

North Devon Forest Plan

2019 - 2029

West England Forest District

Ben Robinson

FE File Ref: OP10/71

OLD Ref: PE34 & PE35



Declaration by FE as an Operator.

All timber arising from the Forest Enterprise estate
represents a negligible risk under EUTR (No 995/210)



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Summary

About

The North Devon Forest Plan area is made up of numerous scattered woods mainly on steep sided valleys alongside the upper reaches of tributaries of the Rivers Mole and Yeo with the fertile valley bottoms being used for agricultural grazing.

The North Devon woodlands are situated a few miles to the north of South Molton in the parishes of Brayford, North Molton, Twitchen and Molland on the south western flanks of Exmoor. The local authority is North Devon District Council.

In earlier times the woods would have been managed as traditional oak coppice with standards to produce charcoal and building materials for local use. During the First and Second World War the woods were ravaged for their timber. Acquired by the Forestry Commission in the early 1960's and mostly cleared of the remaining broadleaves they were planted with conifers (Douglas fir, Sitka spruce, Japanese larch, western hemlock and some other minor conifers).

Much of the public forest here is ancient woodland having been planted with conifer to address the national timber shortage of the early Twentieth Century. The area is now known to produce quality fir and spruce log which makes up the majority of the tree cover here supplemented primarily with beech and larch. Areas of remnant ancient semi-natural woodland do remain and are made up of oak and birch with ash and beech. Most of the areas are actively managed to provide timber for local and national businesses, and to improve the quality of the remaining tree crop.

The Plan area is a rich for ecology with habitat such as Priority Lowland Mixed Deciduous Woodland used by for dormice, bats and raptor as well as other important flora and fauna species.

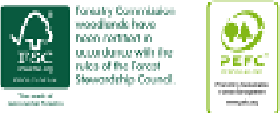
The much of the Plan area is leased and as such access is constrained to public rights of way, areas of freehold are Open Access, confirmed by the Countryside Rights of Way Act. The woodlands are quietly enjoyed by local walkers and cyclists, as well as popular shoots, both retained and let.

Objectives

The core aim of the Plan is to begin to progress the 50 Year Vision by producing woodlands which continue to sustainably produce timber whilst providing a forest rich in wildlife, attractive to people and increasingly resilient to climate, pests and diseases.

The social, economic and environmental objectives of management are:

- The continued production of sustainable and marketable woodland products.
- Protect and enhance woodland and open habitats and their associated species.
- To protect, enhance and restore areas of ancient woodland in line with the ‘Keepers of Time’ policy.
- The provision and maintenance of recreation facilities.
- Deliver well-designed forests that both protect and enhance the internal and external landscape in keeping with the local landscape character and Exmoor National Park.
- To conserve, maintain and enhance cultural and heritage assets.



The current plan outlines management proposals including felling and restocking over several decades, with felling licence approval for operations up until 2029.

The Plan makes provision to develop the complex and dynamic crop compositions of quality fir and spruce shelterwood forest. Areas identified as PAWS will be managed as mixed woodland to maximise their productive potential, with the aim of a gradual return to native woodland.

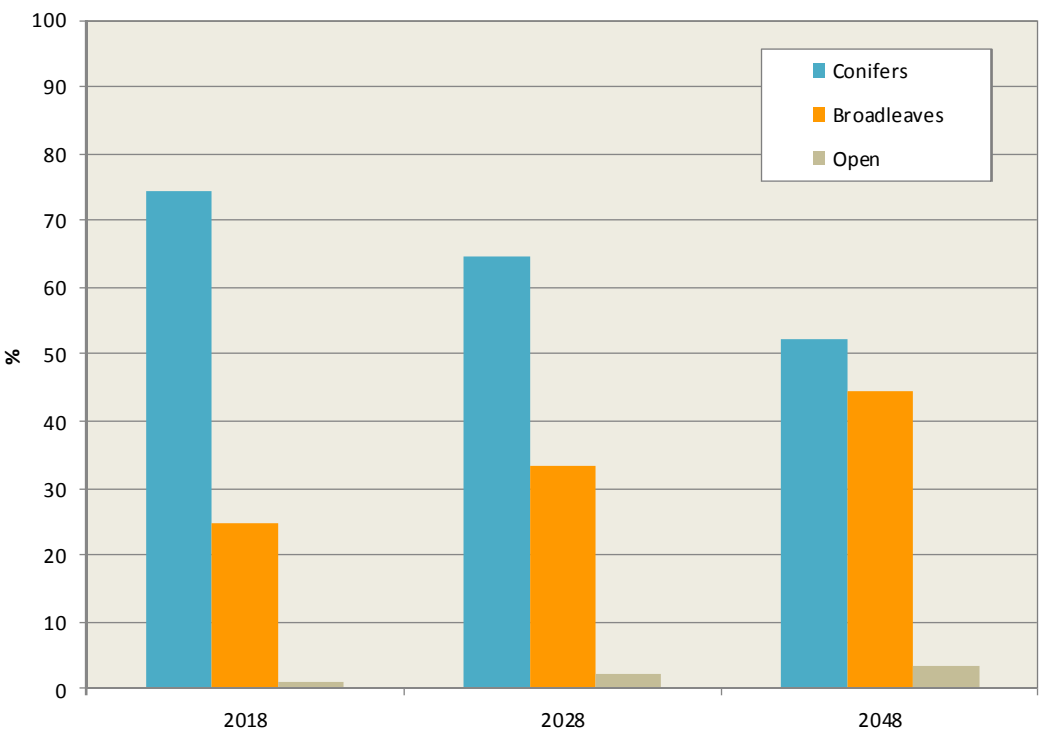
The Plan makes provision to ensure proposals are in keeping with the enclosed farmed and wooded landscape. Implementation and maintenance of an environmental corridor system will continue to increase diversity of habitat and internal landscaping.

The planned areas of clearfelling, restocking and permanent open space creation during the ten years to 2029 are summarised in the chart below.

HECTARES	Conifers	Broadleaves	Open space
Clearfelling	28.9	0.0	-
Restocking/Regeneration	15.7	9.5	3.7

In addition to these defined operations, ongoing thinning and selective felling of both conifers and broadleaves will be carried out in the plan area at five to ten year intervals.

The proportions of conifer and broadleaved woodland and open space at the beginning of the plan period are shown in the bar chart. The increase in native broadleaves within the plan period and over time is indicated in the middle and right hand columns of the chart.





Location

The North Devon woodlands are situated a few miles to the north of South Molton in the parishes of Brayford, North Molton, Twitchen and Molland on the south western flanks of Exmoor. The local authority is North Devon District Council.

The North Devon Forest Plan area is made up of numerous scattered woods mainly on steep sided valleys alongside the upper reaches of tributaries of the Rivers Mole and Yeo with the fertile valley bottoms being used for agricultural grazing.

The majority of the land is at 120-200 metres above sea level and is undulating to steep in places. The climate is warm and fairly moist with an average annual rainfall of 800–1100mm, a soil moisture deficit of around 140mm, and an accumulated temperature over 5 °C of 1800 °C.

The soils across the North Devon Plan Area are primarily medium to rich and fresh typical brown earths with an underlay of gleying elements. Lower and Higher Molland and Sherracombe are situated upon a moist Upland Brown earth which has medium nutrient availability underlain by shallow rock.



A 50 Year Vision

The Vision for the future of the Plan area is bold but in keeping with Forestry England's key strategic goals and the local and national value which is placed on the area. Set against the backdrop of the landscape character whereby woodlands, mostly ancient and oak-dominated, cloak the steep coastal combs and inland valleys. Ancient parks and more recent conifer plantations are features of the lower slopes. This Vision looks to achieve an area which is a haven for wildlife, fun and commerce. A 'Key Opportunity' of the Landscape Character Area (Devon County Council, 2008) is to *manage the area's conifer plantations for sustainable timber production and wildlife interest, creating new green links to surrounding semi-natural habitats. Explore their use as recreational spaces away from the more sensitive habitats.* In 50 years time this Plan will look to have delivered a rich mosaic of robust habitats which supports a multitude of rare and common flora and fauna species as well as contributing to a low-carbon economy.

The conifer dominated forest will predominantly be managed through a mixture of clearfell and low impact silvicultural systems contributing to a vibrant woodland economy. Much of this will be restored overtime to native woodland to better reflect the historical cultural landscape. Rare and protected species, such raptors, badgers and bats will continue to call the forest home. The forest will also be a popular and safe place to come to exercise, learn and relax in a resilient natural environment. The trees will be valued not only for their ecological and social value but also as a timber product, water regulation and for carbon sequestration which as climate change takes effect will be of increasing importance. A diverse structure of young, thicket and maturing crops across the area will provide suitable continuous habitat over time.

Broadleaf woodland will grow in size and improve in condition as restoration to native cover takes affect in certain areas. Managed more sensitively but still with productivity in mind through thinning, these more secluded areas will become a haven for a multitude of micro habitats, species and ecosystem functioning. Veteran, mature and future significant trees will be retained and allowed to breakdown providing deadwood habitat and nutrient cycling. Everything from rare dormice and butterflies to lichens will enhance the contribution to ecology, cultural heritage and social value and to the wider landscape. Riparian areas will be enhanced through broadleaf intrusion and opened up to dappled shade to become invaluable to the quality and storage of water that passes through.

Ancient and native woodland, a key part of the Landscape Character, will feature more significantly in the area's makeup. Areas will be restored to oak dominated forest cover gradually to support the rare and protected flora and fauna species which populate these habitats. In addition to these, areas of conifer dominated forest managed through continuous cover forest techniques or clearfell/restock will become a home for numerous conifer and edge loving species such as bats, nightjar and raptors.

