



**Trees and Woodlands in Urban Sheffield**

## Sheffield's Woodlands

Something we often take for granted in Sheffield is just how many trees there are. Unlike many cities, trees and woodlands are common here, accounting for up to 20% of the landscape cover. Driven past, walked through or seen on the other side of a valley, they're so familiar that we often don't notice them, or ask why they're there.

The story is a long one. Trees became established after the last Ice Age, before Britain was even an island. As the ice melted, trees moved in from the south and east. Seeds were carried by the wind or by animals; early colonists like Pine and Birch were soon followed by Oak, Hazel, Elm and many others. By around 8000 years ago, most of the land, save for the highest ground was covered by rich and varied woodlands.

These landscapes had much to offer. Hunters and gatherers used natural clearings in these woodlands, sometimes extending them by fire to create spaces for settlement. Trees were also managed and harvested for food and other materials. Six thousand years ago these clearings took on a new importance as grassland for stock and as ground that could be cultivated.



Ever since then, the woodlands around Sheffield have been worked for timber, fuel and many other things. Around eighty areas of woodland still survive in the area, some of them new plantings, others centuries old. Most have stories to tell; about different ways of using, seeing and even thinking about trees, stories that have developed as society itself has changed.

# Woodland Management

Trees have been managed in many ways since the last Ice Age, the two most common forms known as *pollarding* and *coppicing*.

**Pollarding**, involved cutting a tree back to a 'crown' above head height so that it was out of reach of deer or cattle.

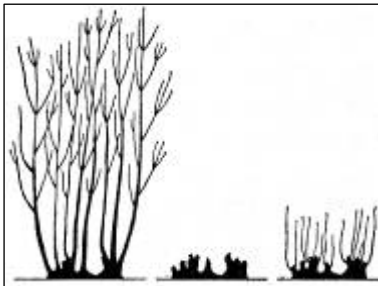


This was important where trees were valued for timber and for the leafy hay that they generated each year.

Often practiced in *Wood Pasture*, pollarding allowed a fine balance of forestry and grazing. As animals grazed on the grass below, the crowns of pollards were cultivated for fodder and poles for fencing, tools and implements.

Pollards can still be seen in some woodlands as large standard trees cut in this way to act as boundary markers.

**Coppicing**, required a tree to be cut back much closer to the ground. The stump or stool which remained then grew multiple stems or 'poles'. Like pollards, coppiced trees were an important source of fodder, and of everything from withies for basketry to larger poles for tools.



How trees were worked depended on who owned them. Were they on tenanted land or part of the Lord's estate? Were they cut to feed the sheep in winter or the furnaces down the valley?

These things made a difference.

The owners of small woods often used most of what grew or fell on their land. But coppiced wood and timber from larger estates was often sold on the open market, wealth to be accumulated and protected.

In the Medieval world, the wealth to be had from woodlands was concentrated in the hands of the Crown and powerful aristocrats. It also flowed into Monasteries. One such, Beauchief Abbey, was founded in the Manor of Norton between 1173 and 1176 by Robert FitzRanulf for the Premonstratensian order. The land was farmed by lay brothers to provide a major source of income for the abbey.

The woodlands of the Beauchief estate surrounded the abbey and isolated it from surrounding communities. They also provided timber and coppiced wood for sale.

## Building with Wood

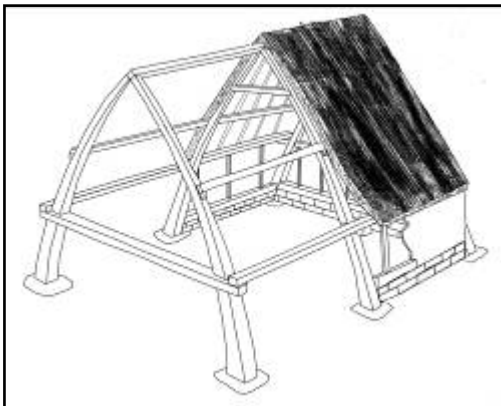
The market was varied. As the main building material, timber, mainly oak, was highly prized, older and larger trees for the main beams and younger ones for rafters. These were shaped by axe and adze whilst the wood was still 'green' and easier to work. Two main styles of construction were used; '**post-and-truss**' and '**cruck-frame**', and trees were sometimes managed while still standing to encourage the right kind of growth.



