

# VALUING THE BLACK COUNTRY'S URBAN FOREST



**Most Common Tree Species:  
English Oak, Hawthorn and Silver Birch**

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The CAVAT value of all of the trees across the Black Country is **£23.2 Billion**

\*Refers to the Capital Asset Value for Amenity Trees.

Urban forests provide people with a range of benefits (or ecosystem services) that help make our towns and cities better places to live.

Trees filter air pollution, improve our health, store carbon and reduce flooding, whilst also providing important habitat for wildlife and a multitude of other benefits.

Understanding these benefits can help to protect and manage this valuable resource.

Black Country Consortium Ltd worked to survey the trees in Dudley, Sandwell, Walsall and Wolverhampton. Using a plot sample assessment in i-Tree Eco the team quantified the structure of the urban forest and valued a range of the ecosystem services it provides to society.

**Number of Trees  
1,952,000**

**15.4%  
Tree Cover**

**211  
Tree Species**

**42  
Trees per hectare**

The Black Country's urban forest contains an estimated 1,925,000 trees benefiting over 1.19 million people. That's 1.6 trees per person!

In addition the Black Country's trees:

-  Cover an area equivalent to 7,173 ha with a leaf area of 35,300 ha.
-  Intercept 614,000 m<sup>3</sup> of rain water every year, worth £604,000 in avoided water treatment costs.
-  Filter 62 tonnes of airborne pollutants each year, worth £4 million.
-  Remove an estimated 24,400 tonnes of carbon from the atmosphere each year, worth £22 million.
-  Store an impressive 844,000 tonnes of carbon worth £767 million.
-  Are at risk from pests and diseases - Ash dieback could affect 162,000 trees in the Black Country.



Leaf area is equivalent to 115 times the area of Sandwell Valley Country Park (308 ha)!



Avoided runoff is equivalent to 246 olympic swimming pools of water!



Carbon sequestration is equivalent to the annual CO<sub>2</sub> emissions of 50,700 cars!



Carbon storage is equivalent to the weight of 68,000 new London double-decker busses (12.4 tonnes)!

# HOW DO THE DISTRICTS COMPARE?

## Structure and Composition Compared

	Dudley	Sandwell	Walsall	Wolverhampton
<b>Number of Trees (estimated)</b>	590,000	265,000	624,000	473,000
<b>Tree Canopy Cover</b>	17.0%	18.1%	10.9%	16.5%
<b>Species Richness</b>	88	108	77	78
<b>Tree Density (trees/hectare)</b>	60	31	60	68
<b>Leaf Area</b>	9,290 ha	7,450 ha	9,850 ha	8,690 ha
<b>Most Common Tree Species</b>	Common hawthorn, English oak, Ash	Field maple, English oak, Bird cherry	English oak, Silver birch, Ash	Common hawthorn, Silver birch, Sycamore
<b>Replacement Cost (CTLA)</b>	£334 million	£684 million	£333 million	£375 million

## Ecosystem Services Compared

		Dudley	Sandwell	Walsall	Wolverhampton
<b>Carbon Storage (whole value)</b>	<b>Amount (tonnes)</b>	174,000	361,000	141,000	169,000
	<b>Value</b>	£158 million	£328 million	£128 million	£153 million
<b>Annual Carbon Sequestration</b>	<b>Amount (tonnes)</b>	5,870	5,550	6,890	6,000
	<b>Value</b>	£5.3 million	£5.0 million	£6.2 million	£5.6 million
<b>Annual Pollution Removal</b>	<b>Amount (tonnes)</b>	17.7	15.3	14.5	14.5
	<b>Value</b>	£1.0 million	£828,000	£922,000	£1.3 million
<b>Annual Avoided Runoff</b>	<b>Amount (m<sup>3</sup>)</b>	162,000	130,000	172,000	151,000
	<b>Value</b>	£159,000	£128,000	£169,000	£149,000
<b>Total Annual Benefits</b>		<b>£7,129,000</b>	<b>£6,558,000</b>	<b>£7,789,000</b>	<b>£7,229,000</b>

Values have been calculated using the following: Carbon-DECC figures for CO<sub>2</sub>e of £248 per tonne for 2022; avoided runoff-Severn Trent Water unmetered volumetric sewerage charge of £0.98/m<sup>3</sup>; pollution-UK social damage costs for 'Transport Urban Medium' (except Wolverhampton which uses 'Transport Inner Conurbation'), £11.97 per kg (nitrogen dioxide - UKSDC), £6.93 per kg (sulphur dioxide - UKSDC), £224.53 per kg (£276.27 per kg for Wolverhampton) (particulate matter less than 2.5 microns - UKSDC). UK values calculated using an exchange rate of US\$0.75 = £1.00.