

Summary

Cannock Chase Forest (2684ha) lies in Staffordshire (West Midlands) between the towns of Stafford to the northwest, Cannock to the south and Rugeley to the east. Birmingham city centre lies 20 miles south. The Cannock Forest Plan outlines the felling and restocking areas for Cannock Forest which lie in the Cannock Chase Area of Outstanding Natural Beauty (AONB). The forest plan area consists of 2,289ha of woodland (1,887 ha conifer & 402ha of broadleaves) and 395ha of open land. The plan details management operations including felling and restocking for the next 10 years with outline proposals for the next 50 years.

The main objectives for the Forest Plan are the continued production of commercial conifers and broadleaves; facilitate the 2.3 million visitors to whole of the AONB and 350,000 visitors to the Birches Valley each year through the provision of recreation facilities and services; manage the forest for the conservation of the wide range of species which are found there; conservation and enhancement of surviving elements of the historic environment within the forest landscape, the restoration of ancient woodland sites and to make the economic potential of the forest more resilient in the face of a changing climate.

The current threat to the primary conifer species in Cannock Forest from pests and diseases will lead to a diversification in species currently grown. To achieve this some of the stands of trees will be removed early before they reach the end of their rotation to reduce the threat and diversify the current stands that are dominated by Corsican pine. A combination of continuous cover management systems will be used to provide the best conditions to establish future stands. Management will have to become more reactive to change to ensure it can grow the economic, social and environmental value of the forest into the future.

The Forest Plan will incorporate any features of cultural significance, veteran trees and open woodland habitats into its design to ensure these can be maintained and conserved while forestry operations are carried out.

Forestry Operations 2015 to 2025

Woodland Name	Grid Reference	Total Area (ha)	Felling (ha)	Natural Regeneration (ha)	Restocking (ha)	Open Space (ha)
Cannock Forest	SK 001 164	2,684	306	22	258	26



Forestry Commission England - **Central Forest District**

- **Cannock Forest Plan**

Contents:	Page No.
Summary	
A Application for Forest Plan Approval	1
1. Introduction	2
Fig 1 Forestry Commission England’s Planning Strategy	3
1.1 Cannock Chase Forest – Survey Data	4
2. Management Objectives	6
3. Forest Plan Objectives	7
3.1 Woodland	
Fig.2 Current Woodland Status	
Fig.3 Current Species within Cannock Forest Plan	8
Table.1 Current Species	
Fig.4 Current Age Structure	9
3.2 Environmental	
3.3 Social	10
3.4 Restocking and Future Management	11
Table.2 Future Species Composition – 2064	12
Fig.5 Current / Future Forest Structure	13
4. Meeting and Monitoring Management Objectives	14
5. 2014 Forest Plan comparison against the 2002 Forest Plan	17
6. Consultees	18
7. Glossary	21
Appendix I – Forest Plan Brief	27
Appendix II – Key Features, Habitats and Wildlife	32

Maps

• Location Map	34
• Forest Area Names	35
• Designations	36
• Current Species	37
• Recreation / Access Map	38
• Elevation Map	40
• Key Features	41
• Concept Map	42
• Silvicultural Systems Maps	44, 52, 60
• The Felling Maps and Intended Land Use maps have been grouped together for the following areas	
• Lichfield Block	45-46
• Trig Point	47-48
• Fair oak	49-50
• Rawnsley Hills	53-54
• Beaudesert	55-56
• Chetwynd	57-58
• Bednall	61-62
• Badgers	63-64
• Hayes	65-66
• Huntingdon	67-68
• Fullmoor	69-70

A Application for Forest Plan Approval

i Plan Area Identification:

Forest District: Central Forest District
 Beat: Cannock
 Name: Cannock Forest Plan
 Nearest Town: Rugeley
 OS Grid Reference: Cannock Chase SK 001 164
 Local Planning Authority: Staffordshire

ii Designations:

Secondary Woodlands, Ancient Woodland Sites (AWS), Plantations on Ancient Woodland Sites (PAWS), Wood Pasture (WP), Site of Special Scientific Interest (SSSI), Area of Outstanding Natural Beauty (AONB), Scheduled Ancient Monument (SAM) and lies within the National Character Area Profile 67 - Cannock Chase and Cank Wood.

iii Date of Commencement of Plan

As soon as possible once approved.

Area (ha)	Conifers	Broadleaves
Felling	306	
Restocking	258	
Underplanting in Shelterwood stands *	18	
Open Space	26 (quarry)	
Natural Regeneration		22

* NB The 18ha refers to the net area of restocking that will take place within the next 10 years

Total felling area 306ha

- Forest Plan maps are attached

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

I undertake to obtain any permission necessary for the implementation of the approved plan.

Signed

Andrew Owens

FDM

Approved

Ewan Calcott

Ewan Calcott

Field Manager

North West & West Midlands Area

District

Central FA

Conservancy

NW & WM Area

Date

12.1.15

Date

14.01.2015

FDP EXPIRES 13-01-2025

Ewan Calcott

Field Manager

North West & West Midlands Area

1. Introduction

This Forest Plan (FP) is updating an older plan prepared in 2002 and provides approval for felling and restocking over the next 10 years and sets out our management proposals for the next fifty years. FP's are operational plans and although they do take into account the presence of social and environmental features, their management will be dealt with in separate documentation.

This FP's is guided and directed by a number of policies and strategies - the main documents are summarised in Fig.1. Delivering this plan will require the Forestry Commission (FC) to be responsive to shifts in our operating environment and increasingly flexible in our approach, and to sustain this responsiveness over decades to come.

.Fig 1. Forestry Commission England's Planning Strategy

National Forest Policy

The FC sets out its vision and aims for Forestry in England at a **national** level. This is outlined in the Strategic Plan for the Public Forest Estate in England.



Forest District Strategic Plan

The District Strategic plan sits between the national and local planning levels and supports the aims and objectives within the districts, according to the FE England National Policy and gives direction for the management of woodlands at a **District** level.



Forest Plans

Forest Plans are used by the FC to demonstrate sustainable forest management on the public estate in the long term and to define a 10 year programme of approved work. They explain how a **local** area of forest will be managed and why and is produced in consultation with internal and external stakeholders, and following UKWAS, PEFC and UK Forest Standards.



Operational Site Plans (Ops 1's)

Management plan for **specific operations** on site, undertaken in accordance with the above and by following national guidance as set out in the UK Forest Standard.

1.1. Cannock Chase Forest – Survey Data

Cannock Chase Forest Plan (2,684ha) consists predominantly of secondary woodland with a small area of ancient woodland, wood pasture and open heathland. It lies within an Area of Outstanding Natural Beauty (AONB) and adjacent to a Special Area of Conservation (SAC) which supports internationally important lowland heath. There is one Site of Special Scientific Interest (SSSI) which lies within the Fair oak Valley and one Scheduled Monument (a Model Trench System) at Penkridge Bank. Cannock Chase lies on a central elevated plateau. It is an unenclosed, heavily wooded landscape with a varied, often steeply sloping surface dominated by heathland and conifer plantations. The large area of plantation is complemented by broad tracts of heathland and there are long views, usually to wooded horizons but sometimes to lower ground, which emphasise its elevation. There is much local variety within the many valleys, known locally as slades. The wild character of the heaths, dotted with patches of pine and birch and dominated by heather and bracken, is a strong contrast with the surrounding cultivated ground and built-up areas. The wildness is emphasised by the small pockets of enclosed agricultural land within the heaths.