Bishops House built around 1500 and now a museum is the best preserved timber framed house in Sheffield. Originally built with two wings both of post-and-truss structure it was extended in stone in the mid-seventeenth century. It retains many original features including the Great Parlour, restored as a dining room.

The numbering system used by the carpenters can still be seen in the West Wing on the first floor wall.

**Cruck-frame** buildings were most common in upland areas of Britain but there were several in the Sheffield area. Oaks Fold Barn, at the entrance to Concord Park, is a fine example.



Trees were specially selected with a naturally curved profile to make the weight bearing cruck blades, so that when the frame was constructed on site, the blades would meet at the ridge purlin in the centre.

Tie beams pegged between the blades stopped them from spreading under the weight of the roof. The walls were made of wooden boarding. The frames rested on stone footings.

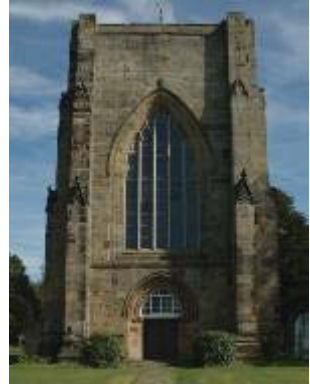
This type of construction was used mainly for buildings of low esteem, small dwellings, barns and outhouses.

# Charcoal Burning

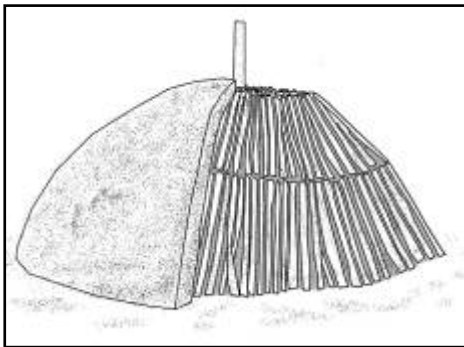
The Monks at Beauchief also capitalised on a great demand for charcoal made from the 'burning' of coppiced rods and poles. Because it burnt at high temperatures, charcoal was vital to metalworking, particularly the smelting of iron. Huge quantities were needed, and the valley sides above many mills and workshops were covered in coppice to meet the demand.

Landowners like the Abbey also leased out land for use as coppice. In 1496 for example, woodland at Hutcliffe was leased to Roger Eyre by the abbey for 'charcoal making' to fuel his bloom hearth on the River Sheaf.

These markets grew alongside metalworking. From the sixteenth century onwards, the growth of the metals industries created a massive demand for fuel and in particular for charcoal.



**Charcoal burning** took place between the spring and autumn. A stack of poles was covered in earth and turf with a central funnel through which burning embers were introduced. It had to be watched day and night over several days, the fire had to burn slowly and be protected from any changes in wind direction.



The work was physical and dangerous for the *wood collier*. At the early stage of the burn, noxious products were given off as the wood lost its moisture. When the smoke turned to a heat haze, the charcoal was ready and the stack was carefully dismantled so as not to break up the charcoal. We can still trace elements of this system today. Though the original coppice has long gone, you can still find *pitsteads* or charcoal burning platforms in many local woods. Whitecoal, wood dried

in a kiln or Q-pit to remove all the moisture, was made from the last quarter of the sixteenth century until the middle of the eighteenth century. It was used in the smelting of lead as it burnt at a lower temperature than charcoal. There are the remains of more than 80 Q-pits in Ecclesall Woods.

Names can tell us something about past woodland use; for example, Ladies Spring Wood at Totley. *Spring* indicates previous coppicing activity.

## Trees as 'Symbols'

Just as trees have always been good to use they have also been '*good to think with*'. The symbolism of trees and woodland has been important since the beginnings of civilisation. Seen as places of danger, where malevolent spirits and wild animals lurked, woodlands were to be feared and respected. The Cistercians deliberately sited their monasteries in the midst of the wilderness to cut themselves off from the world.

