



The mark of responsible forestry Forestry England forests and woodlands have been certified in accordance with the UK Woodland Assurance Standard (UKWAS)







#### Summary

The Clipstone Forests Plan covers 1,586 ha of woodland that lies 7km east of Mansfield and 20km north of Nottingham. The plan comprises of eight woodlands: Sherwood Pines (1,175 ha), Cutts Wood (42 ha), Strawberry Hill (74 ha), Golf Course (83ha), Intake (13 ha), Peafield (97 ha) Garibaldi and Cavendish (102ha) which are dominated by commercial conifer crops.

The plan lies within the Sherwood Natural Area which is relatively flat with shallow valleys and an elevation between 60m and 120m. Historically the area was managed as a mix of woodland, grassy heath and agricultural land, and today a mixture of conifer plantations, heathland, open arable fields and a strong mining heritage characterise the area. The principle geology is acidic sandstone which has given rise to a light, nutrient poor soil.

The primary management objectives for the woodlands covered in the plan are to; produce quality timber products; support local businesses and employment; improve the resilience of the natural environment to climate change; maintain and where possible improve habitats; conserve archaeological features; facilitate recreation.

Sherwood Pines is the largest single block of woodland in the East Midlands and has been dedicated as Open Access land by Forestry England who own the woodland. It now attracts over 750,000 visitors each year who enjoy a wide variety of recreation and leisure activities. The other woodland areas are managed under lease agreements for 'forestry purposes only' and no access provision is made by Forestry England in these woodlands. The woodlands support a wide variety of flora and fauna some of which are of regional, national and international importance. Historic features are scattered throughout reflecting past and more recent land uses, with one of the most notable being Parliament Oak (500+ years old) which marks the entrance to Clipstone Park, a former hunting ground used by King John.

#### **Central Forest District - Clipstone Forests Plan**

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#### 1. What are Forest Plans?

Forestry England

Forest Plans are produced by us, Forestry England, as a means of communicating our management intentions to a range of stakeholders. They aim to fulfil a number of objectives:

- To provide descriptions of our woodlands to show what they are like now.
- To show what we intend the woodlands to look like in the future.
- To detail our management proposals (felling and restocking), for the first ten years so we can seek approval from the statutory regulators.

We use some technical words and phrases in the text because they best describe what we are doing. These technical words are identified throughout the plan with an asterisk \* and their meaning shown in a glossary (Appendix I). A Forest Plan is a 'felling and restocking' plan and is written at a landscape scale and does not set out the detailed yearly management operations for each small piece of a wood, known as a coupe\*. It is not possible to say in which year a particular operation will take place, but we can say in which five-year period it should happen. Before operations are undertaken, Operational Plans\* are written by the Beat Forester before each felling and restocking operation takes place. These outline the site specific features that need taking into account when undertaking the felling and restocking operations. This forest plan does not deal with the management of recreation, ecological or archaeological features. Planning for these elements follows a different management cycle and process. Terms of Reference (page 9) are written to set out the management objectives for the plan area, how these relate to district and national policies, and how these will be monitored.

All tree felling in the UK is regulated and a licence is required before trees can be felled. The scale of tree felling in Central England Forest District, which this plan forms part of, is

such that the Forest Plan is the best mechanism for applying for this licence. Responsibility for checking that the plan meets all the relevant standards and statutes lies with the Forestry Commission. If all the criteria are met, full

approval is given for the management operations in the first ten years from the date it is approved and outline approval for the medium term vision (10 to 50 years). All of our forests and woodlands are certified to the Forest Stewardship Council® (FSC®) and the Programme for the Endorsement of Forest Certification (PEFC) standards. All Forestry England forests and woods are independently certified as sustainably managed, to continue to benefit future generations.