Cannock Forest plays an important role in the local economy supporting a wide range of jobs directly through the timber industry and increasingly through leisure and tourism. The demand for public access into the forest for recreation has increased dramatically over the last 10 years and there are now over 2.3 million visitors to whole of the AONB and 350,000 visitors to the Birches Valley site.

The forest lies on an elevated plateau (200m above sea level) which lies within a flat low lying landscape (60 – 100m above sea level). The western edge of the forest falls away gently and creates a shallow but visible feature in the surrounding landscape. The north-eastern escarpment of the forest is again visible from elevated land to the north but is a shallow low lying feature in the landscape. The M6 and M6 Toll run close by and the western escarpment which is 5 miles long is clearly visible to tens of thousands of motorists each day. Within the forest the greatest variation in topography is in Fair oak Valley and Beaudersert Wood where streams once cut away small valleys, with the greatest variation being just 50m. All the rocks in the immediate area of Cannock Chase are sedimentary. In the main part pebble beds lie over coal measures through the central area of Cannock Forest with Triassic sandstone and Carboniferous limestone around the outer edges of the forest. In Beaudersert to the east, coal measure clays come to the

surface. The soils are in the main infertile gravelly soils derived from the above geology. These are free draining, podsolised, neutral-acidic light soils. There are some localized variations where red mudstone is found and was once used as a brick and tile mineral. The FP area receives low to moderate rainfall levels throughout the year with an average of 681mm annually (Met office data for Penkridge, 2 miles west of Cannock Chase). With the forest sitting on a plateau that rises up approximately 100m above the surrounding landscape the western edge does receive slightly higher rainfall and the micro climate on the plateau is often damp with low cloud and mist. There are four main streams in the forest which flow all year round and five groups of small pools. Due to the free draining soils there are few wet areas within the forest and permanent open water is quite sparse over much of the forest. 162ha of open space has been created over the last 10 years mainly through the creation of heathland corridors linking the adjacent SAC that lie on either side of the forest.

2. Management Objectives

Economic - produce sustainable timber yields, encourage and support new and existing business activity associated to the public forest estate and to make the economic potential of our forests and woodlands more resilient in the face of a changing climate. Growing and diversifying our income from a wide range of sustainable activity on the estate, including non-forestry activities.



Environmental - To increase where possible the environmental contribution made by the Estate to the range of ecosystem services delivered and to protect and enhance its overall biodiversity and heritage value at both the landscape and local level.

Social - Enable everyone, everywhere to connect with the nation's trees and forests so that they understand their importance and act positively to safeguard forests for the future.

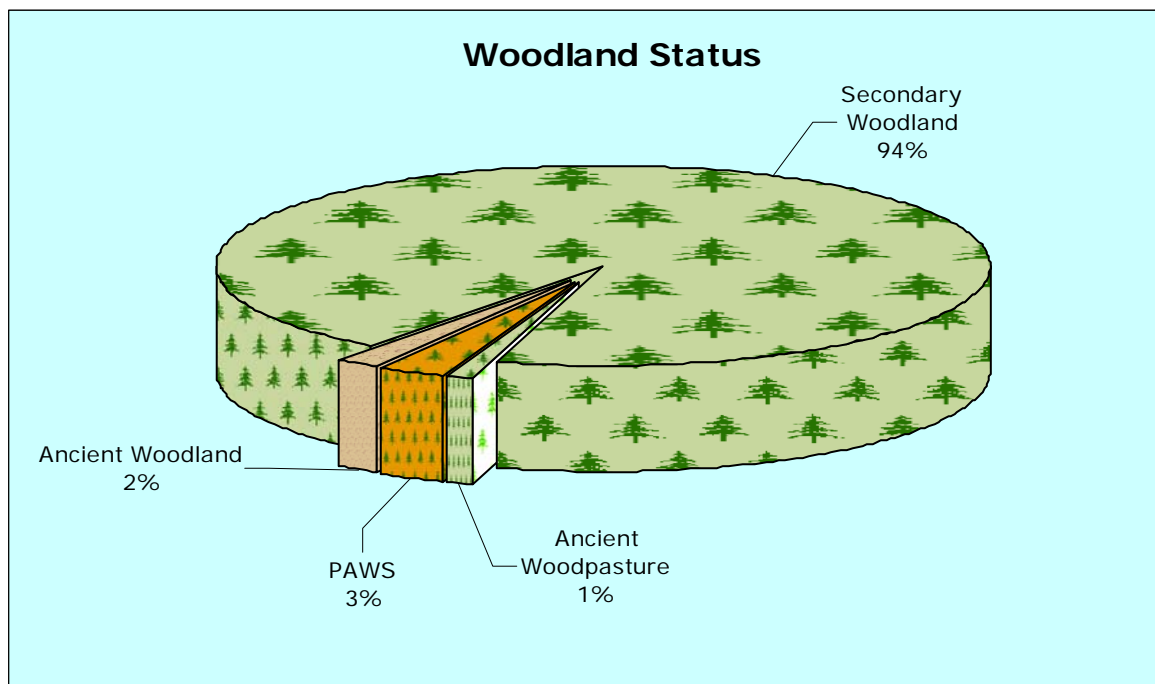


3.0 Forest Plan Objectives

3.1 Woodland

Cannock Chase forest was first planted in 1921 and is predominantly conifer (72%) with 13% covered by broadleaves. The forest has been designated as 2,530 ha of secondary woodland (94%), 72 ha (3%) of plantation on ancient woodland sites (PAWS), 52 ha (2%) of ancient woodland and 32 ha (1%) is former wood pasture. See Figure 2. Corsican pine is the dominant species covering 47% of the woodland area with Scots pine (10%), broadleaves (12%), larch (9%), other conifers (7%) with open ground / recreation and mineral use (15%) covering the remaining areas. See Fig.3 Current Species and Table 1 below. The majority of conifers have been grown on a 40 to 55 year rotation length with some stands now reaching the end of their second rotation. See Fig.4 Current Age Structure.

Fig.2 Current Woodland Status



Cannock Forest produces 19,000 m³ of timber annually which supplies local and national markets and supports a large number of jobs within the timber industry. Corsican pine was the most productive species on the gravelly soils with an average annual yield of 15m³/annum but the fungal pathogen *Dothistroma* Needle Blight (DNB) is now affecting the pine stands leading to reduced yields and in some cases tree mortality. The threat to timber production from climate change and more directly from pest and diseases is already having a major impact on Cannock Forest and Britain's forests. To ensure sustainable

timber production the present tree species will be diversified in future rotations selecting species that are more resistant to the current and increased incidence of pests and disease