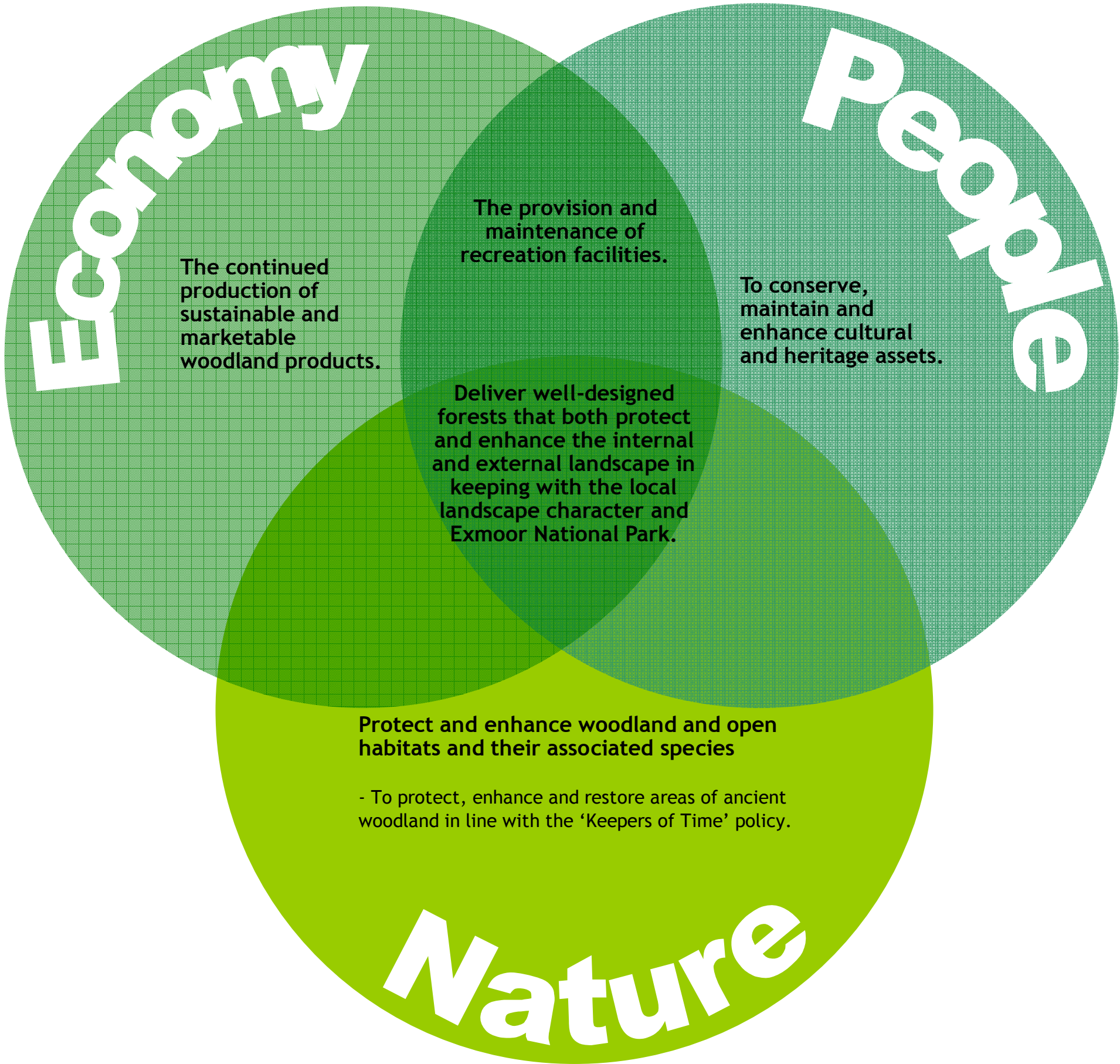
The considerable rides and roadside network will be wider than currently and support common and protected butterflies and other rotational scrub loving species. These areas will also be invaluable to the enjoyment of the area for people, creating windows into the wider forest and out into the landscape.

The 50 Year Vision outlined in this Plan will be delivered in part over the next 10 years through the Objectives outlined on pages 7 and 8 with the proposal and prescriptions following.





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



WEST ENGLAND FOREST DISTRICT

PROTECTING AND EXPANDING ENGLANDS FORESTS AND
WOODLANDS AND INCREASING THEIR VALUE TO SOCIETY
AND THE ENVIRONMENT.

The objectives of this Plan will, in part, deliver the *West England Forest District Strategic Plan* (2013a) and the national *Strategic Plan for the Public Forest Estate in England* (2013b).

Sustainable management of the woodland will be to the standards required to maintain FSC and PEFC accreditation and therefore must deliver economic, environmental and social objectives.

The meeting and monitoring of these objectives is outlined on the following page.



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

The mark of
responsible forestry



Declaration by Forestry England as an Operator.
All timber arising from the Forest Enterprise estate
represents a negligible risk under EUTR (No 995/210)

District Strategy

Forest Plan Objective

Meeting Objective

Monitoring

Economy

Maintain the land within our stewardship under FSC/PEFC certification.

Improve the economic resilience of our woods and forests.

Encourage and support business activity on the Estate

The continued production of sustainable and marketable woodland products.

The majority of the Plan area will remain productive through thinning yield.

Some clearfell timber production of mature crops will occur, majority from the conifers.

Comparison of total production forecast yield 3,500m³ (2019-2021) and 8,000³ (2019- 2029) with actual production at the Forest Plan (FP) five and ten-year review.

Protect and enhance woodland and open habitats and their associated species.

- To protect, enhance and restore areas of ancient woodland in line with the ‘Keepers of Time’ policy.

Appropriate reinstatement works will be carried out once operations have been concluded.

Protection and enhancement of water supplies and soil quality through sensitive implementation of operations and improved restocking practices.

Restoration of ancient woodland through a gradual thinning process

Raptor numbers will be maintained.

Operational site planning of harvesting and restocking operations will help monitor the effect of management.

Ongoing monitoring of soil and water quality pre and post harvesting with input from outside stakeholders.

Analysis of naturalness scores at Review stage

Measured at Review stage through analysis of ongoing surveys and records.

Nature

Improve the resilience of the natural environment of the Estate under our stewardship.

Realise the potential of the Public Forest Estate for nature and wildlife.

Maintain and improve the cultural and heritage value of the Estate.

The provision and maintenance of recreation facilities.

Visitor numbers will be maintained.

Road and ride corridor and car park aesthetics enhanced and maintained.

Felling together with a delayed restock program will continue to diversify stand and age structure.

Viewpoints enhanced and maintained at time of intervention, where possible.

Visitor feedback comments, to be included in Review where appropriate.

Deliver well-designed forests that both protect and enhance the internal and external landscape in keeping with the local landscape character and Exmoor National Park.

Implementation of proposals will soften and better integrate the woodland with the surrounding landscape

Fixed point photography analysis at Forest Plan review stage

People

Maintain existing established consultation panels and engage with other consultative bodies such as National Park Authorities and AONBs.

Provide high quality woodland based recreational opportunities for people and business focusing on the 3 principle Forest Centres.

To conserve, maintain and enhance cultural and heritage assets.

Protect and enhance unscheduled sites at the time of intervention.

Operational site planning of harvesting and restocking operations will help monitor the effect of management.



Analysis & Concept

Lower and Higher Moll and, Hunstone and Lowdy

The woods clustered around Brayford and the A399 road are mainly on steep sided valleys and valley bottoms alongside the upper reaches of the River Bray, a tributary of the River Taw.

The soils are deep and medium/rich, predominantly loamy brown earths. Whilst the climate is mild, wet and sheltered creating the ideal conditions for growing productive tree crops.

Much of the woodland cover is ancient W10 and W16 oak woodland which has been coniferised following the Second World War. The woodlands remain a haven for birds of prey such as goshawk and buzzard, as well as raven whilst the watercourses are valued spawning grounds for salmon and trout.

All of these woodlands are freehold, and as such open access. Higher Moll and is particularly popular with locals for walking. A permissive footpath, part of the Tarka Trail long distance path, runs through this wood.

Lower and Higher Moll and, Hunstone and Lowdy are all freehold woodlands, dedicated with open access. A shoot is let across the woodlands in this area.

The objective in these woodlands is to gradually restore to native tree cover and associated ecosystem functioning where registered as ancient woodland. This will be done using a number of silvicultural methods, specifically addressing threats and long term sustainability concerns first. On sites not registered as ancient woodland productive conifer production will be pursued, both through clearfell and lower impact silvicultural system methods.

Legend

- ASNW
- PAWS
- Mature Japanese larch
- Recent native planting
- Riparian area (restored)
- Riparian area (coniferised)
- Highly Visible Crops
- Roads
- Watercourses

Analysis: The village of Brayford is situated close to the woodland blocks.

Concept: Proposals will look to maintain and enhance the aesthetic landscape of the area.

Analysis: Following the compulsory felling of diseased larch crops, a number of recently restocked areas have been created.

Concept: Appraisal of whether further work to improve the integrity and resilience of the site will ensure that this small woodland is protected and fit for the future.

Analysis: Dense, young conifer is situated in the riparian area and directly adjacent to the watercourse, threatening ancient woodland restoration.

Concept: The management of this area will be sympathetic to ecosystem services and riparian condition. This will be through the clearfelling of the crop, in time and then creation of patchy open space and broadleaf cover.

Analysis: A considerable area of previously coniferised riparian woodland is found through the bottom of valley and woodland. These are now becoming scrub transient woodland.

Concept: These areas will be managed sympathetically to improve their ecological and hydrological contribution and condition.

Analysis: Almost the entirety of Lower Moll and is registered ancient woodland and was most likely managed as ash and oak with hazel coppice in the past. All of these areas are now conifer and therefore PAWS.

Concept: Proposals will outline a plan of restoration to native species cover in line with Keepers of Time policy. This will be achieved through a process of thinning out the conifer to favour ancient woodland features and native regeneration.

Analysis: Mature and exposed Japanese larch has now reached terminal height.

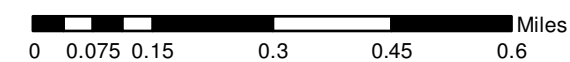
Concept: Proposals will look to minimise the risk of catastrophic windblow, and disease infection through targeted felling and restocking.

Analysis: Many of the crops on the westward edges of Hunstone and Lowdy exposed and visible in the landscape, particularly from the A399 road.

Concept: Proposals will be sympathetic to the high landscape impact of this edge and its role in the wider landscape.

Analysis: A number of watercourses traverse the forests and then feed into the River Bray and then Taw. These are important spawning and nursery streams for salmon and brown trout

Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through targeted removal of some overly shade bearing conifers and management towards 50% open 50% dappled shade, provided by regenerated broadleaves.



