 2050, nearly 70% of the world's population will live in cities. In the UK, over four in five people already live in urban areas. And so, we believe an understanding of urban health is more relevant than ever.

The places that we grow up, live and work impact how healthy we are. Living in urban areas, like inner-city London, carries distinct health challenges, many of which start early in life and are influenced by the wider determinants of health and wellbeing.

We seek to understand the deep causes of these health issues and explore different ways of addressing them through combining the best sources of data, robust evidence, lived experience and practical interventions. We believe that by removing the obstacles to good health, we can make urban areas healthier places for everyone to live.

Impact on Urban Health is a part of Guy's & St Thomas' Foundation.

Social Progress Imperative

The Social Progress Imperative's mission is to improve the lives of people around the world, particularly the least well off, by advancing global social progress by: providing a robust, holistic and innovative measurement tool—the Social Progress Index; fostering research and knowledge-sharing on social progress; and equipping leaders and change-makers in business, government and civil society with new tools to guide policies and programs. From the EU to India to Brazil and beyond, the Social Progress Imperative has catalysed the formation of local action networks that bring together governments, businesses, academia, and civil society organizations committed to using the Social Progress Index as a tool to transform societies and improve people's lives.

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Introduction

Impact on Urban Health is committed to achieving health equity by helping urban areas become healthier places for everyone to live. We believe that health is hugely influenced by where we grow up, live and work. And in urban areas, we see the best and worst health outcomes, often just roads away from each other. We are focused on improving health in inner-city areas by understanding and changing how inequalities impact our health.

Our work is focused primarily in Lambeth and Southwark, two diverse borough in South London. We are increasingly putting data at the forefront to understand these boroughs, make funding decisions, and track impact and progress. Our hope in developing a Social Progress Index (or Urban Health Index) for Lambeth and Southwark is to have an easy to use tool to monitor social and health outcomes at ward level, identify priority areas to focus resources, and track progress over time. The tool will be used to:

- Demonstrate where there are strengths and growth opportunities within our boroughs
- Inform our internal programme funding and prioritisation decisions
- Gain insights into inequalities within our boroughs
- Contribute to our understanding of the relationship between financial security and social and health outcomes
- Engage with local and national stakeholders
- Measure progress across different areas of interest

What is the Social Progress Index?

The Social Progress Index is a composite index which represents the first comprehensive framework for measuring social progress that is independent of traditional economic indicators, while also being complementary to them. The Index focuses on what matters to societies and people by giving them the tools to better understand and seize opportunities, and building blocks to enhance and sustain the quality of their lives, as well as create the conditions to reach their full potential.

Developed in collaboration with a team of scholars led by Professor Michael E. Porter of Harvard Business School, the Index is being used by national and city leaders across Latin America, Australia, the United Kingdom, the US, Canada, and by the European Commission's Directorate General for Regional and Urban Policy for agenda setting and supports policymaking, prioritization of resource mobilization and impact measurement.

The Index presents a granular, actionable picture of what matters most to people regardless of their wealth. It creates a common understanding of how well a community performs on the things that matter to all societies, rich or poor. As a complement to traditional measures of economic performance, such as income, the Social Progress Index provides better understanding of the bi-directional relationship between economic gain and social progress. Its unique framework offers a systematic, empirical foundation for governments, businesses, civil society and communities to prioritise social and environmental issues, and benchmark performance against other countries, regions, cities and communities to inform and drive public policies, investments, and business and community decisions.

Guided by a group of academic and policy experts, the Social Progress Index follows a conceptual framework that defines social progress as well as its key elements. In this context, social progress is defined as the "**capacity of a society to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential.**"

The Social Progress Index is built around a framework that comprises three architectural elements: dimensions, components, and indicators.

- Dimensions represent the broad conceptual categories that define social progress:
  - o Basic Human Needs considers citizens' ability to survive with adequate nourishment and basic medical care, clean water, sanitation, adequate shelter, and personal safety. These needs are still not met in many disparate countries and are often incomplete in more prosperous countries.
  - o Foundations of Wellbeing captures whether a society offers building blocks for citizens to improve their lives, such as gaining a basic education, obtaining information, and access communications, benefiting from a modern healthcare system and live in a healthy environment.
  - o Opportunity captures whether citizens have the freedom and opportunity to make their own choices. Personal rights, personal freedom and choice, tolerance and inclusion, and access to advanced education all contribute to the level of opportunity within a given society.

- Each dimension comprises four components - distinct but related concepts that together make up the Social Progress Index Framework (Figure 1).

Figure 1: Social Progress Index Framework

Basic Human Needs	**Foundations of Wellbeing**	**Opportunity**
Nutrition and Basic Medical Care	Access to Basic Knowledge	Personal Rights
Water and Sanitation	Access to Information and Communications	Personal Freedom and Choice
Shelter	Health and Wellness	Inclusiveness
Personal safety	Environmental Quality	Access to Advanced Education

Source: Social Progress Imperative (2018)

- Each component is composed of indicators that measure as many valid aspects of the component as possible.

Together, this interrelated set of factors represents the primary elements that combine to produce a given level of Social Progress Index. The methodology allows measurement of each component and each dimension, and yields an overall score and ranking.

The three dimensions and twelve components of the Social Progress Framework provide the backbone of the Social Progress Index. The twelve-component structure provides the guidelines, while the questions

below provide a first guide for interpreting each component and help to identify locally relevant data to define it. To help guide this process, the following guiding questions (Figure 2) are used for selecting contextually appropriate indicators for each of the twelve components.

Figure 2: Social Progress Index Guiding Questions

Basic Human Needs

Nutrition & Basic Medical Care
Do people have enough food to eat and are they receiving basic medical care?

Water & Sanitation
Can people drink water and keep themselves clean without getting sick?

Shelter
Do people have adequate housing with basic utilities?

Personal Safety
Do people feel safe?

Foundations of Wellbeing

Access to Basic Knowledge
Do people have access to an educational foundation?

Access to Information & Communications
Can people freely access ideas and information from anywhere in the world?

Health & Wellness
Do people live long and healthy lives?

Environmental Quality
Is this society using its resources so they will be available to future generations?

Opportunity

Personal Rights
Are people's rights as individuals protected?

Personal Freedom & Choice
Are people free to make their own life choices?

Inclusiveness
Is no one excluded from the opportunity to be a contributing member of society?

Access to Advanced Education
Do people have the opportunity to access the world's most advanced knowledge?

SOCIAL PROGRESS IMPERATIVE

Source: Social Progress Imperative (2018)

The Index is explicitly focused on non-economic aspects of performance. Unlike most other measurement efforts, the index treats social progress as distinct though associated with traditional economic measures such as income per capita. In contrast, other indices such as the Human Development Index (UNDP, 2016) or the OECD Better Life Index (OECD, 2015) combine economic and social indicators. The SPI objective is to utilize a clear yet rigorous methodology that isolates the non-economic dimensions of social performance.

The Index applies a set of unique design principles that allow an exclusive analysis of social progress and help the Index stand out from other indices:

Social and environmental indicators only: While economic development is generally beneficial for social progress, it is not sufficient to fully capture the wellbeing of societies, and certain kinds of economic development can reduce social progress. The relationship is complex: social progress can drive and be driven by economic progress. Consequently, social progress needs to be measured directly, without combining economic performance. Measuring social progress exclusively and directly, rather than utilizing economic proxies or combining economic and social variables is therefore the key principle of any Social Progress Index.

