Forestry Commission England

Bourne Wood and Crooksbury Common Forest Plan

South England Forest District

Forestry Commission England

Woodlands Included Within This Forest Plan:

Bourne Wood

Crooksbury Common

Date of Commencement of Plan: **2016**

Approval Period: **2016 to 2026 (10 Years)**

A separate Felling License provides approval for standard silvicultural thinning across the South Forest District estate as a whole.

FOREST ENTERPRISE ***Application for Forest Plan Approvals***

Forest District: ***South England Forest District***

FC Geographic Block No: ***88***

Forest Plan Name: ***Bourne Wood & Crooksbury Common***

FE Plan Reference Number: ***304/88/16-17***

Nearest town or village: ***Farnham***

OS Grid Reference: ***Bourne Wood - SU85564435***
Crooksbury Common - SU88934533

Local Authority: ***Surrey County Council & Waverly Borough Council***

I apply for Forest Plan approval for the property described above and in the enclosed Forest Plan.

I undertake to obtain any permissions necessary for the implementation of the approved Plan.

Signed:

Bruce Rothnie, Deputy Surveyor, South England FD

Date: 8/11/16.

Approved: .....

for ***Forest Services Area Director***

Date: 8/11/16.

Summary of Activity within Approval Period:

Forestry Activity	Habitat Type (ha)			
	Conifer high forest	Broadleaf natural regeneration or replanting	Mixed natural regeneration or replanting	Open
Clearfell 2017—2021	5		5	
Clearfell 2022—2026	0.7			0.7
Clearfell 2027—2031	4.8		4.8	
Clearfell 2037-2041	3.6			3.6
Clearfell Beyond 2046	8.3		8.3	
Permanent Open Space				24.8
Long Term Retention	24.7			
Silvicultural thinning	32.1			
Mixed Woodland CCF Felling	1.2			
TOTAL MAPPED AREA	105.2			

Forestry Commission England

Forest Planning

Forest Plans define the long term vision for a woodland or a collection of woodlands, usually looking 50 to 100 years ahead. It sets objectives and illustrates how management will move towards achieving this vision over the initial 10 to 30 years.

This plan represents the first major review of the Bournewood and Crooksbury forest plan that was originally consulted upon and approved in 2002. The revised Forest Plan was prepared following a review of the original plan undertaken by FC staff and in consultation with stakeholders. It incorporates developments in policy and local initiatives that have occurred in the intervening years.

Objectives for Bourne Wood and Crooksbury Common

- Take opportunities to increase the nature conservation value of existing habitats.
- Maintain and increase the species and age diversity of the woodland to improve long term resilience.
- Provide a regular supply of quality timber to support local employment and local timber processing industries.
- Provide, maintain and enhance the recreational capacity of the woodland where possible.

Consultation and Approval Process

At key points throughout the forest planning process, we seek the views of external stakeholders including local communities and organisations involved with nature conservation, public recreation and the timber industry. Through this consultation process we can ensure that an appropriate balance of objectives is achieved. Details of the consultation strategy for this Forest Plan can be found in Appendix A.

Approval of the Forest Plan is granted by the regulatory arm of the Forestry Commission, known as Forest Services. This regulatory approval is usually valid for 10 years and grants a 10-year felling licence.

The approved plan will be reviewed at year 5 to ensure proposals are still relevant, suitable and in line with current policy and guidance. This will also be an opportunity to evaluate the success of management over the 5 year period and include any amendments to the forest plan that may be required.

Context

Location

Reference: Location Map

Crooksbury Common and Bourne Wood lie between 2 and 3 miles Southeast of Farnham in Surrey. The area is semi-rural with interconnecting fields and woodlands. Alice Holt Forest, a busy woodland owned by the Forestry Commission, lies 3 miles to the West.

Landscape and Historical Context

Combined the woodlands cover an area of 105.2 hectares (Bourne 51.4 and Crooksbury 53.8) and have important landscape value by forming a larger woodland complex in the surrounding area. This helps to connect other areas of woodland, heathland and open space, which protects vulnerable habitats and increases their resilience. Both woodlands are in the Surrey Hills Area of Outstanding Natural Beauty (AONB) and make up part of its 40% woodland and 18% heathland cover (SurreyHills.org 2015). This Forest Plan will seek to enhance and uphold the principals and objectives of the AONB management plan, in particular the woodland aspects of its vision statement.

23% of Crooksbury is a designated Site of Special Scientific Interest (SSSI). This designation is supported by an additional management plan that will be consulted when deciding the scale and type of interventions.

Both woodlands have an undulating topography, rising gently from between 60 metres above sea level to a max height of 130m.

An area of Crooskbury is also part of a Higher Level Stewardship Scheme administered by The Amphibian and Reptile Trust since 2008.

The climate is typical of Southeast England with rainfall below 700mm per annum and temperatures ranging from a mean 14.2°C for the warmest month and 5.3°C for the coldest month.

Both woodlands fall within South England Forest District and are managed by Forest Enterprise, an agency of the Forestry Commission.

Tenure

Crooksbury is currently under a leasehold agreement and is owned by Guildford Borough Council. Bourne Wood is freehold and owned by the Forestry Commission.

Current Woodland Structure

Both Bourne Wood and Crooksbury are not classified as Ancient Woodland.

Within Crooksbury, crops were largely planted in the 1930's, 1940's and the 1950's. Large parts have subsequently been cleared and restocked over the last 13 years, a direct result of the wind blow experienced during the storms of 1987 and 1990. Mature stands remain yet to be felled and restocked. The Forest comprises 98% pine and 2% other conifer species.

An area of around 12 ha is managed as open space under its SSSI designation for the benefit of amphibians and reptiles.

Bourne Wood is predominately pine woodland, however birch regenerates freely on restock sites, ride edges and unplanted areas, contributing to a greater diversity of species.

Crops within Bourne Wood were planted in the 1940's and 1950's. Parts have subsequently been cleared and restocked over the last 10 years and akin to Crooksbury, mature stands remain yet to be felled and restocked.

The age class of canopy trees ranges from 100 plus to just over a year. However, around 25% of the area accounts for one age class (81-90 years old).

Current woodland structure continued—

Within areas of Crooksbury the introduction of Continuous Cover management systems aims to develop a much more varied age structure and a more resilient woodland in the long term. However depending on specific stands and soils, supplementary planting may be used. Continuous Cover management has not been deemed appropriate in Bourne Wood due to the high levels of Gaultheria, a wide spread invasive non-native species which presents a significant challenge for establishing woodland via natural regeneration. A continuation of the clearfell-restock cycle and the subsequent ground preparation that this will entail is deemed the most appropriate technique for eradicating this species from the woodland.

Biodiversity and Conservation

Bourne Wood:
The biodiversity interest at Bourne Wood has been enhanced and maintained through a history of sustainable forest management, open habitat maintenance and the site's long established filming activity. This was delivered via a tandem input from filming supported contractor management and conservation volunteer work parties. Key areas for biodiversity include the Lowland Dry Heathland component to the South of the block, the Northern boundary of the RSPBs Farnham Heaths Reserve, the outlying area of open habitat in the Northeast of the block and the interconnecting heathy corridors which span the site and connect it to the surrounding landscape. The Bourne Woods linkage to the RSPB Reserve to the South and Amphibian and Reptile Conservation (ARC) Trust managed Gong Hill Reserve to the South West reflects the site's ecological value in a landscape context, recently reinforced by its inclusion within the Farnham Heaths Biodiversity Opportunity Area (BOA).

The open habitat units and corridors as identified in the 2014 filming related planning application will be maintained through periodic treatments of vegetation and bare earth. Management interventions during the period of this plan will seek out opportunities for ride enhancement in order to improve structural diversity and ecological connectivity across the forest block. This will prove of principal benefit to invertebrates associated with open and warm conditions as well as the resident reptile populations, both common and rare. Invasive plant species (most notably Gaultheria spp.) will be managed in order to protect the native vegetation on this site.

Crooksbury Common:
The Amphibian and Reptile Conservation (ARC) Trust lease 19.6 hectares of the Crooksbury block as a flagship Nature Reserve on the Wealden Greensand. This part of the forest is designated as a SSSI and comprises 12ha of the wider Puttenham and Crooksbury Common SSSI. The majority of the reserve is classified as Lowland dry heath but a number of artificial ponds have been created to enhance the site's ecological value. The heathland resource on the reserve is managed via a combination of volunteer and contractor input with sporadic clumps of trees and individual trees retained to provide perch points for the heathland/forest gap bird assemblage. In addition, a series of South facing banks and sand scrapes have been created to enhance reptile breeding and overwintering habitat. The SSSI is home to both Sand lizard *Lacerta agilis* and Smooth snake *Coronella austriaca*. The core protected area managed by the ARC Trust is buffered by the Forest Enterprise managed rotational forest stands with the conifer clearfell-restock system providing valuable breeding habitat for European listed ground nesting birds in particular.

Management interventions during the period of this plan will seek out opportunities for ride enhancement in order to improve structural diversity and ecological connectivity across the forest block. This will prove of principal benefit to invertebrates associated with open and warm conditions as well as the resident reptile populations, both common and rare. Invasive plant species (most notably rhododendron) will be managed in order to protect site native vegetation.

