

**HARLING**  
*THETFORD FOREST*  
**FOREST PLAN**

2015 – 2025

Contents

**Contents ..... 2**

**1. What are Forest Plans? ..... 3**

**2. Standard Practices and Guidance ..... 4**

**3. Introduction ..... 5**

**4. Design Brief ..... 6**

**5. Nature..... 8**

**6. People ..... 10**

**7. Economy ..... 11**

**8. Maps & Plan Appraisal..... 12**

**9. Summary of Proposals ..... 17**

**10. Glossary of Terms ..... 18**

**11. Management Prescriptions.....20**

**12. Tolerance Table ..... 21**

**13. Appendix A Scheduled Monument Plans..... 22**



The mark of responsible forestry

Forestry Commission woodlands have been certified in accordance with the rules of the Forest Stewardship Council.



PROTECTING  
AND EXPANDING  
ENGLAND’S FORESTS  
AND WOODLANDS,  
AND INCREASING THEIR VALUE TO SOCIETY  
AND THE ENVIRONMENT.

## 1. What are Forest Plans?

Forest Plans are produced by us, the Forestry Commission (FC), 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 explain the process we go through in deciding what is best for the woodlands' long term future.
- To show what we intend the woodlands to look like in the future.
- To outline our management proposals, in detail, for the first ten years so we can seek approval from the statutory regulators.

Our aim is to produce a plan that meets your needs for the woodland; meets the needs of the plants and animals that live there and meets our needs as managers.

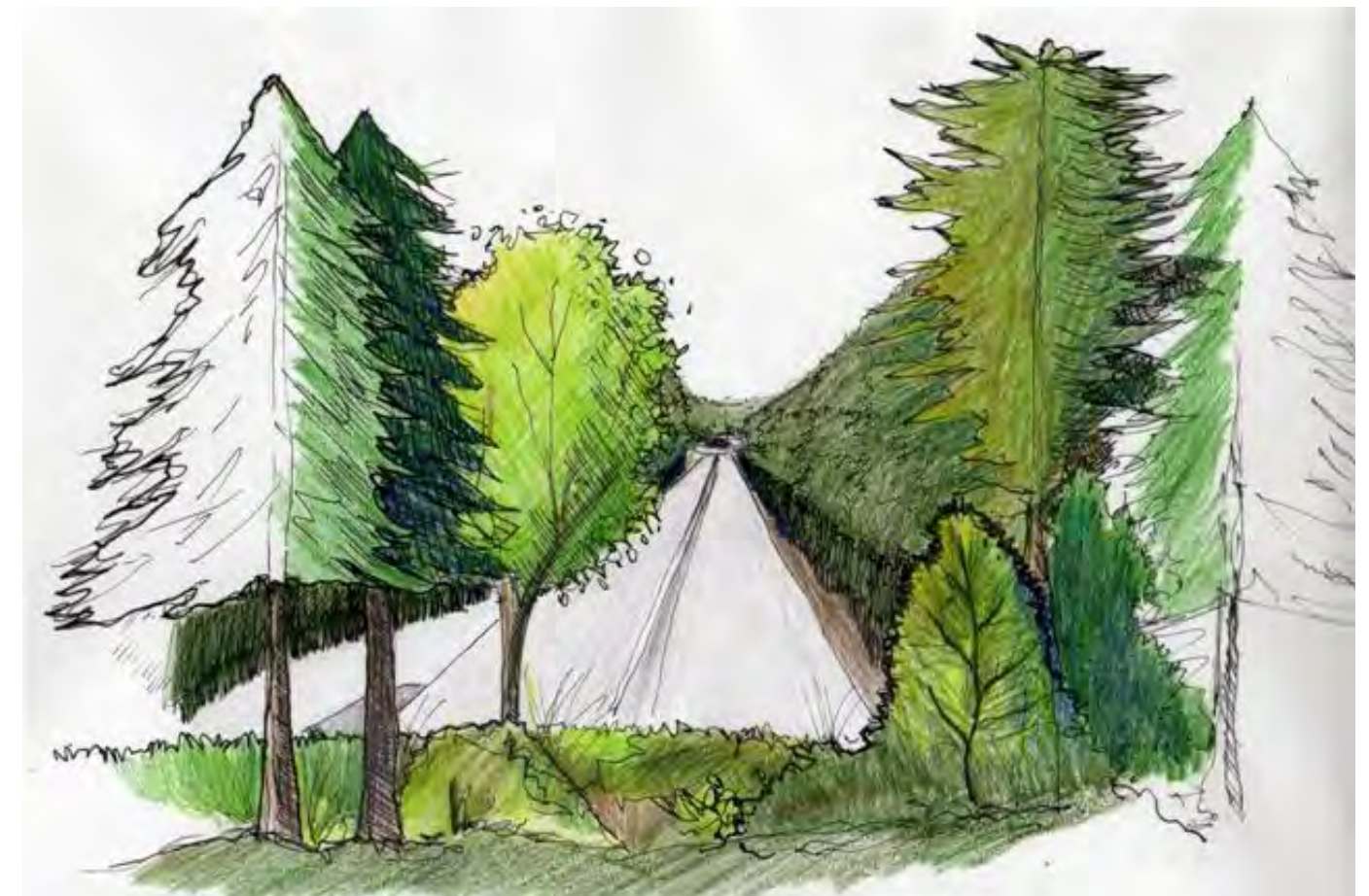
We have produced this plan to illustrate our management proposals and in the process we have created an opportunity for stakeholders to comment on the plan. We have used the information and comments we have received during the consultation period to update this final version.

This plan 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 which year a particular operation will take place, but we can say in which five-year period it should happen.

All tree felling in the UK is regulated and a licence is required before trees can be felled; the scale of tree felling in Thetford Forest 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 another part of the FC (Forest Services). If all the criteria are met, full approval is given for the management operations in the first ten years (2015 - 2025) and outline approval for the medium term vision (2025 - 2045). The plan will be reviewed after the first five years (2020) to assess if the objectives are being achieved. Natural England will approve management proposals for the Sites of Special Scientific Interest (SSSIs) and Historic England will approve management proposals for Scheduled Monuments (SMs) which lie within in our woods.

We use some technical words and phrases in the text because they best describe what we are doing. There is a glossary at the back of the plan with some commonly used technical forest terms and abbreviations these technical words are identified with an \*.



## 2. Standard Practices and Guidance

Underpinning the management proposals in Forest Plans is a suite of standard practices and guidance described briefly below. Some of these practices are strategic national policy, whilst others are local expressions of national policy to reflect the particular conditions found in East England - the policy level is indicated in brackets.

### The UK Forestry Standard\* (national)

The UKFS sets out standards for the sustainable management of all forests and woodlands in the UK and describes, in outline, good forest practice.

### The UK Woodland Assurance Standard\* (national)

The UKWAS certification standard sets out the requirements which woodland owners, managers and forest certification bodies can use to certify their woodland and forests as sustainably managed. It is the document which guides all of our management, and against which the FC is certified by outside consultants to ensure our compliance.

### Deadwood (national and local)

Deadwood is important in the forest as a habitat for birds, invertebrates and some primitive plants. Guidance is given on how to provide deadwood in the forest of different sorts and sizes and how this will be distributed.

### Natural reserves (national and local)

Natural reserves are areas of the forest where little or no active management takes place thereby creating a very different and special habitat in our otherwise actively managed forests.

### European Protected Species (national)

In August 2007 amendments to the European Habitat Directive came into force in England and Wales to protect the habitat of a number of vulnerable species. Those European Protected Species (EPS) most likely to be found in a woodland habitat include all species of bat, hazel dormouse, great crested newt, otter, sand lizard and smooth snake.

In Forestry Commission managed woodland where one or more of these species has been confirmed, the FC will manage the woodland in accordance with the good practice guidance documents that have been produced by FC and Natural England (NE). On the rare occasion when woodland management operations cannot be undertaken in compliance with the guidance, NE will be consulted and where necessary, an application will be made to undertake the operation under licence.

It is recognised that EPS can occur beyond woodland therefore the management of open habitats identified in this Forest Plan will also need to consider the presence of these species.

### Other Designations

The FC landholding in England has a wide range of European and national designations placed upon it in various locations across the country, such as;

- National Park
- Area of Outstanding Natural Beauty (AONB)
- Special Protection Area\* (SPA)
- Special Area of Conservation (SAC)
- Sites of Special Scientific Interest\* (SSSI)
- Scheduled Monuments (SM's)
- County Wildlife Sites\*

Along with the standard guidance documents, we have individual plans for our designated sites; these describe work required to maintain and enhance the protected features. We will gradually integrate these into our Forest Plans where appropriate.

In addition, the Forestry Commission has a number of practice guides and specialist bulletins which further inform our management, some of these are available to download from our website <http://www.forestry.gov.uk/>

3. Introduction

This Forest Plan covers 993 hectares of Forestry Commission land which is part of Thetford Forest in the county of Norfolk. We are guided and directed by a number of policies and strategies - the most significant being:

The Government’s Priorities

While the new Government formulates the detail underlying it’s forestry policy, FC priorities are to make sure that trees and woodlands help in meeting Government’s goals for natural resources, climate change, improved urban environments and a better quality of life for all.

Forest District Strategic Priorities for Thetford Forest

The main priorities listed below are taken from the East Anglia Forest District’s Strategic Plan which was written in 2005 and is under revision in 2015.

This plan lies within the Thetford Forest strategic zone.

- To manage and monitor SACs, SPAs and SSSIs.
- Take into account the internal and external landscape considerations for the area.
- To collate and prioritise the ideas/objectives of all teams to fully inform the Forest Plan.
- To diversify the range of restock species in response to climate change adaptation and increased threats from pests and diseases.