The idea of the 'greenwood' has long exerted a powerful hold on the English imagination. A shortage of oak trees for shipbuilding in the wake of the Battle of Trafalgar led to an episode of 'patriotic planting'. The 'Heart of Oak' became a symbol of British liberty from the French oppressors. For the first time observers noted that the woodlands and hedgerows were being rapidly felled and prizes were offered to both landowners and commoners for the most trees planted. Many acres of country estates were sown with oak, Spanish chestnut, elm and Scots fir all of which were deemed to be of use to the Navy.



The planting of trees was central to the prestige of the landed gentry of Georgian England. A large area of formally planted woodland became a symbol of status. Avenues, rides, clumps and screens of trees were arranged to maximise the view and to emphasize the extent of an estate and the status of the owner. Lancelot 'Capability' Brown was a landscape designer at the time. He was not averse to moving large trees around until they were in the perfect spot. He planted others in large clumps, moved tons of earth and created large manicured lawns and long serpentine rivers. Picturesque landscaping was more discreet, a tree planted here and there, a few branches lopped off another to reveal a view. The managed parkland was blended into the countryside beyond. Decayed branches and untamed undergrowth were allowed, but conifers were strictly forbidden.

## The Status of Trees

In the mid 18<sup>th</sup> century the more prosperous Sheffield residents migrated to the west of the city building villas with long wooded gardens. The cutlery manufacturer George Wolstonholm bought land at Nether Edge, building a model estate of stone houses and employing Robert Marnock to design curving tree lined avenues.



The roads in the Ranmoor area were developed in the mid 1870's by Land Societies who frequently specified that the avenues be 40 feet wide planted on both sides with trees, in this case chestnuts, at set intervals.



A lime tree avenue with over 700 trees, the second longest lime tree avenue in the country, can still be seen on Rivelin Valley Road.



Whinfall House built in 1900 next to Whirlow Brook Park, was destroyed by fire in 1971. Whinfall Quarry Gardens still survive and contain fine specimen trees.

## Parks and Gardens

As the fascination with trees grew, Victorian plant hunters travelled across the globe to furnish the grandest estate and public parks and gardens with exotic species.

In the nineteenth century botanic gardens and arboreta were the most common public parks, where opportunities for self-education and improvement could be found.

Opened on June 29<sup>th</sup> 1836, the Sheffield Botanical Gardens were laid out by Robert Marnock in the highly fashionable Gardenesque style, an informal landscape combining formal and natural planting.



Situated 1km to the west of the city centre, the Gardens lie on a favourable south westerly slope and are well stocked with plants and trees, today's layout being quite faithful to the Marnock original. Although the 1830's were a time of social reform and it was recognised that public parks and gardens were of both physical and spiritual benefit to the working classes, the gardens when first opened, were only accessible to the middle class subscribers of the Sheffield Botanical and Horticultural Society. A certain standard of dress and behaviour was required, alcohol, swearing and gambling were strictly forbidden. It was not until the property was handed over into the care of the town trust in 1898 that the public were freely admitted.

Not unexpectedly the gardens are home to many fine specimen trees. Just inside the Grand Entrance on Clarkehouse road are a large hybrid of the Greek Strawberry Tree (*Arbutus x andrachnoides*) and a Corstorphine Plane (*Acer Pseudoplatanus corstorphinense*) which forms a golden dome in springtime. The Boardwalk, a central avenue which leads into the gardens from the central pavilion is bounded by more fine specimens. The Tulip Tree (*Liriodendro tulipifera*) from the eastern USA, the Southern Beech from Chile and Argentina and the Vine and Paperbark Maples (*Acer circinatum* and *A. griseum*) from North America and China all provide a wonderful display of autumn colour.