#### **Application for Forest Plan Approval**

#### Plan Area Identification:

Forest District:	Central Forest District		
Beat:	Sherwood South		
Name:	Clipstone Forests Plan		
Nearest Town:	Mansfield		
OS Grid Reference:	Sherwood Pines	SK 6116 6359	
	Cutts Wood	SK 6447 6261	
	Strawberry Hill Wood	SK 5826 5983	
	Golf Course Wood	SK 5916 6139	
	Intake Wood	SK 5941 6421	
	Garibaldi Wood and	SK 5792 6395	
	Cavendish and		
	Peafield Wood	SK 5707 6588	
Local Planning Authority	Newark and Sherwood District Council,		
	Mansfield District Council		

ii Designations:

Secondary Woodland\*, Site of Special Scientific Interest\* (SSSI), Rufford Abbey Registered Parks and Gardens and lies in the Sherwood —National Character Area Profile No.49.

#### Date of Commencement of Plan iii

As soon as possible once approved. Approval Date 17 January 2023

	Conifers	Broadleaves
Clear Fell	141	0
Restocking	139	2

NB - All above figures refer to the gross area to be felled and excludes thinning\* operations

## Forestry England

### **Clipstone Forests Plan 2023—2033**

Total clear fell area 141ha Forest Plan maps are attached

In addition to the above felling 560ha will be managed using Low Impact Silvicultural Systems (LISS) \*. This will be done through the removal of small groups of trees, removing no more than 40% of the stems within any single management unit/compartment over the plan period. This operation will provide sufficient light to boost growth of understorey and ground flora, allow adequate space for the development of crowns and stem form for quality timber and accelerate individual tree growth.

All of our forests and woodlands in this Forest District are certified to the Forest Stewardship Council® (FSC®) licence code FSC-

C123214 and the Programme for the Endorsement of Forest Certification (PEFC) licence code SA-PEFC-FM-006972 standards.

All Forestry England forests and woods are independently certified as sustainably managed, to continue to benefit future generations.



Fig.1 Recreational Trail through Sherwood Pines

#### 2. Review of Previous Management Plan

The management objectives set out in the 2009 forest plan have all been successfully delivered over the last 12 years;

- Produce sustainable high quality timber whilst diversifying age, species and structure of the Ι. woodland.
- Maintain and improve habitats to enhance diversity. Π.
- Monitor and protect rare and priority habitats. III.
- IV. Provide high quality recreation and educational opportunities and facilities.
- Continue to improve both internal and external landscapes. V.
- Over the last 10 years 94,725 m3 of timber has i) been produced with increased volumes coming from the phased removal of Corsican pine as strips in the last 6 years. This has created a more balanced age structure.
- The areas of transitional open space and ii) heathland support a wide variety of birds, insects and mammals. Over a dozen conifer species have been planted diversifying the future forest structure.
- Heathland, transitional open space, wetlands iii) and grasslands have all been retained and managed for conservation benefits.
- iv) Visitor numbers have increased to 750,000 each year and recreation services have been expanded to cover over night as well as day visitors.
- Felling patterns over the last 10 years have v) been sympathetic to both internal and external views.





#### 3. Management Objectives

Protecting and Expanding England's Forests and Woodlands and Increasing their

Value to Society and the Environment

Continue to grow and market commercial timber using a variety of silvicutural systems.

Ensure stands are more structurally and species diverse making them more resilient to the impacts from climate change, pests and disease.

Support local business and secondary spend by members of the public visiting and staying in the forest.

> Diversify woodland species and structure to increase diversity and habitats. Reduce impact on woodland ecology.

Continue to provide a wide variety of recreation activities and facilities to help visitors' health and well being.

Promote outdoor education through direct provision and supporting partner groups.

Manage and conserve the un scheduled ancient monuments and features of cultural significance found throughout the woodland for generations to come.

**Conserve Trees of Special** Interest (TSI) and recruit future veteran trees and increase deadwood habitat.

Improve and conserve lowland heath and wetland features.

Forestry England—what we do

We are growing the future:

We think beyond our own generation. We are developing forests today while carefully planning the future.

We are managing something that is growing, active and evolving:

What separates us from other organisations that protect the environment or historical assets is that we are always adapting; from cultural changes over time to bigger issues like a changing climate. It's a job that never stops growing—Forestry England.