General Description of Plan Area

The plan area lies on the eastern edge of Breckland approximately 5 miles east of Thetford.

The whole of the plan area lies in the county of Norfolk, and is within the administrative boundaries of Breckland District Council. It falls within three parishes – the small block north of the River Thet lies within Bridgham, the main block is in Harling, and the detached southern Pheasantry and Frogs Hall Carr blocks are in Garboldisham.

A well used minor road known as the Harling Straight runs through the main block.

Most of plan area was acquired by the Forestry Commission in the 1930s apart from the woods in Garboldisham which were obtained from Metropolitan Railway Ltd in 1954. Extensive areas were wooded prior to Forestry Commission ownership.

Harling woods are currently over 20% pure broadleaf with a further broadleaves mixed amongst the conifer plantations. The wooded area within the plan is dedicated as open access land under the Countryside and Rights of Way Act 2000 (CRoW Act).

There is over 10% open space including a 50ha grazing unit forming part of the millennium partnership Brecks Heathland Re-creation Project. There is a further 40ha grazing unit along the southern floodplain of the River Thet. These grazing areas are not dedicated as open access.

The strategic priorities of the Government and the Strategic Plan for East England set the general direction for the future management of the woodland. We take these and our own local knowledge of the site to prepare a ‘Design Brief’, which sets out the main factors we need to consider within this plan. However these may be subsequently modified following consultation. The Brief is used to draw up an Analysis and Concept Map, which feeds into the rest of the Forest Plan. The whole plan is arranged around the three themes of sustainable forest management:

- Nature
- People
- Economy

4. Design Brief

Nature

- The Thetford felling plans should aim for an even distribution of felled area for Woodlark/Nightjar habitat and maintain a minimum area of 12757 ha in cyclic clearfell as required under the SPA designation.
- Implement the Thetford Open Habitat Plan through the network of rides in the forest.
- Manage Scheduled Monuments and protect other sensitive heritage features within the wood.

People

- Maintain a pleasant woodland environment for users.
- Size and shape of felling coupes to fit into the landscape.
- Promote interest in historic environment features and improve access in public locations.

Economy

- The felling plan should aim to smooth production from crops in cyclic clearfell but also meet market commitments for 2015-25.
- Restocking should aim to maximise production but also to increase species diversity and climate change resilience.
- Restock species should take soil pH into account and the threat posed by Dothistroma Needle Blight.

The following three sections will show how the objectives in the Design Brief can be delivered through the Forest Plan for the Harling area of Thetford Forest. The final section will be an appraisal of the design plan against the brief to see if all the objectives have been met and a statement regarding monitoring the progress of work as the Forest Plan is implemented on the ground over the next ten years.

## Analysis & Concept Map

Environment	Access
SSSIs - excluding Breckland Forest SSSI as this covers whole plan area, as does the EU protection as SPA	Public forest access dedicated under Countryside and Rights of Way Act (CROW)
County Wildlife Sites	Forest Road
Managed conservation rides	Third party vehicle access
Conservation grazing units	Public Road
Heathland Project site	Public Right of Way
Great crested newt ponds	FC trail
Natural Reserve	Other trail
Character or veteran tree	Rides on compartment edges
Pre FC woodland	Parking (in layby)
Scheduled Monument	Parking (in gateway)
West Harling historic parkland and moated manor (undesignated)	Public campsite
Water supply (public)	Suffolk C.C education centre
Wetland	Forest Holidays campsite
Water course (incl. drains)	Settlement
	House

## Location & Context

Forest Plan consultation area highlighted in yellow

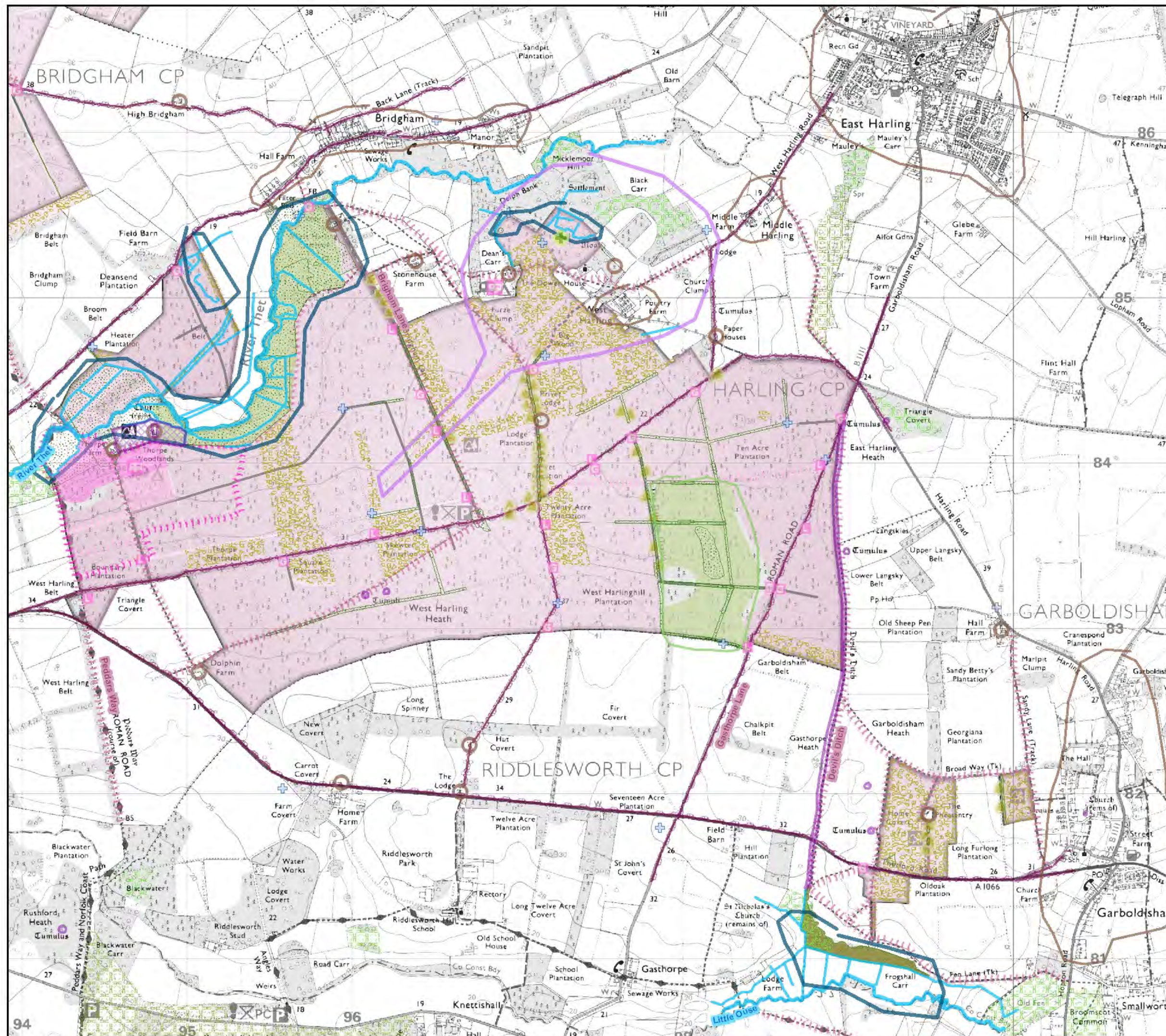


## Design Brief

**Land and Natural Environment**  
The Thetford felling plans should aim for an even distribution of felled area for Woodlark/Nightjar habitat and maintain a minimum area of 12757 ha in cyclic clearfell as required under the SPA designation.  
Implement the Thetford Open Habitat Plan through the network of rides\* in the forest.  
Protect sensitive heritage features within the wood.  
Encourage people away from the managed heathland recreation area during sensitive times of the year.

**Communities and Places**  
Maintain a pleasant woodland environment for users.  
Size and shape of felling coupes to fit into the landscape.

**Working Woodlands**  
The felling plan should aim to smooth production from crops in cyclic clearfell but also meet market commitments for 2013-23.  
Restocking should aim to maximise production but also to increase species diversity and climate change resilience.  
Restock species should take soil pH into account and the threat posed by Dothistroma Needle Blight.



5. Nature

Location and Ownership

Harling is a freehold area of Thetford Forest situated between Thetford and Harling.

Site Characteristics

The main block lies along a plateaux at 30m above sea level. The north of the block falls gently to the 15m contour floodplain of the River Thet. The highest points are two 40m rises on the south edge of the main block. The Bridgham block on the north side of the River Thet is below the 20m contour. The Garboldisham woods are on a gentle spur falling from the 30m to the 20m contour in the floodplain of The Little Ouse .

The floodplain soils are peats and gleys. The higher ground has characteristic Breckland mix of deeper acidic sands and shallow calcareous soils.

The overall climate is generally mild with very warm summers, but the area can experience very low winter temperatures; spring and early summer frosts are common. These factors, coupled with relatively low rainfall (520 - 640 mm/year) create an almost continental climate.

There are water supply boreholes and Environment Agency supplementary boreholes within the forest, to take advantage of the lower ground water nitrogen levels than in surrounding farmland.

Existing Habitats

Coniferous Forest

Most of the wooded area of the plan is conifer forest, with Pine being the predominant species. The mature forest areas are used as breeding habitat by several different species of raptor and other Schedule 1 birds such as Firecrest.

Broadleaf Woodland

Unlike large parts of Thetford Forest, a relatively high proportion of Harling Woods is broadleaf. This reflects their history - over 15% was wooded before the Forestry Commission acquired the land, much of this area had tree cover by 1840. There are several surviving old pollard trees and avenues.

