

Woodland Management Plan

To be completed by the plan author:	
Woodland or Property name	National Trust Bransdale & Farndale Woodlands
Woodland Management Plan case reference	955757
The landowner agrees this plan as a statement of intent for the woodland	Yes
Plan author name	Jackie Dunne, Dunnewoods

For FC Use only:			
Plan Period <i>(dd/mm/yyyy - Ten years)</i>	Approval Date:		Approved until:
Five Year Review Date			

Revision No.	Date	Status (draft/final)	Reason for Revision

Template user support:

The functionality in this version of the management plan template has been downgraded to ensure compatibility with Word 2003. This document is not protected and as such rows can be added & deleted or copied and pasted from tables where needed.

UK Forestry Standard management planning criteria

Approval of this plan will be considered against the following UKFS criteria.
Prior to submission review your plan against the criteria using the check list below.

UKFS management plan criteria		Minimum approval requirements	Author check <input checked="" type="checkbox"/>
1	<p>Plan Objectives: Forest management plans should state the objectives of management and set out how an appropriate balance between social, economic, and environmental objectives will be achieved.</p>	<ul style="list-style-type: none"> Management plan objectives are stated. Consideration is given to environmental, economic and social objectives relevant to the vision for the woodland. 	Yes
2	<p>Forest context and important features in management strategy: Forest management plans should address the forest context and the forest potential and demonstrate how the relevant interests and issues have been considered and addressed.</p>	<p>Management intentions communicated in Sect. 6 of the management plan are in line with stated objective(s) Sect. 2.</p> <p>Management intentions should take account of:</p> <ul style="list-style-type: none"> Relevant features and issues identified within the woodland survey (Sect. 4) Any potential threats to and opportunities for the woodland, as identified under woodland protection (Sect. 5). Relevant comments received from stakeholder engagement and documented in Sect. 7. 	Yes
3	<p>Identification of designations within and surrounding the site: For designated areas, e.g. National Parks or SSSI, particular account should be taken of landscape and other sensitivities in the design of forests and forest infrastructure.</p>	<ul style="list-style-type: none"> Survey information (Sect. 4) identifies any designations that impact on woodland management. Management intentions (Sect. 6) have taken account of any designations. 	Yes
4	<p>Felling and restocking to improve forest structure and diversity: When planning felling and restocking, the design of existing forests should be re-assessed and any necessary changes made so that they meet UKFS requirements.</p> <p>Forests should be designed to achieve a diverse structure of habitat, species and ages of trees, appropriate to the scale and context.</p> <p>Forests characterised by a lack of diversity, due to extensive areas of even-aged trees, should be progressively restructured to achieve age class range.</p>	<ul style="list-style-type: none"> Felling and restocking proposals are consistent with UKFS design principles (for example scale and adjacency). Current diversity (structure, species, age structure) of the woodland has been identified through the survey (Sect. 4). Management intentions aim to improve / maintain current diversity (structure, species, and ages of trees). 	Yes
5	<p>Consultation: Consultation on forest management plans and proposals should be carried out according to forestry authority procedures and, where required, the Environmental Impact Assessment Regulations.</p>	<ul style="list-style-type: none"> Stakeholder engagement is in line with current FC guidance and recorded in Sect. 7. The minimum requirement is for statutory consultation to take place, and this will be carried out by the Forestry Commission. Plan authors undertake stakeholder engagement (ref FC Ops Note 35) relevant to the context and setting of the woodland. 	Yes
6	<p>Plan Update and Review: Management of the forest should conform to the plan, and the plan should be updated to ensure it is current and relevant.</p>	<ul style="list-style-type: none"> A 5 year review period is stated on the 1st page of the plan. Sect. 8 is completed with 1 indicator of success per management objective. 	Yes

Section 1: Property Details

Woodland Property Name		National Trust Bransdale & Farndale Woodlands	
Name	Matthew Wilkinson, Estate Manager	Owner YES	Tenant
Email	Matthew.Wilkinson @nationaltrust.org. uk	Contact Number	07825552465
Agent Name (if applicable)		Jackie Dunne, Dunnewoods	
Email	j.dunne@dunnewoods.com	Contact Number	01931 714175
County	North Yorkshire	Local Authority	Ryedale
Grid Reference	Estate Office Smout House, Bransdale Valley SE62609763	Single Business Identifier	106327021
What is the total area of this woodland management plan? (In hectares)		130 Hectares	
You have included an Inventory and Plan of Operations with this woodland management plan?		Section 1 Woodland Plan Section 2 Woodland Compartment Inventory Section 3 FC Plan of Operations for Licence Section 4 Photo Gallery Appendix 1 NCA Profile 25 North York Moors Appendix 2a NYM SSSI citation Appendix 2b NYM SSSI map Appendix 3 MYN SAC map Appendix 4 NYM SPA map Appendix 5 CROW access layer Appendix 6 Wood pasture & Parkland Bap PH map cp26 Sonley Wood Appendix 7 Wood pasture & Parkland Bap PH Bloworth Slack & Church Banks Appendix 8 Rangers Report 2018 Appendix 9 FE Forest Plan map Appendix 10 NT Access statement Appendix 11 Soilscape map Appendix 12 Water acidification spatial mapping Appendix 13 Woodland for flood risk spatial mapping	

	<p>Appendix 14 UK Forest Standard Appendix 15 Extract of woodland creation map Appendix 16 Forest Research Note of Forestry and surface water acidification Appendix 17 Operational Site Assessment OSA Appendix 18 Ash dieback survey 2021</p>	
<p>You have listed the maps associated with this woodland management plan?</p>	<p>Map 1 Bransdale Woodland compartments Map 2 Farndale Woodland compartments Map 3 Bransdale Features & Constraints Map 4 Farndale Features & Constraints Map 5 Topography Bransdale Map 6 Topography Farndale Map 7 PROW & Access Bransdale Map 8 PROW & Access Farndale Map 9 Bransdale Historic Interest Map 10 Bransdale woodland types Map 11 Bransdale Bloworth & Gimmer Bank & Birch Plantation sub-cpt & key species Map 12 Bransdale Heater, High & Round Plantation Map 13 Beck Plantation & Hall Woods Map 14 Bransdale Mill cpt9 & Hodge Beck cpt10a & 10b Map 15 Bransdale Cpt11 Hodge Beck Map 16 Bransdale Cpt12 Hodge Beck, Cpt13 Clegret & cpt14 Barker Plantation Map 17 Bransdale Cpt15, cpt16 & cpt17 Catherine House Map 18 Bransdale Cpt18, cpt19 & cpt20 Catherine House Map 19 Bransdale Cpt21 & cpt22 Stocking Craggs & Low Wood, cpt23 & cpt24 Woods at Low Lidmoor Map 20 NT Bransdale Cpt25 Bonfield Ghyll Woodland Map 21 NT Bransdale Cpt26 Sonley Wood, Farndale Map 22 NT Bransdale Cpt27 Sikehill Wood, Farndale</p>	
<p>Do you intend to use the information within this woodland management plan and associated Inventory and Plan of Operations to apply for the following?</p>	<p>Felling Licence</p>	<p>Yes</p>
	<p>Thinning Licence</p>	<p>Yes</p>
	<p>Woodland Regeneration Grant</p>	<p>N/A</p>
<p>You declare that there is management control of the woodland detailed within the woodland management plan?</p>	<p>Yes</p>	

You agree to make the woodland management plan publicly available?

Only with sensitive information redacted

Section 2: Vision and Objectives

To develop your long term vision, you need to express as clearly as possible the overall direction of management for the woodland(s) and how you envisage it will be in the future. This covers the duration of the plan and beyond.

2.1 Vision

Describe your long-term vision for the woodland(s). (*Suggest 300 words max*)

The National Trust vision for the Bransdale and Farndale valley and the woodland is to:

Manage a landscape that promotes nature conservation across all landscape disciplines. Focussing on thriving habitats and species populations, protection of water resources, soils and carbon to maintain an environmentally sustainable landscape for the benefit of nature, the local population and the visitor experience.

The woodlands will be managed to provide greater habitat connectivity, diversity of structure and resilience by improving the native and broadleaf species composition of broadleaf and honorary 'natives' species, to diversify the age range of species and to extend and connect woodlands and connect to other natural habitats such as the open moorland.

The woodland management will promote species diversity from old growth and veteran trees creating close to nature habitats to promote all species.

The woodland management will aim to promote resource protection through slow conversion to mixed broadleaf structure including open space along riparian zones, increased woodland to improve the water quality within the catchment and to promote carbon storage and reduce soil erosion.

Through management of woodland condition the long term aim is that the woodlands will become sustainable through natural colonisation where management of browsing can be managed to ensure young trees can become established.

Where the woodlands have a role to support farm shelter for stock and buildings this will be identified and be part of the overall aim for specific sites to support the farmed landscape and where opportunities are feasible timber

will be sought for local use.

Where public footpaths come through woodlands the woodlands will be managed to promote the visitor experience. Other opportunities where feasible will be explored to extend the visitor experience of the valleys such as through volunteer working events and online information.

Enhance and maintain the historic environment and cultural landscape and designations that evoke the Spirit of Place including SSSI landscape, ancient woodlands and trees as well as Listed Buildings within the valley.

All woodland management will follow the best practice guidance within the UK Forest Standard (see appendix 14) and to the UK Woodland Assurance Scheme.

