Forestry Commission England

North York Moors

Deer Park Forest Design Plan

FDP 16

January 2011

Outgang Road
Pickering
North Yorkshire
YO18 7EL
01751 472771

FOREST ENTERPRISE - Application for Forest Design Plan Approvals in England

Forest Enterprise - Property

Forest District:	North York Moors
Woodland or property name:	Deer Park
Nearest town, village or locality:	Helmsley
OS Grid reference:	SE 585 830
Local Authority district/unitary	North York Moors National Park Authority

Areas for approval

	Conifer	Broadleaf
Felling	69.06	
Restocking	19.77	49.29
Continuous Cover	16.00	

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 permissions necessary for the implementation of the approved Plan.

Signed …… Signed ……

Forest Management Director Grants and Regulations Manager

District …… Region……

Date……

Date of Approval…….. **Date approval ends**……

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Deer Park

312.1 ha

Period of Plan: 2011 - 2021

1. Background

Deer Park Wood is comprised of a series narrow wooded dales feeding down into the Rye valley, and regularly shaped plantations on the Southern Hambleton Hills plateaux in the south-west corner of the North York Moors National Park. The wood was leased from the Duncombe Park Estate in 1958 and the conifer stands were established by the Forestry Commission between 1961 and 1976. There are significant areas of ancient semi-natural woodland (ASNW) and plantation on ancient woodland sites (PAWS). The busy A170 – Thirsk to Scarborough road runs along its southern boundary. The wood is comprised of four distinct blocks ranging between 60 and 87 hectares situated on Scawton Moor running down to the River Rye.

2. Describing the Site

2.1 Geology and Soils

The underlying geology across the southern Hambleton Hills plateau is a combination of calcareous grits (Birdsall/Lower) and Coralline oolite formations overlain by sand.

The plateau soils are predominantly sandy in texture which gives rise to iron pan and podzol soil types. These have characteristically poor nutrient and low moisture regime status, which restricts the range of tree species where timber production is an objective. Some local variation occurs where higher clay and silt content leads to areas of brown earth soils, thereby increasing fertility and broadening the range of tree species suitable for timber production.

The underlying geology of the narrow wooded dales is relatively complex with areas of Coralline oolite formation overlain by limestone, Lower calcareous grit formation overlain by sandstone, and Oxford clays overlain by mudstone.

The dales soils are predominantly loam in texture and support predominantly brown earth soil types with isolated pockets of rendzina and surface water gleys toward the valley bottom. Although these soils range in nutrient status from medium to carbonate and very moist to very dry moisture regime, the majority of the dales sites have a very moist and rich nutrient regime status. As a consequence the soils can support a wide range of conifer and broadleaf species.

2.2 Tree Species

Pine is the dominant species group (Scots and Lodgepole) at 32% of the overall area, with Scots pine accounting for over 80% of this. As to be expected, the pines are closely associated with the ironpan and podzol soil types. Larch and hemlock/cedar are the next largest conifer groups, each accounting for 10% by area. Spruce and fir species are minor components.

Broadleaf species occupy 27% of the area, with both birch and mixed broadleaf each accounting for a third of this figure. Beech is also present with oak, sycamore, ash and alder as minor components. Birch is closely associated with ironpan and podzol soils whereas the more site-demanding species dominate the brown earths.

2.3 Wind Damage

The majority of Deer Park Wood falls within Windthrow Hazard Class 1 to 4 providing a range of windfirm conditions from very good to poor. Classes 1 - 3 do not restrict thinning operations. Subsequently, stands might be managed on extended rotations and provide opportunities for continuous cover management where other factors such as soil fertility and topography allow. Bungdale Head and part of Sproxton Moor and Waterloo Plantation are categorised as WHC 4, which could restrict management options.

2.4 Landscape

The woods are an integral part of the well-wooded landscape of upper Ryedale.

There are four main fingers of woodland, covering land from the river edge up steep-sided gills and onto more flat moorland to the south. On the valley slopes the woods are mainly mixed or broadleaved in nature, becoming mostly coniferous on the moors. The woods are characteristic of the locality: fitting into the steep sharp gills of the valley side, and being more extensive and larger in scale on the higher land.

Seamer Howl Wood, Hagg Wood, Briery Hill Wood, Hollins Wood, Spring Wood and Beech Wood all run down to the edge of the river Rye, and are at least partly visible from further up the valley at Rievaulx Abbey, as well as from certain parts of the Cleveland Way. They are also partly visible from the B1257, Helmsley to Stokesley road, though the view is a distant one. These woods sit within the Narrow Moorland Dale (Ryedale) landscape character area. This is characterised by steep wooded valley sides, which define Ryedale valley and create a strong sense of enclosure.