Both Bourne Wood and Crooksbury Common fall within the Biodiversity Opportunity areas WGO1 Puttenham and Crooksbury and WGO2 Farnham Heaths. The areas themselves are home to several notable species of invertebrates, many of which are identified as species of principal importance for biodiversity conservation under Section 41 of the NERC Act 2006 and were previously highlighted as Priority Species under the UK Biodiversity Action Plan. The species of butterfly and moth among the highest priority are the Heart Moth *Dicycla oo*, Silver Studded Blue *Plebejus argus*, Grayling *Hipparchia semele*, Grizzled Skipper *Pyrgus malvae*, and Purple Emperor *Apatura Iris*. In this plan the ride and road network as well as permanent open space and temporary areas created by forest management will be considered as opportunity areas to provide suitable habitat for these species. Specific prescriptions for their management can be found on the Butterfly Conservation Regional Action Plan for South East England 2016-2025.

Water

The main water features are in the heathland area of Crooksbury Common. They consist of a network of small ponds, primarily used for reptile and amphibian conservation. Bourne Wood does not have any water features except forestry drains.

Tree Diseases and Pests

The main diseases of concern currently in the South of England are Dothistroma (red band) Needle Blight on Corsican Pine, *Phytophthera ramorum* on Larch, *Hymenoscyphus fraxinea* (Ash Dieback) and Chronic Oak Dieback. These species are all present in the wider landscape, however the move towards diversifying species makeup in the long term should make the woodland more resilient if a significant pathogen does arise.
Invasive rhododendron and *Impatiens glandulifera* (Himalayan balsam) are also spreading and will require a joined-up landscape wide approach.
However continued monitoring does take place to ensure that species posing a threat to native flora do not become established, particularly after fly tipping incidents.

Plant health guidance and action plans are constantly evolving to adapt to current threats. The sudden emergence of a disease can result in the need to fell a coupe earlier than planned or alter restocking plans. We will continue to monitor for disease and take appropriate action. Any changes to the Forest Plan will be notified or agreed with Forest Services in accordance with the relevant guidance.

Mammal browsing is also a threat to the sustainability of woodlands in Southern England. Muntjac and Roe deer are the most prevalent browsing mammals within the Bourne and Crooksbury Woodlands.

Deer will be managed in accordance with the South England Forest District Deer Management Strategy. Invasive non-native plant species which may pose a threat to native flora and fauna will be monitored in accordance with policy and guidance.

Climate Change

Climate change represents one of the greatest long-term challenges facing the world today. Conventional forest management systems have developed in a climate that has undergone fluctuations but remained relatively stable since the end of the last ice age (around 10,000 years ago). However, the average global temperature is now rising and there is evidence that rainfall patterns are changing. There is also likely to be an increase in the occurrences of extreme weather and the frequency and severity of summer drought.

These factors are likely to represent the greatest threat to woodlands from climate change in the UK over the coming decades. UK forest management needs to respond to these threats in two principal ways: through mitigation, including ensuring management is sustainable, and adaptation, including species diversification.

Wildfire Resilience

Reducing the incidence and impact of wildfires in forests and woodlands through good management planning is important for sustainable forest management and to protect the provision of forest ecosystem goods and services.

This plan will aim to build on the wildfire resilience already present in the woodland by acting on the following points

- Managing the vegetation to maintain a network of fire breaks, reducing fuel across an entire site especially along roads and rides.
- The introduction of continuous cover forestry where appropriate to create a diverse woodland structure.
- Where appropriate fragment high risk species and habitats into smaller areas to reduce the risk of fire spread.
- Initiate a long term move to diversify the species makeup and increase broadleaved native woodland particularly around high risk areas.
- When restocking sites use appropriate species relative to the forests wildfire risk.

These management principals will be implemented during the operational stage of planning and are intended as a guide only.
A site specific wildfire risk assessment for Bourne Wood and Crooksbury Common can be found in the appendices and should be should used in conjunction with a wildfire management plan.

Context

Forest Plan Maps

When consulting the maps, please refer to the glossary for further details about the prescriptions.

Location

Shows the location of the woodlands in the wider landscape.

Aerial

Shows the location of the woodlands in the wider landscape using aerial photography.

Indicative Age

Shows the planting year and age of the trees in the woodland.

Species Diversity

Gives an indicative illustration of the number of different species within the woodlands (including open space). However it should be noted that the data only accounts for trees in the canopy and should only be taken as a general overview of the number of different species present within a sub-compartment.

Long Term Vision

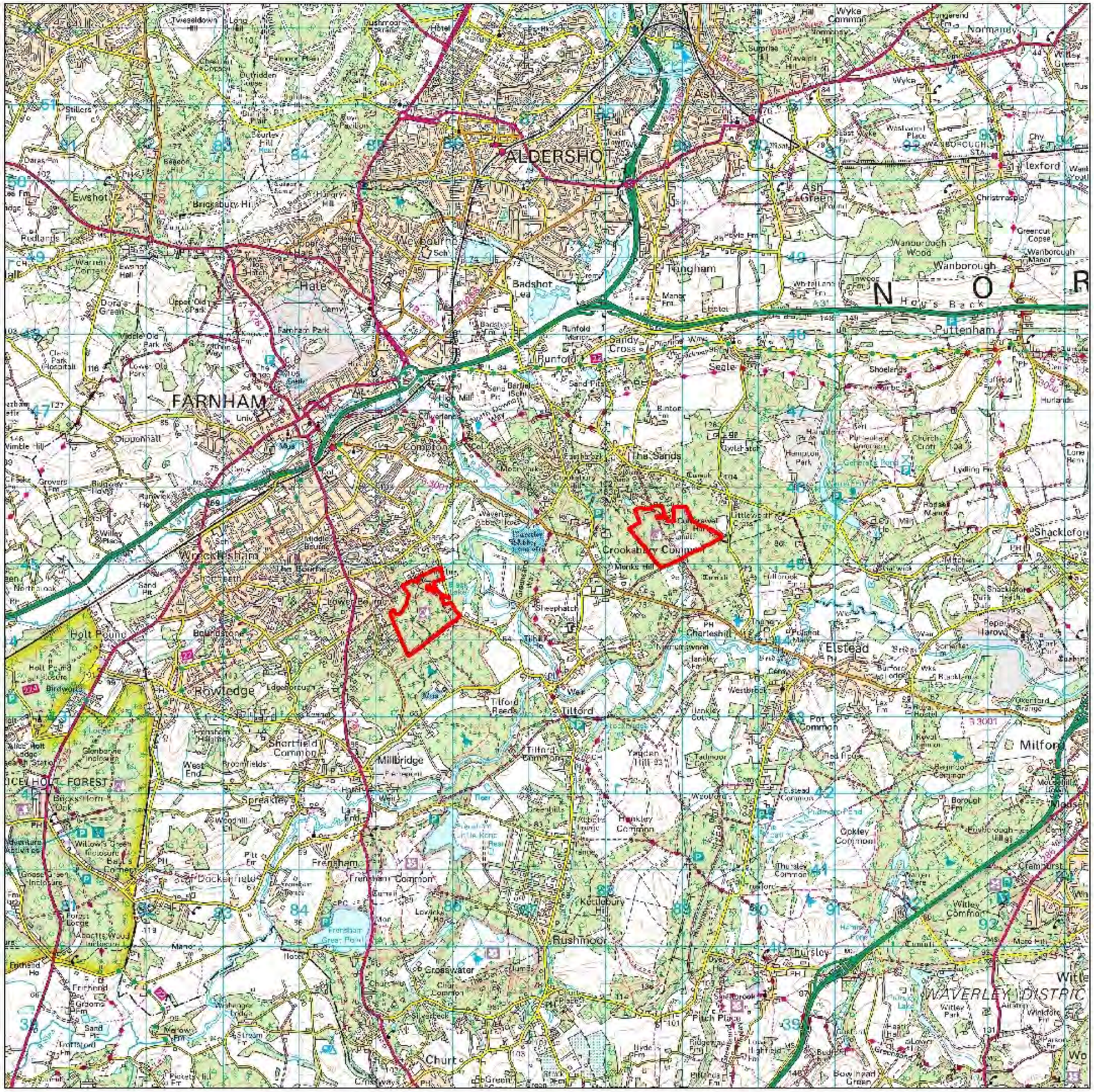
Illustrates the proposed long term structure of the woodland and other habitats consistent with the Forest Plan objectives. While no fixed time scale for the habitat transformations is depicted, an indicative term of around 100 years is assumed.

Current structure

An overview of the current habitat types that exist in the woodlands.

Habitat restoration and felling

Shows the management proposals in the shorter term (10 to 30 years). These proposals are the initial stepping stones towards achieving the long term vision.