2.2 Management Objectives

State the objectives of management demonstrating how sustainable forest management is to be achieved. Objectives are a set of specific, quantifiable statements that represent what needs to happen to achieve the long-term vision.

No.	Objectives (include environmental, economic and social considerations)
1	Conversion of non-native conifer plantations to diverse predominantly broadleaf woodlands through selective felling, protection of old features and significant trees, restocking of broadleaved trees and promotion of natural regeneration.
2	Control of invasive species and tree disease where impacting on woodland ecology and intervention can be successful
3	Protect and promote old growth of ancient woodlands and significant trees; standing and fallen deadwood where safe to do so and protect habitat niches such as wet flushes and rocky outcrops.
4	Enable and promote the establishment of natural regeneration and planting of trees through targeted work to create conditions where regeneration or planting can succeed, maintain secure woodland boundaries from grazing stock, controlling browsing of young trees and controlling extensive damage to trees by grey squirrels. This work will promote the establishment of mixed aged woodland and the long term goal of continuous cover forestry.
5	Manage the establishment of the P2000 woodland planting at Catherine House to ensure the tree growth is successful. Review for further opportunities to connect and expand the woodland habitat including wood pasture, field trees and hedgerows.
6	Continue to monitor and identify key priority species and their habitat ranges

No.	Objectives (include environmental, economic and social considerations)
	to help assess the species diversity to the woodland habitats and need for future management. This may include changes due to tree pest and disease such as ash dieback. Identify a range of particular key species which will help monitor the health of the habitat and create a consistent method of monitoring.
7	Maintain and where possible improve the visitor experience at key points along the footpath networks such as seating at viewpoints and information and interpretation points. This work has to be done within the overall constraints to access and potential for facilities in the valley and is therefore not aimed at increasing numbers.
8	Ensure all designations and historic features are identified and managed as part of the overall woodland habitat. Identify any active management required to protect the woodland features.
9	Management of all woodland in compliance with UKWAS requirement & all statutory requirements including health and safety of staff, visitors, volunteers and contractors on National Trust land.
NB	The objectives are not in any order of priority, are aspirations and aims and will be subject to the effective management of resources available to the National Trust.

Section 3: Plan Review – Achievements

Use this section to identify achievements made against previous plan objectives. This section should be completed at the 5 year review and could be informed through monitoring activities undertaken.

Objectives	Achievement

Section 4: Woodland Survey

This section is about collecting information relating to your woodland and its location, including any statutory constraints i.e. designations.

4.1 Description

Brief description of the woodland property:

This woodland plan covers the National Trust woodlands within the Bransdale and Farndale Valleys within the North York Moors National Park. The valleys are north of Helmsley and Kirbymoorside on the A170 Helmsley to Pickering road. Other key landowners within the valley include Forestry England (shown on map 3) and Nawton Tower Estate.

Both valleys are within the National Character Area profile 25 North York Moors & Cleveland Hills; see profile document in appendix 1. The North York Moors uplands are of sandstone geology incised by valleys.

The woodlands within the Bransdale and Farndale are on the valley slopes and along the watercourses in the valley bottom; see maps 1 & 2 for the woodland location and maps 5 & 6 which show the contours that are narrow on the steeper valley sides. High Plantation cpt5 in the north of Bransdale valley is some 370m above sea level with the plateau in Barker Plantation at 300m. In the Farndale valley where Sonley Wood cpt26 meets the road the land is at 230m altitude with a predominantly west facing steep slope.

The soil terrain at Cockayne is predominantly seasonally wet, slowly permeable wet acid loamy and clayey soils; see reference 17 (bright green) on the Soilscape map from www.magic.defra.gov.uk in appendix 11.

Further south in Bransdale along Hodge Beck the orange shading denotes more freely draining very acid sandy and loamy soil with very low natural fertility in the riparian zone of Low Wood (cpt21a and cpt22a); Soilscape reference 14.

In Farndale the three woodlands are located within the light brown band which denotes a freely draining slightly acid loamy soil with low natural fertility. These soil descriptions are broad-brush and there are varied areas within all the woodlands.

Bloworth Slack watercourse flows from the northeast of the Bransdale valley and joins Hodge Beck at Church Banks. Hodge Becks starts up in the northwest of the area and then runs through the Bransdale Valley and the Vale of Pickering. The River Dove flows through the Farndale Valley and is joined by Hodge Beck south of Kirby Mills and the A170. The River Dove then it joins

the River Rye southwest of Salton. Bonfield Gill watercourse is to the very west of the property and forms the County Parish (CP) boundary between Helmsley CP to the west and Pockley CP to the east.

Along the Hodge Beck there are acidification water quality issues identified by the water regulatory authority and shown in the map in appendix 12 need to be addressed through the forest and land management choices to decrease the surface water acidification. Water acidification was at its highest in the 70's when emissions from industry were at their peak and new forests in the uplands captured the sulphur and nitrogen pollutants 'called scavenging'. The improvements of the riparian management of forests with active management of an open native broadleaf structure in these zones will continue to promote the recovery of the riparian zone. This work will be specifically targeted in the conifer woodland along Bloworth Slack cpt1 at the head of the valley at Cockayne.

Many locations along Hodge Beck and the River Dove have been identified as key areas for woodland creation to reduce flooding through riparian tree planting. Within the spatial mapping data, the high priority areas are shown as dark brown flecks along the water course in the map in appendix 13. The lower priority areas are the light orange colour. In these areas new woodlands can have a positive effect on slowing the water flow down-stream to urban conurbations. The National Trust with the NYMNP are planting some 20 hectares with over 12000 trees targeted around Catherine House shown as P2000 woodland creation and wood pasture planting on map 10.

The whole of the North York Moors is designated a Site of Special Scientific Interest SSSI (Notified 1998) and the full citation & map derived from the Government mapping website are in appendix 2. The reason for notification is for the largest continuous tract of heather moorland in England with mire and moorland vegetation communities. The bird assemblage particularly up on the large moorland expanses is significant merlin, peregrine, hen harrier, golden plover, red grouse, curlew and redshank. Upland gill woodlands of oak and birch with bilberry (NVC W17) and streamside alder ash woodlands with yellow pimpernel (NVC W7) are noted in the citation. Viewing the SSSI unit condition the areas are mostly within 'unfavourable recovering' status.

Of note the North York Moors also carry the European Special Area of Conservation SAC designation as well as a Special Protection Area SPA for the heath vegetation communities; maps in appendix 4 & 5.

Within Bransdale & Farndale the National Trust manage over x hectares of land of which over 126 hectares is woodlands is approximately 28 differing

woodland blocks or compartments; see map 1 for all the Bransdale woodlands and map 2 for those in Farndale as well as the spreadsheet in section 2 which is an inventory of all the woodland compartments. Most of the woodlands are within the Bransdale valley from the head of the valley all along Hodge Beck to a large area of woodland called Stocking Crag & Low Wood at the south end of the valley. Within Farndale there are three discrete woods Sonley Wood, Sikehill Wood & Hall Wood.

Of significance is the 20 hectares of new native woodland planting (planted in winter 2019/2020 around Catherine House to the south of Bransdale Valley extending and connecting a large area of semi natural woodland. This includes an area of wood pasture to the west of High Elm House see map 10. This project is part of a woodland creation agreement with the NYMNP.

Ancient woodlands include Low Wood either side of Hodge Beck and along Shaw Beck at Low Lidmoor; see map 3 (vertical green hatch) as well as Sonley Wood and Sike Hill Wood in the Farndale Valley see map 4. Many of the woodlands are semi natural broadleaved woodlands along the riparian zones of the rivers, shelter belts, farm woodlands and the larger woodland at Stocking Crag that adjoins the ancient woodland of Low Wood.

There are conifer plantations to the head of the Bransdale valley in Blowworth Wood cpt1a, cpt1b, cpt1d, cpt4 and cpt5b as well as cpt7b adjacent to Bransdale Lodge, Barker Plantation cpt14 and a small area to the north of Bonfield Ghyll cpt25. Map 10 broadly shows the areas of conifer woodland in the Bransdale Valley.

There are significant and notable trees throughout the woodlands and fields of the valleys. Section 4.4, page 13 of the Rangers report 2018 in appendix 8 has a map of 126 ancient and notable trees recorded in the Bransdale Valley. All trees have been photographed, measured and mapped (Grid Ref) as well as notes made on any work required to address any threats. An extract of the map is shown below. Within the veteran and notable trees, the dominant species is oak with beech, alder, ash, birch, hazel, holly, lime and sycamore.

There are a number of areas shown on the DEFRA mapping website as Wood-pasture & Parkland BAP Priority Habitat (see appendix 6, 7, 8 & 9) however the mapping indicates there is uncertainty of interpretation, and the mapping has only been drawn from aerial photography. The interpretation on the ground from surveys for the areas shown on the DEFRA mapping data is: Cpt1c Blowworth Slack to the north the terrain is generally fairly steep. However, the southern half of the wood was known as Gimmer Bank Wood. A gimmer refers to a sheep that has been weaned but not sheared around 6 months to 15

months old. This wooded area was grazed but is now fenced off to exclude stock; see photo D1 and D2 on page 13.

