URBAN TREES AND FORESTS

Our views on creating, protecting and restoring urban forests for people and nature

Position statement

WOODLAND TRUST

January 2025

Contents

> “ Trees are beautiful and majestic things living in our cities... They are critical green infrastructure that millions of people rely on and use every day, often without realising it”

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What is the urban forest?

Towns and cities are home to 83% of the UK's population and a complex array of habitats and greenspaces exist within them. Trees form a keystone habitat in urban areas - whether woodlands, groups of trees or individual trees and shrubs. These trees, and the habitats that surround them, are sometimes known as the 'urban forest'. They have a massive impact on quality of life for millions of people. The urban forest includes plants, fungi, animals and even soils.

In the UK, urban forests include a diverse range of habitats and species – from ancient woods to street trees and trees in parks and gardens - and everything in between. Around 10% of ancient woodland in the UK sits within or close to urban areas. Younger secondary woodlands can be found dotted between housing developments, business parks, shopping centres, and road and rail routes. Many urban woodlands have regenerated on old industrial sites. The mature trees that line our streets and parks are the result of urban planning decisions made years, sometimes centuries ago. Hedges, groups of trees and individual trees grow everywhere that people have made space for them.

The definition of 'urban' varies globally and even between different country governments of the UK. The Office for National Statistics (ONS) defines an urban area in the UK as a built-up area with a population of at least 10,000 people.

Value of urban forests

Trees are beautiful and majestic living things in our cities, bringing delight to residents at different times of the year. And, yes, sometimes inconvenience. Urban trees are critical green infrastructure that millions of people rely on and use every day – often without realising it. They provide many benefits to people and nature – helping to improve local air quality[1], aiding physical and mental health[2], reducing the impact of flooding[3], providing cooling[4], visual screening, shade[5] and vital habitat for wildlife[6].

The value of urban forests is recognised in numerous studies both in the UK and internationally. They demonstrate that trees are crucial for mitigating and adapting to the impacts of climate change and improving public health. For example, reducing urban heat[7], stabilising blood pressure and easing anxiety and depression[8]. Forest Research estimates that the long-term mental health benefits of street trees alone in the UK are valued at £1 billion[9].

PHIL FORMBY/WTML

Well-managed urban trees and forests bring many benefits to people and nature. This photo shows community forestry volunteers with Birmingham Tree People.

