

Tyrrels Wood

Management Plan 2018-2023

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THE WOODLAND TRUST

INTRODUCTION

The Trust's corporate aims and management approach guide the management of all the Trust's properties, and are described on Page 4. These determine basic management policies and methods, which apply to all sites unless specifically stated otherwise. Such policies include free public access; keeping local people informed of major proposed work; the retention of old trees and dead wood; and a desire for management to be as unobtrusive as possible. The Trust also has available Policy Statements covering a variety of woodland management issues.

The Trust's management plans are based on the identification of Key Features for the site and setting objectives for their management. A monitoring programme (not included in this plan) ensures that these objectives are met and any necessary management works are carried out.

Any legally confidential or sensitive species information about this site is not included in this version of the plan.

PLAN REVIEW AND UPDATING

The information presented in this Management plan is held in a database which is continuously being amended and updated on our website. Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations. Please either consult The Woodland Trust website <u>www.woodlandtrust.org.uk</u> or contact the Woodland Trust (wopsmail@woodlandtrust.org.uk) to confirm details of the current management programme.

There is a formal review of this plan every 5 years and a summary of monitoring results can be obtained on request.

WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland. Our strategic aims are to:

- · Protect native woods, trees and their wildlife for the future
- · Work with others to create more native woodlands and places rich in trees
- Inspire everyone to enjoy and value woods and trees

All our sites have a management plan which is freely accessible via our website <u>www.woodlandtrust.org.uk</u>. Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

In addition to the guidelines below we have specific guidance and policies on issues of woodland management which we review and update from time to time.

We recognise that all woods are different and that the management of our sites should also reflect their local landscape and where appropriate support local projects and initiatives. Guidelines like these provide a necessary overarching framework to guide the management of our sites but such management also requires decisions based on local circumstances and our Site Manager's intimate knowledge of each site.

The following guidelines help to direct our woodland management:

- 1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene when there is evidence that it is necessary to maintain or improve biodiversity and to further the development of more resilient woods and landscapes.
- 2. We establish new native woodland using both natural regeneration and tree planting, but largely the latter, particularly when there are opportunities for involving people.
- 3. We provide free public access to woods for quiet, informal recreation and our woods are managed to make them accessible, welcoming and safe.
- The long term vision for our non-native plantations on ancient woodland sites is to restore them to predominantly native species composition and semi-natural structure, a vision that equally applies to our secondary woods.
- 5. Existing semi-natural open-ground and freshwater habitats are restored and maintained wherever their management can be sustained and new open ground habitats created where appropriate.
- 6. The heritage and cultural value of sites is taken into account in our management and, in particular, our ancient trees are retained for as long as possible.
- 7. Woods can offer the potential to generate income both from the sustainable harvesting of wood products and the delivery of other services. We will therefore consider the potential to generate income from our estate to help support our aims.
- 8. We work with neighbours, local people, organisations and other stakeholders in developing the management of our woods. We recognise the benefits of local community woodland ownership and management. Where appropriate we allow our woods to be used to support local woodland, conservation, education and access initiatives.
- 9. We use and offer the estate where appropriate, for the purpose of demonstration, evidence gathering and research associated with the conservation, recreational and sustainable management of woodlands. In particular we will develop and maintain a network of long-term monitoring sites across the estate.
- 10 Any activities we undertake will conform to sustainable forest management principles, be appropriate for the site and will be balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

SUMMARY

This public management plan briefly describes the site, specifically mentions information on public access, sets out the long term policy and lists the Key Features which drive management actions. The Key Features are specific to this site - their significance is outlined together with their long (50 year+) and short (5 year) term objectives. The short term objectives are complemented by a detailed Work Programme for the period of this management plan. Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. A short glossary of technical terms is at the end. The Key Features and general woodland condition of this site are subject to a formal monitoring programme which is maintained in a central database. A summary of monitoring results is available on request.