Bungdale Head, Sproxton Moor and Waterloo Plantation are also visible from the B1257, however the view is fore-shortened. The A170, Helmsley to Thirsk road, allows edge views of these three woods, though again this is shortened by the convex landform. These woods sit within the Limestone Hills (Southern Hambleton) landscape character area. This is a large-scale landscape of large regularly shaped predominantly arable fields, where views are broken by coniferous plantations.

2.5 People and Community

These are leasehold woodlands where the owner has retained sporting rights and exercises these through an active pheasant shoot.

Other than a bridleway that runs between Seamer Howl Wood and Hagg Wood, the leasehold status of the woods means they are not registered as open access under CROW legislation and there is no formal public access.

Because of the terms of the lease, potential to develop recreational use and facilities is limited.

2.6 Natural Heritage

The woods at Deer Park can be broadly divided between 60% secondary plantation conifer/broadleaf woodland and 40% ancient woodland. Of the latter, 30% are classed as Ancient Semi Natural.

Deer Park Woods rich ecological value is closely associated with the areas of ancient woodland and high density of veteran trees. Castle Hill SSSI is a remnant of lowland wood-pasture and is designated for this reason. The site is notable for the presence of veteran trees (mainly oak and lime) and associated invertebrates (particularly saproxylic genera), fungi, and lichens. Ryedale Windypits SSSI is designated for the geological significance of its underground structure, its archaeological interest, and the biological importance of the caves for bat conservation.

As highlighted in the previous plan, the importance of Castlehill SSSI and other remnant veteran tree stands is underlined by the GB HAP for Lowland Wood-Pastures on Forestry Commission land, which sets out the framework for conservation and extension of this habitat nationally. Expanding on this, the Castlehill & Surrounds HAP is a significant document steering conservation management within Deer Park Woodland. The main objective of the plan remains the restoration of 75 to 80 ha of high forest to wood-pasture. During the previous plan, 44 ha of PAWS have been managed toward the process of restoration either by thinning or clear felling through the removal of non-native conifer species.

Typically, wood-pasture comprised of large, often pollarded, open-grown or high-forest trees, at a wide range of densities and in a matrix of open habitats such as grassland, heath or scrub and lightly wooded habitats.

For more details see Appendix 1 – Castle Hill & Surrounds HAP.

Remnant communities of dry upland heath habitat are present across the pine dominated woodland, particularly along external boundaries adjacent neighbouring agricultural fields and along internal roads and rides.

2.7 Cultural Heritage

Duncombe Park Registered Park & Garden adjacent Beech Wood.

Linear Dykes – Waterloo 2185/2187, Beech Wood 2191 (late Bronze/early iron age).

Round Barrow – Sproxton 2301 (Bronze Age).

Large number of NYM/FC historic environment records mainly associated with early quarrying activity associated with sourcing stone for reconstruction of refectory at Rievaulx Abbey in late 12th C, also includes pit alignments, windypits, boundary stones.

3. Describing the Project

3.1 Project Brief

- increase the proportion of native broadleaf cover, particularly across areas of PAWS

- maintain and manage recently restored veteran trees to improve their condition status and contribute to the restoration of Lowland Wood-Pasture

- increase the diversity of age structure by selecting the most appropriate felling pattern and silvicultural system throughout the wood and enhance external and internal edges

- consider the selection of alternative main tree species that will contribute toward timber production where productivity can be improved

- manage designated sites in accordance with statutory requirements as per agreed management plans

- ongoing recognition of the sporting potential of the woodland to the Duncombe Park Estate

3.2 Objectives

- Conserve and manage;

  i) veteran trees and their associated flora and fauna as part of the restoration to Lowland Wood-Pasture, to be measured by Natural England and,
  ii) gill/closed canopy woodland as part of the restoration from PAWS to native woodland, to be measured by the sub-compartment database.

- Ensure SSSI's and SAM's are maintained in target condition, to be measured by Natural England and English Heritage.
- 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 wooded character within the Ryedale limestone dales and enhance the geometric form of plantations across Southern Hambleton limestone hills, to be measured by fixed-point photography.

3.3 Constraints

- terms of the lease restrict the development for public recreation

- steep slopes and difficult topography present operational challenges whilst harvesting gills and valley sides

- low nutrient and moisture regime across plateau sites restricts species choice

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 Deer Park this will include:

- Managing Veteran trees and PAWS as set out in – 'Ancient Woodland on the Forestry Commission Estate in England (March 2002)'

- Restore identified areas of designated and non-designated sites to Lowland Wood-Pasture as described in GB and Local HAP's for Lowland Wood-Pasture. Although proposals within this plan set out broad outputs over a ten-year period, a revised Implementation Plan will provide a more detailed programme over the first five years.

- Increase the diversity of species and age structure that will maintain and improve favourable habitat for identified target species.

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.

3.4.3 Landscape

The woods at Deer Park lie within a designated landscape. Views are varied, ranging from edge views of the plateau woods seen by many from the A170, to middle distant views of the wooded dales seen on foot from public rights of way and more distant views from the B1257.

