



# Hockeridge and Pancake Woods Case Study



A map board at the picnic area provides directions and information about the woods

## Background

Hockeridge and Pancake Woods cover a 74.43ha site lying to the south-west of Berkhamsted, astride the Buckinghamshire/Hertfordshire border and adjacent to the Chilterns AONB. They are located in an area of agricultural land interspersed with mainly broadleaved woodlands. The varied ages of the stands and diverse species composition make the woods particularly attractive with varying colours and textures, especially in the spring and autumn.

Most of the site has been woodland for more than two centuries and is classed as Ancient Semi-Natural Woodland (ASNW), with some areas of Plantations on Ancient Woodland Sites (PAWS). The woodland lies on the Chiltern plateau, and rises from 130m to 170m above sea level from Hockeridge Bottom to Pancake Wood. A varied ground flora arises from the soil variation, with deep, compacted, acidic clays dominating except on the southern boundary and Hertfordshire bank where the chalk beds are nearer the surface and the topography is much steeper.

## Management Objectives

- 1) To meet the charitable aims of the RFS.
- 2) To manage the woodlands to produce good quality timber and firewood.
- 3) To manage the woodlands with due regard to the landscape.
- 4) To protect the woodlands from squirrel and deer damage.
- 5) To take remedial action in the event of tree diseases becoming present.

## History

The woods have a long history, with many clues to its past still visible including the double-bank mound near Hockeridge Bottom which demarcates the boundary between Buckinghamshire and Hertfordshire. The last 200 years of management show how initiative and forward-thinking can ensure the creation of woods which can be enjoyed and used for centuries.

Throughout the 19<sup>th</sup> and early 20<sup>th</sup> centuries, under the ownership of the Dorrien family, timber production dominated. However after the last Dorrien died in 1930 the woods' future looked uncertain. The forest was unsightly and unmanaged.



One of the ancient banks in Hockeridge Wood

Mature beech high forest was largely clear-felled by developers hoping to extend nearby Berkhamsted, and the rest was clearfelled for timber to aid the war effort. Gorse, heather and bracken dominated, creating a severe fire hazard and smothering seedlings which stopped most regeneration. Only birch regeneration was extensive, which successfully provided habitats for wildlife; however birch has low commercial value and is not a tree 'local' to the Chiltern tops.

Miss Mary Wellesley purchased the woods in 1952 and was the person determined to rehabilitate the derelict woodland. She set about converting it back to working woodland



*Mary Wellesley was a keen arborculturalist, attending many RFS meetings*

with the help of a local land agent. Public access was encouraged yet controlled, while vehicles were strictly prohibited, and rides were created to provide access and reduce fire risk. The aim was to restore the wood so that it was commercially successful, visually appealing and also able to provide an environment supportive

of a diverse flora and fauna. A hardwood crop of oak and beech was re-established, with conifers also planted; much of the beech was seeded pre-war and the birch which was restricting its growth was removed to free the beech.

As a result of the work undertaken during Mary Wellesley's ownership of the woodlands much of Hockeridge and Pancake is post-1954 woodland. By 1980 nearly a quarter of a million trees had been planted, including 50 specimen trees along the ride edges comprising species such as tulip trees, southern beech, and cedars and red oaks. The avenue of Wellingtonia, a tree named after Mary Wellesley's great, great grandfather, the Duke of Wellington, was also planted and is now a spectacular feature of the wood.

As a result the wood has a unique feel, part typical Chiltern beech wood, part commercial forest, part arboretum.

## RFS Ownership

In 1986 Mary Wellesley generously gifted the wood plus an adjoining field over to the Royal Forestry Society, with the management assumed by the RFS Director Esmond Harris. The woods were seen as a perfect opportunity for the RFS to 'practise what they preach' – that



*The Wellingtonia Avenue planted by Mary Wellesley is a highlight of the woods*

is good silvicultural management, producing an economically successful wood while enhancing wildlife habitats, and promoting informal education of the public through free access.

The RFS' involvement resulted in an intensification of the thinning regime, a total clearing of the 12 ha of 40-year-old birch, and an increased importance placed on the education and conservation value of the property. There were also attempts to improve education by taking school, university and RFS member groups through the woods, while also informing the general public about the woods and the work taking place there. The relationship with the woodland users, mostly local residents, is crucial in order for the site to be fully appreciated, understood and successful.