1.0 SITE DETAILS

Site name:	Tyrrels Wood
Location:	Pulham Market
Grid reference:	TM206897, OS 1:50,000 Sheet No. 156
Area:	16.77 hectares (41.44 acres)
Designations:	Ancient Semi Natural Woodland, Site of Special Scientific Interest

2.0 SITE DESCRIPTION

2.1 Summary Description

A popular wood, quiet and off the beaten track. At the centre is an ancient woodland site named Boscus de Grischave, which can be found in records dating back to 1251. Despite no way markings, a circular route around the site is relatively easy to follow.

2.2 Extended Description

Tyrrels wood is a group of woods (part SSSI) totalling 16.79 Ha (41.5 acres) within the Parish of Pulham Market, South Norfolk. It comprises Low Wood, Dale Plantation, Big Wood, New Plantation and Bales' Plantation to the East. Big Wood is strongly believed to be part of a once much larger ancient woodland. A large wood bank runs around the entire woodland and east west between Big Wood and Dale Plantation. Tyrrels Wood was once considered one of Norfolk's finest woods for quality oak.

Prior to The Woodland Trust acquiring the site many of the oaks were felled, but there are a still a number of very large specimens throughout the site and many are thought to be older than 150 years. A relic hazel coppice structure is present throughout the whole of the wood, and old boundary pollards are scattered predominantly along the eastern and northern boundaries. The ground flora is surprisingly poor within Tyrrels Wood, both on the rides and within the woodland stands. Bramble (Rubus fruticosus) and bracken (Pteridium aqilinum) are the main ground flora species, with bare ground frequently dominant within heavily shaded areas. Ancient woodland indicators are found in isolated patches throughout the wood including yellow archangel (Lamiastrum galeobdolon), dog's mercury (Mercurialis perennis), and bluebell (Hyacinthoides non-scripta), generally associated with the wood banks.

Big Wood was designated a SSSI in 1985 primarily for the variation of stand types present, with particular reference to Plateau Alder Carr. Tyrrels Wood is situated within the South Norfolk and High Suffolk Claylands National Character Area, and soil types include clays, sands and gravels that show great variation across the site. The surrounding countryside is predominantly arable farming, and 4/5ths of the boundary of Tyrrels Wood is adjacent to open fields. To the west, Crow Green adjoins the wood, regenerated naturally from former open grassland and scrub.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

How to get to Tyrrels wood

Tyrrels Wood is situated on Wood Lane off the A140. The closest town is Long Stratton, which is situated 2 miles north of the site. Tyrrels wood has a carpark that can accommodate about 12 cars.

Tyrrels wood can be accessed by bus: Service 83 runs Monday - Saturday from Harleston to Norwich via The Pulhams and Long Stratton

Link to Anglian bus website: www.anglianbus.co.uk

The closest train station is Diss station, which is within 10 miles of the site. Link to train times: www.thetrainline.com

The nearest toilets are situated at Goodies Food Hall and cafe off Wood Lane.

3.2 Access / Walks

Tyrrels Wood has one main entrance which is accessed via a kissing gate in the car park on Wood Lane. All paths are dirt tracks that are cut twice yearly. The paths can get very muddy in winter so sturdy footwear is recommended.

The site is flat but has many ancient ditches crossing the wood. These have been bridged to improve public access. The site in places is very wet and boardwalks have been installed within these areas to reduce path spread and improve public access. Informal footpaths and a footbridge link Tyrells Wood to Crow Green, a secondary woodland that adjoins Tyrrells Wood on its western boundary.

The Boudicca Way passes through Tyrrels wood and is a long distance footpath which runs for approximately 36 miles between Diss and Norwich train stations.