Extract of ancient and notable tree map Bransdale Valley

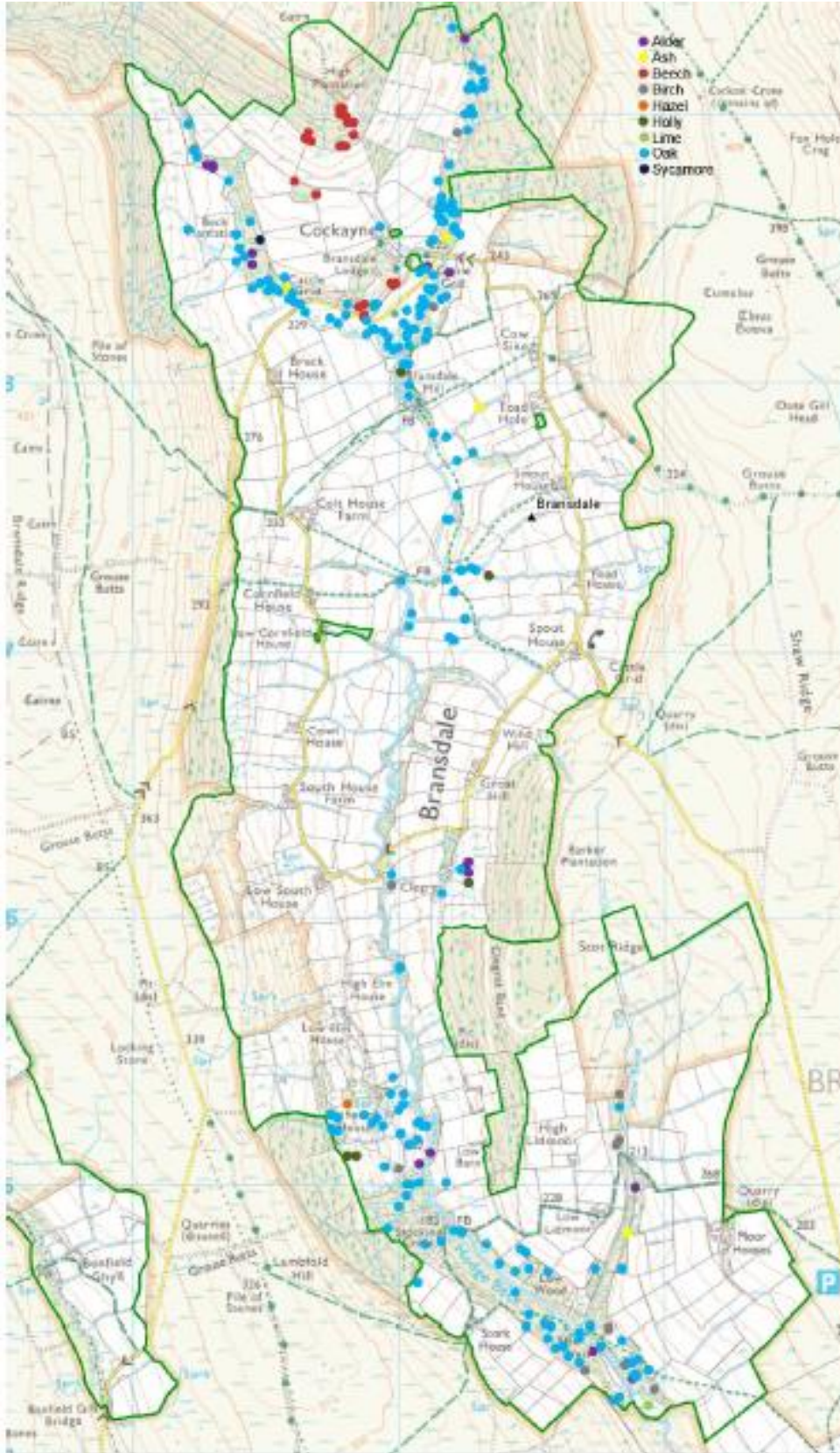


Photo D1 North of Bloworth Slack cpt1c with steep sides to the watercourse



Photo D2 South end of Bloworth Slack cpt1c



There is no evidence to support that Cpt2a Birch Plantation was wood pasture; but was likely a grazed area with one or two mature field trees.

The area around Church Banks (see map in appendix 7) is highly likely to be grazed parkland and wood-pasture and much of the area is currently managed as such apart from woodland cpt8 which is now fenced from grazing stock. Cpt8 does have open areas which appear recently grazed and some very old mature oaks.

Cpts 26 Sonley Wood in the Farndale Valley appendix 6 – unlikely wood pasture due to steepness of much of the wood. This is an area of ancient

woodland.

The Rangers Report from 2018 in appendix 8 is a significant document listing and documenting features and species in all the land across the North York Moors managed by the National Trust. There are some key species listed for Bransdale page 54 and Farndale page 73; including birds, beetles and true flies. The diversity of habitat created by ancient woodland and old trees, dead wood, ground vegetation, wet woods and watercourses is critical in supporting a diverse range of species.

There are no statutory historic features within the woodlands however there are a significant number of Listed Grade II buildings; see map 10. The buildings at Bransdale Mill, the Miller's House, barns and outbuildings and Bransdale Lodge. Of key importance when considering any movement of timber are the Listed bridges over Hodge Beck to the south of cpt7 Beck Plantation and the north of cpt12 just down from the village hall.

Whilst access to the public is always a key feature of National Trust properties the remoteness of the Bransdale <https://www.nationaltrust.org.uk/bransdale> and Farndale Valleys and the difficult nature of the land these woodlands are not very accessible. There are some good footpath routes and loops for the more adventurous see maps 7 & 8. Whilst people are welcome to walk on public routes and permitted tracks there is no dedicated parking in the valleys; no toilets, shops cafes or pubs in Bransdale. Café near Church Houses in the Farndale valley. The National Trust access statement for Bransdale & Farndale can be found in appendix 10.

Visitors can stay in National Trust accommodation at Bransdale Mill bunkhouse <https://www.nationaltrust.org.uk/holidays/bransdale-mill-bunkhouse> and High Lidmoor Farmhouse as well as other local accommodation to visit the area.

The Bransdale volunteers group undertake activities such as dry stone walling, bracken management and biological surveys <https://www.nationaltrust.org.uk/bransdale/features/become-a-bransdale-volunteer>

Off road vehicles are required for access for maintenance works in the woodlands and newly planted areas. There is a rangers station with offices at Smout House (Grid reference SE 626 976).

The main Bransdale valley road is a consultation route for timber movements as the road is not up to the Agreed Route standard. Consultation is required with the local Highways team. B-roads and minor roads are classified as

consultation routes by default. The A170 is an Agreed Route. The timber transport route map can be viewed by using this link

<https://timbertransportforum.org.uk/maps/agreed-routes>

Photo D3 Information board in Sonley Wood welcomes walkers but the terrain is difficult in places.



4.2 Information

Use this section to identify features that are both present in your woodland(s) and where required, on land adjacent to your woodland. It may be useful to identify known features on an accompanying map. Woodland information for your property can be found on the [Magic](#) website or the Forestry Commission [Land Information Search](#).

Feature	Within Woodland	Cpts	Adjacent to Woodland	Map No
<u>Biodiversity- Designations</u>				
Site of Special Scientific Interest	No		Yes	Appendix 2
Special Area of Conservation	No		Yes	Appendix 3 Overlaps with the SSSI
Tree Preservation Order	No		No	
Conservation Area	No		No	
Special Protection Area	No		Yes	Overlaps with the SSSI
Ramsar Site	No		No	
National Nature Reserve	No		No	
Local Nature Reserve	No		No	
Site of Interest to Nature Conservation SINC	Not known			
Other (please Specify):	No		No	
Notes				
North York Moors SSSI (NOTIFIED 1998) See appendix 2 for citation & map derived from www.magic.defra.gov.uk				
North York Moors SAC EU code UK0030228 See appendix 3 for a map of the area https://sac.jncc.gov.uk/site/UK0030228				
North York Moors SPA				
North York Moors interactive map viewed to check for TPO & CA 11/02/2021 https://www.northyorkmoors.org.uk/planning/planning-applications/application-search-map				

Feature	Within Woodland	Cpts	Map No	Notes
<u>Biodiversity - European Protected Species</u>				
Bat	Species Pipistrelle	Yes		Recorded in the Bransdale valley 1987
	Brown Long-eared bat	Yes		Recorded in the Bransdale valley 1987 Cockayne Lodge
Dormouse	No			
Great Crested Newt	Possible			Recorded in 1987 in the valley location unknown
Otter	Yes			Recorded in 2018 location TBC