Fig.3 Current Species within Cannock Forest Plan

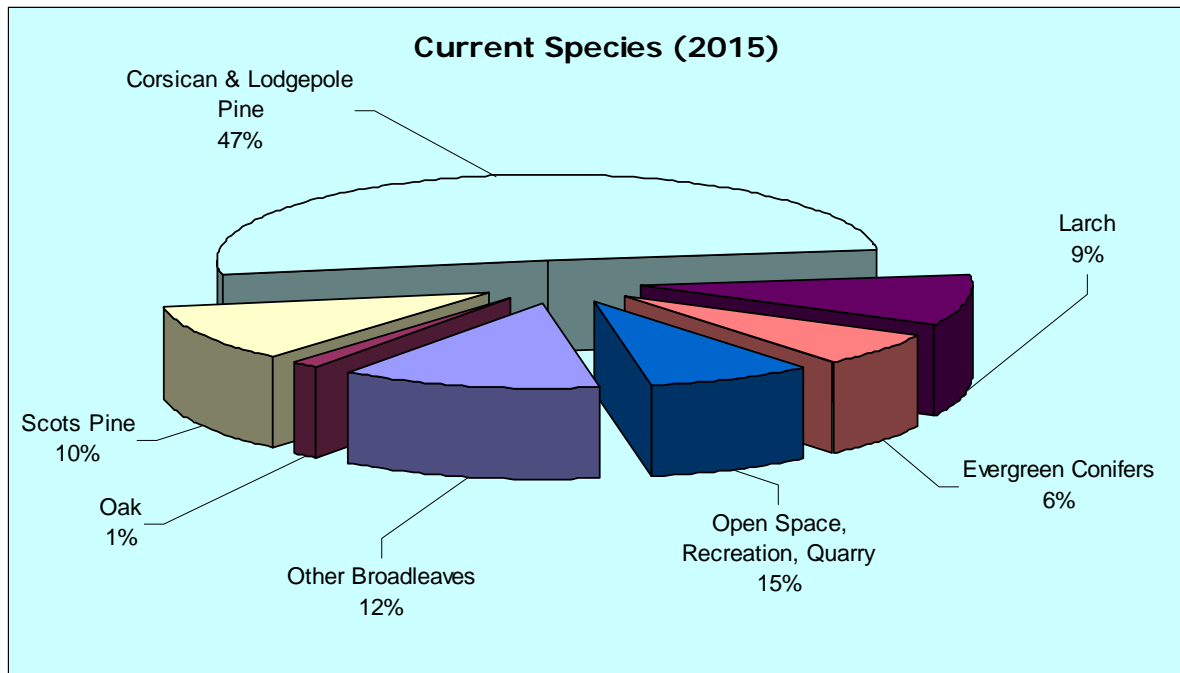
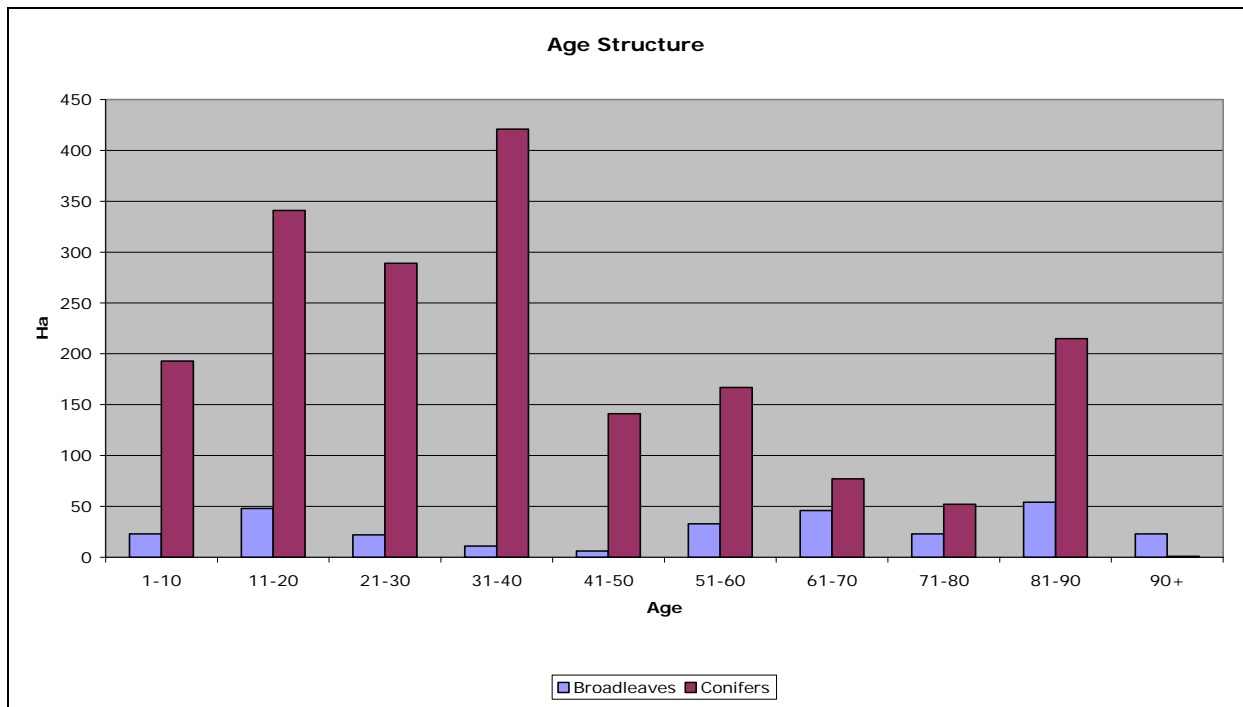


Table 1. Current Species

Other Broadleaves	316	12%
Oak	38	1%
Scots Pine	270	10%
Corsican & Lodgepole Pine	1266	47%
Larch	238	9%
Evergreen Conifers	159	6%
Open Space, Recreation & Built	202	8%
Road & Rides	60	2%
Quarry	135	5%
Grand Total	2684	100%

Fig.4 Current Age Structure



A combination of felling systems will allow a more diverse mixture of species to become established in Cannock Forest and in order to enhance the landscape character of the area. To achieve this low impact felling systems will be more widely used to establish some of the less hardy species on areas traditionally clearfelled and to encourage and utilise natural regeneration where appropriate. The PAW's areas will be gradually restored (to broadleaved woodland) in a manner and time scale that does not lead to further loss of biodiversity or cultural value.

3.2 Environmental

Cannock Forest has a wide variety of habitats including Ancient Woodland Sites (AWS), wet woodland, water features, heathland and wood pasture, some of which have been have formal designation and will be managed in accordance with agreed plans, see Survey & Key Features map. A number of the above habitats and species found in Cannock forest have been identified in Staffordshire County Council Biodiversity Action Plan (BAP) and Habitat Action Plan (HAP). The presence of HAP and BAP species (Appendix II) will be taken into account when Operational Site Plans (Ops1) are written up to conserve and enhance these key features wherever possible when forestry operations are undertaken.

Trees of special interest and deadwood habitats will be retained wherever possible in each of the woodlands to create long-term retentions. Individual and small groups of character trees if identified during management operations will be retained in perpetuity to create future trees of special interest, conserving their landscape value, increase deadwood habitat and diversify the available woodland ecosystems. 42ha of natural reserve was identified in Chetwynd coppice which is designated as a PAWS site. Operations will take place in this area to removed invasive species (over a 10 year period) and gradually return the area back to a broadleaf woodland. After this the natural reserve will be managed under a minimum intervention policy. In total 61ha of the FP area will be managed as a biological retention and management operations within these areas will be carried out for their wildlife and aesthetic values. Any timber resources utilized when these areas of forest are managed will be a secondary benefit, see Silvicultural Systems map.