Link For Boudicca Way: www.boudiccaway.co.uk/

4.0 LONG TERM POLICY

With the complexity of the site, the long-term intention will be to retain the Pulham Market Big Wood SSSI in favourable condition by maintaining the variety of stand types for which it is renowned. This will be achieved through the control of invasive tree species that could adversely affect its canopy structure, the management of woody invasives such as bramble and silvicultural works early in the plan period to encourage the much needed natural regeneration of native flora. The sycamore within Big Wood must be removed as part of the attainment of favourable status for Woodland SSSIs. The variety of stand types within Big Wood is due to the variation in soil types and through selective thinning and coppicing, this interesting stand variation should remain. Underplanting may have to be considered, but only if there is no natural regeneration developing following the silvicultural and fencing works. A survey of Big Wood (compartment 2a) is undertaken approximately every 10 years. The next survey will be due in 2021) and this and will be an opportunity to identify the extent of the stand types and the impact of the management interventions due early in the plan period.

The potential impact of tree disease on Tyrrels Wood must also be considered since SSSI woodlands are nationally important areas for the conservation of biological diversity. Instances of both Acute Oak Decline (AOD) and Ash Dieback have been identified at Tyrrels Wood. By not carrying out management interventions aimed at encouraging natural regeneration, there is a risk that the impact of tree disease will be greater in the long-term. Woods where tree regeneration is unsuccessful, where there is a reduced range of tree and shrub species, or where there is a lack of structural diversity across the wood, can be even more susceptible to the effects of tree diseases such as ash dieback. The silvicultural works planned at Tyrrels Wood are aimed at addressing issues such as natural regeneration levels and these works therefore form a large part of the approach to minimising the effects of tree disease, in addition to the continuing monitoring of levels of tree disease on site. Fortunately, ash is only a minor part of tree species composition at Tyrrels Wood and the presence of ash dieback will not dramatically affect the woodland's structure. AOD is perhaps of more concern due to the proportion of oak; however, whilst there are signs of AOD being present, significant damage or death due to this condition so far has been limited.

Within the rest of Tyrrels Wood, a broad strategy of varying management regimes will be implemented to maintain and improve this well-structured broadleaved woodland. This will involve the selective thinning of dense stands of young even-aged birch in compartment 3a (Dale Plantation/Low Wood) to promote the growth of other tree species, a coppicing regime to promote structural and species diversity and the control of invasive tree species such as sycamore (only where it casts dense shade that impacts upon ground flora or where it is found to be displacing native tree species). Selective felling in New Plantation and selective thinning in Bales' Planation is also planned to improve structural diversity in those compartments. Areas not at threat from inhibitive light levels or invasive species will be allowed to develop through natural regeneration. These management interventions will ensure that this ancient woodland site is protected through the retention of this 41.5 acres site as a well-structured and diverse broadleaved woodland.

Where appropriate and feasible, some areas of hazel coppice within Dale Plantation and Low Wood will be placed back into a coppice rotation to improve the structure of the understorey. One of the main threats to the woodland is the effect of agricultural pressures from surrounding commercial farming practices. The long-term intention will be to create a structured thick woodland edge, through coppicing the outside Eastern and Northern edge of the wood, which will help buffer the rest

of the site.

The archaeological features associated with the wood, namely the ditches and wood banks will be protected by limiting excessive tree regeneration and erosion through high public usage. This will be done by removing excessive tree regeneration and channelling the public over these features with the use of bridges and boardwalks. Where sections of the ancient wood banks are clearly deteriorating through compaction and erosion caused by high levels of visitor traffic, remedial action may have to be taken to prevent the continued destruction of these features. Such action may include the relocation of bridges or crossing points or the diversion of sections of footpath for defined periods.

The pollards and veteran trees are historically, visually and ecologically important to the wood. The pollards are past the point where any further pollarding management could have an effect on their overall health. The long term management will be to monitor and only intervene when their structural integrity and public health and safety would be placed at risk. The overall intention will be to eventually replace the old pollards with new pollards to continue their presence within Tyrrels wood for the long term.

Public access will continue in line with the corporate objective of increasing people's enjoyment of woodland. Whilst some sections of the wood may become unavailable due to the fencing works necessary for the protection of newly coppiced and thinned areas, principle sections of the path will be kept open. Regular tree safety inspections will be carried out, and all internal structures such as bridges, boardwalks and entrances will be maintained to a safe and high standard.

