Combwell Wood Management Plan

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Supported by

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Introduction

The intention of this management plan is to inspire you to look at your woodland in different ways and perhaps consider new ideas or approaches to management. It is not intended to be a document that tells you *exactly* what to do but rather to help you to explore ways to sensitively manage this wonderful woodland.

There are a whole range of excellent books that explore the many facets of woodlands, covering their wildlife, history and management. This short summary does not try to replace these but will highlight useful sources of information and direct you to what you need to know to answer those questions relevant to your woodland. The aim is to encourage you to look at your woodland in a landscape context and instil the idea that the work you undertake now is a continuation of past management practises that created the diversity we see today.

At the initial meeting, it was clear that there is a great pride in the woods you own and a deep appreciation of the conservation value of this woodland. The value of this woodland is recognised at a national level by the notification of 111 hectares of it as a Site of Special Scientific Interest (SSSI). SSSI designation is given to the best sites for wildlife or geology in England and legally protects them. This does not mean that those areas outside the SSSI boundary are any less important; they are vital in maintaining the integrity and health of the whole woodland complex and management activities can have an impact on adjacent SSSI areas. This is a real gem of ancient woodland within the High Weald Area of Outstanding Natural Beauty, a designated area deserving of your careful management.

Over the past year we have been fortunate enough to explore sections of the woodland. During these brief visits it became clear how large and diverse this woodland is. It would not do this woodland justice to overly simplify the rich diversity of this woodland in a short plan. So please consider this as an attempt to outline some general principles and methods of management, an introduction if you like to the wonders of woodland management. As owners you are the ones who know the detail of your area of woodland and we would hope that you can take from this brief plan, ideas and thoughts that are relevant to your ownership.

Whilst there may be a mix of individual objectives across the woodland ownerships it is important that there is a degree of connectivity and unity to the management of the woodland as a whole. A key overarching objective to the management should be to try to achieve and maintain favourable conservation condition across the whole woodland complex. In particular those of you that have ownership of SSSI woodland have a duty to ensure that it is managed in a sensitive and sustainable way. We hope that this plan will help you achieve this and so much more from your wood.

Site Description

Combwell Wood is an area of ancient semi-natural woodland totalling approximately 164ha (405 acres). The wood has been sub-divided into 36 smaller woodlands under multiple ownership.

The wood includes Park, Shearnfold and Cats woods, as depicted on Ordnance Survey maps and is situated near the village of Kilndown, 4km south of Goudhurst, Kent, and within the intersection of the A21 and B2079 roads. It is positioned West of Bedgebury Pinetum and the larger Bedgebury Forest.

This woodland is described as an ancient woodland site; which means that the historic record shows woodland on this site for at least the last 400 years. It should be stressed that this does not mean that all the trees, or indeed any, need to be of a great age just that there has always been a tree cover. It is the soil and ground flora that are often more important than the trees. With little past cultivation by humans these soils can develop a community of plants that indicate its long continuity of tree cover. As you explore your woodland you may learn to recognise some of these important ancient woodland indicator plants.

Combwell Wood is not a ‘natural’ woodland. (You would have to travel to the far east of Europe or Russia to see a broadleaved woodland that approaches an ecologically natural state.) All of this woodland has been managed to some extent in the past. Coppice is a clear example of past management and shows the impact of past generations of foresters on the woodland that is seen today. The attached archaeology report makes this very clear.

Much of Combwell can be described as coppice woodland and this term helps describe the structure of the woodland produced by a particular management practice. Coppicing is a traditional form of woodland management and over time, many species have adapted and now depend on this management for their survival. Some rare and unusual species can be found in areas of coppice woodland with many being strongly associated with a particular stage of the coppice growth. So, whilst this is a woodland type that has seen regular harvesting of timber by past generations it has an array of ancient woodland specialist species associated with it.

Within the Combwell Wood complex there are different types of woodland which have developed through a mix of factors to produce this special woodland. Mixed with the traditional chestnut coppice are areas of high oak forest, plantations of conifers, small wet alder carrs and more open heathy birch areas to name a few. Describing all the intricate and complex habitat types that make up this woodland mosaic is not the purpose of this plan. But some general principles and types can be defined to help in making clear decisions regarding sensitive management.

Designation

111ha of Combwell Wood is designated a Site of Special Scientific Interest (SSSI) for its woodland type - ancient wood on Tunbridge Wells Sandstone, with ghylls in which peat has accumulated. The wood has a large number of plants that are typical of south-eastern ancient woodlands, these being particularly associated with the ghylls and the open rides. It also contains uncommon Atlantic bryophyte communities (mosses and liverworts) and 2 nationally scarce water beetles.

The wood lies within a nationally designated protected landscape, the High Weald Area of Outstanding Natural Beauty (AONB).

Classification

National Vegetation Classification (NVC) has become the standard classification used for describing vegetation in Britain. Natural England have surveyed the SSSI area within the wood and divided the area into the following classifications: W7b, W8a, W10a, W10b and W16a. (See appendix for summary classification details). A map of the SSSI boundary within Combwell Wood and the classification areas is included in the maps section.

Landscape Character

Combwell is situated within the High Weald AONB, characterised by its series of forested ridges and valleys, numerous steep ravines or ghylls and patchwork of small fields, hedges and sunken lanes.

Geology

The underlying geology of the area is a succession of clays and sandstones of the Hastings Bed Group of the Wealden series. The clays often prevent free drainage and hence areas within the wood are seasonally wet.

Elevation

Ranging from 100m to 70m above sea level, with predominantly north facing slope in the eastern section of the wood and east facing on the western section, leading to the ghylls at the centre of the wood which run north–south through it.

Access

Main vehicle access points into the woodland are from the B2079 Lady Oak Lane, Rogers Rough Road and the A21 (see map in appendix). There are numerous tracks and rides through the wood, some of which are in poor condition due to lack of maintenance and wet conditions. A footpath runs north-south through the western part of the wood, from Kilndown and through Combwell Priory Farm and beyond.

History of Management

The majority of the wood has previously been managed as predominantly chestnut coppice with oak standards, although coppicing has not been carried out on a regular basis recently. The chestnut trunks arising from the coppice stools typically range from 15-25cm in circumference and some have deteriorated due to wind damage, disease and neglect.

Secondary birch growth is dense in some areas, shading out the coppice stools. There are also areas of hazel coppice and stands of high forest oak.

Small areas of conifer plantation and some standard pines are also present showing more recent planting influences. Whilst the presence of natural alder carrs in the wetter area along the streams and flushes suggests that the planting schemes were not intensive.

Recent management has included some coupes of coppice chestnut and opening up of glades for amenity use by the woodland owners.

By understanding how human influence has shaped the woodland, creating and maintaining a mosaic of different age structures will help steer your decisions as to how it can be managed today to retain this scarce habitat and its associated wildlife.

Vision

To conserve the special nature of this ancient woodland by developing a diverse and species-rich native woodland that clearly demonstrates the outstanding ability of a group of owners to sensitively manage this woodland for current and future generations to enjoy.

Management Objectives

Before any work is undertaken in the woods within the SSSI designated area, it is essential that you refer to the Natural England list of Operations Likely to Damage (a copy of which is attached in the appendix.)

This document does not give permission or consent to undertake any work.
If in doubt about any work then contact the Natural England office.

Natural England are responsible for protecting the country's fine wildlife sites and so will have the best interest of the site at heart. They will be supportive of any sensitive management that enhances the conservation value of the woodland's sensitive features.
Individual owner's objectives for their part of the wood will differ and should be in harmony with the wood's SSSI objectives. However, the broad objectives listed below apply to the wood as a whole and not necessarily each individual wood.