Outcomes, not inputs: There are two broad categories of conceptually coherent methodologies for index construction: input indices and outcome indices. Both can help countries to benchmark their progress, but in very different ways. Input indices measure a country's policy choices or investments believed or

known to lead to an important outcome. In competitiveness, for example, an input index might measure investments in human capital or basic research. Outcome indices directly measure the outcomes of investments. The Social Progress Index has been designed as an outcome index. The Index measures the lived experience of real people, regardless of effort spent or the capacity to impart change. Given that there are multiple distinct aspects of social progress each measurable in different ways, the Social Progress Index has been designed to aggregate and synthesize multiple outcome measures in a conceptually consistent and transparent way that will also be salient to benchmarking progress for decision-makers.

Holistic and relevant to all communities: The Social Progress Index is a multidimensional measure of social progress that encompasses the many inter-related aspects of thriving societies everywhere. It aims to be a practical tool for decision makers in any given country regardless of its level of development. At the national level, the Social Progress Index fulfils this value proposition by deepening our understanding of the relationship between social progress and economic growth and by designing a very relevant tool to highlight strength and weakness at the component and indicator levels, using GDP comparator groups. Nevertheless, what matters at the national level to compare countries among themselves may not be what matters for the policy debate within a given country. For example, tuberculosis is not an issue in the Amazon region, but Malaria is. These examples illustrate how building subnational indices—by preserving the 12-components structure of the Social Progress Index and by customizing the indicators to be monitored and targeted—can increase the capacity of the Social Progress Framework to boost relevant and timely policy-debates in every country at every stage of development.

Actionable: The Index aims to be a practical tool with sufficient specificity to help leaders and practitioners in government, business, and civil society to benchmark performance and implement policies and programs that will drive faster social progress. At the national level, the Social Progress Index fulfils this value proposition by focusing on the granularity of the model. Every component supposes an essential area for human wellbeing. And every indicator implies a potential "entry-point" and an "explicit target" for public policy. Building subnational indices with local networks will strength the actionability of the social progress framework, if the process of disaggregating and customizing the index is also supported by strong political buy-in around socially legitimate targets. A practical tool that will help leaders and decision-makers in government, business and civil society to implement policies and programs that will drive faster social progress.

The successes of the Global Social Progress Index have resulted in an increased demand for subnational indices to address the need for greater actionability; the need to make the index relevant for all countries at all levels of development and at any level of geography; and a need to build common languages and to align interventions. As a result, local stakeholders around the world have developed innovative initiatives to build relevant and consistent social progress indices at the macro (national), meso (regional, municipal) and micro (community, organizational) levels, to influence the policy decision-making process and move the needle of social progress around the world.

Lambeth and Southwark Urban Health Index

The Lambeth and Southwark Urban Health Index follows the Social Progress Index rationale as well as its key principles and methodology. As such, it adopts the same dimension and component level framework as the global Social Progress Index. However, data availability restrictions, data at the appropriate geographic level and indicator relevance to our local boroughs and organisational aims meant that the

final list of indicators was developed uniquely for the Lambeth and Southwark Urban Health Index as outlined below in Figure 3.

We believe that all of the indicators included in the index play fundamental roles not only in social progress, but in the health of people in urban areas such as Lambeth and Southwark.

Figure 3: Lambeth and Southwark Urban Health Index Indicator List

Basic Human Needs

Nutrition and Basic Medical Care
Deaths under 75
Low birth weight
Obesity in children - Reception
Obesity children - Year 6

Water and Sanitation
Food hygiene rating
Households overcrowding
Houses in poor condition

Shelter
Energy efficiency
Household in fuel poverty
Vacant dwellings

Personal Safety
Burglary
Drug crime
Weapon possession
Road accident casualty rate

Foundations of Wellbeing

Access to Basic Knowledge
Adult skills and English language proficiency
Persistent Absentees
Pupils achieving "good level of development" at Early Years Foundation stage
Pupils achieving Key stage 2, Level 4 in Reading, Writing and Maths
Pupils achieving Key stage 4 basics

Access to Information and Communications
Broadband speed
Broadband data useage
Digital exclusion index rank

Health and Wellness
Female Healthy Life Expectancy
Diabetes prevalence
Asthma prevalence
Depression Prevalence

Environmental Quality
Access to private outdoor space
NO2 Concentration
PM2.5 Concentration
Greenspace coverage

Opportunity

Personal Rights
Voters turnout at Local Election
Racial aggravated crime
Public order offences

Personal Freedom and choice
Access to transportation index
People with limiting long-term illness
Youth unemployment gap

Inclusiveness
Connectedness score
Active and engaged community score
Loneliness index

Access to Advanced Education
Highest level of qualification: degree or higher
Participation of state school pupils in higher education
Participation in higher education

Geographic and Time Coverage

The Index was calculated for all 48 Wards in Lambeth and Southwark (outlined below) and included the most recent data available at point of pulling the indicators (May 2022). Detailed table with annual data availability for each indicator is presented in Annex 3: Data Availability.

Borough	Ward
Lambeth	Brixton Acre Lane
	Brixton North
	Brixton Rush Common
	Brixton Windrush
	Clapham Common & Abbeville
	Clapham East
	Clapham Park
	Clapham Town
	Gipsy Hill
	Herne Hill & Loughborough Junction
	Kennington
	Knight's Hill
	Myatt's Fields
	Oval
	St Martin's
	Stockwell East
	Stockwell West & Larkhall
	Streatham Common & Vale
	Streatham Hill East
	Streatham Hill West & Thornton
	Streatham St Leonard's
	Streatham Wells
	Vauxhall
	Waterloo & South Bank
	West Dulwich

Southwark	Borough & Bankside
	Camberwell Green
	Champion Hill
	Chaucer
	Dulwich Hill
	Dulwich Village
	Dulwich Wood
	Faraday
	Goose Green
	London Bridge & West Bermondsey
	Newington
	North Bermondsey
	North Walworth
	Nunhead & Queen's Road
	Old Kent Road
	Peckham
	Peckham Rye
	Rotherhithe
	Rye Lane
	South Bermondsey
	St George's
	St Giles
	Surrey Docks

Figure 4: Map of Lambeth and Southwark Wards
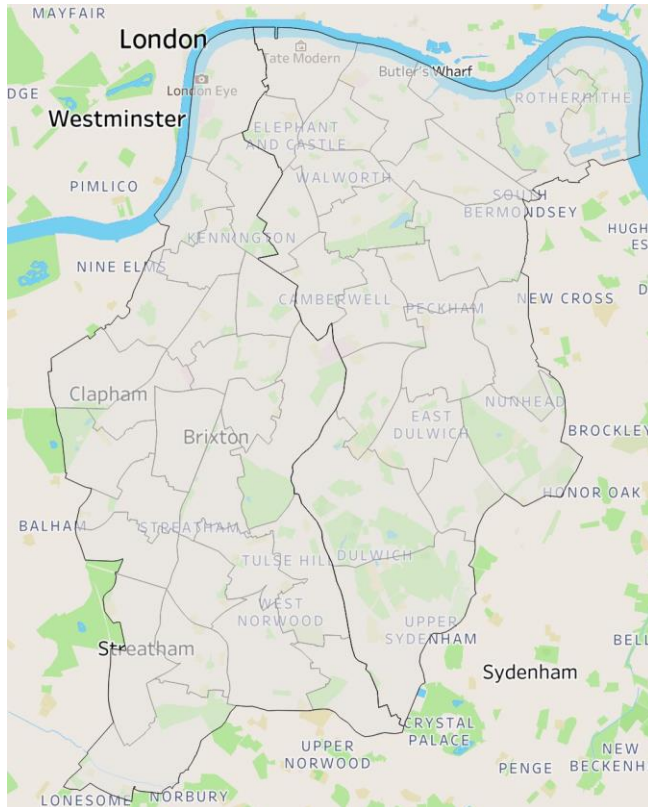
Index Calculation

Calculating the Lambeth and Southwark Urban Health Index was a multistep process involving:

1) Indicator Selection and Data Collection
2) Dealing with missing values
3) Data Transformation
4) Aggregation and scaling
5) Evaluating the fit

Indicator Selection and Data Collection

As an organization focused on urban health, our aim for the SPI was to focus the indicators around what would be most relevant for our work, our partners' work, the residents of Lambeth and Southwark and other stakeholders who might use the tool.

