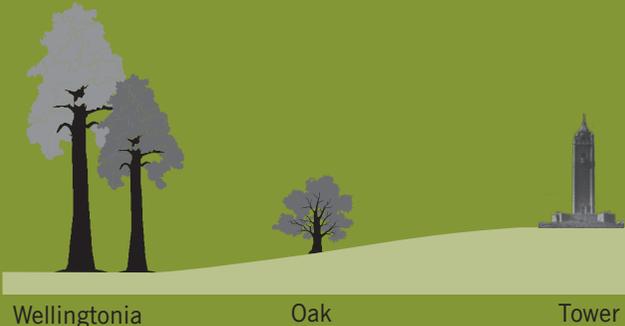




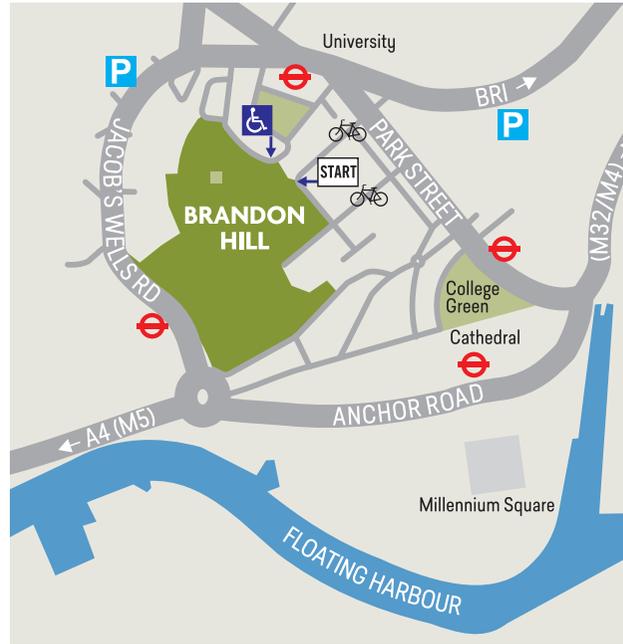
- The hill has historically been used for grazing and generally been without many trees except hawthorn and oak.
- Now it has one of the best collections of trees in the city with just under 500 trees on the hill covering nearly 100 different species.
- If you would like help to identify other trees on the hill such as box elder, maple, tulip, wild service, turkey oak and the many fruit trees in the orchard area the Bristol City Council 'Know Your Place' website maps all the trees at <http://tinyurl.com/brandonkyp>
- If you get a chance once you've finished take the time to climb to the top of Cabot Tower to get a birds eye view of the trees on the trail.
- We hope you will return in other seasons to appreciate the continually changing features of the trees.

How the Wellingtonia will look when fully mature in relation to Cabot Tower

The Wellingtonia (Tree Trail no. 23) can grow to 76m, while the tallest in the UK currently stands at 56m. By comparison the Oak (Tree Trail no. 6) is 22m. Although the Tower is 32m tall, sitting on ground 13m higher, the Wellingtonia will eventually outgrow it.



Getting there



Brandon Hill is located just off Park Street in Bristol City Centre. There are many buses that go by, including services from Temple Meads Train Station (www.firstgroup.com). There is a bicycle rank at the Park Street end of both Charlotte Street and Great George Street. Two NCP car parks are within easy walking distance as well as many parking meters in the immediate vicinity.

The area is well served with food shops, so why not take a picnic, but please dispose of your waste in the bins provided.