5.0 KEY FEATURES

The Key Features of the site are identified and described below. They encapsulate what is important about the site. The short and long-term objectives are stated and any management necessary to maintain and improve the Key Feature.

5.1 Ancient Semi Natural Woodland

Description

Tyrrels Wood is a collection of 5 smaller woods, all adjacent to each other, with the exception of Bales Plantation, 160m to the east. The total area is significant in the local landscape, being 16.5 Ha (41 acres). The central part (Big Wood) was designated a SSSI in 1985. Big Wood is documented as ancient and mentioned in the doomsday book and is the only area of Tyrrels wood that is designated as Ancient Semi Natural Woodland, with the remaining parts of Tyrrels Wood being on an ancient woodland site, but being extensively modified through past management.

The entire wood is surrounded by a significant ditch, likely to be an old boundary feature of the wood, but of greater significance is a large wood bank and ditch running east-west between Big Wood and Dale Plantation. This is likely to be an ancient feature of Big Wood and would possibly have marked the old boundary of the wood.

Significance

Big Wood was designated a SSSI, primarily for the variation in stand types present and the geology of the surface soils which give rise to this variation. Of particular interest is plateau alder carr, which is completely a-typical to the expected stand composition. The wood banks are part of the historical importance of the wood and the local area. The wood bank running along the northern edge of Big Wood is particularly rich in ancient woodland indicators, including dog's mercury (Mercurialis perennis) and bluebell (Hyacinthoides non-scripta).

Opportunities & Constraints

Opportunity to maintain 41.5 acres of broadleaved woodland whilst improving the potential the wood has for contributing to the biodiversity of the area through sympathetic management. The opportunity to maintain the diverse stand types present is of primary importance within Big Wood, particularly plateau alder carr.

Tyrrels Wood is bordered to the west by Crow Green, a large secondary woodland which was derived from common land. Combined with Tyrrels Wood, this makes up a significant area of broadleaf woodland within a predominantly arable landscape.

Visitor numbers are high in Tyrrels Wood, partly because of the limited availability of other open access woodlands in the surrounding area. The high footfall and number of dogs has resulted in the formation of a significant number of informal footpaths, which has led to erosion and damage to ground flora and natural regeneration in Big Wood and other compartments. An expansion plan for Long Stratton will see up to 2,000 new homes being built to the eastern side of the village by 2026, along with a long-awaited bypass. This is likely to place even more visitor pressure on Tyrells Wood in the future.

Factors Causing Change

Invasive sycamore, squirrel damage, deer damage, damage by human activity.

Long term Objective (50 years+)

Retain structurally and floristically diverse woodland throughout, whilst retaining the current favourable condition of Big wood SSSI.

Tyrrels Wood will be maintained predominantly as high forest, whilst promoting structural diversity and maintaining a high proportion of deadwood. Archaeological features within the wood will continue to be protected.

Short term management Objectives for the plan period (5 years)

Big Wood SSSI.

Maintain the current diverse range of stand types within the Pulham Market Big Wood SSSI. This will be undertaken through monitoring of the current stand type structure and appropriate management activities to control invasive or unfavourable tree and any other species that could affect the future diversity of stand types.

Selective thinning operations will be undertaken early in the plan period where appropriate to encourage natural regeneration of native tree species, particularly in dense stands of young, evenaged birch. Coppicing of the hornbeam on the eastern boundary will reduce the dense shade currently cast over this area and the subsequent availability of light will allow for the natural regeneration of hornbeam and other tree species, as well as other flora associated with coppiced woodland. Overall levels of natural regeneration are low within the compartment, owing to the prevalence of bramble, shading from dense areas of birch and hornbeam and deer pressure. Following the coppicing and thinning works in Big Wood, a deer exclosure of approximately 2.5 Ha will be erected around the entire perimeter of the works area for a fixed period to greatly reduce the browsing pressure and allow natural regeneration to thrive. The exclosure will allow the vegetation to recover and increase the chances for native broadleaf trees, shrubs and wildflowers to proliferate. Within the compartment, mature oaks trees will be retained, except where they are significantly impacting the development of the understorey.

