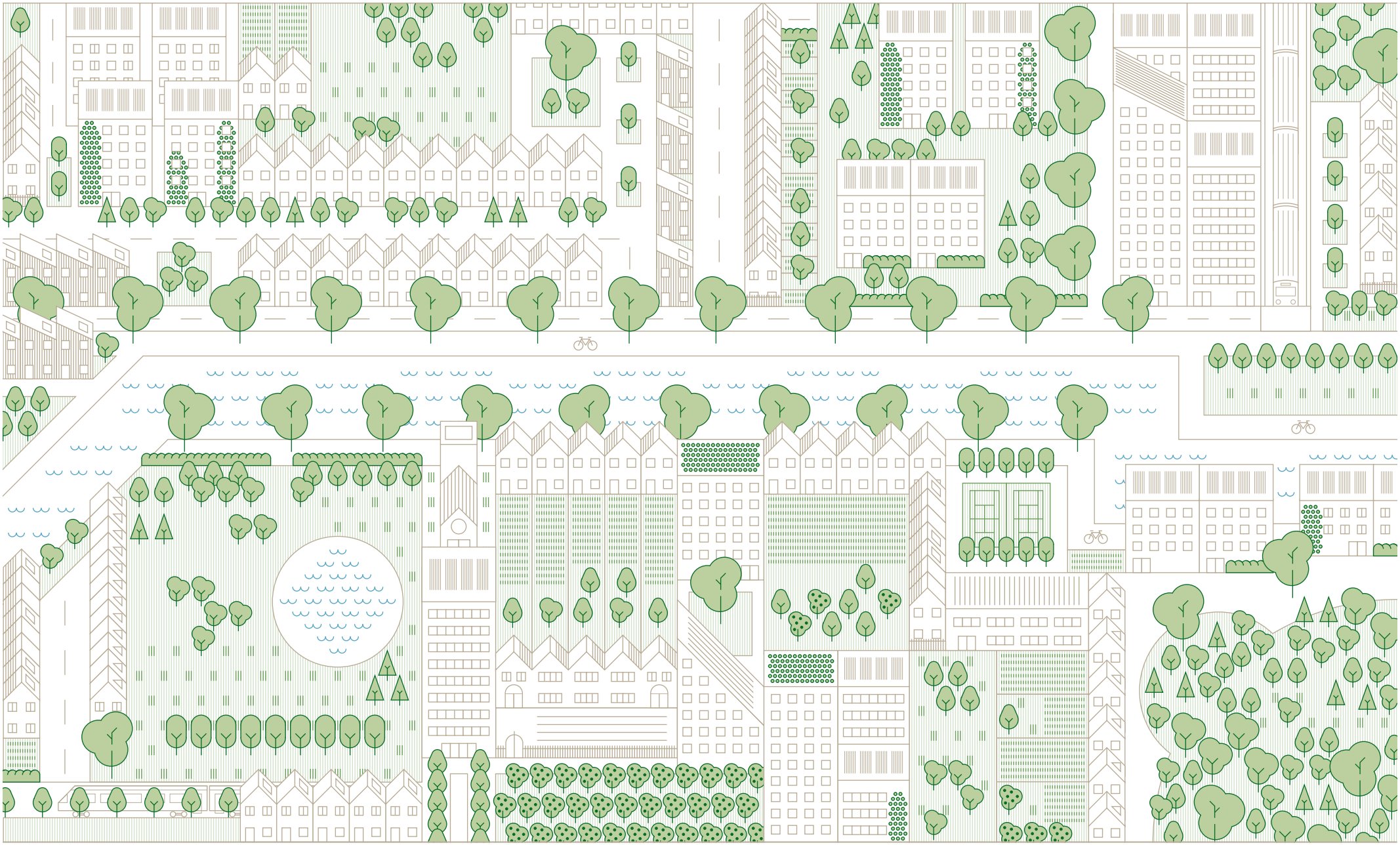
London Urban Forest Plan

Working together to protect, grow and enhance London's urban forest

November 2020



This plan was published in November 2020. It will be periodically reviewed and updated by the London Urban Forest Partnership.

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Partnership members

The London Urban Forest Partnership

The London Urban Forest Partnership comprises organisations with a strategic interest in the capital's trees and woodlands working together to:

- protect, manage and enhance London's existing urban forest
- promote, support and implement good practice in the management of London's urban forest to ensure its long-term resilience
- increase the area of London under tree canopy
- improve the understanding of the value of London's urban forest through better data provision and dissemination of information
- increase engagement and involvement with London's urban forest for all Londoners
- ensure decision-makers support and value London's urban forest and invest in its long-term protection, management and enhancement.

1. Foreword

London is a green city. Our trees and woodlands are a major contributory factor; much of the capital lies beneath the canopy of trees. This 'urban forest' is just one of the reasons why London was confirmed as the world's first National Park City in July 2019.

Left:
A view of London's urban forest from Norwood Park.
© London Wildlife Trust

However, we must not take our urban forest for granted. It is comprised of an array of different elements. Many of the most magnificent trees in London's streets and parks are legacies of planting by city planners going back to the early 1800s. More recently, a growing environmental awareness has led to a blossoming of urban orchards and community woodlands, planted and cared for by local groups from all of London's diverse communities. Within its boundaries the city also has fantastic natural ancient woodlands from the extensive Epping Forest in north-east London to the remaining fragments of the Great North Wood in south London, echoed in place names such as Forest Hill and Norwood.

London's canopy cover, the amount of ground covered by trees when looking from above, may be higher than the England average of around 16%,[1] but we should aim to protect and expand it because of the many benefits trees bring; from providing habitats for wildlife, and shading and cooling our streets; to improving our wellbeing and mental health, and helping to tackle air pollution and adapt to climate change; there are many reasons to appreciate and value our urban forest.

Recently the urgent need to plant more trees to help tackle the climate emergency and the ecological crisis has risen up the national political agenda. The role of trees and woodlands in supporting Londoners' health and wellbeing during the Covid-19 pandemic lockdowns has also highlighted their value and there's growing interest from businesses and the public, keen to get involved.

We need to harness this interest and make the most of this opportunity to help manage, grow and support London's urban forest. The act of planting a tree or giving time and space for woodlands to naturally generate can be simple. However, to scale this up, ensure that new trees thrive and to look after our existing urban forest, requires resources and co-ordinated action. We need a planned and strategic approach.

One of London's other assets is the diversity of organisations involved in looking after the capital's trees and woodlands. Many of these organisations are members of the London Urban Forest Partnership, who have collaborated on and endorsed this plan.

This plan sets out priorities for action for London's urban forest. Many of these actions require additional time and resources to do them at the scale required. We look forward to working together for the future of London's urban forest.

London Urban Forest Partnership, 2020

2. Executive summary

21%

of London lies under the canopy of trees

Source: Curio canopy cover analysis https://maps.london.gov.uk/canopy-cover/

Left:
Great North Wood view north from Norwood Park.
© London Wildlife Trust

London's urban forest – all the trees and woodlands in the capital – is an integral part of the city's green infrastructure and currently covers around 21% of London.[1] The London Urban Forest Plan sets out the goals and priority actions needed to protect, manage and expand the capital's urban forest.

This Plan also provides the framework to guide the work of the London Urban Forest Partnership to achieve these objectives. The London Urban Forest Partnership, comprising organisations with a strategic interest in the capital's trees and woodlands, convened by the Greater London Authority and the Forestry Commission, will co-ordinate delivery of the plan, collaborating with others responsible for the stewardship of London's urban forest and the wider urban forest community.

Overview

With components ranging from trees in parks and streets, ancient and secondary woodlands and copses along railway lines, rivers and canals, London's urban forest consists of over eight million trees.[2] Woodlands, which are mostly broadleaved, cover 13,300 hectares, (8% of London's land area), with 20% of these defined as ancient woodland.[3] The most common tree species are sycamore, oak and birch.[4] Although London's urban forest is quite species diverse, there are areas where diversity of both species and age profile is low, increasing vulnerability to the impact of pests and diseases.[5] Over two fifths, (43%) of the urban forest is under public ownership and management – the majority under the control of London's 32 boroughs and the City of London. A fifth of London's urban forest stands within private gardens, making Londoners the custodians of a significant proportion of London's trees.[6]

Trees and woodlands provide a wide range of environmental, social and economic benefits. These include wildlife habitat, improved air quality, shade and urban cooling, reduced flooding and significant health and wellbeing benefits to Londoners, amounting to at least £133m of benefits every year.[7] Getting outdoors into leafy public spaces has proved particularly vital to Londoners' mental and physical wellbeing during the Covid-19 crisis, with visits up 25% this May compared to 2018, highlighting their critical role as an essential part of London's infrastructure. Investment in greening London, including tree planting, will also create much needed jobs and training opportunities, to support a green economic recovery from Covid-19, whilst also tackling the nature and climate crises.

There are several policy drivers informing the management of London's urban forest. Protecting and planting trees and woodlands in and around towns and cities is a key objective of the Government's 25 Year Environment Plan and an England Tree Strategy is currently being drafted. The new London Plan has policies to protect existing trees and promote the planting of trees in new developments. It also recommends that boroughs prepare a green infrastructure strategy[8] to inform operational plans including local urban forest plans. The London

[1] Figures from Curio canopy cover analysis https://maps.london.gov.uk/canopy-cover/ There is significant variation in tree canopy cover in London, from less than 3% in some wards, to over 50% in others.
[2] www.london.gov.uk/sites/default/files/valuing_londons_urban_forest_i-tree_report_final.pdf
[3] https://data.gov.uk/dataset/9461f463-c363-4309-ae77-fdcd7e9df7d3/ancient-woodland-england
[4] As above, note 2
[5] See the Tree Talk website for some mapping of species diversity by borough from the public inventory. https://www.treetalk.co.uk/map/#xyz=11.2/51.508/-0.128 This is partial information but as data collection and sharing improves there is the opportunity for more analysis, planning across borough boundaries.
[6] Estimates based on 2.5 million trees calculated as part of LWT/GiGL London: Garden City study 2010 combined with canopy averages and total tree numbers of approximately eight million https://www.wildlondon.org.uk/about/research-and-reports
[7] London Environment Strategy Fig22 p. 139
[8] https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/draft-new-london-plan/chapter-8-green-infrastructure-and-natural-environment/policy-g1

Environment Strategy sets out an ambition to increase tree cover by 10% and create 200 hectares of species-rich woodland by 2050.

Key issues and goals

This Plan proposes a combination of better protection and management; encouraging new planting and natural regeneration to grow the urban forest; and valuing and promoting its benefits to landowners, managers and the wider public. The following issues and goals will guide the actions to be carried out by members of the London Urban Forest Partnership.

Protecting and managing

Protecting and proactively managing trees and woodlands is essential for maintaining a healthy, resilient, ecologically diverse urban forest. As London grows, the urban forest faces multiple threats, particularly outside the network of protected open space. Climate change also presents risks to health of the urban forest, just as the need for more trees to help adapt to its impacts, such as flooding and overheating, becomes acute. Lack of woodland management, exacerbated by constraints on public sector budgets, poses a further challenge. According to the Forestry Commission definition, only 25% of London's woodlands are classed as in management.

Goal 1

Manage London's urban forest according to a set of principles ensuring improved resilience against pests, diseases and climate change.

Goal 2

Manage more of London's woodlands to maximise their benefits for people and wildlife.

Goal 3

Support all London boroughs to produce a local urban forest plan as a key part of a comprehensive green infrastructure strategy.

Goal 4

Better protect London's urban forest against loss and damage, particularly irreplaceable assets including veteran trees and ancient woodlands.

Growing and expanding

New tree planting and natural regeneration should be planned to deliver multiple environmental, social and economic benefits and address natural declines in the existing tree stock. This will help achieve the London Environment Strategy target of increasing the capital's tree canopy cover by 10% which would provide approximately 3,300 hectares of additional canopy. A range of different approaches will be needed, including creating new woodlands in the Green Belt, increasing the number of trees on the capital's streets, planting in parks and other green spaces, and planting by Londoners in their gardens. Tree planting should follow the principle of "right tree, right place", and will not be appropriate in all locations. Procurement of trees should promote biosecurity, favouring locally, or at least UK grown trees. Natural regeneration should ideally be located adjacent to existing woodlands and scrub, on soils and habitats that will assist rapid colonisation. New evidence and decision-support tools, such as the Green Infrastructure Focus Map can help identify where tree planting or natural regeneration may be able to deliver the greatest benefits.

Goal 5

Create more woodland, especially species-rich woodland, in London, particularly in the Green Belt.

Goal 6

Increase the number of trees on London's streets, particularly in areas of currently low canopy cover.

Goal 7

Increase the number of trees in London's parks and green spaces, particularly in areas of currently low canopy cover.

Goal 8

Ensure high quality, up to date information on the extent, condition and benefits of London's urban forest is accessible to land managers, decision-makers and the public.

Protecting and proactively managing trees and woodlands is essential for maintaining a healthy, resilient, ecologically diverse urban forest

Promoting and supporting

Londoners' passion for trees is borne out by the thousands of supporters, members and volunteers who actively contribute to the London Urban Forest Partnership. As London was declared the world's first National Park City in 2019, Londoners also came together to get outdoors and make the city greener, healthier and wilder. Londoners' support will be key to protecting and growing London's urban forest, including in their own gardens. It's important that projects include and engage those who are typically less likely to use outdoor spaces in London including the under 25s, BAME communities, people from lower-income families and D/deaf and disabled people. Woodlands can also provide opportunities for business and community enterprises which can help support the management of the urban forest.

Whilst there is a wealth of information available about London's urban forest, collating data is challenging due to the number of landowners and managers involved and the limited resources available. Better data will improve our understanding of the benefits and inequalities in provision of trees and woodlands as well as identifying trends and providing a tool for engagement.

Goal 9

Support Londoners in playing an active role in the protection, growth and management of the urban forest.

Goal 10

Recognise the productive potential of London's urban forest and support woodland enterprises.

Goal 11

Champion, share and encourage good practice, innovation and research amongst urban forest professionals.

Coordinating delivery of the Plan

The majority of the current actions connected to the goals above have a five-year timeframe. They will be monitored against key performance indicators, updated and reviewed by the partnership on an annual basis.

Goal 12

Develop a new partnership structure to deliver the London Urban Forest Plan actions.

Londoners' passion for trees is borne out by the thousands of supporters, members and volunteers who actively contribute to the London Urban Forest Partnership

Above:
Community planting day at Pepys Park.
© Nathalie Weatherald

Left:
Veteran oak in Dulwich Park.
© London Wildlife Trust

3. Introduction

London's urban forest – all the trees and woodlands in the capital – is an integral part of the city's green infrastructure and currently covers around 21% of London.[1]

Left:
Volunteers planting trees at the Ashburton Estate.
© The Orchard Project

The London Urban Forest Plan sets out the goals and priority actions needed to protect, manage and expand the capital's urban forest.