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

Clearfell areas have been designed so that their scale and shape are in keeping with the scale of the woodland blocks and the surrounding landscape. The resulting diversity in age and height that the clearfell system produces will enhance both external and internal views of the woodlands.

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

3.5 Plan

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

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	**%age of total area**
2007 – 2011 Clearfell	**18.13**	**6**
2012 – 2016 Clearfell	**20.76**	**7**
2017 – 2021 Clearfell	**30.17**	**10**
Continuous Cover	**16.00**	**5**
Minimum Intervention	**50.80**	**16**

3.6.2 Breakdown of constituent areas.

A management information map showing the location and detail of the constituent areas can be found in the A1 Forest Design Plan folder.

Habitat type (based on principal species planted)	**Area – hectares**	**%age of total area**
Conifer	**90.98**	**29**
Broadleaf*	**214.20**	**69**
Temporary open space (clearfell)	**6.92**	**2**
Agricultural, heathland, and planned open areas	**Nil**	**Nil**

*** Up to 80 hectares of broadleaf woodland will be managed toward wood-pasture. Although predominantly open in nature, where potential canopy cover may range from 20% to 50% by area, this will still be classed as woodland.**

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'.

For plateau woods, using the FC Forest Research Agency, Ecological Site Classification system (ESC), Scots pine and Douglas fir are considered 'suitable' for CCF where timber production is considered as an objective. We will look to implement CCF through the management of successor stands where this does not compromise other objectives.

Across wooded dale sites, stand management will be through a combination of clearfell and CCF systems. Narrow, steep sided, unthinned sites with poor access and difficult harvesting terrain will be clear felled with a view to retaining mature, windfirm broadleaf specimens where possible. Oak, birch and beech are considered 'suitable' for CCF where timber production is considered as an objective and this does not compromise other objectives. Where timber production is considered a low priority objective, a much wider range of species, particularly native species, can be accepted.

See Appendix 2 – CCF justification.

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 tonnage's.

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

The areas of clearfell in the design plan will be replanted to diversify species and age structure and to continue to provide a sustainable timber resource. For Deer Park this will include Douglas fir where soil type changes from podzol to podzolic brown earth.

Although considered suitable by ESC, Corsican pine is no longer considered appropriate for restocking due to forest health issues and there are concerns regarding the long term sustainability of larch. Also, Western hemlock is not appropriate for restocking due to its poor timber quality and its invasive nature through natural regeneration. This is a particular issue adjacent to ASNW and conifer PAWS restoration sites.

In areas where the restoration and protection of the heathland understorey is desirable then Scots Pine will be the preferred species.

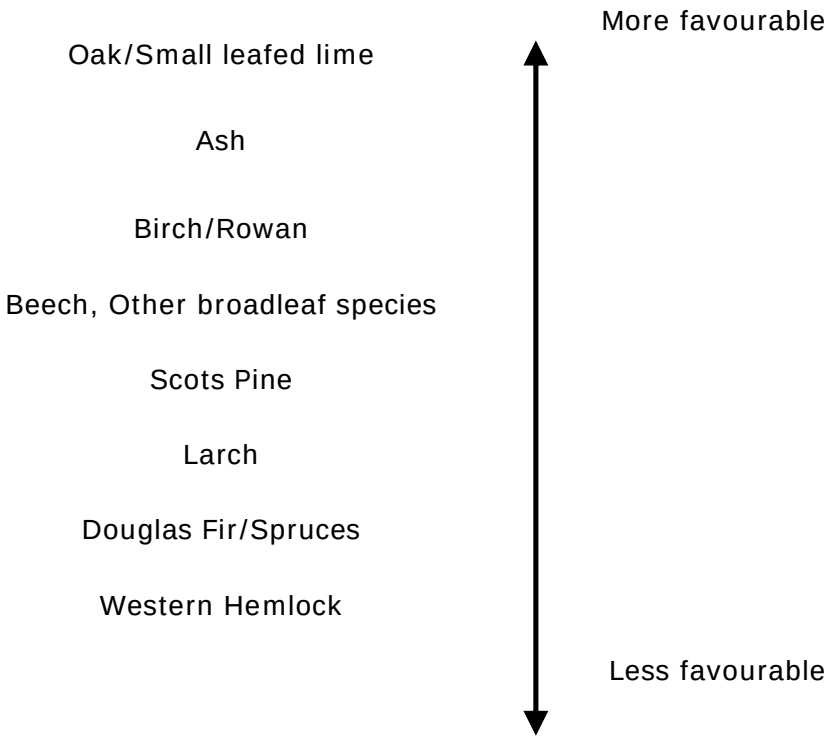
The CCF areas will be managed to encourage natural regeneration, though enrichment planting may be considered if regeneration is not successful or to further diversify the species present.

