

Pavilion Gardens

Trees & Ecology Management Plan



High Peak Borough Council

Working for our community

Trees and Nature Conservation Management Plan

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1.0 Introduction

- 1.1 Pavilion Gardens is a major park located in the heart of Buxton. It is recognised as having historical and landscape importance as well as being a valued recreational resource for the residents and visitors to Buxton. In 2005 the park was awarded a Green Flag by the Civic Trust.
- 1.2 A management plan for the park has been prepared and this document supplements this overall plan with a detailed assessment of the arboricultural and ecological aspects of the park. A 5 year action plan has also been prepared which prioritises action that needs to be taken to achieve the aims as set out in the Park Management Plan.
- 1.3 In 1996 The Parklands Consortium produced a detailed development plan, that included a landscape assessment and historical survey of the park. This was as the basis of a successful Heritage Lottery Bid; as a result of which a major refurbishment of the park was undertaken.

2.0 The Planning perspective

- 2.1 Pavilion Gardens covers approximately 7.75ha and located within the centre of Buxton. It connects with Serpentine Walks an area of open space on the western side of Burlington Road
- 2.2 The whole of Pavilion Gardens is within Buxton Central Conservation Area (Local Plan Policies BC7 and BC 8).
- 2.3 It is included on the Register of Parks and Gardens of Historic interest (Grade II*) as compiled by English Heritage (Local plan policy BC.13). In the Local plan it is also identified as an archaeological site, as a post medieval garden.
- 2.4. The gardens are adjacent to and provide a setting for the listed buildings as follows
 - The Octagon (grade II)
 - Paxton suite and railings (grade II)
 - Opera house (grade II*),
- 2.5 In the High Peak Local Plan Pavilion Gardens is designated as a Protected Major Park (Local plan policy LT3).
- 2.6 The local plan also designates the lakes as a site of importance for nature conservation (OC8).
- 2.7 The site is transacted by a right of way (Buxton 73).

3.0 Historical Development of the Landscape

3.1 18th Century

The Dukes of Devonshire owned Buxton Hall, which was located close to the river Wye until the original hall was burnt down in 1670. It was rebuilt and is today the Old Hall Hotel. As early as 1730 gardens were established in front of the rebuilt hall in the location of what is now Pavilion gardens. The gardens included walks by the river and a bowling green surrounded by sycamores. More groves of trees were established to the north to provide shelter.

At this time Buxton was a remote and inaccessible village surrounded by barren moorland. The 5th Duke of Devonshire planned to develop the potential of Buxton and the planting of trees to relieve the barrenness was central to these improvements. Following the Enclosure Act several areas of 'waste land' previously used for lime burning were placed in the hands of the Dukes of Devonshire. In addition to planting in what is now Pavilion Gardens these areas were planted with trees and are now other areas of woodland within the centre of Buxton and managed by Buxton Civic Association.

Other improvements included the construction of the Crescent which was completed in 1784. At this later date contemporary reports suggest that most trees around the hall were cut leaving only few to the north of the Bowling Green.

3.2 Early 19th Century

The extensive planting of trees continued into the first half of the 19th century. The improvement of facilities and environment of Buxton began to attract more visitors. Robertson (1854) describes 'the public walks and pleasure grounds' he notes that they were laid out 'planted with princely liberality'.

By 1850 the early development of the 'public walks and pleasure grounds' in Buxton was quite extensive, including areas outside of what is now Pavilion Gardens. The slopes adjacent the gardens were laid out and planted around 1818, probably by Sir Jeffery Wyatville who was working at Chatsworth House at the time. The Park area to the north of the Pavilion Gardens, was laid out by Sir Joseph Paxton and was extensively planted with the intention of being developed in to an up market residential area. Paxton also undertook work in Pavilion Gardens, notably introducing rustic bridges across the Wye, fountains and cascades. Corbar woods was also planted by this time as a formal woodland with plantations of trees, yew lined walks and Rhododendrons which offered shelter and provided pleasant walks.

3.0 Historical Development of the Landscape (continued)

Robertson (1854) also describes what was then known as 'Serpentine Walks', although later part of this area was to become the Pavilion Gardens, the 'luxurious' plantations either side of the river Wye.

3.3 Mid 19th Century

Planting in the mid 1800's included a variety of species such as horse chestnut, ash, mountain ash, sycamore, elm, silver birch, hawthorn and pine. Also a number of weeping varieties of trees were planted including ash, willow, birch, beech and elm. What is now Broad Walk on the eastern boundary of Pavilion Gardens was developed in 1850s as were the avenues of limes, remnants of which remain today.