Sand Lizard	Not known			
Smooth Snake	Not known			
Natterjack Toad	Not known			
Biodiversity – Priority Species				
Schedule 1 Birds	Species:	Yes		Goshawk (recorded 1986) Hen Harrier (recorded 1986) Merlin (recorded 1986) & more recently 40 pairs breeding in the valley Redwing (recorded 2018) Fieldfare (recorded 2018) Red kite (recorded 2018) See page 55 to 58 of the report in appendix 8.
Breeding birds Bransdale Valley	Red & Amber list species	Yes		Ring ouzel, redstart, pied flycatcher, curlew, snipe & lapwing.
Mammals Water Vole,		Yes		Last recorded in 1987
Reptiles (grass snake, adder, common lizard etc)		Yes		Grass snake, adder & slow worm recorded in 1987 location unknown
Plants		Yes		Ferns are abundant in Gimmer Bank cpt12 an Low Wood cpt21 & 22. See list for Bransdale by 73 which includes: Narrow Buckler fern Moonwort Lemon-scented fern Soft Shield fern Wood horsetail
Fungi/Lichens		Yes		Page 73 lists those recorded in Bransdale
Invertebrates (butterflies, moths, beetles etc)		Yes		Page 59 to 69 in appendix 8 is a list for the Bransdale valley. Noted in woodland are: Green hairstreak butterfly in Stork Woodlands cpt21 (1983) Purple hairstreak, Shaw Beck Woodland cpt22 (1999) Beetles Anthonomus conspersus in Bonfield Ghyll Woodland cpt25 (1999) Coeliodes ruber Low Bank Wood (1999) Curculio betulae Low Bank Wood (1999) Eledona Agricola Low Wood (1999) Pseudotrphyllus suturalis Low Bank

				<p>Wood (1999) Pterostichus (Bothriopterus) oblongopunctatus Low Bank Wood (1999) Northern rove beetle <i>Querdus plagiatus</i> Cpt1c Gimmer Bank Wood (2013) Page 74 lists the beetles recorded in the woods of Farndale</p>
Amphibians	Yes			<p>Common toad, palmate newt & common frog all recorded in 1987 in the valley.</p>
Other (please Specify): BIRDS	Yes			<p>In the valley of Bransdale 107 species of birds identified. Of these 61 were recorded in 2018 by the ranger team; see page 55 to 58 and page 74 of the report in appendix 8. The lists includes wren, tawny owl, willow tit, willow warbler, spotted flycatcher, marsh tit, dunnock, bullfinch, nuthatch, tree creeper & gold crest.</p>
<p>Information from Appendix 8 2018 Rangers Report Historical management plan 2013</p>				
<p>Historic Environment</p>				
Scheduled Monuments	No			
Unscheduled Monuments	No			
Registered Parks and Gardens	No			
Boundaries	Yes		7 & 8	<p>Parish boundaries & district boundaries are shown on maps 7 & 8.</p>
Veteran trees	Yes	Cpt1 Cpt4 Cpt5 Cpt6 Cpt7 Cpt8 Cpt9 Cpt10 Cpt11 Cpt12 Cpt17 Cpt18 Cpt19 Cpt20 Cpt21 Cpt22	App 8	<p>Section 4.4, page 13 of the Rangers report 2018 in appendix 8 has a map of 126 ancient and notable trees recorded in the Bransdale Valley. All trees have been photographed, measured and mapped (Grid Ref) as well as notes made on any work required to address any threats.</p>

Listed Buildings	Yes	Cpt24 Cpt7 Cpt9 Cpt10 Cpt11 Cpt12	9	Bransdale Lodge GII Ref 1149075 https://historicengland.org.uk/listing/the-list/list-entry/1149075 Bridge over Hodge Beck GII Ref 1172747 https://historicengland.org.uk/listing/the-list/list-entry/1172747 Bransdale Mill GII Ref 1149038 https://historicengland.org.uk/listing/the-list/list-entry/1149038 Millers House GII Ref 1316045 https://historicengland.org.uk/listing/the-list/list-entry/1316045 Outbuildings at Bransdale Mill GII Ref 1149039 https://historicengland.org.uk/listing/the-list/list-entry/1149039 Waterhouse Bransdale Mill GII Ref 1296545 https://historicengland.org.uk/listing/the-list/list-entry/1296545 Barn at Bransdale Mill GII Ref 1149040 https://historicengland.org.uk/listing/the-list/list-entry/1149040 Mill pond walls GII Ref 1316046 https://historicengland.org.uk/listing/the-list/list-entry/1316046 Sundial s/w of Bransdale Mill GII Ref 1316047 https://historicengland.org.uk/listing/the-list/list-entry/1316047 Bridge over Hodge Beck GII Ref 1149037 https://historicengland.org.uk/listing/the-list/list-entry/1149037
SHINE	Not known			Check with NT mapping team
Other (please Specify): Forestry England heritage feature points	Yes		App 9	It is noted on the FE Bransdale Forest Plan there is a significant number of heritage features shown which include cairns, listed buildings as well as some unknown features which are potentially ancient trees; appendix 9
Landscape				
National Character Area (please Specify): NCA Profile 25 North York Moors & Cleveland Hills, appendix 1				
National Park	Yes			North York Moors National Park NYMNP
Area of	No			

Outstanding Natural Beauty				
Other (please Specify):	No			
People				
CROW Access	Yes	None	Appendix 5	Map in Appendix 5
Registered Common Land	No			
Public Rights of Way (any)	Yes	Cpt8 Cpt9 Cpt10 Cpt11 Cpt21 Cpt22	7 & 8	Bridleway 25.117/005/1 through Bransdale Mill Footpath 25.117/013/1 from Bransdale Mill to Cow Sike Footpath 25.117/504/1 from Bransdale Mill south to the FB and west to Cornfield House Footpath 25.117/202/1 from FB to Colt House Farm Footpath 25.117/006/1 from South House n/w to Hodge Beck Footpath 25.117/019/1 from Stork House through Low Wood to Ankness Bridleway 25.117/015/1 from Moor Houses to Low Lidmoor through Stocking Craggs to Stork House Bridleway 25.117/017/1 from Stork House s/w across Pockley Moor Bridleway 25.45/084/1 through Bonfield Gill Wood and heading west
Other Access Provision	Yes			NT sites are open to the public however access is limited in these valleys; see access statement in appendix 10.
Public Involvement	Yes			NYM conservation volunteers
Visitor Information	Yes	Cpt26	8	Information board at Cpt26 Sonley Wood Information on access on NT website
Public Recreation Facilities	No			
Provision of Learning Opportunities	Yes			NYM conservation volunteers Apprentice Ranger & Agricultural apprentice
Anti-social Behaviour	No			
Other (please Specify): Accommodation facilities	Yes			Bransdale Mill Bunkhouse High Lidmoor Farmhouse

Water				
Watercourses	Yes	Cpt1 Cpt8 Cpt10 Cpt11, Cpt12, Cpt15, Cpt16, Cpt20, Cpt21, Cpt22 Cpt26 Cpt27 Cpt28		Cpt1 Bloworth Slack Cpt7, 8, 10, 11, 12, 15, 16, 20, 21, 22 Hodge Beck Cpt22 Shaw Beck Cpt26 River Dove and other un- named narrow watercourses through cpt27 & cpt28 Cpt25 Bonfield Gill
Lakes	No			
Ponds	No			
Other (please Specify):	Yes	Cpt1		Water acidification Hodge Beck appendix 12

4.3 Habitat Types

This section is to consider the habitat types within your woodland(s) that might impact/inform your management decisions. Larger non-wooded areas within your woodland should be classified according to broad habitat type where relevant this information should also help inform your management decisions. Woodlands should be designed to achieve a diverse structure of habitat, species and ages of trees, appropriate to the scale and context of the woodland.

Feature	Within Woodland	Cpts	Map No	Notes
Woodland Habitat Types				
Ancient Semi-Natural Woodland	Yes	21, 26, 27	3 & 4	ASNW areas include Cpt21 Low Wood along Hodge Beck and Shaw Beck to the south and east of Low Lidmoor Cpt26 Sonley Wood & Cpt27 Sikehill Wood in the Farndale Valley
Planted Ancient Woodland Site (PAWS)	No			
Semi-natural features in PAWS	No			
Lowland beech and yew woodland	No			
Lowland mixed deciduous woodland	No			
Upland mixed ash woods	No			

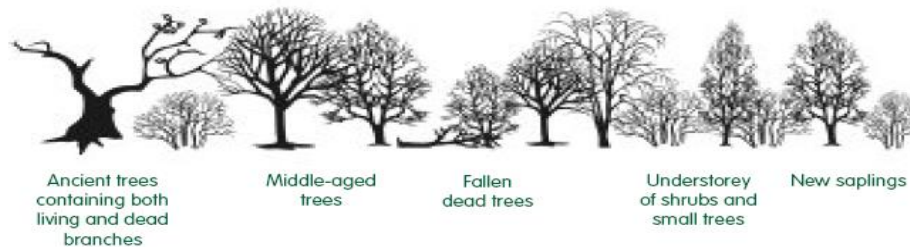
Upland Oakwood	Yes	21a, 22a, 26a, 27a		
Wet woodland	Yes	21a, 22a, 26a, 27a		
Wood-pasture and parkland	Yes	26	App 6 & 7	Cpt26 Sonley Wood appendix 6 is mapped as Wood pasture / Parkland BAP Priority Habitat – questionable due to steepness of much of the wood Cpt1c Bloworth Slack appendix 7 Church Banks part of cpt8
Other (please Specify):	No			
Non Woodland Habitat Types				
Blanket bog	No			
Fenland	No			
Lowland calcareous grassland	No			
Lowland dry acid grassland	No			
Lowland heath land	No			
Lowland meadows	No			
Lowland raised bog	No			
Rush pasture	No			
Reed bed	No			
Upland hay meadows	No			
Upland heath land	No			
Unimproved grassland	No			
Peat lands	No			
Wetland habitats	Yes			Flushes & riparian zones
Other (please Specify):	No			

4.4 Structure

This section should provide a snapshot of the current structure of your woodland as a whole. A full inventory for your woodland(s) can be included in the separate Plan of Operations spreadsheet. Ensuring woodland has a varied structure in terms of age, species, origin and open space will provide a range of benefits for the biodiversity of the woodland and its resilience. The diagrams below show an example of both uneven and even aged woodland.