We started with a list of over 200 indicators and following a framework of selection, we shortlisted down to our eventual final list of 42 indicators. Some of the criteria used to shortlist included:

- Indicator is non-economic related
- Indicator is an outcome (rather than an input)
- Data is available or can be converted at ward level

- Data is from a reputable source
- Data is not too old (note: some data comes from Census 2011, but we aimed to minimise this as much as possible)
- Indicator is relevant to our boroughs
- Indicator had no or minimal missing values

A list of indicators that were taken into consideration but are not included in the final index is presented in Annex 1: Indicators not Included in Final Framework. Detailed information on individual indicators included in the Index is presented in Annex 2: Indicator Definition and Sources.

Dealing with missing values

Data for all indicators were available for all wards.

Data Transformation

Data transformations were completed in order to ensure a consistent and reliable final database was used with the index calculations. Indicators that did not display a normal distribution were confined to the upper or lower boundaries. These are noted in Table 2.

Table 1: Data Transformations

Indicator	Treatment	Explanation of treatment
Youth unemployment Gap	Uppder boundary confined to 0	Theoretical objectives, while taking into account distribution of observed values

Aggregation and scaling

The Urban Health Index for Southwark and Lambeth adopts an aggregation approach similar to other subnational Social Progress Indices, such as Social Progress Index for Barking and Dagenham or Social Progress Index for the United States. Arithmetic mean was used for the the aggregation of dimensions and the overall index score.

The Social Progress Index uses the Principal Component Analysis (PCA) for calculating the weights of indicators within a component[1]. A list of weights is presented in Annex 4: Weighting.

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[1] Principal Component Analysis is a multivariate technique which was developed in early 20th century for the purpose of aggregating information. Calculations were done in STATA, using "factor, pcf" command.

The component values are calculated by summing the weighted scores using the following formula:

Components = $\sum$ (wi * indicator)

To calculate component scores the Index transforms indicator values onto 0 to 100 scale. This is done by calculating scores using best- and worst-case scenarios which are defined at the indicator level according to desirable or theoretically possible upper and lower bounds. The best-case scenario in most cases reflects the best value identified across England or London (depending on which is more relevant) or an improvement on the best performance recorded across the wards of 1 standard deviation of ward values. The value for worst-case scenario reflects the worst recorded value across England or London (depending on which is more relevant) or a decline of the worst performance recorded across the wards of 1 standard deviation of ward values. See Annex 5: High and Low Scores for the range of indicators.

This method enhances comparability as well as comprehensiveness across the dataset. The calculation is done using the following formula:

$$\frac{Xj - Worst\ Case}{Best\ Case - Worst\ Case}$$

Where, Xj represents the raw values.

Each dimension score is then taken to be the arithemetic mean of its four components and the overall Index score is the arithmetic mean of the three dimensions.

Evaluating the fit

The indicator selection process entails including the indicators that describe the concept of the component in the best possible way and are conceptually linked to each other. The rigor of the Social Progress Index methodology is strengthened by assessing multiple aspects of fit between those. First, exploratory factor analysis is used to test the underlying factors among the set of selected indicators in each component. In this process, the indicators that are statistically incompatible are removed.

Furthermore, the Social Progress Index methodology involves evaluating the fit between the individual indicators by calculating Cronbach's Alpha for each component. Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency; it is expressed as a number between 0 and 1 (Tavakol & Dennick 2011). Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test. An applied practitioner's rule of thumb is that the alpha value should be above 0.7 for any logical grouping of variables (Cortina, 1993). The alpha values are presented in Table 3.

Table 2: Cronbach's Alpha

Component		Cronbach's Alpha
Basic Human Needs	Nutrition and Basic Medical Care	0.93
	Water and Sanitation	0.74
	Shelter	0.91
	Personal Safety	0.94
Foundations of Wellbeing	Access to Basic Knowledge	0.95
	Access to Information and Communications	0.75
	Health and Wellness	0.94
	Environmental Quality	0.89
Opportunity	Personal Rights	0.74
	Personal Freedom and Choice	0.66
	Inclusiveness	0.91
	Access to Advanced Education	0.90

After calculating each component, the goodness of fit is evaluated using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The measure reflects the proportion of variance among variables that might be common variance. The KMO index ranges from 0 to 1, as a rule of thumb, KMO scores should be above 0.5 (Williams, Onsman, & Brown 2010). The results of this analysis are shown in Table 3.

Table 3: Kaiser-Meyer-Olkin

	Component	Mean KMO
Basic Human Needs	Nutrition and Basic Medical Care	0.84
	Water and Sanitation	0.72
	Shelter	0.69
	Personal Safety	0.64
Foundations of Wellbeing	Access to Basic Knowledge	0.86
	Access to Information and Communications	0.40
	Health and Wellness	0.79
	Environmental Quality	0.57
Opportunity	Personal Rights	0.64
	Personal Freedom and Choice	0.63
	Inclusiveness	0.72
	Access to Advanced Education	0.74

Conclusion

Building the Urban Health Index for Lambeth and Southwark was a long-term endeavour lead by the Data & Analytics team at Impact on Urban Health, supported by the Social Progress Imperative. Throughout the process, the team constructed and tested several iterations of the index, and consulted many colleagues across the organisation and beyond. Despite numerous challenges, such as the lack of appropriate data, or the fit of indicators, the authors are confident that this is a robust and credible assessment of urban health.

The Index provides a benchmark by which wards can be compared and enables stakeholders to identify priorities that need addressing in order to advance social progress and urban health. The Index is meant to be a unifying tool, which brings a common language and understanding of what social progress and urban health mean to Lambeth and Southwark's community members and local stakeholders.