These objectives are not listed in any order of priority and should be seen as being all interlinked. Some are clear and easily achieved whilst others are more complex and longer term.

No	Objective
1	Ensure all the SSSI woodland achieves and maintains favourable status
2	Remove Rhododendron and treat re-growth to prevent further spread.
3	Identify and protect all the old veteran trees
4	Re-instate the traditional coppice cutting cycles where appropriate
5	Enhance and maintain the current ride and track network
6	Prevent unauthorised access to the woodland
7	Establish a sustainable level of timber harvesting where appropriate
8	Create and maintain glades for biodiversity value.
9	Inspire other woodland owners to actively manage their woodland
10	Explore all markets for timber and other products to develop an income, where appropriate
11	Ensure the long term ecological integrity of the woodland
12	Create an outstanding example of successful management of SSSI and adjoining woodland, by multiple owners.

Woodland Types and Their Management:

This is an oversimplification of this complex mosaic of woodland types, habitats and niches. But it should give you an insight into the nature of the woodland at Combwell and some general guidelines. Essentially, there are five main woodland types at Combwell Wood;

- High Forest
- Wet woodland
- Coppice with standards
- Secondary woodland
- Plantation

As you look through the woodland it is clear that there are not always obvious boundaries between one type and the next. The graduation of one type with it associated communities into another is beneficial and contributes to the overall richness of the woodland.

It is important to gain an understanding of what woodland you own in order to develop appropriate methods to manage it. Again, we stress that consultation with the Forestry Commission and/or Natural England is vital before you undertake any works, which also includes tracks or structures.

There are a number of fine publications on the nature of woodland types and their appropriate management techniques. The following pages are taken from the Forestry Commission practice guide series; *the management of Semi-natural woodlands* (which are available as downloadable files from the FC).

These are just extracts and should be considered as a starting point in the consideration of appropriate management options. As the very useful little book ‘So you own a woodland?’ observes; ‘the old adage ‘a little knowledge is a dangerous thing’ is never more true than in woodland work, especially where equipment such as chainsaws are involved’.

Taken from ‘Practice Guide 1: Lowland Acid Beech and Oak Woods’:

What are lowland acid beech and oak woods?

This guide deals with the management of the ancient semi-natural woods dominated by oak or beech which are found on strongly acid soils mainly in southern England and south-east Wales. It also includes guidance for those woods of this type which have become dominated by birch or sweet chestnut. These woods are concentrated on the acid brown earths and podzols developed in the sands, gravels and very acid loams and clay loams of the Weald, London basin, Hampshire basin, chalkland plateaux and some kinds of superficial deposit. Though they are commonest in south-east England, where beech is native, oakwoods can be found on strongly acid soils in most parts of lowland Britain. There are estimated to be a total of 15 000–25 000 hectares of ancient semi-natural woods of this type.

A typical example grows on gently undulating ground and either has a heathy ground vegetation or is bordered by heathland. Many famous ancient forests fall within this type, including the New Forest, Ashdown Forest, Sherwood Forest, Windsor Forest and Great Park, Wyre Forest, Burnham Beeches and parts of Epping Forest.

Two woodland types within the National Vegetation Classification (Rodwell, 1991[1]) fall within the scope of this Guide.

Beech–wavy hairgrass woodland (W15)

These are the beech–oak woods of very infertile, base-poor, strongly acid soils in southern England. Beech is usually mixed with pedunculate oak or, less often, sessile oak, with birches, and sometimes whitebeam present in gaps and on fringes. Scots pine and sycamore, both introductions, also occur sporadically. The underwood is sometimes dominated by holly, notably in woods which have been heavily grazed. Yew, rowan and alder buckthorn are characteristic, but hazel and hawthorn are absent or rare. Where soils are freely-drained, a podzol profile has commonly developed. The ground vegetation may be sparse and extremely poor, sometimes reduced to little more than tufts of Leucobryum and other mosses scattered amongst persistent drifts of leaves. In other examples, wavy hairgrass, bracken or bilberry is abundant, and in richer examples wood-sorrel, cow-wheat, butcher's broom, hard-fern and buckler ferns are common.

Oak–birch–wavy hairgrass woodland (W16)

These likewise occupy strongly acid soils, most of which are light, freely-drained and podzolic. Pedunculate oak, sessile oak and both birch species can predominate, or grow in mixtures, often with a few beech, sweet chestnut, Scots pine or aspen. Holly, rowan, alder buckthorn and elder commonly occur as an underwood, but hazel, hawthorn and ash are extremely rare. Many woods have been overtaken by Rhododendron. The ground vegetation is extremely poor and generally sparse, characteristically including wavy hair grass, bracken, bilberry, wood sage, tormentil, foxglove, hard-fern and buckler ferns.

The differences between these two types will have little significance for foresters. Indeed, over time, the two types may often be interchangeable, e.g. as beech seeds into a birch–oak wood. More important for management is the dominance of the main trees, for this reflects the history of the wood and its silvicultural prospects. Birch–dominated stands have usually been initiated by disturbance or removal of grazing animals. Oak-dominated stands may be the successors of birchwoods, whereas beech-dominance can develop from oak woodland. Chestnut-dominated ancient woods have usually been planted. Exceptionally holly becomes dominant where it was once cut for browse.

In heathland districts these woods are often intricately intermixed with secondary birch and holly scrub, small mires, strips of alder and wet birchwoods, and enclaves of heath. In south-east England, hornbeam coppices commonly fringe the acid oakwoods. Elsewhere, acid oak woods usually form patches within mixed coppices on the lightest and most acid soils. On the upland fringes, acid oak woods become more extensive, giving way to ash–hazel mixtures on more fertile soils in valleys.

History and traditional management

After the last ice-age, beech was slow to return to Britain. In fact, it had probably not reached its climatic limits before the original woodlands were mostly cleared. Thus, although it is strictly native only in southern England and south Wales, it can spread vigorously after introduction to woodlands further north and west, to which, given time, it might have penetrated naturally. Within its native range beech rose to dominance in woods which were disturbed by woodcutting and pasturage.

Evidence from the New Forest, Epping Forest and elsewhere suggests that many acid beech and oakwoods were mainly dominated by small-leaved lime in prehistoric times. Lime disappeared and beech, oak and hornbeam increased at the time of major disturbances brought about by felling and pasturage.

Most lowland acid beech and oak woods were managed either as coppice-with-standards or as wood-pasture in the medieval period. Under the former regime, beech was an infrequent species within mixed coppice of oak, birch and hazel growing below oak standards. From the 18th century onwards many of these coppices were planted with sweet chestnut, especially in south-east England and locally in the Welsh borderland. Now, some are so dominated by chestnut with little or no beech, that their origins are unrecognisable. Coppices dominated by oak or beech survive locally. The acid oak coppices growing in the lowlands from the English Midlands northwards were rarely planted with chestnut or beech. Now, some are so dominated by chestnut with little or no beech, that their origins are unrecognisable. Coppices dominated by oak or beech survive locally. The acid oak coppices growing in the lowlands from the English Midlands northwards were rarely planted with chestnut or beech.

Within the medieval wood-pastures, beech and oak assumed greater prominence, partly because they were pollarded and thereby outlived other species, but oak was usually far more abundant than beech, until it was selectively felled in the 17th and 18th centuries.

The persistent and extractive character of wood-pasturage probably led to progressive soil degradation and loss of species such as hazel, and reduced many woods to a sparse scatter of ancient trees growing within heathland. Nevertheless, wood pasturage survived far better in this woodland type than any other, and today some of the best wood-pasture relicts in Europe fall within this type.