Postcode: BS1 5QB
 Grid Reference: ST580729
info@friendsofbrandonhill.org

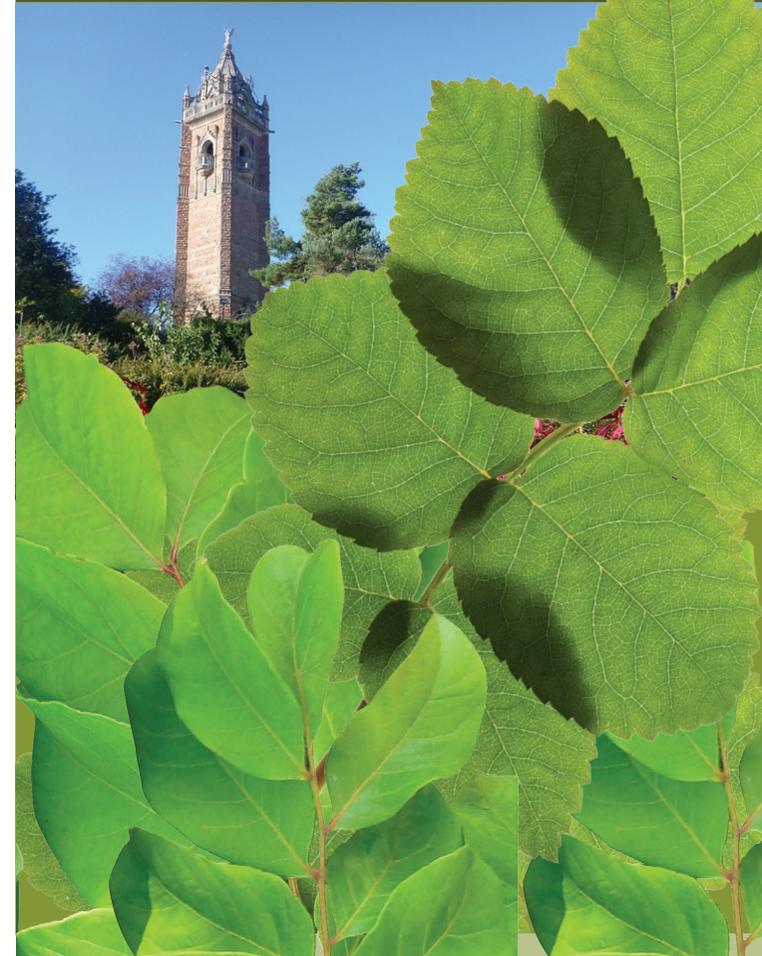


Many thanks to Tony Titchen and Richard Bland for their invaluable dendrological input to this tree trail.

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BRANDON HILL TREE TRAIL

Explore the trees, both rare and native, with this specially designed tree trail





History of Brandon Hill

Brandon Hill, named after the chapel dedicated to St. Brendan which stood on the summit, is an oasis of calm in the middle of Bristol and has a long and varied history as a public open space.

In 1174 Brandon Hill, then owned by the Earl of Gloucester was divided into lots. The upper four lots were given to St. James's Priory and later to Tewkesbury Abbey. The Carmelite friars constructed St. John's Conduit, which still carries water from the springs on the hill to the old city. This was the only source of water for a time during the Blitz of the Second World War. The lower slopes were let to Bristol Corporation, who sub-let the land to farmers for the purpose of sheep grazing, this being the most practical way to maintain the steep grassland. It is likely, therefore, that Brandon Hill can claim to be the oldest public space in the country. The summit passed to the Crown at the Reformation and in 1625 became the property of the Corporation. The right of the public to dry washing on the hill was confirmed and extended to include the right to beat carpets at certain times and to take exercise.

“ Brandon Hill can claim to be the oldest public space in the country ”

During the Civil War, Brandon Hill was the site of several battles between Royalists and Roundheads and remains of the line of defensive fortifications including the Water Fort overlooking the river, can still be seen today.

Later during the Industrial Revolution and the years of electoral reform the summit of Brandon Hill was used for public meetings of all kinds with Jacobites, anti-Emancipationists, Chartists and others setting up hustings. Queen's Square and the Downs eventually took over this role.

Cabot Tower, on the summit of the hill, was planned in 1897, the year of Queen Victoria's Diamond Jubilee to

commemorate John Cabot's voyage of discovery 400 years earlier. The architect, William Venn Gough, also designed several other buildings in the city and based his design on a tower in the Loire Valley because it was similar in style to the architecture of the reign of Henry VII.

In 1924 Brandon Hill became a municipal park with responsibility for its upkeep passing to the Sanitary Committee who authorised the construction of "alpine and water gardens, pools and waterfalls". These became the water feature and surrounding gardens that we see today.

Since their inception in 2008, Friends of Brandon Hill have worked to maintain and enhance this beautiful public space. The Old Bowling Green has been renovated to make a tranquil space and a community orchard and herb garden have also been created. Our latest project is this tree trail, which provides information about the many trees, both rare and more common, which make the hill such a refuge from the hustle and bustle of the city.