Deadwood

A proportion of dead trees are left standing after clearfelling, providing they are regarded as safe; these become important standing deadwood habitat. A lot of fallen trees are left to rot down where they fall, it is important not to 'tidy up' these fallen trees from a biodiversity point of view as shaded rotting wood is important habitat for invertebrates. Part of Frogshall Carr is designated as a natural reserve.

Ponds and watercourses

The plan area falls within the catchment of the River Thet and the Little Ouse. The boundary of the main block runs along the southern bank of the River Thet for

approximately two miles, and for half a mile the Bridgham block runs along the north bank. There are seasonally wet ditches and pools in the floodplain. The Garboldisham block has seasonally wet ditches and pools in the Little Ouse floodplain.

Otters are well-established on the rivers in this region, and great crested newts have been recorded in the ponds at West Harling.

Open space

The tenanted grazing units (including a heathland re-creation site) and network of wide forest rides provide around 11% open space. Neighbouring land is generally intensively managed arable land, although an increasing amount is entering environmental stewardship schemes, particularly along the river valleys and eastern forest edge. The importance of linking these areas is recognized and a project called the 'Thetford Forest Open Habitats Plan' is underway looking at linking the larger open space areas utilizing wide rides as 'ecological corridors', which will be managed for biodiversity.

Protected Sites

Most of the plan area has been designated as a Special Protection Area (SPA) under the European Habitat Directive. The two birds of interest are the Woodlark (*Lullula arborea*) and Nightjar (*Caprimulgus europaeus*).



## 5. Nature and the Historic Environment

These birds nest on open ground and rely on the clearfell tree harvesting system to generate suitable nesting habitat. As a result of the SPA designation the area notified as a Site of Special Scientific Interest (SSSI) has been increased to match the SPA, although parts of the forest had already been notified as SSSI for significant assemblages of rare Breckland plants and invertebrates.

The SPA designation protects the breeding habitat of Woodlark and Nightjar and therefore impacts on the clearfell programme across Thetford Forest. This revision of the Forest Plan will try to smooth the 'supply' of breeding habitat over time by amending the felling dates of the clearfell coupes to produce an annual area of clearfell close to the sustainable mean for the forest. This is illustrated in a bar graph in the appraisal and monitoring section.

### Open Habitats

The 'Thetford Forest Open Habitats Plan' aims to focus open space around a ride network managed for conservation and will utilize data from the Breckland Biodiversity Audit (2010) to make links along rides that already have high levels of biodiversity and contain a wide range of rare species. The Thetford Forest Open Habitats Plan will be completed during 2015 and incorporated into Forest Plans through formal amendments where necessary.

### Safeguarding our Heritage

The Forestry Commission acquired the main block of Harling Forest in 1930, adding the woods at Garboldisham in 1954 from the Metropolitan Railway Ltd. Over 15% of the plan area was already woodland when the Forestry Commission took ownership, the remainder was predominantly farmland.

In common with much of Thetford Forest, a number of designated and undesignated historic environment features survive in the plan area. These reflect human settlement patterns over thousands of years and how land uses have influenced their survival.

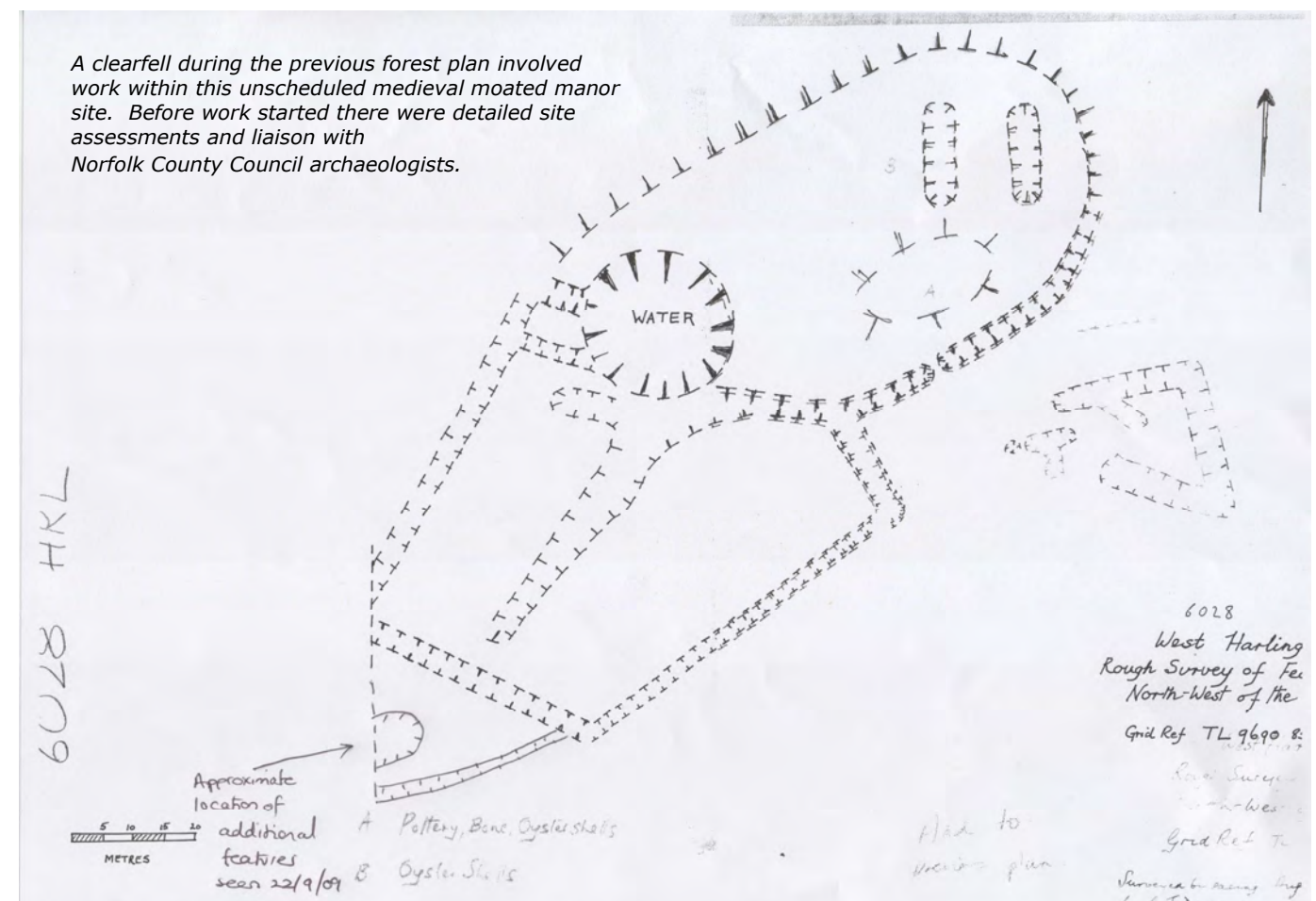
Designated Scheduled Monuments are legally protected under the Ancient Monuments and Archaeological Areas Act 1979. The Forestry Commission accepts our responsibility to protect them and manages them through close working relationships with Historic England. This Forest Plan forms part of the formal management agreement with Historic England (see Appendix A for Scheduled Monument descriptions and site objectives; management actions are included in work programmes).

There are three designated sites in the plan area — an Iron Age boundary feature

known as Devil's Ditch (English Heritage ref. N79; 1003794), two burial mounds on West Harling Heath (English Heritage ref. N137; 1003996) and the remains of a medieval church and village at Thorpe (N337; 1003921).

The numerous undesignated features include prehistoric burial mounds, field boundaries, a moated manor and parkland at West Harling.

Several historic routeways pass through the woods approximately north/south



between the River Thet and Little Ouse and are still used as by-ways - the Peddars Way, Bridgham Lane, Gasthorpe Lane and along the Devil's ditch.

Cultural and heritage features are considered in detail during operational site assessments rather than within this plan. These assessments allow us to plan operations to improve the preservation of a features and take opportunities to enhance their setting. Sensitive management of historic features also contributes to other environmental and social objectives.

6. People

Access and Recreation

Just over 80% of the plan area (the land under woodland) has been dedicated for unrestricted public access on foot under the Countryside and Rights of Way Act 2000. The Peddars Way long distance trail passes along the west edge and other rights of way cross the woods. The Roman Road to Gasthorpe is part of the “Quiet Lanes” network.

There are several places to stay in Harling Woods. The Forestry Commission Forest Holidays Cabin site is in the west next to the deserted hamlet of Thorpe. Suffolk County Council have an activity centre close by. Both groups maintain trails for their users. The Dower House campsite is on neighbouring private land in West Harling, accessed though the woods.



In Harling Woods the Forestry Commission make no formal provision for access, although there is informal parking in many gateways along the roads and Bridgham Lane. The woods appear to be well-used by locals and campers.

A recent Europe wide study has shown that people who visit forests prefer to see stands of large mature trees, both of broadleaves and conifers. This study confirms our own management policy of retaining some over-mature trees and managing them under a continuous cover system, especially in areas with high public access.



Community

There are isolated hamlets and estate houses within and neighbouring the woods. The plan area is close to East Harling, a village of over 2000 people, and smaller satellite villages within walking distance of the woods.

There are rights of access through the woods to private houses/campsites/Environment Agency Monitoring sites and powerline wayleaves.

Landscape

The woods sit in a predominantly arable landscape, but are complimented by the frequent wide tree belts and copses in the river valleys.