High forest management appears to have developed early in acid beech and oak woods. By the 17th century oak plantations had been established in some Royal Forests and by the 18th century beech and Scots pine were also being planted. Enclosure of commons during the 18th–20th centuries, both within Forests and beyond, generated many high forest beech and oak woods, many with an admixture of conifers used in the original mixed plantings. These plantations were often intermixed with surviving medieval coppices and wood-pastures.

Sessile oak

Taken from Practice Guide 3: Lowland mixed broadleaved Woods:

What are lowland mixed broadleaved woods?

This guide deals with the management of ancient semi-natural lowland mixed broadleaved woods. These are concentrated in the English lowlands, where they are by far the dominant type in the Midlands and East Anglia, but they also occur sparingly in the Scottish and Welsh lowlands and the upland margins. They mostly occupy 'mesic' soils, i.e. neither the extremely dry sites on limestone outcrops, nor the extremely acid, podzolised soils associated with heathlands. Typically, they occupy a wide range of fertile, moist loams and clays, and support a rich flora containing both lime-loving and lime-avoiding species. There are estimated to be 130 000–160 000 ha of ancient semi-natural woodland of this type.

Lowland mixed broadleaved woodlands include many variants, some of which are restricted in their distribution. For example, hornbeam woods are common only in Kent, Sussex and East Anglia. Lime woods are scattered mainly through the Midlands and East Anglia. A typical example is a wood of 10–30ha, growing on a flat or gently sloping site at or below 300m altitude, entirely surrounded by farmland, dominated by mixtures of oak, ash and hazel, which was treated as coppice until 30–70 years ago.

These woods have long been known as 'oak-ash' woods by ecologists. They broadly correspond with two woodland types in the National Vegetation Classification, (Rodwell, 1991[1]) namely W8, Ash–maple–dog's mercury woodland and W10, oak–bracken–bramble woodland. Some of the former occur in the uplands, where they are covered by the guide for Upland Mixed Ashwoods (Forestry Practice Guide 4).

Oak and ash dominate most of these woods, with hazel as the commonest underwood species. Although pedunculate oak is characteristic, sessile oak occurs on a variety of sites, from strongly acid, poorly drained clays (e.g. Hertfordshire hornbeam woods) and alkaline loams (e.g. Herefordshire limestone woods) to light, acid loams (e.g. some silver Lincolnshire limewoods). Field maple, wych elm, wild cherry suckering elms and sallows are frequent within W8, whilst silver birch, small-leaved lime, hornbeam and alder are often present in W10. Hawthorns, dogwood, spindle and other shrubs are frequently found in the underwood. Wild service occurs sparingly. Conifers are naturally absent, save for yew on a few limestone outcrops. Beechwoods are treated as separate types in this series of guides, though mixed woods with just a few beech can be covered by this type. Sycamores, sweet chestnut and other non-native trees have colonised many woods.

Within these two types there is considerable variation in stand composition. Although oak–ash–hazel mixtures are commonest, woods dominated by hornbeam, small-leaved lime, field maple, suckering elms, wych elm, sessile oak or alder are all found. In many woods the stand is a complex, small-scale patchwork of different dominants.

Type W8 occurs on alkaline and neutral soils, many of which are heavy and poorly-drained. Dog's mercury is the characteristic field layer dominant, but bluebell, enchanter's nightshade, bramble, yellow archangel, primrose, wood anemone and many others are often common. Type W10 occurs on acid soils ranging from poorly-drained clays to lighter, base-poor sandy loams. The ground flora is poorer than in W8, with bluebell, wood anemone, bramble, honeysuckle and bracken often dominating at different seasons.

Lowland mixed broadleaved woods overlap with several other types. Some upland mixed ashwoods on deeper soils are very similar. In some woods on chalk and limestone in southern England and the southern Welsh borderland beech forms a small proportion of mixed stands which are closely related to beech–ash woods (Guide 2). On the more acid clays and loams, oakwoods occur with a hazel-dominated underwood, which are similar to some of the oakwoods included in the lowland oak–beech type (Guide 1).

History and traditional management

Wood pasture

Mixed woodlands have been used as pasture for millennia, Prehistoric communities used the wooded waste as a source of timber and a place to graze domesticated animals. This usage was formalised in common rights, deer parks, royal forests and private chases in medieval times. Most of the modern survivors of wood-pasturing are on acid soils and are covered by the acid oak and beech guide (Guide 1), but some old deer parks are forms of mixed broadleaved woodland.

Modern relics of wood-pasture generally comprise a scatter of large oaks, many of which have been pollarded or shred, and a few ancient specimens of other trees, such as ash, maple, lime and elm. They are extremely important refuges for lichens and other epiphytes, fungi and invertebrates associated with dead wood.

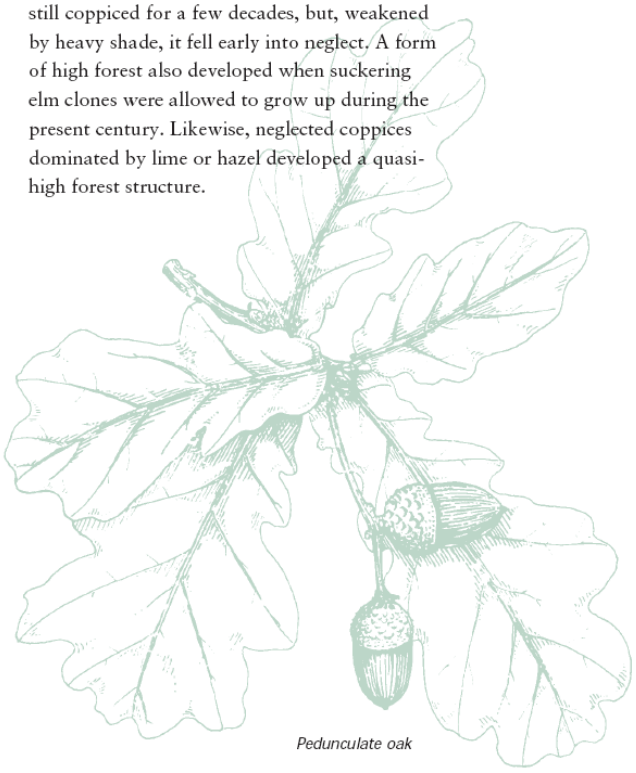
Coppice and coppice-with-standards

Since the early middle ages the great majority of lowland mixed woods have been treated as coppice or coppice-with-standards. Most coppices were cut on rotations of 5–30 years, supplying mainly local markets with fuelwood, roading material, charcoal, fencing and the basis for numerous coppice crafts. Growing amongst the coppice were timber trees, known as standards, most of which were oak. These were used to frame houses and were sometimes sold for more distant markets, though it is doubtful whether ship-building was a major influence in most woods. Standard oaks were grown for 80–100 years. Their density varied down the centuries according to market changes and the needs of individual owners, so there was a range from pure coppice and coppice with standards at up to 50 standards per hectare.

The character of coppices changed over the centuries. During the middle ages many were used to harbour deer and pasture domestic animals, once the new growth had grown tall enough to remain unbrowsed, but this practice died out in recent centuries. Species composition also changed. Until the 18th century coppices comprised those species which happened to be there already, but around 1800 many were 'improved' by planting the more useful species, especially coppices in south-east England, many of which were changed from mixtures to monocultures. The third major change has been very recent. Coppicing ceased in most woods at some point in the 20th century and the oaks were cut out during wartime. Most now stand neglected, bereft of their finest growth.