References

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Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. Journal of applied psychology, 78(1), 98. Social Progress Imperative (2018). Social Progress Index 2018. Retrieved from www.socialprogress.org

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Annex 1: Indicators not Included in Final Framework

Dimension/component	Indicator name	Reasons not included
Basic Human Needs		
Nutrition and Basic Medical Care	Healthy eating	Data is too old
	Provides 50+ hours unpaid care a week	Data is too old
	Travel time to nearest GP by public transport/walk	Not an outcome
	Travel time to nearest Hospital by public transport/walk	Not an outcome
	Teenage mothers	Poor data quality-missing values
	Children providing unpaid care	Data is too old
	Children in poverty	Economic outcome
	Deaths under 65	Discontinued- replaced with Deaths under 75
	Obesity in adults	Data is too old
	Free school meals pupils	Economic outcome
	Still births/ infant mortality	Data availability at MSOA level
	A&E waiting times	Data availability at MSOA level
	Premature mortality	Alternative indicator uses "Deaths under 75"
Water and Sanitation	Pest control visits	Data availability
	Presence of bacteria (coliforms - E Coli) in drinking water	Data availability
	Turbidity of drinking water	Data availability
	Lead in water	Data availability
	Fly tipping	Data availability
	Calls to council for mold	Data availability
	Water purity	Data availability
Shelter	Social rented housing	Not clear if it is positive or negative outcome
	Houses lacking central heating	Data is too old
	Overcrowded housing	Used in Water and Sanitation
	Households not connected to the gas network	Not relevant if other sources of energy are available
	Potential average energy efficiency of domestic buildings	Using current average energy efficiency, which is practically the same
	Energy efficiency gap for domestic buildings	Using current average energy efficiency, which is practically the same
	IoD 2019 Homelessness indicator	Data availability at MSOA level
	Safety of construction	Data availability
	Air quality in the home	Data availability
Personal Safety	Anti-social behaviour	Not as relevant as other crime indicators
	Violent crime and sexual offences	Not as relevant as other crime indicators
	Robbery recorded offences	Keeping burglary
	Vehicle crime	Not as relevant as other crime indicators
	Public order offences	Not as relevant as other crime indicators
	Criminal damage	Not as relevant as other crime indicators
	Theft from the person offences	Not as relevant as other crime indicators
	Total offences	Used single types of offences
	Road traffic accidents indicator	Used road accident casualty rate
	Shoplifting	Not measuring personal safety
	Domestic abuse	Data availability
	Trafficking rates	Data availability
	Terrorist related incidents	Data availability

Foundations of Wellbeing				
Access to Basic Knowledge	People with no qualifications	Data is too old		
	transport/walk	Not an outcome		
	Road distance (meters) from the nearest Primary School	Not an outcome		
	Pupil unauthorised absences	Using persistent absentee instead		
	Travel time to nearest Primary School by public transport/walk	Not an outcome		
	People aged 16-24 with no qualifications	Data is too old		
	Road distance (meters) from the nearest Secondary School	Not an outcome		
	Children providing unpaid care	Not an outcome and census data		
	Permanent exclusion rates	Data availability at MSOA level		
	Schools judged as outstanding/good	Data availability at MSOA level		
	Pupils getting free school meals vs not	Economic outcome		
Access to Information and Communications	Low broadband speed	Including Broadband speed		
	Community Needs Index: Connectedness score	Included in Inclusiveness		
	Registered library users	Data availability		
	Residents without internet access	Data availability		
	My Account users	Data availability		
	Digital skills data	Data availability		
	website?	Data availability		
	How many people with 4g/5g?	Data availability at MSOA level		
	Average download speed	Including Broadband speed		
	Receiving over 30mbps	Including Broadband speed		
	Receiving under 10 mbps	Including Broadband speed		
	Superfast availability	Including Broadband speed		
Health and Wellness	Male life expectancy at birth	Using Female healthy life expectancy at birth		
	Male healthy life expectancy at birth	Using Female healthy life expectancy at birth		
	ID 2019 Years of potential life lost indicator	Alternative indicator selected		
	Deaths under 65, all causes	Discontinued		
	Deaths under 75, all causes	Using it on Nutrition and basic medical care (N&BMC)		
	Deaths under 75, coronary heart disease (CHD)	Keeping deaths under 75 in N&BMC		
	Deaths under 75, circulatory disease	Keeping deaths under 75 in N&BMC		
	Deaths respiratory disease	Keeping deaths under 75 in N&BMC		
	Deaths Stroke	Keeping deaths under 75 in N&BMC		
	Deaths Cancers	Keeping deaths under 75 in N&BMC		
	Deaths under 75 Cancers	Keeping deaths under 75 in N&BMC		
	Deaths Circulatory disease	Keeping deaths under 75 in N&BMC		
	Deaths CHD	Keeping deaths under 75 in N&BMC		
	Obese children in reception year	Including in N&BMC		
	Obese children in year 6	Including in N&BMC		
	Overweight or obese children in reception year	Including obesity in N&BMC		
	Overweight or obese children in year 6	Including obesity in N&BMC		
	Obese adults	Data is too old		
	People with a limiting long-term illness (aged 65+)	Keeping people with a limiting long term illness ages 16-64		
	People with a limiting long-term illness (aged 16-64)	Included in Personal Freedom and Choice		
	Female disability-free life expectancy (DFLE)	Close to 1 correlation with healthy life expectancy		
	Male disability-free life expectancy (DFLE)	Close to 1 correlation with healthy life expectancy		
	Atrial Fibrillation prevalence	Alternative indicator more relevant to our programme		
	Cancer prevalence	Alternative indicator more relevant to our programme		
	Coronary Heart Disease prevalence	Alternative indicator more relevant to our programme		
	Chronic Kidney Disease prevalence	Alternative indicator more relevant to our programme		
	COPD prevalence	Alternative indicator more relevant to our programme		
	Cardiovascular Disease prevalence	Alternative indicator more relevant to our programme		
	Dementia prevalence	Alternative indicator more relevant to our programme		
	Heart Failure prevalence	Alternative indicator more relevant to our programme		
	High Blood Pressure prevalence	Alternative indicator more relevant to our programme		
	Learning Disabilities prevalence	Alternative indicator more relevant to our programme		
	Cancer Incidence	Alternative indicator more relevant to our programme		
	Serious Mental Illness prevalence	Alternative indicator more relevant to our programme		
	Osteoporosis prevalence	Alternative indicator more relevant to our programme		
	Rheumatoid Arthritis prevalence	Alternative indicator more relevant to our programme		
	Stroke and Transient Ischaemic Attack prevalence	Alternative indicator more relevant to our programme		
	(2017/18)	Less accurate data – comes from surveys and keeping obesity indicator		
	Emergency Hospital Admissions	Alternative indicator more relevant to our programme		
	Covid-19 vulnerability index	Not included Covid indicators		
	Suicide rates	Data availability at MSOA level		
Environmental Quality	ID 2019 Benzene (component of air quality indicator)	Alternative indicator more relevant to our programme		
	ID 2019 Sulphur dioxide (component of air quality indicator)	Alternative indicator more relevant to our programme		
	ID 2019 Air quality indicator	Keeping the individual air quality measures for more granularity in air quality improvements		
	AHAH Air quality domain	Keeping the individual air quality measures for more granularity in air quality improvements		
	Air quality related illness/mortality	Data availability at MSOA level		
	Electric car charging stations	Data availability		
	Bike lanes	Data availability		
	Fly-tipping	Data availability		
	Open space within 400m from households	Alternative indicator more relevant to our programme		
	Noise pollution	Data availability		