To achieve this:
– London's existing urban forest requires protection and management
– new planting and natural regeneration of trees and woodlands needs to be planned, designed and integrated with the wider network of green and open spaces across London, and
– the variety of organisations responsible for London's urban forest need to work more collaboratively on determining priority projects and initiatives.

The London Environment Strategy also includes a commitment to prepare a London Urban Forest Plan that will set out the priority actions and activities needed to protect, manage and expand London's urban forest. This document provides the framework and an action plan to guide the collective work of the London Urban Forest Partnership to achieve these objectives.

The London Urban Forest Partnership is convened by the Greater London Authority and the Forestry Commission who will be accountable for co-ordinating the delivery of the plan with partners. This plan seeks to add value and complement existing organisational strategies and projects already in place.

The Partnership will also collaborate with the wider community of organisations and Londoners responsible for the stewardship of London's urban forest and engage with the wider urban forest community in the UK and beyond.

[1] Figures from Curio canopy cover analysis https://maps.london.gov.uk/canopy-cover/. There is significant variation in tree canopy cover in London, from less than 3% in some wards, to over 50% in others.

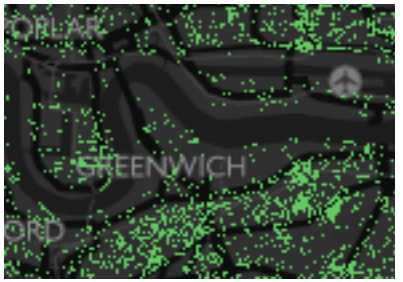
4. London's urban forest: an overview

4. London's urban forest: an overview

London's urban forest comprises all the trees and woodlands in London, including: individual trees in parks and gardens; woodlands from the extensive ancient woodlands of Epping Forest to the secondary woodlands of inner-city nature reserves and Thames Chase Community Forest; London's street trees, and the trees and copses along railway lines, rivers and canals.

Figure 1.
Curio London tree canopy cover map
https://maps.london.gov.uk/canopy-cover/

Below:
Detail of Greenwich using the map's zoom-in function.



Many place names in London such as Wood Green, Forest Gate, Nine Elms and Burnt Oak give testimony to the wooded landscape that was once prevalent across London and, in places, still remains. London hosts remarkable trees such as the Totteridge yew; the ancient sweet chestnut pollards of Greenwich Park; the veteran oaks in Richmond Park; the majestic London planes, dating back in some cases to the late 17th century; and specific cultivars such as Fulham oak and Merton pride (a pear).

London's urban forest is a significant component of London's green infrastructure – the network of parks, green spaces, waterways and features such as street trees and green roofs that provides a wide range of environmental, social and economic benefits. Getting outdoors into leafy public spaces has proved particularly vital to Londoners' mental and physical wellbeing during the Covid-19 crisis, with visits up 25% this May compared to 2018, highlighting their critical role as an essential part of London's infrastructure. Investment in greening London, including tree planting, will also create much needed jobs and training opportunities, to support a green economic recovery from Covid-19, whilst also tackling the nature and climate crises. The extent of London's urban forest can be seen in Figure 1.

Trees and woodlands have considerable intrinsic and amenity value; they mark the passage of the seasons, bring us into contact with nature and help create a distinct sense of place.

Woodlands and some key tree species are a particularly valuable habitat for wildlife and the numerous trees in parks and gardens provide corridors and stepping stones that enable birds and insects to move through the urban environment. Many of London's protected and priority wildlife species (such as bats, song thrush, spotted flycatcher, stag beetle and orchids) are strongly associated with ancient woodlands, veteran trees and mature scrub.

Trees also provide shade and cooling in streets and parks. They can help to reduce localised flooding as part of sustainable drainage systems and improve local air quality by filtering fine particles from the air.[2] As part of the capital's green infrastructure network, they provide significant health and wellbeing benefits to Londoners. In this sense trees and woodlands can also be regarded as valuable natural capital as they provide services that can be valued in economic terms. A full description of the economic value of London's urban forest can be found in Valuing London's Urban Forest[3], summarised in Figure 2.[4]

The components of the urban forest, from specimen trees in modern landscapes to ancient woodland in historic parkland is shown Figure 3.[6]

[2] The Forestry Commission England's Urban Forest leaflet explains how the urban forest delivers benefits for people, the economy and the environment: https://www.forestresearch.gov.uk/tools-and-resources/tree-canopy-cover-leaflet/

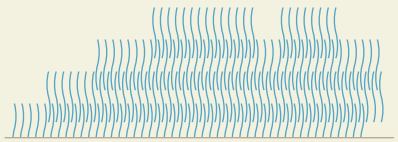
[3] https://www.london.gov.uk/sites/default/files/valuing_londons_urban_forest_i-tree_report_final.pdf

[4] The general benefits of urban trees are outlined in a number of published sources including the Forestry Commission Urban Tree Manual https://www.forestresearch.gov.uk/tools-and-resources/urban-tree-manual/, and by the FAO: http://www.fao.org/resources/infographics/infographics-details/en/c/411348/

[6] www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/london-tree-partnership

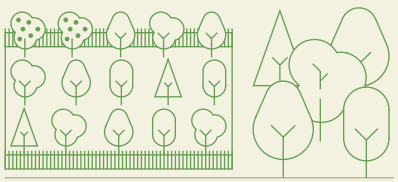
21%

The total area of London under tree canopy. This ranges from less than 3% to over 50% across the capital's council wards.



200£m

The value of cooling provided by London's urban forest in 2018. This value will increase as the climate warms and we experience more summer heatwaves.

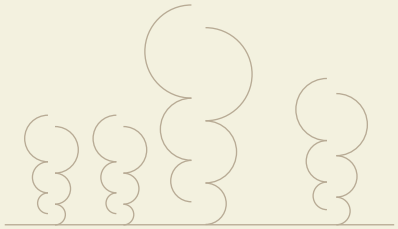


60%

Almost 60% of London's trees are in private ownership, but the trees on public land contribute 60% of the ecosystem service benefits as there is a higher proportion of larger trees.[1]

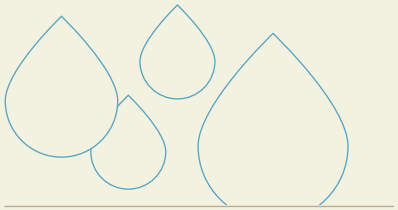
147£m

The approximate value of the estimated 2,367,000 tonnes of carbon stored in London's trees.



2,241

Tonnes of air pollution removed by trees annually. The equivalent of 13% of PM_{10} particulates, and 14% of NO_2 emitted annually by road transport.[1]



10x

Trees prevent 10x the volume of water in the Serpentine from entering London's drainage system each year, reducing the risk of localised flooding.[1]

Biodiversity

London's trees and woodlands support a wide range of important wildlife including ten bat species, birds like barn owl, insects such as stag beetle and white admiral butterfly, and fungi like oak polypore.[4]

Figure 2.
The value of London's urban forest[5]

Left:
Stag beetle in flight.
© Charles Snell

Noctule bat.
© Hugh Clarke

White admiral.
© Val Borrell

[5] Source: London Environment Strategy Fig22 p. 139 https://www.london.gov.uk/what-we-do/environment/london-environment-strategy based on London i-Tree Eco report Figure 1 https://www.london.gov.uk/sites/default/files/valuing_londons_urban_forest_i-tree_report_final.pdf

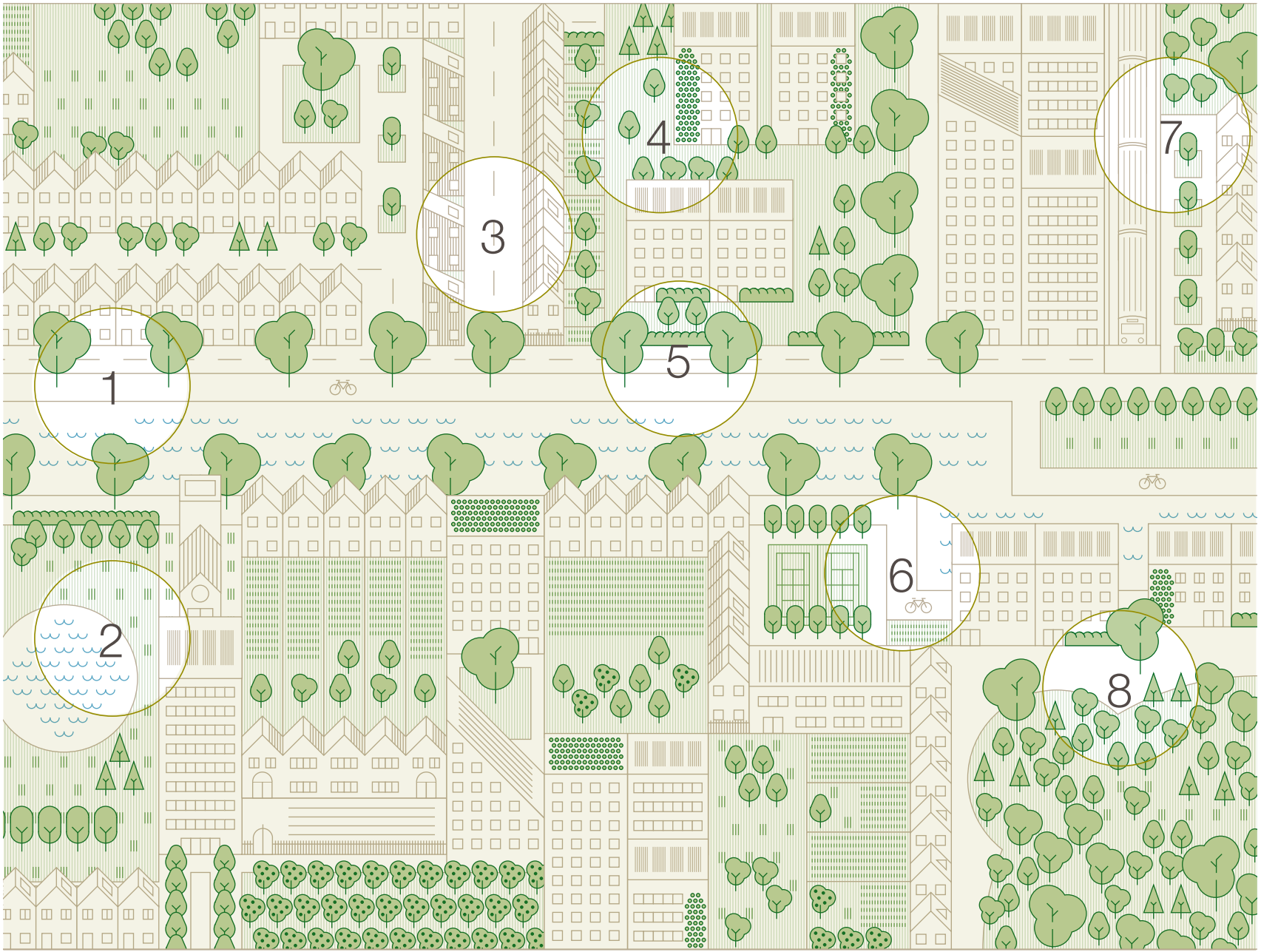


Figure 3.
London's urban forest locations

1.
Along linear transport routes and waterways e.g. canals and rivers

2.
Parks, nature reserves and informal green spaces

3.
Along streets

4.
Domestic gardens

5.
Hedges

6.
Urban green spaces such as housing estates, school and hospital grounds

7.
Urban woodlands

8.
Green Belt

Woodlands cover 13,300 hectares (or 8% of London's land area). The vast majority is broadleaf woodland; less than 1% of woodland in London is predominantly coniferous. Woodlands can often comprise of many thousands of species of animals, plants and fungi.

The most common tree species across London are sycamore (7.8%), oaks (7.3%) and birch (6.2%).[7] But the urban forest comprises a much wider range of species including native species such as ash, hawthorn, hornbeam, field maple and holly, and a wide variety of exotics and cultivars in parks, streets and gardens. Although an iconic species for the city, London planes make up only 1.36%[8] overall. However, their size, maturity and location (in heritage streets, squares and parks) means they play a particularly important role in the character and appearance of parts of London. Overall, although London's urban forest is quite species diverse there are parts of the city, particularly in the public realm, where diversity both in terms of species and age profile is low, increasing vulnerability to the impact of pests and diseases.[9]

Who owns London's urban forest?

The ownership of London's urban forest is split between private individuals (largely homeowners with gardens), private landowners (including environmental organisations managing woodlands and other land managed to protect wildlife or landscapes) and public sector bodies (including the London boroughs and Transport for London). Over two fifths (43%) is under public ownership and management, the majority under the control of London's 32 boroughs and the City of London. A fifth (20%) of London's urban forest stands within private gardens making Londoners the custodians of a significant proportion of London's trees.[10] See Figure 4. See Appendix 1 for more detail about the roles of the organisations.

The policy framework for London's urban forest

National, regional and local policy influences decisions about London's urban forest. The goals and actions of this plan have been written within the context of the existing policy framework. New insights into policy may emerge as the plan's objectives are delivered and these should be considered when this plan is updated or new opportunities arise to influence national, regional or local policy.

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England.[11] It states that planning policies and decisions should contribute to and enhance the natural environment by recognising the intrinsic character and beauty of the natural environment, and the wider benefits from natural capital and ecosystem services. Specifically, the NPPF provides for the protection of irreplaceable habitats such as ancient woodlands and veteran trees, stating that development resulting in the loss or deterioration of irreplaceable habitats should be refused. In addition, Section 197 of the Town and Country Planning Act (TCPA) 1990 places a duty on local planning authorities to make provision for the preservation or planting of trees.[12]

The Town and Country Planning (Tree Preservation) (England) Regulations 2012 enable local authorities to make a Tree Preservation Order to protect specific trees, groups of trees or woodlands in the interests of amenity.[13] Furthermore, the Planning (Listed Buildings and Conservation Areas) Act 1990 enables local authorities to designate Conservation Areas (CAs) of special architectural or historical merit; trees within CAs are subject to greater levels of protection.