Up until 1869 the land on which the gardens are now was still owned by the Dukes of Devonshire, however in this year the Buxton Improvements Company was formed to promote 'the prosperity of the place by laying out the gardens and erecting a pavilion for concerts and balls' (Grundy Heape, 1948). 12 acres were given to the company by the Duke of Devonshire on the condition that the grounds are enclosed and landscaped with the provision of a suitable building. The gardens were formally open in 1871. A further 11 acres were laid out later and the area now known as Serpentine Walks was given to the town in 1888.

3.4 Late 19th Century

Edward Milner designed the winter gardens and pleasure grounds in the 1870s. In addition this he made some other striking contributions to the lay out of the gardens; which are still important to the park as it is today. In particular he carefully established the many views and vistas across the park, many of which were enhanced by his alteration of the topography of the gardens. The planting and location of trees is integral to creating and framing these views. Although early photos reveal that the tree cover in the gardens was lavish it was clearly well thought out.

3.0 Historical Development of the Landscape (continued)

Milner's son in his book '*The Art and Practice of Landscape Gardening*' gives instructions on tree planting. It directs that trees should be used to emphasise undulating ground and be planted on the summit of a hill or mound, with the tallest trees at the top. He also notes the pleasing effect of small groups or striking specimens planted at the junctions of paths.

Although no list of trees planted survives it is noted that at the same time as Milner laid out the park he was working at Lincoln arboretum on the committee there was Mr Pratt the Head of Derby arboretum, then still the major collection of trees in a public landscape and it is suggested that he assisted Milner in the selection of trees for planting at Pavilion Gardens.

There were a great many trees in the landscape around the margins of the park and framing water features. On the western boundary there was more or a less a continuous line of planting that acted as a shelter belt which included a good mix of evergreens as well as beech. The beech that were planted were grafted to ensure that they maintained a low spreading habit and they were planted on mounds and bunds to extenuate the effect of self contained character of the park without a harsh regularly defined boundary; some of these beech trees remain today.

The planting along the Broad Walk was more open and delicate allowing view across the park from those living in the properties. There is also formal planting such as the circular avenue of limes that has recently been replanted.

The architect Robert Rippon Duke designed the Octagon Hall that was opened in 1876. The construction of this building required that the promenade was extended and widened, this impacted on the landscape near the Pavilion that changed some of Milner's original design. It was also around 1888 that Burlington Road was constructed and split what is now Pavilion Gardens from Serpentine Walks.

3.5 20th Century 1926 to Present

In the early 20th century the park began to decline. The gardens were used by the military during the First World War and damage was caused to the lake and surrounds. The Buxton Improvement Company, by then the renamed Buxton Gardens Company fell into financial trouble and despite some tree planting in the 1920s, the infrastructure of the park began to decline. The park was then taken over by the Buxton Corporation in 1927.

3.0 Historical Development of the Landscape

The park has since then remained in the ownership of the Local Authority. During this period the trees have been generally well managed, however Dutch Elms disease in the 1970s led to the loss of the elm trees from the original planting. Nevertheless many old beech trees remain, as do remnants of the lime avenues in the park, although some of these trees are now unfortunately in decline. The Heritage Lottery Fund has allowed the restoration of some important features such as the replanting of Milner's circular lime avenue.

4.0 Nature Conservation Value of the Park

- 4.1 The park is within an urban area but has linkages with the other significant woods that surround Buxton, as well as the open moorland, countryside and the Peak District National Park. The Wye River comes from the moors through the park before being culverted under the crescent.
- 4.2 The park provides valuable green space in the centre of town that can be used by wildlife such as birds, small mammals and invertebrates. Because of the extensive planting of trees in the 18th and 19th century Buxton is a well wooded area with large areas of woodland such as Gris Low Wood, which is a SSSI and Corbar Woods. Also Pavilion Gardens is closely linked to Serpentine Walk which is a more informal park area and lends itself more readily to the development of 'wild areas' such as the recent establishment of a wildflower meadow. The links between Pavilion Gardens and these other areas are strengthened by the corridors of mature street trees and the predominantly large garden areas close to the park.
- 4.3 The park is very formal and 'gardenesque' and there are few informal areas, given this and the historic importance of the landscape of the park it is not appropriate to establish an extensive 'wild areas' as this would detract greatly from its formal character. However this is not to say that the park has no value for wildlife or that its value cannot be enhanced.
- 4.4 The lake and river are important landscape and nature conservation features of the park. The lake is used by a variety of wild fowl that are popular with the public. Some management could enhance both its value in terms of nature conservation and amenity.