#### Economic 3.1

The impact of Dothistroma Needle Blight\* (DNB) on the health and productivity of the Corsican pine that dominated the forest has led to a drop of yields and the need for early intervention and removal of infected Corsican pine. Fortunately due to the high market value of timber in the UK this has not had such a great effect on income, but will in the next 20 to 30 years lead to a significant drop off in larger log sizes. To reduce the risk, and to enhance forest resilience and adaptive capacity, a wider range of productive conifer species are now being used as part of the replanting programme. As the removal of Corsican pine continues, Forestry England will continue to introduce more species into our forests to ensure the woodland habitats can be adapted to the rapid climate change we are now seeing. This will help ensure we can provide sustained timber resources needed by society while maintaining other woodland ecosystem services\*.

To ensure new species become properly established a variety of silvicultural systems\* will be used, designed to create ideal conditions for the next rotation of trees to be established. A much wider variety of shade tolerant\* species are now being planted that will be better suited to Low Impact Silvicultural Systems\* (LISS) in this current and future cro rotations. It is hoped the use of LISS will also reduce the likely impacts of more extreme weather events. LISS will also offer greater protection to soils and ground flora by reducing the variation in micro climates throughout the day and between seasons. 42% of the forest area will still be managed under a clearfell and restocking programme to provide transitional open space for wildlife and costeffective production of timber. Table 1 shows the predicte annual production each year from both felling and thinning within each five year period.

Recreation and leisure businesses based at Sherwood Pines now play an important role in the revenue generated from the forest. The key recreation zones are in the northern half of Sherwood Pines. Here we will see a greater use of LISS to help maintain the aesthetic value of the forest and ensure forest operations are carried out at a scale appropriate to the internal landscape and leisure facilities in the area.

Squirrel damage is becoming more prevalent in the woodlands and damage from deer and small mammals needs to be monitored and controlled to ensure the forest can regenerate and trees reach maturity.

ρ	Table 1—Annual pro both conifers and br cubic meters.	oduction fror oadleaves ir
	Forecast Period	Volume m3
/	2023-2026	11,415
	2027-2031	10,712
	2032-2036	17,700
	2037-2041	10,722
d	2042-2046	11,627
-	2047-2051	10,292



#### 3.2 Social

Forestry England owns the freehold to Sherwood Pines and provides a wide range of facilities which now attract over 750,000 visitors each year. The outlying woodlands covered in the forest plan are leased to Forestry England for forestry purposes only so the only right of access the public has is along the promoted public rights of way. Under our lease agreements with the landowner there is no opportunity for the provision of leisure or educational services.

#### Fig 2. Freehold and Leasehold Land



Forest plans provide Forestry England with a licence to fell and restock its woodlands and do not cover provision for or management of recreation or educational facilities. These are mapped and considered to ensure when the felling programme is designed, the size, shape and scale of operations is in keeping with the other ecosystem services\* the forest provides.

In Sherwood Pines visitors can now stay overnight in one of <u>Forest Holidays</u> cabins or on the <u>Camping in the Forest</u> site and spend their holidays exploring the forest and enjoying the many activities on offer. Over 8,000 children have already booked educational visits in 2022 where they can learn in the living landscape.

The recreation facilities on offer include promoted trails for walkers, runners, horse riders and cyclists. Bike hire, children's play areas and aerial adventures, themed events, education activities, café, toilets and car parks.

Sherwood Pines contains a wide variety of historic features, many associated to 'Clipstone Camp' which was established in the First World War. Tens of thousands of troops were trained here before being dispatched to the front line. When the forest was planted in 1928 it has preserved many of the trenches that were built to train in. Wood banks, old enclosures and a monastic dam have also been recorded and mapped to ensure these can be conserved.



Forestry England aims to preserve these and any other features of cultural significance including more recent industrial heritage to help future generations understand the local history.

#### 3.3 Nature

The Clipstone Forests Plan covers a diverse mixture of habitats that support a wide variety of species.

The management of open space for birds, mammals and insects is a priority for Forestry England. Several areas of heathland and grassland have been identified in the management plan (see intended landuse map). These will be cut sympathetically to help maintain biodiversity.

To help link these fragmented open areas a wildlife corridor has been identified following roads and powerlines. This will be kept open and provide a corridor for fauna to move between sites. Due to the high concentration of visitors in the north-eastern part of Sherwood Pines the primary open space managed for conservation will be located in the central and southern part of the forest which has lower visitor pressure and will deliver greater benefits for wildlife.