Forestry Commission
England

South England Forest District

Bourne and Crooksbury Location

Management Area

1:50,000
at A3

Forestry Commission
England

South England Forest District

Bourne and Crooksbury Aerial

Management Area

1:50,000
at A3

N

Forestry Commission
England
South England Forest District

Bourne and Crooksbury Indicative Age Diversity

Key

Planting Years

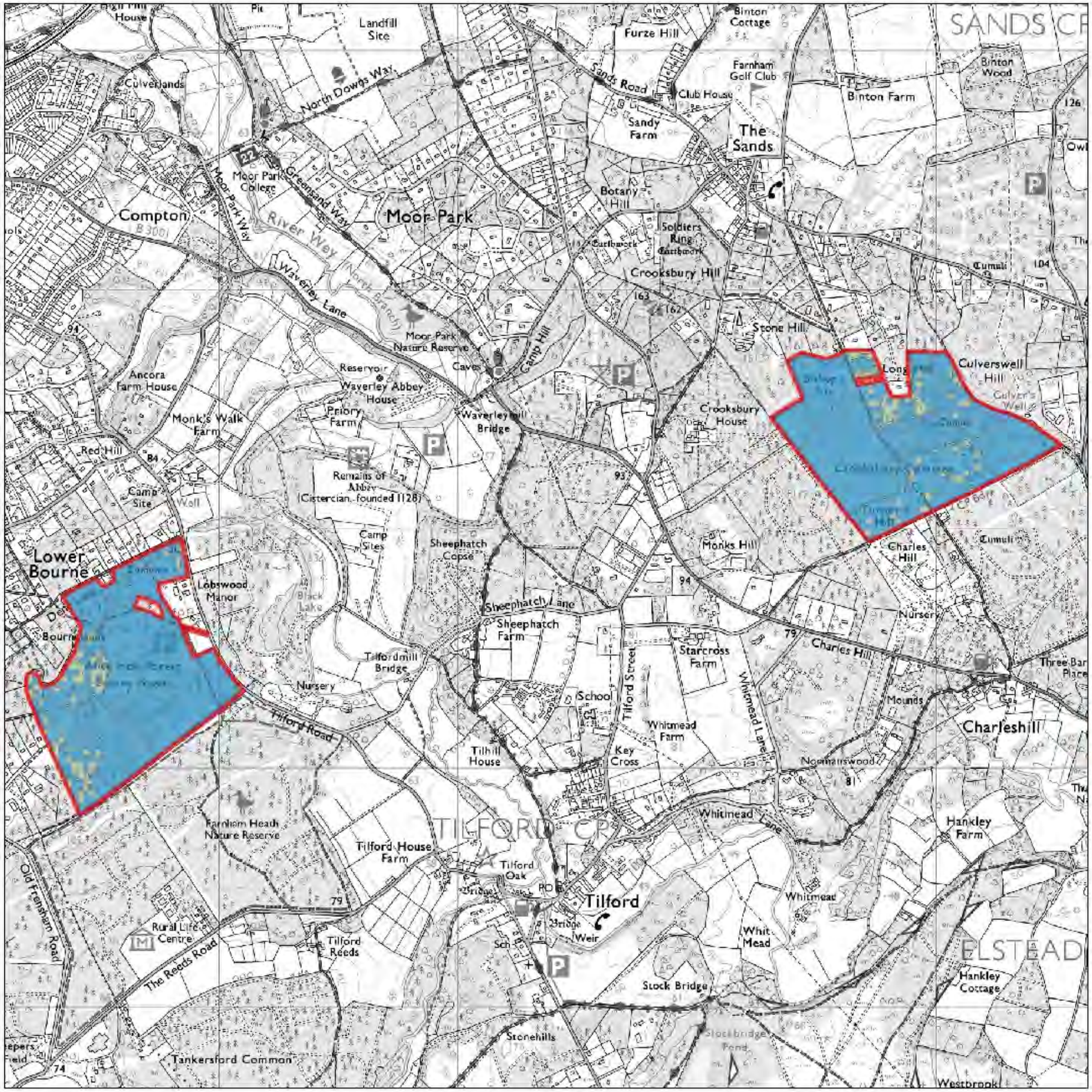
- 1500
- 1501 - 1882
- 1883 - 1945
- 1946 - 1977
- 1978 - 2016

Gaps illustrate open space, areas covered by recent natural regeneration, non woodland areas or missing data.

Management Area

1:15,000

Produced by the Planning Team
Date: 04/12/2015



Forestry Commission England

South England Forest District

Bourne and Crooksbury Indicative Species Diversity

- 1
- 2 - 3
- 4 - 5
- 6 - 7
- 8 - 9

Shows the number of species within the canopy (including open space).

Management Area

1:16,000 at A3

N

Forestry Commission
England
South England Forest District

Bourne and Crooksbury Indicative Current Structure

Key

- Native and Honourary Native Broadleaf Woodland
- Conifer Woodland
- Mixed Woodland
- Open Habitat
- Open water & Ponds
- Management Area

1:15,000
at A3

N

Produced by the Planning Team
Date: 05/10/2016

Forestry Commission England

South England Forest District

Crooksbury Common
Long Term Vision

Mixed Woodland Management

Woodland consisting of a mixture of native and non-native tree species neither of which dominates more than 80% of the canopy.

Road/Ride Edge Management

Open ride and road network, connecting habitats and woodland for enhanced biodiveristy.

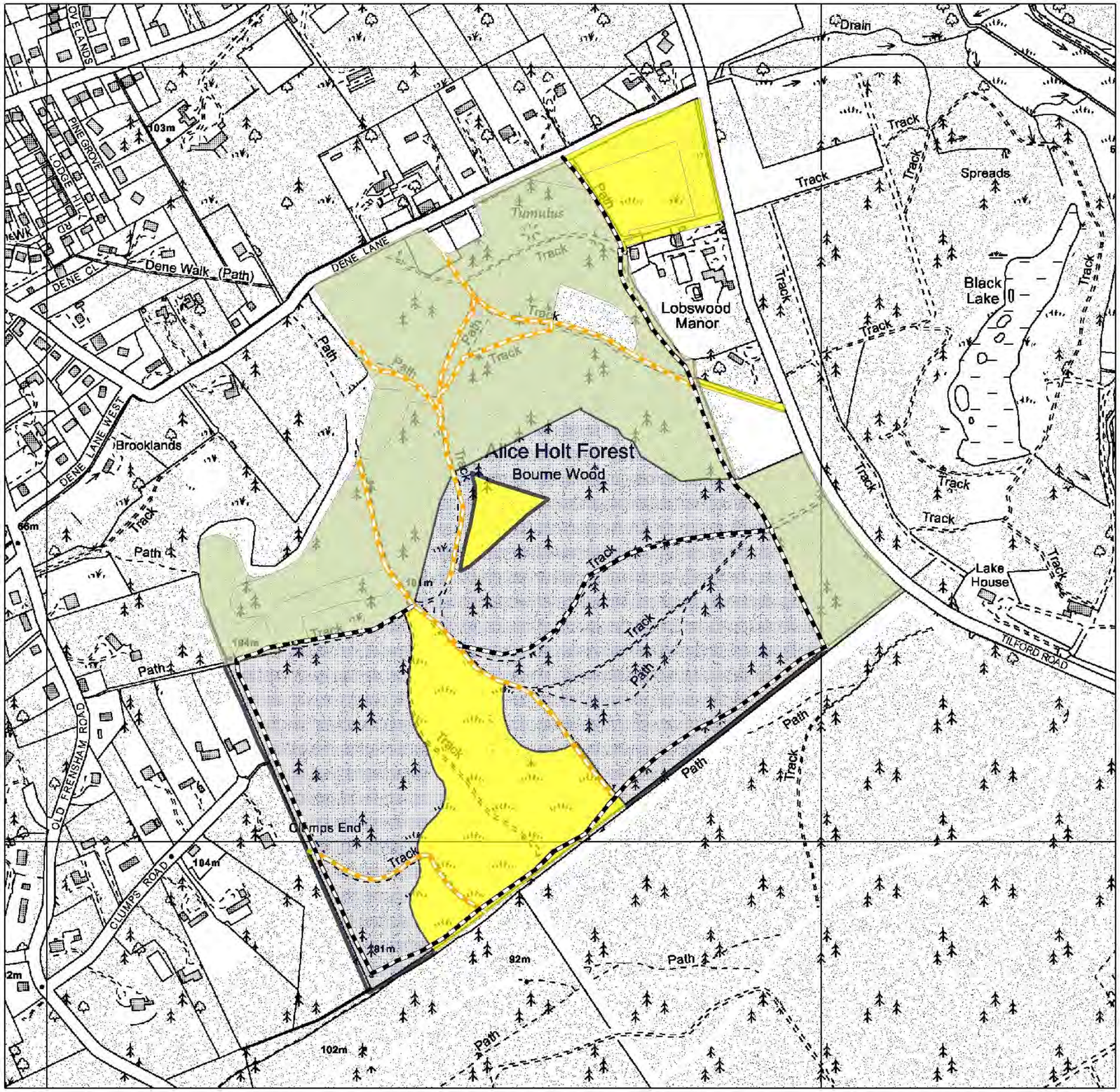
Manage as Open Habitat

Open Water / Ponds

Site of Special Scientific Interest

1:5,000
at A3

N



Forestry Commission England

South England Forest District

Bourne Wood
Long Term Vision

Mixed Woodland Management

Woodland consisting of a mixture of native and non-native tree species neither of which dominates more than 80% of the canopy.

