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Woodland Management Plan

(Southern Woodland)

Cophall Wood, Polegate, East Sussex, BN26 6RE

On behalf of

Biossence Polegate Limited

Undertaken by

Nicholas D Jones *NCH Arb. A I Hort. Tech Arbor A.*

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Contents

Section 1

Introduction

1.1 Formal details – My name is Nicholas Jones I am the principal arboricultural consultant for R W Green Limited based at The Lister Building, Upper Stoneham Farm, Lewes, East Sussex, BN8 5RH. I have 20 years experience in the arboricultural industry with the past 8 years acting as a consultant; I am a Lantra accredited Professional Tree Inspector giving advice to clients on a wide range of arboricultural and silvicultural issues.

1.2 This woodland management plan has been commissioned by Biossence Polegate Limited in order to advise on the management of the wooded area adjacent to the proposed location of a Combined Heat and Power Plant and existing waste transfer station.

1.3 This version of the Woodland Management Plan supersedes the previous plan submitted to East Sussex County Council on 13.04.2010. The management of the woodland to the north of the adjoining transfer station is now covered in a separate Woodland Management Plan

1.4 The information contained in this plan is based on data collated during an initial assessment of the site on 3rd November 2009 and a follow up survey to an extended area on 31st March 2010. It describes the woodland and the operations planned to fulfil the management objectives.

1.5 The plan sets out the long term aims and objectives for the woodland while prescribing management operations for the 20 year period 2010-2030.

1.6 The extent of the surveyed area for this management plan is indicated on Drg No. RG-NDJ-BPL 005 **Appendix 3.**

1.7 The woodland compartment areas are indicated on Drg No. RG-NDJ-BPL 006 **Appendix 3.**

Section 2

Description

2.1 Area – (as indicated on Drg No. RG-NDJ-BPL 005) 4.9 Hectares approximately

2.2 Grid reference – TQ 576 066 (Centre of the woodland)

2.3 National Vegetation Classification – W10 (JNCC 2004)

> *"Oak is the most common tree (usually pedunculate in England, but hybrids predominate in Wales), and silver birch is abundant, especially in younger stands. Ash tends to be rare in south-eastern stands, but can be more frequent, with sycamore and sometimes wych elm, in the north-west. Small-leaved lime, hornbeam and sweet chestnut are locally prominent. Other species, present at low frequencies, include holly, beech, wild cherry, wild service and crab apple with alder and aspen on damper soils. Some stands are dominated by planted conifers, but there is often enough of a field layer to classify the type. Hazel is the most abundant shrub, often with hawthorn."*

2.4 Altitude limits - 25-35 metres above sea level

2.5 Soil – Slowly permeable seasonably wet, slightly acid but base-rich loamy and clayey soil.

2.6 Status – Ancient Semi-Natural Woodland

Section 3

Site Context

3.1 Cophall wood is bordered to the east by the A22. Immediately adjacent to the west is Nate Wood an area of replanted ancient woodland, with Ogg's wood to the south. Nate Wood is under the management of the Forestry Commission and has recently been extensively cleared.

3.2 The woodland can be described as a coppice with standards and consists of isolated mature Pedunculate Oak (*Quercus robur*) with an understory of coppiced Hornbeam (*Carpinus betulus*), interspersed with Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*) and Hawthorn (*Crataegus monogyna*). Further isolated species of Ash (*Fraxinus excelsior*), Field Maple (*Acer campestre*) Wild Cherry (*Prunus avium*) and Silver Birch (*Betula pendula*) are also present.

3.3 Records indicate the last coppicing being undertaken between 1927 and 1935.

3.6 The woodland throughout the area also contains a diverse range of wildlife; most significantly Bats and Dormice are recorded in the local area (NBN Gateway).

3.7 The retention of standing dead wood and Ivy clad trees is essential to maintain bat roost potential in the woodland an example tree is given in Plate 1 **Appendix 2**.

3.8 The presence of Bramble and Hazel are preferred habitats and food sources for Dormice and the retention of these species is of key importance.

Section 4

Management Aim

4.1 To perpetuate the Woodland and associated habitat while encouraging any dependent wildlife.

4.2 To ensure the management of the woodland is in accordance with the long term management goals of the Forestry Commissions Forest Design Plan for Wilmington Forest. An extract from the Forest Design Plan is included in **Appendix 1** with the compliant sections highlighted in yellow.