4.0 Nature Conservation Value of the Park (continued)

- 4.5 As part of the overall management plan of the park the aim is to practice more sustainable methods of horticulture; neither peat nor pesticides are used in Pavilion Gardens and initiatives are being developed to increase the recycling of green waste.
- 4.6 The trees and shrubbery in the park offer roosting and nesting sites for birds as well as being a source of food. The diversity in the height and types of trees has been shown to be important at providing a variety of niches for bird species and the maintenance of a diversity of age groups and species of tree will retain this balance.
- 4.7 Mature trees are also important for bats species. Trees will also most certainly be used as roosts during the summer. There are known bat roosts at Pooles Cavern and this is close enough for bats to visit the park for feeding at night. In particular the lakes are sufficiently large to attract Daubenton's bats, which feed from insects close to the surface of the water.
- 4.8 There are already some bird boxes in the park, further boxes, for both bats and birds could be installed were suitable sites exist.
- 4.9 Deadwood in trees and on the ground is important for invertebrate, fungi and for recycling of nutrients. However in Pavilion Gardens the management of deadwood for wildlife poses a dilemma. The ideal situation is to not intervene with deadwood, i.e to leave dead trees and leave any wood where it falls, this type of management would come into conflict with the formal nature of the park. However some deadwood will be left in the park in less formal areas and deadwood in trees will only be removed where it is an unacceptable risk..
- 4.10 Emphasis will be given to the planting of native tree species which are in keeping with the original landscape design of the park tree such as Beech, Oak, Lime, Ash Also the variety of plants, particularly scented plants, in the gardens provide a nectar and pollen source for butterflies and moths as well as other invertebrates.
- 4.11 The rockeries provide shelter for small creatures which like nooks and crannies, such as hibernating newts, hunting spiders and bumble bees
- 4.12 A list of species recorded on the site is appended at Appendix 1

5.0 Survey Technique Pavilion Gardens

- 5.1 A detailed tree survey was undertaken in the summer of 2005. The aim of the survey was to establish the condition of the trees in the park. The survey also recorded any works that are required to manage health and safety, improve the aesthetics and longevity of the trees. The survey established the approximate age of the trees to help pinpoint the original planting and identify those that are of historic or cultural importance.
- 5.2 Trees were recorded as individuals or as a distinct group. The approximate location of the trees has been recorded on a plan. It should be noted that this is will be illustrative only and to help to identify the location of specimens and it cannot be relied upon as an accurate plotting of the trees.

6.0 Results of survey

- 6.1 The survey has established the following key issues:
- The park has is essentially formal with a structured landscape in which the trees provide a framework which enhances views and vistas. It is important for the character of the part that the original landscape intentions are retained.
 - The park has in excess of 500 trees; 326 trees were recorded as individuals and the 22 groups of trees account for the rest.
 - The graph below (Fig. 1) shows the estimated date of planting of the trees. Some early planting, circa 1800 remains within the park, although the majority of planting which occurred between 1850 and 1900 when the major landscaping of the park was undertaken accounts for the majority of the mature trees.