3.3 Social

The Forestry Commission will continue to manage Birches Valley Visitor Centre as its key access point which links directly to Fairoak Valley. Fairoak Valley will be the focus of promoted trails and recreation facilities to help balance the impact from public access on the rest of the AONB and help conserve the special qualities of the AONB's character as a space for quiet enjoyment of a wild place. The promoted trails that leave the forest centre are designed to lead the public through the forest along interesting routes that incorporate varying terrain and views and help minimise the impact on more sensitive conservations areas. With over 2.3 million day visits to the AONB each year the forest is able to absorb large numbers of visitors in comparison to the more open habitats within the AONB

The Forestry Commission will continue to work with partners to encourage and support existing events and new sustainable business and leisure facilities that are in keeping with other objectives laid out in this Forest Plan. Forestry operations in and around the Birches Valley and Tackeroo sites will begin to be managed on a ten year rotation to help minimise the impact operations may have on our commercial partners, recreation and leisure events that take place there. 1,803ha of the forest is freehold and has now been designated as Open Access Land under the Countryside and Rights of Way Act 2000. The remaining 881ha is managed under a long term lease agreement for forestry purposes and there are some restrictions on public access into these areas, see Recreation Map.

Cannock Chase has a diverse history going back centuries to when it was a royal hunting forest. There is also an extensive network of woodbanks across the Chase that have been mapped and numerous Bell Pits used for mining in Beadesert forest. During the first and second world wars Cannock Chase was used as a training camp which has left hundreds of military remains which are of national and international significance. The most important of which is a World War 1 model of a trench system near Takeroo which has been scheduled as an Ancient Monument (SAM) and will be managed in accordance with the agreed management plan drawn up with English Heritage. The historic relics and any features of cultural significance, that have been mapped or may in the future be identified, will be conserved wherever possible and where appropriate, in consultation with the Forestry Commissions Historic Environment Adviser, English Heritage and Staffordshire County Council Archaeology team.

3.4 Restocking and Future Management

Sites due to be felled will be assessed to select the most appropriate species that will be best adapted to each site and the impacts of any future climate change whilst maintaining species diversity. No one species will dominate the future forest structure and a wider variety of species will gradually become established over the next 50 years including some mixed stands. Broadleaf stands will use a combination of restocking as well as utilizing natural regeneration where site conditions allow. Management operation will look to develop stands of high quality timber in both the broadleaf and conifer stands.

Cannock Forest produces an annual yield of 19,000 cubic metres (m³) of timber each year which can be harvested sustainably. The bulk of this volume is conifer timber which goes into fencing and building markets as well as chipwood for wood-based panels. Hardwoods are used to supply UK markets for construction and wood fuel.

Clearfell and restocking will remain an important system in regeneration the forest covering an area of 1480ha within this first period of the approved FP and 657ha will be managed using low impact felling systems. These silvicultural systems will be refined to provide the most suitable conditions to diversify and establish future stands. The size, shape, scale and timing of felling coupes have been designed in keeping with the landscape character of the area and will enhance both internal and external views of the forest and surrounding landscape.

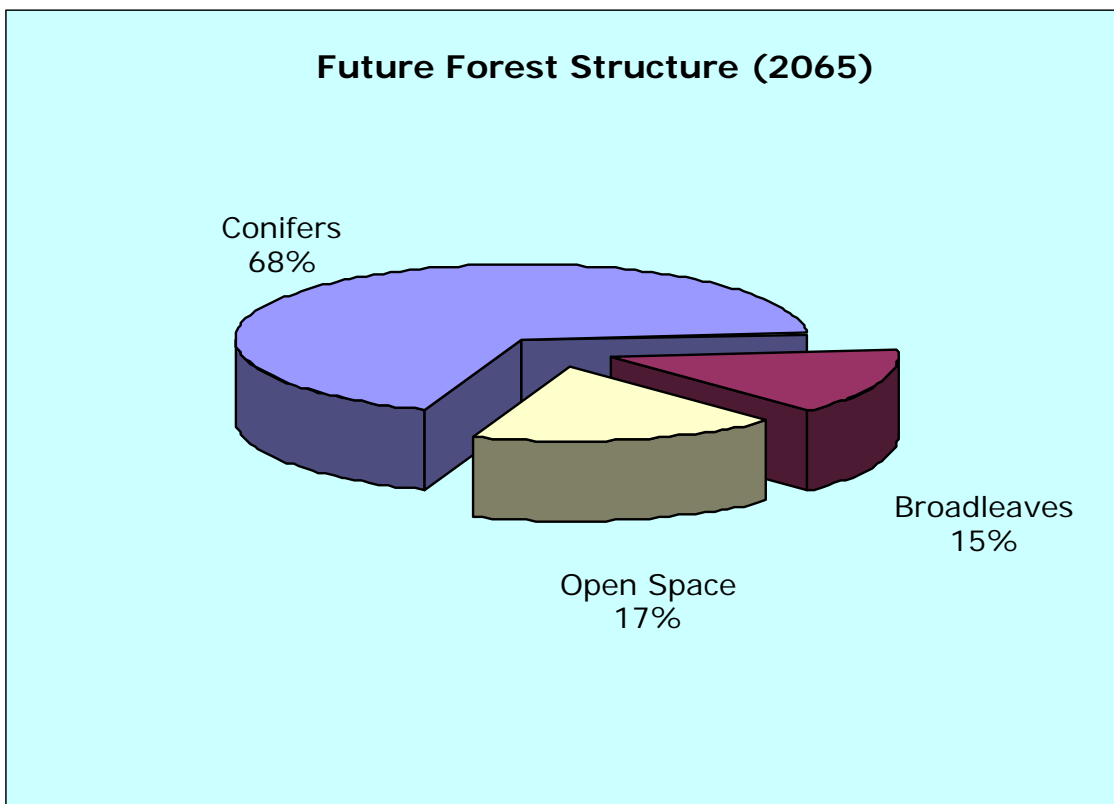
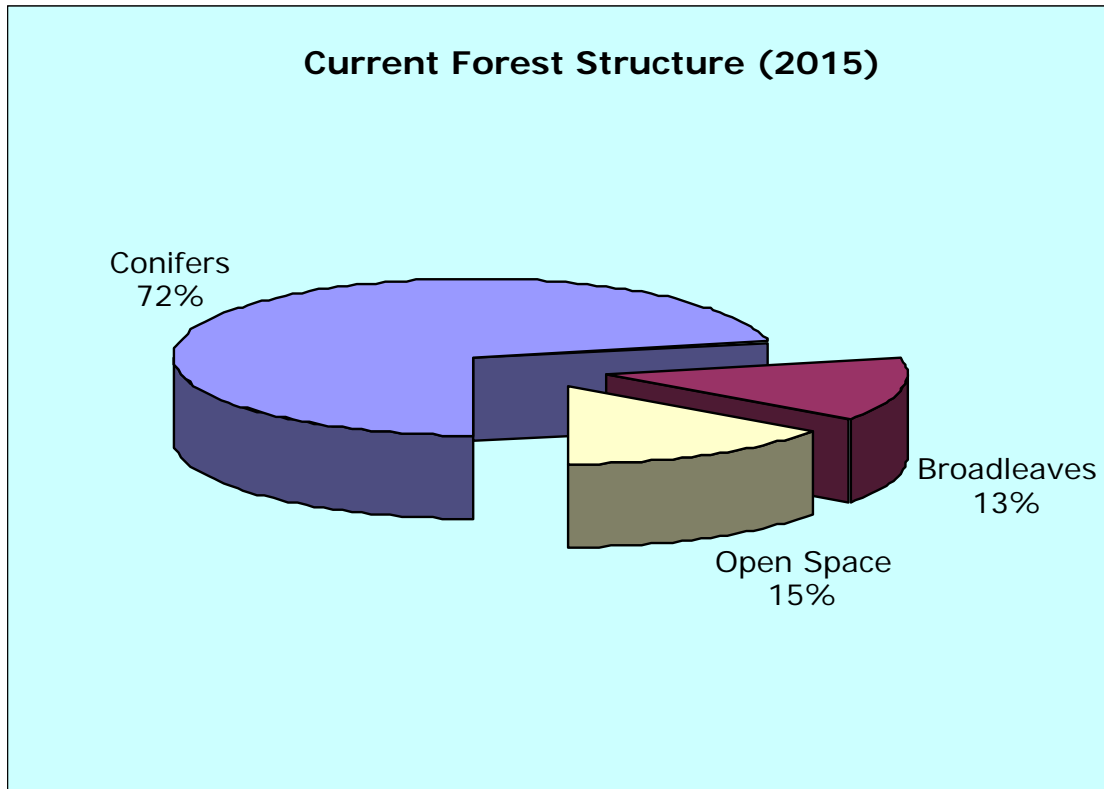
The current species now being planted (Douglas fir, western hemlock, Silver fir and western red cedar) and additional ones still to be used are increasing palatable to mammals compared to the Corsican pine and larch stands. A greater level of protection may be needed to ensure successful establishment and a combination of mammal control and fencing will be used achieve this.