Opportunity

Category	Indicator	Note
Personal Rights	Households who own their property	Data is too old
	Gender pay gap	Data availability at MSOA level
	Minimum wage	Economic indicator
	Unemployment benefits	Economic indicator
	Disability benefits	Economic indicator
	Employment support schemes	Economic indicator
	Maternity/paternity leave	Data availability at MSOA level
	Discrimination rights	Data availability
	About of legal aide/access to legal aide	Data availability
	Time to access a hearing	Data availability
	Vulnerable employment – 0 hour contract	Economic indicator
	Stop and search	Alternative indicator selected
	Access to art, community, literature, sciences (culture)	Data availability at MSOA level
	Legal aid usage	Data availability
Personal Freedom and Choice	Teenage pregnancy	Poor data quality–missing values
	Modern slavery/human trafficking	Data availability
	Female genital mutilation	Data availability
	Hate crimes	Used in Personal Rights
	Disable access issues	Data availability
	Adults skills and english language proficiency	used in Access to Basic Knowledge
Inclusiveness	Road distance (meters) from the nearest Job Centre	Not an outcome
	Voter Turnout at Local Elections	Used in Personal rights
	Low broadband speed	Used in access to information and communication
	Belonging: average score	Limited strength of data at lower level geography
	Community Needs Index: Civic Assets score	Not an outcome
	Broadband speed	Used in access to information and communication
	Local_social_relationships_average_score	Small sample size, limited data
	Volunteering rates	Data availability
	Hate crimes	Used in Personal Rights
Access to Advanced Education	transport/walk	Not an outcome
	ID 2019 Staying on in education post 16 indicator	Old and irregular data updates
	ID 2019 Entry to higher education indicator	Old and irregular data updates
	ID 2015 Adult skills and English language proficiency indicator	Used in Access to Basic Knowledge
	Meaningful work	Data availability
	Apprenticeship	Data availability
	Entrepreneurship	Data availability

Annex 2: Indicator Definition and Sources

Dimension/component	Indicator Name	Definition	Source
Basic Human Needs			
Nutrition & Basic Medical Care	Deaths under 75, all causes	Shows age standardised estimates of deaths from all causes for people aged under 75. The data is presented as a standardised mortality ratio of calculated by dividing the observed total deaths in the area (by five year age and gender band) by the expected deaths (applying age-specific death rates for England) and multiplying by 100.	Office for National Statistics (ONS) (http://www.localhealth.org.uk/)
	Low birth weight	Shows the proportion of babies born with a low birth weight. The Low birth weight count is the number of live and still births occurring in the year with a stated birth weight greater than 0 and less than 2500 grams for all maternal ages. The denominator is all live and still births occurring in a year with a valid stated birth weight for all maternal ages. The figures presented here are expressed as percentages of total births with a stated birth weight. Rate calculated as = (Low birth weight births)/(Total births)*100	Office for National Statistics (ONS) (http://www.localhealth.org.uk/)
	Obesity in children- Reception	Shows the % of children in reception year (aged 4-5) classified as obese. Children are classified as obese where their BMI is greater than or equal to the 95th centile of the British 1990 growth reference. Data is collected by the National Child Measurement Programme, Health and Social Care Information Centre. Rate calculated as = (Rate of children in reception year with obesity)/(Total children in reception year)*100.	National Child Measurement Programme, NHS Digital (https://fingertips.phe.org.uk/profile/national-child-measurement-programme)
	Obesity in children- Year 6	Shows the % of year 6 children classified as obese (aged 10-11). Children are classified as obese where their BMI is greater than or equal to the 95th centile of the British 1990 growth reference. Data is collected by the National Child Measurement Programme, Health and Social Care Information Centre. Rate calculated as = (Children in year six with obesity)/(Children in year 6)*100	National Child Measurement Programme, NHS Digital (https://fingertips.phe.org.uk/profile/national-child-measurement-programme)
Personal Safety	Burglary	Shows 12 month total of neighbourhood-level burglaries, and as a rate per 1,000 households. Burglary is defined using a series of National Crime Recording System codes covering different types of this crime. The incidents were located to the point at which they occurred and allocated to the appropriate output area and lower super output area (LSOA). Rate calculated as = (Burglary recorded offences)/(All households (census KS402))*1000	Police UK (Police recorded crime figures) (https://data.police.uk/)
	Drug crime	Shows 12 month total of neighbourhood-level incidents of drug crime, and as a rate per 1,000 residents. The incidents were located to the point at which they occurred and allocated to the appropriate output area and lower super output area (LSOA). Rate calculated as = (Drug crime offences)/(Total population)*1000	Police UK (Police recorded crime figures) (https://data.police.uk/)
	Weapon possession	Shows 12 month total of neighbourhood-level incidents of possession of weapons, and as a rate per 1,000 residents. The incidents were located to the point at which they occurred and allocated to the appropriate output area and lower super output area (LSOA). Rate calculated as = (Possession of weapons offences)/(Total population)*1000	Police UK (Police recorded crime figures) (https://data.police.uk/)
	Road accident casualty rate	Shows the overall road accident casualty rate per 1,000 population. Road accident casualties include all road traffic accidents which involve human injury or death. Rate calculated as = (road accident casualty)/(Total population)*1000	Department for Transport (DfT) (https://www.gov.uk/government/collections/road-accidents-and-safety-statistics)
Shelter	Energy efficiency	Shows the average energy efficiency for domestic buildings. The data is derived from postcode level Energy Performance Certificates (EPC) for domestic buildings occurring between January 2016 and September 2020. Data has been calculated by averaging (mean) the median energy efficiencies of Output Areas. Only homes that have been built, bought, sold or retrofitted since 2008 have an EPC, which represents about 50 to 60 per cent of homes within a local authority area. Additionally, data has not been published where the holder of the energy certificate has opted-out of disclosure, energy certificates are excluded on grounds of national security or energy certificates are marked as cancelled or not for issue. Only postcodes that matched the ONS postcode file directory have been included.	Ministry of Housing Communities and Local Government (MHCLG) (https://epc.opendatacommunities.org)
	Households in Fuel Poverty	Shows an estimate of the number of households in Fuel Poverty. The definition of fuel poverty is based on the Low Income High Costs framework, where a household is in fuel poverty if a) their required fuel costs are above average (the national median level), and b) were they to spend that amount they would be left with an income below the official poverty line. The indicator is estimated using regional data from the English Housing Survey and modelling down to local areas based on characteristics of the local area. Rate calculated as = (Households living in fuel poverty)/(Total households)*100	Department for Business, Energy and Industrial Strategy (https://www.gov.uk/government/collections/fuel-poverty-statistics)
	Vacant Dwellings	Shows the proportion of all dwellings that are vacant in an area, excluding second homes and holiday homes. This data is an estimate of vacant dwellings in 2017 at Output Area level and is based on Local Authority level estimates of vacant dwellings for 2017, Census 2011 household spaces with no residents and Census 2001 vacant dwellings.	Council tax base (CTB) (published by MHCLG)/Census 2011/Census 2001 (https://www.gov.uk/government/statistical-data-sets/live-tables-on-dwelling-stock-

Water & Sanitation	Food hygiene inspection ratings- improvement needed	% of businesses in each ward that "needs improvement" (score 0-2)- The food hygiene rating scheme gives businesses a rating from 5 to 0 which is displayed at their premises and online so you can make more informed choices about where to buy and eat food.	Food Standard Agency
	Households overcrowding score	The Indices of Deprivation (IoD) 2019 Household overcrowding indicator is the proportion of households in a Lower-layer Super Output Area that are classed as overcrowded according to the definition below. The numerator is the number of overcrowded households in the Lower-layer Super Output Area, while the denominator is the number of occupied households in the same area. Both were taken from the 2011 Census.. A higher score indicates that an area is experiencing high levels of deprivation.	Ministry of Housing Communities and Local Government (MHCLG) (https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019)
	Houses in poor condition score	The Indices of Deprivation (IoD) 2019 housing in poor condition indicator is a modelled estimate of the proportion of social and private homes that fail to meet the Decent Homes standard. A property fails the Decent Homes Standard if it fails to meet any one of four separate components: 1) Housing Health and Safety Rating System 2) Disrepair 3) Modernisation 4) Thermal comfort. A higher score indicates that an area is experiencing high levels of deprivation.	Ministry of Housing Communities and Local Government (MHCLG) (https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019)