Fig.3 Lidar images of trenches conserved within the forest



In addition to the permanent habitats on average 88ha of transitional open space will be created in each 5 year period of the plan following clearfell and strip felling operations. Monitoring by the Birklands Ringing Group has shown how important these transitional open spaces are for ground nesting birds in the first 7 or 8 years through until the new planting becomes established. The phased felling programme has been designed to ensure that



within each woodland at least one new area of transitional open space (several in the larger woodlands) is created every 5 years ensuring there is available habitat for the local ground nesting bird population and insects.

Several species of bats have been recorded in the area and use Clipstone Forests Plan woodlands for feeding and roosting. The belts of broadleaves that follow the rides and water courses will be maintained as important feeding sites and flight lines for the bats. The riparian area of fen-mire associated to Rainworth Water has been managed over the last 10 years as open space with weirs removed. The surrounding woodland management associated with Rainworth Water will focus on the development of mixed woodland aimed at benefitting a range of priority bird species. In the more open habitats associated to the heathland, grassland, wildlife corridors and riparian zones individual trees and small groups of broadleaves will be retained as song posts and to provide additional food sources for birds.

The number and distribution of deadwood habitats is relatively sparse across the plan area and when future operations are carried out opportunities will be taken to retain deadwood, where safe to do so, and recruit future TSI\*. Trees are some of the oldest and longest living organisms on the



Fig 5. Large diameter deadwood is the most valuable resource due to the long time period over which it breaks down and decomposes.

planet, provide a local genetic resource and are historic landscape features. Forestry England will identify more TSI to ensure the continuity of trees that are allowed to reach their biological maturity and gradually decay within the local landscape. These TSI will provide a valuable resource for many of the invertebrates associated to standing deadwood habitats and the birds and mammals that feed on these.

10.6ha in Rainworth Water catchment has been designated as a Natural Reserve\* for conservation. The woodland will be left to evolve naturally with minimum intervention providing a quiet area for wildlife. Active management will be limited to removing any invasive vegetation that may encroach or any remedial action needed to stabilise or make safe any trees that could compromise any archaeological features present.

#### 4. Harvesting Operations

Clipstone Forests Plan has a balanced age structure (see Fig 11) spread over the 100 years since it was created. In the new plan 12.6% of the woodland is due to be felled comprising of 187ha of clearfell and 22ha felled as part of strip shelterwood (LISS\*) across 53 sites. Felling operations will focus on the removal of infected Corsican pine stands and diversifying the broadleaved stands. 90% of the annual volume will come from conifers and 10% from broadleaves. Cutting operations will take place in all the woodlands to ensure a wide distribution of transitional open space accessible to wildlife.

If *Phytophthora ramorum* \* does spread into the forest plan woodlands within the approval period the Forestry Commission will issue statutory plant health notices\* to remove a buffer around each infected area which could mean additional trees have to be felled in the approval period of this plan. *Phytophthora pluvialis* \* is now present in the UK and affects Douglas fir and western hemlock but at present is not in the immediate area.

Broadleaf stands will be managed through a group felling system which will allow small clearings of up to 1.5ha to be created which will begin to restructure the crop, diversifying the age and species composition. The size and shape of group felling will be designed around the light requirements of the trees to become established, the aspect\* and shade cast by the adjacent stands of trees, and help create optimum growing conditions.



#### Fig 6. Current Age Range



In addition to the above felling operations conifers will be thinned every 5 years and broadleaves approximately every 10 years to ensure the trees have space to grow and develop in. Thinning operations are essential for each tree's crown and rooting systems to develop fully helping ensure the tree remains stable in the wind as they mature.

#### 5. Intended Landuse

No major changes are planned to the overall proportion of woodland habitats and the current balance of 77.5% conifers and 22.5% of broadleaves will continue over the next rotation. The biggest changes that will be seen will be in the species composition and the need to diversify both the species' seed origin and provenance to help enhance the forest's resilience and adaptive capacity. Many of the new species to be planted will be shade tolerant\* which will create new opportunities for establishment and the development of a more diverse structure within stands as well as between adjacent stands.