Section 5

Management Objectives

5.1 To ensure the woodland boundaries are secure and to prevent unauthorised access.

5.2 To ensure so far as is reasonably practicable that trees adjacent to the woodland boundaries are in a safe condition and do not present an unacceptable risk to users of the adjacent public footpath and highway on the eastern boundary.

5.3 To ensure so far as is reasonably practicable that trees within falling distance of the internal rides and footpaths are in a safe condition with structurally significant decay managed appropriately and subject to regular inspections.

5.4 To ensure a diversity of habitats throughout the woodland by retaining where both practicable and safe standing and fallen dead wood.

5.5 To ensure continuity of existing habitats through the proactive management of invasive species.

5.6 To improve the availability and quality of invertebrate habitat. The woodland edge and open habitat of the area provide a high value habitat for invertebrates with egg laying, basking and foraging resources. With some simple measures the value of the site for invertebrates could be both maintained and enhanced further. The retention of trees and shrubs with a known value to invertebrates, and the retention of fallen and standing dead wood will help to maintain invertebrate habitat. Clearing out vegetation from the remnant ditch will open up a new area of bare ground with a southern aspect.

5.7 To provide additional opportunities for roosting bats. To enhance roosting opportunities for bats in nearby trees. A regular check of all new bat boxes will assess their use and the suitability of their placement. All positive records for roosting bats to be passed to the SxBRC. Any bat boxes that are unused by bats after five years to be re-sited by a licensed bat worker to alternative locations. 20no boxes will be placed in woodland/woodland edge around the clearing.

5.8 To provide additional opportunities for nesting birds. 15no nest boxes will be placed in around the woodland edge adjacent to eh clearing. A regular check of all bird boxes will assess their use and allow an opportunity for them to be cleared out. The precise placement of the boxes is to be decided on site.

Section 6

Constraints

6.1 There are no way leaves across the woodland however a public footpath attached to the A22 is immediately adjacent to the eastern boundary.

6.2 The woodland is designated as Semi natural ancient woodland and any management activity prescribed must enhance this designation.

Section 7

Prescriptions

7.1 Prescribed works and recommended timescales for the twenty year period of 2010-2030 are included in table 3 below. The ten year period to 2020 is given as individual years with the ten year period 2020-2030 grouped into five year blocks.

7.3 Within all compartment areas there is repeated presence of Butterfly Bush (*Buddleia davidii)* which is an invasive non-native shrub (Plates 2&3 **Appendix 2**). This must be removed and the cut stumps treated with an appropriate herbicide to prevent re-growth and self seeding. The arisings from the removal of invasive species must be cleared from site or processed through a brushwood chipper.

7.4 A deep layer of woodchippings has been layed on the ride running through the clearing. Such a dense layer of chippings within this area could potentially have a detrimental effect on the ground flora associated with the woodland clearing habitat. As a result the woodchip will be removed and the ground cover allowed to regenerate naturally with invasive species such as *Buddleia davidii* managed accordingly.

7.5 Trees within falling distance of the internal footpaths and rides in all areas will be assessed annually and any necessary remedial work undertaken managing the risk associated with dead or dying trees.

7.6 It is essential that any remedial pruning is undertaken with due regard to wildlife. Dead and decaying wood is a valuable ecological resource and where deemed safe its retention must be assured. In some instances it may be prudent to adopt natural fracture techniques and coronet pruning to manage risk while maintaining naturally occurring features within trees.

7.7 All arisings from the remedial pruning or removal of woodland trees should be stacked in habitat piles to form hibernacula.

7.8 Where practicable dead/decaying trunks and stems should be left standing or retained on the ground in as long a length as is possible.

7.9 To enhance roosting opportunities for bats a selection of woodcrete bat boxes will be erected in mature trees around the clearing, concentrated in those areas where the trees are grouped together rather than in isolated trees. Boxes may have a greater chance of uptake if hung up in groups of three to five close together. These should be hung at heights of between 3 and 6m in areas that allow for a clear flight path to the box. A total of 20 new bat boxes will be used to enhance the clearing for bats. Details of box types and numbers are given in Table 1 below:

Type	**Number**
1Fw Hibernation box	1
1FD nursery boxes suitable for smaller bat species	5
2F boxes suitable for smaller bat species (Pipistrelles etc)	5
2FN boxes suitable for larger species of bats (Noctules etc)	5
2F DFP boxes general purpose box	4