The Government's 25 Year Environment Plan which sets out their objectives for improving the environment, includes a target to increase tree cover in the UK by 12% by 2060.[14] They are also publishing an England Tree and Woodland Strategy in 2021 and national best practice guidance on Tree and Woodland Strategies. Protecting and planting

Left:
Trees in a London garden.
© Sam Davenport

20%

of London's urban forest stands within private gardens

Source: Greenspace Information for Greater London

[7] www.london.gov.uk/sites/default/files/valuing_londons_urban_forest_i-tree_report_final.pdf
[8] As above, note 7.
[9] See the Tree Talk website for some mapping of species diversity by borough from the public inventory. https://www.treetalk.co.uk/map/#xyz=11.2/51.508/-0.128 This is partial information but as data collection and sharing improves there is the opportunity for more analysis, planning across borough boundaries.
[10] Estimates based on 2.5 million trees calculated as part of LWT/GiGL London: Garden City study 2010 combined with canopy averages and total tree numbers of approximately eight million. https://www.wildlondon.org.uk/about/research-and-reports
[11] https://www.gov.uk/government/publications/national-planning-policy-framework--2
[12] https://www.legislation.gov.uk/ukpga/1990/8/section/197/2011-11-15?wrap=true&timeline=true
[13] https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas
[14] https://www.gov.uk/government/publications/25-year-environment-plan

trees and woodlands in and around towns and cities is a key objective because of the benefits of urban trees which are set out in the Urban Forestry and Woodlands Advisory Committee's, Vision for a Resilient Urban Forest.[15] The Government has committed to an urban tree planting programme and published a manual for urban trees.[16] The Environment Bill 2020 introduces new requirements to ensure local authorities consult if they are considering removing street trees.

At a regional level, the London Environment Strategy sets out several ambitions in relation to trees and woodlands including the protection and management of the existing urban forest; increasing canopy cover by 10% of current levels; creating 200 hectares of species-rich woodland by 2050 and encouraging naturalistic approaches to flood water management and climate change adaptation.

The London Plan amplifies the NPPF's requirement for the protection of trees and woodlands through the land use planning process. It also recommends that boroughs should prepare a Green Infrastructure Strategy[17] as an overarching framework which informs a series of operational plans that determine the management of particular elements of the green infrastructure network including a local Urban Forest Plan. The Mayor of London will be publishing guidance on Green Infrastructure Strategies. The new London Plan also promotes the planting of trees and woodlands in new developments and, where loss of trees is unavoidable, requires replacement based on the existing value of the trees removed[18] based on for example, i-Tree Eco or CAVAT.

At the borough level there may be more specific policy frameworks such as biodiversity action plans and open space strategies, and more detailed land use planning policies in respective Local Plans, or strategies for trees and woodlands.

About 13% of woodland in London is found within statutory Sites of Special Scientific Interest (SSSIs) thus giving it strict protection, whilst a further 64% is within London's more than 1600 non-statutory Sites of Importance for Nature Conservation (SINCs), which ensures that these woodlands are protected from most forms of development. See Appendix 2 for a more detailed breakdown by borough.

20% of London's woodlands are ancient woodland[19] and these, (and most ancient and veteran trees), are all located within SSSIs or SINCs. Many woodlands under two hectares which are not included on the Ancient Woodland Inventory may have ancient woodland characteristics. Individual ancient or veteran trees not within SSSIs or SINCs may be protected by Tree Preservation Orders. Ancient woodlands, and ancient and veteran trees are irreplaceable habitats, as highlighted in the NPPF, which states that development resulting in the loss or deterioration of irreplaceable habitats should be refused.

In addition, a number of animal and plant species associated with woodlands and trees are either legally protected (e.g. badgers, bats, breeding birds)[20] and/or subject to special consideration in respect of operations that may affect them.[21]

13%

of London's woodland is found within statutory Sites of Special Scientific Interest

Source: Greenspace Information for Greater London

Left:
Hornbeams and oaks at Bentley Priory.
© London Wildlife Trust

[15] https://www.forestresearch.gov.uk/documents/1710/urban-forest-final-v4.pdf
[16] https://www.forestresearch.gov.uk/tools-and-resources/urban-tree-manual/
[17] https://www.london.gov.uk/sites/default/files/intend_to_publish_-_clean.pdf
[18] As above, note 17.
[19] https://data.gov.uk/dataset/9461f463-c363-4309-ae77-fdcd7e9df7d3/ancient-woodland-england
[20] https://www.gov.uk/topic/planning-development/protected-sites-species
[21] https://jncc.gov.uk/our-work/uk-bap-priority-species

	Legislation and Policy	Advice/ guidance	Landowners/ managers	Advocates	Planters
City of London	✓		✓		✓
CPRE London		✓		✓	
Developers			✓		✓
Forest Research		✓			
Forestry Commission	✓	✓			
Forestry England		✓	✓		
Greater London Authority	✓	✓			
Greenspace Information for Greater London		✓			
Groundwork London			✓		✓
Housing Associations			✓		✓
Local Community Groups			✓		✓
London boroughs	✓		✓		✓
London Tree Officers Association		✓		✓	
London Wildlife Trust		✓	✓	✓	✓
Londoners			✓	✓	✓
National Rail			✓		
Natural England	✓	✓			
Parks for London		✓		✓	
Private Landowners			✓		✓
Thames Chase Trust	✓	✓	✓	✓	✓
The Conservation Foundation				✓	
The Conservation Volunteers			✓		✓
The Orchard Project		✓		✓	✓
The Royal Parks			✓		✓
The Tree Council		✓		✓	✓
Transport for London	✓		✓		✓
Trees and Design Action Group		✓		✓	
Trees for Cities		✓			✓
Woodland Trust		✓	✓	✓	✓

Figure 4.
Who manages London's trees and woodlands

5. Key issues and challenges

5. Key issues and challenges

This plan proposes a combination of better protecting and managing the existing urban forest; encouraging new planting and natural regeneration to grow the urban forest; and valuing and promoting its benefits to the public, woodland owners and managers.

Left:
Volunteers at Goodmayes Park.
© Beth McConnell

5.1. Protecting and managing London's urban forest

Protecting and proactively managing London's existing trees and woodlands is essential for increasing canopy cover and maintaining a healthy, resilient, ecologically diverse urban forest. Resilience should be considered at the urban forest, woodland and tree scale.

London's urban forest faces multiple threats. London's population continues to grow, and maintaining this growth whilst protecting the Green Belt, the land around the city that prevents urban sprawl, Metropolitan Open Land and SINCs will require change and intensification of land use. However, the city must become greener whilst it also becomes denser to ensure the growth is sustainable. The new London Plan emphasises the need to protect trees and woodlands and to retain existing trees of quality. However, development will continue to put pressure on London's urban forest, particularly those parts that sit outside the network of protected open space.

Climate change threatens the health of London's urban forest, just as the need for more trees and woodland to help adapt to the impacts of climate change such as flooding and overheating, becomes acute. Changes in temperature and rainfall due to global warming have already changed the climatic conditions for London's trees and woodlands and will continue to do so. The predictions for climate change for London include substantial warming and more seasonal rainfall distribution, including wetter, milder winters and drier, hotter summers. Some tree species will be better adapted than others to these changing conditions and species selection will need to adapt accordingly following the principle of "right tree, right place", including planting and natural regeneration to ensure climate resilience. Woodlands are likely to be affected by more frequent storms resulting in windblow but will be relatively resilient, although their composition may change in the medium term.[22] Trees on London's clay soil with its potential for shrinking and swelling, will become increasingly vulnerable to removal due to building subsidence claims. The London Tree Officers Association (LTOA) has developed a Joint Mitigation Protocol to establish best practice in the processing and investigation of tree root induced building damage (see box 1, next page).

As outlined in the Government's Tree Health Resilience Strategy[23] the risk to the UK's trees from pests and diseases has increased as globalisation has increased the volume and diversity of plant products entering the UK from overseas. Climate change is exacerbating this risk, altering the type and species of outbreaks, their frequency and severity. Since 2000 there has been over a 300% increase in the number of forest pests and pathogens confirmed in the UK.

LTOA has highlighted London's particular vulnerability to these

[22] http://www.righttrees4cc.org.uk/default.aspx
[23] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/710719/tree-health-resilience-strategy.pdf

risks due to its status as a site of global transit, its proximity to mainland Europe, and the urban heat island effect.[24] The LTOA highlight seven particularly significant pests and diseases threatening the health of London's trees. Five of these are established in London: acute oak decline, Chalara ash dieback, horse chestnut leaf miner, Massaria disease of plane and oak processionary moth. A further two are not currently present in London, but pose substantial potential threats: canker stain of plane, and bacterial leaf scorch. These pests and diseases have the potential to affect 15% of London's tree population.

Just as worryingly there are a range of threats to the ecology of the urban forest including the decline in the diversity and mass of invertebrates and other species associated with trees and woodlands, and the impacts of some invasive plants and animals.[25] Woodlands are subject to particular challenges – for example specialist woodland birds[26] and butterflies have experienced serious declines since 1970. Urban woodlands are also threatened by a range of pressures such as light and air pollution, fly-tipping, nitrification of soils as well as those through poorly managed public use (e.g. trampling, soil compaction, and disturbance).

Proactive, long-term and adaptive management of the existing tree stock is required to respond to these threats and also to encourage a diverse age range of London's trees to ensure there are appropriate young, semi mature, early mature, mature and veteran trees. However, a lack of management, exacerbated by constraints on local authority and other public sector budgets poses a further threat to the urban forest. Research has shown that many woodlands that used to be managed by coppicing or selective harvesting of timber have lost that structure and developed heavily-shaded canopies unsuitable for some of their associated wildlife[27] and less inviting for people. Woodland management also has the potential to build employment opportunities within the urban forest (see box 2, next page).

Using the national Forestry Commission definition, only 25% of London's woodlands are classed as in management compared to a national average of 56%. However, national management indicators include felling licences, grant schemes and Forestry Commission approved management plans, which are not designed for urban woodlands, where felling licences may not be required and the benefits of grant schemes may be limited. Although more London woodlands may be in management than figures suggest, there is still potential to increase this number.

Information 1

Trees and the insurance industry

Joint Mitigation Protocol

Tree root related subsidence claims for many years created a challenging working relationship between the insurance industry and local authority officers responsible for the care and protection of trees, both publicly-owned ones and private trees covered by Tree Preservation Orders (TPO). A perceived lack of professionalism from insurers, loss adjusters and their arboricultural representatives had created a default negative response to requests for tree removal from local authorities. This delayed mitigating any building damage to the detriment of all involved, especially the policy holder.

The necessity to create a forum resulting in an agreed claims handling methodology or protocol was pressing. This forum was created and produced a protocol formally called The Joint Mitigation Protocol (JMP) which was agreed by all sides involved, was launched in 2008 and chaired by the Forestry Commission. It was attended by several insurers, loss adjusters, consultants and the London Tree Officers Association (LTOA). These discussions started with clear disagreement on both sides to the other's position. Tree officers expressed a frustration with the continued requests for tree removal regardless of circumstances and tree value. Insurers for their part expressed what they perceived as an unrealistic desire to retain all trees given the disruption underpinning works presented to their clients and the financial implications associated with this repair work.

Following detailed negotiations, a protocol was agreed on a set of specific site investigations based on tree value and an understanding of the pressures each side was experiencing in these cases. This protocol has recently been reviewed to simplify the process, for all claims to follow the site investigations required when applying for works to trees covered by Tree Preservation Orders and implicated in building damage claims. This revised version of the JMP is scheduled to be published in early 2020.

For more information: www.ltoa.org.uk/resources/joint-mitigation-protocol

25%

of London's woodlands are classed as in management

Source: https://www.london.gov.uk/sites/default/files/171130-londonwoodlandevidencereport.pdf

[24] https://www.ltoa.org.uk/resources/pest-diseases/biosecurity
[25] http://www.londonisi.org.uk/
[26] http://www.bto.org/our-science/publications/developing-bird-indicators
[27] https://ptes.org/wp-content/uploads/2014/09/Plantlife-report-on-woodlands-122011.pdf

A more comprehensive risk assessment of the threats to London's urban forest, their potential impact, and the resources currently allocated to them, is required to better inform prioritisation, targeted action and future expenditure.

5.2. Growing and expanding London's urban forest

The London Environment Strategy establishes the headline target of increasing the capital's tree canopy cover by 10% of the current area by 2050. This would represent an increase in canopy cover from 21% of London's area to 23%: approximately 3,300 hectares of additional canopy.

New tree planting and natural regeneration should be planned as part of London's network of green infrastructure and actively designed and managed to deliver multiple environmental, social and economic benefits. Due to the dynamic nature of trees there will be natural declines in the existing tree stock that need to be addressed and replaced to support the target. Since 2016, the Mayor has funded the planting of over 280,000 trees in London, complementing planting by boroughs, landowners, environmental charities and Londoners.

Tree planting should follow the principle of "right tree, right place", and will not be appropriate in all locations. Procurement and sourcing of trees should promote biosecurity, favouring locally, or at least UK sourced and grown where possible, whilst also promoting species diversity. Likewise, natural regeneration requires adequate space and time, and ideally should be adjacent to existing woodlands and scrub, on soils and habitats that will assist rapid colonisation.

Ecological benefits can accrue from increasing the size of existing woodlands, connecting areas of woodland and enhancing the quality of existing – especially young – woodlands. The London Environment Strategy proposes that at least 200 hectares of species-rich woodland is created by 2050, primarily designed to meet biodiversity objectives. Depending on location, this will require the promotion of natural regeneration as well as tree planting, and other interventions such as the provision of dead wood and establishment of more natural understorey and field layers.

There are many constraints to tree planting. In open spaces this may include protecting other important habitats such as ancient or species-rich grassland and heathland, and maintaining open space for recreational use, whilst in the built environment, tree planting is limited by factors such as underground utilities and basement development.

Information 2

Management of London's urban forest

It is essential that the urban forest is protected through robust planning policy and guidance for landowners about the benefits of retaining and increasing tree canopy. However, it is also necessary to recognise that the management of London's trees and woodlands will involve the removal or cutting of existing trees for valid reasons, many of which support the long-term health and function of the urban forest as a whole.

This might be required for several reasons:
– diseased or dangerous trees in public places need to be managed or removed because they are a risk to public safety
– plantations may need thinning, selective felling or woodland areas coppiced to increase structural diversity which will benefit particular wildlife
– street and park trees may need to be pruned or pollarded to prevent or minimise damage to nearby built structures.

By managing the urban forest appropriately, we can build resilience to climate change and deliver multiple benefits such as carbon storage, improving air quality, providing urban cooling and improving health and wellbeing for us all, as well as providing places for nature. The route to achieving the benefits trees can provide involves managing woodlands sustainably.

However, there remains significant potential to increase London's tree canopy cover.

New evidence and decision-support tools, such as the Green Infrastructure Focus Map (see box 3, next page), can help to identify where there is the greatest need for green infrastructure to tackle social and environmental challenges, and where tree planting or natural regeneration may be able to deliver the greatest benefits. These may include addressing specific needs such as providing shade, improving air quality (see box 8, page 23) or creating connections between fragmented areas of woodland.