Within broadleaf stands the likely impact over the next century from Sudden Oak Death, Acute Oak Decline, Chalara and Phytophthora\* on the current species present poses a high risk to the woodland habitat. To reduce this risk we aim to introduce a wider range of species and genetic types from a provenance 2 to 5 degrees south of the forest plan area. These will be better suited to the predicted local climatic conditions at the end of this century.

Open grassland, heathland, woodland edges and riparian areas will wherever possible be managed to maintain and conserve the flora and fauna associated to these habitats.

### Table.2 The Clipstone Forests Plan Contribution towards Central Districtcommitments to UKWAS and UKFS

	Forest Plan Area	Forest Plan Percentage	Forest District Area	Forest District Percentage
Total Area	1586	100	27,144	100
Total Wooded Area	1390	87.6	23,909	88
Open Habitat (>10%)	178	11	3,235	12
Natural Reserves - Plantation (1%)	10.6	1	251	1.57
Natural Reserves - Semi Natural (5%)	0	0	380.9	4.81
Longterm Retentions & Low Impact Silvicultural Systems (>1%)	765	48	14,637	55.2
Area of Conservation Value (>15%) including LISS	624ha above + 62ha heathland	43	17,582	64.8

## Forestry England

#### **Terms of Reference** 6.

National Strategy	District Strategy	Forest Plan Objective	
Economy: 1) Maintain the land within our stewardship under UKWAS certification, 2) Improve the economic resilience of our woods and forests, 3) Encourage and support business activity on and around the Estate.	<ol> <li>Adapting our management practices to suit the character and requirements of local woodlands whilst satisfying national standards and business requirements.</li> <li>We will use the opportunity presented by additional, unscheduled clear felling as a result of disease control to accelerate the diversification of both conifer and broadleaf species appropriate to each local area and site type, and in some areas trialling species which may not have been previously planted in forest conditions, using a range of silvicultural systems.</li> </ol>	Continue to grow commercial timber using a variety of species that will be more resilient to the impacts of climate change, pests and diseases and maximise yields. Use a variety of silvicultural systems based around the light requirements of the trees to be established. Use strip felling to maintain adequate shade to allow more shade tolerant species to become established within the current diseased pine stands. Ensure felling operations are sustainable and planned at a scale that is sympathetic to the local businesses who are reliant on the forest to attract visitors.	Record chan subcompart Research an alternative sy degrees sour Record the ty the intensity timing of felli subcompart Review the la felling throug
Nature: 1) Improve the resilience of the natural environment of the Estate under our Stewardship, 2) Realise the potential of the Public Forest Estate for nature and wildlife, 3) Maintain and improve the cultural and heritage value of the Estate.	<ol> <li>Adapting more sensitive timber harvesting arrangements and adopting recent FC guidance on forest operations to reduce the impact of forest operations on soils and ground vegetation on sensitive sites.</li> <li>Contributing to and undertaking control programmes to limit the impact of deer and other species on woodland habitats in order to reduce the adverse impacts of grazing and disturbance to native habitats and their flora and fauna</li> <li>Where possible, work with interested parties to explore ways to maintain or improve features of cultural or heritage value to the local community.</li> </ol>	Continue to create temporary open space created through felling operations for ground nesting birds. Continue to manage and conserve wet woodland and riparian habitats for biodiversity at Rainworth Water. Identify and manage heathland habitats away from areas with increased visitor pressure. Manage open habitats associated to woodland edges to maintain a variety of flora of varying hights to link food chains within the woodland ecosystem. Identify existing locations of TSI and demonstrate appropriate management to recruit future veteran trees and increase the volume and distribution of deadwood.	Areas of tem felling operat 5 year forest Wetland, hea not be monit review proce
People: 1) Encourage communities to become involved in the Estate, its management and direction, 2) Provide high quality woodland-based recreational opportunities for people and business, 3) Enable everyone, everywhere to connect with the nations' trees and forests so that they understand their importance and act positively to safeguard forests for the future.	<ol> <li>Provide safe and accessible woodlands.</li> <li>Offering opportunities for quiet recreation and adventurous activities, to enable people to experience the potential health and wellbeing benefits.</li> <li>Developing partnership with private businesses and public bodies to expand and improve recreational opportunities across the estate.</li> <li>Creating a wide variety of opportunities for schools, groups, families and individuals to engage with and learn about trees and forests in accordance with the National and District Strategies.</li> <li>Encouraging third party environmental educators and other partners to offer learning opportunities on the public forest estate</li> </ol>	<ul> <li>Continue to work with local businesses to provide a wider range of services and facilities on site.</li> <li>Continue to develop and run a programme of events and activities at Sherwood Pines based around education and learning.</li> <li>Provide an extensive network of promoted trails for walkers, horse riders, cyclists, mountain bikers.</li> <li>Conserve features of cultural significance including earthworks and World War II features.</li> <li>Work with volunteer groups to become involved with forest management and foster a sense of ownership.</li> <li>Promote the Active Forests Programme aimed at creating a sporting habit for life for visitors through communication, partnership and engagement.</li> </ul>	Features of a conserved a England Hist Monitoring w plans are ca review. Any monitori activities pro partners will process and Forestry Eng

