

North York Moors

Hagg Wood Forest Design Plan

FDP 28

February 2012

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FOREST ENTERPRISE - Application for Forest Design Plan Approvals in England

Forest Enterprise - Property

Forest District:	North York Moors
Woodland or property name:	Hagg Wood
Nearest town, village or locality:	Dunnington
OS Grid reference:	SE 681 528
Local Authority district/unitary	City of York Council

Areas for approval

	Conifer	Broadleaf
Felling	5.90	0.50
Restocking	Nil	5.90
Continuous Cover	8.00	

- 1. I apply for Forest Design Plan approval for the property described above and in the enclosed Forest Design Plan.
- 2. I confirm that the pre consultation, carried out and documented in the Consultation Record attached, incorporated those stakeholders which the FC agreed must be included. Where it has not been possible to resolve specific issues associated with the plan to the satisfaction of consultees, this is highlighted in the Consultation Record.
- 3. I confirm that the proposals contained in this plan comply with the UK Forestry Standard.
- 4. I undertake to obtain any permission necessary for the implementation of the approved Plan.

Date of Approval	Date approval ends
Date	
District	Region
Forest Management Director	Grants and Regulations Manager
Signed	Signed



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Hagg Wood

81.0 Ha

Period of Plan: 2012 - 2021

1. Background

Hagg Wood woodlands are located due east of Dunnington village and comprise of three separate blocks of woodland, Hagg Wood (43.3 ha), Scoreby Wood (33.2 ha) and Cottage Plantation (4.2 ha). They were part of a larger parcel leased from the Church Commissioners in 1952 for a period of 999 years. The surrounding land is primarily arable farmland.

2. Describing the Site

2.1 Geology and Soils (FDP Map 01)

Underlying superficial deposits of Lacustrine deposits and Devensian sand gravel overlay sandstone bedrock.

The soil distribution is more complex than the geology would suggest, but generally the soils are heavy mineral in nature with a high clay content and imperfect drainage. There are however quite acidic soils in parts of the north and west of Hagg, with sandy almost podzolic drifts. The resulting gley and brown earth soils provide a 'moist' soil moisture regime and 'medium' soil nutrient regime as indicated by FC Forest Research Agency, Ecological Site Classification system (ESC). As a result, the woods can support a wide range of conifer and broadleaf species.

The topography is flat and lies between the 10m and 20m contours.

2.2 Tree Species (FDP Map 02)

Conifer is the dominant species group at 70%, comprised primarily of pine (49%) and larch (16%) with spruce, fir and hemlock as lesser components.

Broadleaves account for 27% of the wood, dominated mainly by oak (10%) and then beech (6%) with birch, alder, sycamore, and ash also present.

2.3 Wind Damage (FDP Map 03)

Windthrow hazard measurements indicate the wood is relatively windfirm ranging from Windthrow Hazard Class (WHC) 1 to 3, although there have been two areas of windthrow, both involving spruce on the heavier soils in Hagg Wood. Despite this, management options to practice Continuous Cover Forestry across all three woods remain relevant.

2.4 Landscape

The woods sit within the Vale of York national character area where the landform is generally flat or gently undulating. They are located within a medium-scale arable landscape of largely geometric field patterns where scattered small woodlands create an impression of wooded farmland.

2.5 People and Community (FDP Map 06)

Although the leasehold status of the woods means they have not been dedicated as open access under CROW legislation, Hagg Wood is very well used by local people and dog walkers alike with a comprehensive network of public footpaths, internal forest rides and tracks. Hagg Wood is well supported in the local community having benefited from the Friends of Hagg Wood (FHW) community group since 1996 and designated a Community Woodland in 1997.

The Minster Way long-distance footpath runs through Scoreby Wood before heading up the banks of the River Derwent.

Cottage Plantation is not as well served for pedestrian access and has less capacity to support and develop its recreational use.

The Church Commissioners retain sporting rights on the leasehold.

2.6 Natural Heritage (FDP Map 06)

Hagg Wood and Scoreby Wood are designated as a Plantation on Ancient Woodland Site (PAWS), closely matching the lowland mixed broadleaved with bluebell, NVC W10 woodland type.

The booklet "Hagg Wood, Past, Present and Future" produced by FHW provides a wealth of local ecological and cultural data on Hagg Wood, although some of its content could equally be applied to Scoreby Wood and the surrounding area.