Analysis & Concept

Sherracombe and Long Wood

Located just north of North Molton, Sherracombe and Long Wood lie in valley bottoms which feed into the River Bray. Both of these rich historic woodlands lie within the Exmoor National Park, are freehold and open access.

The soils are thinner than the other sites and slightly less rich. The climate is mild and wet still creating the ideal conditions for growing productive tree crops. Remnants of the pedunculated oak dominated Lowland Mixed Deciduous Forest remain with birch as a sub-species type W16 which followed before coniferisation. The woodlands also contain a number of significant trees.

The main objective within the ancient woodland areas is restoration to native species cover and the associated ecosystem functioning in an economically efficient way; that is through the tackling of immediate threats and then gradual removal of non-native trees in favour of native species. In other areas the continued production and diversification of timber species will be pursued whilst maintaining a woodland valued for biodiversity, recreation and amenity.

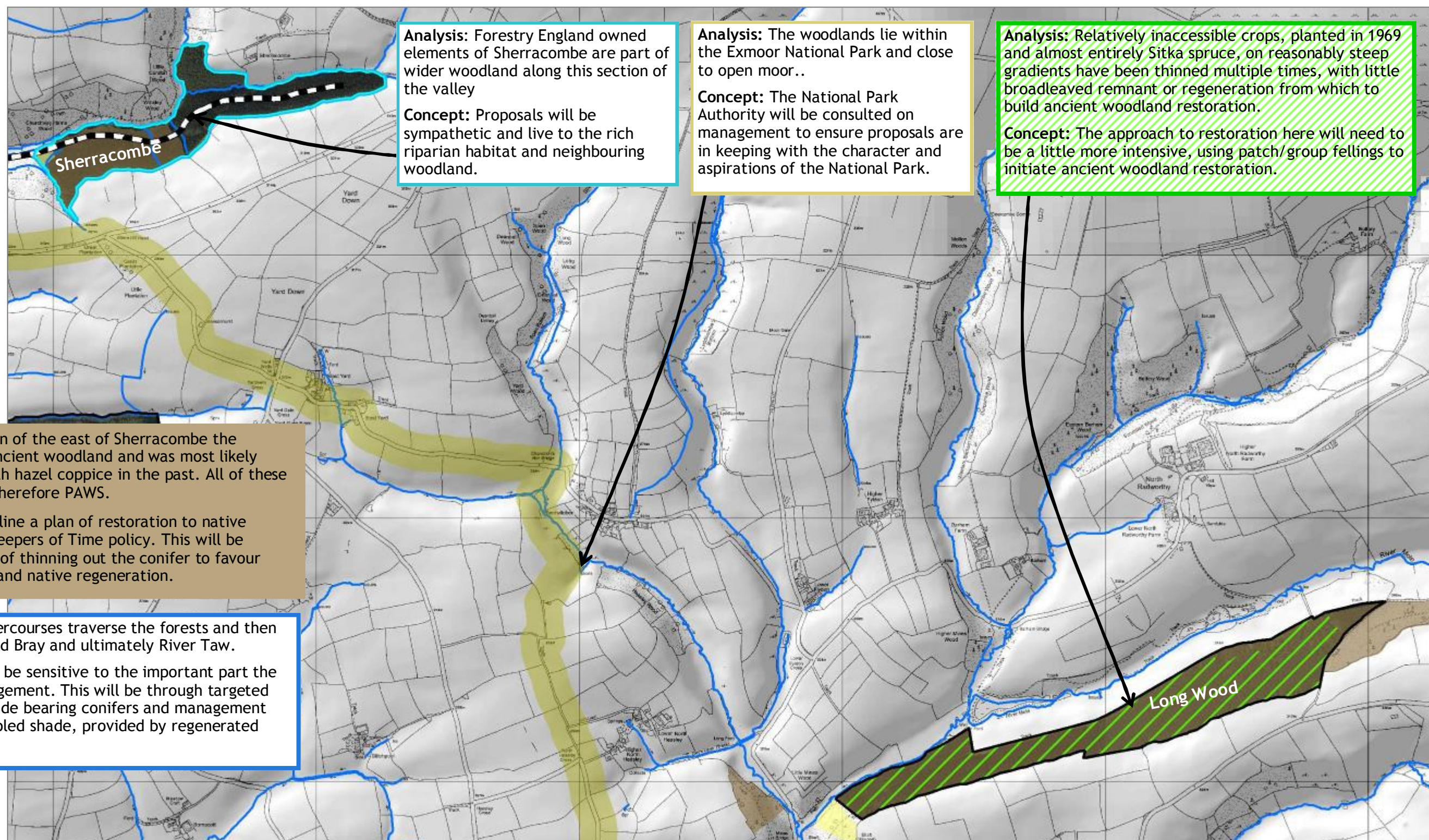


0 0.075 0.15 0.3 0.45 0.6 Miles

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Legend

- Exmoor National Park
- ASNW
- PAWS
- Single storey crops
- Sherracombe
- Roads
- Watercourses



Analysis: Forestry England owned elements of Sherracombe are part of wider woodland along this section of the valley

Concept: Proposals will be sympathetic and live to the rich riparian habitat and neighbouring woodland.

Analysis: The woodlands lie within the Exmoor National Park and close to open moor..

Concept: The National Park Authority will be consulted on management to ensure proposals are in keeping with the character and aspirations of the National Park.

Analysis: Relatively inaccessible crops, planted in 1969 and almost entirely Sitka spruce, on reasonably steep gradients have been thinned multiple times, with little broadleaved remnant or regeneration from which to build ancient woodland restoration.

Concept: The approach to restoration here will need to be a little more intensive, using patch/group fellings to initiate ancient woodland restoration.

Analysis: With the exception of the east of Sherracombe the woodlands are registered ancient woodland and was most likely managed as ash and oak with hazel coppice in the past. All of these areas are now conifer and therefore PAWS.

Concept: Proposals will outline a plan of restoration to native species cover in line with Keepers of Time policy. This will be achieved through a process of thinning out the conifer to favour ancient woodland features and native regeneration.

Analysis: A number of watercourses traverse the forests and then feed into the River Mole and Bray and ultimately River Taw.

Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through targeted removal of some overly shade bearing conifers and management towards 50% open 50% dappled shade, provided by regenerated broadleaves.

Analysis & Concept

Redlands, West Molland and Gatcombe

The woods to the west of the village of Molland are mainly small isolated blocks within deeply incised combes. The valley bottoms are predominantly treeless alongside the River Yeo which flows into the River Taw.

The soils are deep and medium richness, predominantly loamy brown earth. Whilst the climate is mild, wet and sheltered creating the ideal conditions for growing productive tree crops.

Most of the woodland is ancient pedunculate oak coppice, W16 which has been coniferised following the timber shortage after the wars. The woodlands remain a haven for birds of prey such as goshawk and buzzard, whilst the watercourses are valued spawning grounds for salmon and trout.

The woodlands are leasehold and as such access is constrained to public rights of way. A shoot is retained by Molland Estate across the woodlands which prefer open site lines, and valley floors as well as variety of crop structures.

The main objective here is to gradually restore the woodlands to native tree cover and the associated ecosystem functioning whilst maintaining timber output and habitat conditions and delivering the other objectives of the Plan. This will be done using a number of silvicultural methods, primarily through thinning but also specifically addressing threats and long term sustainability concerns first.

Legend

-  Exmoor National Park
-  ASNW
-  PAWS
-  Recent native planting
-  Heavy conifer
-  Open valley bottom
-  Roads
-  Watercourses

0 0.075 0.15 0.3 0.45 0.6 Miles

Analysis: The Exmoor National Park boundary passes close to the woodlands here.

Concept: The National Park Authority will be consulted on management to ensure proposals are in keeping with the character and aspirations of the National Park.

Analysis: Almost the entirety of the woodlands are Ancient Woodland and was most likely managed as ash and oak with hazel coppice in the past. All of these areas are now conifer and therefore PAWS.

Concept: Proposals will outline a plan of restoration to native species cover in line with Keepers of Time policy. This will be achieved through a process of thinning out the conifer to favour ancient woodland features and native regeneration.

Analysis: Dense, mature and seeding conifer species are situated on the eastern slopes and combes of Gatcombe, threatening ancient woodland restoration.

Concept: The management of this area will be sympathetic to ecosystem services and riparian condition. This will be through the clearfelling of the crop, in time and then creation of patchy open space and broadleaf cover.

Analysis: The bottom of the valleys are predominantly open and grassy, surrounded by steep wooded slopes, making ideal management and driven birds conditions.

Concept: The management of this area will be sympathetic to the multiple purposes and needs of the woodland as well as the riparian and biodiversity value.



Analysis: Following catastrophic windblow in spruce crops, a number of recently restocked areas have been created.

Concept: Appraisal of whether further work to improve the integrity and resilience of the site will ensure that this small woodland is protected and fit for the future.

Analysis: A number of watercourses traverse the forests and then feed into the River Taw. These are important spawning and nursery streams for salmon and brown trout

Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through targeted removal of some overly shade bearing conifers and management towards 50% open 50% dappled shade, provided by regenerated broadleaves.

Analysis & Concept

Kings Wood, Beere, Smallacombe and Gourte Woods

The woods clustered around the village of Moll and are mainly small isolated blocks on steep sided valleys alongside tributaries of the River Yeo.

The soils are thinner than the other sites and slightly less rich. The climate is mild and wet still creating the ideal conditions for growing productive tree crops.

Most of the woodland is registered as ancient having been coniferised following the Second World War. The woodlands remain a haven for birds of prey such as goshawk and buzzard, whilst the watercourses are valued spawning grounds for salmon and trout.

The woodlands are leasehold and as such access is constrained to public rights of way. A shoot is retained by Moll and Estate across the woodlands.

The objective in these woodlands is to gradually restore to native tree cover and associated ecosystem functioning where registered as ancient woodland. This will be done using a number of silvicultural methods, specifically addressing threats and long term sustainability concerns first whilst maintaining timber output. On sites not registered as ancient woodland productive conifer production will be robustly pursued, predominantly through clearfell/restock given the limited access.

Analysis: A number of watercourses traverse the forests and then feed into the River Yeo and ultimately River Taw.

Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through targeted removal of some overly shade bearing conifers and management towards 50% open 50% dappled shade, provided by regenerated broadleaves.