High forest

Very few lowland mixed broadleaved woods were traditionally treated as high forest. However, during the 19th century many woods were densely stocked with oaks which eventually grew into a closed-canopy stands resembling high forest. The underwood was still coppiced for a few decades, but, weakened by heavy shade, it fell early into neglect. A form of high forest also developed when suckering elm clones were allowed to grow up during the present century. Likewise, neglected coppices dominated by lime or hazel developed a quasi-high forest structure.



Pedunculate oak

These guides go on to consider the principles of management for these woodland types and make an excellent source of information. It is tempting to reproduce them all here but space prohibits this! If you do not have access to the internet then copies could be made available on request, they are well worth reading.

Conservation Objectives for the SSSI designated area

The SSSI at Combwell was notified for its ancient woodland with deep stream valleys and the rare/unusual range of plants and insects that are associated with this.

There is a national assessment of all SSSIs and they are graded by Natural England according to their conservation condition. Natural England makes regular assessments of all SSSIs to ensure that they remain in good health. These assessments use conservation features within the SSSI to determine the condition of the site. There are some standard features that are used, which includes the canopy cover, level and amount of understory, amount of open space, levels of deadwood and the presence/ health of the rare species. All these features need to be considered before any management is approved.

At the last assessment, in August 2010, 35% of the area was judged to be 'favourable' and 65% as 'unfavourable recovering'. Details of this assessment can be found on the Natural England website.

Hazards, Constraints, Threats and Opportunities:

Hazards:

Steep and uneven ground:
Two streams flow through the wood in a north/south direction and are found at the bottom of the ghylls. The steep sided nature of the ghyll terrain makes wood management operations and extraction in these areas difficult, especially in wet conditions. They also restrict access to some sections of the woodland. Not managing these inaccessible areas, is often positive for the rare species found within and adjacent to the ghylls. These are often valuable conservation areas in which many rare species can be found and so it may be unfair to describe them as hazards! Both Forestry Commission and Natural England's advice is to adopt a minimum intervention policy within these sensitive areas, which are an important feature of the High Weald AONB. Natural England should always be consulted regarding any proposed work in or adjacent to ghylls as the plants, ferns, mosses and lichens growing in these areas are easily harmed by changes in humidity and light levels.

Power lines:
A power line passes across the woodland from north to south. Any work within this wayleave area is potentially dangerous and the power company should be informed of any obvious danger in this area, such as fallen or leaning trees. Any tree felling within this area should only be undertaken with caution and never within 2 tree lengths of the power lines in the wayleave.

Main water pipe:
A water pipe wayleave which runs through the western part of the wood should attract care if heavy machinery is being used.

Constraints:

Wet ground conditions:
Vehicle access through the wood will be hampered by generally damp soils on the rides and tracks and there is high risk of soil disturbance through repeated use of existing tracks either severe rutting or compaction of the soil. It can also increase the risk of soil erosion and run-off, which can reduce the water quality in the ghyll streams. This may be seasonal and effect the timing of work as some bryophytes rely on the wet/damp tracks in the winter months.

Badgers:
Badger setts in the wood may limit management activity as it is an offence for a person to interfere with a badger sett by disturbing a badger occupying the sett. However latest guidance from Natural England (June 2009) states that in their view badgers are reasonably tolerant of activity around their setts and vegetation removal including felling small trees and shrubs over or adjacent to setts (using hand tools and machinery) would not normally be activities requiring a licence.
Further information on management activities around badger setts is available from the FC practice guide 9, available on the FC website.

Archaeology:
Combwell Wood is a site with a wealth of archaeological features dating from the medieval period (Bannister N, 2010) and disturbance around an archaeological feature should be kept to a minimum and sensitively carried out when necessary. The range of archaeological features discovered to date in the wood is documented in the Core Monument Record and Report by Dr Nicola Bannister, 2010.

Historic features:
It is important to consider ponds, springs, bogs etc as important banks of historical information, held in the deposits laid down over centuries. Disturbance to these sites should also be limited. Stubs, pollards and ancient coppice stools are also important historic features that indicate how the wood was managed in the past and should also be treated with care to ensure these remarkable features are retained

Threats:

Non-native and invasive plants:

Rhododendron ponticum is present in patches throughout the wood, and as a non-native invasive plant species poses a threat to woodland biodiversity. Where possible this species should be removed and grants are available to undertake this important work.

Sycamore, which although has benefits for wildlife (insects, lichen and fungi and dormice – seeds are a useful early food source), seeds readily and comes into leaf early, shading out the natural woodland flora. Natural England do not consider sycamore to be an acceptable naturalised species on the SSSI and so it should be controlled.

Other invasive plants may occur within the woodland, such as Japanese Knotweed and Himalayan Balsam, which may be spread from dumped or imported material. If in doubt about an unidentified plant species then seek advice to ensure that it is not a problem species.

Pests and diseases:

Deer are increasing in numbers in the area and are considered to be a serious threat to the health of woodland. Recent RSPB research has shown that deer in woodlands can have a serious impact on the biodiversity of woodlands and could contribute to the decline in woodland birds. Deer are selective browsers and so can alter the plant species found in a wood. The most obvious signs of deer browsing will be on recent coppice growth and so before any coppice work is done methods to stop deer from eating the coppice re-growth must be considered.

Squirrels are widely spread and can cause considerable damage to trees. They often strip the bark from young trees and cause the death of all or parts of the tree. It is very difficult to control squirrels effectively in woodlands.

Rabbits are common and will cause damage to young trees and protection around young plants will often be essential. Rabbits will also browse off naturally regenerating seedling trees and so can alter the species balance.

Fungal and bacterial infections are common and very diverse. Within the woodland ecosystem these are an essential part of the natural cycles. These will only be considered as a threat to the woodland when the levels of infection are high and damage is considerable. Different trees get affected in different ways, but if in doubt it is always advisable to seek advice. It is better to be cautious than to ignore a problem that becomes a serious infection. There is a considerable amount of information on the impact of the phytophthora fungus on trees and so this may need to be considered.

Unauthorised access and use of the woodland:

There is a public footpath within the woodland and public access is restricted to this route. However, there are numerous occasions when people stray from the path. As woodland owners you are all well aware of the issues related to the liability and the public even in private woodlands. Further information is available through the SWOG website.

Another issue is the unauthorised entry to the wood by 4x4 vehicles and people intent on theft or criminal damage. Any work in the woodland will need to take this unpleasant factor into consideration. Regular inspection of gates, padlocks and other security is required.

Fly tipping and the illegal dumping of waste in and around the access points or gateways, including vegetation which may contain garden escapees is an ever present problem. Some plant species can rapidly spread and shade out native ground flora and so extra vigilance is required to avoid future problems.

There are many issues that you need to contend with when owning a woodland and there will be others that have not been mentioned here, but it is not all doom and gloom as the woodland provides a wealth of wonderful opportunities.

Opportunities:

- Generate an income from timber production; this could be either from coppice or larger trees including oaks.
  (Please consult with FC and NE before felling any trees.)

- Developing local markets for coppice products e.g. chestnut fencing products, hazel hurdles, firewood and charcoal.

- Improve the biodiversity of the woodland through sensitive management.

- Develop your woodland skills and species knowledge

- Discovery, recording and research of archaeological features.

- To maintain and enhance the SSSI designated habitats of broadleaved woodland and bryophyte assemblage in favourable condition

- To protect wildlife species of national and international importance.

