OXFORD CITY COUNCIL

Treec₀₂nomics

VALUING OXFORD'S URBAN FOREST

Urban forests provide people with a range of benefits (also called Ecosystem Services) that help make our towns and cities better places to live.

Trees filter air pollution, improve our well-being, store carbon and reduce flooding, whilst also providing important habitats for wildlife. Trees provide many other benefits too, all at the same time and at little cost.

During the summer of 2018 Oxford City Council worked in partnership with Treeconomics to survey the trees in Oxford. Using i-Tree Eco, the team quantified the structure of Oxford's urban forest resource and valued a range of the benefits (ecosystem services) it provides to society.

The benefits provided by Oxford's Urban Forest are worth over

£1.8 Million
every year

Number of Trees
248,200

22.3%
Canopy Cover
(15.9%Tree Cover + 6.4% Shrub Cover)

73
Tree Species

54
Trees per hectare

Oxford's Urban Forest:

Contains an estimated 248,200 trees which benefit over 154,600 people. That's nearly 2 trees per person, double the ratio for London.

In addition these Trees:

- Cover an area equivalent to 725ha (the same as 725 football fields of trees) with a leaf area of 31km².
- Intercept around 255 thousand cubic metres of rain water every year, equivalent to an estimated £81,000 in avoided stormwater treatment costs.

- Filter an estimated 65 tonnes of airborne pollutants each year, worth more than £1.12 million in social damage costs.
- Remove an estimated 2,500 tonnes of carbon from the atmosphere each year, estimated to be worth £619,000.
- Store an impressive 76,400 tonnes of carbon worth £18.8 million.
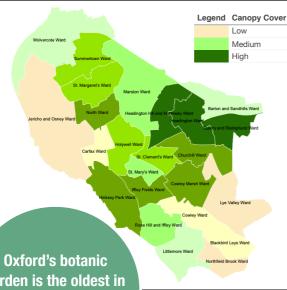
Most Common Trees:
Ash, Willow and Poplar

i-Tree Eco

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Legend | Canopy Cover
- Low
- Medium
- High

How ?

A survey of 200 randomly allocated plots was undertaken by teams of trained volunteers and professionals across Oxford. Plots were located on public and private property across the city. **The Urban Forest is everywhere!**

Detailed tree measurements were recorded, including the species, height, diameter of the trunk and canopy spread. In addition, details on the location of the trees such as the land use and the ground cover were also collected to build a picture of the structure and composition of Oxford's urban forest.

Oxford's botanic garden is the oldest in the world, founded in 1621

Conclusions

Oxford's urban forest is providing a valuable benefit to all of its residents and visitors. For example, the filtration of Sulphur Dioxide alone is equivalent to the emissions of over 11,000 cars every year.

However there are challenges too, *Ash Dieback* and *Xyella* diseases threaten around 16% of Oxford's tree's resource and this could have a devastating effect on the provision of benefits.

Understanding urban forest composition is the first step in the proactive management of this important resource. Now we can begin to strategically plan to improve and maintain our urban forest. By all working together we can ensure that Oxford's Urban Forest continues to provide benefits long into the future.

What is i-Tree?

A state-of-the-art, peer-reviewed software suite from the USDA Forest Service, i-Tree Eco quantifies the structure and functions of community trees & urban forests.

It is adaptable to multiple scales from a single tree to area-wide assessments. It's also open source and free to use.

What Next ?

A full report detailing the results will be published by the end of the year and will be available at: www.urbantreecover.org. If you want to learn more about trees and their benefits then take a look at the Trees Design Action Group Website at: www.tdag.org.uk

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