Analysis: Much of the woodland is Ancient Woodland and was most likely managed as ash and oak with hazel coppice in the past. The majority of these areas are now conifer and therefore PAWS.

Concept: Proposals will outline a plan of restoration to native species cover in line with Keepers of Time policy. This will be achieved through a process of thinning out the conifer to favour ancient woodland features and native regeneration.

0 0.075 0.15 0.3 0.45 0.6 Miles

Legend

- Exmoor National Park
- ASNW
- PAWS
- Douglas fir on secondary woodland
- Non-thin/Limited intervention
- Roads
- Watercourses

Analysis: The village of Moll and is situated close to the woodland blocks. With the main access road dissecting Kings Wood.

Concept: Proposals will look to maintain and enhance the aesthetic landscape of the area.

Analysis: The Exmoor National Park boundary passes close to the woodlands here.

Concept: The National Park Authority will be consulted on management to ensure proposals are in keeping with the character and aspirations of the National Park.

Analysis: Typical remnant Lowland Mixed Deciduous Woodland, also registered ancient semi-natural woodland is found to the north of Gourte Wood. It is oak dominated NVC type W10.

Concept: The management of this area will be to preserve and protect them in perpetuity, through occasional and low impact intervention to build resilience and ecosystem functioning

Analysis: A number of isolated stands of pure Douglas fir are found on secondary woodland.

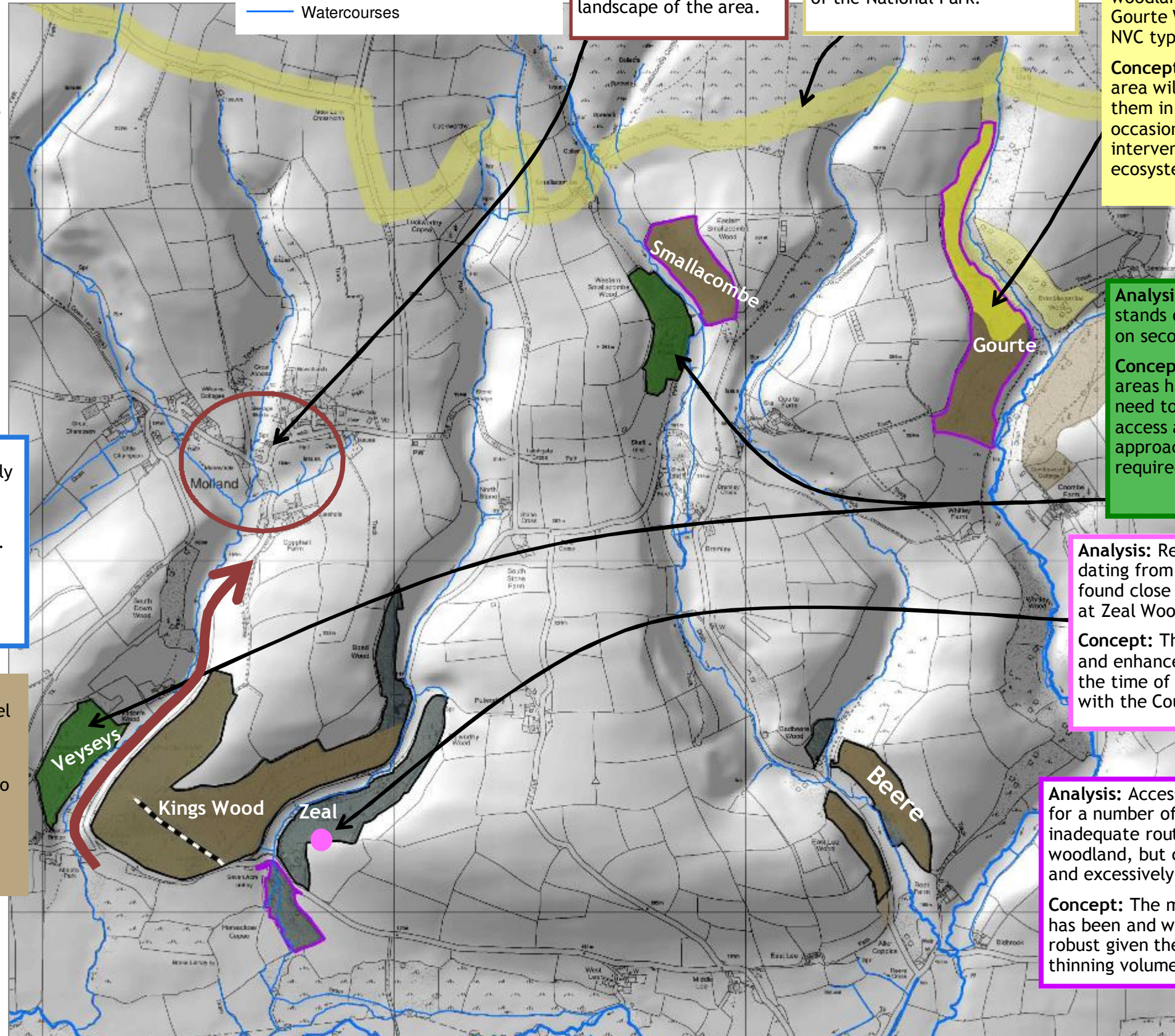
Concept: The management of these areas has been and will continue to need to be robust given the limited access and a non thin management approach. This may also be required on similar PAWS sites.

Analysis: Remnants of an old Limekiln dating from C18-19th century can be found close to the entrance and quarry at Zeal Wood.

Concept: This area will be protected and enhanced further where possible at the time of intervention, in consultation with the County Archaeology team.

Analysis: Access is extremely constrained for a number of blocks. This is usually to inadequate routes into and within the woodland, but can also be due to uneven and excessively steep gradient

Concept: The management of these areas has been and will continue to need to be robust given the limited access and minimal thinning volume.





Woodland Composition

The Plan area is dominated by conifer with some ancient semi-natural and native broadleaf remnants. The majority of conifer component are made up of quality Douglas fir and Sitka spruce, with Japanese larch and Norway spruce the major supplementary species.

Whilst the age of conifer crops is somewhat varied the majority are concentrated into one period with considerable planting having occurred in the 1960s. In places the thinning of conifer crops has ensured that understorey development is beginning to establish, which in time will deliver a more structurally diverse woodland composition. In other areas, constrained access has meant that some crops have been neglected and are no longer thinnable.

The broadleaf components of the Plan area comprise a mixture of ancient semi-natural oak and ash assemblages as well as beech plantation and intruded elements and edges to the conifer crops. The overall broadleaf composition is predominantly made up of ash, oak and beech. With birch, hazel and alder evident as pioneer species within discrete, often wetter areas of the Plan area. Broadleaf crops vary in age with significant planting and regeneration establishment occurring in the early 1900 s. The majority of stands are even aged with understory development evident but not always establishing as a secondary crop. Where broadleaf features within conifer crops these have been favoured and halo thinned where appropriate to assist crown development.



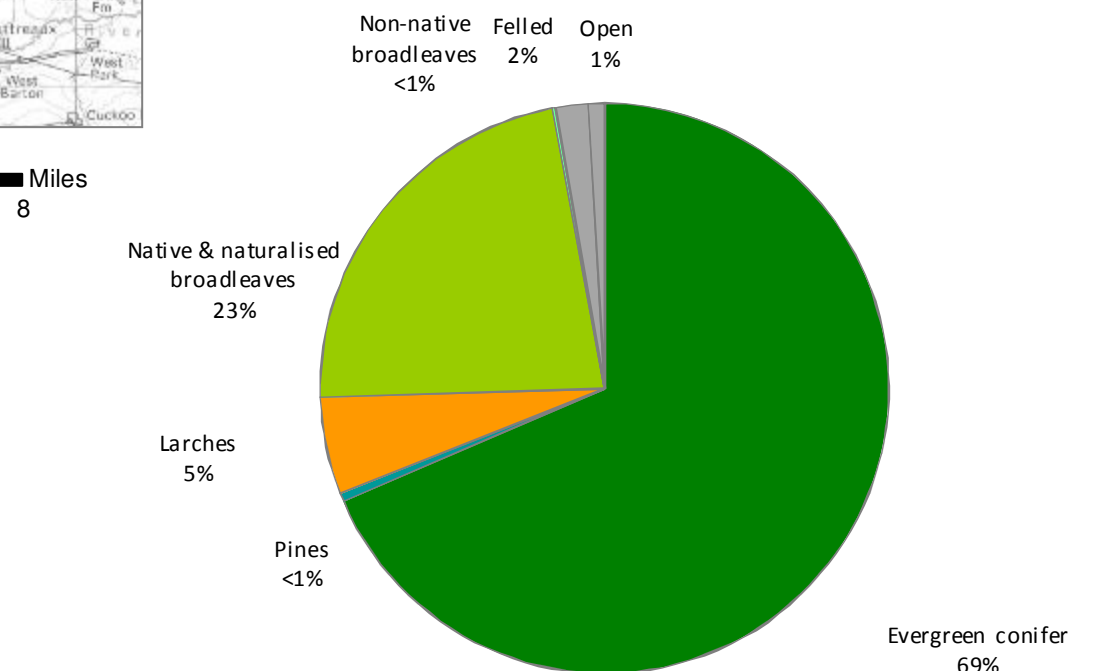
Legend

- Evergreen Conifer
- Pines
- Larches
- Native & naturalized broadleaves
- Non-native broadleaves
- Open/other

Note: Beech, sycamore and sweet chestnut are considered to be not within their native range but are considered to be 'naturalised'

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0 1 2 4 6 8 Miles



Class 1 - Semi-Natural Woodland
(> 80% site native species)