- To increase your enjoyment of your woodland

- To conserve and enhance a nationally important landscape and its distinctive components, e.g. ghyll and ancient woodland

- To meet new people and develop a sense of community amongst woodland owners

- Develop stronger links between neighbouring woods so that the management work is sustainable across the woodland.

- Create a wildlife rich network of linking tracks and rides that are structurally diverse and user friendly.

So what do you do next?

This project and plan are intended to provide a starting point to developing a long term management approach to the whole of Combwell Woods. There are no definite answers and no two woods, of indeed parts of woods, are the same, but it is important that the woodland is considered as a whole. With over 30 different woodland owners at Combwell you are not alone in your woodland. We are aware that there are a whole range of aspirations in this diverse ownership, but there does appear to be a unified desire to ensure that the woodland is managed in a sustainable and sensitive way. The conservation of this important woodland has been high on most people's priorities for this woodland.

Doing nothing is not necessarily a sound way to ensure the long term good health of this woodland. So what should you do?

Again, before any work is undertaken you should refer to the attached Operations Likely to Damage list and consult with Natural England and / or the Forestry Commission, who are happy to advise.

There are a range of grants available from the Forestry commission and a few owners have already made use of these to have their own specific management plan written. This is an excellent means of exploring all the options that are relevant to your particular ownership. Both the Forestry Commission and Natural England will be consulted on its content and so you can establish a long term program of work with the peace of mind that it is the best way to conserve your woodland. A well written plan will consider the appropriate work for the long term benefit of the woodland and incorporate your aspirations whilst exploring other options.

If you choose not to pursue a planning grant then at the very least you should read the FC publication 'So, you own a woodland?' to ensure that you are clear about the basics of good management.

With a large number of woodland owners covering well over 150 hectares there are incredible opportunities here. For example, working with your neighbours to undertake coppicing may enable a larger, more sustainable coupe to be cut and be an effective H&S 'buddy' system. Indeed, considering where and when other

people are cutting in the area is important to ensure that work is sustainable and at an appropriate scale. The Forestry Commission can help advise on the appropriate level of felling either as thinning of trees or cutting of coppice. The development of the ride network is a clear example of the benefit of a communal approach to the management.

When you look at the woodland as a whole there is clearly a huge volume of harvestable timber .We are not encouraging woodland owners to start on a program of intensive silvicultural management, which would be inappropriate within the SSSI but there is a fine opportunity to diversify the woodland structure and benefit wildlife through sustainable timber harvesting. At present the market for firewood is very positive and quality fencing is always in demand, so there are opportunities not to be missed.

It is well worth considering not just the potential timber harvest of your woodland but also of your neighbour's woodland. If you do not have a large volume on your own you may have if you join forces with a neighbour. There are some good harvesting companies in the area that can provide estimates of timber value and a sustainable level of harvesting. Where site access and sensitivities are present then you may want to consider the use of horses to extract the timber.

There are a whole range of potential markets that can be explored to help you manage your woodland. In a world where Climate Change is an ever increasing issue, you, as a woodland owner, can make a positive contribution to the environment at so many levels.

In conclusion, there is plenty of work to be done to ensure that all the woodland reaches and then maintains favourable condition status. This should be a pleasurable task to ensure that this responsibility is achieved and indeed that the woodland as a whole becomes greatly enhanced over the coming years.

If in doubt do ask for advice!

If in need of help then ask, because you are not on your own!

Enjoy your woodland, now and in the future.

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Acknowledgements

Janet Whitman. Adviser - Sussex and Weald of Kent Land Management Team. Natural England

Appendix

Combwell Wood Boundaries Map

Combwell Wood Main Tracks and Entrance Points map

Combwell Aerial Image (2003)

Combwell Wood NVC Survey Data Map

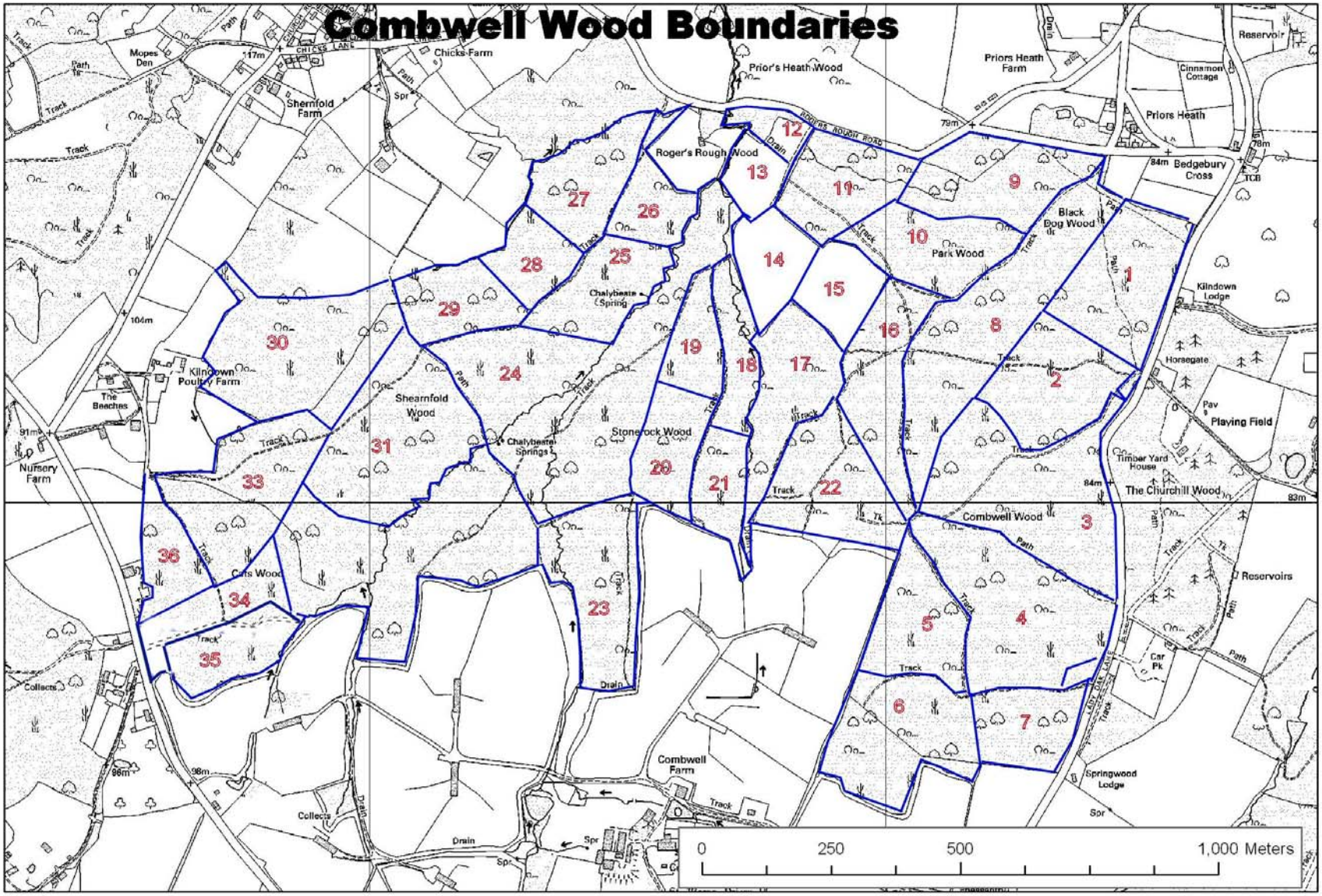
National Vegetation Classification – Combwell Wood Communities