As part of the Urban Forest Plan, we have published a new decision support tool to help identify priority wards for increasing tree canopy

cover, based on existing canopy, and a range of environmental and social factors (see box 4). It highlights the significant variation in tree canopy cover in London, from less than 3% in some wards, to over 50% in others.

A range of different types of planting and natural regeneration approaches will be needed to achieve London's canopy cover target. Opportunities include creating new woodlands in the Green Belt, increasing the number of trees on the capital's streets, planting in parks and other green spaces, and planting by Londoners in their gardens. These different types of planting will require different funding and delivery mechanisms, and will need to involve a range of stakeholders.

Green Belt planting and natural regeneration opportunities

The greatest opportunity for meeting London's canopy cover target is through woodland creation in the capital's Green Belt, through tree planting and natural regeneration. The London Plan provides robust protection for the Green Belt, and the policy also highlights the need

Data and evidence 3

Green Infrastructure Focus Map

This Map (see https://maps.london.gov.uk/green-infrastructure/) is a tool and evidence base to help London's decision-makers identify where green infrastructure improvements and investments might be best targeted, and what kind of interventions might be most useful for the needs of a specific area. It can help:

– identify where there is more need or less need for green infrastructure interventions
– describe which specific environmental or social issues have the greatest need for intervention in a particular location
– highlight other issues that green infrastructure can't necessarily help with, but that are useful context for decision making (e.g. income deprivation).

Data and evidence 4

Ward prioritisation tool

This decision support tool includes tree canopy cover figures for each of London's 633 council wards. This data is drawn from the high-resolution London Tree Canopy Cover Map published in 2018.

Canopy cover ranges from 58.7% (Hampstead Town) to 2.4% (City of London), with 373 wards below the Forestry Commission's recommended canopy cover level of 20% for urban areas. There are multiple factors that influence both the existing variation in tree canopy cover across the capital, and the potential for increasing canopy cover, including population density, land use, differences in natural vegetation, soils and topography.

This ward-level canopy cover data is published alongside a range of other environmental and social data at the same scale, including green cover, deprivation, urban heat island effect, air quality, flood risk and extent of Sites of Importance for Nature Conservation (SINCs). This data is designed to help decision-makers, including local authorities, NGOs and funders, as well as Londoners, to identify priority areas for increasing tree canopy cover based on a suite of different factors.

For more information: https://data.london.gov.uk/dataset/tree-canopy-cover-prioritisation-tool

373

wards are currently below the Forestry Commission's recommended canopy cover level of 20%

Source: https://data.london.gov.uk/dataset/tree-canopy-cover-prioritisation-tool

Left:
A volunteer at Goodmayes Park.
© Beth McConnell

to enhance access to it and improve its quality. The Government's 25 Year Environment Plan and the Natural Capital Committee[28] have emphasised the importance of establishing new woodlands close to urban areas to maximise the benefits to people's wellbeing, for example through flood protection and recreation.[29]

Provisional analysis suggests that around 8,000 hectares of Green Belt land currently not under tree canopy could be suitable for woodland creation through planting or natural regeneration.[30] This is illustrated in box 5. This excludes areas that are unsuitable for tree planting, such as the highest-grade agricultural land, or nature conservation sites designated for other habitats. Of the total, 2,254 hectares of this theoretically plantable land is owned by local authorities. However further analysis is required to identify potential sites for woodland creation, on both public and privately owned-land. This should include opportunities to expand or connect existing woodland habitats, and to expand on existing landscape-scale initiatives, such as the Thames Chase Community Forest and new initiatives in the wider Metropolitan Green Belt outside the London boundary.

While there is considerable potential for new woodland creation in London's Green Belt, delivering this at scale will require significant changes in land management policy and funding, for example as part of the Government's proposed new Environmental Land Management Scheme.

Urban planting opportunities

New tree planting within London's urban area – including street trees, planting in parks and other green spaces, in Londoners' gardens and through new developments – is likely to make a smaller contribution to meeting the canopy cover target than woodland creation in the Green Belt. However, new urban trees will provide a wealth of benefits to London's environment and Londoners' wellbeing. Areas of tree planting with longer grass can also be cheaper to maintain than short grass which is frequently mown. However, constraints on local authority parks budgets have in many cases reduced investment in new planting and revenue funding for managing new features or habitats in parks and green spaces.

While there are more constraints to tree planting in the urban realm, there are still considerable opportunities. For example, research by the London Tree Officers Association suggests that there are at least 20,000 vacant street tree pits in London that could be planted[31], while

Data and evidence 5

Green Belt potential planting map

In 2017 the GLA carried out preliminary analysis of the potential for woodland creation in London's Green Belt, which covers 35,000 hectares. A desktop analysis used land use data to identify locations which had theoretical potential for woodland planting including agricultural land (excluding Grade 1 and 2), mineral extraction sites, parks and open spaces and grassland.

Certain categories of land were excluded from consideration including: existing ancient woodland; Biodiversity Action Plan habitats of Principal Importance; battlefields; geological sites; nature reserves; Ramsar sites; reservoirs; rivers; Special Areas of Conservation; scheduled monuments; Sites of Importance for Nature Conservation; Sites of Special Scientific Interest and National Forest Inventory.

The analysis suggests that in theory around 8,000 hectares of London's Green Belt could be suitable for woodland creation. Of this the Land Registry hold ownership data for just over 4,500 hectares – shown in red on the map at the link below. Unregistered land may belong to the crown, aristocracy or church – this is shown in blue on the map.

Of the known landowners local authorities own 2,254 hectares of potentially plantable land and private companies hold 1,528 hectares.

This analysis is a purely desktop exercise and significant further work is required to ground-truth potential sites. Identifying and working with landowners will be key, alongside future funding mechanisms to support woodland creation projects.

For more information: https://data.london.gov.uk/dataset/potential-woodland-creation-sites-in-london-s-green-belt

2,254

hectares of theoretically plantable land is owned by local authorities

Source: https://data.london.gov.uk/dataset/potential-woodland-creation-sites-in-london-s-green-belt

[28] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/516725/ncc-state-natural-capital-third-report.pdf
[29] https://www.gov.uk/government/publications/25-year-environment-plan
[30] https://data.london.gov.uk/dataset/potential-woodland-creation-sites-in-london-s-green-belt
[31] www.ltoa.org.uk/documents-1/ltoa-reports/288-ltoa-vacant-tree-pit-report/file

the London Borough of Barking and Dagenham's Parks and Open Spaces Tree Planting Strategy sets out how a 10% increase in canopy cover can be achieved across several of the borough's parks without compromising uses.[32]

Planting or natural regeneration in parks and open spaces should be designed to suit each location, which could include: new avenues or filling gaps in older avenues or boundary trees, community orchards, whip planting; young trees from 50cm-150cm, to create woodland areas or hedgerows and trees to provide shade for playgrounds or seating areas. New developments can also contribute to increasing tree canopy cover, including through the application of the Urban Greening Factor within the new London Plan.

Identifying opportunities for urban tree planting is currently largely done on a case-by-case basis. A more strategic approach could be informed by new data and decision-support tools, in combination with local expertise and site surveys. The London Urban Forest Partnership has tested this using a combination of tree canopy cover and land use data to identify potential planting sites on streets and in open spaces (see box 6). A refined and improved version of this approach could be used to inform local assessment of tree planting opportunities.

London's local authorities are responsible for the majority of tree planting sites within the capital. Securing sustainable funding and resources for new tree planting and critically for the maintenance of these trees so they survive to deliver the benefits, in the context of constraints on budgets is a key challenge in meeting the canopy cover target. It will require a mix of sources including: local authority budgets, funding from the GLA and central government, private sponsorship and investment, and contributions from the planning system, including carbon offset funds (see box 7, next page).

Data and evidence 6

Mapping planting opportunities

While the London Environment Strategy has established a target to increase the capital's tree canopy cover by 10%, there has not been an attempt to assess or model the theoretical potential for increasing canopy cover, nor to systematically identify locations for tree planting.

An experimental pilot study was carried out by Maplango to assess the potential of using the newly published London canopy cover data alongside land use data drawn from UKmap, to conduct a provisional assessment of the potential plantable area in streets and open spaces within a sample of low canopy wards. A range of open space land uses that could be suitable for tree planting were included in the assessment, alongside paved surfaces that are of sufficient width and distance from buildings to be potential sites for street trees.

The study suggested that across the six sample wards, the theoretical potential increase in tree canopy cover ranged from 19% to 30%, with new street tree planting representing most of this potential increase in all but one cases.

As this approach was experimental, it is limited by the lack of granularity in land use data (for example not excluding some habitat types that would not be suitable for tree planting), the need for ground-truthing in all cases, and the lack of available data for constraints on tree planting imposed by underground services. However, such a method could be trialled further and refined to help establish a theoretical basis for potential increases in canopy cover, to help decision-making and the identification of planting opportunities.

For more information: https://data.london.gov.uk/dataset/tree-canopy-cover-prioritisation-tool

20,000

vacant street tree pits in London that could be replanted

[32] https://www.london.gov.uk/sites/default/files/lbbd_pos_tree_planting_strategy_2017.pdf

Information 7

Climate change and carbon

Trees and woodlands play an important role in removing carbon dioxide from the atmosphere through photosynthesis which sequesters carbon in the trunk, branches, leaves and roots. Although decay eventually releases carbon back into the atmosphere there is a net increase in carbon sequestered if the urban forest is managed sustainably with more trees reaching maturity than being lost to natural decline or felling. The Committee on Climate Change recommends planting 30,000 hectares of woodland each year to make a significant contribution to meeting the net zero target.[33]

In London, there are limited opportunities for extensive tree planting at scale, apart from in some parts of the Green Belt. Nevertheless, ensuring the protection of London's existing mature woodland and trees ensures that over 2.3 million tonnes of carbon remains locked up. Tree-planting projects also provide an opportunity to raise awareness of how carbon can be captured by natural solutions.

Carbon Offset Funds

Since 2016 around £11m of carbon offset funding has been collected by London's Local Planning Authorities (LPAs) with a further £38m secured by legal agreements, although this varies significantly by borough. These funds are ring-fenced for spending on carbon saving projects in the area. Guidance recommends spending funds on energy efficiency projects where solutions are readily available, such as solar panels. However, some LPAs fund tree planting and green space projects, although these are a lower priority as the carbon savings are less immediate.[34]

Information 8

Trees and air quality

The London iTree Eco study estimated that the capital's eight million trees remove an estimated 2,000 tonnes of pollution from the air each year, equivalent to 13% of particulates (PM_{10}) and 14% of Nitrogen Dioxide (NO_2) emitted by road transport.

At regional and national scales, vegetation, including trees plays an important part in removing air pollutants by the process of deposition to leaf surfaces. However, at the street scale deposition is of limited benefit. The main value of green infrastructure for urban air quality is not its ability to remove pollutants, but its ability to control their flow or distribution.

For trees in central London to significantly reduce air pollution they would need to be planted in very high numbers, but there are significant practical constraints to achieving this. As street tree canopies can trap pollution in summer, careful siting and design are also crucial. The report, Using Green Infrastructure to Protect People from Air Pollution (GLA, 2019)[35], identifies interventions that can deliver significant reductions in exposure and, therefore, improvements in public health.

Although the best way to improve urban air quality is to reduce the emissions of pollutants at the source, (ie. road transport, which is the main source of local air pollution in London), trees do still have a valuable role to play, particularly to address longer term air quality issues that will persist after the implementation of emission control measures.

In the short-term the most effective approach in the most polluted parts of the city may be to create greener walking routes away from the busiest roads and to target greening (green walls, climbers, and trees, where possible) in locations where vegetation can act as a barrier between a busy road and a school playground, for example.

For more information:
www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/using-green-infrastructure-protect-people-air-pollution
www.tdag.org.uk/first-steps-in-urban-air-quality.html

[33] https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk/
[34] www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/carbon-offset-funds-report-2019
www.london.gov.uk/sites/default/files/carbon_offsett_funds_guidance_2018.pdf
[35] https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/using-green-infrastructure-protect-people-air-pollution

5.3. Promoting and supporting London's urban forest

In July 2019 London was confirmed as the world's first National Park City. London National Park City aims to encourage more people to enjoy the great outdoors and to support all Londoners, and the city's businesses and institutions, in making the city greener, healthier and wilder.

Support and action from all Londoners will be key to protecting and growing London's urban forest. This includes Londoners protecting and planting trees in their own gardens, which make up approximately 20% of the capital's urban forest.[36] Although this is an area where government agencies and charities have limited powers, campaigns such as those linked to National Tree Week can help encourage people to plant. Information and resources can also be made available to the public to provide advice on common queries.

Research for the London Environment Strategy consultation found that planting more trees was consistently well supported by Londoners. However, research participants also felt that more needed to be done to protect London's trees, and many had the perception that tree cover in the capital is being reduced. Similarly, participants lacked knowledge and confidence around planting trees in their own garden.[37]

Improving and sharing information and data

Whilst there is a wealth of information and data available about London's urban forest it can still be improved and be made easier to find. Collating data about London's urban forest is challenging due to the number of landowners and managers involved, as well as the limited resources available.

Nationally, there is of a lack of common data standards and reporting for tree data. Forest Research has recently consulted on a set of standards for tree data as part of their Communitree project.[38] The aim is to work towards adopting these standards in London and use the data for future updates of the London Street Tree Map (see box 9).

Improving the data we hold and publish, and carrying out further analysis of that data, can improve our understanding of the benefits provided by London's trees and woodlands and inequalities in this provision. It can help to identify trends, and prioritise actions, and also provide a tool for engagement.

There is also a large body of good practice, evidence and developing research and innovation on how to protect, manage, grow and support the urban forest. Lessons can be learnt from urban forests across the world where important principles can be usefully applied.

Data and evidence 9

London Street Tree Map

The London Street Tree Map, hosted on the GLA's website, visually presents information about trees owned and managed by London boroughs and TfL. The majority of data is for street trees but the map also includes some park trees. The map shows the locations and species information for over 700,000 trees, using data from 26 boroughs.

The map received over 13,000 views in 2019 alone, and the open data underpinning the map has also been used by the independent website TreeTalk, which generates walking routes to explore London's trees.

The initial data for the Street Tree Map was collated in 2014-15, and a partial update was added in 2020. The GLA and GiGL are working together to collect data from the boroughs to enable annual updates in the future, and to also include vacant tree pits to demonstrate the potential for additional tree planting.

As noted in section 4 there is not a consistent or agreed format for recording street tree data across London or nationally. This represents a challenge in collating and standardising data across multiple boroughs. As a more standardised approach is developed, more data will be added to the map.