Grey squirrel

Brandon Hill is home to a thriving population of Grey squirrels. These curious, playful, and agile little creatures are used to us and will happily pose for photos especially if they think there may be a free lunch. Originating from North America they were introduced to Britain in the 19th Century. Their nests or 'dreys' are found in tree tops or hollow trunks and constructed from twigs, moss, bark and grass. They are regarded as a pest mainly because of the damage they cause to trees and young saplings by stripping the bark.

Common tree facts:

- A fully-grown Oak in the UK grows - and sheds - 250,000 leaves every year and produces around 50,000 acorns in a good year.
- Every tree variety has flowers, leaves, bark, roots, and seed.
- Roots provide anchorage, water, and minerals from the soil and store food for future use.
- Seeds on trees take many forms – look out for conkers, beans, acorns, berries and cones.
- Growth occurs every year from the tip of the previous year's branch so that any branch will always be the same distance from the ground.
- Water and nutrients travel up the tree trunk, through the branches and all the way out to the leaves.
- An outside layer of bark protects the trunk of a tree.
- Leaves use photosynthesis to capture carbon dioxide from the air and turn it into oxygen.
- A mature tree can generate enough oxygen for a family of four every year.
- One tree can absorb as much carbon dioxide in a year as a car produces while driving 26,000 miles.
- By cooling the air and ground around them, the shade from trees helps cool the Earth's temperature.

To find out more about trees in Britain visit the Woodland Trust website at:
<https://www.woodlandtrust.org.uk/visiting-woods/trees-woods-and-wildlife/>



BRANDON HILL TREE TRAIL

Starting from the Charlotte Street entrance, leave the hill briefly by the steps reentering by the path on the right above two fine examples of an ornamental variety of the native beech tree:

1. Copper Beech - *Fagus sylvatica* 'Purpurea'
The rich dark purple leaves begin as bright green buds in spring. If you look closely you can see old graffiti that was carved into the smooth bark many years ago. This has remained at the same height off the ground as the trees have grown with the letters becoming distorted as the girth increases. The wood from beech trees was used for furniture as it bends easily and beech nuts were used as feed for pigs, deer and poultry.

2. Holm Oak - *Quercus ilex*
A native of the Mediterranean, it has been planted in the UK since the 17th century. Recognised by its distinctive waxy dark evergreen foliage, with its falling leaves (in June) and densely branched canopy, nothing much survives underneath it. It does thrive well in a city environment. It reproduces in the UK and is seen as an invasive species in sensitive areas such as the Avon Gorge where seedlings from its acorns are actively removed.

3. Common Ash - *Fraxinus excelsior*
A fine example of the native ash tree. Easily identifiable by its black velvety buds on light grey shoots. Ash trees' self-seeded saplings are common and many can be found in the nature reserve at the bottom of the hill.

4. London Plane - *Platanus x hispanica*
Although this tree has a 4m girth it is only about 100 years old. Plane trees have been planted in cities throughout the world. They are very tolerant of atmospheric pollution and root compaction so they are popular as a street tree. Great George Street has some fine examples at the foot of the hill. The bark exfoliates randomly in summer in hand sized plates to reveal patches of creamy yellow underneath. This is how the tree sheds the city dirt and soot and is enabled to grow in girth.

Notice beside the steps and around the hill (especially between trees 15 and 16) the varieties of common holly (*Ilex aquifolium*). Holly is a native species but some you'll see were bred selectively by the Victorians from other hollies such as Canary Island Holly to have variegated leaves or different coloured berries or no prickles.

5. Cornelian Cherry - *Cornus mas*
A wonderful tree from south-east Europe that precociously flowers with bright yellow flowers in February. The 'cherries' are edible. You could make Cornelian Cherry jam. A variegated variety can also be seen next to the Acer (8). Like most variegated plants it is liable to revert to green eventually.

6. Common Oak - *Quercus robur*
This tree within the depot is by far the more impressive oak tree of the two on the trail. Its 5m girth suggests it could be 250 years old. This is perhaps the oldest tree on the hill. Think of the weight of the fully laden branches. You will notice that the tree was once pollarded (had its top cut off) at 5m. Oak bark used to be used for tanning leather and acorns were also pig feed. The small brown spheres that appear on oak branches are called galls. Gall wasp larvae induce this abnormal growth giving them an enclosure to grow in safely. There are over 30 species of gall wasp that use oak trees as their host plants.