For nearly a century the landscape of Thetford Forest has been ever-changing; from the 1920’s onwards tree planting on a huge scale created one of England’s largest lowland forests and from the 1970’s, when the trees started to reach maturity, the timber from the forest has been harvested. The present day landscape of Thetford Forest is a patchwork of trees of different ages intermingled with wide rides and open spaces.

As the age structure of the forest has altered it has been possible to assess the visual effect of the larger clearfells of the 1970’s and 80’s. These early clearfells were 25 – 30 hectares in size and can dominate the landscape. It is now agreed that a fell area of around 15 hectares fits better into the landscape, providing visual diversity while retaining the economies of scale for our forest operations. In areas of high public access smaller coupes are often used to add variety to the landscape.



Forest Plans have been used in Thetford Forest for more than 20 years; leading to a change from rectilinear felling shapes to more ‘organic’ shapes that follow natural or historic boundaries resulting in more of the forest becoming a mosaic of interlocking shapes composed of trees of different ages and species. There are just a few large rectilinear areas left to ‘redesign’ but most of the Thetford Forest is well on the way to becoming a well balanced and sustainable multi-purpose forest.

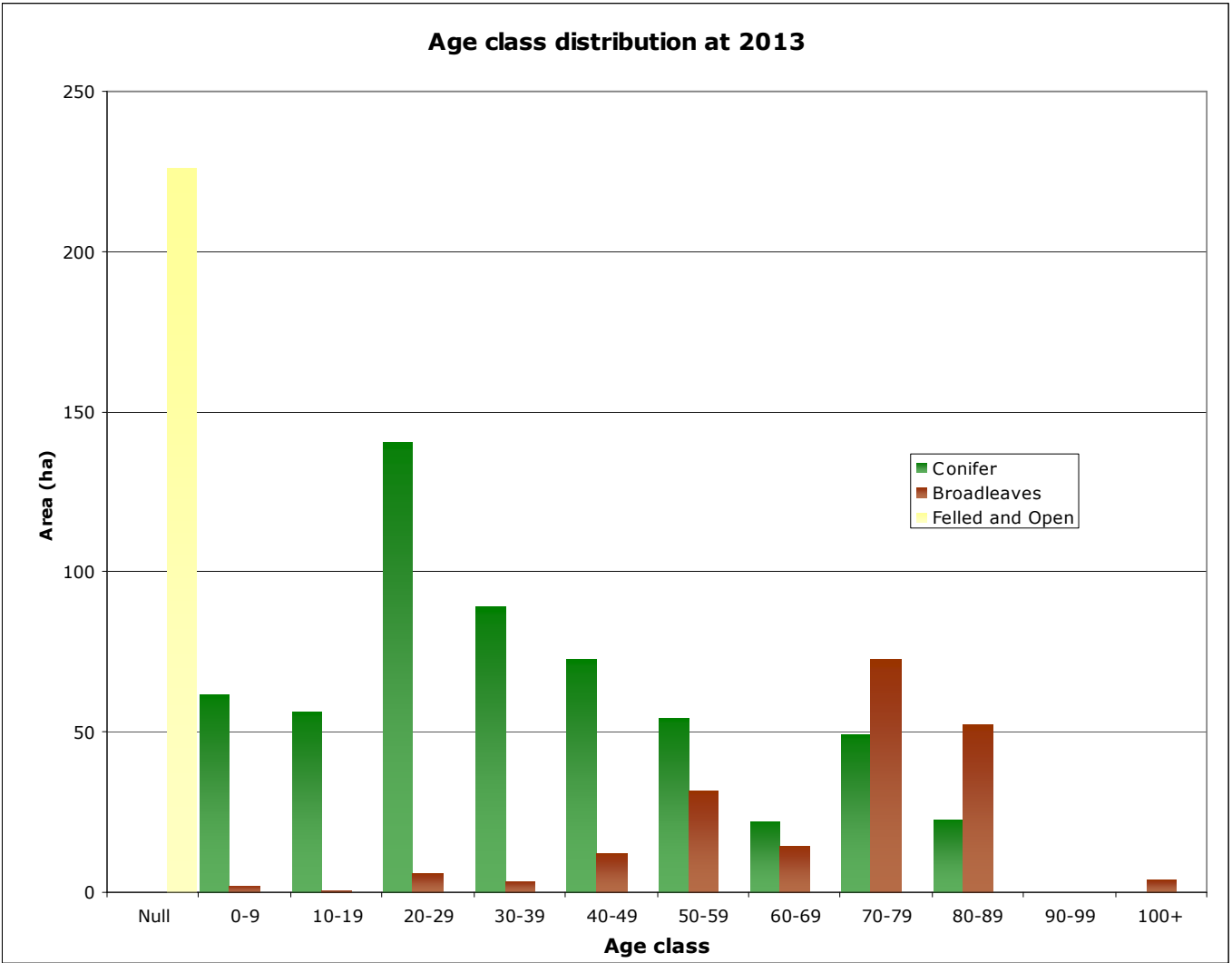
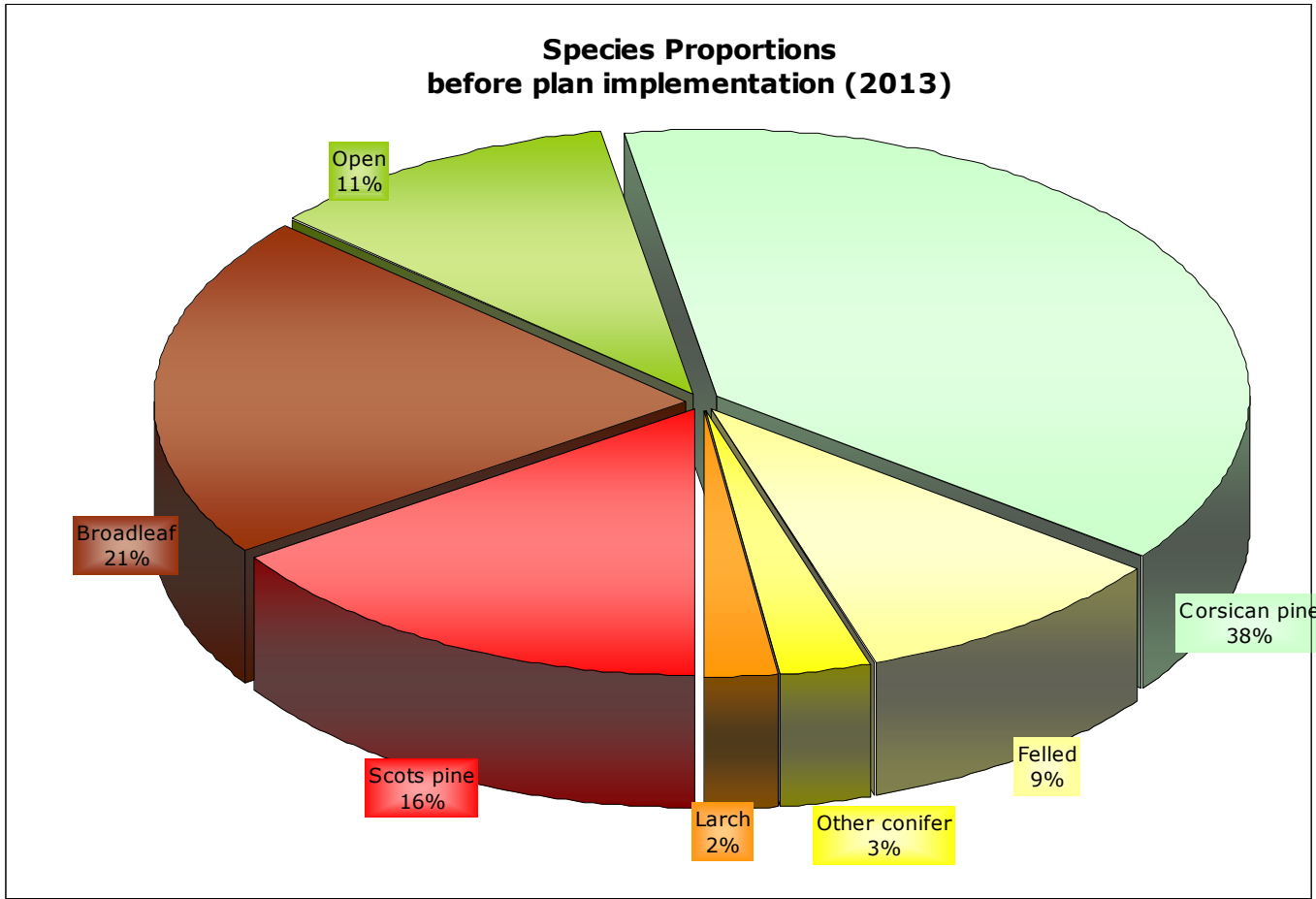
7. Economy

Tree Species

Thetford Forest is predominantly a pine forest; this genus was chosen as both Scots and Corsican pine are particularly well suited to the soils and climate in Breckland; growing fast and producing good quality timber. The heavy reliance on pine, particularly Corsican pine, has its downside as Dothistroma Needle Blight (aka Red Band Needle Blight) has now spread across the forest; Corsican pine is particularly susceptible to this disease; Scots pine is also affected but to a lesser extent. The effect of DNB is to reduce the number of needles held on the tree and also to reduce the efficiency with which the remaining needles photosynthesize, leading to poor growth and in the worst cases killing the tree but this relatively rare. Ongoing research is guiding our silvicultural decisions.

Over a fifth of the plan area has broadleaves as the main species, occurring in belts and small blocks. In addition, some stands have a significant amount of naturally regenerated broadleaf.