Map: https://maps.london.gov.uk/trees/
Data: https://data.london.gov.uk/dataset/local-authority-maintained-trees

[36] http://live-twt-d8-london.pantheonsite.io/sites/default/files/2019-05/London%20Garden%20City%20-%20full%20report%281%29.pdf
[37] https://www.london.gov.uk/sites/default/files/report_to_the_mayor.pdf
[38] www.forestresearch.gov.uk/research/urban-trees-and-greenspace-in-a-changing-climate/quantification-and-valuation-of-ecosystem-service-provision-of-urban-trees/treezilla/communitree-connecting-tree-databases-public-improving-urban-tree-data-business-government-and-research

Involving Londoners

Londoners' passion for trees is borne out by the thousands of supporters, members and volunteers who actively contribute to the London Urban Forest Partnership, including:

– 15,000 people participating in London's biggest ever tree planting weekend, co-ordinated by the Mayor in December 2018 including flagship events led by Trees for Cities
– over 3,000 volunteer hours each year supporting TCV's management of key sites such as Dulwich Upper Woods
– London Wildlife Trust's 1,000 active volunteers, many working across 19 woodlands or woodland-related projects, such as the Great North Wood Living Landscape
– five active Tree Warden groups across the capital, working closely with their local authorities and championing the trees in their communities. They act as the council's eyes and ears on the ground and help in planting, caring and protecting trees as well as inspiring others to do the same
– The Thames Chase Conservation Volunteers planting thousands of trees across the Thames Chase Community Forest.

However, more could be done to support communities to take action for London's urban forest and to ensure that its benefits are accessed by all Londoners. It's important that projects involve those who under-use outdoor spaces in London including the under 25s, BAME communities, people from lower-income families and D/deaf and disabled people.

It needs to be recognised that co-ordinating and supporting volunteers, including increased interest from corporate volunteers in tree planting projects, takes time and resource from boroughs and charities.

Currently there is great interest in planting trees but less understanding or focus on the need for their long-term management. Woodlands can provide opportunities for business and community enterprises such as bespoke furniture makers, fruit harvesting, coppice workers and outdoor/adventure activity as well as larger scale markets from the larger woodlands. This wide range and scale of economic activities can help support the management and development of the urban forest and it would be beneficial to develop methods for recording economic turnover and outputs. There are initiatives such as the London Wood Enterprise[39] bringing individuals, organisations and businesses from across the wood supply chain together to better connect people within the London wood supply chain.

The GLA and other partnership organisations get frequent queries and complaints from Londoners related to tree planting, pruning and removal. In many cases people don't know who to contact or can't easily find relevant information online. This could be provided through the London Urban Forest Partnership webpages on the GLA website.

15,000

people participated in London's biggest ever tree planting weekend

Source: https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/london-national-park-city

Left:
Involving Londoners in Biggin Wood, Norwood.
© London Wildlife Trust

[39] https://www.lantern.uk.com/londonwoodenterprise

6. Goals and actions

6. Goals and actions

The goals and actions in the London Urban Forest Plan are framed around the three key themes identified above:
– Protecting and managing
– Growing and expanding
– Promoting and supporting.

Under each theme are a set of headline goals, broken down into specific actions that will be delivered by the identified members of the London Urban Forest Partnership. The actions include those which partnership members can commit to delivering now, and more aspirational or longer-term actions that the partnership will work towards but may require additional resources or policy change.

Delivery of the Plan will be monitored through the key performance indicators outlined in section 7. The majority of the current actions have a five-year timeframe, and these will be updated and reviewed by the partnership on an annual basis. The lead and supporter organisations identified for each action may change to reflect the progress and opportunities that arise.

Key to the organisations on the following Goals

AA	Arboricultural Association
COL	City of London
CPRE	CPRE London
EA	Environment Agency
FC	Forestry Commission
FE	Forestry England
GIGL	Greenspace Information for Greater London CIC
GLA	Greater London Authority
GW	Groundwork
ICF	Institute of Chartered Foresters
L	Lantern
LAW	Lesnes Abbey Woods
LTOA	London Tree Officers Association
LUFP	London Urban Forest Partnership
LWT	London Wildlife Trust
NE	Natural England
PL	Parks for London
RP	The Royal Parks
TC	The Tree Council
TCT	Thames Chase Trust
TCV	The Conservation Volunteers
TDAG	Trees and Design Action Group
TFC	Trees for Cities
TFL	Transport for London
TOP	The Orchard Project
WT	Woodland Trust

Left:
Community planting day at Pepys Park.
© Nathalie Weatherald

6.1 Protecting and managing

Goal 1

Manage London's urban forest according to a set of principles ensuring improved resilience against pests, diseases and climate change

Left:
Bluebells in Perivale Wood.
© London Wildlife Trust

Context

London's urban forest is under threat from factors including pests and diseases, pollution and climate change (as set out in section 5.1). Building resilience through good management will help to protect and enhance London's urban forest.

Many of these threats require collaborative approaches to management across administrative boundaries. However, practices and understanding vary hugely across the capital. Identifying common approaches and sharing good practice will strengthen London's urban forest against increasing threats.

Actions

1a. Assess the threats of pests and diseases and climate change to London's urban forest. This could include assessing the number of high priority tree pests in the UK Plant Health Risk Register (UKPHRR) that are present in London. Providing a report and recommendations to provide the foundation for Action 1b below.

1b. Develop a set of principles for managing London's urban forest to increase resilience and to combat the threats from pests and diseases, and climate change. This may include using UK sourced and grown stock, site and landscape scale biosecurity plans, best practice related to quarantine before planting, appropriate species choice and species diversity, encouraging natural regeneration to negate any risk of importing pests and diseases, relying on natural selection to ensure climate resilience and developing a wide age range distribution.

	Lead Organisation	Supporting Organisation
1a	FC	AA, GIGL, LWT, NE, RP, TC, TCT, TFL, TOP, WT
1b	LTOA	AA, COL, EA, FC, GIGL, ICF, LAW, LWT, RP, TC, TCT, TFL, TOP, WT

Goal 2

Manage more of London's woodlands to maximise their benefits for people and wildlife

Left:
Pollarded willows in Brent River Park.
© London Wildlife Trust

Context

Good woodland management is essential for maximising benefits for wildlife and people. However, reductions in public sector budgets have had an impact on capacity for proactive woodland management.

National indicators, which show that only 25% of London's woodlands are in management, are not designed for urban woodlands. Identifying a more specific woodland in management indicator for London will enable a strategic approach to supporting more woodlands into management, which will help ensure their long-term sustainability and value.[40]

Actions

2a. Identify priority woodland sites requiring management to maximise benefits for people and wildlife. This review will focus on sites without Forestry Commission approved (or similar) management plans, including protected sites with woodland and/or tree interest including ancient and veteran trees, heavily-used woodlands and ecologically rich woodlands.

2b. Develop mechanisms to support pan-borough grant applications for priority woodland sites (including Forestry Commission grants).

2c. Deliver a package of tailored woodland management training for urban forest managers in London. This could include: training and templates to aid development of management plans, operational principles and grant applications, supporting landscape scale deer management, investigating additional resource opportunities including income-generation, unlocking barriers to delivery and guidance on managing threats to woodland habitat.

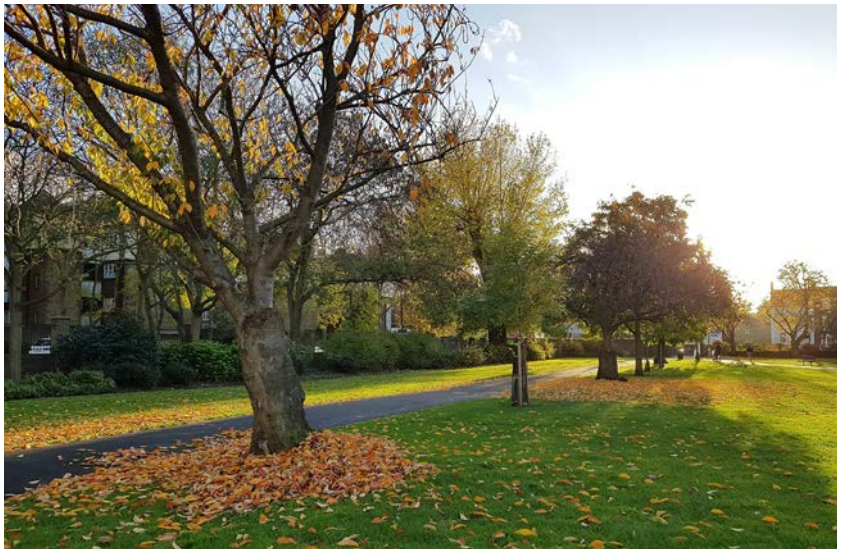
2d. Develop alternative indicators of woodland condition and management appropriate for London.

	Lead Organisation	Supporting Organisation
2a	GIGL	EA, FC, NE, TCT
2b	FC	GIGL, GLA, LWT, TCT, TCV, TOP
2c	FC	AA, COL, EA, ICF, LAW, LTOA, LWT, RP, TCT, TOP
2d	LWT	FC, GIGL, TCT, TFC, WT

[40] http://downloads.gigl.org.uk/website/Woodland%20Management%20in%20London.pdf

Goal 3

Support all London boroughs to produce a local urban forest plan as a key part of a comprehensive green infrastructure strategy



Left:
Parkland trees in King George's Field, Southwark.
© The Tree Council

Context

A strategic framework is essential to ensure an integrated approach, to optimise the use of resources and to identify priorities for action. It also demonstrates political buy-in and can explain the borough's aims and objectives to the public. Within this document 'Local Urban Forest Plans' relates to Local Tree and Woodland Policies, Strategies, Frameworks and or Plans.

Set within the context of a Green Infrastructure Strategy, a local urban forest plan implements the strategic objectives that relate to the protection and management of the borough's trees and woodland and, by so doing, ensures synergies with and between the protection and management of other parts of the green infrastructure network including, parks and natural habitats. These strategies should recognise the importance of trees and woodlands in the urban context and treat them as having parity with and equal status to, other green and built infrastructure. They will also need to link to Local Nature Recovery Strategies, a forthcoming duty in the Environment Bill.

Actions

3a. Input to future reviews and updates of the GLA's green infrastructure strategy guidance. This updated guidance should cover trees and woodlands; development risk and planning policy; and align with the Government's best practice guidance on tree and woodland strategies.

3b. Provide support and guidance for boroughs to produce local urban forest plans, integrated with other key strategies that help enhance the urban forest. This could include guidance and measures to ensure there are adequate resources and skilled staff in the boroughs.

	Lead Organisation	Supporting Organisation
3a	TDAG	AA, CPRE, GIGL, LWT, NE, RP, TCT, TFL, TOP
3b	GLA, LTOA	GIGL, PL, TC, TCT, TDAG, WT

Goal 4

Better protect London's urban forest against loss and damage, particularly irreplaceable assets including veteran trees and ancient woodlands

Left:
Veteran oak in Dulwich Park.
© London Wildlife Trust

Context

London's woodlands and trees are generally well protected by the planning system, as explained in section 5.1, however parts of the urban forest are still at risk. Promoting a greater understanding of the benefits of the urban forest and ensuring that appropriate protection is in place will help ensure that it is properly valued and integrated into urban development as the city grows.

Actions

4a. Collate and share examples of effective implementation of London Plan tree and woodland policies into development plans. These will inform future updates of the London Plan and drafting of local plans.

4b. Review the risks to trees within London's built environment with the National Tree Safety Group and insurance industry stakeholders. This will help understand and review the issues around perceived risks of trees within the built environment, in particular of London's clay soils.

4c. Promote the adoption of tree and woodland plans and policies by other major land managers and statutory undertakers such as housing associations and rail companies.

	Lead Organisation	Supporting Organisation
4a	GLA	CPRE, LTOA, RP, TC, TCT, TCV
4b	LTOA	ICF, TC, TFL
4c	FC	GIGL, LWT, NR, TC, TCT, TCV, TFC, TFL, WT

6.2 Growing and expanding

Goal 5

Create more woodland, especially species-rich woodland, in London, particularly in the Green Belt

Left:
Coppice protection in Pear Wood, Stanmore.
© London Wildlife Trust

Context

Woodlands in and around cities provide a wide range of benefits for people and nature: providing space for recreation, improving air quality, providing vital habitat, tackling soil erosion and reducing flood risk. London has over 13,000 hectares of existing woodland, but there is significant opportunity to increase this, through new tree planting and natural regeneration, predominantly in the Green Belt, building on existing initiatives such as the the Thames Chase Community Forest. The London Plan provides robust protection for the Green Belt and highlights the need to improve its quality and public access. The London Environment Strategy proposes that at least 200 hectares of species-rich woodland is created by 2050. Any new woodland must be considered as part of a strategic plan which ensures the right trees regenerate or are planted in the right place.

Actions

5a. Refine and publish mapping and data to identify priority opportunity areas for woodland creation, particularly in London's Green Belt, with a focus on delivering multiple benefits.

5b. Advocate for new planting and funding mechanisms for a cooperative approach to woodland creation, including community forests, in the Green Belt. This should be informed by the evidence of the benefits of woodland creation in and around London.

	Lead Organisation	Supporting Organisation
5a	GIGL, GLA	CPRE, EA, LWT, TCT, TFL, TOP, WT
5b	CPRE	COL, EA, FC, FE, GIGL, GLA, LWT, RP, TCT, TCV, TFC, TFL, WT

Goal 6

Increase the number of trees on London's streets, particularly in areas of currently low canopy cover

Left:
Tree planting in Pepys Park.
© Nathalie Weatherald

Context

London already has over 700,000 street trees, which provide multiple benefits from creating a sense of place to providing shade. However, some London neighbourhoods benefit from more trees than others for a variety of reasons ranging from the legacy of historic planting to the layout of streets and underground services. We know that there is potential to plant thousands more trees, including in over 20,000 vacant tree pits across the city which among other benefits could improve species diversity and provide a strategic approach to addressing climate change and risks associated with pests and diseases. However, constraints on local authority budgets have reduced investment in new planting and limited boroughs' capacity to effectively manage their existing tree stock.

Actions

6a. Support boroughs to improve the quality and accessibility of their data on vacant and potential street tree pits. Data should be added to the London Street Tree Map.[41]

6b. Promote corporate and public sponsorship for tree planting and maintenance across London. This should include piloting an online platform.

6c. Publish good practice guidance on the use of the Community Infrastructure Levy and Carbon Offset by local authorities to support tree planting.

6d. Identify priority locations for street tree planting to deliver multiple benefits. This should include sharing good practice on decision support tools, combining environmental and social data.