Foundations of Wellbeing

Access to Basic Knowledge	Adult skills and English language proficiency	The Indices of Deprivation (IoD) 2019 Adult skills and English language proficiency indicator shows a non-overlapping count of those adults with no or low qualifications, and/ or who cannot speak English or cannot speak English 'well' . The adult skills indicator is the proportion of working-age adults (women aged 25 to 59 and men aged 25 to 64) with no or low qualifications. The English language proficiency indicator is the proportion of the working-age population (women aged 25 to 59 and men aged 25 to 64) who cannot speak English or cannot speak English 'well'. A higher score indicates that an area is experiencing high levels of deprivation.	Ministry of Housing Communities and Local Government (MHCLG) (https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019)
	Persistent absentees pupils	Shows the proportion of pupils (in Primary and Secondary schools) who have been absent for 56 or more sessions during the year (around 15 per cent of overall absence) based on location of pupil residence.	Department for Education (DfE) (https://www.gov.uk/government/collections/statistics-neighbourhood-absence-and-attainment)
	Pupils achieving a good level of development at Early Years Foundation stage	Shows the proportion of pupils achieving a "good level of development" at Early Years Foundation stage (an assessment of pupils in foundation year at school (aged 4 to 5)). A pupil achieving 6 or more points across the 7 Scales of PSE and CLL and who also achieves 78 or more points across all 13 scales is classed as having ""a good level of development"".	Department for Education (DfE) (https://www.gov.uk/government/collections/statistics-neighbourhood-absence-and-attainment)
	Pupils achieving Key Stage 2, Level 4 in Reading, Writing and Maths	Shows the proportion of pupils achieving level 4 in Reading, Writing and Mathematics at Key Stage 2 (KS2). Level 4 is the expected level for most 11 year olds. Figures are based on postcode of the pupils residence and derived from the School Census. KS2 is the National Curriculum standard test for eleven year olds.	Department for Education (DfE) (https://www.gov.uk/government/collections/statistics-neighbourhood-absence-and-attainment)
	Pupils at the end of Key Stage 4 (GCSE) achieving the Basics	Shows the proportion of pupils achieving 'the basics' at GCSE (Key Stage 4). A pupil obtains the 'basics' if they achieve an A*-C grade in English and mathematics GCSEs or iGCSEs. Figures are based on postcode of the pupils residence and derived from the School Census. KS4 is the National Curriculum standard test for pupils in year eleven (aged 15-16).	Department for Education (DfE) (https://www.gov.uk/government/collections/statistics-neighbourhood-absence-and-attainment)
Access to Information & Communications	Broadband speed	Shows the average broadband download linespeed (Mbit/s) for connections in the area. Due to variations in broadband performance over time, this data should not be regarded as a definitive and fixed view of the UK's fixed broadband infrastructure. However, the information provided here may be useful in identifying variations in broadband performance.	Ofcom (https://www.ofcom.org.uk/research-and-data/data)
	Broadband data useage	Shows the median data usage (upload and download) in Gigabytes for all connections in the area for the time period the data cover.	Ofcom (https://www.ofcom.org.uk/research-and-data/data)
	Digital exclusion index rank	The Digital exclusion index is derived from postcode-level data provided by CACI combining information on Broadband speed, Buying online, Managing current accounts online, Mobile phone ownership, Internet usage and People agreeing with the statement "computers confuse me, I will never get used to them". Each indicator is scored between 0 and 1, with higher values meaning greater digital exclusion (e.g. less likely to own a mobile or more likely to have slower broadband). Data is presented as an average LSOA rank across the UK, where a higher value indicates higher digital exclusion (ranked between 1 and 42,616).	CACI via British Red Cross

Environmental Quality	Addresses with private outdoor space	Shows the proportion of addresses with access to private outdoor space (for both houses and flats). Data is based on analysis of Ordnance Survey (OS) data on access to private gardens, public parks and playing fields in Great Britain. Rate calculated as = (Addresses with private outdoor space/(Total addresses)*100	Ordnance Survey https://www.ons.gov.uk/economy/environmentalaccounts/datasets/accesstogardensandpublicgreenspaceingreatbritain
	NO2 concentration	Annual average level of concentration of NO2	London Atmospheric Emissions Inventory (LAEI) 2019
	Greenspace coverage	The percentage of an area that is covered by public parks and gardens. OCSI have intersected OS Greenspaces data with Output Area boundaries to produce a measure of total greenspace area per Output Area. In producing this data, it was apparent that some greenspaces are missing or have been excluded from the Ordnance Survey Greenspace data. If you suspect that your areas are affected by missing greenspace data please get in touch with Ordnance Survey: https://www.ordnancesurvey.co.uk/business-and-government/products/os-open-greenspace.html. Rate calculated as = (Total area of England and Wales public parks and gardens)/(Total OA Area)*100	Ordnance Survey. OS data © Crown copyright and database right 2017
	PM2.5 concentration	Annual average level of concentration of PM2.5	London Atmospheric Emissions Inventory (LAEI) 2019
Health & Wellness	Diabetes prevalence	Shows the estimated percentage of Diabetes prevalence. The estimate is calculated based on the number of people listed on GP registers in 2019/20, and the number of people recorded as having the relevant health conditions. The data from England's GP practices was published by NHS digital. Please note that these are only estimates and that they are sensitive to the accuracy of GP data reporting. Some differences between areas may reflect differences in the way that GP practices operate, measure. and record, rather than genuine differences in prevalence. As the data is for 2019/20, it may be affected by the beginning of the COVID-19 pandemic.	House of Commons Library (https://commonslibrary.parliament.uk/social-policy/health/diseases/constituency-data-how-healthy-is-your-area)
	Asthma prevalence	Shows the estimated percentage of Asthma prevalence. The estimate is calculated based on the number of people listed on GP registers in 2019/20, and the number of people recorded as having the relevant health conditions. The data from England's GP practices was published by NHS digital. Please note that these are only estimates and that they are sensitive to the accuracy of GP data reporting. Some differences between areas may reflect differences in the way that GP practices operate, measure. and record, rather than genuine differences in prevalence. As the data is for 2019/20, it may be affected by the beginning of the COVID-19 pandemic.	House of Commons Library (https://commonslibrary.parliament.uk/social-policy/health/diseases/constituency-data-how-healthy-is-your-area)
	Female healthy life expectancy at birth	Female healthy life expectancy at birth. Healthy life expectancy (HLE) is the average number of years that an individual might expect to live in good health in their lifetime. The 'good' health state used for estimation of HLE was based on self-reports of general health at the 2011 Census; specifically those reporting their general health as 'very good' or 'good' were defined as in 'Good' health in this context. The HLE estimates are a snapshot of the health status of the population, based on self-reported health status and mortality rates for each area in that period. They are not a guide to how long someone will actually expect to live in good health, both because mortality rates and levels of health status are likely to change in the future, and because many of those born in an area will live elsewhere for at least part of their lives.	Office for National Statistics (ONS) (http://www.localhealth.org.uk/)
	Depression prevalence	Shows the estimated percentage of Depression prevalence. The estimate is calculated based on the number of people listed on GP registers in 2019/20, and the number of people recorded as having the relevant health conditions. The data from England's GP practices was published by NHS digital. Please note that these are only estimates and that they are sensitive to the accuracy of GP data reporting. Some differences between areas may reflect differences in the way that GP practices operate, measure. and record, rather than genuine differences in prevalence. As the data is for 2019/20, it may be affected by the beginning of the COVID-19 pandemic.	House of Commons Library (https://commonslibrary.parliament.uk/social-policy/health/diseases/constituency-data-how-healthy-is-your-area)

