



# **Tree** Benefits **Tree** Maintenance



**Trees play a very important role in enhancing the environment of the County Borough of Wrexham, they screen unsightly views, provide colour and contrast to built up areas, and can provide a sense of season and naturalness.**

### **Pollution interception**

Trees improve air quality by removing harmful dust, smoke and fumes from the atmosphere by trapping them on foliage & branches.

A study by The University of Lancaster estimates that doubling the number of trees in the West Midlands would reduce excess deaths due to particulate pollution by up to 140 per year.

### **Property values**

Streets well populated with trees look far more attractive than those completely devoid of vegetation.

Studies analysing tree cover on residential house prices demonstrate that property value in tree lined areas can be 6% greater than similar areas without trees.

### **Carbon sequestration**

Trees play an important role in combating climate change by absorbing carbon dioxide (one of the principal greenhouse gases accelerating climate change). During tree growth, Carbon is absorbed and stored in the wood until it is released when the tree is broken down as part of the natural carbon cycle.

Another benefit during this process is the release of oxygen through respiration and each year a mature tree can produce enough oxygen for up to ten people.

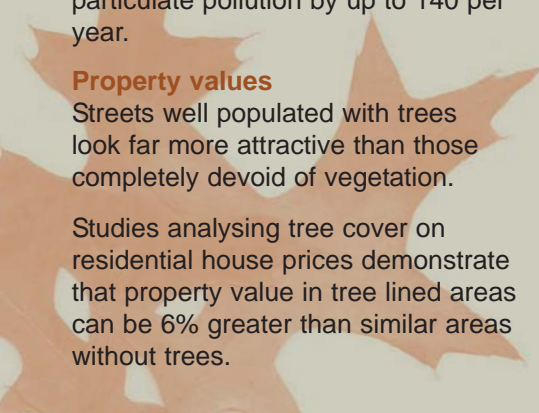
### **Wildlife Benefits**

Trees are an important wildlife habitat. They provide nesting sites for birds, roosting sites for bats and support a wide range of insects that are an important food source for birds and other wildlife. A mature oak tree can provide support for over 460 different species of insects, birds and mammals in it's branches and trunk, as well as fruit, flowers and foliage that also attract a huge variety of birds and insects.

### **Health benefits**

Research has been undertaken by the University of Illinois and has identified numerous beneficial effects that trees have on society. Many of the benefits relate to encouraging people out of their homes and into public open space, where they can interact with others and build stronger social relationships. An additional benefit of interest is the positive effect that contact with nature can have on children with Attention Deficit Disorder (ADD).

Trees provide shade from the sun's ultraviolet rays (UV). Children's skin is



more sensitive to UV damage and the amount of sun exposure during childhood is thought to increase the risk of developing skin cancer in adult life. A safe umbrella of trees is particularly useful in school grounds and where children play.

Office workers who can see greenery from their desks experience 23% less time off sick than those who can not. Office workers who can see greenery also report greater job satisfaction, whilst hospital patients with views of trees have been found to recover significantly faster than those who can not see any natural features.

### Tree Pruning

Every time a tree is pruned its ability to grow, prevent infection or limit the spread of any existing infection is reduced. Broadly speaking this means the less a tree is pruned, the more physically healthy a tree will be (even though it may appear untidy to the human eye). At Wrexham we are keen to maintain trees in a way that will hopefully allow future generations to benefit as we do today. To do this, our methods are based on a good knowledge of current practice and a minimum intervention approach.

### Crown Reduction

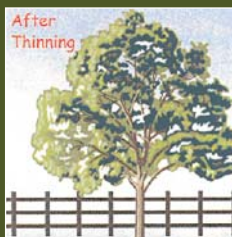
Reduction of the tree canopy by a

specified amount usually a percentage of the canopy area. This is generally discouraged on most species of tree and is generally a last resort. The ability of a tree to cope with such a drastic loss of leaf area depends on the type of tree (species), some may be more tolerant than others.

Willow for example react with vigorous growth which can provide good wildlife habitat but it needs to be controlled regularly to avoid branch breakage. Reduction is also used when trees have unsafe parts but need to be kept as habitat for bats or birds. If branches do grow back the new growth is thought to have a weaker attachment to the tree so will need to be monitored more regularly and if necessary pruned again.

### Crown thinning

Reduces the amount of leaf area within the canopy without reducing the size of the tree. This method of pruning is thought to be more sensitive and can be an option for improving light and reducing wind resistance. There is however still a creation of wounds (cuts) on the tree which are open to infection and a reduced ability to create food through photosynthesis. Thinning also exposes previously sheltered branches to the wind which can increase the risk of branches snapping



therefore it needs to be carefully done by qualified and competent tree surgeons.

### **Tree Inspection**

Trees will grow and develop according to their surroundings. For example trees growing in exposed windy conditions may adapt by thickening wood making the tree stronger and less susceptible to breakage.

Unfortunately these adaptations are not fail-proof which is why trees growing in places where they could cause harm to people or property need inspecting from time to time.

At Wrexham we are undertaking a risk assessment of trees on council land in order to do everything we reasonably can to ensure trees do not cause harm or damage to persons or property. This is done by assessing how areas in the Borough are used and how often. Areas with high or regular use are first to be checked and any individual trees in these areas that have problems considered to be significant to safety are pruned or removed accordingly.

### **Tree Maintenance**

Since the concept of tree surgery pruning methods have developed. As with many science based subjects, research is carried out and new discoveries are made; practices are then adapted to reflect them. What was the 'norm' 5 or 10 years ago, may not be the 'norm' now. Ten years ago leaving deadwood in trees would have been unusual because many people thought it unsightly or unhealthy. Research was carried out and it was recognised deadwood as a valuable habitat in quick decline. Today deadwood is recognised for its greater benefits to ecology so is retained unless it is not safe to do so.

### **Contact Information**

[www.wrexham.gov.uk/trees](http://www.wrexham.gov.uk/trees)

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