	Lead Organisation	Supporting Organisation
6a	GLA, LTOA	GIGL
6b	TFC	GLA, LTOA members, LWT, TCV
6c	LTOA	TC
6d	GLA	COL, EA, GIGL, London boroughs, LTOA, TFL

[41] https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/trees-and-woodlands/london-tree-map

Goal 7

Increase the number of trees in London's parks and green spaces, particularly in areas of currently low canopy cover

Left:
Tooting Bec Common.
© London Wildlife Trust

Context

London has many hundreds of thousands of trees in parks and other urban green spaces such as school grounds and playing fields, hospitals and housing estates. These provide many benefits such as helping to address surface water flooding and overheating which will become increasingly important to help London adapt to climate change. There are opportunities to increase tree canopy cover in some of these spaces, including edible tree crops and orchards, to improve the quality of green spaces and meet climate adaptation and wellbeing objectives. However, not all green spaces will be suitable for additional tree planting due to space constraints, recreational uses and the need to maintain other habitat types and it will be important to plant the right trees in the right places.

Actions

7a. Identify opportunities for increasing canopy cover in parks and green spaces as part of green infrastructure strategies. This will require working closely with and supporting boroughs.

7b. Create, publish and promote decision support tools to help identify priority park and green space planting locations to deliver multiple benefits, including the Green Infrastructure Focus Map, ward-level canopy cover data, and planting potential maps.

7c. Work with social housing providers to develop London housing estates landscape enhancement programmes to increase canopy cover for climate resilience and resident wellbeing. Implementing this widely will need a tree sector wide approach and engagement with organisations such as the G15, National Housing Federation and the Housing Quality Network.

7d. Support community groups, such as friends of parks groups, park user groups and the London Greenspace Friends Network to identify locations to plant and maintain trees.

	Lead Organisation	Supporting Organisation
7a	GLA, LTOA	GIGL, LWT, PL, RP, TCT, TCV, TFC, TOP
7b	GLA, LTOA	CPRE, GIGL, LWT, PL, TCT, TCV, TFC
7c	TFC	CPRE, LTOA, LWT, PL, TCV, TOP
7d	TCV, TFC	CPRE, GLA, PL, TCT, TOP

6.3 Promoting and supporting

Goal 8

Ensure high quality, up to date information on the extent, condition and benefits of London's urban forest is accessible to land managers, decision-makers and the public

Left:
Wood anemones in Selsdon Wood.
© London Wildlife Trust

Context

The complex nature of London's urban forest ownership and management combined with resource constraints and a lack of common tree reporting methodologies and data consistency makes data collection challenging. There is more to do to achieve a comprehensive understanding of our capital's trees and woodlands.

Improving the information available on London's urban forest will enable the partnership, land managers, Londoners and other stakeholders to better assess the extent and condition of London's urban forest. It will improve our understanding of the benefits provided by London's trees and woodlands, and inequalities in this provision. It can help to identify trends, and prioritise actions, and provide a tool for engagement.

Actions

8a. Collate a London-wide inventory of publicly owned and managed trees. This should move to adopting the national common data standards for collecting and reporting tree data once these have been agreed.[42] This will then allow analysis of the data and support future KPIs.

8b. Undertake regular updates to the London Street Tree Map. A repeatable methodology should be used utilising the latest borough data.

8c. Undertake a London canopy cover assessment every five years. This will track progress towards London Environment Strategy canopy cover target.

8d. Review and update London's Ancient Woodland Inventory. This will include woodlands below two hectares.

	Lead Organisation	Supporting Organisation
8a	GLA	GIGL, LTOA, LWT, RP, TCT, TFC, TFL
8b	GIGL, GLA	LTOA, TFL
8c	GLA	GIGL, TFL
8d	GIGL, WT	LWT, TCT

[42] https://www.forestresearch.gov.uk/research/urban-trees-and-greenspace-in-a-changing-climate/quantification-and-valuation-of-ecosystem-service-provision-of-urban-trees/treezilla/communitree-connecting-tree-databases-public-improving-urban-tree-data-business-government-and-research/

Goal 9

Support Londoners in playing an active role in the protection, growth and management of the urban forest

Left:
Encouraging children's involvment in the urban forest.
© The Orchard Project

Context

Ensuring support and action from all Londoners, including those who currently under-use green spaces, will be key to protecting and growing London's urban forest. This includes Londoners protecting and planting trees in their own gardens, which make up approximately 20% of the capital's urban forest. Community engagement in tree and woodland planting and management activities provides additional resources and encourages greater use. Wider support and engagement can also help demonstrate the value of London's urban forest to decision-makers.

Actions

9a. Maintain a hub for information and data on London's urban forest.
9b. Develop an annual collaborative campaign for involving Londoners with London's urban forest. This should link to collective priorities of the partnership.
9c. Research Londoners' attitudes to London's urban forest. This will provide baseline data to inform campaigns and public engagement programmes.
9d. Scope the need for a pan-London urban forest community network for community organisations involved in tree planting and maintenance and woodland management. If a need for this is established, this could offer advice, training and support good practice.

	Lead Organisation	Supporting Organisation
9a	GLA	GIGL, GW, LWT, RP, TCT, TCV, TFC, TFL
9b	TFC	CPRE, GLA, LWT, RP, TC, TCT, TCV, TFL
9c	LUFP	GIGL, LWT, RP, TC, TCT, TCV, TFC, TFL,
9d	TCV	GW, LWT, TC, TCT, TFC, TFL

Goal 10

Recognise the productive potential of London's urban forest and support woodland enterprises

Left:
Timber from Kings Wood management.
© Forestry Commission

Context

There are a variety of business and community enterprises who work in and with London's woodlands. Many of these are likely to remain small scale local initiatives due to their local focus, capacity and the amount of produce.

However, realising the productive potential of London's woodlands – particularly larger areas – can help incentivise management, support community engagement, offer potential employment and deliver revenue to those responsible for their long-term upkeep. Currently supply chains are fragmented, market potential is not fully realised and more support is needed to develop and encourage woodland enterprise.

Actions

10a. Support the London Wood Enterprise Network. This could include an online platform to connect the wood supply chain and woodland and tree enterprises.

10b. Commission research on the productive potential of London's urban forest.

10c. Develop and deliver a training programme for tree and woodland managers on identifying and developing routes to markets for wood products.

	Lead Organisation	Supporting Organisation
10a	FC	L, LAW, RP, TCT
10b	FC	TCT
10c	FC	COL, ICF, L, LAW

Goal 11

Champion, share and encourage good practice, innovation and research amongst urban forest professionals

Left:
New mature tree planting at New Street Square.
© TDAG, Steve Parker

Context

There is a large body of good practice, evidence and developing research and innovation on how to protect, manage, grow and support the urban forest. The London Urban Forest Partnership, LTOA, TDAG, Forest Research and the Urban FWAC, for example, are all existing networks which commission, produce, and distribute good practice guidance as well as sharing research and knowledge. However, there is an opportunity to make this information more clearly accessible, to identify collective priorities and knowledge gaps, facilitate pathway to impact for research, and to share learning between London and other cities in the UK and abroad.

Actions

11a. Identify priority research topics for London's urban forest, and promote to research providers and funders.
11b. Improve the collation and dissemination of good practice guidance on urban forest policy and practice.

	Lead Organisation	Supporting Organisation
11a	LUFP	AA, EA, GIGL, LWT, RP, TCT, TFL, TOP
11b	GLA, LTOA	AA, COL, EA, GIGL, ICF, LWT, NE, RP, TCT, TCV, TFC, TFL

Case study
Woodland protection in Lewisham

Theme: Protecting and managing
Subject: Protecting Ancient Woodland
Location: Lewisham
Contact: London Wildlife Trust and Woodland Trust
Period: 2018

Correctly designating ancient woodland is critical to ensuring its survival

Left:
Hillcrest Estate, Sydenham.
© London Wildlife Trust

In 2018 an application was made to Lewisham Council to redevelop parts of the Hillcrest Estate, Sydenham. Although there are elements of ancient woodland on site (designated as a SINC), the applicant relied on its absence from the Ancient Woodlands Inventory (AWI) and its alleged "poor condition" as evidence that none was present.

London Wildlife Trust, which had been working with local residents to enhance the woodland, objected to the proposals. Residents also alerted the Woodland Trust to add weight to the objections, which eventually led the applicant to withdraw their application.

Typically, only ancient woodlands greater than two hectares appear on the Government's AWI and on Natural England's website. Greenspace Information for Greater London (GiGL) can provide information of any sites in Greater London that have already been identified as having ancient woodland components, even below the two hectares threshold. To ensure proper protection, local plans should require that GiGL is consulted to check for the presence of ancient woodland. In addition, London could follow the example of the South East by re-surveying smaller sites for ancient woodland and updating the AWI with the results.

Case study
Tree health plan

Theme: Protecting and managing
Subject: Biosecurity at Lesnes Abbey Woods
Location: Lesnes Abbey Woods, LB Bexley
Contact: Lesnes Abbey
Period: 2017-ongoing

The plan focused upon simple actions that could reduce the risk from pests and pathogens

Left:
Surveying for Chestnut Gall Wasp.
© Lesnes Abbey

In 2017, recognising the sharp increase in invasive non-native pests and diseases affecting our woodlands and urban trees, we produced the Lesnes Abbey Woods Tree Health and Biosecurity Plan. The plan focused upon simple actions that could reduce the risk from pests and pathogens being introduced and becoming established within the wood. The plan identified three key areas:
– monitoring for and early detection of key pests and diseases
– control and management of any pests and diseases discovered on site
– prevention of pests and diseases being brought on to site through human activity.

A tree health survey looking for pests and diseases was undertaken by staff and volunteers covering a representative sample of tree species from across the wood as well as areas of high visitor traffic, newly planted trees and areas where fly-tipping has occurred. This was followed by a risk assessment to identify key pests and diseases and giving a risk rating based upon the likelihood of establishment and spread, and the potential impact that each pest or disease could have on the estate. Biosecurity measures were then identified for each.

Finally, a pathways assessment of the activities that occur in and around Lesnes Abbey Wood was also undertaken in order to highlight any activities that may unwittingly transfer infected or infested material on to the woodland site. The assessment highlighted three key types of activities on site that require consideration from a biosecurity perspective:
– operational activities including planting
– educational, recreational and leisure activities
– storage and illegal dumping of green waste on site.

Implementation of the plan has meant introducing changes to the way in which operations are carried out by staff, volunteers and contractors as well better communication with the public. Lesnes Abbey Woods has undertaken work aimed at the eradication of Rhododendron from within the Wood where it was found to be a host of the pathogen Phytophthera ramorum. In 2020, and working closely with the Forestry Commission, Lesnes Abbey Woods produced its first Oak Processionary Moth Management Plan.

Case study Woodland management

Theme: Protecting and managing
Subject: Kings Wood, Woodland Management
Location: Croydon
Contact: London Borough of Croydon
Period: Ongoing

These woods are not only a vital recreational resource but provide important locations for biodiversity

Left:
Ride widening to improve flora and fauna at Kings Wood.
© Forestry Commission

The London Borough of Croydon has been actively managing their woodlands across their 500 hectare estate. With almost half the woodland comprised of Ancient Semi Natural Woods these are not only a vital recreational resource but provide important locations for biodiversity.

The woodlands have been managed with the objective of improving biodiversity, access and safety. Kings Wood is a great example where the woodlands have been bought back into coppice management, with the hazel now being manged via a coppicing rotation system; rides have been opened up improving the woodland edge for forest flora and fauna; veteran trees have been given more room to grow by thinning out some of the trees.

This coppicing has helped create a local market, sold to local allotments, garden centres and hedge layers and enabled the employment for forest workers. Timber produced during the management of the woodland has been sent to sawmills for oak timber beams, locking up the carbon in the timber and utilising other forest markets. The income has been used to help with the woodland management such as the cutting of the rides and coppicing work.

This management has been undertaken by the council and its contractors as well as the numerous friends groups who actively undertake woodland work. The woodland has a management plan following the Forestry Commission template to demonstrate meeting the UK Forestry Standard with Kings Wood being used as an example of good practice for woodland management for workshops to encourage more woodlands into management.

Case study
Tree policy

Theme: Protecting and managing
Subject: London Borough of Barnet Tree Policy
Location: Barnet
Contact: London Borough of Barnet
Period: Ongoing

A scoping exercise and interviews across council departments took place, highlighting working arrangements

Left:
Oak Hill Wood in East Barnet.
© London Wildlife Trust

The need for a tree policy in Barnet had been evident for a number of years and following the publication of a Greenspaces Strategy and Green Infrastructure Strategy, the council decided to write a policy for publicly owned trees which could be part of a suite of documents. They commissioned a scoping exercise and interviews across council departments took place, highlighting working arrangements with colleagues from Planning, Housing, Highways as well as Tree Officers. Inter-departmental working challenges were discussed such as tree roots damaging pavements, tree felling criteria, tree planting, engaging with residents and councillors and managing contractors. A draft policy which was detailed by Barnet's Tree Officers, included:

Biosecurity – national guidance promoting biosecurity, which had been included in contract specification previously, was adopted and ensured tree planting followed guidelines on importing trees.

Tree root damage – experience in Sheffield was widely discussed and led to support from Highways directors to include flexible paving as standard footway relay around tree roots. This has the dual benefit of creating SuDS as this material is fully permeable, which has been calculated as much as 30m^3 per tree pit.

Ecosystem services – access to air quality and urban heat island data from the GLA highlighted areas in Barnet that would benefit most from strategic targeted tree planting. A proposal for a high increase in tree planting each year for a five-year project was costed and subsequently funded by the council.

Communication – the policy also clearly details the need to inform all stakeholders of reasons for removal of trees and refusal of works including pre-publicising works and advance notice of tree felling.

Case study
Regeneration

Theme: Growing and expanding
Subject: Thames Chase Community Forest
Location: Barking and Dagenham; Havering
Contact: Thames Chase Trust
Period: 1990-ongoing

The Thames Chase Community Forest has been increasing woodland cover in east London since its inception in 1990; repairing and restoring degraded landscapes and creating and improving habitats.

The creation of the Community Forest is governed by its overarching strategy: The Thames Chase Plan. During a refresh of the Plan in 2014, it was identified that since 1990 1.3 million trees have been planted; there has been a 70% increase in woodlands through new planting; and 41.2km of hedgerows have been created or restored. This work is continued through the Thames Chase Trust as custodian of the Community Forest. The refreshed vision for Thames Chase Community Forest is simple: '*By 2030, Thames Chase Community Forest will be recognised as an inspirational example of landscape regeneration where enhanced, connected woodland and green spaces has made a clear difference to wildlife and peoples' lives*'.

