

Monmouthshire's Urban Trees



51% are found in residential areas

12% are found in parklands

11% are found in vacant areas



69% are in good or excellent condition

Monmouthshire's urban forest contains an estimated **80,010** trees

Top pest and disease threats



Ramorum Disease (present)

Asian Longhorn Beetle (not present)



Maples provide the most pollen and nectar

Cherry/plum trees provide the most fruit and seed

Habitat provision

Most common species:



Hawthorn



Field Maple

Ash



Provide **10%** canopy cover

Deliver ecosystem services such as...

removing **24 tonnes** of pollution each year... which avoids **£94,000** in yearly health costs



storing **26,800** tonnes of carbon...

and sequestering **675** tonnes of carbon...

valued at **£24 million** equivalent to emissions of 60,995 cars

intercepting **38,700 m³** of rainfall each year... an annual service valued **£56,900**

valued at **£606,400** equivalent to emissions from 495 households

have a total amenity value of **£2.4 million**

Have a 100-year present value of **£33.7 million**

Provide an estimated total annual benefit of **£757,300**



Ariennir gan **Lywodraeth Cymru**
Funded by **Welsh Government**

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What is i-Tree Eco?

i-Tree Eco is part of the state of the art, peer-reviewed software suite from the USDA forest service, that provides urban forest analysis and benefits assessment tools. The urban forest is defined as all the trees in an urban area, both public and private. **i-Tree Eco has been used to understand the composition and structure of Monmouthshire's urban forest and the benefits it provides.** This analysis can be used as a baseline to make informed decisions to better manage and maintain the urban forest, both for the present and future climates.

How did we collect the information?

i-Tree Eco uses field data collected from plots which represent a sample of the total area. We surveyed 200 plots of 0.04 hectare, producing a sample every 9 hectares across the study area. We combined the field data (including information about land use, land cover, tree cover, plantable space, and information on the trees present) with local climate, phenology, and air pollution data to produce **estimates of ecosystem service provision.** We also calculated i) the amenity value of Monmouthshire's trees, using an amended version of the CAVAT Quick method, ii) a risk matrix to determine the potential impact of priority pests and diseases, and iii) a literature-based assessment of habitat provision from the trees present.

What does this mean for Monmouthshire?

The information gained from this survey and report has increased our knowledge of the structure and composition of Monmouthshire's urban forest. **This can help to inform future decision making and strategy** and raise awareness of the importance of the wider environment. The sustainability of Monmouthshire's urban forest has been assessed to be 'Good' in two of five indicators: tree health and climate suitability. Sustainability could be improved by **increasing canopy cover, and balancing the community with larger trees and wider taxonomic diversity.**

The i-Tree Eco report can underpin planning for futureproofing Monmouthshire's urban forest, including optimising ecosystem service provision. Recommendations for further analysis include: **an analysis of where to focus tree planting efforts, developing a tree planting strategy, and creating an Urban Forest Masterplan.** Targeted planting strategies would improve equitability, quantity, and sustainability of ecosystem service delivery. An Urban Forest Masterplan would likely incorporate objectives such as setting specific canopy cover targets for different land uses or areas, identifying and prioritising action through planting and management, and management of pests and diseases, to ensure that tree cover is maintained.