Non SSSI woodland areas of New Plantation, Dale Plantation, Low Wood and Bales Plantation.

To maintain the diverse woodland structure and deadwood habitat within Tyrrels Wood, the non SSSI woodland areas of Dale Plantation and Low Wood will be subject to selective thinning of large stands of dense, even-aged birch to encourage regeneration of other species. Work will also include some coppicing of hazel in Low Wood on a rotational basis and for the eastern and northern edge of the compartment the short term objective will be to promote a structurally diverse scrubby edge through the continuation of the current coppice regime. Thinning will take place early in the plan period and, following the coppicing and thinning works in Low Wood and Dale Plantation, a single deer exclosure of approximately 6 Ha will be erected around the entire perimeter of the works area for a fixed period to greatly reduce the browsing pressure and allow natural regeneration to thrive. As with Big Wood SSSI, the exclosure will allow the vegetation to recover and increase the chances for native broadleaf trees, shrubs and wildflowers to proliferate. Where coppicing or thinning of dense stands of even-aged birch is not required, the remainder of the compartment will be allowed to develop through natural progression, except where any health and safety issues arise or pose a threat to public safety.

Management of the holly in compartment 1a (New Plantation), combined with selective thinning of the oaks, will be beneficial to other species by increasing the amount of light reaching the ground. This will encourage natural regeneration and improve the age and species diversity of the stand. Compartment 4a, which is dominated by turkey oak, will be thinned to lighten the canopy and improve light levels for the future establishment of new trees and shrubs, thereby improving structural and species diversity.

With regards the archaeological elements within Tyrrels Wood the short term objective will be to try and limit their decline, the erosion and compaction of which has been caused by high visitor pressure. Excessive tree regeneration along the wood banks will be managed where young trees pose a threat through root plate damage. The management of public access routes through the limited restriction of informal paths and the re-siting of crossing points where necessary should give these valuable archaeological features a chance to recover from the significant and continuing damage being caused.

Summary of works (early in the plan period):

Compartment 1a (New Plantation) - management of holly and selective thinning of mature oaks
Compartment 2a (Big Wood SSSI) - bramble management, thinning of dense stands of birch, coppicing of hornbeam on the eastern boundary and approximately 2.5Ha of protective fencing around the perimeter of the works area

Compartment 3a (Low Wood/Dale Plantation) - thinning of dense stands of birch, coppicing of hazel and approximately 6Ha of protective fencing around the perimeter of the works area
Compartment 4a (Bales' Plantation) - selective thinning of mature turkey oak

5.2 Informal Public Access

Description

Tyrrels Wood is a busy well used area of open space in a predominantly arable landscape. The rides link in with the Boudicca way, a 36 mile route from Diss to Norwich which is maintained by Norfolk County Council and a number of partner organisations.

A car park is available directly off Wood Lane, with spaces for up to 12 cars. A number of bridges and boardwalks have been erected to reduce damage to the ancient wood banks and to limit damage to the ride system caused by high usage.

Significance

There is little woodland with public access in the local area, and therefore Tyrrels Wood provides an excellent area for the public to use.

Opportunities & Constraints

Given the very wet ground conditions, Tyrrels Wood is not easy for wheelchair users or prams to negotiate, although the topography on the main rides is flat and a circular route around the site is relatively easy to follow.

High visitor pressure is already adversely affecting the ecological value of the wood, and this may be exacerbated by the expansion plan for Long Stratton. With nearly 2,000 new homes planned by 2026, the popularity of Tyrrels Wood is likely to grow. The impact of present and future visitor numbers will need to be mitigated by careful management of the path network. This management will involve temporary measures to exclude visitors from some sections of the wood to allow the vegetation to recover from the damage that has been caused. The planned deer exclosures, constructed to reduce browsing pressure following silvicultural works, will be in place for a fixed period and will have the added benefit of limiting public access to some the informal paths that have developed within Big Wood and Dale Plantation.