### **Clipstone Forests Plan 2023—2033**

#### Monitoring

iges of species in the ment database and work with Forest nd the nurseries to source pecies with seed stock from 2 to 5 ith of Clipstone FP.

type of silvicultural systems used, of thinning cuts and the area and ing operations in the ment database.

landscape impact of proposed gh 3D modelling and landscape Monitor at the 5 year review hat have taken place.

porary open space associated with tions will be reviewed as part of the plan review process.

athlands, open habitats and TSI will tored as part of the forest plan ess.

cultural significance will be and maintained in line with Forestry toric Environment PPG 57. vill take place when any operation rried out and at the 10 year plan

ing of recreational or social ovided by Forestry England or not be part of the forest plan review will be undertaken by other land teams.



#### Appendix I

#### Glossary

#### Aspect

The direction a slope faces. This can have a strong influence on the microclimate, ground vegetation, soils and hydrology.

#### Chalara ash dieback

A highly destructive fungus killing native ash trees across the UK. Young and coppiced trees will die guickly once infected, more mature ash may survive for a number of years once infected. Causes the timber to lose strength, become brittle and trees to start dropping limbs.

#### Canopy

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

#### **Clearfell System**

The removal of all trees in one operation (>0.25ha).

#### Coupes

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

#### **Dothistroma Needle Blight (DNB)**

Dothistroma needle blight is a fungal disease affecting mainly pine species. The fungus affects the needles of the infected tree, which eventually shed. This can continue year on year and gradually weaken the tree, significantly reducing timber yields. It can also eventually lead to mortality.

#### **Ecological Site Classification (ESC)**

ESC is an online tool set up by Forest Research that assists a user in choosing a tree species for a given site. The system is built on four climatic variables and two edaphic (soil) properties.

#### Ecosystem

An ecosystem includes all the living things (plants, animals and organisms) in a given area, interacting with each other, and also with their non-living environments (weather, earth, sun, soil, climate).

#### **Ecosystem Services**

Are the variety of goods and services upon which people depend, and that arise from ecosystems. Ecosystem Services are commonly categorised into Provisioning (e.g. water, food production), Regulating (e.g. the control of climate and diseases), Cultural (e.g. aesthetic values, recreational opportunities), and the underpinning Supporting services (e.g. crop pollination).

#### 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.

#### **Forestry England**

The part of the Forestry Commission that following devolution is responsible for the management of the Public Forest Estate woodlands in England.

#### **Forestry and Water guidelines**

Forests and Water is one of a series of seven guidelines that support the United Kingdom Forestry Standard (UKFS). The UKFS and guidelines outline the context for forestry in the UK; set out the approach of the UK government to sustainable forest management; define standards and requirements; and provide a basis for regulation and monitoring; including national and international reporting.

#### Forest Plan (FP)

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

Glossarv

#### Forest Stewardship Council® (FSC®)

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

#### **Historic Environment**

The physical remains of every period of human development starting from 450,000 years ago including 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.

#### Long Term Retention

Trees that are being retained beyond their normal economic / commercial age.