Natural regeneration development across CCF and clearfell areas will be assessed and the risk it poses to the aims of the plan considered. Where it presents a high risk e.g. Western hemlock across Ancient Woodland Sites, 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.

Broadleaf

The upper reaches of PAWS are on ironpan soils and are predominately W16 – Lowland oak-birch woodland with bilberry, with smaller areas of W10 – Lowland mixed broadleaf woodland with bluebell. The base rich, lower slopes and gills are representative of W8 – Lowland mixed broadleaf woodland with dogs mercury. These sites will be restored through clearfell/restock by natural regeneration or CCF management implemented by successive thinnings and small group fellings to encourage natural regeneration of site native species.

Species regeneration on PAWS areas



Natural regeneration in PAWS woodland will be assessed and the risk it poses to the aims of the plan considered. Where dense shade or invasive species (such as Western Hemlock or 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.

Lowland Wood-Pasture/Open Space

Natural regeneration of Lowland Wood-Pasture will follow the principles as above for Broadleaf, with the exception that open space will range between 50 and 80%, comprised of both temporary and permanent open areas. These will form an integral part of the varied habitats required to support the range of specialist invertebrate, fungal and ornithological fauna across the site, particularly those sites designated as SSSI.

Minimum Intervention

These are designated as areas of woodland that are fully established and no longer require intervention in order to increase their biodiversity value. It is accepted that any changes in structure and species composition will occur through natural process (e.g. windblow). In exceptional cases, some areas may continue to be thinned but only when, and for as long as, thinning can be clearly demonstrated to have a higher conservation or biodiversity value than not thinning.

Heathland

There are currently no specific areas of heathland across Deer Park and there is no intention under this plan to convert woodland to heathland. It is recognised however that remnant communities of dry upland heath habitat are present across the pine dominated woodland as indicated on the Management Information map. Where the maintenance and restoration of heathland understorey is desirable then Scots pine will be the preferred species.

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 GLM 6.

4.2 Restock

All restock areas where timber production is an objective will be planted 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.

Lowland Wood-Pasture

Up to 4 rabbit-proof fenced enclosures will be erected across parts of the Lowland Wood-Pasture that have already been cleared of conifers. These will be monitored using fixed-point photography to assess the level and impact of non-domestic grazing on ground flora and natural regeneration. Results will be used to inform future management on grazing.

4.4 Design Plan

All design plans are formally reviewed “mid term” and this plan, its aims and objectives and its success at achieving those aims and objectives will be formally reviewed in 2016. 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, and continue the control of the Rhododendron to enhance and maintain this valuable habitat.

5.2 Flora

Heathland is a UKBAP Priority Habitat

Within woods, concentrate on open space habitat expansion and management, developing heathland, neutral grassland and acid mires.
(G. Peterken – Native Woodland Development in the North York Moors and Howardian Hills)

This plan, while not creating new areas of heathland, will promote the management and development of heathland particularly where this will improve habitat networks within and outwith Deer Park.

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 in Deer Park. This will improve and enhance the habitat network within the woodlands and benefit protected species.

Appendices

1. **Castle Hill and Surrounds HAP**
2. **CCF justification**
3. **Consultation Record**

Appendix 1

FOREST ENTERPRISE

NORTH YORK MOORS FOREST DISTRICT

LOWLAND WOOD-PASTURE HABITAT ACTION PLAN

SITE NAME: **CASTLE HILL & SURROUNDS (former Duncombe Deer Park)**
GRID REFERENCE: **SE 585 830**
COMPARTMENT NUMBERS: **2164, 2165, 2166, 2168, 2169, 2170, 2172, 2173, 2174, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2190, 2191, 2192, 2193, 2194, 2195**

LAND TENURE: **LEASEHOLD Hambleton forest Lease No 56**

PLAN PERIOD: **1999 - 2005**

AGREED ON BEHALF OF FOREST ENTERPRISE

signed: .....
Forest District Manager

dated: .....

AGREED ON BEHALF OF ENGLISH NATURE

signed: .....
Conservation Officer

dated: .....

ENDORSED BY FORESTRY COMMISSION

signed : .....

dated : .....

ENDORSED BY LANDOWNER

signed : .....

dated : .....