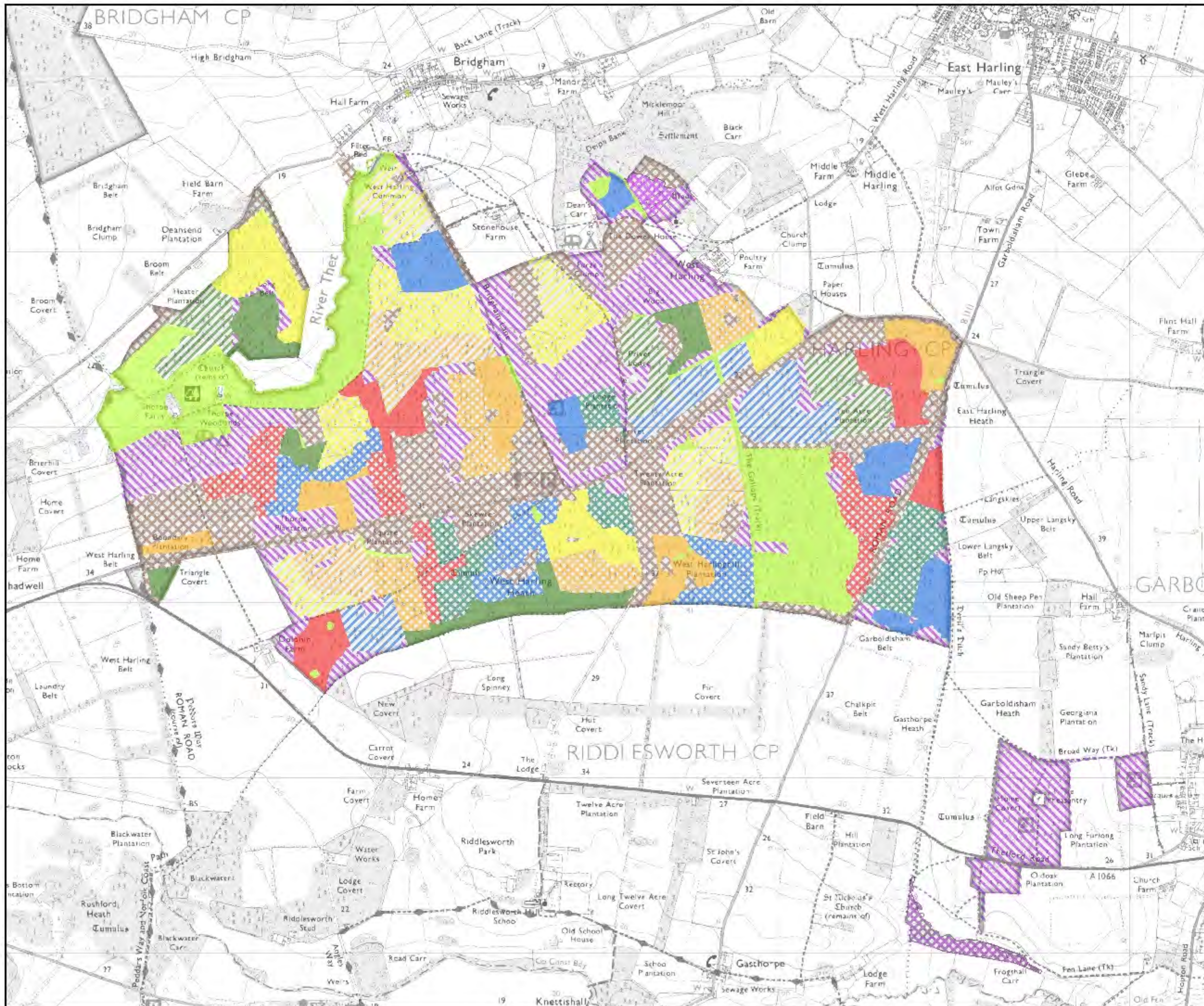
There is a Forestry Commission Research weather station at Thorpe, and a long term European environmental monitoring plot.



Age Classes

The bar chart above illustrates how past management of the woods has perpetuated the condensed initial establishment phase—resulting in the current limited spread of tree ages. Some of the original pine plantings and broadleaf belts remain.

The design brief is to 'smooth' the felling of the second rotation so that the age class distribution becomes more evenly spread over a period of 60 to 70 years. This equates, approximately, to a rotation\* of trees and will move the forest forward on a more sustainable basis.



Forestry Commission  
England

East England Forest District

Harling

## Management Map

### Legend

- Clearfell 2017-2021
- Clearfell 2022-2026
- Clearfell 2027-2031
- Clearfell 2032-2036
- Clearfell 2037-2041
- Clearfell 2042-2046
- Clearfell 2047-2051
- Clearfell 2052-2056
- Clearfell 2057-2061
- Clearfell 2062-2066
- Clearfell 2067-2071
- Clearfell 2072-2076
- Clearfell 2077-2081
- Clearfell 2082-2086
- CCF - Conifer
- CCF - Broadleaves
- Minimum Intervention
- Open/Other

Produced by the Planning Team  
October 2014

© Crown copyright and database  
right [2013] Ordnance  
Survey [100021242]



1:20,000



Forestry Commission  
England

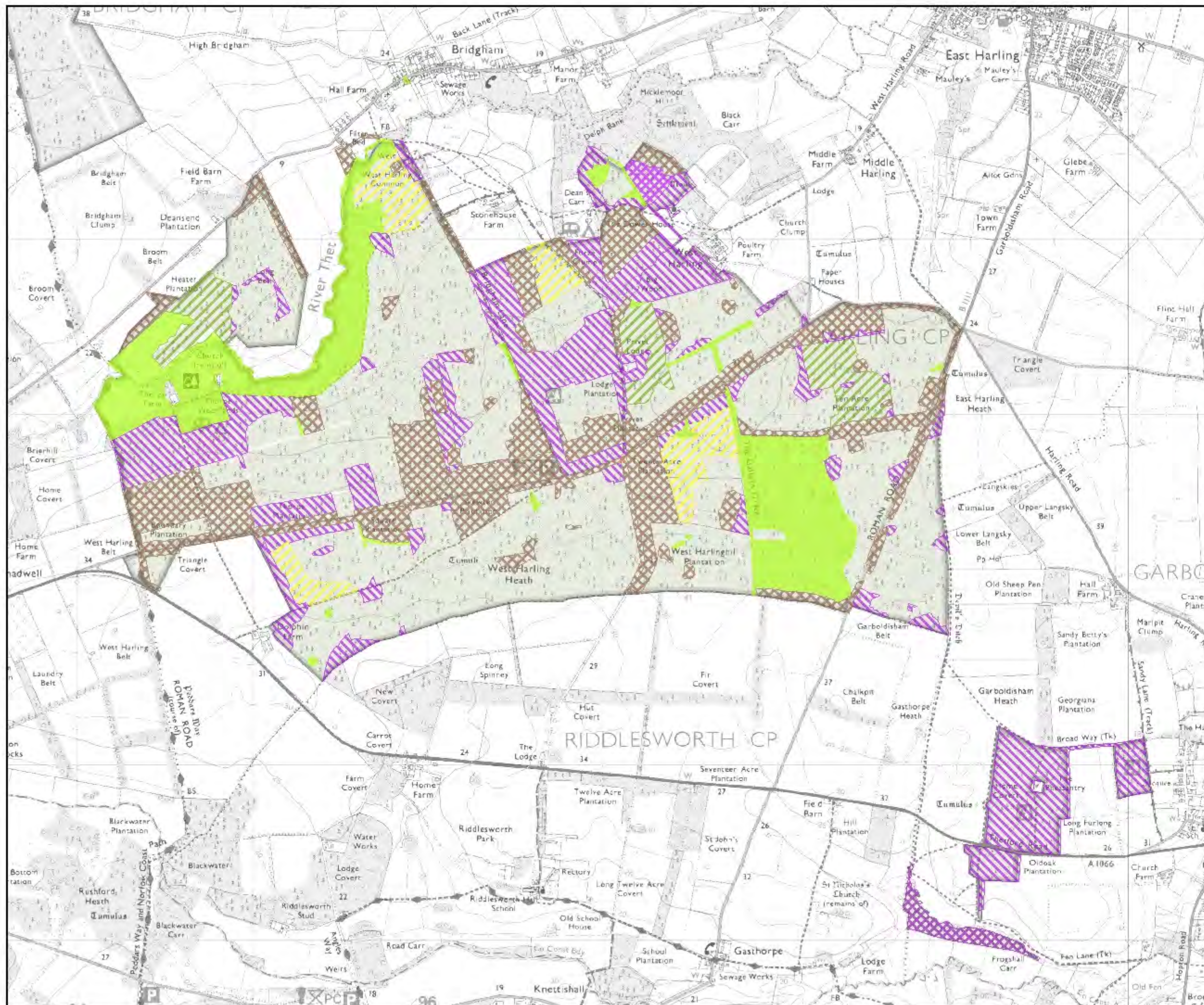
East England Forest District

Harling

**Management Map  
Showing felling  
periods falling within  
the 10 year plan  
approval date**

### Legend

-  Clearfell 2017-2021
-  Clearfell 2022-2026
-  CCF - Conifer
-  CCF - Broadleaves
-  Minimum Intervention
-  Open/Other