Factors Causing Change

Visitor pressure damaging path structure and ancient wood banks, dog waste, the creation of a number of off-ride informal footpaths.

Long term Objective (50 years+)

To maintain public access so that visitors to the site continue to enjoy this valuable woodland. This access must be maintained without causing further damage to archaeological features, natural regeneration and woodland flora.

Crow Green and Tyrrels Wood are connected by informal paths and a footbridge. There is an opportunity to maintain the open access between the two areas but minor works may have to be undertaken to discourage the occasional presence of horse riders coming into Tyrrels Wood from Crow Green.

Short term management Objectives for the plan period (5 years)

To maintain the site as an area of public open access, with all main internal paths being kept to a minimum width of 2m, unhindered by ride edge woody scrub and fallen trees. Internal structures such as boardwalks, bridges and the car park will be maintained in a safe usable condition.

Where sections of the ancient wood banks are clearly deteriorating through compaction and erosion caused by high levels of visitor traffic, remedial action may have to be taken to prevent the continued destruction of these features. Such action may include the relocation of bridges or crossing points or the diversion of sections of footpath for defined periods.

The large deer exclosures in Big Wood and Dale Plantation, due to be constructed early in the plan period (and which are essential for the protection of newly coppiced and thinned areas), will make large sections of the woodland unavailable for visitors. However, principle sections of the path will be kept open so that a circular route around Tyrrels Wood still remains open.

5.3 Veteran Trees

Description

There are many old pollards and veteran trees within Tyrrels Wood. These are mainly concentrated along the eastern and northern boundaries of the wood. None of the surviving pollards have been managed for a long while and have reached a point where management would potentially have a detrimental effect on their health.

Significance

The pollards, due to their close proximity to the wood bank and ditch which runs around Tyrrels Wood, are historically important as old boundary markers and are significant features of the wood. There is also an important invertebrate association with veteran pollards, and their retention is therefore important in maximising the potential conservation interest of the wood.

Opportunities & Constraints

The pollards have not been pollarded for at least 50 years, and therefore re-pollarding may not be successful. There is the opportunity to maintain both the pollard and veterans as feature trees and deadwood habitat.

Factors Causing Change

Long term Objective (50 years+)

To ensure the continuation of boundary pollards and all other veteran trees within Tyrrels wood.

Short term management Objectives for the plan period (5 years)

Retain both pollards and veterans where possible within Tyrrels Wood. Necessary maintenance will be undertaken where they pose a risk to public safety. There will be a process of selecting and recording potential future veteran trees throughout Tyrrels Wood. Depending on volunteer availability, 10 new pollards will be created to replace the existing declining pollards along the eastern and northern boundary of Tyrrels wood within the 5 year plan period.

6.0 WORK PROGRAMME					
Year	Type of Work	Description	Due By		

APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	1.29	Mixed broadlea ves		High forest	Mostly wet ground/exposed site	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland
Compartment 1 is a linear stand, dominated by oak, including Turkey oak, with occasional ash and field maple. The understorey is predominantly mature hazel coppice together with good holly regeneration. Generally sparse ground flora, however bluebell (Hyacinthoides non-scripta), enchanter's nightshade (Circaea lutetiana), and yellow archangel (Lamiastrum galeobdolon) are present in localised areas. Undesirable species such as nettles (Urtica Dioica) are found near the entrance where dumping of waste may have been a contributing factor through localised enrichment.							
2a	4.68	Mixed native broadlea ves		High forest	Mostly wet ground/exposed site, Sensitive habitats/species on or adjacent to site	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, Site of Special Scientific Interest
Big Wood was given SSSI status in 1985 due to its variety of stand types which reflect the diversity of soil types within this compartment. The stand types that make this part of the wood exceptional are listed as follows: plateau alder carr, stands of lowland birch-pedunculate oak, birch-hazel variant of pedunculate oak woodland and pedunculate oak-hornbeam woodland. Interspersed with common ash, rowan and holly. The centre of compartment 2 was heavily damaged in the 1987 gales and is now very open. The ground layer is completely dominated by Bracken with localised patches of Bramble and Rosebay Willowherb. A number of small interconnecting ponds are present within the north of Big wood.							
За	9.42	Mixed native		High forest	Mostly wet	Ancient Semi	Ancient Semi