6.0 Results of survey (continued)

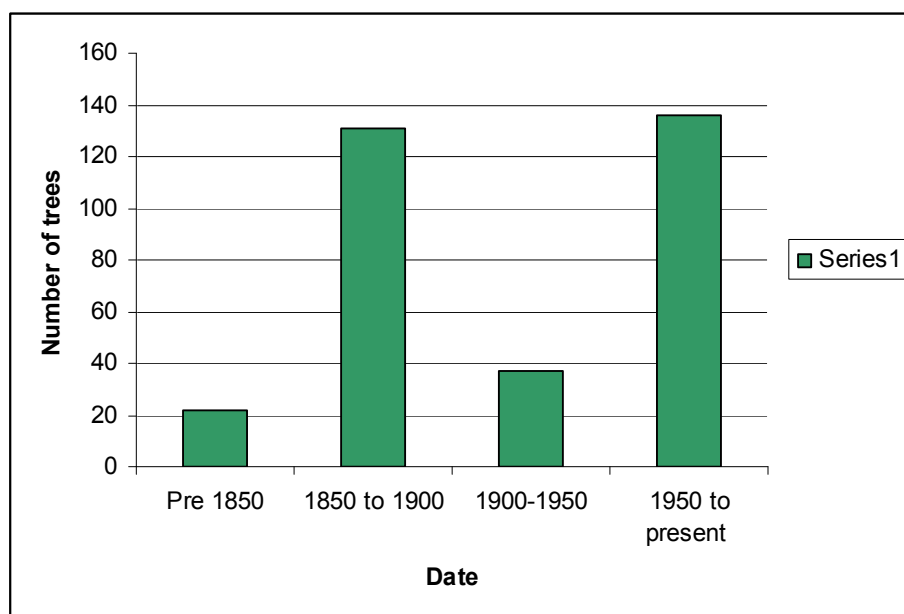


Fig. 1. The estimated planting date of trees in Pavilion Gardens

- It is desirable to retain as much of the original planting for as long as possible, however many of the older trees are showing signs of declining health or have defects which may eventually undermine their safety.
- It is notable that there has been a significant amount of recent planting in the last 50 years in the park. Much of this dates from the renovations undertaken with the Heritage Lottery Funding. The species planted are generally in keeping with the original planting with the establishment of a new circular lime avenue, although there has been planting of some more interesting species to add variety to the planting. There is also planting of short lived ornamental species such as cherry.
- The graph below (Fig. 2) shows the distribution of tree species in the park. Yew is the most common species as this makes up much of the structure and understorey planting in the park, particularly adjacent to Broad Walk, much of this is probably the original planting circa 1850.

6.0 Results of survey (continued)

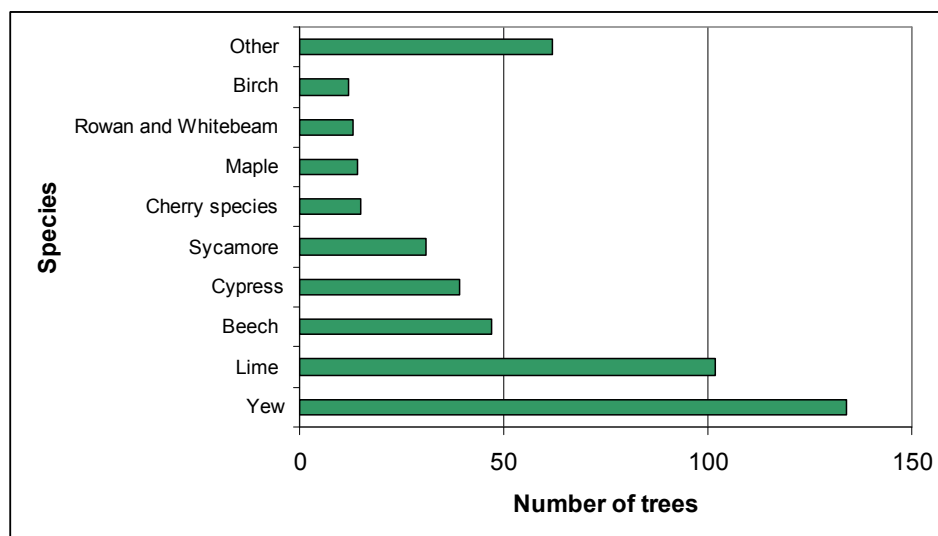


Fig. 2 Distribution of species of trees in the park

- The large number of limes in the park is a combination of mature original planting and but up to 30 of these trees are recent planting. Some of the mature trees are showing signs of declining health and it is appropriate that the planting of young lime trees have already been undertaken so that these trees will replace the mature lime when they die.
- The next most common species of tree in the park is beech. The majority of these are original planting as with the lime many of these are showing some signs of declining condition and in September 2005 a detailed risk assessment of 9 trees in prominent locations were undertaken. The assessment concluded that two trees should be removed and the condition of a number of other trees required annual monitoring. Further tree removal will certainly be required in the coming years, but this will always be as a last resort.

There are only 5 trees which have been planted in the last 50 years, therefore unlike the lime in the park there are not already trees established to act as replacements should these trees have to be removed. Beech grow particularly well in this area and were a dominant part of Milner's landscaping of the park. Therefore the establishment of beech trees should be given priority in future planting.

6.0 Results of survey (continued)

- The majority of planting in the park is of common species and varieties and the overall the arboricultural interest of the park could be improved. Historical evidence seems to suggest that weeping varieties of trees were important in the park as features, however there are only three mature weeping trees an elm and two beech trees which remain of this planting. The weeping beech near the car park and fine specimen and an important arboricultural feature in the park. More recent planting has included weeping varieties of willow, willow leaf pear, beech and ash. The judicious and carefully located planting of further weeping varieties of trees would be an asset to the arboricultural interest in the park and in keeping with Milner's original vision.
- The other less common tree species include young specimens of Kashmir birch, blue atlas cedar, dawn redwood, wellingtonia, Sweet Gum and snake bark maple. With the exception of the Dawn redwood all of these species would have been introduced to the UK by the mid to late 19 century and would have been planted in parks in that time. The date of be born in mind when selecting species for planting to increase the interest in the park and priority should be given to the species that were available at the time when the park a landscaped, circa 1850's. The connection with Derby and Lincoln arboretums is an interesting one and should be explored. Very careful consideration to the impact of planting on views and vistas needs to be given.
- It was also noted that there is no horse chestnut in the park other than one red horse chestnut near the conservatory. This species was a part of the original planting and establishment of a few specimens should be included in future planting.
- The trees have generally been well managed and the need for extensive pruning or felling is limited. However a few trees may need to be felled where they pose a hazard.