7. Common Lime - *Tilia x europaea*
The lime avenue around the terrace walk is one of two on the hill. An older avenue is found lower down on the 'Bristol to Clifton' path. The limes here are a cross between the native large and small leaved limes that were cultivated in Holland in the 17th and 18th centuries. Lime avenues were a 'must-have' in stately homes and gardens in those times. The trees become infested with aphids whose secretion can damage paintwork that it lands on. The aphids do however attract ladybirds who lunch on them. The flowers are also very attractive to bees.

8. Acer - *Acer pseudoplatanus* 'Brilliantissimum'
Perhaps the most colourfully spectacular trees on the hill. The leaves in April start as a glorious salmon pink 'shrimp' colour turning a lovely pale lemon by the end of May before becoming a bright green as the season goes on. This complements the fruit tree blossom that can be seen in the orchard below on the other side of the lime avenue.

9. Indian Bean Tree - *Catalpa bignonioides*
A native of North America, this tree has very distinctive fruits that are narrow pendulous green bean pods. Its large egg shaped leaves up to 25cm long are hairy and thus attract pollutants. The pods were dried and painted by American Indians (from where the name comes) to wear as decoration. The large trumpet shaped flowers are among the last to flower and make a wonderful display in August and September.

10. White Mulberry - *Morus alba*
Though not as sweet as the much more common Black Mulberry, this tree produces red fruits that become white when ripe to eat. It was cultivated in China for its leaves to feed silkworms. The upper surface of the leaves are smooth and bright green.

11. Horse Chestnuts - *Aesculus hippocastanum*
A tree well known for its 'conkers' from its spiky seed pods. They produce their leaves very early in spring with tall conical candle-like flowers appearing in mid-spring from sticky buds that appeared in November. There are two horse chestnuts next to one another here. Notice that one of the horse chestnuts has upright branches. This is known as a 'fastigate' variety. This tree was also grafted at 2m. It's said they get their name from either the ability to heal horses and cattle of respiratory illnesses or that their oil was once used to make their fetlocks and hooves shine.



12. Common Hawthorn or May Tree - *Crataegus monogyna*
These trees are a traditional part of Brandon Hill and were present before any of the landscaping was done during the 19th Century. There are many fine examples around the hill. Their profusion of creamy white or pink delightfully scented flowers appears in May (hence the name) with red berries in autumn from the thorny branches. The twisted knotted trunk and grey fissured bark make them look like ancient trees indeed. Lore has it that they are the meeting place for fairy folk providing a portal into the realm of the fairies. Hawthorns are often used in hedging and 'haw' is an old word for hedge. They were used in the past for carpet beating.

As you approach the Tower you may have to look carefully to spot the next tree:

13. Persimmon - *Diospyros virginiana*
This is a member of the ebony family and the dark wood was used for golf 'woods' due its strength and elasticity. It has characteristic 'tessellated' (tile like) bark, flowers in mid-summer and produces edible orange-brown fruits that ripen and sweeten in the autumn. The autumnal leaves are a spectacular orange-yellow display.

14. Yellow Buckeye - *Aesculus flava*
From the same family as the Horse Chestnut. Notice that the leaves have the same 5 fingered form. The 'yellow' comes from its flowers with frilly edged butter yellow petals and a distinct pink blotch that bloom in early summer. The orange-red of the leaves in autumn is the most stunning of displays. Known in its native USA as the 'Sweet Buckeye', the 'buckeye' alludes to its nut looking like a stag's eye.

15. Black Locust or False Acacia - *Robinia pseudoacacia*
A native of the Appalachian mountains in North America, its strong flexible wood was used by American Indians to make bows and was also favoured for ships' masts because of its strong durable timber and straight trunk. It has white fragrant pea-like flowers with leaves that appear in early summer that are attractive to bees and has a characteristic 'ropey' bark. It sends out suckers and regenerates when cut down.

16. Caucasian Wingnut - *Pterocarya fraxinifolia*
Along with the monkey puzzle and ginkgo (found elsewhere on Brandon Hill), this tree has been around the longest on earth. Identical leaves had been found in fossils from the Early Cretaceous period (around 140-100 million years ago). It's very fast growing and suckers profusely. All three trees around this spot probably are the same tree and its suckers can be seen infiltrating the paths and walls around Cabot Tower. A member of the walnut family, the tree has green leaves that can grow to over 60cm long and that turn butter-yellow in autumn. In the summer, it produces eye-catching chains of green catkins. The nuts that come from these have semi-orbicular wings (hence the name).