Road/Ride Edge Management

Open ride and road network, connecting habitats and woodland for enhanced biodiversity.

Manage as Open Habitat

Character Woodland

Long term retention for filming interest.

Priority Ecological Corridors

An internal corridor where management seeks to promote ecological connectivity to the benefit of focal species.

1:5,000 at A3

N

Forestry Commission England

South England Forest District

Crooksbury Common
Habitat Restoration & Felling

Clearfell 2017-2021

Sivilcultural thinning until clearfell then restock with a mixture of native broadleaves and conifers with no component dominating more than 80% of the canopy.

Clearfell 2022-2026

Sivilcultural thinning until clearfell then
manage as open habitat using guidance from the Crooksbury Common SSSI plan.

Clearfell 2037-2041

Sivilcultural thinning until clearfell then
manage as open habitat using guidance from the Crooksbury Common SSSI plan.

Manage as Open Habitat

Road/Ride Edge Management

Enhance the woodland edge developing a scalloped and graded structure in accordance with best practice guidelines.

Mixed Woodland Management

Manage with a combination of thinning and selective felling. Favour best tree, focussing on the production of quality timber, species diversity and an irregular stand structure.

Restocking

Restock with a 50/50 mixture of native and non native species.

Specialist Site of Scientific Interest (SSSI)

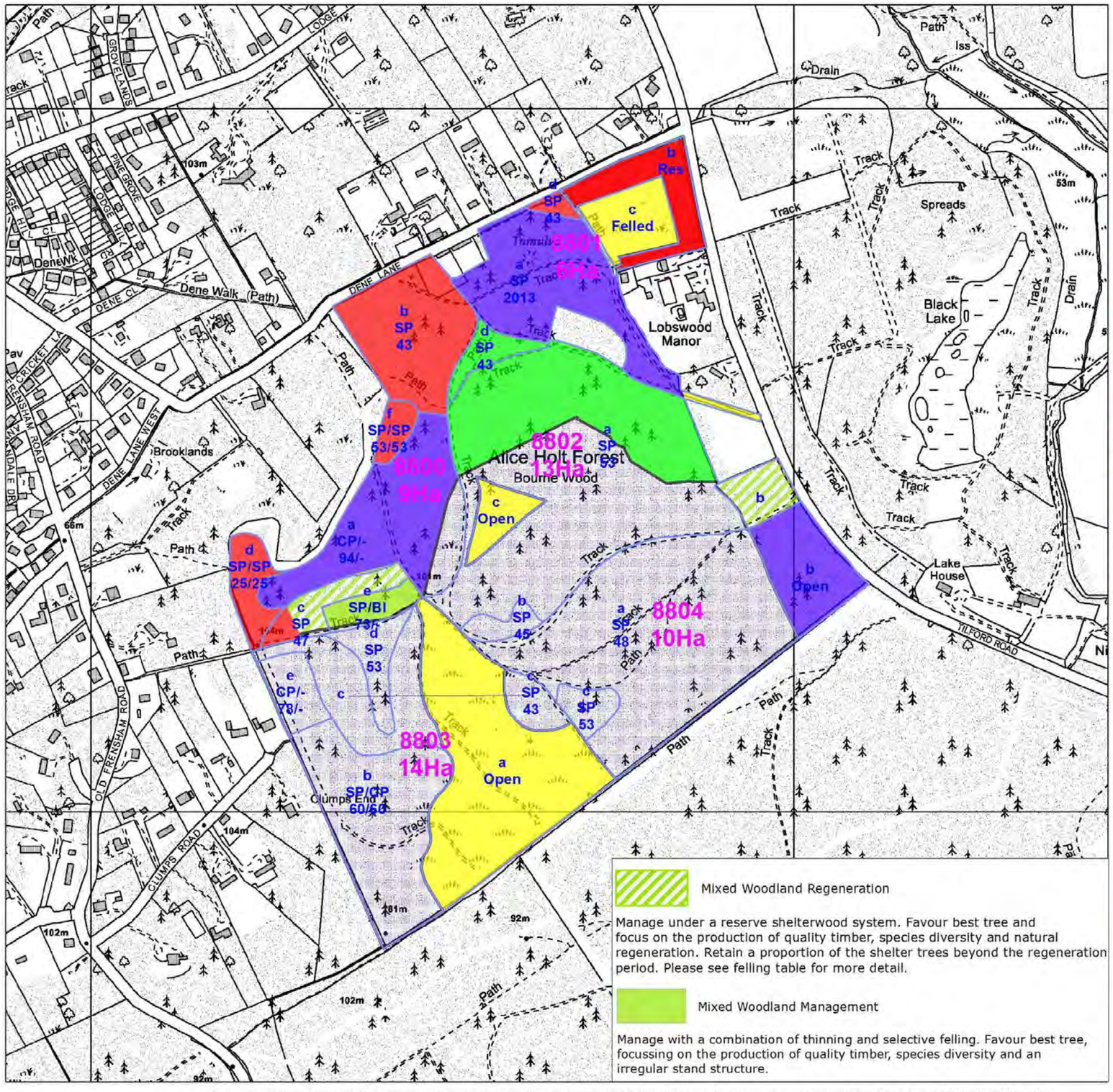
Sub-Compartments

Compartments

1:5,000
at A3

N

Declaration by FC as an Operator. All timber arising from the Forest Enterprise estate represents a negligible risk under EUTR (No 995/210).



Mixed Woodland Regeneration

Manage under a reserve shelterwood system. Favour best tree and focus on the production of quality timber, species diversity and natural regeneration. Retain a proportion of the shelter trees beyond the regeneration period. Please see felling table for more detail.

Mixed Woodland Management

Manage with a combination of thinning and selective felling. Favour best tree, focussing on the production of quality timber, species diversity and an irregular stand structure.

Forestry Commission England

South England Forest District

Bourne Wood
Habitat Restoration & Felling

Clearfell 2017-2021

Sivilcultural thinning until clearfell, then restock with a mixture of native broadleaves and conifers with no component dominating more than 80% of the canopy.

Clearfell 2022-2026

Sivilcultural thinning until clearfell, then restock with a mixture of native broadleaves and conifers with no component dominating more than 80% of the canopy.

Clearfell 2027-2031

Sivilcultural thinning until clearfell, then restock with a mixture of native broadleaves and conifers with no component dominating more than 80% of the canopy.

Clearfell Beyond 2046

Sivilcultural thinning until clearfell then restock with a mixture of native broadleaves and conifers with no component dominating more than 80% of the canopy.

Road/Ride Edge Management

Enhance the woodland edge by developing a scalloped and graded structure in accordance with best practice guidelines.

Manage as Open Habitat

Priority Ecological Corridor

Enhance the woodland edge by developing a scalloped and graded structure in accordance with best practice guidelines for locally identified key species. For specific prescriptions consult district wildlife staff.

Character Woodland

Long Term Retention for Filming Interest

Sub-Compartments

Compartments

Forestry Commission woodlands have been certified in accordance with the rules of the Forest Stewardship Council (FSC)

1:4,000 at A2

N

Declaration by FC as an Operator. All timber arising from the Forest Enterprise estate represents a negligible risk under EUTR (No 995/210).

Forestry Commission England

Felling Table

Felling Coupe Thresholds

Felling must be limited to 10% of the contiguous area in a 5 year period (20% for the duration of the forest plan).