Woodland Type (Broadleaf, Conifer, Coppice, Intimate Mix)	Percentage of Mgt Plan Area	Age Structure (even/uneven)	Notes (i.e. understory or natural regeneration present)
		Uniform	See Section 2 Compartment Inventory
		Irregular	

Uneven-aged woodland – many wildlife habitats because of high diversity



Even-aged woodland – tidy but of low diversity



Section 5: Woodland Protection

Woodlands in England face a range of threats; this section allows you to consider the potential threats that could be facing your woodland(s). Use the simple Risk Assessment process below to consider any potential threats to their woodland(s) and whether there is a need to take action to protect their woodlands.

Note: To add more tables, Copy the table and Paste below.

5.1 Risk Matrix

The matrix below provides a system for scoring risk. The matrix also indicates the advised level of action to take to help manage the threat.

Impact	High	Plan for Action	Action	Action
	Medium	Monitor	Plan for Action	Action
	Low	Monitor	Monitor	Plan for Action
		Low	Medium	High
Likelihood of Presence				

5.2 Plant Health

Threat (e.g. Ash Dieback, <i>Phytophthora</i> , Needle Blight etc)	Chalara ash dieback (<i>Hymenoscyphus fraxineus</i>) The disease is present in all counties of England, and experience in mainland Europe suggests that the majority of ash trees in woodlands infected with the disease will decline and die over the next 10–15 years. There is growing evidence that once trees are infected by <i>H. fraxineus</i> , and the disease has progressed to the point where basal lesions are exhibited, the trees become susceptible to colonisation by secondary pathogens such as <i>Armillaria</i> spp. (honey fungus). These secondary pathogens can result in butt or root rot, destabilisation of the tree making them prone to falling, and may ultimately be the final cause tree decline and death.
Likelihood of presence (high/medium/low)	High – confirmed cases have been identified within the woodlands and symptoms are visible in young and mature stems. The Forest Research chalara map shows that infections have been in this area since 2015/2016 http://chalaramap.fera.defra.gov.uk/
Impact (high/medium/low)	Low - ash is mostly only a minor component predominantly present along Hodge Beck forming generally around 10-25% of the composition. Cpt9e a very small woodland has a higher component adjacent to Bransdale Mill and Cleget Wood cpt13a has 25% composition.

<p>Response (inc protection measures)</p>	<p>Survey undertaken during 2021 to assess all areas of ash dieback near to potential risk site; see appendix 18 for summary results and work programme.</p> <p>Remove the dead, dying and dangerous trees identified on footpaths and adjacent to roads or buildings as per the survey recommendations.</p> <p>With mature trees crown reductions will enable the retention of the tree for as long as possible whilst mitigating risks.</p> <p>1-5% of the ash population are very likely to be resilient so retaining healthy trees will enable these trees to reproduce potentially resilient offspring.</p> <p>Within woods where ash is part of the composition, thin to remove ash showing dieback symptoms The ash may need to be marked in summer when in full leaf so the dieback impact can be assessed.</p> <p>Any ash retained within the woodland will be monitored for signs and symptoms of dieback and actions taken accordingly.</p> <p>Currently no planting of ash from nurseries is being undertaken in the forestry sector but ash is naturally regenerating within the woodlands. Alternative species may need to be introduced to improve the long-term resilience of the wood. Alternative species for restocking will be considered and will aspen, black poplar, willows,</p>
<p>Threat (e.g. Ash Dieback, <i>Phytophthora</i>, Needle Blight etc)</p>	<p>Phytophthora ramorum in larch & rhododendron. Other susceptible species include beech, sweet chestnut and bilberry.</p> <p>https://www.forestry.gov.uk/pramorum#outbreakstage</p>
<p>Likelihood of presence (high/medium/low)</p>	<p>Low – most cases are to the west of the country see Forest Research outbreak map</p> <p>https://www.forestresearch.gov.uk/documents/7768/Pr_Ou_tbreak_map_at_Feb_2020.pdf</p> <p>No cases in the Bransdale Valley</p>
<p>Impact (high/medium/low)</p>	<p>Medium to Low</p> <p>Bloworth Wood cpt1a & 1b, Birch Plantation cpt2a, High Plantation cpt4b, around Bransdale Hall cpt7b, Barker Plantation cpt14a and Hall Wood cpt28a (Farndale) all have</p>

	larch as a major component of the tree species composition.
Response (inc protection measures)	<p>Generally, the aim within the Bransdale & Farndale woodlands is to reduce or remove the larch where accessible. So over time the threat of the disease will reduce.</p> <p>Larch and other susceptible species will be monitored by the rangers for signs of the disease.</p> <p>Forest Research undertake fly overs to identify new potential outbreaks.</p> <p>Currently no restocking using larch is advisable.</p>
Threat (e.g. Ash Dieback, <i>Phytophthora</i> , Needle Blight etc)	<p>Dothistroma needle blight. Dothistroma needle blight (DNB) is an economically important disease of conifer trees (trees with cones and needles), and particularly pines (trees in the <i>Pinus</i> genus). It is caused by the fungus <i>Dothistroma septosporum</i> (<i>D. septosporum</i>). It causes premature needle defoliation, resulting in loss of timber yield and, in severe cases, tree death.</p> <p>It is also known as red band needle blight because of the colourful symptoms it shows on pine trees, as in the picture above.</p>
Likelihood of presence (high/medium/low)	The disease has been found in most parts of the United Kingdom (UK), mostly since the 1990s. In the UK it has been found on Corsican or 'black' pine (<i>P. nigra</i>), lodgepole pine (<i>P. contorta</i>), Scots pine (<i>P. sylvestris</i>), Ponderosa pine (<i>P. ponderosa</i>) and bishop pine (<i>P. muricata</i>). Corsican pine is particularly susceptible.
Impact (high/medium/low)	<p>Low</p> <p>The most significant areas of pine are within Barker Plantation cpt14b where lodgepole pine is a the key species and Scots pine are significant feature trees</p>
Response (inc protection measures)	<p>The aim within this plan is to reduce the composition of lodgepole pine at Barker Plantation.</p> <p>With the reduction of the commercially planted pine within the valley by both Forest England and the National Trust it is hoped that the remaining Scots pint feature trees and minor components of pine within tree species compositions will have less threat from the outbreak of DNB.</p> <p>Continue to monitor for signs of the disease.</p>

	<p>Generally the focus in the UK is on the use of resistant species and good stand management. This particularly includes thinning of stands of pine trees in accordance with good silvicultural practice to promote air circulation in the tree crowns. This will help to reduce humidity levels in the crowns, thereby making conditions less conducive to fungus development. Although this will not prevent infection, it can help to reduce the impact. No-thin regimes and delayed first thinning have been shown in public forests to lead to significant numbers of tree deaths.</p>
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Note	<p>There are several prevalent pest and diseases in forestry and the Forest Research website holds information of pest and diseases https://www.forestresearch.gov.uk/tools-and-resources/pest-and-disease-resources/</p>
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5.3 Deer

Species - Likelihood of presence (high/medium/low)	<p>Consistent with numbers across the UK there is understood to be high number of deer within the valley and across the landscape. Forest England have noted within their woodland plan that browsing pressure is a threat to natural regeneration as a tool for woodland succession.</p>
Impact (high/medium/low)	<p>On restock sites the impact can be high with unsuccessful tree establishment being a high possible outcome. In woods where natural regeneration is a key mechanism for managing succession that the effect is more subtle. When planting slower growing broadleaves deer control is vital. As for example oaks may get repeatedly browsed and not get bigger than browsing height.</p>
Response (inc protection measures)	<p>The impact the deer have on younger trees will be mitigated using a combination of methods:</p> <ul style="list-style-type: none"> temporary deer fencing culling tree tube protection <p>For culling identify the most vulnerable areas annually for targeted culling. Given the valley topography and woodland locations culling will be possible across the management area. Consult key stakeholders and the owners of shooting rights as necessary.</p> <p>It is important when restocking to ensure that natural regeneration can become established in years 1-5 and can</p>

	<p>produce a tree of good form. 10% damage is acceptable and can be thinned out during woodland work.</p> <p>If natural regeneration is the main restocking method, then key phases of browsing control can be effective in enabling young trees to become established. A phase is likely to require 10 years of monitoring and reduction culling to allow trees to regenerate and grow to a height which is above the deer browsing level.</p> <p>Monitor CCF stands using 4mx4m deer & rabbit enclosure's</p> <p>Further advice available from the Deer Initiative http://www.thedeerinitiative.co.uk/best_practice/</p>
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5.4 [Grey Squirrels](#)