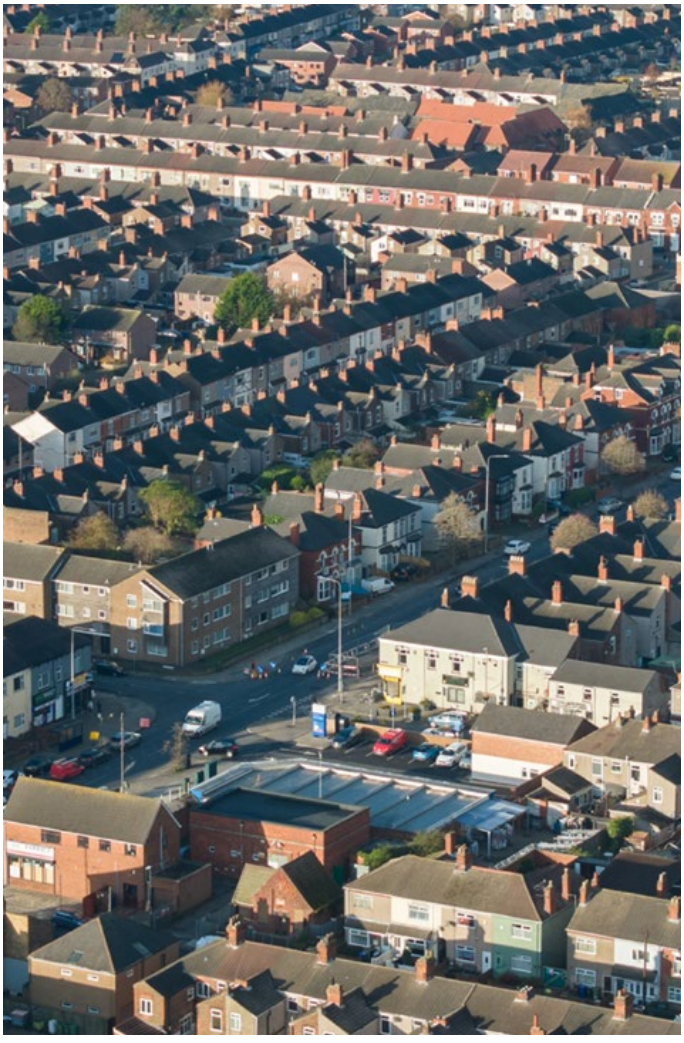
Urban tree canopy cover

Urban tree canopy cover is a measure expressing the percentage of ground in an urban area considered to be covered by the leaves, branches and stems of trees. It is an indicator of the presence of trees and a simple way to measure their benefits to people and nature. Levels of canopy cover vary between towns and cities and often between neighbourhoods within them – sometimes drastically. Average UK urban tree canopy cover, measured at the council ward level, is 17.3% as calculated in a citizen science survey led by Forest Research and supported by the Woodland Trust. Approximately one quarter of wards have canopy cover exceeding 20%[10].

Tree equity

Tree equity is the process of ensuring that everyone has access to the benefits of trees. It also includes prioritising and deploying resources in the areas where people have least access to them.

Disparities in tree equity exist in most UK towns and cities. On average, the most economically and socially deprived and most ethnically diverse neighbourhoods have half the tree canopy cover compared to the least deprived and least diverse neighbourhoods[11]. Canopy cover ranges from 1–2% in parts of north-east England to 36% in Hampstead, north London. Neighbourhoods where tree canopy cover is highest also have less air pollution and are cooler during heatwaves.



JAMES READER/WTML

(Left) A neighbourhood with 23% tree canopy cover in Sheffield. (Right) A neighbourhood with 6% tree canopy cover in Grimsby. Taken in October 2023.

LAURIE CAMPBELL/WTML

Deans Wood - one of several hundred accessible urban woodlands that we own and manage.

In 2023, we partnered with American Forests and the Centre for Sustainable Healthcare to launch Tree Equity Score UK. This mapping tool measures equitable access to urban trees and can help to identify priority areas for increasing urban tree cover. We will support local authorities and communities to utilise Tree Equity Score UK, to make the case for increasing tree canopy cover where it is most needed to improve climate change resilience and public health in urban areas. To reduce the inequalities in access to urban trees, we believe the UK is in urgent need of policies and actions which protect existing trees and promote the establishment of more trees in areas which are a high priority for tree equity.

Recent guidance on sustainable urban and peri-urban forestry published by the United Nations states that: 'Environmental equity in terms of the fair and equal distribution of the benefits should be part of any urban forestry programme, as called for in Sustainable Development Goals.'[12]

Towns and cities need the resources to create and maintain bigger, better and more equitable urban forests for people and nature. In practice this means a diversity of habitats within urban areas, with open areas of green space as well as trees in varying densities across the city. A long term aim should be for all urban communities to have at least 30% canopy cover as part of the 3+30+300 rule promoted by the International Union for Nature Conservation (IUCN). The rule indicates that every resident should be able to see at least three mature trees from where they live and work, enjoy at least 30% tree canopy cover at the neighbourhood level and be no more than 300m from a publicly accessible green space.[13]

Nature recovery

Green space within urban areas can support a surprising richness of wildlife. Many species of woodland plants, ferns, fungi and invertebrates can all be found in urban forests alongside bats, foxes, badgers and hedgehogs. Twenty-seven bird species are considered urban specialists including several, such as blackcap, greenfinch, song thrush and dunnock, that depend on trees and shrubs for nest sites, shelter or food.

Good ecological condition is strongly associated with resilience and underpins the benefits of the urban forest for people and nature[14]. The component parts of a woodland ecosystem (for example: the ground layer, shrubs, trees, ponds and glades) may all be present in the urban forest, but with a different spatial arrangement to rural woods and trees.

Well-designed tree and shrub planting can greatly enhance the structural complexity of the urban forest, providing a mix of tree age classes, dense scrub and open grown trees. Tree planting can be combined with 'understorey' like shrubs and rain gardens to create structural complexity. Structural complexity is a key indicator of the quality of a woodland habitat. Other indicators can be applied to the urban forest too, including plant communities, decaying wood habitat, absence of invasive plants and tree diseases.

Sometimes, trees in urban areas can live long enough to become veteran or ancient trees. Ancient and veteran trees are irreplaceable keystone features in the urban forest, supporting a healthy ecosystem and acting as critical refugia for biodiversity.