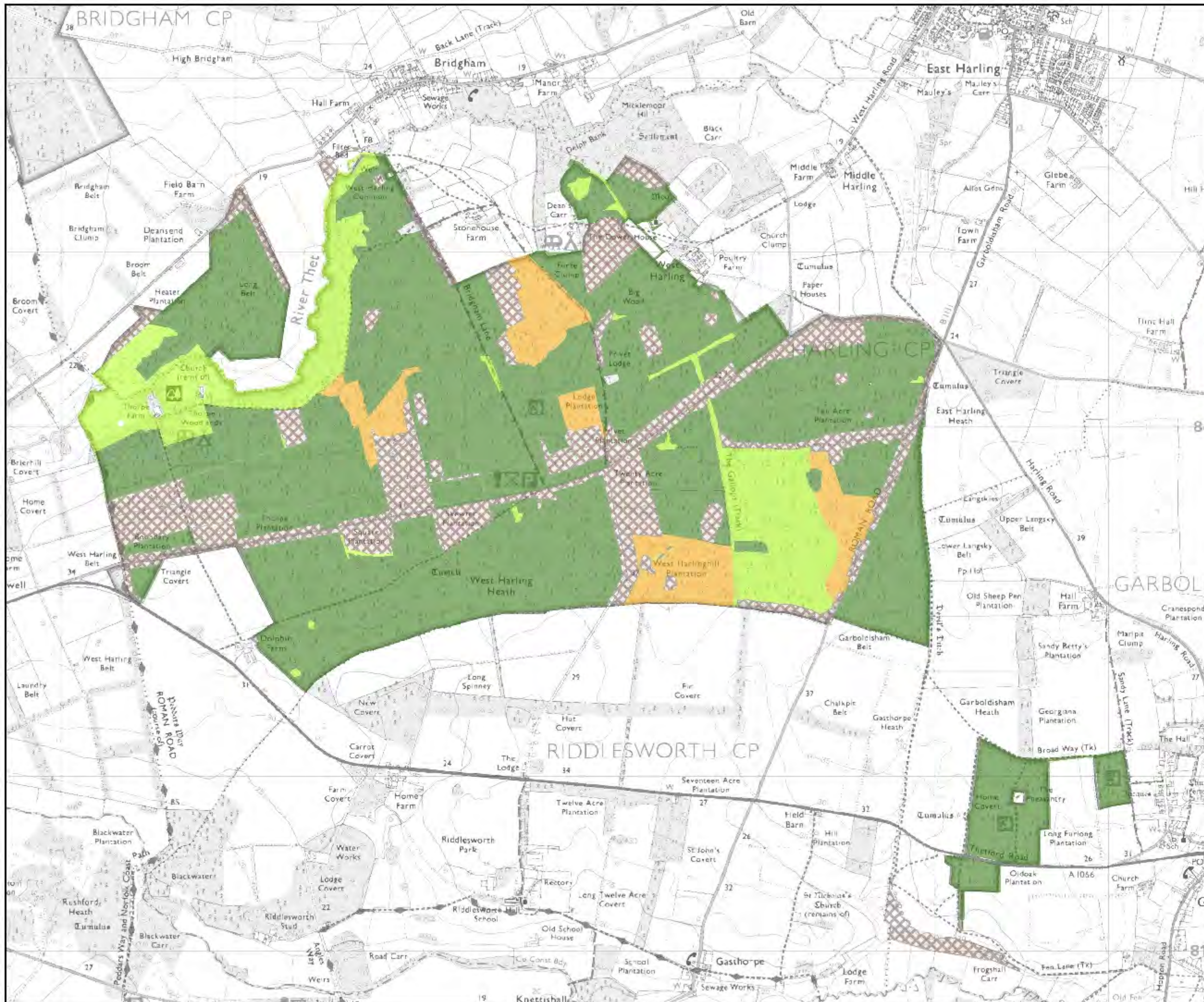
Produced by the Planning Team

October 2014

© Crown copyright and database  
right [2013] Ordnance  
Survey [100021242]



1:20,000







Forestry Commission  
England

East England Forest District

Harling

## Habitat Map

### Legend

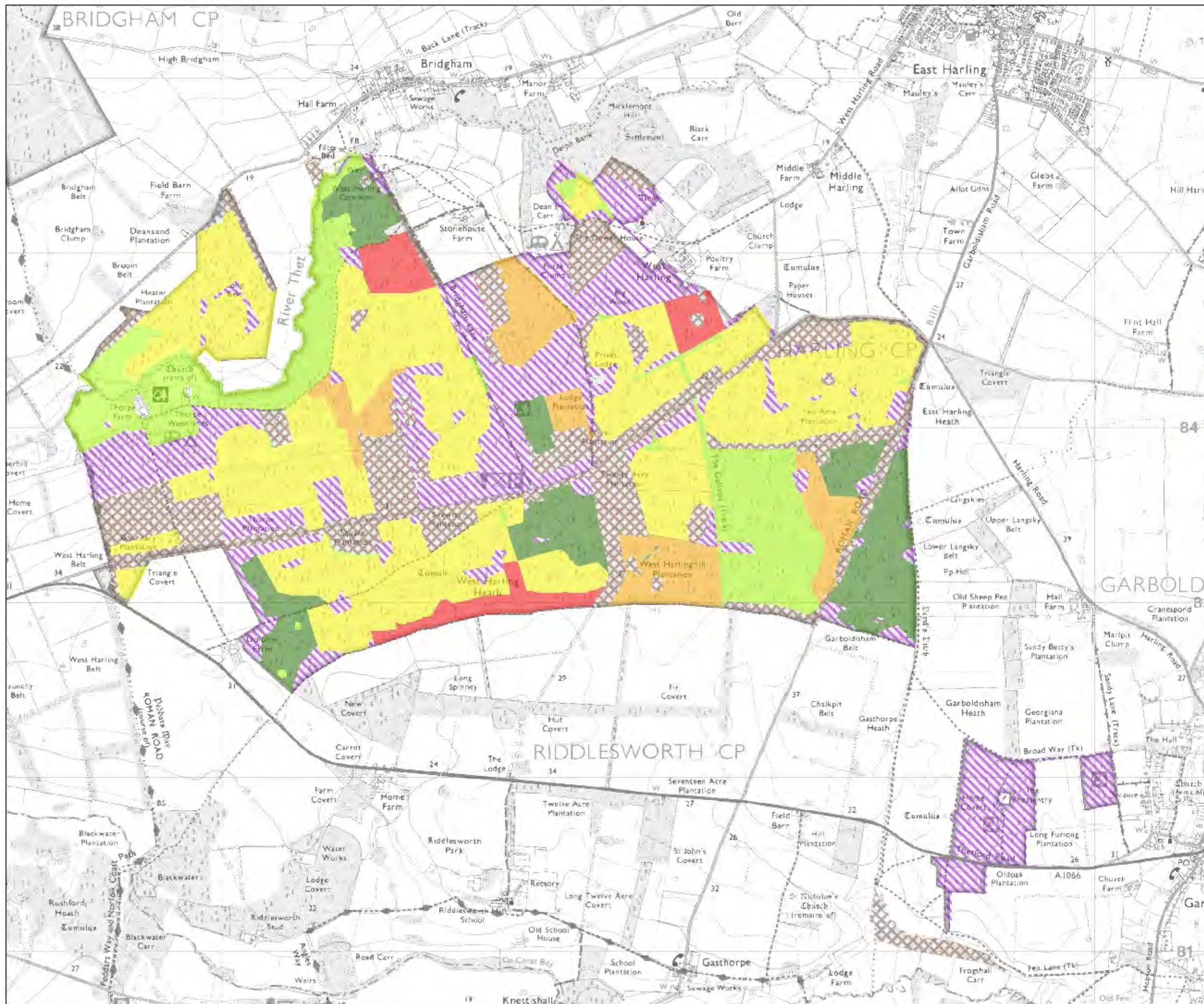
-  Broadleaf woodland
-  Evergreen conifer woodland
-  Deciduous conifer woodland
-  Permanent Open Space

Produced by the Planning Team  
October 2014

© Crown copyright and database  
right [2013] Ordnance  
Survey [100021242]



1:20,000



Forestry Commission  
England

East England Forest District

Harling

# Habitat Map showing provisional restock species

## Legend

- Larch
- Scots pine
- Douglas fir
- Other conifer
- Broadleaves
- Mixed conifers
- Permanent open space

Produced by the Planning Team  
October 2014

© Crown copyright and database  
right [2013] Ordnance  
Survey [100021242]