Cottage Plantation is a secondary plantation conifer/broadleaf wood.

The recent creation of wetland areas and ponds provides the opportunity to develop favourable habitat conditions for associated flora and fauna (i.e. bat species).

Recent RSPB records for priority woodland bird species indicate healthy numbers of both Willow tit and Marsh tit are in close proximity to the woodlands at Hagg Wood (Appendix 3) and likely to benefit from appropriate woodland management. The proximity of Tree pipit and Woodlark at nearby Strensall Common offer an opportunity to enhance the woodland habitat for their benefit.

The locally rare Royal Fern (*Osmunda regalis*) currently exists in Millfield Wood, preferring wet/damp conditions.

2.7 Cultural Heritage (FDP Map 06)

Besides the ancient monument, Millfield Mound in the south of Scoreby Wood, recent earthwork surveys as described in "Hagg Wood, Past, Present and Future" indicate a network of medieval ditches and rectangular and circular platforms circa prehistoric/Romano-British exist in the south-west corner of compartment 8913.

In addition, a survey carried out in 2000 by English Heritage Field Survey team noted slight earth banks which were interpreted as late medieval boundary features in the agricultural fields between Hagg Wood and Cottage Plantation. These have mostly been levelled by agricultural practices.



3. Describing the Project

3.1 Project Brief

- increase the proportion of native broadleaf cover, particularly across areas of PAWS
- consider the selection of alternative main tree species that will contribute toward a greater range of species diversity to maintain timber productivity
- increase the diversity of the age structure by adjusting current felling and thinning patterns throughout the wood and enhance external and internal edges
- maintain and where appropriate improve the visitor experience to Hagg Wood in association with the Friends of Hagg Wood

3.2 Objectives

- Conserve ancient and veteran trees and continue the restoration of PAWS to native dominant woodland, to be measured by the sub-compartment database.
- Ensure identified ecological and historic features are maintained in target condition and improved where opportunities arise, to be measured by FC systems accordingly.
- Maximise and maintain a sustainable supply of timber from site-appropriate conifer and broadleaf species, to be measured by the Production Forecast and Sales Recording Package.
- Maintain the woodlands contribution to the Vale of York landscape character area. To be measured by fixed-point photography.
- The provision of an open and accessible woodland area at Hagg Wood for a variety of recreational pursuits, to be measured by stakeholder consultation with the Friends of Hagg Wood community group.

3.3 Constraints

- poor vehicular access to Cottage Plantation significantly restricts harvesting operations
- terms of the lease restrict the development for public recreation across all woodlands
- small scale nature of the woodland blocks, contributing to the lack of habitat connectivity in the surrounding landscape
- projected climate change scenarios and forest pest and diseases are likely to challenge future tree species choice



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site limiting factors (localised windblow, invasive species such as rhododendron, hemlock regeneration)



3.4 Implementation

3.4.1 Conservation

Protect and, where appropriate, enhance all known sites of archaeological and ecological importance:

Archaeological sites

All sites, regardless of their designation, will receive the same level of care during the planning and execution of forest operations. The operational planning system will ensure they are recognised and the proper measures for their protection are in place before work begins. This planning system also ensures that, where possible, opportunities to enhance the condition of archaeological interest are taken during routine forest work.

Ecological sites

All work sites are surveyed prior to any operations both to audit the accuracy of information already held on record and to identify opportunities to further improve the ecological value of the woodlands. For Hagg Wood this will include:

- Managing Veteran trees and PAWS as set out in 'Ancient Woodland on the Forestry Commission Estate in England (March 2002)'
- Increase the diversity of species and age structure that will maintain and improve favourable habitat for identified habitats and target species. This is particularly beneficial for bats and the range of priority woodland bird species recorded close to Hagg Wood (Appendix 3).
- Ensure harvesting activity in Millfield Wood does not have a negative impact across the site of Royal Fern.

3.4.2 Timber Harvesting

We will continue to sustainably harvest timber both from clearfell and thinnings, and where appropriate develop broadleaf stands to increase their contribution to timber production. These operations will be planned and controlled to ensure due regard for all other objectives of management at Hagg Wood.



3.4.3 Landscape

The woods at Hagg Wood do not lie within a designated landscape where the topography is flat and views are limited to edges and internal landscapes.