202ha of the FP will be managed as open space and recreation, 70ha for roads and rides and 183ha for mineral extraction (quarries) see Table 2 and Fig.5.

Table 2 Future Species Composition – 2065

Species	Area (Ha)	Percentage
Other Broadleaves	245	9%
Oak	157	6%
Pine	331	12%
Larch	60	2%
Evergreen Conifers	1436	54%
Open Space & Recreation	202	8%
Road & Rides	60	2%
Quarry	183	7%
Grand Total	2684	100%

Fig.5 Current / Future Forest Structure



4. Meeting and Monitoring Management Objectives

Objective	Description	Proposals	Methods of Monitoring
<p>Woodland</p>	<p>The woodlands will be managed to produce commercial conifer and broadleaf timber using a variety of silvicultural systems which will be chosen to aid establishment.</p> <p><i>Dothistroma</i> Needle Blight (DNB) is now affecting the Corsican and lodgepole pine stands. <i>Phytophthora ramorum</i> is now present in the West Midlands.</p> <p>Restocking and future species.</p>	<p>Conifer stands will be managed to their economic rotation to maximise production. The planned fell years may have to be reviewed to respond and be reactive to the impacts of pests and disease.</p> <p>AWS stands will generally be managed as high forest using a low impact felling system to produce quality timber.</p> <p>PAWS will in general be managed to develop into native broadleaf high forest, with thinning and selective felling gradually reducing the non-native components to below 20%.</p> <p>Any stands badly affected by pests and diseases will be felled early and replanted with alternative tree species that will be more resilient. If <i>Phytophthora ramorum</i> is identified them as a notifiable disease and infected stands will have to be clearfelled within a short timescale.</p> <p>Conifer stands will be diversified using a range of species best suited to the site conditions and resilience to predicted climate change, pest and disease. Broadleaf stands will use both restocking and natural regeneration. AWS site will favour native species.</p>	<p>Monitored through Sub-compartment database.</p> <p>Monitor annually by beat team and at FP review.</p> <p>Monitored through Sub-compartment database</p>

Objective	Description	Proposals	Methods of Monitoring
Biodiversity	<p>Specific areas in the forest have been designated for their environmental value (SAC & SSSI) and a number of key species have been recorded in the forest including European Protected Species (EPS) as well as local and national BAP species</p> <p>There are numerous trees of special interest trees in the FP area but limited deadwood.</p> <p>Open space and heathland.</p>	<p>Future management operations and planned recreation activities will take into account the presence of these key species/habitats and the associated legislation.</p> <p>The trees of special interest trees will be retained in perpetuity wherever possible. Trees of special interest will be identified and conserved to provide future trees of special interest trees and increase the available deadwood habitat. The current and future trees of special interest trees will be surveyed and tagged.</p> <p>The areas of open space will be maintained and gradually diversified as stands are felled and woodland edge habitats diversified. Clearfell operations will create the continuity of transitional open space across the forest. The management of riparian areas will help conserve water quality and wetland habitats. Grazing and cutting will be used to maintain heathland and ride cutting will help maintain the correct habitat for moths, butterflies and reptiles.</p>	<p>Monitor annually by beat team and at FP review.</p> <p>Monitored by wildlife ranger and at FP review.</p> <p>Monitored by wildlife ranger and at FP review.</p>

Objective	Description	Proposals	Methods of Monitoring
Biodiversity	<p>Limited areas of deadwood</p> <p>Areas of Natural Reserves have been identified to provide undisturbed areas for wildlife.</p>	<p>Standing snags will be left and individual and small groups of trees will be retained beyond their economic rotation, to become trees of special interest and provide additional deadwood habitats.</p> <p>Following the gradual removal of exotic species from these areas low levels of change within the designated areas will allow the ecological development of a more natural woodland ecosystem and will be beneficial for biodiversity (high nesting birds, deadwood, indigenous flora and fauna).</p>	<p>No monitoring required.</p> <p>Monitored through Sub-compartment database Monitoring at FP review</p>
Social & Recreation	<p>The demand for access onto Cannock Chase increased over recent years.</p>	<p>The Forestry Commission will continue to manage its recreation and education facilities to cater for the demand for access and environmental education. Through planned well managed trails in the forest this will alleviate the pressure on the more sensitive SAC and SSSI areas. The Forestry Commission will continue to work in partnership with local businesses and stakeholders to facilitate the future demand for recreation and tourism.</p>	<p>No monitoring required</p>
Heritage	<p>There is one scheduled ancient monuments (SAM) within the FP.</p>	<p>The SAM will be managed in accordance with English Heritage's agreed management plan. Any other significant heritage features found will be avoided wherever possible during forest operations.</p>	<p>Monitoring at FP review</p>

5. 2015 Forest Plan comparison against the 2002 Forest Plan

The new FP is largely based on the old plan's management areas which were carefully designed to create a diverse forest structure as felling took place using irregular patterns that fitted into the local landscape. The main variations in the new FP will be the type of silvicultural systems used, the timing of felling within the existing management areas and species that will be used to restock the forest. The new forest plan has been designed in keeping with the AONB, in which the forest lies, it directly delivers many of the policies and actions within the AONB Management Plan and helps maintain the diverse forest which is enjoyed by millions of visitors each year. The plan also helps deliver the Strategic Environmental Objectives as set out in National Character Area Profile 67 - Cannock Chase and Cank Wood ensuring multiple benefits for people and place.

The expected yields from the forest has also dropped due to the impact of *Dothistroma* Needle Blight on the Corsican pine stands but through the combination of new silvicultural systems and a wide range of sustainable non forestry activities, the income generated from the forest has diversified and is still growing.

