

# Reaching Tree Equity: how can trees help 'level up' our cities?

*"We often talk about "levelling up" as an issue of north vs. south. Wealth and jobs are heavily concentrated in the southeast of England, and the health and educational outcomes correspond accordingly. We might focus on the different opportunities available in Oxford and Glasgow, for example, but it's also true that there are vast differences within these regions, and even within a single city."*

**Vicki Brown, Centre for Sustainable Healthcare**

As the UK Government's **Levelling Up policy paper**<sup>1</sup> states, "These disparities are often larger within towns, counties or regions than between them. They are hyper-local and pockets of affluence and deprivation may exist in the same district. Indeed, many of the worst areas of deprivation are found in the UK's most successful cities."

This imbalance is visible to anyone wandering around a British city centre, where crumbling council estates back onto affluent avenues, and high rises loom over sprawling, gated mansions. Data maps reveal other divisions, too – as health outcomes, air quality and income

levels within these areas correlate closely with the provision of publicly accessible green space.

This is, perhaps, no surprise; mature trees and public parks are all too often viewed as luxuries, in much the same way as we view private gardens. These are features associated with wealthy neighbourhoods, not poor ones: they are something to aspire to. The problem with this mindset is that trees and nature are not just "nice to have" – they are key to breaking down health inequalities. A 2008 study revealed that where people have greater access to green space, income-related health inequalities are narrower.<sup>11</sup>

The message is clear: we need to start thinking about trees as critical infrastructure, not just street decoration.

## Calculating tree equity

Until now, there have been no publicly available tools to help us understand the relationship between tree canopy cover and deprivation in the UK. But a new partnership between the Centre for Sustainable Healthcare, the Woodland Trust and American Forests is set to change that.

American Forests, a US non-profit organisation, has been analysing the relationship between tree canopy cover and the factors contributing to inequality in major American cities to calculate the level of tree equity in each neighbourhood. This evaluates metrics such as existing tree canopy, income, population density, surface temperature and race, to create a Tree Equity Score<sup>11</sup> of between 0 and 100. This score uses a scientific approach to determine the tree canopy cover needed for everyone to experience the health, economic and

climate benefits that trees can provide.

The organisation is now bringing this tool, and the associated datasets, to the UK, enabling trees to be planted in a highly strategic way.

Given the existing imbalances, it is evident that not all trees are equal. Those planted in a street with no trees, with high levels of air pollution, increased surface temperatures, and where few residents have private gardens, can have a much greater impact on public health than trees planted in an already leafy suburb. Trees can create better places for people to live and work, and the greatest benefits are to be found in the greyest areas.

## The potential of the NHS estate

It can be complicated to secure land where trees can be planted in highly built-up areas. The land needs to be available now – and safe from development well into the future. It needs to be managed; young trees need frequent watering and mulching, and more established trees need pruning and checking for disease and damage.





<sup>i</sup> <https://www.gov.uk/government/publications/levelling-up-the-united-kingdom/levelling-up-the-united-kingdom-executive-summary>

<sup>ii</sup> Effect of exposure to natural environment on health inequalities: an observational population study, Dr Richard Mitchell, PhD and Frank Popham, PhD

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<sup>iii</sup> <https://www.americanforests.org/our-programs/tree-equity/>

<sup>iv</sup> <https://www.who.int/europe/news/item/07-11-2022-statement-climate-change-is-already-killing-us-but-strong-action-now-can-prevent-more-deaths>

<sup>v</sup> <https://committees.parliament.uk/committee/67/environmental-audit-committee/news/100427/heat-related-deaths-set-to-treble-by-2050-unless-govt-acts/#:-:text=Prediction%20that%20higher%20temperatures%20which,matter%20of%20life%20and%20death.&text=The%20Environmental%20Audit%20Committee%20publishes,%3A%20adapting%20to%20climate%20change>

<sup>vi</sup> <https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health>

<sup>vii</sup> <https://www.gov.uk/government/publications/levelling-up-the-united-kingdom/levelling-up-the-united-kingdom-executive-summary>

This is where the Centre for Sustainable Healthcare (CSH) comes in. Through its NHS Forest initiative, CSH supports healthcare sites to expand and enhance their green estate – particularly through planting trees. Hospitals and GP surgeries are often located in or near to densely populated areas, and they are open to all, regardless of age, income, employment status and race. They are, of course, frequently visited by those with chronic health conditions, whether mental or physical. There is a great potential to combat existing inequalities through planting trees on the NHS estate, through lower temperatures, cleaner air, and access to resilient green space.

### Trees for climate justice

During the heatwave-ravaged summer of 2022, the UK saw a high number of excess deaths, with mortality peaking when the temperatures did. Across Europe, the WHO estimates that there were at least 15,000 deaths<sup>iv</sup> specifically due to heat, with more than 3,200 in the UK alone. By 2050, it is anticipated that this number could more than double to 7,000<sup>v</sup> if action is not taken. Trees play a crucial role in lowering surface temperatures, and they are more prevalent in wealthier, whiter neighbourhoods. In addition, air pollution is responsible for an

estimated 28,000–36,000 deaths<sup>vi</sup> every year in the UK, with more deprived communities and ethnic minorities more likely to live in highly polluted areas.

These communities will therefore be disproportionately affected by rising temperatures, and tree planting is urgently needed in the spaces where they live.

The government's Levelling Up agenda pledges to protect health and wellbeing, to reduce the gap in healthy life expectancy, and to improve wellbeing. As noted in its Levelling Up paper,<sup>vii</sup> "One of the gravest inequalities faced by our most disadvantaged communities is poor health."

Planting urban trees seems like an easy win in terms of tackling these health inequalities – especially with the data to ensure those trees are situated where they will bring the greatest benefits. Joining the dots between these socioeconomic, health and environmental datasets will enable us to do just that: striving for Tree Equity across our diverse cities.

Find out more about the NHS Forest and the wider benefits of tree planting on healthcare sites at [www.nhsforest.org](http://www.nhsforest.org)