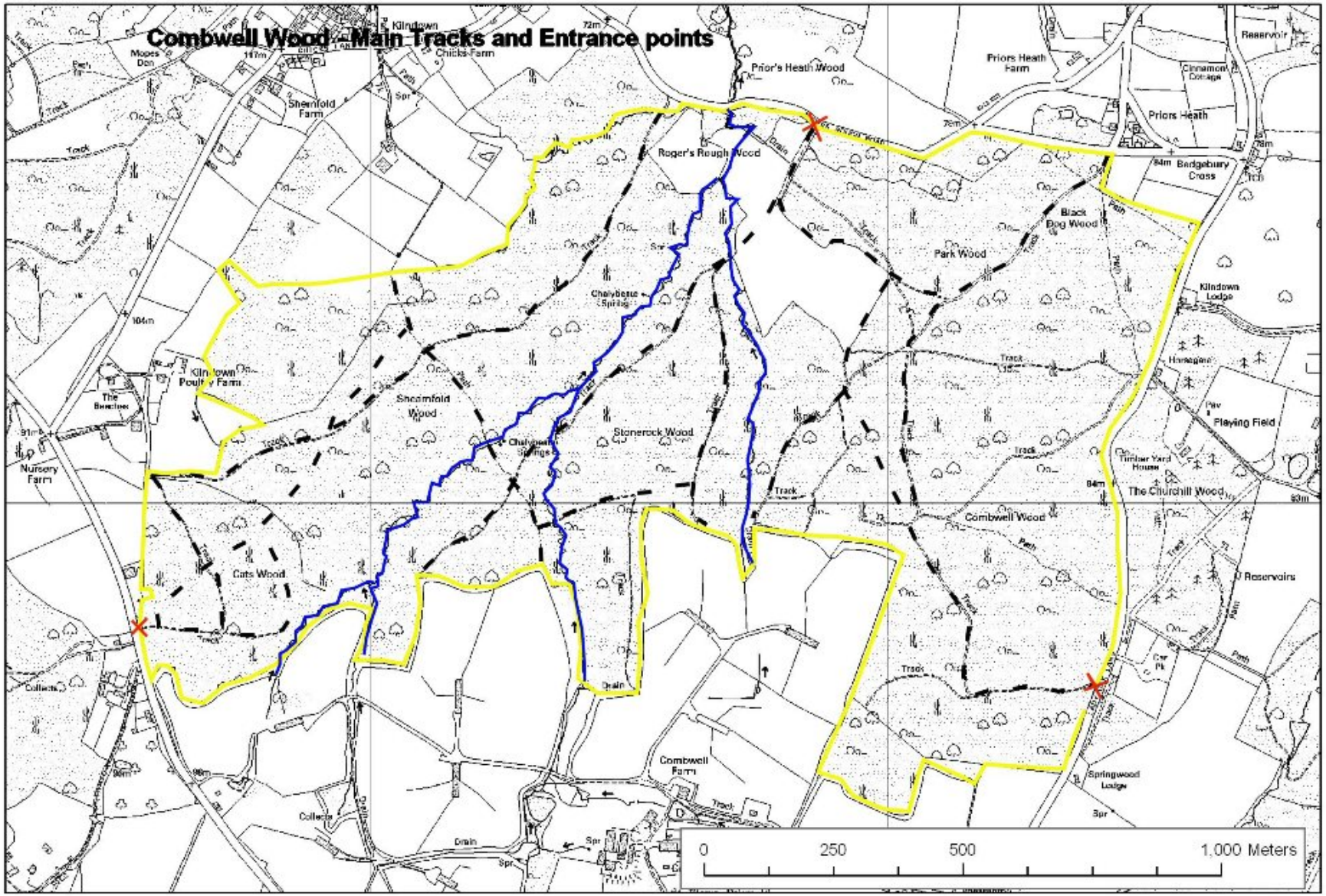
Combwell Wood SSSI Citation

Combwell Wood list of Operations likely to Damage

Views About Management (English Nature 2003)

Safeguarding European Protected Species

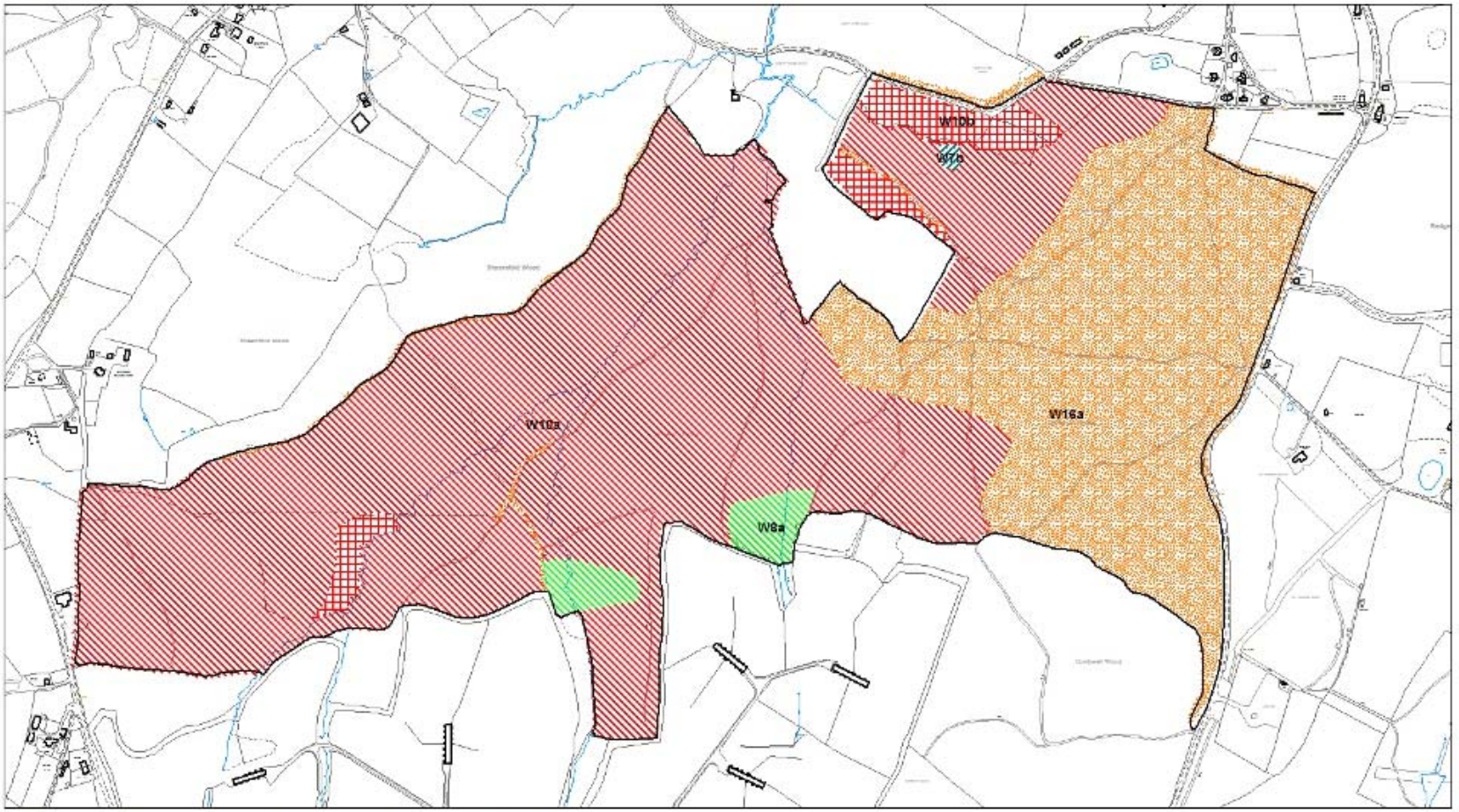

Combwell Wood Boundaries
Chicks Farm
Prior's Heath Wood
Priors Heath Farm
Priors Heath
Bedgebury Cross
Roger's Rough Wood
Black Dog Wood
Park Wood
Kilndown Lodge
Horsegate
Playing Field
Timber Yard House
The Churchill Wood
Combwell Wood
Reservoirs
Springwood Lodge
Combwell Farm
Shearnfold Farm
Shearnfold Wood
Kilndown Poultry Farm
The Beeches
Nursery Farm
Chalybeate Springs
Stonerock Wood
Cats Wood
Collects
Drain
0
250
500
1,000 Meters