Ja	9.42	IVIIXEU	Ingriorest	INDSILY WEL	Ancient Semi	Ancient Senn
		native		ground/exposed	Natural	Natural
		broadlea		site	Woodland,	Woodland
		ves			Informal Public	
					Access	

Compartment 3 comprises Low wood and Dale Plantation. These areas are thought to be of ancient origin; however they have been heavily modified in the past by planting and widely varying management. Many magnificent mature oak specimens are present throughout and the majority of pollards and veterans are situated within the eastern and northern boundary of this compartment. Young birch is common throughout Low Wood and Dales Plantation, which has come in through natural regeneration. Ash is also fairly common together with field maple. Holly and Hornbeam dominates the majority of the canopy of the eastern edge of the compartment. The central area of Dale Plantation and a larger part of Low Wood still retains relic Hazel coppice structure. Small area of blackthorn (Prunus spinosa) - Bramble (Rubus fruticosus) scrub located to the north of Low Wood. The ground layer consists primarily of bramble, leaf litter and dead wood, with small communities of dog's mercury (Mercurialis perennis), yellow archangel (Lamiastrum galeobdolon) and bluebell (Hyacinthoides non-scripta) residing mainly within low wood.

		-	2			î	1
4a	1.17	Mixed		High forest	No/poor	Ancient Semi	Ancient Semi
		broadlea			vehicular access	Natural	Natural
		ves			to the site,	Woodland,	Woodland
					People issues	Informal Public	
					(+tve & -tve)	Access	

Bales' Plantation is isolated and separated from the main woodland block. Turkey oak dominates, with a sparse hazel and holly understorey and mainly bramble ground cover. This area of woodland is subject to agricultural pressures on all four boundaries. Thought to once be part of Big Wood and is surrounded by a large wood bank.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2019	1a	Selective Fell	1.00	10	10
2019	2a	Selective Fell	1.50	10	15
2019	2a	Thin	1.00	5	5
2019	2a	Coppice	0.25	20	5
2019	3a	Coppice	0.75	20	15
2019	3a	Selective Fell	2.00	10	20
2019	3a	Thin	3.00	10	30
2019	4a	Thin	0.75	80	60

GLOSSARY

Ancient Woodland

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

Ancient Semi - Natural Woodland

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

Ancient Woodland Site

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

Beating Up

Replacing any newly planted trees that have died in the first few years after planting.

Broadleaf

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

Canopy

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

Clearfell

Felling of all trees within a defined area.

Compartment

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

Conifer

A tree having needles, rather than broadleaves, and typically bearing cones.

Continuous Cover forestry

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

Coppice

Trees which are cut back to ground levels at regular intervals (3-25 years).

Exotic (non-native) Species

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

Field Layer

Layer of small, non-woody herbaceous plants such as bluebells.

Group Fell

The felling of a small group of trees, often to promote natural regeneration or allow planting.

Long Term Retention

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

Minimum Intervention

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

Mixed Woodland

Woodland made up of broadleaved and coniferous trees.

National vegetation classification (NVC)

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

Native Species

Species that arrived in Britain without human assistance.

Natural Regeneration

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.

Origin & Provenance

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

Re-Stocking

Re-planting an area of woodland, after it has been felled.

Shrub Layer

Formed by woody plants 1-10m tall.

Silviculture

The growing and care of trees in woodlands.

Stand

Trees of one type or species, grouped together within a woodland.

Sub-Compartment

Temporary management division of a compartment, which may change between management plan periods.

Thinning

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

Tubex or Grow or Tuley Tubes

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

Weeding

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established. Either by hand cutting or with carefully selected weed killers such as glyphosate.

Windblow/Windthrow

Trees or groups of trees blown over (usually uprooted) by strong winds and gales.

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