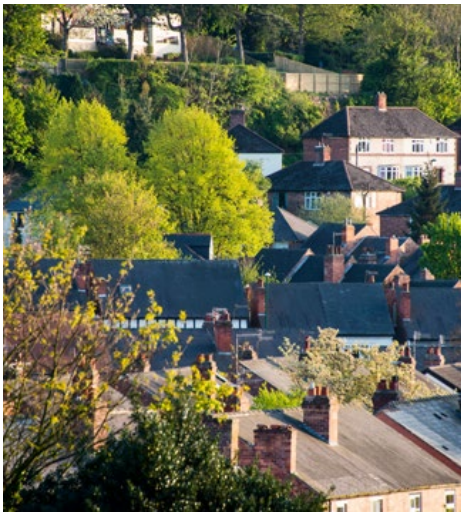
JILL JENNINGSWTML

The Allerton Oak in Calderstones Park, Liverpool. Thought to be around 1,000 years old, this is one of the most ancient urban trees in the UK.

Managing the urban forest

A number of towns and cities have developed tree strategies and urban forest plans to enable systematic and integrated management of all urban trees and woods. One challenge that any urban forest plan has to navigate is fragmented ownership of land – and of woods and trees. Securing sufficient above and below ground space for trees is a challenge faced by every local authority. Two thirds of all urban trees and shrubs in England are on private property (mainly gardens) or on less accessible public land (for example: schools, churchyards and allotments), 20% are in public parks and open space and 12% are street or highway trees (CITE, 2008)[15]. A 2014 survey[16] of trees in London showed a similar pattern. This also showed that publicly owned trees (which make up 40% of London's trees) contribute the majority (60%) of the ecosystem services. This is due to the high number of mature, large canopy trees in public ownership.

Protecting and retaining large canopy urban trees is vital for the provision of ecosystem services to urban residents. Urban trees require a higher level of management intervention than trees in rural areas due to their proximity to people and urban infrastructure. Professional arboriculturists do this work by managing trees for a range of landowners including local authorities, charities, environmental groups and individual homeowners. Management can help to ensure that mature trees live to an old age and maintain the large canopies that deliver the most benefits.



PHILIP FORMBY/WTML

Urban treescape, Nottingham.

Local authorities are the biggest owner and manager of trees in urban forests, but every land (and tree) owner has legal obligations which relate to trees and public safety. Tree officers and urban woodland managers have to balance a range of objectives, including public access, safety, and management for nature recovery. According to local authority tree officers, the primary management objective for urban forests is risk management, with half as many saying it is to increase canopy cover[17] (Davies et al 2017). In some cities, not-for-profit organisations have been set up to work alongside local authorities to plant trees in urban areas. The planting of urban trees to increase tree canopy cover is not yet a statutory obligation, despite the contribution urban forests make to public health and climate resilience.

Urban trees can create disbenefits for people and responses to these can threaten urban trees. These disbenefits include allergic reactions to tree pollen, structural damage to built infrastructure from roots, and the production of Volatile Organic Compounds (VOCs). VOCs can contribute to the formation of smog and ozone which have negative health impacts. Most trees near buildings don't cause any damage, but in some cases, tree roots can be linked to subsidence. Insurance claims relating to subsidence and damage from tree roots can be a major cause of tree removals, particularly in areas with clay soils. Shading, whilst generally providing benefits, can in some circumstances be a disbenefit. These kinds of issues alongside others like leaf litter, mess from birds roosting and nesting, and the perception of crime in woodlands can result in negative perceptions by some members of the public. These disbenefits and negative perceptions can be minimised through good design, choice of tree species and effective management.

Threats

Urban trees are affected by a growing list of interacting stressors which can put great pressure on the growing space above and below ground. These include the availability of water, compacted soils, restricted root space, damage to roots, pollutants and pests and diseases. Ancient and veteran trees are particularly important in urban areas and must be protected from these threats, which can be compounded by poor-quality planting, establishment and management techniques. A lack of skilled arboriculturists to plant and care for urban trees is another urgent threat faced by all urban forests. Most urban trees are under threat due to climate change[18]. Development is a constant threat to urban trees and there are numerous examples of community campaign groups having to take extreme measures, sometimes risking arrest, to safeguard notable trees. The loss of mature urban trees to development can't be easily compensated by new planting, but losses of trees occur regularly for a variety of reasons, both avoidable and, sometimes, unavoidable. Between 2006 and 2013, 7,000 mature trees were lost in towns and cities in Wales alone[19].

ADAM CORMACK/WTML

A protest against the proposed felling of urban trees in Newark, to make way for a car park extension. The trees were saved.