With enhanced public access through Hagg Wood and The Minster Way long-distance footpath through Scoreby Wood, woodland views are experienced by all who walk within the forest area.

On a scale of low/medium/high, landscape sensitivity is considered low.

The adoption of Continuous Cover Forestry (CCF) will contribute toward the creation and retention of species and structurally diverse woodlands within the landscape.



3.5 Plan (FDP Map 07)

The design concept map shows the key factors we need to address. These are taken forward and used to form the basis of a practical plan in the fell and restock maps.

3.6 Areas (FDP Maps 08 and 09)

3.6.1 Breakdown of felling areas within the period of the plan.

A map showing the location of felling sites can be found in the A1 Forest Design Plan folder.

Felling	Area - hectares	% of total area
2011 – 2016 Clearfell	4.2	5
2017 – 2021 Clearfell	0	0
Continuous Cover	8.0	10
Minimum Intervention	0	0

3.6.2 Breakdown of constituent areas.

A Future Habitat and Species map showing the location and detail of the constituent areas can be found in the Forest Design Plan folder.

Habitat type (based on principal species established)	Area – hectares	%age of total area
Conifer	0	0
Broadleaf	77.00	95
Permanent open space	4.00	5



3.7 Methods / Forest Operations

3.7.1 Planning

Before any major forest operations are undertaken an "Operational Site Assessment" is completed. This document details the proposed work and outlines all known environmental, social and operational considerations. The "Operational Site Assessment" then becomes an important reference document during the planning phase, at the pre commencement meeting before scheduled works begin and for supervisory visits during the operation. The "Operational Site Assessment" is kept along with other documents relating to the operation in the main office.

For routine maintenance operations (e.g. fencing, ride mowing, survey work etc.) the North York Moors policy on timing of operations to minimise wildlife disturbance will be followed.

3.7.2 Standards

All operations within the forest will be carried out according to guidance contained in the U.K Forestry Standard, the U.K. Woodland Assurance Scheme, and will adhere to the guidance given in the Forestry Commission Guideline Publications (Forests and Water, Forests and Archaeology, Forest Nature Conservation, Forest Recreation)

3.7.3 Harvesting

The majority of the timber is likely to be sold standing and then contractors will be employed by the purchaser to carry out the work. Staff from both the timber buyer and the Forestry Commission will monitor work through regular site visits to ensure all guidelines and contract conditions are adhered to.

Clearfell V's Continuous Cover Forestry

All plans are required to consider lower impact silvicultural systems (LISS) in windfirm conifer plantations as opposed to traditional clearfell systems. This decision is based upon the methodology provided in FC Information Note 40 – 'Transforming Even-aged Conifer Stands to Continuous Cover Management'.

At Hagg Wood, using the FC Forest Research Agency, Ecological Site Classification system (ESC), a range of broadleaf species are considered 'suitable' at the 2050 Hi scenario (although 'unsuitable' at the 2080 Hi scenario) for CCF where timber production is considered as an objective. The site limiting factors are Moisture Deficit and the summer Soil Moisture Regime (drought) respectively for these scenarios. On this basis,



Sessile oak should be used where planting over natural regeneration is considered, as it is suited to lighter and therefore droughtier soils (see Appendix 2).

3.7.4 Haulage

As in our other woodland blocks we will continue discussions with the relevant Highways Authority to agree haulage routes and discuss annual tonnages.

All timber traffic will be managed in line with the Road Haulage of Round Timber Code of Practice (2003), which aims to improve the safety and environmental standards of the timber haulage industry.

3.7.5 Restocking

Conifer

Although there are no intentions to carry out conifer replanting across areas of PAWS at Hagg Wood, Scoreby Wood and Millfield Wood, we will accept a proportion of natural regeneration (no more than 20%) as part of the overall mixture by canopy cover where this does not threaten the plan objectives.

Broadleaf

The areas of PAWS will be restored to W10 - lowland mixed broadleaved with bluebell, with wetter areas lending themselves to variants of ash/alder/birch wet woodland where suitable conditions prevail.

On both PAWS and non-PAWS sites planned for conversion to broadleaf woodland, we will accept natural regeneration of both native and non-native species i.e beech, sycamore where this does threaten the plan objectives. This is based upon the acceptance that through climate change, the natural range for beech will extend northwards and that sycamore is now considered a naturalised species.