The future forest management will incorporate management patterns that are sympathetic to the sustainable recreation and leisure interests of our partner and local businesses. Through the active forestry management the FC has practiced in Cannock forest the woodland ecosystem supports now supports a diverse range of wildlife and the new FP will continue to diversify the forest structure and available woodland habitat.

8. Consultees

The consultation undertaken in the preparation of this plan has been wide ranging and extensive. Full documentation including letters, notes of conversations etc. are held at our District Offices.

Consultee	Date Contacted	Date Response Received	Issues Raised	Forest District Response to Issues
Public meeting 22 April 2013 Glyn Ward – Brocton PC	2 April	22 April 13 drop in meeting	Concerned about forestry operation south of Brotcon village	It was confirmed that these forestry operations were carried out by Stafford CC on their land.
June Jukes, William Hollins & Trevor Warburton – Friend of Canock Chase	2 April	22 April 13 drop in meeting	Appeared to be a well thought out plan	No action needed.
Ian Jones – Walton Chasers	2 April	22 April 13 drop in meeting	Would like to know more about the timing of operations to help them organise events	The recreation team at Birches Valley will keep the group informed of planned operations. But sold standing then contractors have an 18 month widow in which to work and exact timings are not always available.
Mike Turner		22 April 13 drop in meeting	Very interested to see plans and areas he has an interest in.	No action needed.
Brocton PC	12 March 14	9 May 14	Recognised and supported the FC objectives for sustainable recreation routes and habitat management.	No action needed.
Stephanie Wickison - Stafford CC	12 March 14	28 April 14	Stafford CC wanted to see a great emphasis on AONB, landscape character, mention of veterans for landscape purposes and WWI & II features, Concerned about the visual impact of felling around quarry, pleased with heathland restoration but would like to see more.	The FC wrote back to Stafford CC to identify where the final FP would be amended to make reference to the historical features, landscape character, veteran trees and heritage features. The other points raised were acknowledged and would be taken into account when management operations are undertaken and in future FP reviews.
Bernadette Noakes - Staffordshire Wildlife Trust	12 March 14	14 April 14	Staffs WT acknowledges the partnership working with FC	FC expressed its wiliness to work together with Staffs WT on future projects. The FC

			with regards to stream, riparian zone and heathland management projects and wanted to explore the opportunity to review landuse and redistribution of existing open space to create more heathland habits.	stated that it is open to discussion on future opportunities for large scale restoration of heathland habitats were compensatory planting can be found to offset the loss of woodland cover as it is felt that this would have the greatest benefit for conservation rather than small scale projects.
Ruth Hitch Cannock – AONB team	12 March 14	6 May 14	Asked for amendment to factual contact relating to AONB, visitor number, forest absorbing people and two AONB mgt plan references to be made. Listed a number of points relating to recreation, social and landscape issues.	The FC has amended the FP with regards to the factual comments raised and noted the AONB mgt plan. The landscape issues have been addressed in the original FP and the matters relating to social and recreation issue have been acknowledged but the FP is not the correct document to address these as it relates to felling and restock operations.
FE and FS	January 2015	Resolved	FE applied for an amendment to fell infected stand of 15year old CP that is now nearly dead from DNB.	FS has assessed the application and is happy to authorise this amendment as part of the approved FP.
Anthony Muller & Jaclyn Lake – Natural England	15/5/13	Ongoing	Natural England would like an appropriate assessment carried out by the FC looking at the impacts forestry operation may have had to date and in the future on the Sherbook Valley water course and surround habitats (SAC).	The FC is in consultation with Forest Research to investigate any impacts the planned forestry operation may have on the surrounding habitats and will liaise with Natural England over it findings. See below.

Amanda Craig, Anthony Muller & Ian Butterfeild (NE)	7/1/15	Ongoing	NE advises that evidence indicates that forestry may be having a significant effect on the Sherbrook Valley SAC and further investigation is required to understand the extent of this impact to enable appropriate mitigation to be put in place if necessary, and so ensuring the FDP is compliant with the requirements of the Habitats Regulations	<p>Following a meeting on 7/1/15 between NE, FE and FS, we agreed a commission for assessing the impact of forestry on the SAC habitats within the water catchment of the Sherbrook Valley and agreeing any follow up mitigation/future management that may subsequently be required.</p> <p>A technical group, to include FE hydrologist and ecologist, will meet with NE and EA representatives in March 2015 to finalise the details needed to complete a technical report to establish the level of impact forestry is having on the SAC.</p> <p>Based on the findings of the technical report the technical group will agree if forestry is having a significant effect on the SAC and if so, what measures need to be undertaken to mitigate this effect, following the HRA steps.</p> <p>To ensure there is no potential for further impact on the SAC habitats whilst this work is carried out, until the agreement on the potential impact forestry may be having on the SAC has been made, and agreement has been reached on any mitigation measures that may be required (as stated above), no replanting will be undertaken within the Sherbrook Valley water catchment following any felling operations.</p> <p>The FDP may then require amendment following conclusion of this work.</p>
36 letters were sent out to stakeholders, local residents and businesses in the area as part of the consultation exercise, signs were placed within the woodland prior to the public drop in meeting and any comments received and action to be taken or to be taken have been recorded above.				

9. Glossary

Ancient woodland sites

Sites which have been continuously wooded since before 1600 AD in England. Some of these woodlands may be primary (i.e. remnants of our prehistoric woodlands) and others will have arisen as secondary woodland on ground cleared sometime prior to 1600 AD. Ancient refers to the history of the site as woodland.

Ancient semi-natural woodland

An ancient woodland where the trees and shrubs are semi-natural, i.e. predominantly composed of trees and shrubs that are native to the site and are not obviously planted.

AONB – Area of Outstanding Natural Beauty

An Area of Outstanding Natural Beauty (AONB) is a landscape which is considered so precious that it is protected for the nation. The criteria for designating an AONB include valuable wildlife, habitats, geology and heritage, as well as scenic views.

AONB Management Plan

The Management Plan is the basis for the strategic direction of the conservation and enhancement of the AONB. Its delivery is the responsibility of Cannock Chase AONB Partnership, led by a Joint Committee of local authorities in whose area the AONB falls.

Appropriate Assessments

These are carried out as part of HRA to determine if a project or plan will have a significant effect on a Natura 2000 site.

Biological Diversity

The richness and variety of wildlife and habitats.

Biodiversity Action Plan (BAP)

Describes the UK's biological resources and details the protection of these resources, including 391 Species Action Plans, 45 Habitat Action Plans and 162 Local Biodiversity Action Plans.

Biological Retention

A habitat or woodland ecosystem that will be conserved and actively managed i.e. deadwood, coppice, wet woodland, grassland.

Canopy

The mass of foliage and branches formed collectively by the crowns of trees.

Clearfell System

The removal of all trees in one operation > 0.5ha.

Continuous Cover Forestry (CCF)

Silvicultural systems where the forest canopy is maintained at one or more level, e.g. Shelterwood, Group Regeneration, Selective Felling, Regeneration Thinnings.

Compartments

Permanent management units of land within a forest, further divided into subcompartments.

Coupes

Areas of forest that have been or will be managed together.

Cubic metres (m³)

A standard forestry unit of volume. A cubic metre is roughly equivalent to a tonne of wood.

England Forestry Strategy (now England's Trees Woodlands and Forests)

Describes how the Government will deliver its forestry policies in England and sets out the Government's priorities for the next five to ten years.