#### Low Impact Silvicultural Systems (LISS)

Describes a number of felling systems (shelterwood, group felling, selection systems, small coupe felling) which avoid large-scale felling coupes and which maintain forest canopy at one or more levels.

#### Native

Native trees are determined by whether the trees colonised Britain without assistance from humans since the last ice age.

#### **Naturalised**

Naturalised trees are those that have colonised the British Isles since the land divide from Europe, seen to be within their natural climatic range and are regenerating freely.

#### Natural regeneration

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

#### **Natural Reserve**

Natural reserves are predominantly wooded, are permanently identified and are in locations which are of particularly high wildlife interest or potential. They are managed by minimum intervention unless alternative management has higher conservation or biodiversity value.

#### **Notifiable Disease**

Some tree pests and diseases are notifiable, which means that, in England, they must be reported to the Forestry Commission. Notifiable tree pests and diseases are the ones that have the potential to cause the greatest damage to our trees, woods and forests.



#### Glossary

#### **Open grown trees**

Trees that have been given space to develop a large crown and natural shape as opposed to trees planted closely in a plantation managed for timber or biomass.

#### **Operational Plans (Ops1)**

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

#### Phytophthora ramorum and pluvialis

P.ramorum (<u>LINK</u>) is a very destructive algae affecting over 150 forest species with larch being most susceptive. P.pluvialis (<u>LINK</u>) first appeared in the UK in Cornwall in 2021 and is affecting mature Douglas fir and western hemlock trees.

#### Public Forest Estate (PFE)

The woodlands managed by Forestry England which would include both freehold and leasehold land.

#### Public Rights of Way (PROW)

Access routes open to the public through legal designation.

#### Restocking

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

#### Ride

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

#### **Secondary Woodland**

Woodlands that have been established on land that was formally used as pasture, meadow, 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 the aim is to maintain full stocking of all tree sizes and ages, from seedlings to mature trees, in any one area.

#### **Shade Tolerant Species**

Trees that have adapted to lower light levels and will regenerate and establish freely under the shade of the surrounding tree canopy, as opposed to light demanding species which require full sun/high light levels to establish and grow.

#### Silvicultural Systems

Techniques of managing a forest through a variety of cutting / felling patterns over varying time scales.

#### Site of Special Scientific Interest (SSSI)

A Site of Special Scientific Interest is a formal conservation designation. Usually, it describes an area that's of particular interest to science due to the rare species of fauna or flora it contains - or even important geological or physiological features that may lie in its boundaries.

#### Glossary

#### **Statutory Plant Health Notice (SPHN)**

A SPHN is a Notice that requires the destruction of the trees specified to prevent onward transmission of disease within a defined time period.

#### 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.

#### **Strip Felling**

Strip felling involves the removal of trees in rows. The width of strips will vary and several strips will be removed from one stand at a time rather than clearfelling the crop in one go.

#### 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 Standard (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.

#### **Understorey Woodland Species**

Minor tree species that live under the top canopy trees, or are pioneer species that arrive in clearings before climax tree species become established. Once the overstorey becomes established these minor species are usually restricted to the woodland edge where light levels allow them to survive.

#### **Trees of Special Interest (TSI)**

A trees 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, also referred to as Veteran or Ancient trees.

#### **Yield Class**

Yield Class (YC) is a measure of the growth rate of a tree crop on a given site. It expresses the maximum average increase in timber volume that a particular crop can achieve on 1 ha. of land each year. For example, a crop capable of annual growth of 14 m3 per hectare has a yield class of 14.

![](_page_11_Picture_0.jpeg)

![](_page_11_Picture_2.jpeg)

![](_page_11_Picture_4.jpeg)

#### **Central Forest District**

#### Location Map

The Clipstone Forests Plan comprises of eight woodlands covering 1,586ha that lie just to the east of Mansfield Town centre, Nottinghamshire. The woodlands lie on gently rolling sandstone soils in an area extensively mined for coal. Before the area was planted in the 1920's Sherwood Pines was formally known as Clipstone and Rufford Forests. Historically these were significantly wooded with a heathy character. Of the outlying woodlands Peafields was the only area of enclosed farmland. Each of the other woodland blocks due to their sloping uneven ground were heavily wooded. The plan area today is dominated by mature pine forest interspersed by broadleaves and open habitats.