Species regeneration across PAWS

Oak/Birch Holly/Rowan Ash/Alder Beech, other broadleaf species Scots Pine Larch Fir/Spruce Western hemlock More favourable

Less favourable

Natural regeneration in PAWS woodland will be assessed and the risk it poses to the objectives of the plan considered. Where dense shade or invasive species (i.e conifer, rhododendron) threatens the native woodland community, it will be removed as soon as practicable. Where the risk is lower it will be allowed to reach a harvestable size and removed as part of a routine felling or thinning operation.

4. Monitoring

4.1 Clearfells

All clearfell areas are managed spatially using the Sub Compartment Database to ensure the boundaries and designs are accurately reproduced on the ground. Significant variances in the areas to be felled require a formal amendment of the plan plus the agreement of and approval by FC regional staff, as per CSM 6.

4.2 Restock

All restock areas where timber production is an objective will be planted/naturally regenerated and monitored to ensure that the number of established trees / ha fully meets the requirements of OGB*4. This document has mandatory requirements on the monitoring of the crop in Year 1 and Year 5 to ensure the establishment of at least 2500 trees / ha.

4.3 Continuous Cover

Continuous cover areas will be monitored using the methods and procedures contained in OGB*7. Similar in scope to the methods employed for restock areas, where timber production is the aim we need to have 2000 saplings / ha after 10 - 15 years, these should be evenly spread over 90% of the site.

4.4 Design Plan

All design plans are formally reviewed "mid term" and the plan, its aims and objectives and its success at achieving those aims and objectives will be formally reviewed in 2017. This time period can be shortened if circumstances change significantly or if parts of the plan prove detrimental to the overall aims and objectives.

*Operational Guidance Booklet

5. Determination of Impact Significance and Mitigation

5.1 Ancient and Native Woodland

Threats to our ancient and native woodlands can be immediate and absolute (e.g. loss to infrastructure or development) or slower and more subtle (e.g. shading from conifer species or invasive species such as Rhododendron). There are also more widespread environmental changes, such as diffuse pollution and climate change, which may threaten in the long term. (www.forestry.gov.uk/keepersoftime)

Major threats to ancient and native woodland are:

- Climate change and fragmentation
- Excessive browsing and grazing by deer & livestock
- Inadequate or inappropriate management
- Invasive and problem species
- Diffuse pollution
- Loss

Through this plan, we will continue to apply local and national policy and best practice guidance for the restoration of PAWS.

5.3 Other Objectives

Concentrate on developing habitat – rich riparian corridors with marshes, meadows, woodlands, trees in farmlands. These would pass through both woodland and farmland. (G. Peterken – Native Woodland Development in the North York Moors and Howardian Hills)

We will continue to apply local and national policy and best practice guidance to the management of riparian corridors and areas of species-rich ground flora across the woodland blocks that form Hagg Wood. This will improve and enhance the habitat network within the woodlands and benefit protected species.



Continuing development of species and structural diversity will benefit habitats for identified priority woodland bird species throughout the woodland (see Appendix 3).

Appendix 1- Forest Design Plan Consultation Record

Consultee	Date Contacted	Date Response	Issues Raised	Forest District Response to Issues
		Received		

Statutory Consultees

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Community Groups

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Friends of Hagg Wood (FHW)	20/01/2012		

Neighbours

Lodge Farm	TBC ALA	by	Negotiation to agree access for timber from Cottage Plantation through Lodge Farm to A1079	
West Cottages				

Non Governmental Organisations

RSPB	09/01/2012	09/01/2012	Opportunities to develop habitat for marsh	Design plan text reference to refer to appropriate
			and willow tit, and tree pipit and woodlark.	habitat development.

Others

English Heritage	17/11/2010	30/11/2010	Agreed that no further consultation required for this block	None required.
NYM District	17/11/2011	17/11/2011	See copy of minutes	Area Land Agent to contact neighbours at Lodge Farm regarding access to Cottage Plantation.
Natural England	20/01/2012	23/01/2012	None. General agreement with Principles and Objectives.	None required.
Smiths Gore	20/01/2012	25/01/2012	No objection so long as the plan accords with the MOU between FHW, FC and CC.	None required.