Favourable condition

English Nature's definition for an SSSI in its intended state.

Forestry Commission Guidelines

Outline the principles and standards of good management practices in forests and woodlands to enable landowners, land managers and their advisors to satisfy

Group regeneration system

A management system that allows young crops to become established under the side shelter of existing crops. Several areas of 0.1 to 0.5 ha are felled across an area to bring about natural regeneration on the ground beneath the existing tree crop. Once adequate regeneration has been achieved in these gaps, further groups of trees are removed and the cycle is repeated until the desired area is completely regenerated.

Forest Plan (FP)

An approved plan that outlines felling operation over a 10 year period, outlining proposals over the next 50 years. The FDP's are reviewed every 5 years and redrawn and approved every 10 years.

Forest Stewardship Council (FSC)

An internationally recognised body made up of non-government organisations promoting sustainable forest management to the forest industry and consumers.

Habitat Action Plans (HAP)

Habitat recognised as internationally important, for example those designated under the EU Habitats Directive; nationally or locally important.

Habitats Regulations Assessment (HRA)

Require competent authorities to carry out appropriate assessments in certain circumstances where a plan or project affects a Natura (European designated) site. This applies to any plan or project which has the potential to affect a Natura site, no matter how far away from that site. An appropriate assessment should focus exclusively on the qualifying interests of the Natura site affected and must consider any impacts on the conservation objectives of the site.

Historic Environment

These are the physical remains of every period of human development from 450,000 years ago and include earthworks, buried remains, structures and buildings.

Landscape Character

England is renowned for its rich, diverse and beautiful landscapes which have their own distinct local character. These have been shaped over many thousands of years by natural influences such as soil and landform and by generations of human activity.

Limited Intervention

An area of stable clumps or stands of trees where forestry operations are limited to those necessary to meet biodiversity objectives, on health and safety grounds and the need to protect the surrounding forest >1% of the woodland area.

Long Term Retention

Trees that are being retained beyond their economic rotation.

Native woodland

Woodland containing tree and shrub species which colonised Britain unaided by the influence of man after the last Ice Age.

National Character Areas (NCAs)

England is divided into 159 distinct natural areas. Each is defined by a unique combination of landscape, biodiversity, geodiversity and cultural and economic activity.

Natura 2000 site

Natura 2000 is a comprehensive ecological network of areas designated by the European Union member states, Special Area of Conservation (SAC), Special Protection Area (SPA) and Sites of Special Scientific Interest (SSSI).

Natural regeneration

The growth of trees from seed found in the soil or cast from adjacent trees and shrubs.

Natural Reserve Are predominantly wooded, they are managed under minimum intervention unless alternative management systems have high conservation or biodiversity value.

Natural Vegetation Classification (NVC)

A comprehensive classification of vegetation in the UK which is used to describe and assist in the evaluation of woodland habitat that would naturally occur there.

Non-native species

Trees and shrubs that have been introduced to the UK by the activities of man. Also used to describe species not native to the site and locality.

Operational Plans (Ops1)

Detailed site plans that are prepared in advance of all major forest operations and identify site constraints, opportunities and areas requiring special treatment or protection.

Plantations on Ancient Woodland Sites (PAWS)

Planted woodlands of any species on ancient woodland sites.

Public Rights of Way (PROW)

Access routes open to the public through legal designation.

Red Data Book species

Species that are included on Red Data lists published by the Joint Nature Conservation Committee (JNCC). The lists are based on a global system developed by the International Union for Conservation of Nature and Natural resources (IUCN) for classifying species according to their extinction risk.

Restocking

The re-establishment of trees where felling has taken place. Restocking may be achieved through natural regeneration but as a term, it is more usually associated with replanting.

Ride

Forestry term for unsurfaced roads, paths and tracks within a woodland.

Regeneration Thinnings

When the volume of timber removed in a thinning operation is increased to open up the canopy thereby increasing light levels onto the forest floor and assist the natural regeneration of the next stand of trees, allowing it to become well established prior to the mature stand being removed.

Special Areas of Conservation (SACs)

Strictly protected sites designated under the European Habitats Directive.

Scheduled Monuments

Nationally important archaeological sites which are protected under the Ancient Monuments and Archaeological Areas Act, 1979.

Secondary Woodland

Woodlands that have been established on land that was formally used as pasture, meadows, arable, quarries etc and has not continually been wooded.

Selective Felling

Where individual trees of varying sizes are selected and removed from a stand. The whole stand is worked and its aim is to maintain full stocking of all tree sizes and ages, from seedlings to mature trees, in any one area.

Semi-natural woodland

A woodland predominantly composed of trees and shrubs that are native to the site and are not obviously planted.

Sites of Importance for Nature Conservation (also SNCI and LNR)

A non-statutory designation, recognising a site's local importance for nature conservation. These sites are identified by the Local Authority and should be taken account of in planning.

Silvicultural Systems

Techniques of managing a forest through a variety of cutting / felling patterns and time scale.

Species Action Plan

A conservation plan under the UK Biodiversity Action Plan for species based upon knowledge of its ecological and other requirements, which identifies the action needed to stabilise and improve its status.

Site of Special Scientific Interest (SSSI)

A Site of Special Scientific Interest is one of the country's very best wildlife and/or geological sites

Sub-compartments

Areas of forest comprising a more or less homogeneous crop in terms of age, species composition and condition. Their boundaries may change as the forest develops after felling and restocking.

Strategic Plan

Serves as a guide to the management of woodlands within Central England Forest District. It divides the district into zones for the purpose of management and ensures that forestry activities reflect the local ecological, social and cultural individuality of woodland. Strategic objectives for each zone are presented within the context of the Government's strategic priorities for forestry in England (e.g. forestry for rural development; forestry for economic regeneration; forestry for recreation, access and tourism and forestry for the environment and conservation).

Succession

Applied to the natural sequence of species change on a site over time, or more simply, the following on of one thing after another. So successional open space is the open space and the plants associated with it, that persist for a short time after felling of trees.

Thinning

The removal of a proportion of the trees in a sub-compartment to improve the quality of the remaining trees, accelerate individual tree growth and provide income.

UK Forestry Standard (UKFS)

Outlines the Government's criteria and standards for the sustainable management of forests in the UK.

UK Woodland Assurance Scheme (UKWAS)

A voluntary scheme for the independent assessment of forest management in the UK. The Scheme has been developed by a partnership of forestry and environmental organisations in response to the growing consumer demand for timber products from sustainably managed forests. It has been designed to ensure that it reflects the requirements of both the Government's UK Forestry Standard - and through this the guidelines adopted by European Forestry Ministers at Helsinki in 1993 - and the Forest Stewardship Council's (FSC's) GB Standard.

Uniform Shelterwood System

A management system that allows young crops to become established under the overhead shelter of existing crops. The existing tree crop is evenly and gradually removed over time in successive regeneration fellings to bring about natural regeneration on the ground beneath.

Trees of special interest

A tree that is of interest biologically, aesthetically or culturally because of its age, or a tree that is in the ancient stage of its life, or a tree that is old relative to others of the same species.

Windthrow (or sometimes windblow)

Uprooting or breakage of trees caused by strong winds.

Yield Class

Yield class is a measure of the growth rate of a tree crop and is the maximum average rate of volume increment (increase) that a particular crop can achieve. For example, a crop capable of a maximum annual increment of 14 m³ per hectare has a yield class of 14.