Likelihood of presence (high/medium/low)	Grey squirrels are likely to present across the valley but little damage has been seen so numbers anticipated as low. They will particularly go to pheasant feeding stations as a source of food.
Impact (high/medium/low)	<p>Greys will have a high impact on pole stage sycamore and beech as they strip the bark from the main stem and branches. Other susceptible species include oak, sweet chestnut, pine, larch and Norway spruce.</p> <p>Planted and naturally regenerated trees between the ages of 5-40 years are the most vulnerable.</p> <p>Grey squirrel damage was particularly noted in Beck Plantation</p>
Response (inc protection measures)	<p>Grey Squirrel control will be essential to secure tree establishment and growth of good form and reduce the risks associated with tree damage in areas where tree safety may be a concern. Where good timber form is not a key requirement level of browsing can be accepted.</p> <p>Key control methods currently are trapping and shooting.</p> <p>Greys can be trapped at any time of the year but March to September is the best time due to a shortage of food. Later in the year, natural food, such as nuts and seeds, are more abundant and make trapping more difficult. Trapping is a legally acceptable and most effective way of controlling grey squirrels in most situations. A live capture trap must</p>

	<p>be used where red squirrels are present or suspected but, where there are no reds, a spring trap may be selected as the preferred method. See the BASC's Code of Practice on trapping pest mammals for guidance on the use of spring traps.</p> <p>When managing woodland where trees have been damaged remove damaged stems during early thinning to improve the residual timber stock and remove damaged stems in tree safety zones.</p> <p>When restocking woodlands include in the species mix trees more resilient to damage from greys such as birch, aspen and wild cherry.</p>
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5.5 Livestock and Other Mammals

Threat (Sheep, Horse, Rabbit etc)	Sheep
Likelihood of presence (high/medium/low)	Medium
Impact (high/medium/low)	Sheep can browse off young trees and ring bark young to pole stage trees. Sheep are particularly having a negative impact in cpt6 Round Plantation
Response (inc protection measures)	<p>Ensure boundaries are maintained as stock proof.</p> <p>Walls around Round Plantation require gapping up to make the areas secure.</p>

Threat (Sheep, Horse, Rabbit etc)	Rabbit
Likelihood of presence (high/medium/low)	The presence of rabbit varies across the valley from woodland to woodland and is generally high and a significant threat to young trees.
Impact (high/medium/low)	The impact of rabbits browsing on young trees can devastate the restocking of a stand and prevent successful colonisation by natural regeneration.
Response (inc protection measures)	<p>It will be necessary when restocking areas after felling that the potential impact of rabbit browsing is reviewed.</p> <p>Control can be undertaken using rabbit fencing, by culling and/or by protecting trees using spirals or</p>

	tubes. This will be necessary for approximately 5 years.
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Threat (Sheep, Horse, Rabbit etc)	Cattle
Likelihood of presence (high/medium/low)	Currently there is no browsing of cattle within the woodlands
Impact (high/medium/low)	If managed some breeds of cattle can have a positive impact on woodland succession and diversity
Response (inc protection measures)	If the browsing of cattle is to be used as a woodland management tool it must be closely monitored for both successful and negative outcomes.

5.6 Water & Soil

Threat (Soil Erosion, Acidification of Water, Pollution incidents etc)	Diffuse pollution
Likelihood of presence (high/medium/low)	Low
Impact (high/medium/low)	High
Response (inc protection measures)	All woodland operations will be managed in accordance to UKFS best practice guidance appendix 14, page 145 and within the audited rules of the UK Woodland Assurance Scheme UKWAS of which the National Trust is a member.

Threat (Soil Erosion, Acidification of Water, Pollution incidents etc)	Acidification can adversely affect soil biodiversity, soil fertility, tree growth and water quality.
Likelihood of presence (high/medium/low)	Appendix 12 is a map from Natural England mapping website MAGIC showing the water courses of the Bransdale valley to have higher acidic deposits than is normally expected. This is largely due to atmospheric pollution. The primary mechanism responsible is the ability of forest canopies to capture more sulphur & nitrogen from the atmosphere that shorter types of vegetation. Pollutant scavenging peaked in the 70's when emissions were greatest and planting of forest in the uplands had occurred in the 50's & 60's.
Impact (high/medium/low)	Low – national monitoring studies show forest sites to be recovering in line with their moorland counter parts

	appendix 16 Forest Research Note Forestry & surface water acidification 2014.
Response (inc protection measures)	<p>Modelling suggests that improvements in air quality will reduce forestry's contribution to a small margin. The impact of new planting of densely shading conifers must be considered in this regard.</p> <p>The NT restocking proposed along the Bloworth Slack when the conifers are removed is with native and honorary broadleaves and includes glades and open spaces.</p> <p>Active management of the riparian zone will be undertaken to control conifer natural regeneration.</p>

5.7 Environmental

Threat (Pollution, Fire, Flood, Wind, Invasive Species, etc)	American skunk cabbage (<i>Lysichiton americanus</i>) has huge leathery leaves between 40cm – 1.5m, and bright yellow flowers up to 45cm, which resemble those of Lords and Ladies. The original source is in the Valley Gardens cpt1c where it was planted as part of the formal garden design. Its seeds disperse via waterways but also probably by birds and animals. It is found on pond margins, stream sides and wet woodlands. It can grow in shade or full-light and in a range of different soil conditions and thrives in disturbed environments.
Likelihood of presence (high/medium/low)	Skunk cabbage is present along Hodge Beck to the south of the valley west of Catherine House woodland compartments 1c Valley Gardens, 15, 16, , 18, 20 & Low Wood cpt22; see maps page 12 of Rangers Report appendix 8
Impact (high/medium/low)	The large leaves and dense stands of the plant lead to it out-competing smaller plants due to its shading effect and can cause extensive damage locally to native flora including vascular plants and mosses.
Response (inc protection measures)	The plants are dug out by hand annually and mapped and monitored to assess effectiveness of the work.
Threat (Pollution, Fire, Flood, Wind, Invasive Species, etc)	Rhododendron within the 20 th century woodland garden of Gimmer Bank Wood cpt1c the southern end
Likelihood of presence (high/medium/low)	Low – isolated location in cpt1c
Impact (high/medium/low)	Low
Response (inc protection measures)	The NT aim is to ensure the rhododendron and bamboo population do not spread and are contained in

	this original location. Where other native species are present in they will be favoured and the extent of the non-native species will be reduced over time.
Threat (Pollution, Fire, Flood, Wind, Invasive Species, etc)	Wind throw and snap
Likelihood of presence (high/medium/low)	There are areas of fairly significant wind throw in the uniform conifer stands in Bloworth Wood cpt1a, 1b, 1d and High Plantation 4b. With threat of blow in High Plantation cpt5b and Barker Plantation cpt14
Impact (high/medium/low)	The impact of the wind blow increases the difficulty of the felling operations proposed in Section 2 Compartment Inventory
Response (inc protection measures)	The aim is to undertake conversion of these areas to predominantly broadleaves following a semi natural restocking regime ultimately creating continuous cover forestry stand of mixed age and mixed species. Aim to work with Forest England to manage the timing of felling in adjacent woodlands to prevent further windblow in the neighbouring stands.

5.8 Social

Threat (Rights of Way, CROW, permissive access, events sporting rights, Anti-social Behaviour etc)	Sporting rights are held by Nawton Tower Estate
Likelihood of presence (high/medium/low)	N/A
Impact (high/medium/low)	N/A
Response (inc protection measures)	Liaise with the Estate as necessary regarding planned works, management of public access and management of browsing mammals as required.
Threat (Rights of Way, CROW, permissive access, events sporting rights etc)	There is open CROW access across much of the adjacent moorland but not within the woodlands.
Likelihood of presence (high/medium/low)	The extent of the CROW access is shown on the map in appendix 5
Impact (high/medium/low)	Low
Response (inc protection measures)	The NT encourages access where it is safe and reasonably practicable.

5.9 Economic

Threat (Timber forecasting, markets, products, operational costs etc)	Haulage access for timber harvesting
Likelihood of presence (high/medium/low)	High
Impact (high/medium/low)	Over the short-term period of restoration from even aged conifer stands to native woodland the haulage of timber will have a medium impact on the valley.
Response (inc protection measures)	<p>The removal of the timber from the valley must be managed with consultation with Highways, neighbouring landowners and residents.</p> <p>Work being undertaken across woodlands owned by Forest England and NT requires a level of co-ordination through consultation to manage any impacts on the community.</p>

5.10 Climate Change Resilience

Threat (Uniform Structure, Provenance, Lack of Diversity etc)	Changes in climate temperature, moisture, wind exposure & rainfall see Forest Research information at https://www.forestresearch.gov.uk/research/climate-change-impacts/climate-change-impacts-and-adaptation-in-englands-woodlands/adapting-englands-woodland-to-climate-change-main-issues/
Likelihood of presence (high/medium/low)	High
Impact (high/medium/low)	<p>Current projections suggest that areas of south, central and eastern England will have drier and warmer summers, resulting in increasingly severe soil moisture deficits which will reduce tree growth – particularly on shallow, south facing slopes, and sandy-textured, freely draining soils.</p> <p>Changes in the seasonality of rainfall have occurred gradually over the past century, and this trend is projected to continue and to intensify in the future. The resulting wetter autumn and winter periods will cause greater water table fluctuations, limit rooting depth, and reduce tree stability on exposed sites.</p>

	<p>Changes in the wind climate are highly uncertain but, with reduced anchorage on wet sites, the risk of windthrow will increase.</p> <p>The incidence and severity of tree disease and pest outbreaks will increase. A warmer climate and, particularly, warmer winters will allow tree pests and pathogens to extend their range.</p>
Response (inc protection measures)	<p>The NT's can review the following strategies to adapt to the changes climate change may pose for woodland ecology in the NYMNP:</p> <ul style="list-style-type: none"> • Adaption of uniform conifer stands to predominantly mixed broadleaf woodlands including trees, shrubs and open space • Increase tree species diversity in both tree, shrub and provenance • Early thinning, continued thinning and self-thinning mixtures will help improve woodland stability • Monitor sites for increased pests & pathogen activity • Monitor sites for tree stress to drought/water/wind

Section 6: Management Strategy

This section requires a statement of intent, setting out how you intend to achieve your management objectives and manage important features identified within the previous sections of the plan. A detailed work programme by sub-compartment can be added to the Plan of Operations.