In 1992 the RFS was named as one of the first Centres of Excellence by the Forestry Authority in recognition of its multipurpose management, including creating benefits for wildlife, good access for people and producing timber in an environmentally sound way. Conservation

measures adopted included:

- digging out and enlarging the principal pond,
- ring barking old birch trees to provide standing deadwood for woodpeckers and hole-nesting birds,
- mowing the rides to create a mixed length grassland habitat, and
- providing fifty bird nest boxes.

The original objectives of the woodland have been met, with the emphasis on education achieved through the increased partnerships with schools, local groups and the RFS field meetings.



Field meetings allow for amateurs and RFS members alike to share their knowledge and experience

## The Current Situation

The breakdown of the current forest composition can be seen in the table opposite. 44 sub-compartments are ANSW with some containing a small proportion of conifers, while the other 34 sub-compartments are PAWS (although 14 of these contain a good proportion of native broadleaves). The ASNW sub-compartments are managed to ensure minor species are retained and site natives favoured. 18% of the trees are 1-20 years old, 17% 21-40, 56% 41-60, 4% 61-100 and 5% over 100 years old. Five compartments contain veteran beech and oak well in excess of 100 years old.

With the exception of beech, the growth rate for broadleaves and conifers is average. The oak is yield class 4, while the beech and other broadleaves are yield class 8. The western hemlock and western red cedar average yield

Species	Percentage of Area (%)
Beech	48
Ash	10
Norway Spruce	10
Oak	7
Scots Pine	6
European/Japanese Larch	6
Mixed Broadleaves including Lime, Sycamore and Birch	4
Western Hemlock	4
Western Red Cedar	3
Mixed Conifers including Douglas Fir and Corsican Pine	2

class 18, the Norway spruce yield class 14 and other conifers average yield class 8.

Sixteen species are grown commercially, including beech, Corsican pine and Norway spruce. Recently two compartments of conifers were clear-felled and restocked with site native or natural regeneration broadleaves, restoring an area of PAWS to ASNW status. Other areas of PAWS mixed with broadleaves are being thinned with the aim of encouraging a pure broadleaved crop. The woods are managed along strictly commercial lines with revenue generated from grant schemes, the sale of firewood, and timber which is starting to provide a more significant revenue.

The work at Hockeridge and Pancake Woods is intrinsically linked to conservation through best practise, however there are aims to enhance its conservation value even further. Species lists are kept to monitor and analyse the effectiveness of conservation work. Specialist studies are also conducted in the woods, including detailed projects on the edible dormouse (*Glis glis*).

Public access is carefully managed, with rides regularly mown and a picnic area recently updated. Recreational bike riding is discouraged and horse-riding isn't permitted due to frictions with other forest users. The RFS

Warden, Jonathan Saggerson is vigilant, liaises with local residents and ensures the woods are maintained to a high standard.

The RFS has been more proactive in inviting groups to tour the woodland, with these groups catered for at an appropriate level dependent on their background. The fifty specimen trees were also re-labelled in 2013 and an identification leaflet has been updated.



The tree specimens have been re-labelled to make identification easier for visitors

The wood is managed by a combination of the RFS, the Warden Jon Saggerson and Abbey Forestry, a woodland consultancy firm. They produce the management plans, oversee their delivery and manage the timber marketing.

All management is in accordance with UKWAS standard best practise, and this helps ensure that wildlife, recreation and education are inherent within good commercial forestry.

## Challenges

**People:** Humans are often the biggest challenge facing woodland owners, and at Hockeridge and Pancake Woods this is exacerbated by the fact they are fully open to the public and have a road running through them. Fly-tipping along Johns Lane is a problem, and litter within the woods needs to be collected and removed. People and their dogs also have the potential to disturb wildlife and cause damage through vandalism or even stealing rare tree/plant species. However these issues are steadily decreasing, in part due to the increased number of regular visitors who act as the eyes and ears of the RFS. They see the woods as their own, and this level of community

engagement makes public access a notable benefit. Key to this is education of the public regarding what is occurring in their woods, and why certain decisions or management techniques have been employed.

**Pests and diseases:** Although Dutch elm disease and beech blast have caused significant issues in the past, there are currently no fatal tree diseases present at the wood. Ash Dieback (*Chalara fraxinea*), however, has the potential to have a serious impact and is one of an increasing number of tree pests and diseases which require regular inspection. Fortunately at Hockeridge and Pancake Woods where ash is present it is in mixture with other trees and can therefore be thinned without seriously affecting the quality of the woods and the landscape.