The most recent woodland to have been created in Thames Chase is Forestry England's Berwick Glades, with in excess of 10,000 new trees planted. Sections of the new woodland were planted by local schoolchildren and volunteers from the local community. Berwick Glades is a key component of Forestry England's Brownfield Programme in Thames Chase and the Trust will continue to work in partnership on other woodland creation opportunities within the Forest.

1.3m

trees have been planted in the area since 1990

Source: The Thames Chase Plan

Left:
Engaging schoolchildren on Trees for Learning day.
© Becky Gibson

Case study
Planting strategy

Theme: Growing and expanding
Subject: Parks and Open Spaces Tree Planting Strategy
Location: Barking and Dagenham
Contact: Barking and Dagenham Council
Period: 2017
Budget: Under £5k

1,643

standard trees identified by the strategy as planting potential

Source: Barking and Dagenham Parks and Open Spaces Tree Planting Strategy

Left:
Barking Park masterplan showing locations for new trees.
© London Borough of Barking and Dagenham

In 2017 the London Borough of Barking and Dagenham extended the scope of the update of their Parks and Open Spaces Tree Planting Strategy to assess the quality of the borough's existing tree stock and identify further opportunities for tree planting. This was in the context of a quality assessment of green infrastructure assets prepared for a natural capital account register for the borough. The strategy also proposed masterplans for the boroughs nine most important parks and open spaces, which included tree planting.

The strategy set out a rationale for tree planting and looked at opportunities for planting individual standard trees, avenues, groups of trees, orchards and woodland areas. One of the aims was to identify priority sites for tree planting, which met the objectives for the strategy and didn't compromise other outcomes and functions of green spaces. These sites could then be suggested as locations for partnership projects with third sector organisations when funding opportunities arise. Overall the strategy identified the potential to plant 1,643 standard trees (including in avenues and boundaries) and create over three hectares of orchards and seven hectares of woodland.

For more information: https://www.london.gov.uk/sites/default/files/lbbd_pos_tree_planting_strategy_2017.pdf

Left:
Trees in Barking Park.
© London Borough of Barking and Dagenham

Case study
Connecting residents with nature

Theme: Growing and expanding
Subject: Growing a greener estate: Racecourse
Location: Ealing
Contact: Trees for Cities
Period: 2017-ongoing

'... I know the Racecourse Estate is going to really benefit from them in years to come'

Left:
Community planting day at the Racecourse Estate.
© Nathalie Weatherald

During the 1930s, Northolt Racecourse was considered to be one of the finest in the UK. Walking around the estate, you can imagine what it was once like, as the main roads loop in what was once the original pony-racing track. In the 1950s, over 1,000 new council homes were constructed on part of the racecourse with the remainder of the land becoming Northolt Park. Over time, as with many estates across the UK, the park and open spaces across the estate have become unused and unloved.

Since 2017, Trees for Cities has been working with Ealing Council engaging local residents to transform the outdoor environment. Starting with trees as the focal point, the Greater London Authority supported planting of 160 trees across the estate, engaging local nurseries, schools, faith groups, scouts and the local fire brigade.

The community responded so positively to the tree planting that work has continued through planting wildflower strips and spring flowers.

'Thanks for everything your team did over the last two weekends in Northolt. As we found out on Saturday – planting trees is hard work. But I know the Racecourse Estate is going to really benefit from them in years to come.' Local resident.

Trees for Cities has now secured a grant from the National Lottery Communities Fund for a further three years, building the capacity of residents to lead further improvements to the estate and developing a year-round plan of outdoor activity to promote community cohesion. Residents have already suggested ways to get everyone more involved with ideas such as areas to grow food, more seating areas to build community interaction and more trees to provide shade and reduce air pollution.

For more information: www.treesforcities.org/racecourse-estate

Case study
Planting activities

Theme: Growing and expanding
Subject: Mass tree planting 2018 and 2019
Location: Londonwide
Contact: GLA
Period: December 2018, November/December 2019
Budget: £300k p/a

200

community groups and schools, over 40 planting events, were provided with 25,000 trees

Left:
Community planting day at Beckenham Place Park. © Luca Radek, London Wildlife Trust

For the past two years, the Mayor of London, in partnership with the Woodland Trust, TCV and Trees for Cities has supported a scaling up of tree planting activities in London for National Tree Week, helping thousands of Londoners get involved in a variety of ways:

Community Tree Packs – 25,000 trees were provided to over 200 community groups and schools in both 2018 and 2019, co-ordinated and supported by TCV. This scheme enabled groups to run their own planting events which were listed on the GLA website. Over 40 planting events took place.

Trees for Londoners – 54,000 trees were planted by 27,000 Londoners in gardens during 2018 and 2019 distributed via a ballot organised by the Woodland Trust. Trees were delivered to all London boroughs. The tree species included rowan and wild cherry, chosen to be suitable for small gardens. An additional 5,000 trees were available to collect at tree giveaway locations during National Tree Week arranged by TCV.

Volunteering events – Trees for Cities organised mass tree planting events involving hundreds of volunteers, many of whom planted trees for the first time, planting thousands of trees in parks and green spaces. TCV also hosted events, as did community groups across London. These events offered opportunities for Londoners without gardens to get planting, and for groups of volunteers from universities, faith groups, schools and businesses to take part.

For 2018 information:
https://www.london.gov.uk/city-hall-blog/londons-biggest-ever-tree-planting-weekend

For 2019 information:
https://www.london.gov.uk/city-hall-blog/londoners-mark-national-tree-week-planting-80000-trees

Case study
Tree valuation

Theme: Promoting and supporting
Subject: Ealing i-Tree Eco with Trees for Cities
Location: Ealing
Contact: Trees for Cities
Period: 2018

Left:
Informative tree tag at Ealing Broadway.
© Trees for Cities

3.4 £bn

is the amenity value of the borough's 234,400 trees

Source: www.ealingitree.online/

In 2018, Trees for Cities initiated the first borough-wide i-Tree Eco project, paving the way for use of the software to help inform urban forest management and maintenance by local authorities. The charity teamed up with Ealing Council, Treeconomics, Forestry Commission, Forest Research, the Greater London Authority and Arup.

The project piloted a three-part methodology: i) 35 volunteers were trained to deliver i-Tree Eco surveys of 220 randomised plots across Ealing ii) i-Tree Eco of Council inventory data and iii) Ward level i-Tree Canopy assessment of tree canopy cover. The rationale was to include trees on public and private land at borough and ward level, whilst also providing data exclusively for the trees actively managed by Ealing Council.

The project found that there are circa 234,400 trees in the borough, with an amenity value of £3.4bn. These trees remove 33 tonnes of pollutants and over 2,000 tonnes of carbon from the atmosphere every year. Tree cover varies greatly across wards, from 6% in Southall Green to 26% in North Greenford. 87 tree species were recorded across Ealing within our study: as London's third largest borough this number is proportionate to the city as a whole, but greater diversity could be achieved.

To raise local appreciation for the value of trees, Trees for Cities tied tags onto trees along the approach to Ealing Broadway station with fun greetings and facts to inspire and inform the public. The charity also ran a social media photo competition #iValueTrees.

The full technical report Valuing Ealing's Urban Trees provides a comprehensive assessment. Key findings are disseminated through an interactive micro-site www.ealingitree.online/, designed and developed by Arup.

Case study
Cross-boundary collaboration

Theme: Promoting and supporting
Subject: Great North Wood Living Landscape
Location: Bromley, Croydon; Lambeth; Lewisham; Southwark
Contact: London Wildlife Trust
Period: 2017-2021
Budget: £700k

A collaborative project reviving and reimagining the Great North Wood as a home for nature and people – in a modern urban landscape

Left:
Great North Wood view north from Norwood Park.
© London Wildlife Trust

The Great North Wood once extended across the hilly ridge between Deptford and Selhurst, and had largely disappeared by 1900. However, fragments of this ancient landscape still survive in and around Norwood, Sydenham, Forest Hill and Dulwich, together with a network of parks and greenspaces. Since the 1980s, and especially through a specific programme from 2017, the Trust has worked with volunteers, community groups, landowners, and local councils, in a collaborative project reviving and reimagining the Great North Wood as a home for nature and people – in a modern urban landscape.

The project raises awareness of this largely forgotten wooded landscape, encouraging people to explore, enjoy and value the natural wealth on their doorsteps. With strong community involvement, especially with under-represented audiences, it focuses on species such as woodpeckers, purple hairstreak butterfly, stag beetle, oak and hornbeam trees; with active woodland enhancement work, surveying, guided walks, school engagement and family activities. It aims to secure a long-term consistent approach to woodland management across the five local authorities, through developing baseline condition assessments, site management plans and training for volunteers.

Left:
Boundary oak, Forest Hill.
© London Wildlife Trust

For more information: www.wildlondon.org.uk/great-north-wood

7. Key performance indicators

7. Key performance indicators

The health of London's urban forest, and progress against delivery of the actions in the Urban Forest Plan will be tracked against the following key indicators:

KPI 1	Explanation	Baseline	Baseline source	Monitoring method	Monitoring frequency
Percentage canopy cover in London	The overall percentage tree canopy cover will be used to track trends over time, with the aim of increasing canopy cover. Remote sensing methods have margins of error. Within the London i-Tree Eco Project the standard error for tree canopy cover estimates where +/-1.35% for Inner London +/-1.04% for Outer London and +/-0.86% for Greater London which mean that repeating them more frequently is unlikely to show significant change.	21%	Curio canopy cover analysis https://maps.london.gov.uk/canopy-cover/	Remote sensing	Five years (Action 8c)

KPI 2	Explanation	Baseline	Baseline source	Monitoring method	Monitoring frequency
Total number of street trees in London	Tree inventories of London boroughs can help track part of London's tree population. The total number of street trees in inventories is a basic metric. Currently this data is partial as it covers 25 boroughs. In the short term this number will increase due to additions to the data set. The appropriate number of street trees for each borough will vary depending on many factors. We will work to analyse the inventory data and to develop a smarter KPI such as 'street trees per km of road'. Action 8a is to move to adopting emerging national reporting standards for tree data. This should enable the quantifying of ecosystem service benefits of trees in tree inventories (e.g. every five years). This would then take into account that larger trees provide greater canopy cover and more benefits. Once this data is collected and analysed it could form the basis of a new KPI.	700,000 (trees)	London Street Tree Map https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/trees-and-woodlands/london-tree-map	Borough tree inventories, collated by GiGL	Annual (Actions 8a, 8b)

KPI 3	Explanation	Baseline	Baseline source	Monitoring method	Monitoring frequency
Proportion of trees planted by London boroughs and TfL which meet the London Urban Plan principles for being more resilient to climate change, pests and diseases	Within Action 1b is the requirement to develop a set of principles for building a more resilient urban forest. The working group will develop these principles and this KPI will indicate the number of boroughs and could be used for wider organisations that are signed up to the principles.	No baseline		Survey of boroughs and partner organisations	Annual

KPI 4	Explanation	Baseline	Baseline source	Monitoring method	Monitoring frequency
Percentage of woods in favourable management	This figure is currently based on national Forestry Commission metrics. As set out in section 5.1 this figure underestimated the number of woods in management in London. Action 2d is to develop a more appropriate London metric, which will then be used to monitor this KPI. The NFI covers all woodlands over 0.5 hectares.	25%	Managed Woodland Headline Performance Indicator England https://data.gov.uk/dataset/f32ad7fd-b745-4c5a-904a-687e51f4fe74/managed-woodland-headline-performance-indicator-england-31-march-2017	Managed Woodland Headline Performance Indicator England (in the short term)	Annual (Action 2d)

KPI 5	Explanation	Baseline	Baseline source	Monitoring method	Monitoring frequency
Number of London boroughs which have a local urban forest plan	Within Goal 3 there is the aim of increasing the number of boroughs that have a local urban forest plan as a key part of a comprehensive green infrastructure strategy.	No baseline	N/A	Survey of boroughs via LTOA and/or Parks for London	Annual

KPI 6	Explanation	Baseline	Baseline source	Monitoring method	Monitoring frequency
Area of ancient woodland	Ancient woodlands are protected through planning policy and all known ancient woodlands in London are within SSSIs or SINCs. As such the area of ancient woodland tracked through this KPI should remain the same and demonstrate that there has been no loss of ancient woodland. As set out in Action 8d, smaller areas of ancient woodland under two hectares may not appear on the Ancient Woodland Inventory. Adding these may slightly increase the total area.	2,519 (hectares)	Ancient Woodland provisional register https://data.gov.uk/dataset/9461f463-c363-4309-ae77-fdcd7e9df7d3/ancient-woodland-england	Updates to the provisional register	Annual

KPIs will be added and updated during future reviews

KPI monitoring against goals

	Protecting and managing	Growing	Supporting
KPI 1 Percentage canopy cover in London		Goals 5, 6, 7	Goal 9
KPI 2 Total number of street trees in London	Goal 3	Goals 6	
KPI 3 Proportion of trees planted by London boroughs and TfL which meet the London Urban Plan principles for being more resilient to climate change, pests and diseases	Goals 1, 2, 3	Goals 6, 7, 8	Goal 11
KPI 4 Percentage of woods in favourable management	Goals 1, 2, 3		Goals 10, 11
KPI 5 Number of London boroughs which have a local urban forest plan	Goals 1, 2, 3		Goal 11
KPI 6 Area of ancient woodland	Goal 4		

8. Coordinating delivery of the plan

8. Coordinating delivery of the plan

A new partnership structure will need to be created to enable the delivery of the London Urban Forest Plan actions.

The Urban Forest Plan Delivery Group will take a strategic approach to ensure all 12 goals are given the priority required

Left:
Volunteers at Beckton District Park.
© Beth McConnell

The London Urban Forest Partnership is a network of organisations which collaborate to help protect the capital's trees and woodlands and encourage individual Londoners, businesses and organisations to manage the urban forest better and plant more trees. The partnership shares information and data, informs the development of tree related programmes in London, and promotes the benefits of the urban forest and prepared the London Urban Forest Plan.

The partnership currently operates as a forum and network. To enable the delivery of the Urban Forest Plan goals and actions there is a need to update the governance structure of the partnership. It is proposed that there is the creation of an Urban Forest Plan Delivery Group made up of the lead organisations. The Urban Forest Plan Delivery Group will take a strategic approach to ensure all 12 goals are given the priority required. This group will be responsible for managing any funds that are obtained directly for the partnership and will also undertake the strategic direction of any staff resource that is obtained which is likely to be needed. This group will report back progress to the wider partnership network.

By updating the structure now it will ensure the partnership is appropriately placed to manage the delivery of the plan and co-ordinate any future dedicated resources.

Delivery of the London Urban Forest Plan will require more collaborative working, better co-ordination and prioritisation of activity.

Partnership organisations have indicated which actions they will lead and those where they will be supporting as set out under each goal.