Management Objective / Feature	Management Intention
<p>Conversion of non-native conifer plantations to diverse predominantly broadleaf woodlands through selective felling, protection of old features and significant trees, restocking of broadleaved trees and promotion of natural regeneration.</p>	<p>Conversion of the following compartments:</p> <p>Phase 1 Years 2021-2025 Barker Plantation cpt14a & 14b phase 1 halo thinning around features Bloworth Wood cpt1a, 1b & 1d CF & restock (cpt1b could be moved to phase 2) High Plantation cpt4a – phase 1 thin</p> <p>Phase 2 Years 2026-2030 Barker Plantation cpt14a & 14b CF conifers Bransdale Hall Plantation cpt6b High Plantation cpt4a – phase 2 thin & SF High Plantation cpt4b CF & Restock High Plantation cpt5b SF SS & thin & restock Hall Wood cpt28a SF Larch & restock.</p> <p>The restocking will be predominantly broadleaf and native (see felling licence agreement) with a review if diversified tree provenance will further help mitigate future climatic changes. It is recommended that where possible temporary deer fencing is used to enable establishment and that the stocking density is as high as possible (2250sph) to allow for failures and reduce the beat up requirements. Ensure 3-5 years of concentrated tending is undertaken to ensure establishment.</p>
<p>Control of invasive species and tree disease were impacting on woodland ecology and intervention can be successful</p>	<p>Control & monitoring of Skunk cabbage through the woodlands along Hodge Beck</p> <p>Monitoring and containment of rhododendron and bamboo in the original Valley Gardens part of cpt1c.</p> <p>Ash dieback where present has been noted in Section 2 Compartment Inventory and appendix 18 ranger survey from 2021. The impact to a woodland is more significant where ash is a higher proportion of the woodland composition for example along Bransdale Mill 9a & 9b, Coronation Wood 10a, Hodge Beck 10b, 11a, 12a and in cpt13 Clegret Wood. A licence has been sought to enable thinning and felling of these trees as required. In safe areas leaving the trees to naturally fail is also a valid</p>

	<p>management option. Review & prioritise work areas. Aim to complete within phase 1 time period 2021-2025.</p>
<p>Protect and promote old growth of ancient woodlands and significant trees; standing and fallen deadwood where safe to do so and protect habitat niches such as wet flushes and rocky outcrops.</p>	<p>Secure old growth and features within areas where conifer conversion will occur and thinning is programmed for example Barker Plantation cpt14. Identifying the features prior to woodland operations can form part of an Operational Site Assessment of similar.</p> <p>Continue to promote old growth through continuous cover woodland management.</p> <p>Maintain veteran tree database mapping see map in Rangers Report appendix 8.</p> <p>Promote the management of standing and fallen woody debris (hardwood) as a general woodland management action.</p> <p>Undertake tree condition surveys and management works to promote old growth as well as managing the health and safety to users of footpaths and roads and to protect buildings and utilities.</p>
<p>Enable and promote the establishment of natural regeneration and planting of trees through targeted work to create conditions where regeneration or planting can succeed, maintain secure woodland boundaries from grazing stock, controlling browsing of young trees and controlling extensive damage to trees by grey squirrels. This work will promote the establishment of mixed aged woodland and the long-term goal of continuous cover forestry.</p>	<p>Phase 1 Years 2021-2025 Birch Plantation cpt2 tending & cluster planting Heater Plantation cpt3 tending & cluster planting. Round Wood cpt6 – wall gapping to exclude stock.</p> <p>Phase 2 Years 2026-2030 High Plantation cpt5a – control bracken & undertake cluster planting. Round Wood cpt6- cluster planting.</p> <p>General Review deer populations, browsing impact and management requirements.</p> <p>Review grey squirrel populations, browsing impacts & management requirements.</p> <p>Monitor the presence, range of species and successful establishment of natural regeneration across a sample of woodlands every 3 years. This work will inform the need for browsing control and under planting.</p> <p>Monitor boundaries to ensure remain stock proof. The work can be broken down into woodland groups to be inspected over a 5-year phase.</p> <p>Identify potential boundary work for CS Higher Tier capital grant support – application 2022 Needing review are cpt1c</p>

	<p>Valley Gardens, cpt2 Birth Plantation, cpt6 Round Plantation, cpts 9-11 Hodge Beck & cpt13 Clegret. Cpt19a & 20a at Catherine House and parts of Low Wood cpt22a to the west</p>
<p>Manage the establishment of the P2000 woodland planting at Catherine House to ensure the tree growth is successful. Review for further opportunities to connect and expand the woodland habitat including wood pasture, field trees and hedgerows.</p>	<p>Annual tending to tree tubes, weeding (hand or herbicide as necessary), replacing stakes as necessary to ensure successful establishment of the new planting areas around Catherine House; see maps 17 & 18 for tending areas.</p> <p>Review areas along Hodge Beck where woodland expansion will benefit the resilience of the core woodland areas, improvements to water quality and carbon sequestration; initial thoughts and areas to review have been indicated on maps 12-16. This work can include field trees and wood pasture.</p>
<p>Continue to monitor and identify key priority species and their habitat ranges to help assess the species diversity to the woodland habitats and need for future management. This may include changes due to tree pest and disease such as ash dieback. Identify a range of key species which will help monitor the health of the habitat and create a consistent method of monitoring.</p>	<p>Rangers Report once every 3 years.</p> <p>Surveys of ancient trees & condition once every 10 years.</p> <p>General woodland condition surveys over a sample of woodlands once every 5 years identifying key woodland composition changes, pest (including browsing impacts) or disease impact, drought, invasive species, key components of ground flora and presence and success of natural regeneration.</p>
<p>Maintain and where possible improve the visitor experience at key points along the footpath networks such as seating at viewpoints and information and interpretation points. This work has to be done within the overall constraints to access and potential for facilities in the valley and is therefore not aimed at increasing</p>	<p>Consider simple seating points / interpretation along key footpaths along Hodge Beck at Bransdale Mill, Catherine House, Stocking Craggs & Low Wood</p> <p>Volunteer work where feasible walling, planting, surveys.</p> <p>Woodland interpretation & walk routes at accommodation venues.</p> <p>Review potential access improvements at Sonley Wood cpt26 & Hall Wood cpt28 in Farndale to support the interpretation already on site.</p> <p>Continue to review opportunities to work with members, visitors, neighbouring landowners, stakeholders and the</p>

numbers.	local communities to protect and promote the special qualities of the Valley.
Ensure all designations and historic features are identified and managed as part of the overall woodland habitat. Identify any active management required to protect the woodland features.	<p>Designations and historic features are identified in section 4.2 and on maps 3, 4, 7, 8, 9 and 10.</p> <p>Management of Ancient Woodland Sites (ASNW) which includes Low Wood (cpt21/22), Sonley Wood cpt26 & Sike Wood cpt27 to achieve a woodland structure that resembles a semi natural structure predominantly broadleaf in composition.</p> <p>NT holds information on all features and continues to work closely with key stakeholders see stakeholder engagement section 7.</p>
Management of all woodland in compliance with UKWAS requirement & all statutory requirements including health and safety of staff, visitors, volunteers and contractors on National Trust land.	<p>The compliance to UKWAS and the UK Forest Standard covers a wide range of work from protection of habitats and water courses to ensuring the relevant certification, risk assessments and operation control measures are undertaken during works.</p> <p>The UK Forest Standard is a useful reference document see appendix 14.</p> <p>An Operation Site Assessment OSA template is shown in appendix 17 and an example can be provided if necessary.</p>

Section 7: Stakeholder Engagement

There can be a requirement on both the FC and the owner to undertake consultation/engagement. Please refer to [Operations Note 35](#) for further information. Use this section to identify people or organisations with an interest in your woodland and also to record any engagement that you have undertaken, relative to activities identified within the plan.