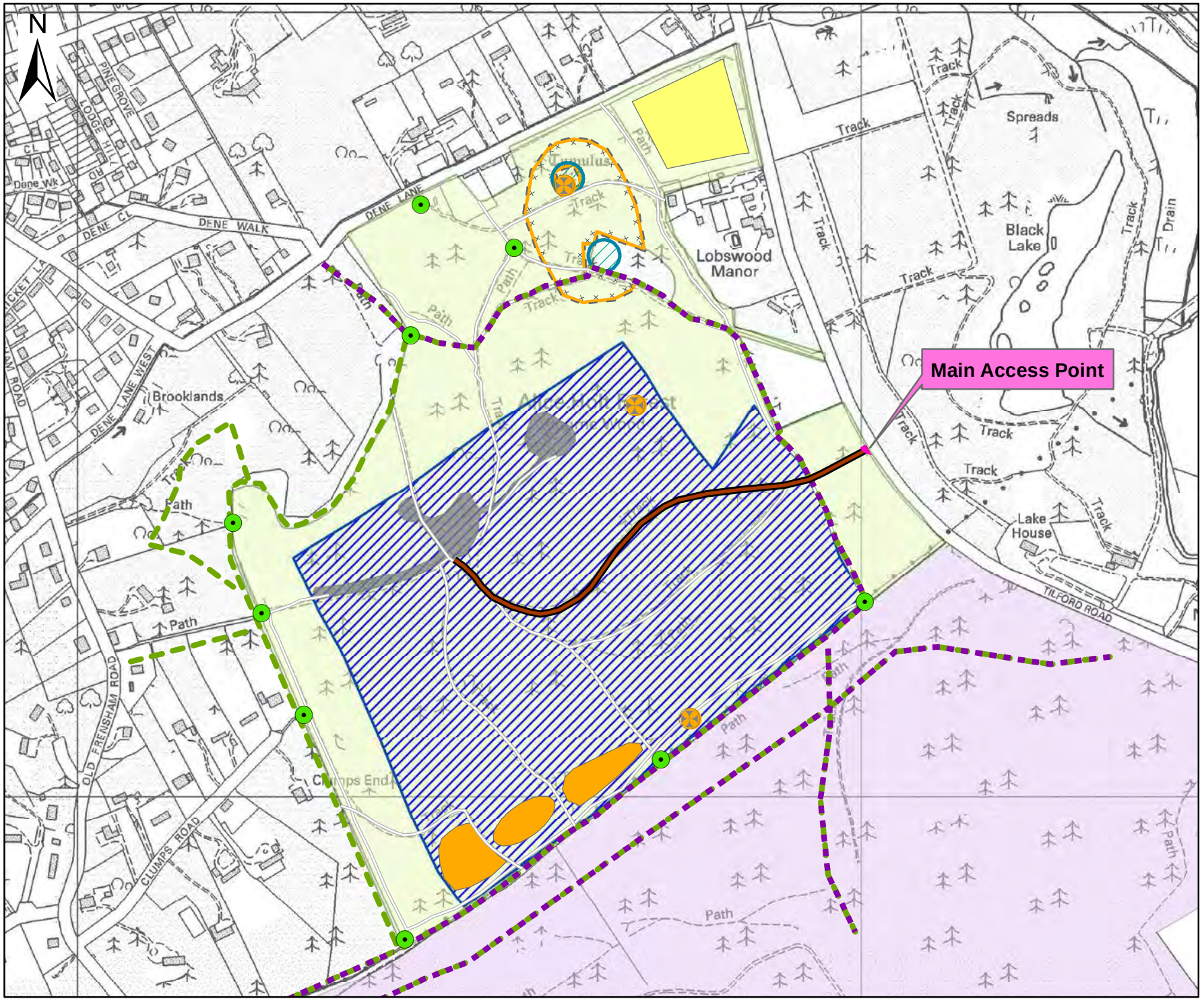
An indicative regeneration period of 25—50 years is assumed depending on species type.

In this Forest Plan

Mixed Woodland Regeneration

- Coupes up to 0.25ha in size and non-adjacent

Woodland	Maximum size of combined felling coupes over a 5 year period	Maximum size of combined felling coupes over a 10 year period	Date of intervention and area worked
Bourne Wood	5.2	10.4	



Forestry Commission England

South England Forest District

Bourne Wood Filming Area with Associated Access plus Heritage and Reptile Protected Areas

Legend

- Filming Site - Permitted Area
- Unit Base Parking
- Public Car Park & Main Entrance
- Entrances
- Tarmac Access Road
- Bridleway
- Public Footpath
- FC Rides
- Scheduled Monument
- Heritage Features Point
- Heritage Features Polygon
- Hibernacula Area
- Lizard Habitat
- RSPB Reserve
- FC Management Area

Scale @ A4
1:6,500

Chart shows main components only (1% or more in size).

More species may be present on the ground.

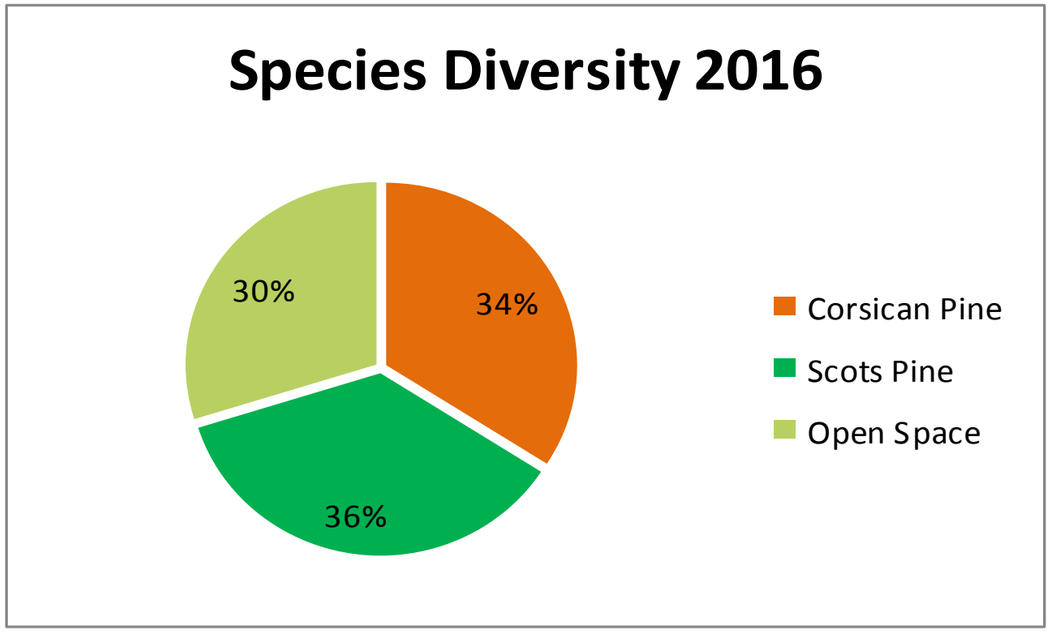
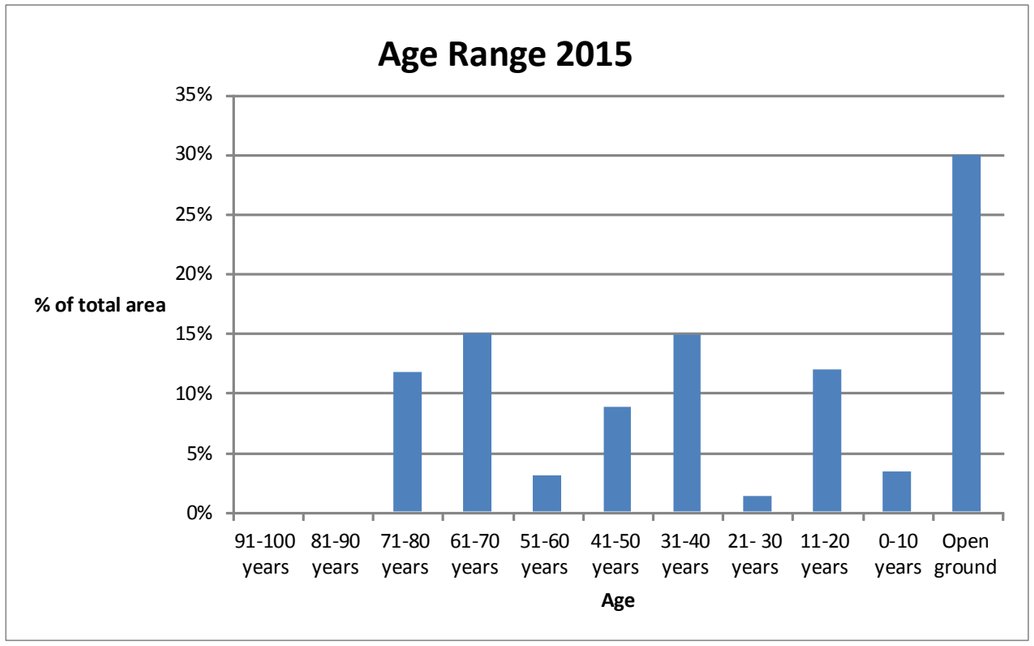


Chart shows the trees in both woodlands, separated into their different age classes.



Source— FC Sub-compartment Data base 2016

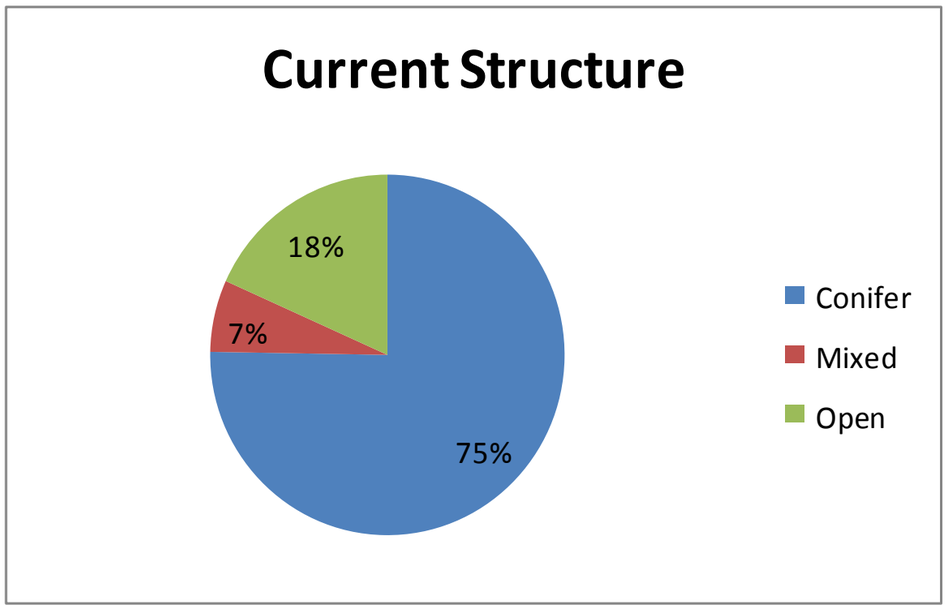


Chart shows the current structure of both woodlands separated into broad habitat types.