Opportunity

Access to Advanced Education	Highest level of qualification: Level 4/5 (degree or higher) qualifications	Shows the proportion of adults (aged 16+) with qualification levels at level 4 or higher. The highest level of qualification variable was derived from responses in the 2011 Census to both the educational and vocational qualifications question, and the professional qualifications question. Level 4+ qualifications include Level 4/5: First degree, Higher degree, NVQ levels 4 and 5, HNC, HND, Qualified Teacher status, Qualified Medical Doctor, Qualified Dentist, Qualified Nurse, Midwife, Health Visitor Other qualifications/level unknown: Other qualifications (e.g. City and Guilds, RSA/OCR, BTEC/Edexcel), Other Professional Qualifications. Rate calculated as = (Level 4 qualifications and above (census KS501))/(All usual residents aged 16 and over)*100	Census 2011 https://www.nomisweb.co.uk/census/2011/ks501uk)
	Participation of state school pupils in higher education	Shows the percentage of state school pupils in higher education. The data is recorded as the proportion of the 16 year old state-funded mainstream school pupils in the MSOA who sat their GCSEs in the summer of 2010 to 2014 that were in higher education at the age of 18 or 19. The denominator is the total number of Key Stage 4 pupils living in the MSOA, rounded to the nearest 5. Further information on how TUNDRA is calculated can be found here: https://www.officeforstudents.org.uk/data-and-analysis/young-participation-by-area/about-the-*data- data converted from MSOA to ward level*	Office for Students, ONS
	Participation in higher education	Shows the combined participation rates of those who entered higher education between the academic years 2009-10 and 2013-14 if they entered aged 18, or between 2010-11 and 2014-15 if they entered aged 19 as a proportion of the whole young person population cohort during those years. More information on the geographical classification can be found in the POLAR4 report on the HEFCE website. The numerator in this participation rate calculation is the combined cohort young entrant estimate entering Higher Education aged 18 in 2009-10 and 2013-14 and 19 in 2010-11 and 2014-15 (taken from HESA student records / Individualised Learner Records supplied by the Data Service / FES data provided by the Scottish Funding Council). The denominator is the total combined cohort young population estimate during the same year.	Office for Students (OFS) (https://www.officeforstudents.org.uk/data-and-analysis/polar-participation-of-local-areas/)

Inclusiveness	Community Needs Index: Connectedness score	The Community Needs Connectedness score measures the connectivity to key services, digital infrastructure, isolation and strength of the local jobs market. It looks at whether residents have access to key services, such as health services, within a reasonable travel distance. It considers how good public transport and digital infrastructure are and how strong the local job market is. A higher score indicates that an area has higher levels of community need.	Oxford Consultants for Social Inclusion (OCSI) and Local Trust (https://localtrust.org.uk/insights/research/left-behind-understanding-communities-on-the-edge/)
	Community Needs Index: Active and Engaged Community score	The Community Needs Active and Engaged Community score measures the levels of third sector civic and community activity and barriers to participation and engagement. It shows whether charities are active in the area, and whether people appear to be engaged in the broader civic life of their community. A higher score indicates that an area has higher levels of community need.	Oxford Consultants for Social Inclusion (OCSI) and Local Trust (https://localtrust.org.uk/insights/research/left-behind-understanding-communities-on-the-edge/)
	Loneliness Index – GP Prescriptions for Loneliness	An outcome-based loneliness index using open prescription data. Open prescription data lists medicines, dressings and appliances prescribed by NHS primary care facilities, including General Practices (GPs), each month. Loneliness Index is created by using GP prescription data to find areas with above-average prescriptions for five conditions where loneliness has been shown to be a risk factor: Alzheimer's, depression, high blood pressure, anxiety and insomnia. An index was created for each condition by standardising the proportion of a practices prescriptions that were given for the condition relative to the levels in other practices (into z scores). The index for each condition had a value that was negative if prescribing was lower than typical and positive if it was greater than typical. The loneliness index is generated by summing together these standardised-scores for each condition.	Office for National Statistics' Data Science Campus /NHS /Red Cross https://github.com/matthewgthomas/loneliness/blob/master/README.md
Personal Freedom & Choice	Access to transportation index	Public Transport Accessibility Index (PTALs) was used to calculate an average Access Index for all LSOAs within the same ward- A higher index corresponds to better access to transport	
	People with a limiting long-term illness (aged 16-64)	Shows the proportion of residents aged 16-64 with a limiting long-term illness. Figures are taken from responses to the 2011 Census, based on a self assessment whether or not a person has a limiting long-term illness, health problem or disability which limits their daily activities or the work they can do, including problems that are due to old age. Rate calculated as = (People with a limiting long-term illness aged 16-64)/(Population aged 16 to 64 (Census 2011))*100	Census 2011 (https://www.nomisweb.co.uk/census/2011/ks301uk)
	Youth Unemployment Gap	Gap between the proportion of job seeker allowance and universal credit claimants age 18-24 and the proportion of all job seeker allowance and universal credit claimants aged 16-64	Department for Work and Pensions (DWP) (https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=72)
Personal rights	Public order offences	Shows 12 month total of neighbourhood-level incidents of public order offences, and as a rate per 1,000 residents. The incidents were located to the point at which they occurred and allocated to the appropriate output area and lower super output area (LSOA). Rate calculated as = (Public order offences)/(Total population)*1000	Police UK (Police recorded crime figures) (https://data.police.uk/)
	Racially aggravated crime	Number of public offences classified as "Racially or religiously aggravated public fear" per 1000 population	https://data.london.gov.uk/dataset/recorded_crime_summary
	Voter Turnout at Local Elections	Shows the valid voter turnout (%) at the most recent Local Council Election (held between 2016 and 2019). There is some local variation in the frequency and date of Local Elections, with different parts of the country going to the polls at different times and with different levels of regularity. Caution should therefore be advised when drawing direct comparisons between local areas, as the socio-political context varies from year to year with associated impacts on turnout rates. Another factor affecting turnout is whether the local election is concurrent with other elections (for example turnout is generally higher when General Elections coincide with Local Elections). Frequency can also have an impact on turnout with a risk of electoral fatigue in areas required to re-elect councillors on an annual basis.	Electoral Commission (https://www.electoralcommission.org.uk/our-work/our-research/electoral-data)

Impact on Urban Health

Annex 3: Data Availability

Dimension/component	Indicator Name	Year
Basic Human Needs		
Nutrition & Basic Medical Care	Deaths under 75, all causes	2015-2019
	Low birth weight	2011-2015
	Obesity in children- Reception	2017/18 - 19/20
	Obesity in children- Year 6	2017/18 - 19/20
Personal Safety	Burglary	Mar-21 to Feb-22
	Drug crime	Mar-21 to Feb-22
	Weapon possession	Mar-21 to Feb-22
	Road accident casualty rate	2018
Shelter	Energy efficiency	2017-2021
	Households in Fuel Poverty	2020
	Vacant Dwellings	2017
Water & Sanitation	Food hygiene inspection ratings- improvement needed	2021
	Households overcrowding score	2011
	Houses in poor condition score	2015
Foundations of Wellbeing		
Access to Basic Knowledge	Adult skills and English language proficiency	2011
	Persistent absentees pupils	2013/14
	Pupils achieving a good level of development at Early Years Foundation stage	2013/14
	Pupils achieving Key Stage 2, Level 4 in Reading, Writing and Maths	2013/14
	Pupils at the end of Key Stage 4 (GCSE) achieving the Basics	2013/14
Access to Information & Communications	Broadband speed	Jun-20
	Broadband data useage	Jun-20
	Digital exclusion index rank	2020