Detail below issues still unresolved (if any) between the proposal and stakeholders

Appendix 2 - CCF species choice

Species	Baseline			2050 Lo			2050 Hi			2080 Lo			2080 Hi		
	Lim Factor	Suitability	Yield	Lim Factor	Suitability	Yield									
Silver Birch	SMRS	Suitable	8	SMRS	Suitable	6	SMRS	Suitable	6	SMRS	Suitable	6	SMRS	Unsuitable	4
Downy Birch	SMRS	Unsuitable	4	SMRS	Unsuitable	2	SMRS	Unsuitable	2	SMRS	Unsuitable	2	SMRS	Unsuitable	0
Sessile oak	SMRS	Suitable	8	SMRS	Suitable	6	MD	Suitable	6	SMRS	Suitable	6	SMRS	Unsuitable	4
Pedunculate oak	SNR	Suitable	6	SMRS	Unsuitable	4	SMRS	Unsuitable	4	SMRS	Unsuitable	4	SMRS	Unsuitable	2
Beech	SNR	Suitable	8	SNR	Suitable	8	MD	Suitable	8	MD	Suitable	8	SMRS	Unsuitable	4
Ash	SNR	Unsuitable	4	SNR	Unsuitable	6	SNR	Unsuitable	6	SNR	Unsuitable	6	SNR	Unsuitable	6
Aspen	SNR	Suitable	8	SMRS	Unsuitable	6	SMRS	Unsuitable	6	SMRS	Unsuitable	6	SMRS	Unsuitable	4
Sycamore	SNR	Suitable	6	SMRS	Unsuitable	4									
Alder	SMRS	Unsuitable	4	SMRS	Unsuitable	2									
Rauli New	SNR	Suitable	10	SMRS	Unsuitable	8	SMRS	Unsuitable	8	SMRS	Unsuitable	8	MD	Unsuitable	4
Poplar	SNR	Unsuitable	4	SMRS	Unsuitable	2									
Wild cherry	SNR	Unsuitable	4	SNR	Unsuitable	4									
Scots Pine	MD	Very suitable	12	AT5	Suitable	6									
Corsican Pine	AT5	Very suitable	18	SNR	Very suitable	20	SNR	Very suitable	20	SNR	Very suitable	20	SMRS	Suitable	14
Lodgepole Pine	SNR	Very suitable	16	SMRS	Very suitable	14	SMRS	Very suitable	14	AT5	Very suitable	12	AT5	Suitable	6
Sitka Spruce	MD	Unsuitable	12	MD	Unsuitable	12	MD	Unsuitable	8	MD	Unsuitable	10	MD	Unsuitable	2
Norway Spruce	MD	Suitable	14	SMRS	Unsuitable	12	SMRS	Unsuitable	12	SMRS	Unsuitable	12	SMRS	Unsuitable	8
European Larch	MD	Suitable	8	SMRS	Suitable	8	MD	Suitable	8	SMRS	Suitable	8	SMRS	Unsuitable	4
Japanese Larch	MD	Suitable	8	SMRS	Unsuitable	8	MD	Unsuitable	0	MD	Unsuitable	2	MD	Unsuitable	0
Douglas Fir	SNR	Suitable	18	SNR	Suitable	20	MD	Suitable	18	MD	Suitable	20	MD	Suitable	16
Grand Fir	MD	Suitable	14	SMRS	Unsuitable	14	MD	Unsuitable	6	MD	Unsuitable	10	MD	Unsuitable	0
Noble Fir	MD	Unsuitable	12	SMRS	Unsuitable	2	SMRS	Unsuitable	2	SMRS	Unsuitable	2	SMRS	Unsuitable	0
Western Hemlock	MD	Suitable	16	MD	Suitable	14	MD	Unsuitable	10	MD	Unsuitable	12	MD	Unsuitable	4
Red Cedar	MD	Suitable	14	MD	Suitable	14	MD	Unsuitable	6	MD	Unsuitable	8	MD	Unsuitable	0

Appendix 3 – RSPB Priority woodland bird species

Hagg Wood, Dunnington	SE of York	N of records in 10km	Nearest Km distance
Lesser redpoll		3	4
Lesser spotted woodpecker		2	2
Marsh tit		15	2
Redstart		1	9
Spotted flycatcher		10	2
Tree pipit		3	8
Willow tit		13	4
Woodcock		2	6
Woodlark		4	8
Wood warbler		1	7
Garden warbler		ü	
Willow warbler		ü	