Urban woodlands must tolerate high levels of recreational use and anti-social behaviour as well as incidents of illegal felling, arson, pollution and pressures from surrounding development. They are especially vulnerable to the spread of invasive non-native plants due to the dumping of garden waste and the proximity of woodland habitats to gardens.

Fragments of ancient woodland exist in urban areas but are often not recorded on ancient woodland inventories due to their small size. These areas are particularly vulnerable and, wherever possible, urban woodlands should be expanded and linked to other surrounding habitats to improve their value for wildlife.

Public attitudes and community involvement

Most people living in urban areas believe that trees make them a better place to live[20]. The Covid-19 pandemic highlighted the value of nearby trees and green space, and people's connection with urban trees increased during the pandemic's social and travel restrictions[20]. A significant proportion of urban residents have indicated a willingness to participate in tree care[20], but this requires coordination and public engagement that is lacking in many areas, largely due to a lack of staff capacity in local authorities.

Major efforts to involve communities in urban forestry date back to the 1970s and include the creation of NGOs like Trees for Cities, the Community Forests, city-wide tree planting campaigns, community tree nurseries and day-to-day consultations with residents by tree officers. Charities like the Woodland Trust also involve local communities with management of urban woodlands. High profile protests about the felling of urban trees have underlined the importance of involving communities in decisions about urban tree management, but cuts to local authorities have compromised their ability to do this. A few local authorities employ staff in community forestry roles to undertake this type of public engagement work alongside tree planting.

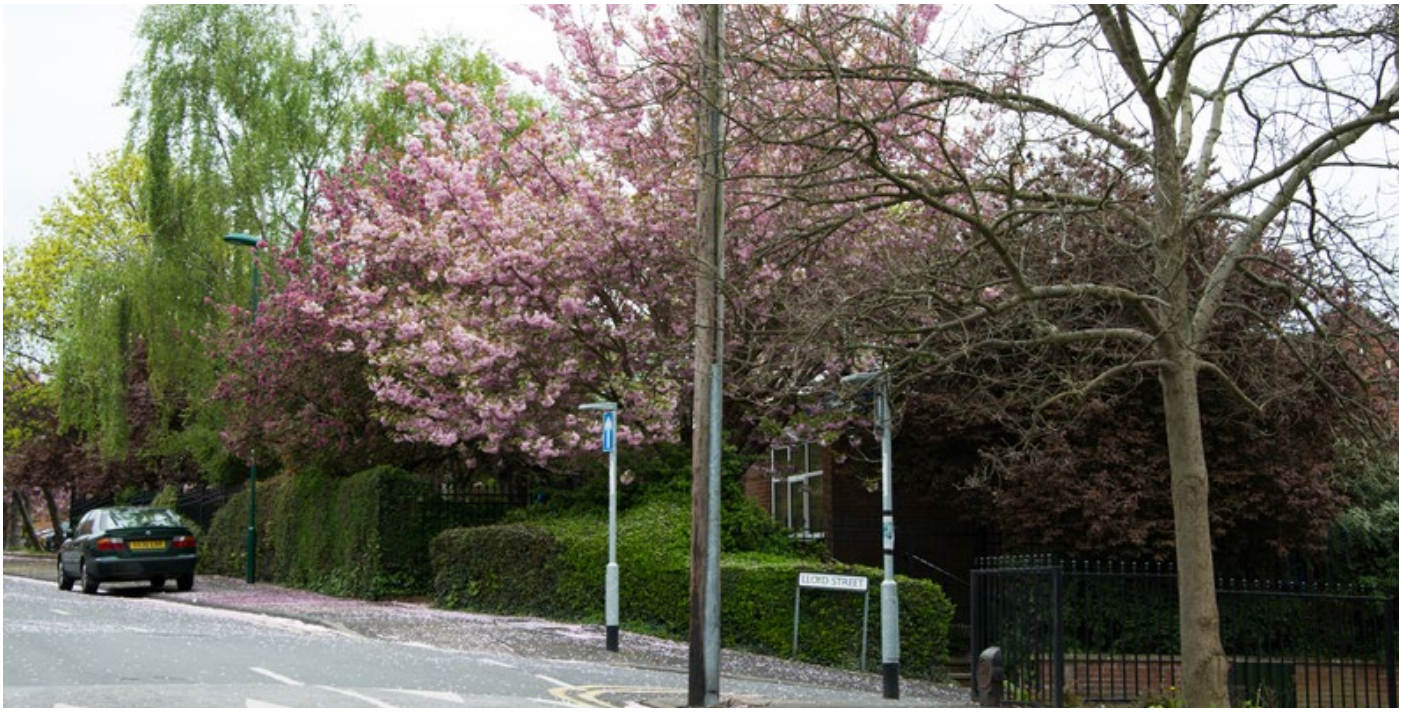
Species choice

Urban forests are diverse. They contain a mix of native and non-native tree species that reflect both the local natural environment and centuries of decisions made by people about planting trees. Space for trees is limited in towns and cities and species selection should be based on what is appropriate for the objectives and the local environmental conditions.