Environmental Quality	Addresses with private outdoor space	2020
	NO2 concentration	2019
	Greenspace coverage	2017
	PM2.5 concentration	2019
Health & Wellness	Diabetes prevalence	2019/20
	Asthma prevalence	2019/20
	Female healthy life expectancy at birth	2009-2013
	Depression prevalence	2019/20
Opportunity		
Access to Advanced Education	Highest level of qualification: Level 4/5 (degree or higher) qualifications	2011
	Participation of state school pupils in higher education	2012-13 to 2017-18
	Participation in higher education	2009/10 to 2013/14 - 2010/11 to 2014/15
Inclusiveness	Community Needs Index: Connectedness score	2019
	Community Needs Index: Active and Engaged Community score	2019
	Loneliness Index – GP Prescriptions for Loneliness	2019
Personal Freedom & Choice	Access to transportation index	2015
	People with a limiting long-term illness (aged 16-64)	2011
	Youth Unemployment Gap	Apr-22
Personal rights	Public order offences	Mar-21 to Feb-22
	Racially aggravated crime	Mar 2020- Feb 2022
	Voter Turnout at Local Elections	2016-2019

Annex 4: Weighting

Dimension / Component	Indicator Name	Weight
Basic Human Needs		
Nutrition & Basic Medical Care	Deaths under 75, all causes	0.26
	Low birth weight	0.24
	Obese children in reception year	0.25
	Obese children in year 6	0.26
Water & Sanitation	IoD 2019 Household overcrowding indicator	0.33
	Food hygiene inspection ratings - % improvement needed	0.36
	IoD 2019 Housing in poor condition indicator	0.31
Shelter	Current average energy efficiency of domestic buildings	0.31
	Households in Fuel Poverty	0.35
	Percentage of all dwellings that are vacant (excluding second homes and holiday homes)	0.34
Personal Safety	Burglary	0.27
	Drug crime offences	0.27
	Possession of weapons offences	0.27
	Road accident casualty rate 2018	0.20
Foundations of Wellbeing		
Access to Basic Knowledge	IoD 2019 Adult skills and English language proficiency indicator	0.19
	Pupil persistent absentees	0.20
	Pupils achieving a good level of development at Early Years Foundation stage	0.20
	Pupils at the end of Key Stage 4 (GCSE) achieving the Basics	0.20
	Pupils achieving Key Stage 2, Level 4 in Reading, Writing and Maths	0.21
Access to Information & Communications	Broadband speed	0.27
	Broadband data useage	0.22
	Digital exclusion index rank	0.30
	Premises with broadband speeds below the Universal Service Obligation (USO)	0.21
Health & Wellness	Diabetes prevalence	0.25
	Asthma prevalence	0.26
	Female healthy life expectancy at birth	0.26
	Depression prevalence	0.23
Environmental Quality	Addresses with private outdoor space	0.20
	NO2	0.28
	PM2.5	0.27
	Greenspace coverage, total	0.24
Opportunity		
Personal Rights	Public order offences	0.36
	Racially Aggravated Crime	0.29
	Voter Turnout at Local Elections	0.35
Personal Freedom & Choice	Access to transportation	0.30
	People with a limiting long-term illness (aged 16-64)	0.34
	Youth Unemplyment Gap	0.36
Inclusiveness	Community Needs Index: Connectedness score	0.34
	Community Needs Index: Community Needs score	0.32
	Loneliness Index	0.34
Access to Advanced Education	Highest level of qualification: Level 4/5 (degree or higher) qualifications	0.33
	Participation of state school pupils in higher education	0.34
	Participation in higher education (Proportion of a young cohort that has entered higher education by age 19)	0.33

Annex 5: High and Low Scores

Dimension / Component	Indicator Name	Best Case	Worst Case
Basic Human Needs			
Nutrition & Basic Medical Care	Deaths under 75, all causes	25.1000	303.7000
	Low birth weight	0.4000	11.9000
	Obese children in reception year	0.0000	33.3000
	Obese children in year 6	9.5000	56.1000
Water & Sanitation	IoD 2019 Household overcrowding indicator	0.0100	0.7050
	Food hygiene inspection ratings - % improvement needed	0.0000	31.9019
	IoD 2019 Housing in poor condition indicator	0.0220	0.7820
Shelter	Current average energy efficiency of domestic buildings	87.8800	39.6100
	Households in Fuel Poverty	1.8000	60.2000
	Percentage of all dwellings that are vacant (excluding second homes and holiday homes)	0.0000	65.4300
Personal Safety	Burglary	0.0000	203.4000
	Drug crime offences	0.0000	306.8000
	Possession of weapons offences	0.0000	62.3000
	Road accident casualty rate 2018	0.0000	14.5000
Foundations of Wellbeing			
Access to Basic Knowledge	IoD 2019 Adult skills and English language proficiency indicator	0.0310	0.7540
	Pupil persistent absentees	0.0000	26.2000
	Pupils achieving a good level of development at Early Years Foundation stage	100.0000	0.0000
	Pupils at the end of Key Stage 4 (GCSE) achieving the Basics	100.0000	0.0000
	Pupils achieving Key Stage 2, Level 4 in Reading, Writing and Maths	100.0000	0.0000
Access to Information & Communications	Broadband speed	741.8500	1.6400
	Broadband data useage	1.1600	0.0000
	Digital exclusion index rank	0.0000	22847.0633
	Premises with broadband speeds below the Universal Service Obligation (USO)	0.0000	83.7000
Health & Wellness	Diabetes prevalence	1.2000	15.0000
	Asthma prevalence	2.2000	10.7000
	Female healthy life expectancy at birth	78.0000	46.0000
	Depression prevalence	3.4000	27.0000
Environmental Quality	Addresses with private outdoor space	100.0000	2.4100
	NO2	23.6088	41.9417
	PM2.5	10.0524	13.1405
	Greenspace coverage, total	92.7200	0.0000
Opportunity			
Personal Rights	Public order offences	0.0000	299.2000
	Racially Aggravated Crime	0.0000	10.6983
	Voter Turnout at Local Elections	99.7700	0.0000
Personal Freedom & Choice	Access to transportation	100.0000	0.0000
	People with a limiting long-term illness (aged 16-64)	1.3000	42.5000
	Youth Unemplyment Gap	0.0000	9.5869
Inclusiveness	Community Needs Index: Connectedness score	0.0100	99.8300
	Community Needs Index: Community Needs score	4.7500	229.0100
	Loneliness Index	-5.3000	25.9200
Access to Advanced Education	Highest level of qualification: Level 4/5 (degree or higher) qualifications	83.8000	3.3000
	Participation of state school pupils in higher education	100.0000	0.0000
	Participation in higher education (Proportion of a young cohort that has entered higher education by age 19)	100.0000	0.0000