Combwell Wood - Main Tracks and Entrance points
Kilndown
Mopes Den
Chicks Farm
Shemfold Farm
Prior's Heath Wood
Priors Heath Farm
Reservoir
Cinnamon Cottage
Priors Heath
Badgebury Cross
Roger's Rough Wood
Black Dog Wood
Park Wood
Chalybeate Springs
Kilndown Lodge
Kilndown Poultry Farm
The Beeches
Shoemfold Wood
Stonerock Wood
Horsepine
Playing Field
Nursery Farm
Timber Yard House
The Churchill Wood
Combwell Wood
Cats Wood
Reservoirs
Combwell Farm
Springwood Lodge
0
250
500
1,000 Meters

Aerial Image Map 2003

Combwell Wood

NVC survey data



Scale 1:7500 Map 1 of 1

Drawn by: Lorraine Smith
Date: 4/6/2009
Ref: lq/0663416
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Grid North

Natural England
International House
Dover Place
Ashford
Kent
TN23 1HU

National Vegetation Classification – Combwell Wood Communities

Classification	Communities	Sub-Community	Description
W7b	Alder- Ash – Yellow Pimpernel	Remote sedge, marsh thistle	Vegetation associated with springs or seepage lines. Alder dominant with frequent ash and birch; bryophytes important.
W8a	Ash – Field Maple – Dog's Mercury	Primrose, Ground-ivy	Common in woods managed as coppice with standards. Oak is the most common woody species, hazel the most frequent shrub. Ground flora dominated by Dog's mercury and bluebell is more frequent on damper soils.
W10a	Pedunculate oak – Bracken - Bramble	Hazel, hawthorn, holly, bluebells.	Oak and birch dominated woods although oak can be excluded by chestnut coppice. Most common shrub is hazel with bluebell dominant in spring followed by bramble, bracken, and honeysuckle.
W10b	Pedunculate oak – Bracken - Bramble	Wood anemone	Pedunculate oak usually dominant with some birch and hazel understory. Sweet chestnut abundant. Carpet of wood anemone is the most distinctive feature in spring.
W16a	Oak spp. – Birch spp. – Wavy Hair-grass	Pedunculate oak, Wavy hair-grass, bracken.	Pedunculate oak typical on poor acidic soils. Birch prominent in secondary woodland. Shrub layer and field layer poor with wavy hair-grass and bracken most abundant species with some heathers present in open areas

COUNTY: KENT SITE NAME: COMBWELL WOOD

BOROUGH: TUNBRIDGE WELLS

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981

Local Planning Authority: TUNBRIDGE WELLS BOROUGH COUNCIL

National Grid Reference: TQ 706 342 Area: 110.82 (ha.) 173.73 (ac.)

Ordnance Survey Sheet 1:50,000: 188 1:10,000: TQ 73 SW, TQ 63 SE

Date Notified (Under 1949 Act): 1968 Date of Last Revision: 1981

Date Notified (Under 1981 Act): 1991 Date of Last Revision: Ð

Other Information:

Description and Reasons for Notification:

Combwell Wood is an ancient wood on Tunbridge Wells Sandstone, with deepstream valleys (gills) in which peat has accumulated. The wood has a large number of plants that are typical of south-eastern ancient woodlands, these being particularly associated with the gills and the open rides. The former contain several uncommon “Atlantic” bryophytes (mosses and liverworts) as well as two nationally scarce** water beetles (Coleoptera).

Much of the site has traditionally been managed as coppice, but undisturbed woodland cover has probably persisted continuously along the steep sided gills maintaining the moist mild climate suitable for the “Atlantic” bryophytes. These are thought to be survivors from the Atlantic climatic period of Western Europe, about 5000 years ago.

The coppiced woods contain much sweet chestnut *Castanea sativa* with both silver and hairy birch *Betula pendula* and *B. pubescens*, and scattered oak *Quercus robur* standards. The ground flora contains much bramble *Rubus fruticosus* and bracken *Pteridium aquilinum*, but it is on the rides and open glades that particularly diverse plant communities occur. Here heather *Calluna vulgaris* is abundant, with several species that are scarce in Kent* such as saw-wort *Serratula tinctoria*, allseed *Radiola linoides*, lesser centaury *Centaurium pulchellum* and the nationally rare*** moss *Atrichum angustutum*.

The epiphytic lichen flora is also very rich, with a range of species characteristic of ancient woodland, such as *Thelotrama lepachinum* and the nationally scarce *Cyphelium sessile*.

In the gills, and other wet flushes alder *Alnus glutinosa* is frequent, over lady fern *Athyrium filix femina*, opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium* and the bog-moss *Sphagnum palustre*. The moist mild microclimate

of the gills is suitable for several “Atlantic” bryophytes that are most frequently found in Western Britain, and are rare in the South-east of England, such as the mosses *Hookeria lucens* and *Hyocomium armoricum*. In the flushes and shaded woodland pools there are two nationally scarce species of water beetles, *Agabus chalconatus* and *Hydroporus neglectus*, as well as several others that are local in distribution.

*****Scarce in Kent: recorded from between 1 and 5% of the 2 km 3 2 km tetrads in Kent.
******Nationally scarce: recorded from between 16 and 100 10 km squares in Britain.
***Nationally rare: recorded from 15 or less 10 km squares in Britain.

Operations likely to damage the special interest

Site name: Combwell Wood, Kent

OLD1003507

Ref. No.	Type of Operation
2	Grazing.
3	Stock feeding.
4	Mowing or other methods of cutting vegetation.
5	Application of manure, fertilisers and lime.
6	Application of pesticides, including herbicides (weedkillers).
7	Dumping, spreading or discharge of any materials.
8	Burning.
9	The release into the site of any wild, feral or domestic animal*, plant or seed.
10	The killing or removal of any wild animal*, including pest control.
11	The destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf.
12	Tree or woodland management+.
13a	Drainage (including the use of mole, tile, tunnel or other artificial drains).
13b	Modification of the structure of watercourses (eg streams, springs and ditches), including their banks and beds, as by re-alignment, re-grading and dredging.
13c	Management of bank vegetation for drainage purposes.
14	The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
15	Infilling of ditches, dykes, drains, ponds, pools, marshes or pits.
16a	The introduction of freshwater fishery production and/or management, including sporting fishing and angling.
20	Extraction of minerals, including peat, topsoil, subsoil, and spoil.
21	Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground.
23	Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
26	Use of vehicles or craft likely to damage or disturb features of interest.
27	Recreational or other activities likely to damage or disturb features of interest.
28	Game and waterfowl management and hunting practices.

* ‘animal’ includes any mammal, reptile, amphibian, bird, fish or invertebrate.
+ including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management.