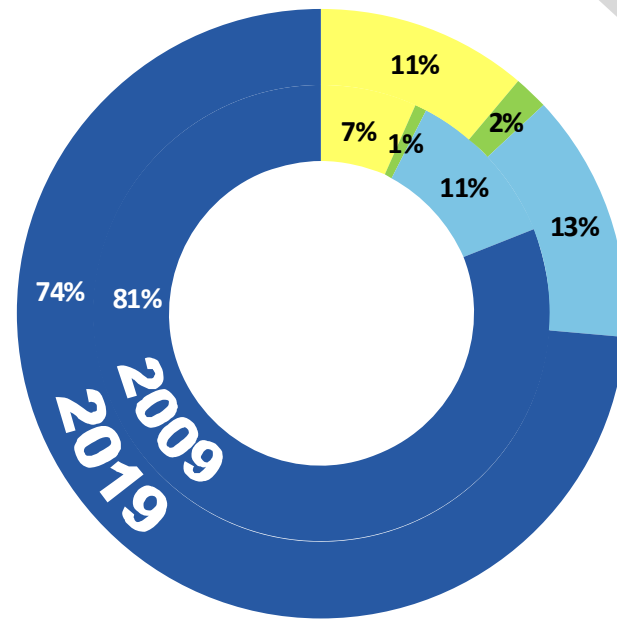
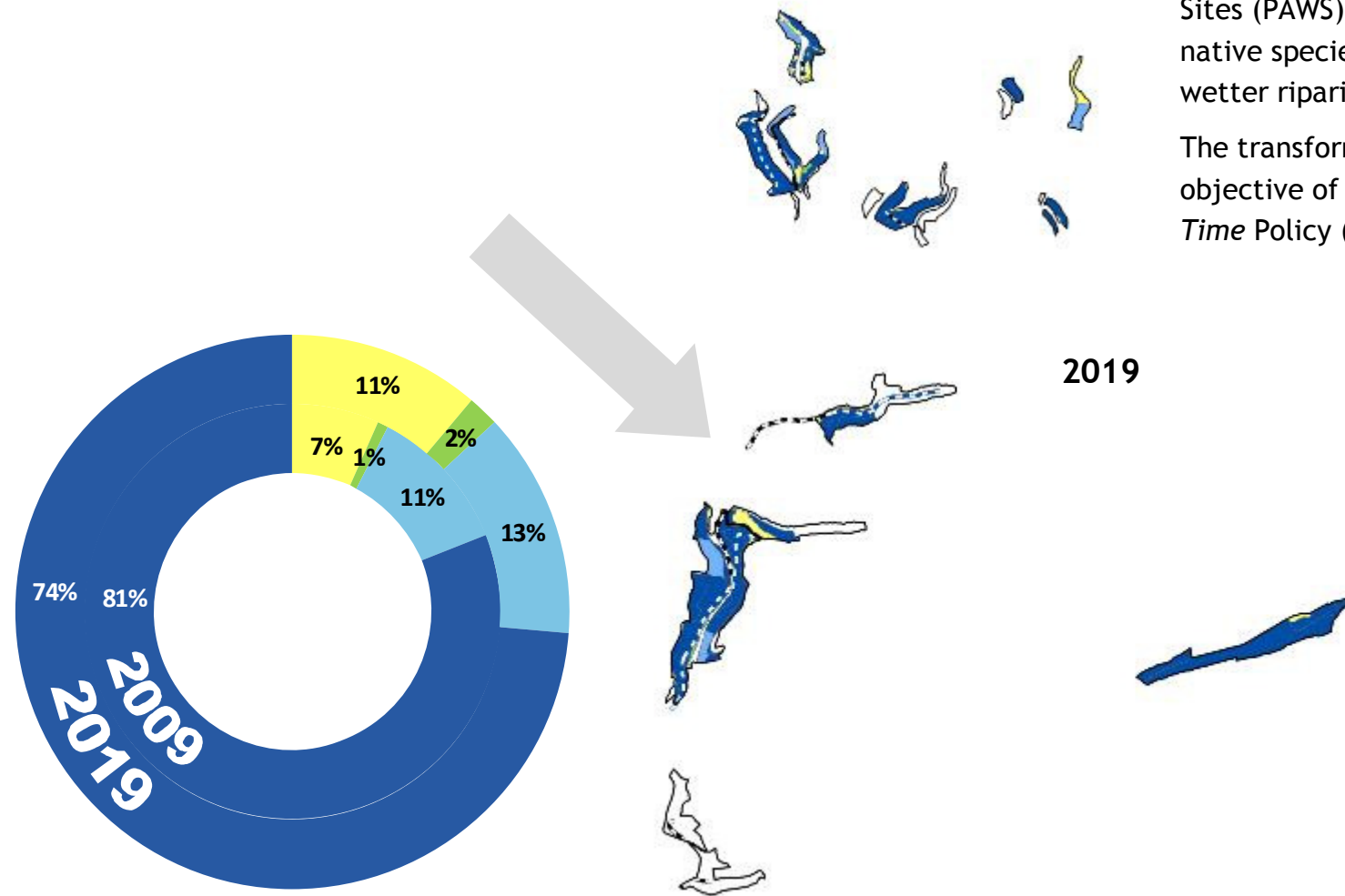
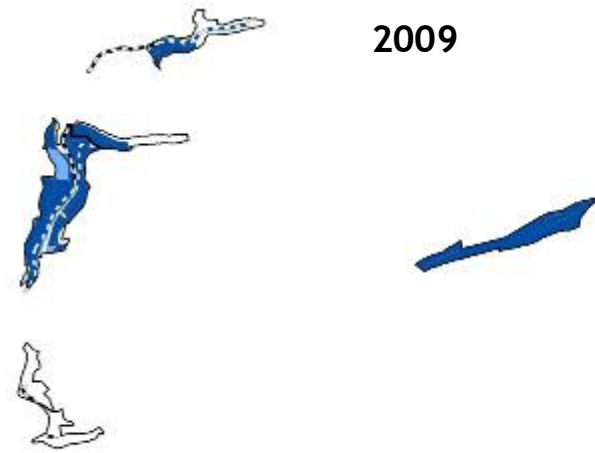
Class 2 - Plantation Woodland
(50 - 80% site native species)



Class 3 - Plantation Woodland
(20 - 50% site native species)



Class 4 - Plantation Woodland
(< 20% site native species)



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Legend

- Class 1 - > 80% Site Native Species
- Class 2 - 50-80% Site Native Species
- Class 3 - 20-50% Site Native Species
- Class 4 - <20% Site Native Species

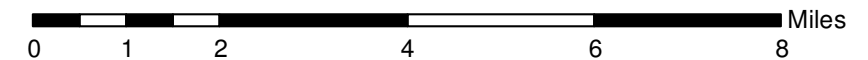
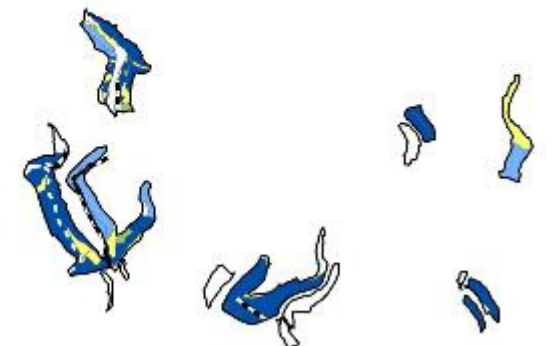
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Naturalness on Ancient Woodland

Naturalness is the measure to show the percentage of site native tree species in a given area. This measure is used to record and monitor the naturalness and restoration of Ancient Woodland Sites previously planted with non-native species.

Classes 2, 3 and 4 are classified as Plantations on Ancient Woodland Sites (PAWS). Areas of Semi-Natural Woodland (Class 1 - > 80% site native species) are mostly found towards the bottom of valleys, in wetter riparian areas where the soils are richer.

The transformation of Classes 2, 3 and 4 AWS towards Class 1 is a key objective of this Plan and is in line with Forestry England, *Keepers of Time* Policy (Forestry Commission, 2005).



Transition Zone

The indicative proportion of native tree species is 50% or more of the crop. Removal of remaining conifer will be achieved through repeated thinning operations.

The establishment period to predominantly native woodland within this category is anticipated to be 20 - 30 years but is dependant on successful regeneration and establishment although maybe sooner depending on the level of conifer needing to be removed. Scattered individual conifers or small groups may remain.

Preparation Zone

Areas within this category contain less than 50% of native tree species but have a proportion greater than 20% of the crop and the area

neighbours an area of significant native species cover which can be utilised as a seed source. Enhancement of native content will continue through thinning of the conifer content.

These areas will be thinned heavily to release ancient woodland remnants and features and to encourage natural regeneration and intrusion in to the non-native crop.

The anticipated time scale for establishment of predominantly native species is expected be around 50 - 60 years or so, but could be as long as 70 - 80 depending on success of establishing the future crop.

Non-native Zone

The proportion of native tree species within a management area is less than 20% of the crop. Thinning in both these sub-categories should encourage crown development of broadleaf components. Progress will be monitored and crops moved into the Preparation zone depending on development of stand structure and the response of natural regeneration.

Clearfell Zone

Seven clearfells will be used to convert PAWS four of which are within this Plan period. These fellings of the heaviest shade casting areas are usually within the bottom of valleys or where crops are totally unthinnable. These areas will be restocked with site suitable native species.

PAWS Management

Restoration of Plantations on Ancient Woodland Sites (PAWS) has already begun and this continued restoration is going to take a considerable amount of time and resource because of the limited native remnants from which sites can regenerate.

Therefore a proactive yet realistic approach will be used to transform these sites over a period of time. The aim of the transitional period to woodland containing 80% or more of native species should be to achieve:

- a varied age structure with varying ratios of high canopy, secondary canopy and understory throughout.
- transition that ensures a minimum future content of 3 native species, with 4 to 5 species being the preferable target.
- a minimal reliance on monocultures especially of birch, ash, hazel or oak. In practice this may involve either underplanting or group felling and planting within existing mid rotation broadleaf crops.
- restoration of beech and sweet chestnut stands will not be prioritised as these species are to be naturalised and offer greater broadleaf diversity and therefore resilience.
- If adequate regeneration is not evident in the 'Transition' and 'Preparation' zones after 10 years a reappraisal of the prescription will be needed.



Legend

- Building Block (native seed source)
- Transition Zone
- Preparation Zone
- Non-native Zone
- Clearfell

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0 1 2 4 6 8 Miles





Clearfell coupes will simply be managed through clearcutting (of over 0.25ha) and restocked either through natural regeneration, replanting or a combination.

Long term retentions are in place where the conifer elements of the landscape or ecological value of the woodland is key.