Native tree species have co-evolved with many other species and are key for enhancing nature recovery within urban settings. Incorporating them into urban environments is to be encouraged wherever appropriate, especially where urban woodlands are being created. Non-native species have been planted in urban areas for centuries and also provide many services and benefits, including flowers for pollinators and shade for people. They can be more appropriate for some non-woodland settings like streets.

Where species are selected, care must be taken that they are the most appropriate tree species for the planting area. Make sure that non-native species do not have the potential to become invasive and cause harm to nearby semi-natural habitats like ancient woodland, or be vectors of pests and diseases[21]. Resilience against tree disease and harsh growing conditions is critical, so promoting diversity through a mix of species and genetic diversity should be a guiding principle.

We ensure that every tree we sell, plant or fund is sourced and grown in the UK or Ireland. Our UK and Ireland Sourced and Grown (UKISG) scheme is the most reliable source of these trees. This is an audited standard that ensures the trees origin, thereby reducing the likelihood of importing tree pests like oak processionary moth, or disease. An increasing number of nurseries are now supplying UKISG trees, including larger standard trees. To minimise the risk of importing tree pests and diseases, only trees that have been sourced and grown in the UK or Ireland should be planted and we encourage purchasers to specify UKISG accreditation when buying trees. To boost availability, government should ramp up investment in domestically sourced and grown urban trees, supported by skills training to create sustainable jobs.



PHIL FORMBY/WTML

Urban treescape, Nottingham.

Our commitment

On our estate

1. We will continue to care for urban woodlands, managing them for the benefit of people and wildlife. Around a third (more than 300) of the Trust's woods are within urban areas, with concentrations in north-west England and central Scotland.

Local authorities and communities

2. We will increase the proportion of free trees we supply to schools and communities in high priority areas for tree equity. From 2021–23, we provided nearly 3.5 million free trees to schools and communities. The majority of these were planted in urban areas.
3. We will support local authorities and communities with efforts to manage and expand urban forests.
4. We will support local authorities and communities to utilise the Tree Equity Score UK map, to make the case for increasing tree canopy cover where it is most needed to improve climate change resilience and public health in urban areas.

Since 2020, we've supported and funded local authorities across the UK to create new woodlands and increase urban tree canopy cover through the Emergency Tree Fund. This has provided over £6 million, including supporting urban forestry roles in local authorities and the development of urban forestry strategies.

Advocacy

5. We will continue to advocate for the protection of all woods and trees, but especially ancient and veteran trees and woodlands in urban areas.
6. We will advocate for the use of UKISG trees to reduce the risk of pests and diseases. Mature and semi-mature trees are available through our UKISG scheme and we will explore ways to expand this supply. Additionally, we will support community tree-growing projects aligned with UKISG principles, helping them achieve UKISG assurance where suitable.
7. We will advocate for and promote the development and implementation of national and local policies to expand and care for urban forests and trees and their wildlife, and to reduce urban inequalities.
8. We will advocate for sufficient resourcing from the public and private sectors to enable the delivery and maintenance of tree equity for people living in towns and cities, including new housing developments and villages.