There are existing precedents for this approach such as the framework in place to deliver the London Sustainable Drainage Action Plan which comprises a dedicated officer (full-time) with a small budget to support and leverage delivery.

These suggested changes are reflected in an additional goal and actions related to governance and delivery mechanisms set out below.

Reviewing the plan

The plan is designed for use as a live document, to be reviewed, and updated as necessary by those involved in achieving the overall vision it champions. It will be reviewed every year by the Urban Forest Delivery Plan Group.

Goal 12

Develop a new partnership structure to deliver the London Urban Forest Plan actions

Left:
Apple trees at community food learning centre.
© London Wildlife Trust

Context

The existing structure, ways of working and configuration of the partnership has been effective in bringing together existing stakeholders to share knowledge and expertise, speak with one voice and highlight the actions that need to be taken forward to deliver on the aims and objectives of the London Environment Strategy with respect to trees and woodlands.

However, the majority of the actions identified within this plan are, almost by definition, those which cannot be delivered by individual partners alone. Delivery of the plan will require more collaborative working, better co-ordination and prioritisation of activity.

Actions

12a. Develop the London Urban Forest Partnership to support the delivery of the Urban Forest Plan.

12b. Secure resources to co-ordinate the delivery of the plan. This should include dedicated officer support and funding to implement actions in the plan and monitor progress against KPIs.

	Lead Organisation	Supporting Organisation
12a	FC, GLA	AA, CPRE, LUFP, LWT, RP, TCT, TCV, TFL, WT
12b	FC, GLA	LUFP, RP, TCT, TCV

9. Further information
10. Appendices

9. Further information

Policies

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https://www.gov.uk/government/publications/25-year-environment-plan

Government Forestry Policy Statement (2013)
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Lantern and Forestry Commission England (2017) Making London's Woodlands Work
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https://data.london.gov.uk/dataset/curio-canopy

Valuing the Urban Forest

TDAG (2019) First Steps in Valuing Trees and Green Infrastructure
http://www.tdag.org.uk/first-steps-in-valuing.html

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https://www.forestresearch.gov.uk/research/i-tree-eco/

LTOA (2008) Capital Asset Valuation of Amenity Trees
https://ltoa.org.uk/resources/cavat

Reference and guidance

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https://www.forestresearch.gov.uk/tools-and-resources/urban-tree-manual/

TDAG guidance including species selection and urban design (various dates)
http://www.tdag.org.uk/guides--resources.html

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Using tree canopy cover data to secure the benefits of the urban forest – Urban Forest and Woodland Advisory Committee (undated)
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Food and Agriculture Organisation of the United Nations (2016) Benefits of Urban Trees
http://www.fao.org/resources/infographics/infographics-details/en/c/411348/

10. Appendices

Appendix 1: Who's responsible for London's urban forest

A wide range of partners and stakeholders are responsible for growing, protecting and supporting London's urban forest, each with a variety of roles and responsibilities as set out below. This is not an exhaustive list.

London Boroughs

The 32 borough councils have the primary responsibility for London's urban forest. They own and manage a significant proportion of London's trees and woodlands including street trees, trees in parks and open spaces and woodlands in nature reserves and other protected landscapes. Through their land use planning role they also have powers and responsibilities for ensuring trees and woodlands are protected from development and new development results in the planting of new trees or the better management of existing trees and woodland where appropriate. They also ensure the protection trees and woodlands that are important landscape assets by imposing Tree Preservation Orders or designating Conservation Areas. Borough councils also have an important role in engaging the public in protecting and planting trees through a range of environmental programmes, often in association with NGOs.

The Royal Parks and the City of London

Both organisations are major owners and managers of woodland in London. The City of London has particular responsibility for managing a significant area of ancient woodland (Epping Forest) and the Royal Parks for managing one of the biggest concentrations of ancient and veteran trees in Richmond Park.

London Tree Officers Association

The Association is the voice of tree officers and managers. The membership is drawn primarily from the London Boroughs but with associate members from local authorities neighbouring greater London, other major land-managers (such as The Royal Parks) and arboricultural consultancies, contractors and suppliers. The Association has a particularly important role in promoting professional standards, developing and disseminating best practice and developing and issuing technical guidance on key issues such as pests and diseases; valuing trees; and risk management.

Not-for-profit sector

A range of environmental charities, community interest companies, community groups, lobby groups, etc., play an important role in shaping policy and practice; influencing decision-making; managing key sites and working with borough councils and others to engage and mobilise volunteers for tree and woodland projects. Although their roles sometimes overlap, the sector broadly operates as woodland managers, tree planters and woodland creators, public engagers, researchers, and campaigners. CPRE London, Greenspace Information for Greater London, Groundwork London, London Wildlife Trust, The Conservation Trust, The Orchard Project, TCV, Thames Chase Trust, The Tree Council, Trees for Cities, Woodland Trust, and many smaller local organisations are particularly active across most of these roles.

Forestry Commission and Natural England

The Forestry Commission is the government department responsible for promoting the economic, social and environmental benefits of trees and woodlands in the UK, promoting woodland creation and regulating the management of trees and woodlands through provision of grants, expert advice and licencing. Natural England has a similar role albeit with specific responsibility for the wider natural environment and landscapes. In London, the Commission plays an important role in preventing and managing outbreaks of tree pests and diseases, ensuring trees and woodlands are considered in the land use planning process, and supporting boroughs and other land-managers in implementing sustainable woodland management and identifying opportunities for woodland creation. Natural England's primary responsibility is to ensure that statutory nature conservation sites (Sites of Special Scientific Interest), which include extensive areas of ancient woodland and woodland

associated with other important natural habitats, are managed to maintain their ecological value. They also have responsibility for ensuring the conservation of protected species including those with a particular association with trees and woodlands, such as most bat species.

Environment Agency

The Environment Agency is responsible for managing the risk of flooding from main rivers and promoting natural flood management, including tree planting and wet woodland creation. Natural flood management trials in four areas across London, supported by the Environment Agency are being carried out by Thames 21 in partnership with local councils and communities.

The Mayor of London (and Greater London Authority)

The Mayor of London has no direct responsibility for managing trees and woodlands (other than indirectly through Transport for London which has an extensive street tree portfolio and areas of woodland along the London Underground and London Overground rail network). The Mayor has an important role in setting the policy framework for London's urban forest through policies and proposals in the London Environment Strategy and the London Plan (the spatial planning framework for London). The Mayor of London also has an important role in convening the London Urban Forest Partnership.

Transport for London

Transport for London (TfL) provides an integrated public transport network across London. Much of this transport network incorporates green infrastructure which delivers environmental, economic and social benefits to Londoners.

TfL is a major landowner and manages 1,998 hectares of land within London, mostly consisting of the London Underground network and the Transport for London Road Network (TLRN). As such, TfL is responsible for managing a large number of trees, including 23,000 street trees (including the iconic Victoria Embankment), small woodlands or ornamental groupings of trees on amenity land, and linear woodlands along parts of the London Underground and London Trams networks.

These trees require different approaches to management. Safety issues are TfL's primary focus but environmental and social benefits are fully considered. Tree and vegetation management acrossTfL's networks is necessary in order to protect public safety and property, and prevent disruption to services. This may include removing (and replacing where appropriate) dead or diseased trees or those causing dangerous subsidence and pruning vegetation to maintain clear sightlines on the transport network. However, trees are also assets that can help: stabilise embankments; improve the attractiveness of neighbourhoods; screen tracks from homes; reduce the risk of flooding from storms; support biodiversity and help cool infrastructure and provide shade for pedestrians.

The Mayor's Transport Strategy commits TfL to increase street tree numbers on the TLRN by 1% every year between 2016 and 2025, through a combination of replacing previously removed trees and planting new ones. Where trees are removed from the London Underground network or through other schemes, TfL aims to plant trees to offset those lost.

TfL also contributes to London's tree cover through planting new trees when delivering road and cycleway projects. TfL's multi-disciplinary specialists work together to achieve solutions that can improve traffic flow and pedestrian safety whilst also greening London, as recently delivered at Woodford Avenue in Gants Hill.

Network Rail

In July 2019, Network Rail announced their commitment to achieve biodiversity net gain on each of their routes by 2040 and trees and hedgerows are a key part of this vision. The Tree Council, in its role as champion of trees and critical friend to Network Rail, provides advice on vegetation management to help achieve these goals, for the benefit of rail users, local communities and wildlife.

Network Rail is the fourth largest public sector landowner in Britain. The land they own is and can be a rich habitat and a vital wildlife corridor across Britain. Therefore, working with them to get things right can have a massive positive impact on conservation across the UK. Some trees have to be removed for safety reasons but management techniques such as pollarding, coppicing and hedge creation will always be considered. These are better for the environment, better for wildlife, better for local communities and can cost less than other techniques. With large numbers of ash trees growing on the railway, as Ash Dieback spreads, these issues will become even more important over the coming years.

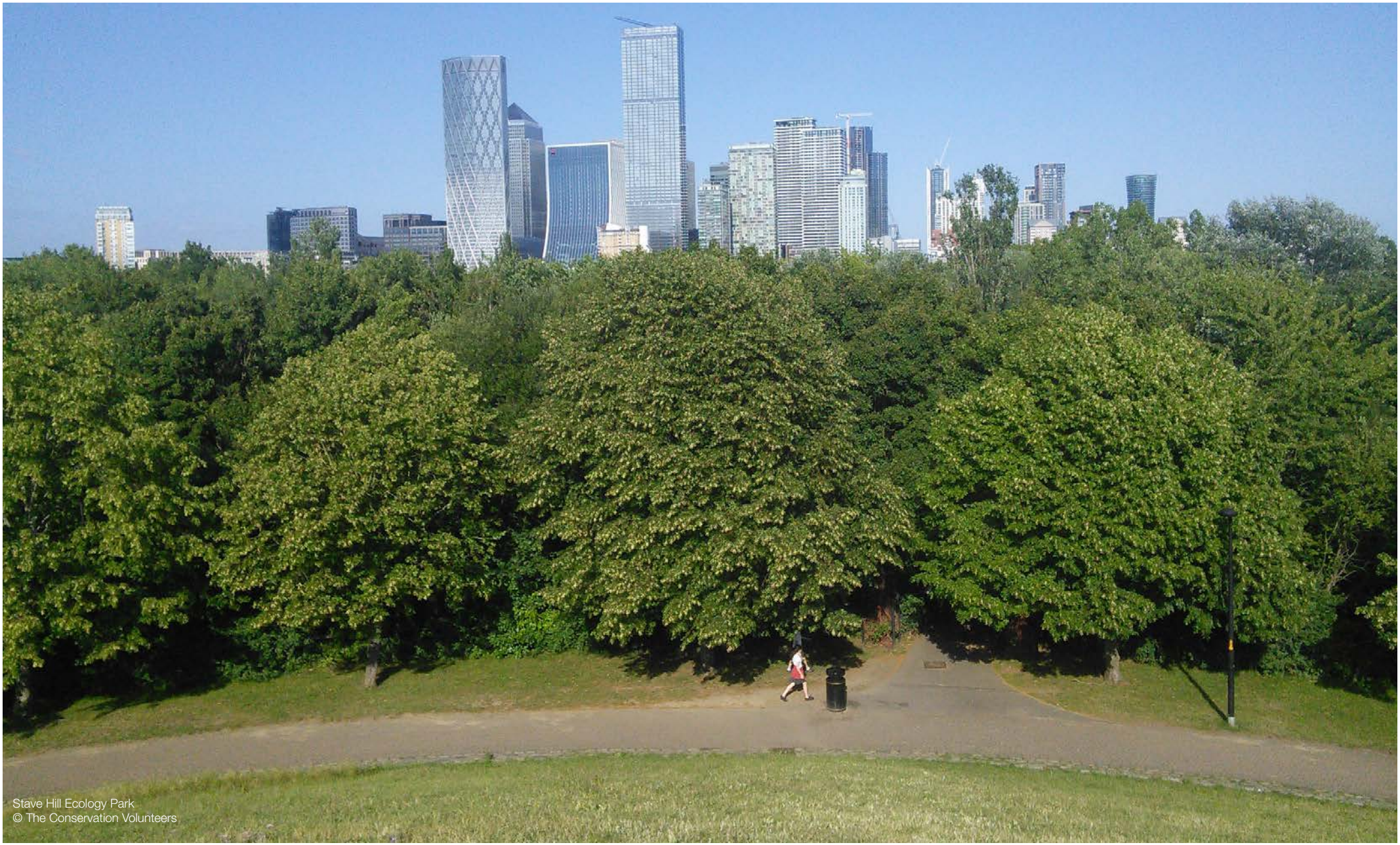
For more information:
www.networkrail.co.uk/communities/environment/

Appendix 2: Woodland in SINCs

Produced by Greenspace Information for Greater London, 03/12/2019

Summary	Location/category	Woodland in SINCs (hectares)	Woodland in Greater London (hectares)	% of woodland in SINCs
Total	Greater London	10,282	13,308	77
	Barking & Dagenham	46	57	79
	Barnet	415	757	55
	Bexley	444	503	88
	Brent	126	145	87
	Bromley	1,698	2,216	77
	Camden	187	199	94
	City of London	0.1	0.3	45
	City of Westminster	95	108	88
	Croydon	937	1,153	81
	Ealing	294	335	88
	Enfield	348	555	63
	Greenwich	356	463	77
	Hackney	52	67	77
	Hammersmith & Fulham	38	46	82
	Haringey	152	169	90
	Harrow	345	461	75
	Havering	601	1,059	57
Borough	Hillingdon	881	1,190	74
	Hounslow	403	504	80
	Islington	24	38	63

Summary continued	Location/category	Woodland in SINCs (hectares)	Woodland in Greater London (hectares)	% of woodland in SINCs
Total	Kensington & Chelsea	31	50	63
	Kingston upon Thames	154	228	68
	Lambeth	50	59	85
	Lewisham	141	161	87
	Merton	363	388	93
	Newham	64	126	50
	Redbridge	399	471	85
	Richmond upon Thames	755	805	94
	Southwark	118	140	84
	Sutton	151	191	79
	Tower Hamlets	42	52	82
	Waltham Forest	334	357	93
	Wandsworth	236	255	93
Woodland Type	Broadleaved woodland (includes mixed and yew) (IHS WB)	10,236	13,229	77
	Coniferous woodland (IHS WC)	47	79	59
SINC grade	Metropolitan SINCs	5,956	N/A	N/A
	Borough SINCs	44	N/A	N/A
	Borough Grade I SINCs	2,428	N/A	N/A
	Borough Grade II SINCs	1,508	N/A	N/A
	Local SINCs	346	N/A	N/A



Stave Hill Ecology Park
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