Ash Dieback (*Chalara fraxinea*) on a young stem

The most significant pest in the wood is the **grey squirrel** (pictured). They gnaw at stems to reach the sap in the tissue below; if this extends around the stem then the tree dies as this layer of tissue is responsible for nutrient transport. Even small scars will restrict the growth of trees, and can result in lethal fungal infections.



The squirrels are controlled using warfarin baited hoppers, however not all pests can be controlled in this way.

The **edible dormouse** (*Glis glis*) is a European Protected Species and therefore needs to be considered when any forest work is completed; they are monitored using nest boxes and the

RFS consults with species experts. *Glis glis* causes a lot of damage to larch and spruce especially, gnawing at the bark much like squirrels which significantly reduces the timber quality. It is a challenge to both control the destructive actions of this creature and protect it in equal measure.

**Muntjac** and **roe deer** are becoming increasingly prevalent at the site, although there has been no significant damage inflicted yet as the most vulnerable saplings are protected by shelters.

**Climate Change:** Large storms can have significant financial impacts, with the 1990 gales destroying 4.4ha of high-quality Scots and Corsican pine which would have been one of the future sources of income for the RFS. Climate change will create new risks to our woodlands, with more severe drought damage in summer and waterlogged conditions in winter expected. The beech stands at Hockeridge are expected to be put at risk of drought by the end of the century due to their shallow root system. Climate change will also provide conditions more suitable for pests and diseases which will make certain species more susceptible and therefore a less viable forestry option. This includes Corsican pine, a species which is historically successful but which will not be planted in the future due to the threat of red band needle blight which damages the crop.

**Financial viability:** Often the greatest challenge facing most woodland owners, but especially those aiming to balance commercial forestry with recreational and habitat conservation objectives, is balancing the books. Over the long term the RFS aims to generate sufficient income from fire wood and timber sales, supplemented by woodland grants to cover the costs of restocking and routine maintenance. This is a tough challenge, especially with regulations regarding protected species, tree health surveys, deadwood surveys and insurance all placing a heavy burden on all woodland owners. It does not take account of the time and cost of managing unexpected events or providing educational resources to

enhance the enjoyment and learning experience for the public, which the RFS aims to fund from donations and legacies. Currently the breakeven objective is an aspiration rather than a reality.

## Future Management Objectives

The main objective is to use the woods to meet the RFS' charitable aims by delivering good examples of forestry practise for both the general public and the wider forest industry. The provision of woodland walks, information boards and other educational material is inherent within this. The woods will be managed as high forest by growing good quality timber whilst enhancing the flora and fauna; this includes protecting against the damage caused by pests and diseases.

Biodiversity enhancement, mainly through diversification of the age and species structure as well as the provision of open space, is fundamental. Natural regeneration will be prioritised, with seed from local sources planted if required. Individual trees will be selected and retained as veterans, and rides and glades will be maintained, widened and scalloped to encourage biodiversity and improve the public experience. The deadwood habitats will be retained where safe to leave, while brash will be left in some places to aid nutrient recycling, protect butterfly and bird species and also discourage deer. The RFS has also applied for grants to support timber production under the Forestry Commission's Woodfuel Initiative.

The aim is to grow the pure broadleaved crops, especially beech, for as long as possible to create fine old woodlands for the public to enjoy. There is 12ha of PAWS which contains a good percentage of native broadleaves, and the thinning operations will aim to remove the conifers to leave these compartments as pure broadleaved ASNWs. The other pure conifer stands will be felled when they have reached maturity with good quality sawlog diameters (expected to be between 11-20 years). Any restocking of felled areas will be with species appropriate to the site, sometimes through

natural regeneration but also by planting of both broadleaves and conifers.

## Conclusion

The woods at Hockeridge and Pancake have had a distinguished history, and continue to demonstrate successful commercial forestry through sustainable silvicultural management. The enhancement of habitats and promotion of informal education of the public through free access is inherent within the management. Threats from humans, pests and diseases, and climate change undoubtedly shape the direction of management into the future, while the financial situation always needs to be considered. At Hockeridge there is an aim for the RFS to use their forest more, and to put the plans for education and recreation into action so that we can promote woodland management using our own forest.

## Bibliography

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