LOWLAND WOOD-PASTURE HABITAT ACTION PLAN - FILE CONTENTS

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6. Stock Map - with approximate positions of ancient trees transcribed from Eborienteers survey Spring 1997.
7. Access, Special Features, Reserved Rights, Lets and Leases.
8. List of References

Castle Hill & Surrounds (former Duncombe Deer Park) Lowland Wood-Pasture Habitat Action Plan

INTRODUCTION

The appreciation of the value and scarcity of ancient trees and their associated habitat is a relatively recent phenomenon. A chronology of the sequence of events at Castle Hill and surrounds (formerly part of the Duncombe Deer Park) from the time that the Forestry Commission acquired a Lease demonstrates the rapid change in perception:

- 1958 Lease for term of 199 years is acquired
- 1961 to 1976 area planted
- 1976 site interest noted by Paul T Harding in ITE research report.
- 1981 meeting between FC, NCC and YNT at Castle Hill
- 1981 G F Peterken NCC Chief Scientists Team confirms site interest
- 1983 Castle Hill SSSI notification
- 1985 Duncombe Park SSSI notification
- 1993/94 Duncombe Park NNR declared
- 1995 Castle Hill SSSI management plan agreed
- 1997 Veteran Tree Initiative launched
- 1998 visit of the Ancient Tree Forum
- 1998 UK Biodiversity Action Plan for lowland wood-pasture
- 1998 GB Habitat Action Plan for lowland wood-pasture on FC land
- 1999 Forest Design Plan and Habitat Action Plan submitted

The GB Habitat Action Plan (HAP) for Lowland Wood-Pastures on FC Land 1998-2005 plan identifies Forest Enterprise strategies for the management of wood-pastures.

The Forest Design Plan (FDP) is the instrument by which lowland wood-pasture will be recognised, managed, restored and extended. The Deer Park FDP is integral to this local HAP and should be read in conjunction with it.

The GB HAP summarises the site proposals at Castle Hill and surrounds as follows:

'Maintain SSSI area and ancient tree interest by freeing remaining trees from shade of adjacent plantation. Complete FDP for whole area restoring 75 hectares to ungrazed native wood-pasture over next 30-50 years. Consider the SSSI status of the undesignated areas during period of this plan'.

PLANNED MANAGEMENT

a. Evaluation

The precise boundaries of the Habitat Action Plan area are not yet defined but are thought to take in some 80 hectares of land in total. Within the area there are two designated sites, Castle Hill SSSI and Ryedale Windy Pits SSSI. Castle Hill SSSI covers 4.5 ha whilst Buckland's or Helmsley Windy Pit the larger of the Ryedale Windy Pits which is identified on grounds of geological as well as biological importance accounts for approximately 11 ha. Slip Gill Windy Pit the second of the Ryedale Windy Pit designation is notified for its subterranean features and only a small surface area around the entrance is included.

Castle Hill SSSI serves as a striking model for the recognition, management, restoration and extension of wood-pasture throughout the HAP area. Described as a unique example of relict wood-pasture, work to remove planted beech and western hemlock had begun before the site was notified in 1983. Elsewhere in the HAP area some individual and some groups of veteran trees were opened up between 1989 and 1995 especially alongside forest roads. These also act as fine examples of the work yet to be done.

The identification of suitable maiden regeneration with the potential for pollarding and retention in perpetuity is of almost equal priority to caring for the relict generation. In places natural regeneration of oak is abundant, in places sparse and drawn up by competition for light and in places absent. Where oak regeneration is insufficient it could be acceptable, given the history of beech woodland in the area particularly in Beech Wood, to select suitable beech for retention.

Although the provisional Inventory of Ancient Woodland shows much of the site to be ancient replanted, in addition to the veteran tree interest characteristic of wood-pasture the HAP area contains some remnant ancient semi-natural woodland. The North York Moors National Park Phase II Woodland Survey (Site No 256 Sword & Castle Gill woods) carried out in 1995 identified the following NVC communities:

W16	*Quercus* spp-*Betula* spp-*Deschampsia flexuosa*	4 hectares
W10	*Quercus robur-Pteridium aquilinum-Rubus fruticosus*	4 hectares
W16b	*Quercus* spp-*Betula* spp-*Deschampsia flexuosa* *Vaccinium myrtillus-Dryopteris dilitata* sub-community	14 hectares
No Match		18 hectares

b. Objectives

1. to continue the beneficial management of Castle Hill SSSI in recognition of the national importance of wood-pasture conservation.

2. to continue the beneficial management of Ryedale Windy Pits SSSI in recognition of the integral relationship with Castle Hill Wood and surrounds.

3. to restore agreed and defined areas of degraded wood-pasture through implementation of the Forest Design Plan.

4. to safeguard and conserve the specific habitat requirements of Species Action Plan and other species whose range is significantly associated with wood-pastures and ancient trees and actively support the English Nature Species Recovery Programme initiatives directed at these species.

5. to actively support the Veteran Tree Initiative.