1:65,437

8. Plan Appraisal

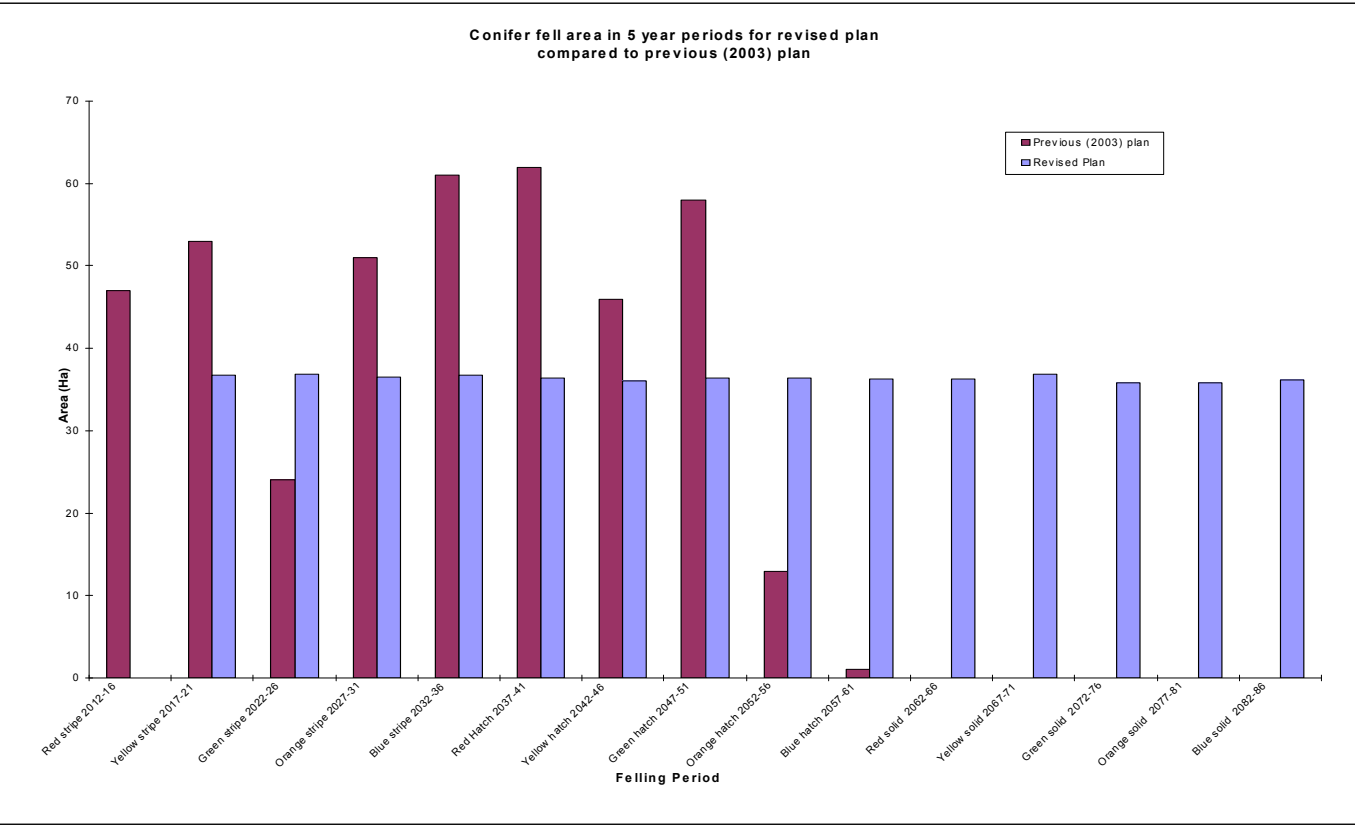
The appraisal of the revised plan is measured against the design brief on page 6, this has three separate sections and the appraisal relates to these sections:

Nature

The felling comparison chart below shows how the revised plan has ‘smoothed’ the creation of felled area over the long term so that Woodlark and Nightjar habitat is more evenly distributed. Just under 95% of the clearfell area is in coupes larger than 5ha.

- Trees cannot be harvested at the optimum age due to the uneven age of conifers (see bar chart on page 11) — some areas will be felled early, others late.
- Coupes allocated to the “red stripe” period of the existing plan are now felled so have been allocated a fell period beyond the end of the existing plan.
- The broadleaves and over mature conifer are being retained to maintain the woodland’s character.

Unfortunately the analysis work involved in the Thetford Open Habitat Plan is more complex than envisaged so the plan is not available to dovetail with this revision. It is still the intention to use the plan as a guide to creating linkages between existing open space, but this will be a separate project.



People

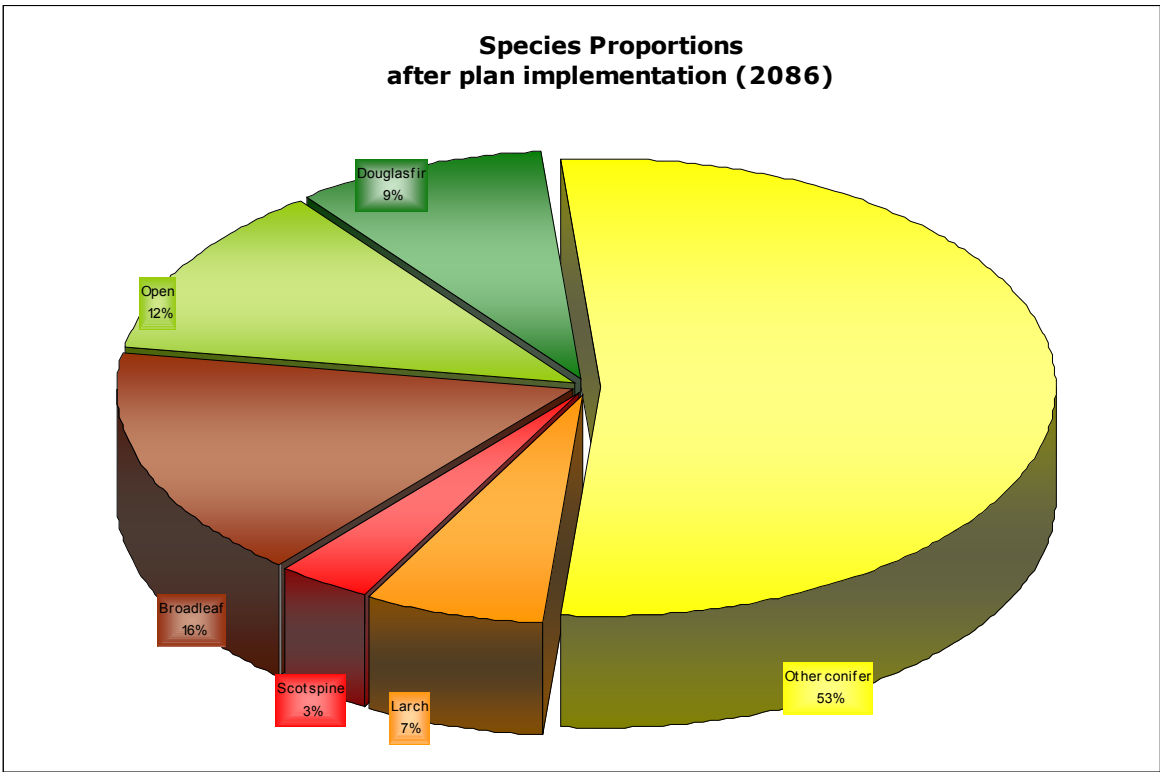
It is difficult to assess how pleasant a woodland environment as it is subjective, but maintaining mature woodland should create a pleasing environment for forest users and viewers. Restocking with a wider variety of species will increase visual diversity.

The size and shape of the coupes planned for felling can be seen on the management maps on pages 12/13; the average size of these coupes is 9.7ha and the continued use of organic shapes blend well into the landscape.

Economy

The objective to smooth timber production while continuing to meet market commitments complements the objective for provision of SPA habitat. The plan attempts to balance smoothing the area to clearfell in a period with optimising the timber value at clearfell. In the revised plan almost 95% of the stocked clearfell coupes are programmed for felling close to their optimum marketable size between age 45 and 70.

The pie chart below shows the projected species proportions by the end of the plan period, when compared the to the current species proportions (page 11) there is a significant increase in the diversity of tree species across the plan area.



## 9. Summary of Proposals

The increase in restock species diversity should increase the resilience of the forest to climate change and the threat from pests and diseases.

The habitat map on page 14 gives an indication of the split between conifer and deciduous trees across the plan area; Larch is separated out because it is a deciduous conifer. The habitat map on page 15 indicates provisional restock species based on soil maps. Restock species will be confirmed by a site assessment after felling—soil pits and vegetation surveys will be used to ascertain the optimum species for the coupe taking into account prevailing knowledge of species performance and pathology concerns.

### Monitoring

To monitor compliance with the felling plan, after a coupe is felled the shape is captured on the ground using a GPS\* receiver and the data is uploaded into GIS\*. The resulting point data is then compared to the original coupe shape to confirm that the felling coupe has been accurately laid out on the ground.

To monitor compliance with the restocking plan, the forest district database is updated at replanting to show the newly planted species and their proportions. As part of this updating process the restocking information is compared with the Habitat Plan to confirm compliance. The restocking area can vary slightly from the plan as physical features come to light only after felling. Most of these minor changes are within the tolerances agreed between Forest Enterprise and the Forest Services – see Tolerance table on page 21. A felled coupe is usually restocked two years later, when all the ground preparation and weed control has been completed.

To monitor timber sustainability, a stocking assessment is carried out to measure establishment success after five years.

Ongoing monitoring of the SPA is undertaken by surveying woodlark and nightjar numbers; the results inform subsequent Forest Plan revisions and site management prescriptions.

**Date of commencement of the plan:** *approved date*

**Expiry Date:** 26 / 8 / 25

**Mid-Term Review Date:** 26 / 8 / 20

I seek approval to clearfell and restock 74ha of the Public Forest Estate (this is the area in yellow and green stripe fell periods—i.e. 2017-2026, all felling from the previous red stripe period has been completed).

I also seek approval to selectively fell up to 90ha within an area of 351 hectares (for the purpose of continuous cover forestry) during the period 2015 to 2025 as shown on the enclosed plans.

Signed ..... 

**FOREST MANAGEMENT DIRECTOR—Forest Enterprise**

Date ..... 10 July 2015

Signed ..... *N. Jones (Field Manager)* on behalf of :-

**REGIONAL DIRECTOR—Forest Services**

Date ..... 26/8/15

Signed ..... 

**13 April 2016 —Historic England**

Date .....

10. Glossary of Terms

**Biological Diversity**

The richness and variety of wildlife and habitats.

**Canopy**

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

**Compartments**

Permanent management units of land within a forest, further divided into sub-compartments. The compartment boundary usually coincides with a road or ride.

**County Wildlife Sites (also SINC 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.

**Coupes**

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

**Cubic metre**

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

**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 Forestry Commission policy.

**GIS**

Geographic Information System - computer program that enables the FC to hold and display all the district’s inventory, landholding and crop information. All the maps in this document have been produced using GIS.