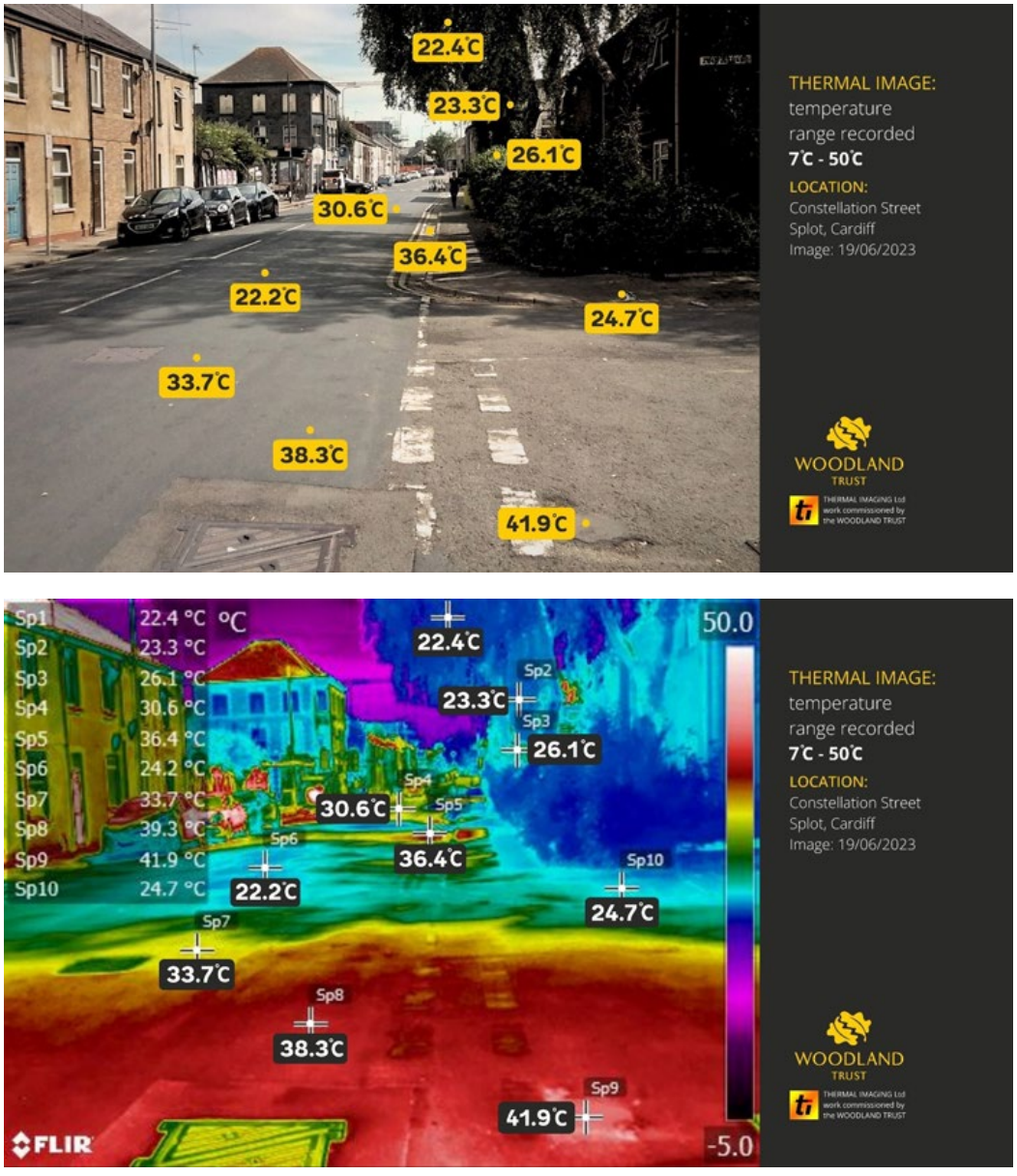
More equitable distribution of urban tree canopy cover will deliver greater mitigation of escalating climate extremes, like prolonged heat and increasingly unpredictable heavy rainfall. Trees can mitigate these public purse cost impacts too. At the same time, they will provide better infrastructure for local residents' mental and physical health.

Communications and partnerships

9. We will promote the benefits of urban trees and raise awareness of the importance of tree equity to help address inequalities in towns and cities.
10. We will continue to work in partnership with local authorities, charities and community groups and support individual residents with their efforts to create bigger, better and more equitable urban forests.

Evidence

11. We will continue to update the Ancient Tree Inventory and develop evidence of the value of ancient trees in urban areas.
12. We will, together with our partners American Forests and the Centre for Sustainable Healthcare, maintain the Tree Equity Score UK tool, a national standard for equitable urban tree cover in Scotland, England, Wales, and Northern Ireland. The tool uses tree canopy data from Google and other datasets relating to heat, air pollution, health and socio-economics and will be updated periodically.



In the shade of an urban tree the temperature difference is almost 20C lower compared to direct sunlight. Thermal imaging captured by Thermal Imaging Ltd during a heatwave in 2023 in Adamstown, Cardiff - a high priority area for increasing tree equity.

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