Table 1

7.10 The woodland already provides a resource and habitat for variety of nesting birds. However, there are only limited opportunities for hole nesting birds such as wren (*Troglodytes troglodytes)* and tits (*Cyanistes/ Parus spp).* The provision of a variety of nest boxes would enhance the woodland for birds. Bird boxes targeting the smaller woodland birds would be fixed onto trees along the woodland edge surrounding the clearing and within the woodland itself. A total of 15 boxes of different designs should be employed (e.g. different sized entrances and protection from predators, etc.) to maximise the number of species that use them. Boxes should be erected at a minimum height of

2m, on suitable trees across the site away from potential predation or disturbance. The detail of box types and numbers are given in Table 2 below:

Type	Number
3SV Nuthatch box	3
Nest box with 32mm entrance hole	3
Nest box with 26mm entrance hole	3
Nest box 2GR, with predator protection	3
Deep nest box 1N	3

Table 2

7.11 Create brash bundles after the scrub clearance in the first year.

7.12 Install Bat Boxes in the first year, with annual checks of boxes and a five year assessment of usage.

7.13 Install Bird Boxes in the first year, with follow up annual checks of boxes.

Table 3 - Cophall Wood 20 year Management Plan 2010-2030

Prescription	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2025	2025-2030
Litter pick all areas of the woodland and remove all foreign objects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Check boundary fencing and maintain/repair as required	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Removal of invasive *Buddleia davidii*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Removal of woodchippings from the ride within the clearing	✓											
Undertake a visual inspection of trees overhanging/adjacent to the internal footpath and rides and the woodland boundaries	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Undertake remedial works identified during inspections	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clear the vegetation from the ditch and bundle in to brash piles	✓											
Installation of 20no. Bat Boxes	✓											
Annual check of bat boxes (August-September)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Assessment of Bat Box use and reloaction (if applicable)					✓					✓	✓	✓
Installation of 15no. Bird Boxes	✓											
Annual check of Bird Boxes (August-September)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓= Action required

Section 8

Conclusions

8.1 The woodland subject of this report is an excellent ecological resource.

8.2 Subject to planning permission being granted for planning application number WD/621/CM the commitment of Biossence Polegate Limited to proactively manage the woodland and enhance the range of habitats it contains is to be commended.

8.3 This management plan provides recommendations for the next 20 years to 2030. The plan should be reviewed annually and amended as necessary to account for changes in circumstances or management objectives.

8.4 The management plan combines with the Forestry Commissions Forest Design Plan for the adjacent Wilmington Wood and enables continuity of established natural woodland habitat in the area whilst the clear felled areas under Forestry Commission management are regenerated. In addition the management of Cophall Wood consolidates the aims and objectives of the Forest Design Plan as indicated in **Appendix 1**.

8.5 Biossence Polegate Limited will commission a suitably qualified and competent independent consultant to undertake an annual assessment of the woodland detailing the extent of works undertaken in the previous 12 months and amending the woodland management plan as required taking into account any changes in management aims. This annual assessment will be submitted to East Sussex County Council prior to adoption and implementation.

Appendix one

Supporting Information

(Extract from Forestry Commissions – A Forest Design Plan Willmington Forest – Including Abbot's Wood)

4. ANALYSIS AND APPRAISAL

4.1 Objectives and Indicators

The table of objectives (Table 1) identifies the objectives of this plan and the targets that the Forestry Commission will use to determine whether or not the objectives have been met. These are taken from the forestry commission's overall objectives, our aims given in the introduction and in response to the issues raised in the Brief.

Resource	Objective	Indicators of objective being met
Biological diversity	• To increase diversity of habitats. • To maintain or enhance the quality of existing habitat. • To restore PAWS areas to native woodland.	• Species diversity is maintained or increased within the woodland. • The range of age classes present among tree species is increased. • Veteran oak trees are retained for deadwood and 'old growth' features. • Small groups of mature conifer are retained to provide nesting sites for raptor species. • Ride-side vegetation is managed to benefit *Lepidoptera* and invertebrates. • Coppice areas are managed on a rotation to benefit *Lepidoptera* and scrub nesting birds. • Heathland vegetation is encouraged on Milton Hide and along roads and ride-sides. • The percentage of native woodland is increased. • Norway spruce nurse crops are removed from areas of oak.
Archaeology	• To protect Unscheduled Ancient Monuments.	• Unscheduled Ancient Monuments are managed according to good forestry practice as detailed in the Forestry Commission Guidelines 'Forests & Archaeology', with site specific work identified in the Site Assessment.
Recreation	• To maintain public rights of way in an open, useable state.	• Public rights of way can be followed without obstruction. • Way-marked walks are maintained under the Forest