**GPS**

Global Positioning System, which uses information from satellites to accurately locate a position on the Earth.

**Habitat Action Plans**

UK wide plans for priority habitats defined under the UK Biodiversity Action Plan. They contain quantitative targets for conserving, restoring and expanding the habitats.

**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.

**Historic Environment Action Plan (HEAP)**

Sets out the requirements for the sustainable management of all historic environment sites.

**Historic Environment Record (HER)**

The definitive database of all known Historic Environment remains which is managed by the County Archaeology Service.

**Native woodland**

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

**Natural regeneration**

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

**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 Site Assessment (OSA)**

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.

**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.

**Rotation**

The period, in years, that a 'crop' of trees take to reach economic maturity e.g. Scots Pine may be grown on a 80 year rotation.

**Scheduled Monuments**

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

**Semi-natural woodland**

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

**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.

**SPA**

Special Protection Area designated under the European Habitats Directive (Council Directive 92/43/EEC).

**SSSI**

Site of Special Scientific Interest—this designation is determined by Natural England and placed on areas of very high conservation value.

**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 South East 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 Biodiversity Action Plan**

The UK government response to the Convention on Biological Diversity at Rio de Janeiro: includes actions to safeguard key habitats and species.

**UK Forestry Standard**

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.

**Veteran tree**

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.

11. Management Prescriptions

(Ref: Management Map)

**Clearfelling**

This is the main form of timber harvesting in Thetford Forest. All the trees are felled across the site or ‘coupe’ with the timber part of the tree extracted to the forest road where it is taken away by lorry. The smaller branches and tops are left on site where they may be chipped, mulched or raked in to rows so that enough bare ground is available to plant the next rotation of young trees. The creation of the bare planting ground is an important part of the management of the Breckland Forest SPA/SSSI, as it is this bare ground that is the nesting habitat for Woodlark and Nightjar.

**Thinning**

This is an important part of the management of Thetford Forest as nearly all the trees planted in the forest will require thinning at some point. Thinning performs three separate functions; removing small, dying or diseased trees; providing space for the dominant trees to continue growing; provide a small economic return in advance of clearfelling. Due to the size of Thetford Forest, thinning is a continual process that works around the forest on a five year cycle.

**Continuous Cover Forestry (CCF)**

This is a general term for the management of trees without clearfelling them all. There are a number of CCF silvicultural systems but all of them are based on thinning the crop on a regular cycle and removing a proportion of the trees thereby making space for seeds to germinate and new saplings to grow and fill the resulting space.

CCF is often used in areas of high public access to maintain the visual impact of large mature trees as these trees are maintained for their aesthetic value. CCF is also used to manage most of the broadleaf crops in Thetford and all the mature conifer crops in areas of high conservation value as these trees often provide important nesting habitat e.g. Firecrest.

**Open space**

Temporary open space follows felling when coupes are prepared for planting or to encourage natural regeneration.

Permanent open space will be centred on conservation sites and the heritage sites—see 5.5 Open Habitats.

**Minimum Intervention & Natural Reserves**

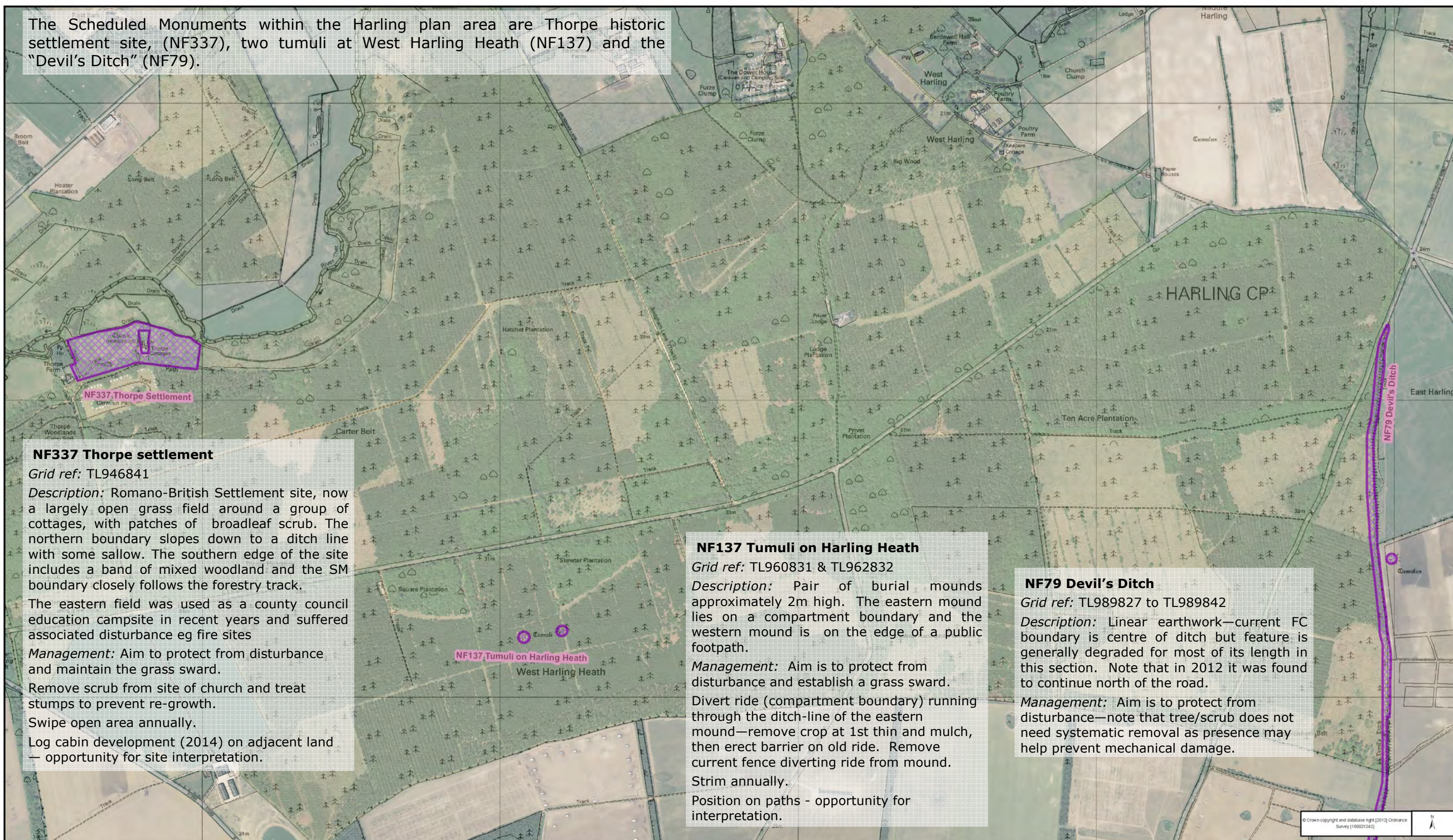
These two management types are similar in that they are areas where natural processes are left to progress unhindered unless there are tree safety issues e.g. a tree has died adjacent to a footpath and creates a hazard to the public. The natural reserve areas have been identified as a permanent feature in the plans where as minimum intervention is the current management type in these areas but could change in the future.

12. Tolerance Table

	Adjustment to felling coupe boundaries	Timing of Restocking	Changes to species	Windthrow & DNB clearance
FC Approval normally not required	0.5 ha or 5% of coupe	Up to 3 planting seasons after felling	Change within species group e.g. conifers; broad-leaves	Up to 2ha
Approval by exchange of letters and map	0.5ha to 2ha or 10% of coupe	Up to 4 planting seasons after felling		> 2ha to 10ha
Approval by formal plan amendment	> 2ha or >10% of coupe	Over 4 planting seasons after felling	Change from broadleaves to conifers	> 10ha

## 13. Appendix A Scheduled Monument Management Plans

The Scheduled Monuments within the Harling plan area are Thorpe historic settlement site, (NF337), two tumuli at West Harling Heath (NF137) and the "Devil's Ditch" (NF79).



### NF337 Thorpe settlement

Grid ref: TL946841

**Description:** Romano-British Settlement site, now a largely open grass field around a group of cottages, with patches of broadleaf scrub. The northern boundary slopes down to a ditch line with some willow. The southern edge of the site includes a band of mixed woodland and the SM boundary closely follows the forestry track.

The eastern field was used as a county council education campsite in recent years and suffered associated disturbance eg fire sites

**Management:** Aim to protect from disturbance and maintain the grass sward.

Remove scrub from site of church and treat stumps to prevent re-growth.

Swipe open area annually.

Log cabin development (2014) on adjacent land — opportunity for site interpretation.

### NF137 Tumuli on Harling Heath

Grid ref: TL960831 & TL962832

**Description:** Pair of burial mounds approximately 2m high. The eastern mound lies on a compartment boundary and the western mound is on the edge of a public footpath.

**Management:** Aim is to protect from disturbance and establish a grass sward.

Divert ride (compartment boundary) running through the ditch-line of the eastern mound—remove crop at 1st thin and mulch, then erect barrier on old ride. Remove current fence diverting ride from mound.

Strim annually.

Position on paths - opportunity for interpretation.

### NF79 Devil's Ditch

Grid ref: TL989827 to TL989842

**Description:** Linear earthwork—current FC boundary is centre of ditch but feature is generally degraded for most of its length in this section. Note that in 2012 it was found to continue north of the road.

**Management:** Aim is to protect from disturbance—note that tree/scrub does not need systematic removal as presence may help prevent mechanical damage.