Appendix I

The Cannock Chase Forest Plan Brief

The Cannock Chase FP covers an area of 2,684 ha which is primarily wooded with small areas of heathland and open space. The forest lies in Staffordshire and is surrounded by large conurbations with over 6.5 million people living within 40 minutes drive. Cannock Forest is an important feature within the landscape which produces sustainable timber yields that support a number of local businesses and contactors. The forest is able to absorb the hundreds of thousands of people who come into the forest and still provide the visitors with a sense of seclusion in a large rural landscape. The forest plays an important role in satisfying the increased demand for access and supporting the local tourism and leisure industry, with a number of new local businesses being established in the forest as well strengthening the existing tourist businesses. Subsequently the forest supports hundreds of jobs in the regional economy through the direct production of timber and the secondary leisure and recreational businesses. The approved forest plan will provide an operational plan that will deliver sustainable forest management which has been developed to find right balance of forest management based on the environmental, social and economic considerations associated to the forest and surround landscape. Cannock Forest lies within a designated Area of Outstanding Natural Beauty (AONB) and adjacent to land designated as Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI). Through the active management of the forest, heathland corridors have now been created to link the SAC and SSSI sites and the transitional open spaces associated to felling operations across the Chase support a diverse mixture of species many of which are Biodiversity Action Plan (BAP) species. The Chase has been actively managed for centuries and has a rich and diverse history being used extensively by the military with some features now designated as Scheduled Ancient Monuments.

Economic Issues

- Corsican pine is the dominant species in Cannock forest and this is now being affected by *Dothistroma* Needle Blight and *Phytophthora ramorum* are fungus like pathogens that are affecting the Corsican pine on Cannock Chase and larch within the west midlands and which will lead to reduced yields and in some cases tree mortality of both young and more mature stands of trees. This could lead to fluctuations in the regular volume of timber being harvested and may well impact on local timber producers and hauliers.

- There is approximately 200ha of ancient woodland in Cannock forest but most of this (179ha) has been cleared of native species by the 1950's and is now classified as Plantation on Ancient Woodland Sites (PAWS). Within these areas there are still some key features and remnants of the ancient woodland that will be conserved as the PAWS areas are restored back to broadleaved woodland over the next 30 years.
- Cannock produced a significant quantity of timber through a clear fell/restock system and the intention is to continue this management system to produce a sustainable volume of timber in to the future, working with diseases and through the use of alternative tree species.

Social Issues

- The landscape in and around Cannock Chase is of particular value and forms the smallest mainland AONB in the country, receiving over 2.5 million day visitors each year. Cannock Forest forms the integral part of the AONB (40%) and is able to help absorb the large number of visitors.
- The Birches Valley forest centre is the key point of access for visitors and incorporates a café, cycle centre, Go Ape aerial adventure, children's play area, disabled access routes, arts trail, toilets, the start of all the waymarked mountain bike and family bike trails. The Forestry Commission also manages a campsite, orienteering area, sled dog trail and several smaller parking areas scattered through the forest. The promoted trails that leave the forest centre are designed to lead the public through the forest along interesting routes that incorporate varying terrain and views and help minimise the impact on more sensitive conservations areas.
- The future demand for access onto Cannock Chase is set to grow further still and the Forestry Commission will, through the careful planning of routes and consultation with stakeholders ensure that the pressures on sensitive areas can be minimised, helping to preserve the AONB ecological and landscape value and ensure the FDP can deliver on its economic, environmental and social management objectives.
- The Forestry Commission will continue to develop and support the businesses that have become established in Cannock Forest and through the wide and varied range of events hosted and promoted by the Forest Commission on Cannock Chase which will help to support the leisure and tourist industry in the region.
- The forest plan will incorporate the Birches Valley forest centre and the start of the main recreational routes as key gateway sites. The future design will incorporate felling patterns that are sympathetic to the areas aesthetic value and visitor enjoyment

while maintaining sustainable timber revenue which is vital to off set the cost of providing and maintaining the visitor services.

- Cannock Chase has a wealth of historic features from many time periods. Most numerous are the mining features particularly bell pits, woodbanks and World War II military facilities. These features of cultural significance will be conserved wherever possible when forestry operations are undertaken.
- The groups of trees planted by Lord Anson in the 19th century known as Anson's Clumps will be retained in perpetuity and the surrounding woodland cover managed to reduce the risk of wind damage.

Environmental Issues

- The open corridors that have been designed to link the SAC and SSSI that lie on either side of the forest will be completed to strengthen these links and enable the heathland habitats to become more established and allow local fauna to move more freely between sites.
- The riparian areas that run through the forest will be managed to create a more varied open woodland structure that will create a diverse range of light levels and encourage a diverse range of flora. Broadleaf buffers will be created adjacent to watercourses when conifers are felled to help limit the level of nutrient released following clearfell operations (Forestry and Water guidelines). Broadleaf buffers will also be established on FC land where they border the Sherbrook Valley that lies on neighbouring land.
- Transitional open space that is created when clear fell operations take place have created important habitats that has enable a number of breeding pairs of woodland larks and nightjars, both National Biodiversity Action Plan Species, to breed successfully over the last 10 years.
- There are a number of notable groups and individual trees in the forest and these will be retained in perpetuity wherever possible.
- There is little deadwood habitat currently within the forest and opportunities to create new deadwood habitat will be taken.
- Where known to exist, appropriate measures will be undertaken during all operations to protect European Protected Species (EPS) and other flora and fauna of local, regional or national significance as per FC guidelines.
- The former wood pasture is now being opened up and this area will be cut periodically to prevent encroachment by woody species.

- The Ancient woodlands will be managed to encourage natural regeneration of native broadleaves and create a diverse woodland structure. Planting may take place where appropriate.
- The restoration of PAWS areas is now underway and exotic species are being gradually removed with native broadleaves becoming more dominant in the canopy. This work will continue until such time that the presence and impact of any exotic species does not inhibit the natural character of these PAWS woodlands.

Consultation

- Due to high levels of public use, stakeholders involvement due to the areas designation and multiple landowners, consultation will be carried out via on-site notices a public information drop in meeting and letters will be sent to statutory bodies, interested parties and wildlife interest groups.
- Formal meetings will be arranged with key stakeholders who are already working with the Forestry Commission and who have a direct involvement over management of the AONB and neighbouring land.
- The Forestry Commissions Woodland Officer will be closely involved in the plan development.
- The consultation period will run from April 2013 through to the 1 March 2014 after which time the Design Plan will be finalised and submitted onto the public register for approval.

Appendix II

Key Features Habitats and Wildlife

The table below identifies a number of the key features found in Cannock Forest, their status and stakeholders who have been involved in the surveillance and management.

Key Feature	Status	Partners
White-clawed Crayfish	BAP	Staffordshire WT
Adders	BAP	
Argent Sable moths	BAP	Butterfly Conservation
Nightjar	BAP	Midlands bird group
Woodlark	BAP	Midlands bird group
Greater crested Newts	EPS	
Bats	EPS	
Ancient woodland	HAP	
Wet woodland	HAP	
Woodpasture	HAP	
Heathland	SSSI & HAP	Staffordshire WT, SITA Trust, NE & Staffordshire CC
Trees of special interest	HAP	