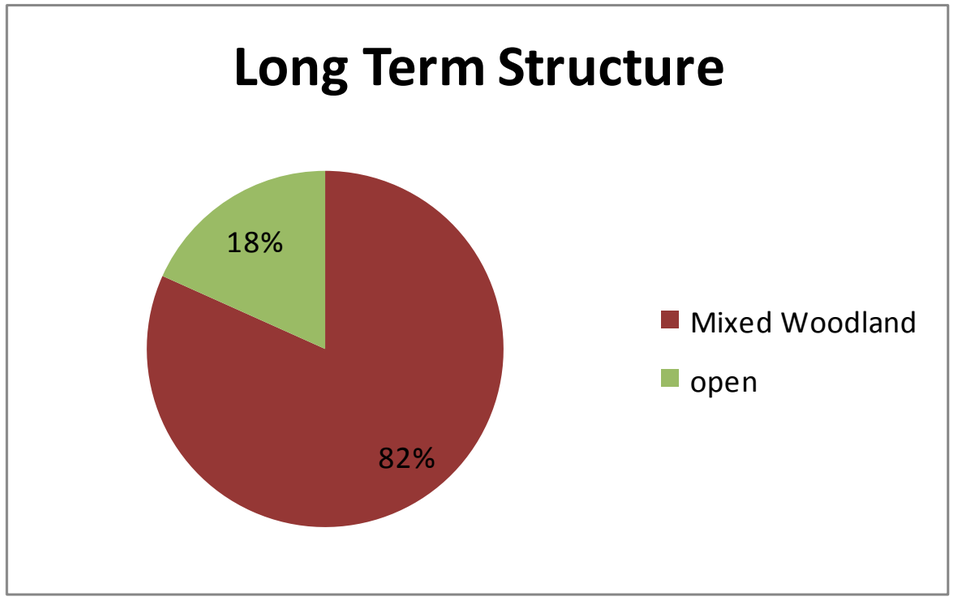
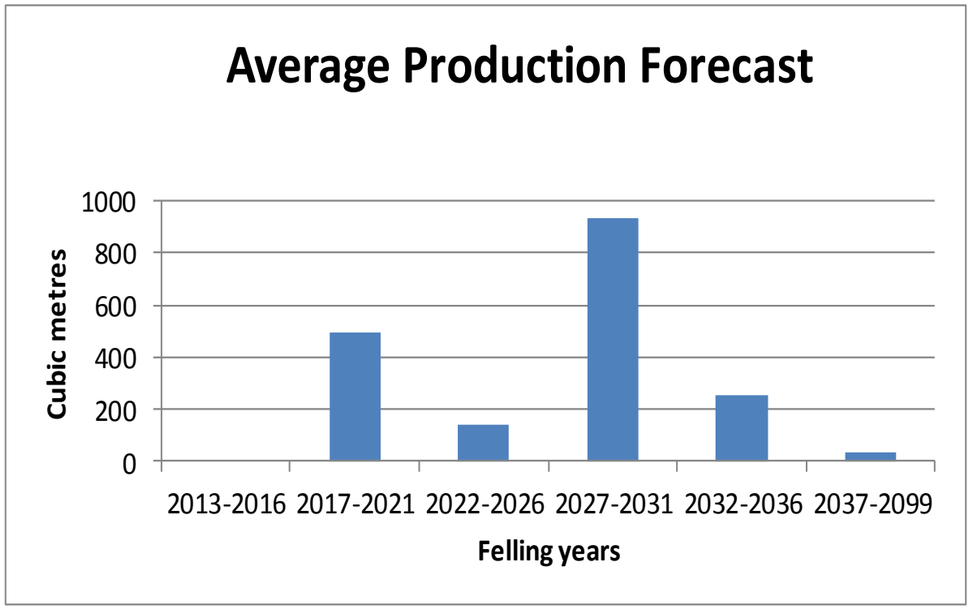


Chart shows the long term structure of both woodlands (100 years) separated into broad habitat types.



Source FC sub compartment data base 2016

Chart shows the volume of timber that will be produced in consecutive 5 year periods from the start of the plan.

Forest/woodland name; Bourne wood and Crooksbury					
What are the Fire Hazards?	**Who/what might be harmed and how?**	**What are you already doing to manage the risk?**	**Initial Risk Rating**	**What else do you need to do?**	**Revised risk rating**
Large blocks of coniferous woodland.	General Public and emergency services	Long term plan to diversify the make up of the blocks, creating mixed species woodlands and restoring appropriate areas back to native woodland.	Medium	Evaluate high risk compartments and consider ways of speeding up the change of species makeup. Evaluate fuel loading during regular intervals. Consider building fire tower to monitor woodland.	
Fires spreading from the road network adjacent to the blocks.	General Public and emergency services	The majority of the road network is either bordered by open space or low risk broad-leafed woodland.	low	Increase vegetation management to reduce fire risk. A verge clear of vegetation should be 3.5m either side of access routes.	
Fires spreading from residential properties adjacent to the blocks.	General Public and emergency services	The majority of residential properties are bordered by open space or low risk broad-leafed woodland.	low	Actively engage with owners about the risks of fire to both the PFE and their property to create an awareness of fire safety.	
Fires spreading from formal recreation areas (BBQ's/ campfires etc.).	General Public and emergency services	Interpretation both onsite and online discourages BBQ use. Rangers patrol at peak times.	low	Deploy fire breaks where necessary	
Fires spreading from powerlines and underground utilities (gas pipes).	General Public and emergency services	Any powerlines that go through woodland blocks already have a mandatory exclusion zone, free of high risk vegetation	low	Conduct ad-hock checks on the state of wayleave vegetation, contacting the relevant utility companies when appropriate.	

Objective	Proposed Actions to Meet Objective	Ref	Output year 10	Monitoring	Indicators of Success
Take opportunities to increase the nature conservation value of existing habitats.	During management interventions, opportunities for corridor widening and wider habitat enhancement will be taken. Work with the Amphibian and Reptile Conservation trust to carry out the management aims in the Crooksbury Common SSSI plan, including annual bracken spraying and removing pine and birch saplings that have encroached onto the heathland.	3	Opportunities are identified at Operational Site Assessment (OSA) stage, acted upon and recorded within this plan.	OSA checks at implementation stage.	The quality of habitats will increase, and bracken and tree seedlings on open areas will decrease.
Provide, maintain and enhance the recreational capacity of the woodland where possible.	Look at maintaining the accessibility of footpaths and trails in the woodlands with a process of vegetation management around key areas. Safety checks of car parks and trails continued as per OGB 1 and 42.	4	Opportunities are identified at Operational Site Assessment (OSA) stage, acted upon and recorded within this plan.	OSA checks at implementation stage. A record of identification of opportunities, assessment of feasibility and fulfilment if appropriate.	The network will be managed to the current standard and accessibility has been maintained or improved.
Provide a regular supply of quality timber to support local employment and local timber processing industries.	Regular management interventions will provide a sustainable supply of wood products to the industry.	5	Wood products supplied sustainably to industry in line with the production forecast.	Query FC sales recording package at year 5 and year 10.	Wood products will be supplied to the timber industry in line with production forecast whilst fulfilling other objectives
Maintain and increase the species and age diversity of the woodland to improve long term resilience.	Managing non-ancient woodland areas as mixed woodland allows the woodland to support a greater species diversity. This will benefit disease and climate resistance as well as adding aesthetic variation. The development of natural regeneration at various stages will break up the current rigid age structure.	6a 6b 6c	Maintained number of tree species. Increased age diversity. Evidence of natural regeneration occurring.	Query sub-compartment data base at year 5 and 10. Query sub-compartment data base at year 5 and 10. Query FC sales recording package at year 5 and year 10.	At least the same number of different tree species present at year 10. Improved age diversity at year 10. Increased successful establishment of natural regeneration.

Ref	Comments year 5	Success?	Comments year 10	Success?
1a				
1b				
2				
3				

Ref	Comments year 5	Success?	Comments year 10	Success?
4				
5				
6a				
6b				
6c				

Forestry Commission England

Glossary

Ancient Woodland

A classification for woodland which has been in continuous existence from before AD 1600 in England, Wales and Northern Ireland or from 1750 in Scotland.

Ancient Semi Natural Woodland

The trees and other plant species within an ancient woodland site appear to have arisen naturally rather than having been planted and are predominately (>80%) native to the site and surrounding area.

Compartments/Sub-Compartments

Sections of woodland used to delineate and plan management.

Priority Ecological Corridors

A network of internal road and ride margins as well as Wealden gill corridors that will be managed in a sympathetic way to increase the structural diversity and provide connecting habitats for key species.

Character Woodland

An area of woodland with a unique characteristics usually managed under a low impact system to preserve the uniqueness.