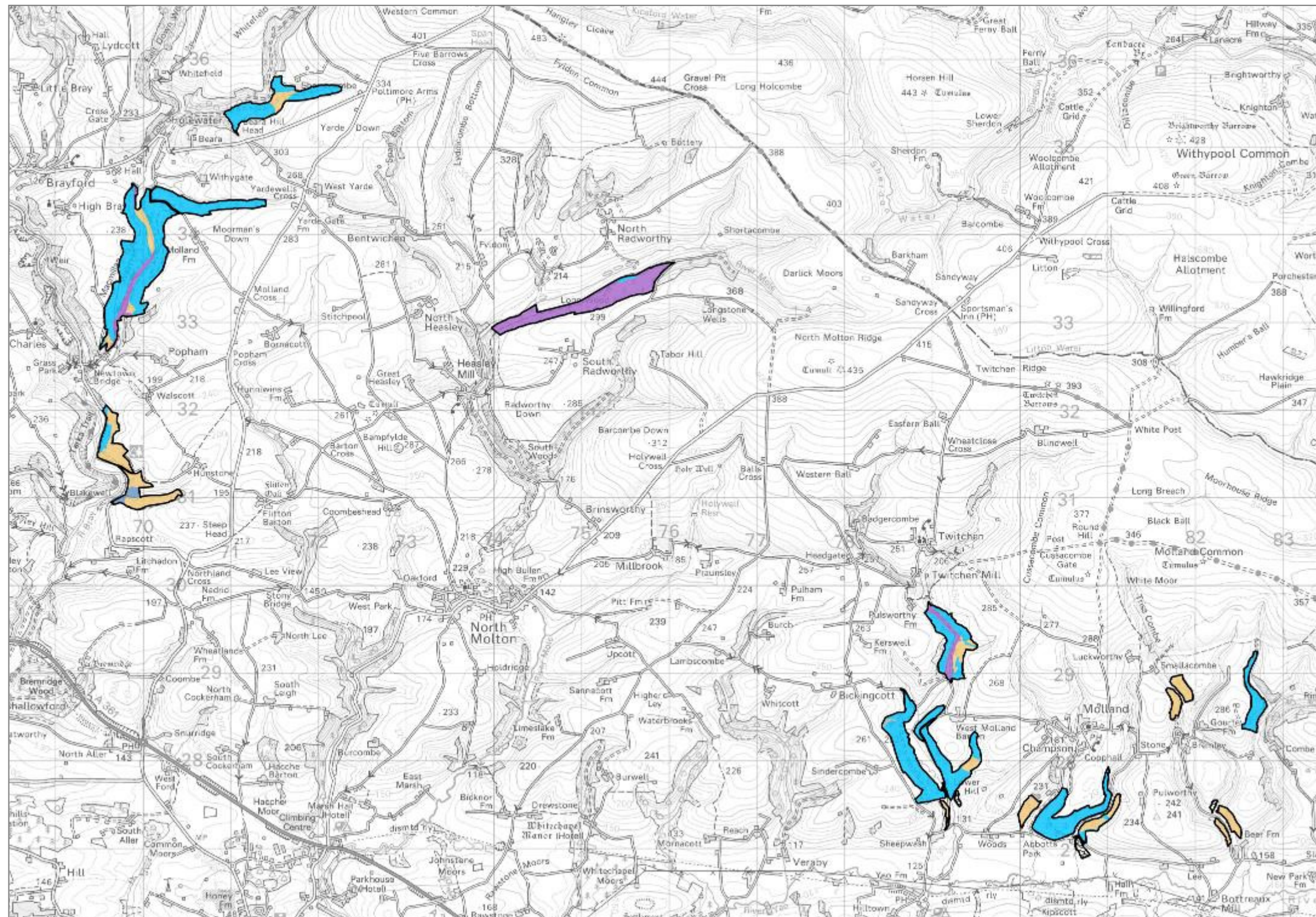
Minimum Interventions are predominantly inaccessible or ecologically valuable areas where intervention will only occur to protect and ensure the future succession of key habitats and species.

Open space is managed to ensure forest cover does not exceed 2m in height, a tolerance of 20% forest cover will be accepted on some lower priority sites.

Uniform shelterwoods are predominately broadleaved dominated and ASNW sites which will be managed using seeding fellings with possible under planting of site suitable species to control light levels and develop good timber quality. Small coppice coupes of less than 0.25ha may be used to inject diversity into the broadleaf woodland

Irregular shelterwoods will look to develop a complex CCF structure through the identification and thinning towards quality final crop trees for the future.

Group selections are used on windfirm, accessible crops to proactively diversify the woodland structure and composition, possibly through the use of enrichment replanting.



0 1 2 4 6 8 Miles

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Thinning

Areas will be assessed and approved for thinning on a site-by-site basis by the local Beat Team. As attempts to improve the structural diversity of the crops are made, initiation of thinning may be made early (uneconomic) or later to address windfirm concerns. The intention to intervene every 5 years as well as on multiple occasions may not be appropriate and therefore will be administered in an adaptive approach by the Beat team.

Conifer Thinning

Areas of conifer are assessed for thinning every 5 years with the targeted removal of larch species a key objective. Other factors such as the quantity, condition, age and distribution of any broadleaf content, will also help decide if an area of conifer is to be thinned or not, with light levels, existing ground vegetation and any evidence of natural regeneration also impacting on how many trees are marked for removal.

Broadleaf Thinning

Broadleaf high forest will be assessed for thinning every 10 years with a visual inspection of the stand. Thinning will allow sub-dominant broadleaves sufficient light and space to mature or will release existing advanced regeneration. Younger patches of regeneration can be thinned to favour site native species with trees of good form and vigour being retained. Where broadleaves consist primarily of a single species, it may be possible to enlarge natural gaps through irregular thinning rather than create new gaps through group felling, however, in all cases the size of gap will be dependent on slope, aspect and site fertility and must not be detrimental to crop stability.

Legend

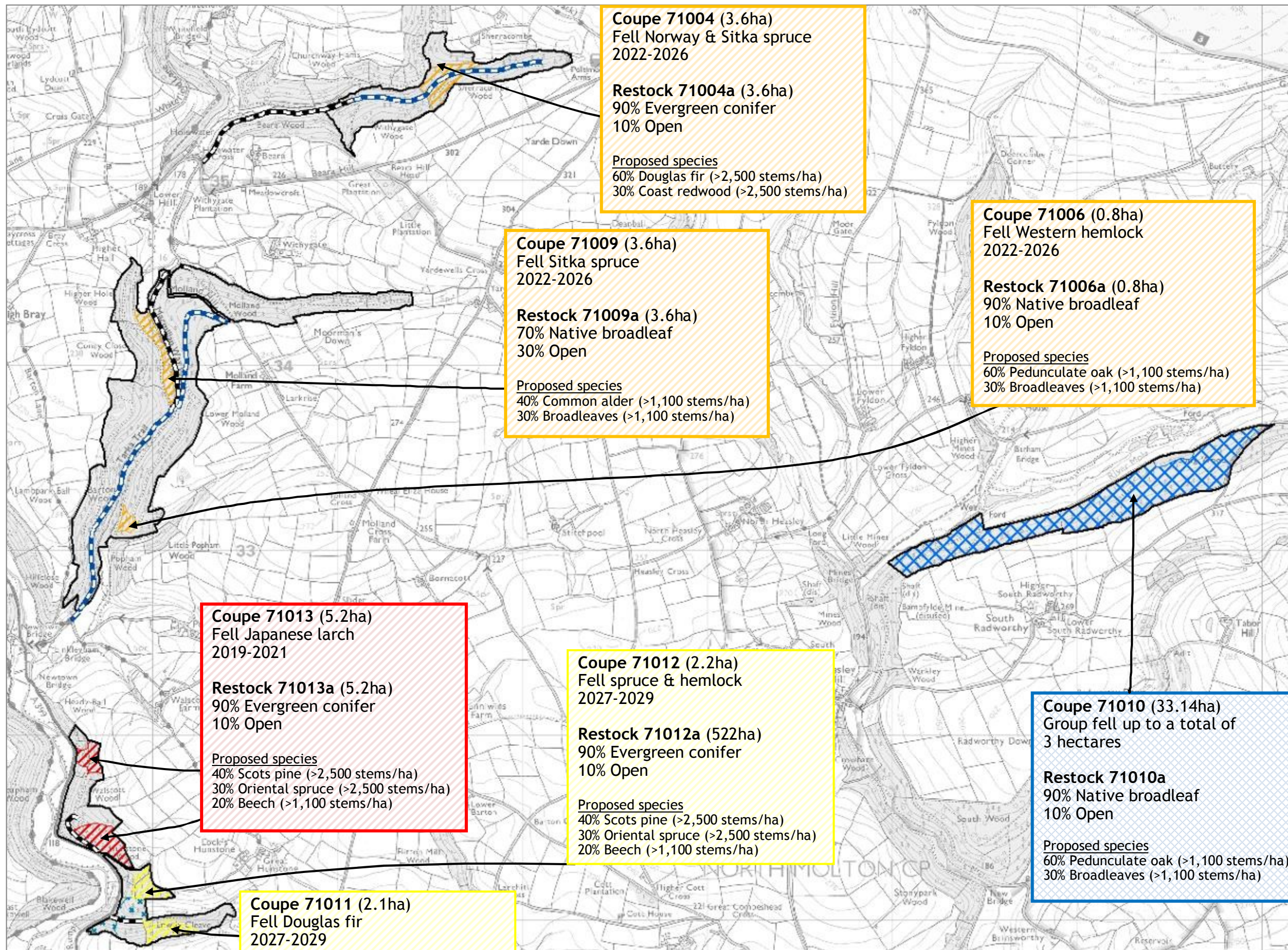
- Clearfell
- Long Term Retention
- Shelterwoods
- Selections
- Open
- Minimum Intervention



Felling and Restocking Brayford and North Molton 2019 - 2029

Legend

- Fell 2019 - 2021
- Fell 2022 - 2026
- Fell 2027 - 2029
- Group selection
- Coppice
- Conifer Retention
- Wood Pasture
- Minimum Intervention
- Natural Reserve
- Open
- Class A/B Roads
- Class C Roads

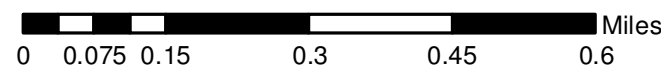


Declaration by Forestry
England as an Operator.