Continue past the tower, down the steps and off the path to the left after the railing to see an unusual shape of hazel leaf:

17. Cutleaf Hazel - *Corylus avellana* 'Heterophylla'
Hazel trees have been coppiced for centuries to provide agricultural hedging and fencing. Notice how the trunk forks very near the ground - does this make it a shrub instead? The tree produces a wonderful display of catkins over winter and early spring and has an unusually jagged leaf edge hence the 'Heterophylla'. Look out for the aptly named Contorted Hazel on the way to our next tree.

18. Zelkova - *Zelkova carpinifolia*
A member of the elm family that rarely succumbs to Dutch elm disease. Also known as the Caucasian Elm as it is a native of that area. Its most remarkable feature is its bark with intricate patterns and splits. It can look very much like a pollarded tree that has been neglected and is rare in Bristol. There is another near St George's Primary School.

19. Golden Rain Tree - *Koelreuteria integrifolia*
Beside the bridge is "Bristol's Rarest Tree" - one of only half a dozen in the country. An autumn flowering relative of a Chinese tree the *Koelreuteria paniculata*, a close relative of 'Pride of India', it flowers in the autumn with yellow flowers and later on very striking inflated bladder-like fruits.

The second oak (No.20) on the trail is a commemorative tree planted for the coronation of Edward VII in 1902:



20. Common Oak - *Quercus robur*
Also known as the English Oak. Druids in Celtic Britain held the oak tree sacred. Ever since, it has been the 'king' of British trees. Robur means sturdy and it could only be felled once iron tools were developed. Its timber's durability meant that it became the foremost construction material for buildings and ships. It could be grown into curved shapes required for cruck frames for houses or the frame supports for ships.

21. Irish Yew - *Taxus baccata* 'Fastigiata'
Yews normally have spreading branches but this bushy tall yew tree is a descendant of the first one found in county Fermanagh in 1780. All yew trees with a strongly vertical growth form come from the same stock. Yews can live for thousands of years; the oldest tree in the UK is a yew claimed to be 5,000 years old in Fortingall, Perthshire. Yews are often found on religious sites and are sacred in most European mythologies. The elastic qualities of yew wood made perfect material for making long bows for English archers in the middle ages. The only part of the yew that is not poisonous is the flesh of the berries hence they are not in livestock field hedges.

Between the two oaks on the trail is another Catalpa (see 9) - a more impressive specimen.

22. Common Ash - *Fraxinus excelsior*
This tree was planted to mark the retirement of Frank Kelf who left a great legacy of tree planting in Bristol that started with 'plant a tree in '73'. Traditionally ash wood was used for furniture making due to its toughness. Today it is still used for tools and sports handles such as oars and hockey sticks due to its shock absorbing properties.

23. Wellingtonia - *Sequoiadendron giganteum*
This tree overlooks the SS Great Britain that brought back many Wellingtonia saplings and seeds from North America in the 1860s and was planted to commemorate the 130th anniversary of her launch. The Victorians planted imported varieties from all over the world and to have such varieties was very much a status symbol in its day. When this tree is about 100 years old it will be higher than Cabot Tower and they can grow up to 76m, one of the world's most impressive trees. The size of the tree at the moment reflects the size that the Victorians would have seen their examples - not like the monumental ones that can be seen today. It's also known as the 'punch tree' because you can punch it without hurting your fists (too much).

24. Silver Birch - *Betula pendula*
One of the first trees to colonise the UK after the last ice age 12,000 years ago and common throughout the northern hemisphere. It is extremely hardy and will withstand intense cold and long periods of drought. It is easily identifiable with its glorious drooping canopy, hanging catkins and silvery white bark with darker black diamond shapes. This tree can be identified as being an older tree as the bark at the bottom of the trunk is broken and gnarled. The sap can be used to make a 'fine' wine and birch beer. Known as 'Lady of the Woods' this tree was believed by pagan, Celtic and Germanic tribes to protect against evil spirits and to symbolise love and fertility.

Finally: downhill on the right can be seen a large Turkey Oak (*Quercus cerris*) planted on the Civil War defence earthworks. It has outgrown the metal bench which used to surround it, on which was a plaque commemorating the marriage of the Prince of Wales in 1869. The Turkey Oak was widely planted as a fast growing ornamental tree though its timber is not as good as that of the native Oak.