6. to actively co-operate with the Lessor The Rt Hon Lord Feversham to pursue the HAP objectives.

c. Prescribed Management

1. **by 31/12/99 with English Nature to agree the specification and part fund a detailed survey and inventory of ancient trees (to include statement of individual condition and factors relating to future management).**

2. **by 31/3/00 to propose management strategy for maiden regeneration on Castle Hill SSSI.**

3. **by 30/6/00 to prioritise the considered and careful removal of conifer matrix as conceived within the Forest Design Plan and informed by the outcome of the inventory survey C1.**

4. **by the end of the plan period to initiate an ongoing programme of thinning informed by the priority programme C3.**

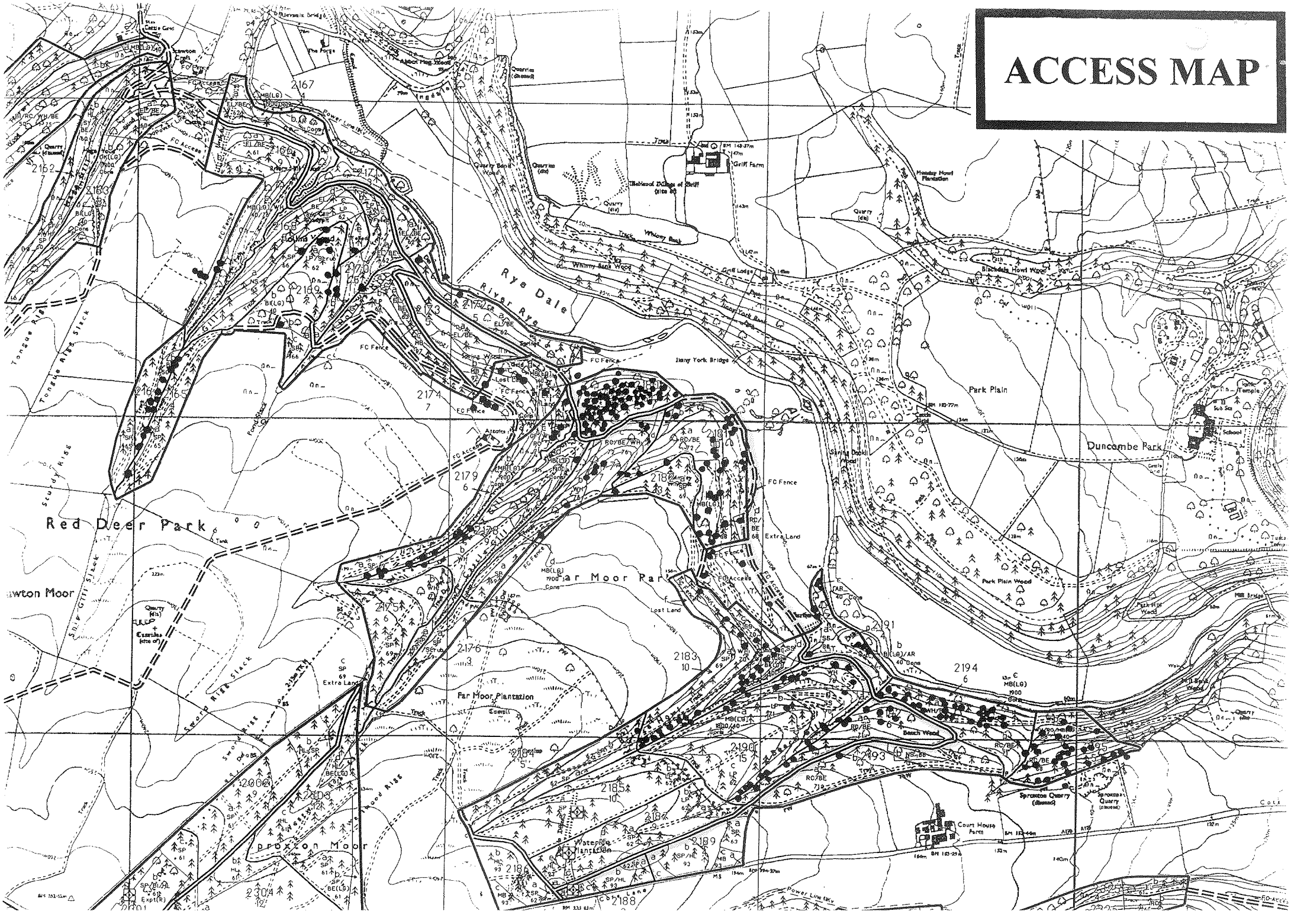
5. **at every stage to identify suitable maiden regeneration and to take appropriate steps to ensure successor generation of key long lived species particularly oak.**

6. **at every stage to conserve standing and fallen deadwood habitat and nectar bearing shrubs such as hawthorn and blackthorn.**

7. **during the plan period to explore the potential of traditional wood-pasture techniques such as lopping and pollard**

8. **during the plan period to encourage biological survey particularly of epiphytic/saproxylic relict biota.**

ACCESS MAP


Rye Dale
River Rye
Red Deer Park
Park Plain
Duncombe Park
Griff Farm
Griff Lodge
Whitwy Bank
Whitwy Bank Wood
Ilkany York Bridge
Park Plain Wood
Beech Wood
Far Moor Plantation
Court House Farm
Sproxton Moor
Tongue Rig
Tongue Rig Slack
Scaly Rigg
Sword Rigg
Sword Rigg Slack
Wood Rigg
Pond Slack
Power Line 11KV
FC Fence
FC Access
Lost Land
Extra Land