All timber arising from the
Forest Enterprise estate
represents a negligible risk
under EUTR (No 995/210)

Restock 71011a (2.1ha)
90% Evergreen conifer
10% Open

Proposed species
60% Douglas fir (>2,500 stems/ha)
30% Macedonian pine (>2,500 stems/ha)

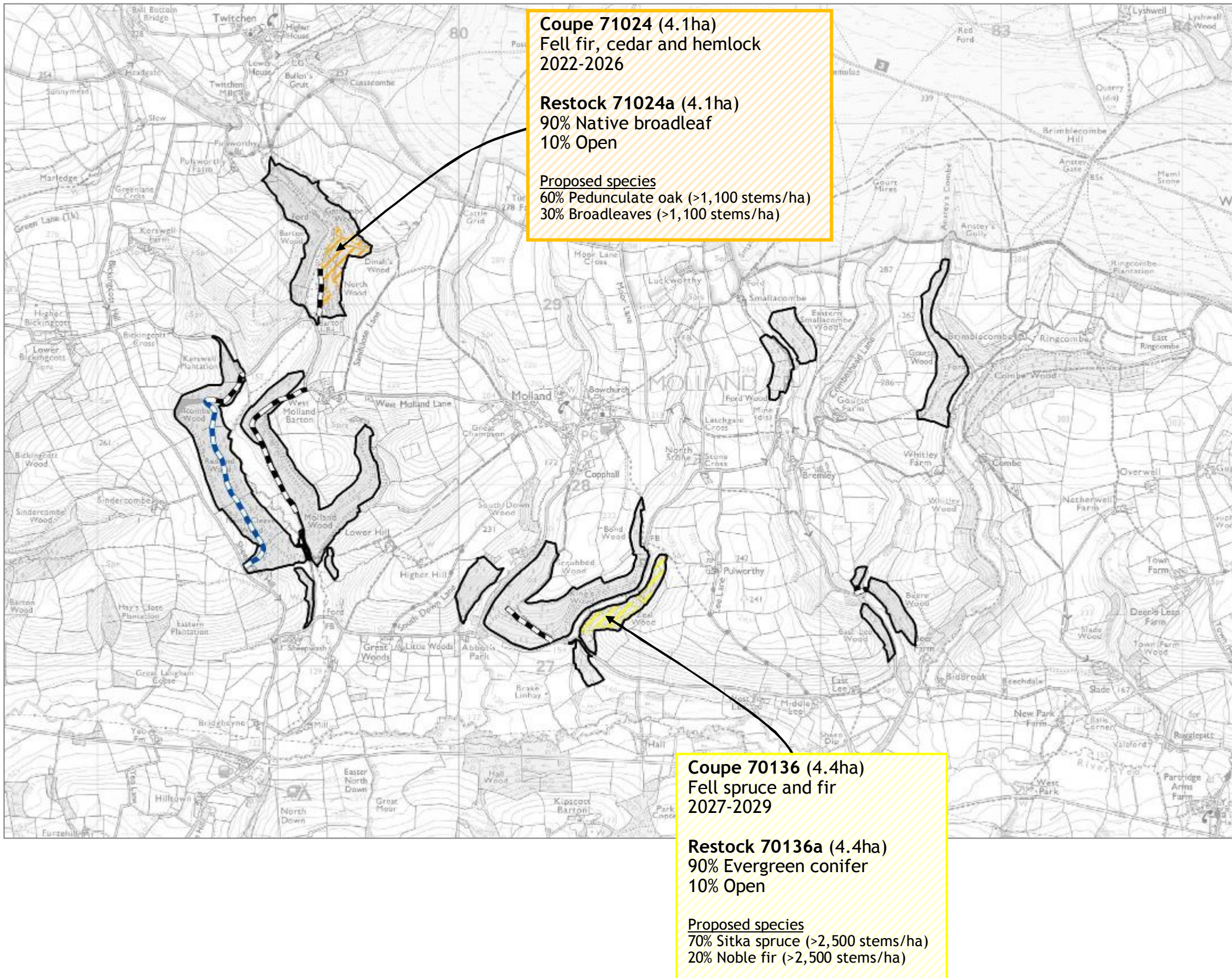


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NB. Whilst 'Restock Proportion' is
often prescribed at 100-90%
Evergreen Conifer the use of suitable
broadleaves to build in resilience and
utilise site conditions is anticipated
and in places is proposed.



Felling and Restocking Molland Estate 2019 - 2029



Legend

- Fell 2019 - 2021
- Fell 2022 - 2026
- Fell 2027 - 2029
- Group selection
- Coppice
- Conifer Retention
- Wood Pasture
- Minimum Intervention
- Natural Reserve
- Open
- Class A/B Roads
- Class C Roads

Declaration by Forestry England as an Operator.

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NB. Whilst 'Restock Proportion' is often prescribed at 100% Evergreen Conifer the use of suitable broadleaves to build in resilience and utilise site conditions is anticipated and in places is proposed.

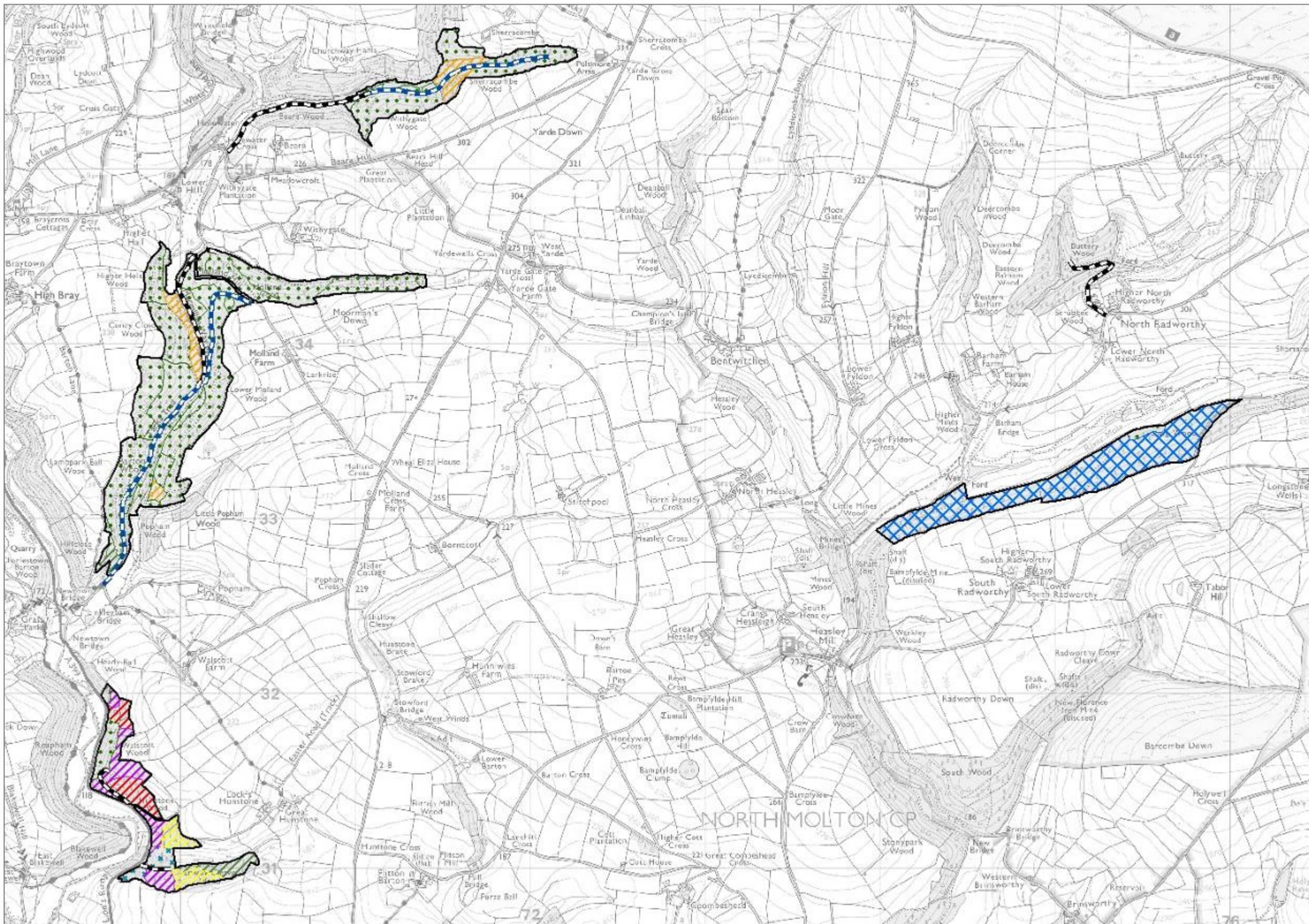


Management Prescriptions 2019 - 2051

An outline of the intended management prescriptions for the Plan area for the next 30 years, including silvicultural, felling and open proposals.

Legend

- Low Impact Silvicultural System
- Fell 2019 - 2021
- Fell 2022 - 2026
- Fell 2027 - 2031
- Fell 2032 - 2036
- Fell 2037 - 2041
- Fell 2042 - 2046
- Fell 2047 - 2051
- Fell beyond 2051
- Group selection
- Coppice
- Conifer Retention
- Wood Pasture
- Minimum Intervention
- Natural Reserve
- Open
- Class A/B Roads
- Class C Roads



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Management Prescriptions 2019 - 2051

An outline of the intended management prescriptions for the Plan area for the next 30 years, including silvicultural, felling and open proposals.

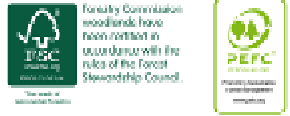
Legend

- Low Impact Silvicultural System
- Fell 2019 - 2021
- Fell 2022 - 2026
- Fell 2027 - 2031
- Fell 2032 - 2036
- Fell 2037 - 2041
- Fell 2042 - 2046
- Fell 2047 - 2051
- Fell beyond 2051
- Group selection
- Coppice
- Conifer Retention
- Wood Pasture
- Minimum Intervention
- Natural Reserve
- Open
- Class A/B Roads
- Class C Roads



Declaration by Forestry England as an Operator.