	• To encourage users to enjoy the woodland. • To encourage sensitive use of the woodland.	District's Facility Inspection System. • Areas of permanent open space are increased around the picnic area and way-marked trail leading to Wilmington Lake to maintain an open feel for visitors. • Communication is maintained with the local community. • A permission system is operated for horse riding. • Outdoor recreation is promoted and managed with water quality in mind (reference: the Forestry Commission Guidelines 'Forests & Water).
Landscape	• To improve internal landscape.	• Coupes are designed for visual interest when viewed from paths and rides. • Tree species are suited to the site and character of the surrounding landscape. • PAWS areas are restored to native woodland. • Norway spruce nurse crops are removed from areas of oak. • Age class diversity increases. • Mature trees are retained. • Areas of conifer are retained for diversity and amenity value. • The proportion of open space is kept in scale with the woodland. • Heathland vegetation on Milton Hide is encouraged and linked with similar vegetation along ride-sides.
Timber	• To maintain an even flow of timber. • To improve timber quality.	• The forest is thinned on a cycle. • Restocking of broadleaf areas makes use of natural regeneration whilst maintaining continuous tree cover. • Norway spruce nurse crops are removed from areas of oak. • Quality conifer and broadleaf stems are favoured in thinning. • Native species are favoured in thinning.

4.2 Constraints and Opportunities

Factors within the forest that affect the achievement of the plan's objectives are identified on the Constraints and Opportunities Analysis (map) and in Table 2.

Factor	Constraint	Opportunity
Forest age structure	• Approximately 50% of the existing crops were planted within the first five years of acquisition, resulting in relatively even-aged woodland.	• Retain areas of mature conifer and scattered individual mature conifer to benefit raptors. • Retain veteran broadleaves to enhance visual appeal of the woodland and provide 'old growth' and deadwood habitat. • Design felling coupes for visual interest when viewed from paths and rides. • Favour tree species that are suited to the site and character of the surrounding landscape.
Ancient woodland sites	• Approximately 60% of the forest area has been planted with conifer species.	• Remove conifer species from areas with >40% broadleaf cover. • Manage ASNW and PAWS areas using Alternative to Clearfell (ATC) systems that make use of natural regeneration of existing native species. • Favour native species in thinning.
Tree health	• Pure Norway spruce crops suffer from *Dendroctonus micans* (Great Spruce Bark Beetle) infestations.	• Norway spruce will be removed as part of the PAWS restoration programme.
Soils	• Poorly drained Weald Clay limits conifer growth. • Poorly drained soils limit forest operations and public enjoyment of the forest.	• Favour broadleaves on poorly drained soils and ancient woodland sites. • PAWS restoration will tend to reduce the number of forest operations requiring heavy harvesting machinery (i.e. thinning operations will be carried out on a longer cycle than those used for the management of conifer crops). • Carry out forest operations during dry weather to minimise ground damage.

		• Maintain permanent open space and remove vegetation that over-hangs rides, way-marked walks and picnic areas to allow light to reach the ground and dry out the soil.
Open space	• The limited proportion of permanent open space within the woodland restricts biological diversity (including local BAP species). • Scrub vegetation has encroached onto Milton Hide since grazing ceased, although grazing rights still remain in place.	• Create areas of permanent open space along ride-sides. • Manage road and ride-sides for amenity and conservation value, linking them to larger areas of open space. • Remove a proportion of scrub vegetation from Milton Hide and manage to provide a range of habitats.
Public access	• High recreational use, particularly in the tourist season. • Forest operations restrict public access.	• Maximise opportunities for recreation by maintaining way-marked walks and public rights of way. • Operate a permission system for horse riding and special use of the woodland. • Promote good forestry practice and ensure communication with the public during forestry operations.
Byway Open to All Traffic (BOAT)	• Motorbikes stray from BOAT.	• Actively discourage access within the forest. Install physical barriers at main access points, which will be designed to discourage bikes but allow horse and pedestrian access.
Archaeological sites	• Ancient monuments are sensitive to disturbance and may be damaged by the use of heavy machinery.	• Consult English Heritage and County Archaeologist when planning forest operations.
External viewpoints	• Woodland boundary visible from surrounding roads.	• Design thinning and felling coupes with external appearance of the woodland in mind.

Appendix two

Photographs

Plate 1

Plate 2

Plate 3

Appendix three

Site Drawings

Drg No. RG-NDJ-BPL 005 Extent of Surveyed Area (Green Line**)**

N D Jones Cophall Wood (Southern)

Drg No. RG-NDJ-BPL 006 Woodland Compartment Areas

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Cophall Wood (Southern)