ACCESS, SPECIAL FEATURES, RESERVED RIGHTS, LETS AND LEASE

Lessor: The Right Honourable Lord Feversham

Agent: Mr I N Saggers
Duncombe Park Estate Office
North Wing
Duncombe Park Mansion
Helmsley
YORK YO62 5EB

Telephone: 01439 770213

Term of Lease: 199 years from 14 July 1958

Sporting: Exercised by the Lessor The Rt Hon Lord Feversham, via the Agent Mr I N Saggers and the Head Keeper Mr J Masterman.

Access: From A170 via FC Cat 1A road marked in green on access map.

LIST OF REFERENCES

1. GB Habitat Action Plan for Lowland Wood-Pastures on Forestry Commission Land 1998-2005
2. North York Moors Forest Design Plan 16 'Deer Park' 1999-2006
3. Castle Hill SSSI Management Plan 1995-2000
4. Ryedale Windy Pits SSSI Management Plan 1995-2000
5. Duncombe Park Management Plan (covering both the National Nature Reserve and SSSI areas) English Nature January 1999
6. Guidelines for identifying ancient woodland English Nature 1996, 97
7. Veteran Trees Initiative Guide to the care of ancient trees English Nature 1996, 97
8. Management choices for ancient woodland getting it right English Nature 1998

Appendix 2 – CCF justification

Plateau/Iron pan sites

Site Factor	Suitability Score	Comment
WHC: range 1to 4	1	Bungdale Head, part Sproxton Moor and Waterloo Plantation may not be suitable due to WHC 4.
Soil fertility: Very Poor	1	Isolated areas of medium fertility
Species suitability: Scots pine, Douglas fir	1	Other minor conifer species not considered due to poor timber qualities.

Initial analysis indicates plateau areas of Deer Park have a good rating for transformation for CCF. Further analysis of stand structure is considered to help inform whether transformation should be considered.

- Stand form – Form of mature stands is moderate and not of a high quality.
- Thinning history – Thinning of mature stands of pine has not followed a regular cycle to help develop crowns that can act as potential seed bearers. Recently established Scots pine and Douglas fir have not started thinning cycle.
- There is little or no sign of early or advanced regeneration for any of the suitable species.

On the basis of the above information, we will consider CCF across even-aged conifer stands using Scots pine through the management of the successor cops rather than the current mature stands. We will also consider similar management across recently established stands of Scots pine and Douglas fir.

Narrow wooded dales/Brown earth sites

Site Factor	Suitability Score	Comment
WHC: range 1 to 3	1	No restrictions
Soil fertility: Medium	2	Sites vary from medium to rich. Greater vegetation competition more likely.
Species suitability: Oak, birch, beech	2	Beech more suitable on rich sites.

Initial analysis indicates the wooded dale areas of Deer Park have a moderate rating for transformation for CCF. Further analysis of stand structure is considered to help inform whether transformation should be considered.

- Stand form – Form of mature stands of broadleaf species is moderate and not of a high quality.
- Thinning history – Thinning of mature mixed conifer/broadleaf stands has not followed a regular cycle to help develop crowns that can act as potential seed bearers. Recently established areas of native mixed broadleaf are not yet fully established and have not started thinning cycle.
- There is little or no sign of early or advanced regeneration for any of the suitable species.

On the basis of the above information, we will consider CCF across even-aged mixed conifer/broadleaf stands. These will be managed through the gradual removal of conifer species with the objective of creating mixed broadleaf woodland favouring oak, birch and beech whilst accepting other broadleaf species where these can be recruited by natural regeneration.

Appendix 1 – Consultation Record

22 May 2010

Regional Natural England/FC liaison meeting at which shared issues and joint working was discussed involving forthcoming programme of FDP renewals/reviews. Issues for Deer Park included; management of birch regeneration/ effect of browsing on regeneration of ground flora and trees/early consultation with stakeholders.

06 July 2010

Internal stakeholder meeting attended by J Bates, B Walker, N Short, N Rylance, J Simpson.

13 July 2010

On-site meeting with D Clayden (Natural England), N Short, B Walker, N Rylance (FC NYM). Discussed progress to date, SSSI developments and future proposals to consider as part of FDP renewal and future operational issues.

09 August 2010

Copies of Planning Meeting minutes and 'Brief and Objectives' document to Mr I Downey, FC Yorkshire & The Humber.

17 September 2010

Letter of Notification and copy of 'Brief and Objectives' document to:
Mr D Clayden (NE), Mr P Harris (NYMNPA) and Mr I Saggers (Duncombe Park Estate)

19 October 2010

Meeting with Mr I Saggers and Mr J Masterman at Duncombe Park Estate. Discussed FDP renewal process and future developments in line with 'Brief and Objectives' paper. The importance of minimising the impact of forest operations on the sporting interest across the woods was noted. N Rylance to submit initial draft documents to Estate for comments.