7.0 Management principals

7.1 Sustainability

The key principal of the management of the trees in the park is sustainability; to ensure that the mature trees that have been inherited from past generations are there for the next. Unfortunately, it will be necessary from time to time for trees to be felled because they are unsafe. Where felling occurs the wood and arisings from the tree works will be reused within the park wherever possible and trees felled replaced with suitable planting to reflect the heritage of the park.

7.2 Programmed tree works

The survey has identified tree works that are required in the park and this includes some tree felling due to condition and potential hazard.

Approximately £10,000 worth of tree work, including replacement planting will be required over the next 5 years. This work will be phased according to how essential it is and to ensure that the resources are efficiently used.

The programme of works will be subject to review in response to comments from community and changing circumstances. All trees will be re-inspected before programmed works are issued to ensure that the recommendations are still appropriate.

7.3 Planting

Some planting has been undertaken recently to maintain the frameworks of trees in the park, however some planting of specimen trees should occur each year to ensure the continuity of tree cover and improve the arboricultural interest as discussed in section 6. Because of the historical interest of the park locations for tree planting will be carefully considered and planned to conform to an overall vision for the park, such as formal prominent locations will be planted high quality larger trees with a reasonable degree of initial impact. Where as more densely trees areas where initial impact is less important will be planted will smaller trees.

7.0 Management principals (continued)

Pavilion Gardens has been a popular place for commemorative trees to be planted and whilst the donation of trees should not be discouraged any planting of such trees should conform to the overall planting plan for the park.

Planting of trees potentially attracts grants and other sources of funding and as such the Arboricultural Officer will assist with the Friends of the Park in accessing these grants where it is appropriate.

7.4 Risk assessments and re-inspections

As the park is constantly used by the public, it is important that the risk from falling limbs etc. is assessed, and action is taken to minimise the hazard. All trees in the park will be inspected every 5 years using the current survey as a basis. In addition to this some trees require more frequent inspections due to their location and/or their condition, these are likely to be given particular attention during and an annual walk over survey of the park. In addition reactive inspections will be undertaken if any issues are brought to the attention of the Arboricultural Officer by staff working in the park or members of the public.

7.5 Heritage trees

The oldest trees in the park will be identified by the survey. Old trees such as this are an important connection with the past and have given pleasure to generations of Buxton residents and visitors. These trees are also important for wildlife and biodiversity as some species are only associated with trees of this age.

The condition of these trees will be monitored and works undertaken as necessary to enhance their longevity. Nevertheless, from time to time it will be necessary because of safety issues that some trees may need to be felled, however this will be the option of last resort and consideration will be given to other potential solutions.

7.0 Management principals (continued)

7.6 Biodiversity

Whilst increasing biodiversity is usually associated with natural areas there are some of management practices that can be undertaken in the park to increase the diversity of species present. Parks are important green refuges for birds, mammals and other species in towns. Pavilion Gardens has many mature trees with connects to areas of woodland within the town, as well as a river and the lake which all provide a diversity of habitats, the management of these will endeavour to enhance their value for wildlife.

Trees, particularly mature trees are important for wildlife and in particular nesting birds and bats roosts. Where possible tree works, particularly felling, will be scheduled to avoid nesting the season (March – August) although from time to time it will be necessary to do works within this period. These works will be limited to minor pruning works or essential works.

Where the presence of bats is suspected a bat survey should be undertaken. If it is concluded that it is unlikely that bats are present and works can proceed care should still be taken.

7.8 Standard of Tree works

All major works to trees in the park will be undertaken by the council's approved contractor to the current industry standards and best practice. Some minor works will be undertaken by the parks staff.

References

Buxton Civic Trust Forest plan (unpublished)

Grundy Heape, R (1948) '*Buxton under the Dukes of Devonshire*', London.

High Peak Local Plan – Revised Deposit Plan January 2003

Milner, H.E (1890) '*The Art and Practice of Landscape Gardening*'

Robertson, W.H (1854) '*A Handbook to the Peak District of Derbyshire and the Use of Mineral Waters of Buxton*' London.

The Parklands Consortium, (1996) '*Pavilion Gardens, Buxton Survey Grounds Development Plan - Volume 1*'. (unpublished)