Conifers are also well represented. A Maidenhair Tree (*Ginkgo biloba*) is to be found on the Cedar Lawn. Fossil records show that similar plants were widely distributed across the world around 200 million years ago. Although classed as a conifer the Maidenhair Tree is the sole survivor of a family of trees that predated the conifers. The Himalayan Cedar (*Cedrus deodara*) and the Dawn Redwood (*Metasequoia Glyptostrobooides*) both native to South East Asia are also represented here. Both are tall trees which can reach over 40m in height. The Dawn Redwood was known only from fossil specimens until its discovery in China in 1941. Seed was distributed to Botanic gardens all over the world in 1948.

Sheffield today is probably one of the most wooded cities in England with over two million trees in woods, parks and adjacent to the roads. It is justly proud of the Winter Gardens recently opened in the city centre. It is the largest temperate glass house built in Britain in the last 100 years housing over 2000 plants. Eucalyptus, Norfolk Island pine and Australian Tree Fern are amongst many of the trees represented.

## Fig Trees

The fig (*ficus carica*), which originates from Asia and is traditionally associated with the sun-drenched Mediterranean, adds an exotic touch to the banks of the River Don where there is now a thriving colony of these trees. Whilst figs do well in Britain once established, they require warm temperatures in which to germinate.



The group of trees, now almost a small wood, alongside the Don which are around eighty years old are thought to have originated when the Sheffield steel industry was at its peak, in the 1920's, when the waters of the Don were warmed to as much as 20C by coolant water from the steel making process being discharged into the river. The fig seeds washed into the river from sewage outfalls germinated in these conditions and can now be seen growing on the banks amongst the abandoned factories and foundries. The figs fruit twice a year, in May and September, though the wild fruits are rarely fit to eat. The river water is now much cooler and whilst the existing trees flourish there are, alas, no new fig trees sprouting on the banks of the Don.

## The Handsworth Hollies

In its heyday at the turn of the twentieth century, the Handsworth nurseries, Fisher, Son and Sibray employed around two hundred workers, cultivating an enormous variety of plants trees and shrubs for sale around the world. The business was founded in the late seventeen hundreds and an article from *The Gardening World* of 1886 suggests a stock list of over half a million plants. The nurseries supplied trees to many American Cemeteries which were shipped in specially made crates. Fisher, Son and Sibray were also breeders of hollies, one, a green barked variety with dark green glossy leaves was named *Handsworthensis*, another variegated one, *Handsworth New Silver*. *Marnockii* was named in honour of the designer and first curator of the Sheffield Botanical Gardens, Robert Marnock, also responsible for the design of Weston Park. Over eighty different hollies were cultivated at these Handsworth nurseries which covered around two hundred acres.



Hollies can still be seen growing in the boundary hedgerows around St Mary's Church on land which used to belong to the nurseries. In the grounds of the Parish centre is a hedge which is made up of thirteen different holly varieties.

## Cemeteries

Tradition and folklore can frequently dictate which trees are planted in cemeteries and the date of planting can sometimes be determined by the species. The Victorians favoured “trees of sorrow” like the Weeping Ash, a single specimen of which is to be found to the north of the chapel in Burngreave Cemetery. Blossom bearing trees were considered to be inappropriate for use in cemeteries but were introduced in the 1960's and 70's to lighten the gloom. Rowan (*Sorbus aucuparia*) has long been associated with Christianity, its berries are said to represent the blood of Christ and that the wood was used to make the Cross of Calvary. It has also been favoured throughout the ages as the best protector against witchcraft, the name Rowan thought to come from the Norse ‘runa’ meaning a charm. Rowan and its relative the Whitebeam proliferate in the southeast corner of Burngreave cemetery along with the Japanese flowering cherry (*Prunus serrulata* ‘Kanzan’) that has become so popular with gardeners today.



There are two ‘avenues’ of trees in the cemetery. Common Lime (*Tilia x europaea*) forms one on both sides of one of the main paths. As a hybrid it does not spread fertile seed, so the mature limes probably date back to the original Victorian planting. London Plane (*Platanus x hispanica*) can be found planted as an ‘avenue’ along one side of the drive from the entrance in Scott Road. The cemetery grounds at Burngreave contain more than thirty different tree species of which only ten are native to Britain.