16 November 2010

Copies of draft text document and draft harvesting and restocking maps sent to representatives of NYMNPA, NE and Duncombe Park Estate.

08 December 2010

Meeting with P Harris and R Charles (NYMNPA), D Clayden (NE), N Rylance and B Walker to discuss draft proposals.

09 January 2011

Email response to draft proposals received from Mr I Saggers. Request to consider retention of conifers in Hags Wood.

12 January 2011

Following 08/12/2010 meeting, amended text document and Future Habitat and Species map sent to NYMNPA and NE for consideration.

13 January 2011

Email response received from NYMNPA to revised text and map.

Xx January 2011

Copies of final documents emailed to NYMNPA, NE, Duncombe Park Estate and FC Yorkshire & The Humber Region.

Future habitat and species map

Forestry Commission England

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

SGS-FM/COC-003358

Legend

- Lowland Wood-Pasture
- Native dominant mixed broadleaves
- Mixed Conifer
- Scots Pine
- Douglas Fir

1:12,500

Print Date: 11/01/2011

0 125 250 500 750 1,000 Meters

Deer Park Forest Design Plan
North York Moors District
Analysis and Concept

Forestry Commission England

Forestry Commission woodlands have been certified in accordance with the rules of the Forest Stewardship Council.
SGS-FM/COC-000358
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The woods are characteristic of the locality:fitting into the steep sharp gills of the valley side, and being more extensive and larger in scale on the higher land on the plateau to the south.

* Size and shape of clearfells will be in keeping with the surrounding landscape
* Restocking will provide opportunities to improve and diversify road and rideside edges
* Continuous Cover Forestry will create more structurally diverse woods

Objectives of the Lowland Wood-Pasture HAP are the most important criteria to consider in those woods historically managed under this system.

* Continue to manage and restore areas of designated and non-designated sites to wood-pasture.
* Conifer and exotic broadleaved species will continue to be removed over the plan period by a combination of clearfell and CCF systems.

Restoration of Ancient Woodland to native species remains a priority objective.

* Conifer and exotic broadleaved species will continue to be removed over the plan period by a combination of clearfell and CCF systems.

Sustainable timber production remains a priority objective across Plateau Woods.

* Alternative conifer species i.e. Douglas fir will be considered where conditions are suitable.
* Areas where the protection of heathland unerstorey is desirable, Scots pine will be the preferred species.

Legend

- Plateau Woods
- Lowland Wood-Pasture
- SSSI
- Ancient Woodland

1:12,500 Print Date: 13/01/11

Forester

Forestry Commission England

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

SGS-FM/COC-003358

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Deer Park

Proposed Harvesting Map

This map shows how we intend to manage tree felling in Deer Park in order to meet the multiple objectives of management there.

Clearfells
Clearfells remove all or the majority of trees from the site. They allow significant changes in landscape, species and age class diversity to be achieved in a short space of time. They provide temporary open space followed by a slow succession of different habitat types each exploited by different flora and fauna.

Continuous Cover
In a continuous cover system change is managed more slowly using a combination of heavier thinnings and small group fellings (normally no greater than 0.25Ha). The purpose of the thinning / felling operations is to produce timber and to allow enough light to reach the forest floor for replanting / regeneration to take place. The majority of the site has tree cover at all times and at one or more levels.

Minimum Intervention
Managed for conservation and landscape. Management will be very low key where areas will be considered as an ecological refuge. In exceptional cases some areas may continue to be thinned but only when, and for as long as, thinning can be clearly demonstrated to have a higher conservation or biodiversity value than not thinning.

Advantages of Continuous Cover Forestry

Less visual impact than clearfelling.

Increased structural and tree species diversity within woodlands provides potential benefits for wildlife.

Less disturbance of forest ecosystem and greater shelter for regenerating seedlings.

Assuming natural regeneration is successful, restocking costs will be reduced.

Production of large diameter, high quality sawlogs.

Structural diversity provides a measure of resilience against windthrow.

Advantages of Clearfelling

Lower harvesting costs due to economies of scale

Lower range of sizes and products suit mechanised harvesting and modern sawmills

Standard operations require less management time.

Temporary internal and external view points created.

New start makes species changes, visual improvements etc. easier.

Restocking operations benefit from economies of scale.

N

Legend

FELLING YEAR

- Open/felled etc
- 2007-2011
- 2012-2016
- 2017-2021
- 2022-2026
- 2027-2031
- 2032-2036
- 2037-2041
- 2042-2046
- 2047-2051
- 2052-2056
- 2057-2088
- Continuous Cover
- Minimum Intervention

1:10,000

Printed Date: 01/11