Clearfell

Cutting down an area of woodland typically greater than 0.25 hectares.

Selective felling

Woodland management system whereby the individual trees are selected for retention based on their character or specific qualities. The area will be thinned to favour the retention and development of these trees.

Shelterwood System

Woodland management system whereby the forest canopy is maintained at one or more levels without clear felling, generally being no single interruption of tree cover of

Site of Special Scientific Interest (SSSI)

A conservation designation protected by law to preserve their wildlife or geology.

more than 0.25 hectares with a maximum of 2 interruptions of this size per hectare.

Mixed Woodland

Woodland consisting of a fairly even mixture of broadleaf and conifer species.

Native Woodland

Woodland predominately made up of tree species that would naturally be found on that site.

Native (and honorary-native)

The trees making up the woodland are part of England's natural (or naturalised) flora. Determined by whether the trees colonised Britain without the assistance of humans since the last ice age (or in the case of 'honorary native' were brought here by people but have naturalised in historic times) ; and whether they would naturally be found in this part of England.

Natural Regeneration

The process of allowing a cleared area of woodland to regenerate naturally the germination and development of seeds found within the soil on site. These may be still require some protection from overbearing plan species and mammal browsing . Some enrichment planting may also be necessary or desirable in areas were natural regeneration is showing limited success or in order to diversify the species range of the woodland.

Open Habitat

An area of ground that will have less than 5% tree cover and support a range of species suitable to the site.

Plantation on Ancient Woodland Site (PAWS)

The trees within an ancient woodland site appear to have been planted. These species may or may not be native to the site and surrounding area.

Road and ride edge management

A network of internal forest roads and ride margins that will be managed in a sympathetic way to increase the structural diversity of the woodland and provide connecting habitats for key species.

Yield Class

The maximum average rate of volume increment which a particular stand can achieve per hectare.

References

This Forest Plan has been influenced by various key policy statements and guidance documents as listed below.

Government Forestry and Woodlands Policy Statement—January 2013

This document sets the direction of travel for forestry policy within England and is the reference point around which main aims and objectives of forestry and woodland management are designed.

The statement sets out the following key objectives, in priority order:

Protecting the nations trees, woodlands and forests from increasing threats such as pests, diseases and climate change.

Improving their resilience to these threats and their contribution to economic growth, peoples lives and nature.

Expanding them to increase further their economic, social and environmental value.

Strategic Plan for he Public Forest Estate in England

This plan sets out the direction and goals for the public forest estate in England and indicates the actions The FC will be taking to achieve these between now and 2020. The ambitions are long term and the FC will use a normal cycle of review over 5 years to embed these in local forest plans and ways of operating.

The FC's Mission for the Estate:

"To work with others to keep the Pubic Forest Estate as a special place for wildlife, people to enjoy and businesses to thrive—and achieve this by adopting a strategy that integrates all the three drivers of sustainable land management; economy, people and nature."

The FC's Vision and Overall Goal:

"To secure and grow the economic, social and natural capital value of the public forest estate for the people of England."

South District Forest Strategic Plan

The strategic management plan is a Forest Enterprise district level document that informs local Forestry Commission staff about the management direction of the Public Forest Estate and the associated policies. The Forest Plans are a key mechanism for delivering policies on the ground.

Open Habitat Policy, 2010

This is government policy on how to decide when to convert woodland to open habitat in England.

United Kingdom Forestry Standard

The UK Forestry Standard (UKFS) is the reference standard for sustainable forest management in the UK. The UKFS, supported by its series of guidelines, outlines the context for forestry in the UK, sets out the approach of the UK governments to sustainable forest management, defines standards and requirements, and provides a basis for regulation and monitoring.

UK Woodland Assurance Standard (UKWAS)

An independent certification standard for verifying sustainable management in the United Kingdom.

Keepers of Time

This policy statement celebrates the importance of our native and ancient woodland and sets out a basis on which to achieve the following vision:

"Ancient woodlands, veteran trees and other native woodlands are adequately protected, sustainably managed in a wider landscape context, and are providing a wide range of social, environmental and economic benefits"

Managing Ancient and Native Woodland in England: Practice Guide

This practice guide has been produced to help practitioners translate what measures and practical action can be taken to protect and enhance our ancient and native woodlands and guides implementation of the approaches to management and restoration trialled in woods around the country.

Managing Deadwood in Forests and Woodland 2012

A practice guide encouraging owners and managers to develop a strategic approach to deadwood with an emphasis on working with natural processes.

Choosing stand management methods for restoring planted ancient woodland sites, 2013.

A practice guide showing different silvicultural methods for restoring planted ancient woodland sites.

European Landscape Convention

The European landscape convention—also known as the Florence convention - promotes the protection, management and planning of European landscapes and organises European co-operation of landscape issues.

UK BAP List of Priority Habitats

This comprises a list of UK Biodiversity action plan priority habitats that were identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP).

The Surrey Hills AONB Management Plan 2014-2019

Surrey Hills Board. *Surrey Hills Board.* [online]

Available at <http://surreyhills.akikodesign.com/wp-content/uploads/2014/12/Surrey-Hills-Management-Plan-17b-SP.pdf> [accessed May 2016].

Surrey Biodiversity Information Centre.

2015. Wealden Greensands Biodiversity Opportunity Areas. [ONLINE]

Available at: <https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKEwid9pTDpNzOAhWGBsAKHcrOBZcQFggtMAM&url=https%3A%2F%2Fsurreynaturepartnership.files.wordpress.com%2F2014%2F11%2Fappendix-7_wealden-greensands-biodiversity-opportunity-area-policy-statements.pdf&usg=AFQjCNGwVlvn4WHbTe-bRyDQf9gdZCkjeQ&bvm=bv.130731782,d.d24.> [Accessed 25 August 2016].

Appendix A—Consultation

The Forest Plan proposals are being consulted on over three main stages:

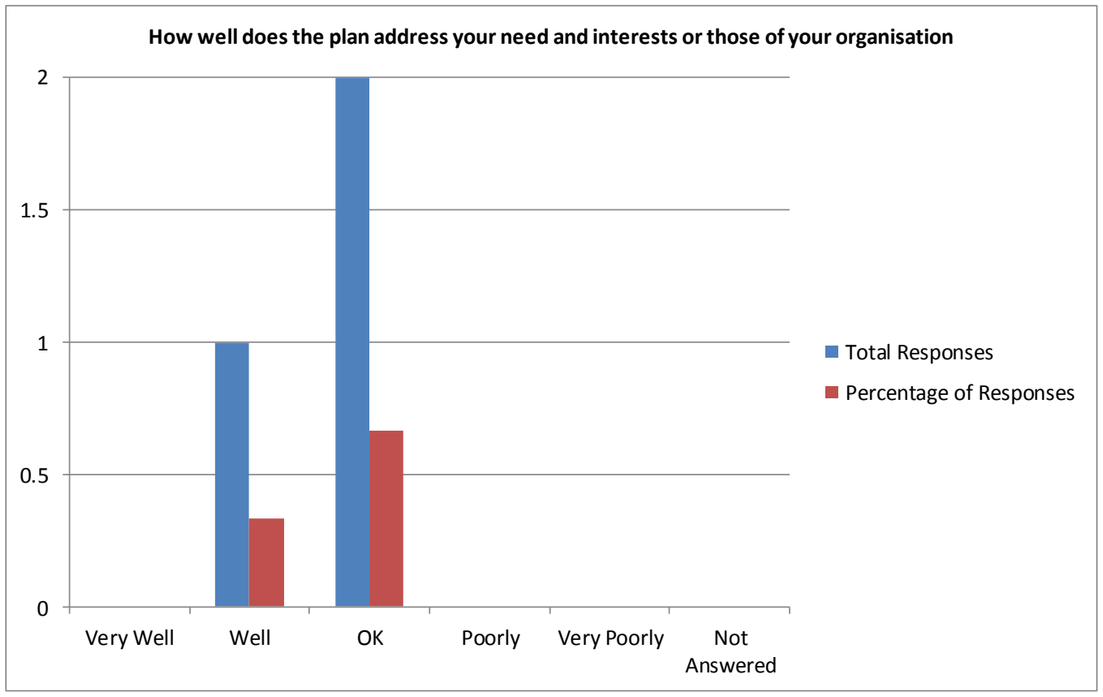
Stage 1: The woodland owners

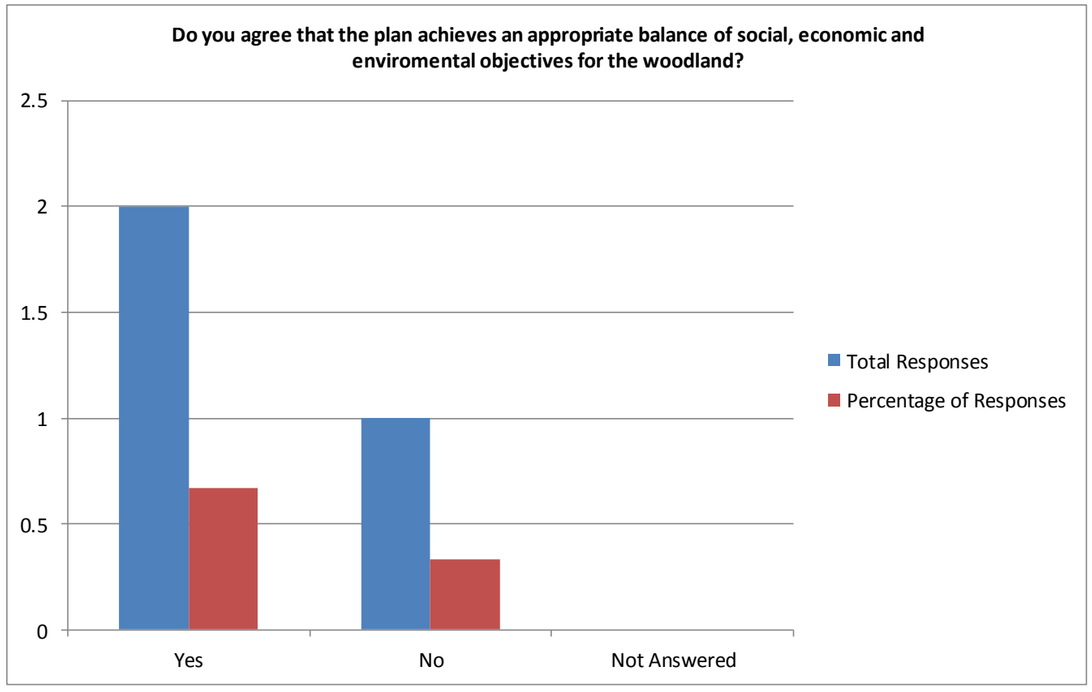
Stage 2: Stakeholder Consultation **15th July—22nd August 2016**

Environment Agency	Surrey Wildlife Trust	Surrey Hills AONB	Bat Conservation Trust	Buglife	Surrey Biodiversity information centre
Butterfly Conservation	RSPB	Surrey Bat Group	Botanical Society of the British Isles	Bumblebee Conservation Trust	Surrey Bird club
Natural England	Farnham Parish Council	The Woodland Trust	British Bryological Society	Fresh Water Habitats Trust	Surrey Mammal Group
Surrey County Council	Seale and Sands Parish Council	Amphibian and Reptile Conservation Trust	British Dragonfly Society	Peoples Trust for endangered species	The Deer Initiative
Waverley Borough	National Trust	Ancient Tree Forum	British Mycological Society	Plantlife	BSW Timber Group

Stage 3: Wider consultation through the Forest Services public register.

Online Consultation Results





Stakeholder	Response Date	Response	FC Follow Up
Bat Conservation Trust	15/07/16	Thanked for the offer of consultation and apologised that they don't have the capacity to respond to individual consultations.	None required.
National Trust	15/08/16	Completed the online consultation questionnaire. No further comments received.	Automatic response thanking for taking part in the consultation.
Waverley Borough Council	08/08/16	Completed the online questionnaire and provided the comments below. The forest plan is in accordance with current national forestry policies and has no foreseeable concerns associated therewith to the Local Authority.	
Surrey Wildlife Trust & Surrey Nature Partnership	10/08/16	Thank you for this opportunity to comment on your review of the Bourne & Crooksbury Forest Plan. I am responding for Surrey Wildlife Trust and on behalf of the Surrey Nature Partnership (SyNP). As you are by now aware the SyNP 'Biodiversity Working Group' has produced a guidance document to Biodiversity Opportunity Areas in Surrey, which collectively represent the spatial planning of a landscape-scale biodiversity conservation strategy for the county and replace the former Surrey Biodiversity Action Plan (available to view on the SNP website here). Bourne Wood is a key component of BOA WG02 'Farnham Heaths' , while Crooksbury occupies a similar position in WG01 'Puttenham & Crooksbury', and their policy statements appear in Appendix 7. Your Forest Plan for these estates is well aligned with the high-level objectives/targets for these BOAs, especially for PAWS restoration to native broadleaved woodland, as well as for Lowland heathland and acid grassland restoration; the eventual attainment of which will be very welcome. Appendix A of your Introduction might include the intent to consult with the Surrey Nature Partnership.	Many thanks for taking the time to comment on the Forest Plan for Bourne Wood and Crooksbury Common. It's great to note that the Forest Plan fits in well with the high level objectives for the BOA's. I will add the Surrey Nature Partnership to the mailing list for future consultations.

Butterfly Conservation

Completed the online questionnaire and sent the letter below.

I am writing to provide Butterfly Conservation's response to the proposed Forest Design Plan for Bourne Wood and Crooksbury Forest.

The Surrey greensands and, in particular, the Farnham Heaths Biodiversity Opportunity Area provide important areas for a range of locally and nationally important butterfly and moth species. Butterflies and moths are indicative of a wide range of invertebrates, and the presence of these threatened species within the forest is indicative of the wider health of these habitats.

We are glad to see elements included such as the restoration of native woodland, improvements to structural diversity, maintenance of open areas within the forest, and ride enhancements to improve ecological connectivity. However, these are general terms; a targeted and careful approach is needed to deliver significant and measurable enhancements for biodiversity.

The species of greatest relevance and highest conservation concern within this landscape are summarised on the attached map. The priorities are derived from Butterfly Conservation's new Regional Action Plan for South East England 2016 to 2025, which highlights priority species specific to this local landscape. Most of these species are identified as species of principal importance for biodiversity conservation under Section 41 (S41) of the NERC Act 2006, and were previously highlighted as Priority species under the UK Biodiversity Action Plan.

The species of butterfly and moth highest priority are highlighted as being:

- Heart Moth
- Silver-studded Blue
- Grayling
- Grizzled Skipper
- Purple Emperor

The outline actions for the priority species are included on the attached summary sheet and there are more detailed but very accessible factsheets available at:

http://butterfly-conservation.org/3545/butterfly-factsheets.html

http://butterfly-conservation.org/3538/2/moth-factsheets.html

In addition, Butterfly Conservation will be happy to work with the Forestry Commission to plan and target specific works.

Butterfly Conservation Response Continued

We hope that many of the actions included within our summary sheet will be specifically included within your plan and evidenced in the delivery over the coming years.

In addition to their conservation value, these woods will have particular value for the local communities and wider visitors within this densely populated part of the Forest District and the Region. This supports the importance of butterflies (particularly) as quality of life indicators and for their aesthetic, educational value, health and overall economic value. The Purple Emperor, although not a Section 41 species, has been added raised in priority because of its value to engage and inspire visitors to these particular woods.

To provide evidence of how the management is contributing to the conservation of priority species and delivering wider biodiversity targets, we would also like to see inclusion of a structured survey and monitoring programme across taxa. Butterfly Conservation would be willing to work with the Forestry Commission to establish this.

Forestry Commission Response

Many thanks for taking the time to comment on the Forest Plan for Bourne Wood and Crooksbury Common. The information on Lepidoptera you have kindly provided will help to inform our management decisions in the woodland and I will amend the document to include reference to this. Your offer of working with the FC to plan targeted works and monitoring programmes is welcome and I will pass this on to the Beat staff and District ecologist to consider in the future.

Appendix B: CSM 6 — Amendments to Approved Forest

Forestry Commission (Forest Services and Forest Enterprise) should agree baseline tolerance thresholds for operations in each District beyond which exchange of letter/map or formal amendment is required. Unless otherwise specified or agreed by the Forestry Commission, amendment will be by formal revision of the plan.

	Adjustment to felling coupe boundaries (1)	**Timing of Re-stocking**	**Changes to species**	**Windthrow clearance (2)**	**Changes to road lines (3)**
FC Approval normally not required	0.5 ha or 5% of coupe - whichever is less	Up to 2 planting seasons after felling	Change within species group e.g. evergreen conifers; broadleaves	Up to 0.5ha	
Approval by exchange of letters and map	0.5ha to 2ha or 10% of coupe - whichever is less			0.5ha to 2ha - if mainly windblown trees > 2ha to 5ha in areas of low sensitivity	Additional felling of trees not agreed in plan Departures of >60m in either direction from centre line of road
Approval by formal plan amendment	> 2ha or 10% of coupe	Over 2 planting seasons after felling	Change from specified native species Change between species groups	> 5ha	As above, depending on sensitivity

Notes on Tolerance Table

1. There are circumstances in which changes - of less than 0.5 ha for example - could have a dramatic visual effect. The above model does require a sensible approach to be taken by Forest Enterprise in notifying Forestry Commission when such cases arise. Local staff need to be sensitive to issues which may influence the situation (bearing in mind that small adjustments to felling coupes will not appear on the Public Register).
2. It is important that Forest Enterprise keep the FC informed about windblow clearance, which can be problematic in cases of public complaint, and in FC compliance monitoring. In some cases a modification of the proposals for the remaining area of the Plan may need to be submitted and approved. Clearance of blow should not require approval but will be needed for related standing trees.
3. It is recognised that roading proposals as marked on Road Plans are necessarily somewhat indicative, in that actual roading operations require to take account of features not always apparent at the time of roadline planning. Accordingly some leeway is acceptable to account for this.