The woodlands in Clipstone Forests Plan provide a wide range of forest services which include: supporting local business, employment, improving water quality, carbon sequestration, providing sustainable natural resources for society and improving the mental and physical wellbeing of the thousands of visitors who enjoy the woodlands each week.

Scale: 1:50,000

![](_page_11_Picture_10.jpeg)

### Clipsto

![](_page_12_Picture_1.jpeg)

![](_page_12_Figure_2.jpeg)

![](_page_13_Picture_0.jpeg)

![](_page_13_Picture_2.jpeg)

![](_page_13_Figure_3.jpeg)

## Forestry England

![](_page_14_Figure_2.jpeg)

![](_page_15_Picture_1.jpeg)

Trees of Special Interest (TSI\*) are very limited currently. Notable Scots pine and Oak will be retained in perpetuity. Deadwood habitats are limited currently to small diameter fallen branches and forest residue left after thinning and harvesting operations and there is no standing large diameter deadwood. A narrow belt of birch encircles the ancient woodland.

Sand Pit 1

Clipston

Phytophthora ramorum is a notifiable disease affecting larch and once infected a Statutory Plant Health Notice\* requiring the trees to be felled will be issued. Diseased trees have now been reported within 8km of the forest plan area and the risk is so significant no larch will be planted in the woodlands moving forward.

> Broadleaved woodland areas comprise of a more diverse mixture of species which includes understorey as well as climax species. The broadleaves are distributed across the forest plan area and have created a greater variety of woodland habitats amongst the commercial conifer crops that dominate each of the secondary woodlands.

Young Corsican pine stands have become badly effected by DNB\*. Visible signs include the end of needles turning reddish brown while the base remains green. In June /July spores are released from the fruiting bodies at which point the symptomatic needles are shed leaving only a tuft of the current years needles on the end of branches. The loss of needles reduces growth and yields and eventually leads to mortality in young trees.

The forest roads have a varied pattern of woodland edge habitats ranging from open heathland to short shady grasses and ferns. This has created a tapestry of wildlife habitats that are interlinked throughout the forest.

![](_page_15_Figure_7.jpeg)

Within the recreation areas and adjacent to promoted trails future felling patterns could have a significant impact on the internal landscape and consideration needs to be given to the size, scale and timing of operations.

![](_page_16_Picture_1.jpeg)

![](_page_16_Figure_2.jpeg)

## Forestry England

![](_page_17_Figure_2.jpeg)

![](_page_18_Picture_1.jpeg)

![](_page_18_Figure_2.jpeg)

![](_page_19_Picture_1.jpeg)

![](_page_19_Figure_2.jpeg)

![](_page_20_Figure_1.jpeg)

![](_page_20_Figure_2.jpeg)

20

![](_page_21_Picture_1.jpeg)

![](_page_21_Picture_2.jpeg)

#### **Central Forest District**

#### Felling Periods & Type

	Open
7//	2022-2026
111	2027-2031
	2032-2036
111	2037-2041
	2042-2046
	2047-2051
****	2052-2056
****	2057-2061
	2062-2066
	2067-2071
	Beyond 2072
	Shelterwood
	Long Term Retention (LTR)
	Low Impact Silvicultural Systems (LISS)
_	Forest Roads
	Management Boundary

![](_page_21_Picture_6.jpeg)

![](_page_21_Picture_7.jpeg)

![](_page_21_Picture_8.jpeg)

#### Designed by Alastair Semple

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![](_page_22_Picture_0.jpeg)

![](_page_22_Figure_1.jpeg)

#### **Central Forest District**

#### **Intended Landuse**

- Wildlife corridors
  - Water courses
  - Forest roads
  - Broadleaves with some conifers
  - Conifers with some broadleaves
- He
- Heathland
  - Open grassland
  - Open woodland
  - Open water

#### Scale: 1:35,000

![](_page_22_Picture_16.jpeg)

![](_page_22_Picture_17.jpeg)

Forestry England forests and woodlands have been certified in accordance with the UK Woodland Assurance Standard (UKWAS)

![](_page_22_Picture_19.jpeg)