ENGLISH NATURE

Views About Management

A statement of English Nature's views about the management of Combwell Wood Site of Special Scientific Interest (SSSI).

This statement represents English Nature's views about the management of the SSSI for nature conservation. This statement sets out, in principle, our views on how the site's special conservation interest can be conserved and enhanced. English Nature has a duty to notify the owners and occupiers of SSSI of its views about the management of the land.

Not all of the management principles will be equally appropriate to all parts of the SSSI. Also, there may be other management activities, additional to our current views, which can be beneficial to the conservation and enhancement of the features of interest.

The management views set out below do not constitute consent for any operation. English Nature's written consent is still required before carrying out any operation likely to damage the features of special interest (see your SSSI notification papers for a list of these operations). English Nature welcomes consultation with owners, occupiers and users of the SSSI to ensure that the management of this site conserves and enhances the features of interest, and to ensure that all necessary prior consents are obtained.

Management Principles

There may be several different ways in which the wood can be managed to best conserve its value for wildlife - by promoting an appropriate woodland structure, by ensuring regeneration and by looking after the things that make this wood special. The attached notes give broad views on a range of regimes that may be appropriate on your site.

A diverse woodland structure with some open space, some areas of dense understorey, and an overstorey of more mature trees (which may be the standard trees under a coppice-with-standards regime) is important. A range of ages and species within and between stands is desirable.

Some dead and decaying wood such as fallen logs, old hollow trees or old coppice stools is essential for providing habitats for fungi and dead wood invertebrates. Work may, however, be needed to make safe dangerous trees where they occur in areas of high public access.

Open spaces, either temporary gaps created by felling or coppicing or more permanent areas such as rides and glades, benefit other groups of invertebrates such as butterflies. They should be of sufficient size to ensure that sunny conditions prevail for most of the day. Rides and glades may require cutting to keep them open.

Felling, thinning or coppicing may be used to create or maintain variations in the structure of the wood, and non-native trees and shrubs can be removed at this time. To avoid disturbance to breeding birds the work is normally best done between the beginning of August and the end of February. Work should be avoided when the ground is soft, to prevent disturbing the soil and ground flora. The wet woodland along the streams should be left undisturbed. Normally, successive felling, thinning or coppicing operations should be spread through the wood to avoid too much disturbance in one area. However, where there is open space interest (e.g. rich butterfly populations) adjacent plots may be worked to encourage the spread of species that are only weakly mobile.

Natural regeneration from seed or stump regrowth (as in coppice) is preferred to planting because it helps maintain the local patterns of species and the inherent genetic character of the site.

Deer management and protection from rabbits or livestock are often necessary. Whilst light or intermittent grazing may increase woodland diversity, heavy browsing can damage the ground flora and prevent successful regeneration.

Parts of the wood should be left unmanaged to benefit species that do best under low disturbance. In addition, lack of management allows for the operation of natural processes such as windblow. Within these areas some trees will eventually die naturally and dead wood accumulate.

Where they are a threat to the interest of the wood, invasive introductions such as *Rhododendron ponticum* or Himalayan balsam should, where practical, be controlled.

Safeguarding European Protected Species

A number of changes have been made to Habitats Regulations that increase the legal protection given to protected species wherever they are found in England. Several of the species covered by the Regulations are found in woodland, and it therefore has implications for how woodlands are managed and forestry operations carried out.

The Forestry Commission in England has been developing the means of implementing these changes and embedding them within the forestry sector. We are committed to increasing the sustainable management of England's woodlands, not least for the biodiversity protected by the Habitats Regulations. As such we have worked with partners to ensure that this amendment is as far as possible drawn into best practice guidance for sustainable forestry, rather than being an additional regulatory measure.

Where the changes will impact

The amended Regulations require changes to the management of woodlands and forestry operations in areas where protected species are found. The species that can occur in England's woodland are:

- all 17 species of bat
- dormouse
- great crested newt
- otter
- sand lizard
- smooth snake

Guidance for each of these species is provided below.

(The natterjack toad and some of the plant species, such as yellow marsh saxifrage, may rarely occur in woodlands or be affected by forest operations.)

What the amendments to the Habitats Regulations mean for woodland managers

Since 1994 it has been an offence, under these Regulations, to deliberately kill or cause significant disturbance to a protected species, or to deliberately destroy their eggs. It has also been an offence to ‘damage or destroy a breeding site or resting place’ used by them (such as a bat roost in a tree or a dormouse nest on the woodland floor).

However, the level of protection has been increased to ensure it complies with the EU Habitats Directive, as set out to the UK Government following a judgement in the European Court of Justice (ECJ). This judgement set the UK Government a tight deadline for incorporating the ECJ ruling into law.

The amended Regulations include as an offence any damage or destruction of a breeding site or resting place. Previously if damage was ‘an incidental result of a lawful operation' and reasonable precautions had been taken to avoid it, it would not have been an offence. Therefore there is a

risk of woodland operators committing an offence if they have not carried out planned operations carefully, with the necessary checks and sought a license where required.

Woodland managers need to consider the presence of protected species and follow good practice guidance to avoid committing an offence. In some cases management practices may need to be modified or rescheduled to a less sensitive time of year, and where this is not possible or adequate then operators may need to apply for a licence to remain within the law. Most activities will be able to continue without the need for a licence through the following of good practice guidance.

The Forestry Commission - nationally through this resource and locally through our network of regional offices - will be able to provide support in relation to the changes and the guidance provided where protected species are present, and will process any applications for licences to carry out work where they are needed. The licences will be issued by Natural England's National Licensing Unit.

What woodland managers need to do to comply with the Habitats Regulations

A series of tools have been developed to help support and advise woodland owners and managers on how to manage woodland where there are protected species present. This guidance is in compliance with sustainable forestry management practices and the Habitats Regulations.

Specific guidance by species

These set out how to find out if EPS are present in your wood and how to operate if they are.

Please note that these documents are interim only and will be finalised in the next few weeks.

- all 17 species of bat (PDF 92 kb)
- dormouse (PDF 95 kb)
- great crested newt (PDF 139 kb)
- otter (PDF 67 kb)
- sand lizard and smooth snake (PDF 79 kb)

A checklist (draft) (PDF 104 kb) has been developed to guide woodland owners and managers through the decision-making process.

Licence information

This sets out application procedures and includes the licence application form.

This suite of guidance has been produced in liaison with Defra and Natural England, representatives of the forestry sector and other expert conservation bodies and individuals.

Two alternative versions of the application form are available: an electronic version and a manual version. We encourage electronic applications wherever possible.

- Electronic licensing form (RTF 61 kb) - updated May 2008
- Manual licensing form (PDF 31 kb) - updated May 2008
- Licensing form guidance notes (PDF 34 kb) - updated May 2008
- Licensing process flow chart (PDF 22 kb)

General guidance

This sets out the changes to the Regulations.

- Background to the 2007 amendments (PDF 152 kb)
- Forestry questions and answers (PDF 55 kb)
- Defra Habitats Regulation questions and answers (External link)

Advice and Demonstration

The Forestry Commission recently organised a series of regional seminars for the woodland sector, which took place from November 2007 to January 2008. The presentations that were delivered at these events are available below.

1. Implementing the Habitats Regulations (PDF 3 Mb)
2. Good Practice (PDF 3 Mb)
3. Licensing (PDF 700 kb)
4. Case Study (PDF 13 Mb)

Advice on protected species management can also be obtained from FC regional offices or e-mail: england-protectedspecies@forestry.gsi.gov.uk