Work Proposal	Individual/ Organisation	Date Contacted	Date feedback received	Response	Action
General consultation on woodland plan.	Natural England Paul.Duncan@naturalengland.org.uk david.clayden@naturalengland.org.uk	27/10/2021			
Consultation on extraction of timber from Barker Plantation	Natural England	27/10/2021			
General consultation on woodland plan.	North York Moors National Park Authority Mark Antcliff	02/10/2021			
General consultation on woodland plan.	Nawton Towers Estate Angus.Hudson@arterjonas.co.uk fred@fredcollin.com	27/10/2021			
On-going consultation and day-to-day management of	Nawton Towers Estate,	27/10/2021			

access, culling etc					
General consultation on woodland plan.	Forestry England Nigel Rylance Nigel.Rylance@forestryengland.uk	02/10/2021			
Consultation on felling & extraction of timber from Barker Plantation, Blowworth Wood & High Stand	Forestry England Nigel Rylance Nigel.Rylance@forestryengland.uk	4/03/2020 Site meeting	09/03/2020	See e-mail on file	All work halted during COVID
Consultation on timber Haulage	NYCC Highways, Keisha Moore Keisha.Moore@northyorks.gov.uk	03/10/2021			
General consultation on woodland plan.	Bransdale Parish Meeting	27/10/2021			
General consultation on woodland plan.	Farndale PC				
General consultation on woodland plan.	Pockley PC cllr.stephen.arnold@ryedale.gov.uk	03/10/2021	18/10/2021	Positive comments backing up the use of a variety of tree species and grey squirrel control.	These elements are a part of on-going work, considerations and monitoring programme.
General consultation on woodland plan.	Tenants TBC				
General consultation on woodland plan.	Ryedale District Council				
Consultation with General Public on Woodland Management Plan will be undertaken via the website Forest Plans	General Public – posters erected on site	Date posters erected			

https://forestplans.co.uk/ for a minimum of 30 days and feedback reviewed					
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Section 8: Monitoring

Indicators of progress/success should be defined for each management objective and then checked at regular intervals. Other management activities could also be considered within this monitoring section. The data collected will help to evaluate progress.

Management Objective/Activities	Indicator of Progress/Success	Method of Assessment	Frequency of Assessment	Responsibility	Assessment Results
10 year programme of conversion of conifer woodland to predominantly broadleaf	Work underway or completed	Work programme tracking	Annual	Mark Bradley	Assess the need to re-programme any work
Restocking of woodland after felling	Trees planted within 2 years of the felling operation Trees successfully established year 5	Beat up assessment	Annual	Mark Bradley	Assess the need to beat up or for further tending, browsing control
Annual tending to tree tubes, weeding (hand or herbicide as necessary), replacing stakes as necessary to ensure successful establishment of the new planting areas around Catherine House; see maps 17 & 18 for tending areas.	Successful establishment by year 5	Beat up assessment	Annual	Mark Bradley	Assess the need to beat up or for further tending, browsing control
Control and monitoring of invasive species – Skunk cabbage	Detail areas where work undertaken Monitor locations and extent of populations (photos/map hatching)	Point location data	Annual	Mark Bradley	Assess the need to increase or decrease intervention

Control and monitoring of invasive species – rhododendron & bamboo	Detail areas where work undertaken Monitor locations and extent of populations (photos/map hatching)	Point location data	Annual	Mark Bradley	Assess the need to increase or decrease intervention
Ash dieback felling work within woodlands	Review and prioritise work required in Bransdale Mill 9a & 9b, Coronation Wood 10a, Hodge Beck 10b, 11a, 12a and in cpt13 Clegret Wood.	Work programme tracking	Annual	Mark Bradley	Keep work plan on track.
Cluster planting & thinning to promote mixed age woodland establishment	Phase 1 Years 2021-2025 Birch Plantation cpt2 tending & cluster planting Heater Plantation cpt3 tending & cluster planting. Round Wood cpt6 – wall gapping to exclude stock. Phase 2 Years 2026-2030 High Plantation cpt5a – control bracken & undertake cluster planting. Round Wood cpt6- cluster planting.	Work programme tracking	Annual	Mark Bradley	Assess the need to re-programme any work
Ensure deer/rabbit control enables successful regeneration & tree establishment	Established trees in restocking areas (all) & natural regeneration in targeted woods (Stocking Crags & Low Wood)	Beat up assessments (above)/Point assessments of natural regeneration/Deer damage assessment form	Existing woodland sample once every 5-years. Restock areas annually	Mark Bradley	Inform the need for increased/decrease of control Record deer cull numbers

Continue to monitor and identify key priority species and their habitat ranges to help assess the species diversity to the woodland habitats and need for future management.	Monitor key indicative species or composition of species <ul style="list-style-type: none"> • Tree canopy composition • Tree understorey composition • Natural regeneration species/abundance • Ground flora diversity • Ancient tree condition 	General woodland condition surveys using DAFOR abundance survey techniques	Existing woodland sample once every 5-years. Ancient tree condition once every 10 years	Mark Bradley	Assign survey tasks to rangers and assess results.
Maintain woodland boundaries as stock proof	Compile a list of phase 1 boundary works – suggested <ul style="list-style-type: none"> • cpt1c Valley Gardens • cpt2 Birth Plantation • cpt6 Round Plantation • cpts 9-11 Hodge Beck • cpt13 Clegret • cpt19a at Catherine House • cpt20a at Catherine House • Cpt22a Low Wood to the west 	Work programme tracking	Annual	Mark Bradley	Apply for capital grants where applicable. Assess the need to re-programme any work
Identify range of visitor improvement works to be undertaken	Compile programme of visitor engagement works/access improvements	Work programme tracking	Annual	Mark Bradley	Assess the need to re-programme any work
Undertake work following UKWAS compliance	Records of work Records of herbicide applications Management of operations near water Maintain ranger certification	Undertake Operational Site Assessments or similar for all operations	Annual	Mark Bradley	

	<p>& first aid training Obtain all contractor certification Ensure all statutory requirements are met felling licences, Site Notice of Operations, planning & EIA as required</p>	<p>Monitor any UKWAS corrections required</p>			
<p>Monitor cattle grazing if used in Low Wood</p>	<p>Base line survey of trees (all age seedling to tree) and ground flora prior to start of managed grazing programme.</p> <p>Identify key monitoring points and species</p> <p>Create a monitoring control area</p>	<p>Photo/observational monitoring annually 5-year repeat survey either point or transect.</p>	<p>Annual</p>	<p>Mark Bradley</p>	

UK Forestry Standard woodland plan assessment

For FC office use and approval only:

UKFS management plan criteria	Minimum approval requirements	Achieved	Review notes
<p>Plan Objectives: Forest management plans should state the objectives of management and set out how an appropriate balance between social, economic, environmental objectives will be achieved.</p>	<ul style="list-style-type: none"> • Management plan objectives are stated. • Consideration is given to environmental, economic and social objectives relevant to the vision for the woodland. 	Yes/No	
<p>Forest context and important features in management strategy: Forest management plans should address the forest context and the forest potential and demonstrate how the relevant interests and issues have been considered and addressed.</p>	<p>Management intentions communicated in Sect. 6 of the management plan are in line with stated objective(s) in Sect. 2. Management intentions should take account of:</p> <ul style="list-style-type: none"> • Relevant features and issues identified in the woodland survey (Sect. 4). • Any potential threats to and opportunities for the woodland, as identified under woodland protection (Sect. 5). • Relevant comments received from stakeholder engagement are documented in Sect. 7. 	Yes/No	
<p>Identification of designations within and surrounding the woodland site: For designated areas, e.g. National Parks or SSSI, particular account is taken of landscape and other sensitivities in the design of forests and forest infrastructure.</p>	<ul style="list-style-type: none"> • Survey information (Sect. 4) identifies any designations that impact on woodland management. • Management intentions (Sect. 6) have taken account of any designations. 	Yes/No	
<p>Felling and restocking to improve forest structure and diversity: When planning felling and restocking, the design of existing forests should be re-</p>	<ul style="list-style-type: none"> • Felling and restocking proposals are consistent with UKFS design principles (for example scale and adjacency). • Current diversity (structure, species, age 	Yes/No	

<p>assessed and any necessary changes made to meet UKFS requirements.</p> <p>Forests should be designed to achieve a diverse structure of habitat, species and age range of trees, appropriate to the scale and context.</p> <p>Forests characterised by a lack of diversity, due to extensive areas of even-aged trees, should be progressively restructured to achieve age class range.</p>	<p>structure) of the woodland has been identified through the survey (Sect. 4).</p> <ul style="list-style-type: none"> • Management intentions aim to improve / maintain current diversity (structure, species, and ages of trees). 		
<p>Consultation:</p> <p>Consultation on forest management plans and proposals should be carried out according to forestry authority procedures and, where required, the Environmental Impact Assessment (Forestry) Regulations.</p>	<ul style="list-style-type: none"> • Stakeholder consultation is in line with current FC guidance, and recorded in Sect. 7. The minimum requirement is for statutory consultation to take place, and this will be carried out by the Forestry Commission. • Plan authors undertake stakeholder engagement (ref FC Ops Note 35) relevant to the context and setting of the woodland. 	<p>Yes/No</p>	
<p>Plan update and review:</p> <p>Management of the forest should conform to the plan, and the plan should be updated to ensure it is current and relevant.</p>	<ul style="list-style-type: none"> • A 5 year review period is stated on the 1st page of the plan • Sect. 8 is completed with 1 indicator of success identified per management objective 	<p>Yes/No</p>	

<p>Approved in Principle</p> <p><i>This means the FC is happy with your plan; it meets UKFS requirements.</i></p> <p>a) You can use it to support a CS-HT or other grant application.</p> <p>b) You do not yet have a licence to undertake any tree felling in the plan.</p>	<p>Name (WO or FM):</p>	<p>Date:</p>
<p>Approved</p> <p><i>This means FC is happy with your plan; it meets UKFS requirements, and we have also approved a felling licence for any tree felling in the plan (where required).</i></p>	<p>Name (AO, WO or FM):</p>	<p>Date:</p>