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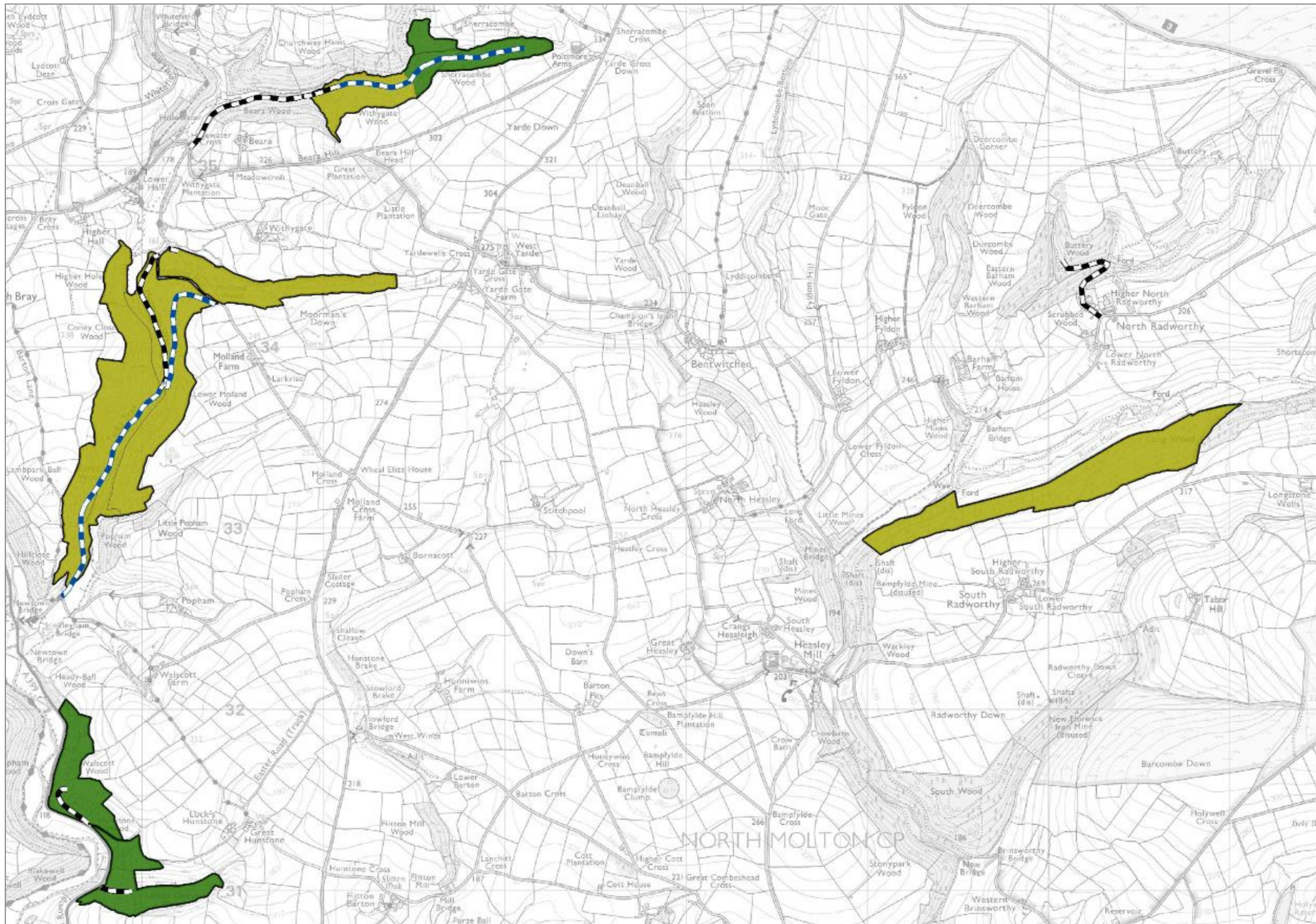


Restock Prescriptions

An outline of the intended restocking prescriptions through planting or natural regeneration for the next rotation, following the removal of the current stock.

Legend

- Conifer dominated forest
- Broadleaf dominated forest
- Open/other
- Class A/B Roads
- Class C Roads



Declaration by Forestry England as an Operator.

All timber arising from the Forest Enterprise estate represents a negligible risk under EUTR (No 995/210)



Restock Prescriptions

An outline of the intended restocking prescriptions through planting or natural regeneration for the next rotation, following the removal of the current stock.

Legend

- Conifer dominated forest
- Broadleaf dominated forest
- Open/other
- Class A/B Roads
- Class C Roads



Declaration by Forestry England as an Operator.

All timber arising from the Forest Enterprise estate represents a negligible risk under EUTR (No 995/210)



Indicative Future Species 2029

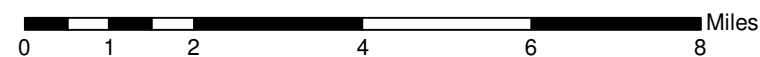
The projections made are indicative of species composition in ten years time. They do not constitute a guarantee and merely act as an indicator of how the vision for the Plan area will be delivered over time.

Legend

- Evergreen Conifer
- Deciduous Conifer
- Native & naturalized broadleaves
- Non-native broadleaves
- Open/other



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Declaration by Forestry England as an Operator.

All timber arising from the Forest Enterprise estate represents a negligible risk under EUTR (No 995/210)

Native & naturalised broadleaves
33%

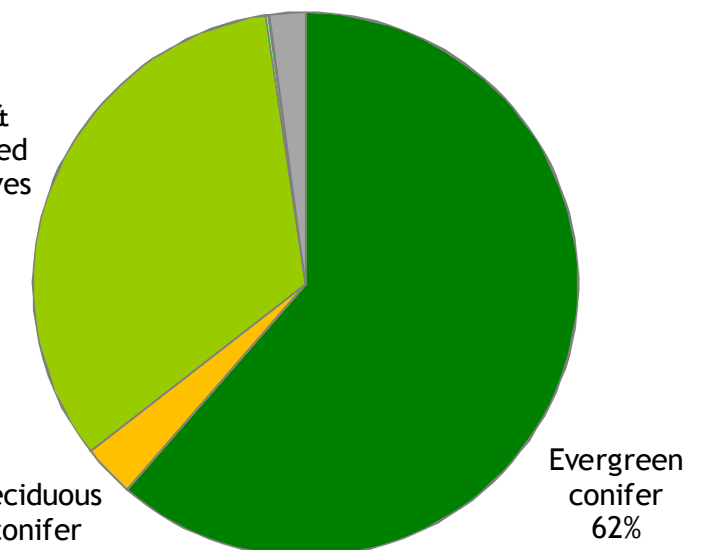
Non-native broadleaves
<1%

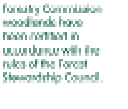
Open/other
2%

2029

Deciduous conifer
3%

Evergreen conifer
62%



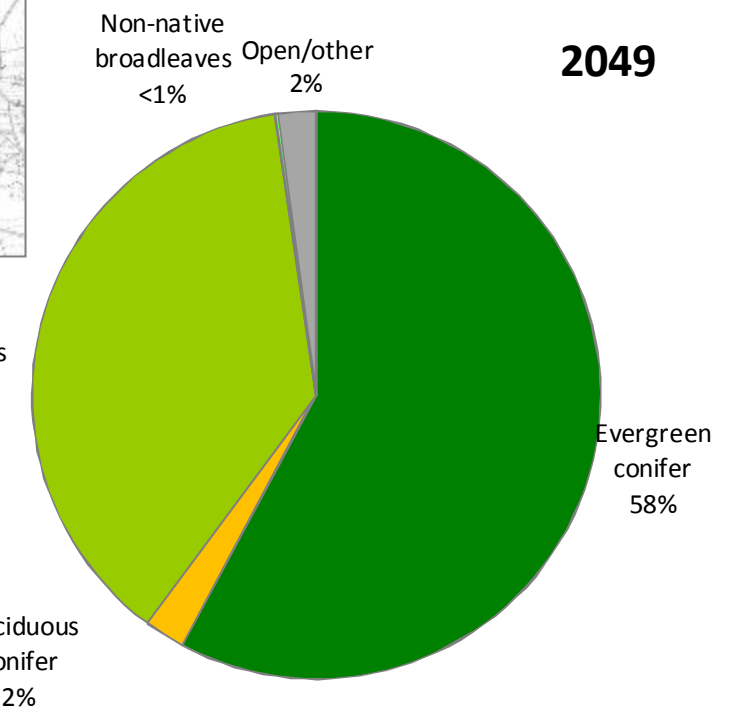


Indicative Future Species 2049

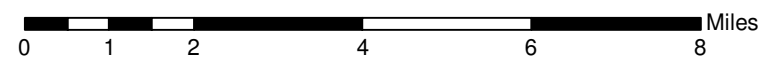
The projections made are indicative of species composition in thirty years time. They do not constitute a guarantee and merely act as an indicator of how the vision for the Plan area will be delivered over time.

Legend

- Evergreen Conifer
- Deciduous Conifer
- Native & naturalized broadleaves
- Non-native broadleaves
- Open/other



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Declaration by Forestry England as an Operator.
All timber arising from the Forest Enterprise estate
represents a negligible risk under EUTR (No 995/210)

Conservation - Habitats and Features

The Forest Plan area is used by an array of common and rare flora and fauna some of which are highlighted below. On the other hand some non-native flora and grazing fauna species can have a detrimental impact on the forest and its features if their numbers are too high. Species such as rhododendron, wild deer and squirrel will all be managed in line with District Strategy to ensure that their pressure does not have a negative impact on the condition of habitats and crops.

The introduction of new palatable tree species, in the bid to diversify the forest structure means that deer and small mammal impact will need to be taken into account. It is likely that protection and control will need to be increased and strategically targeted. This could include fencing, planting design and new deer glades which could be created following felling.



Bats and a number of suitable bat roosting points are located within the Plan area. These will be maintained into the future following Guidance (FC & NE, 2013b).

Unscheduled Monuments - are found across the Plan area, demonstrating its rich cultural and industrial significance. These features include old quarries, lime kilns, leats and iron works.

These features and the internal surrounding landscape needs to be preserved, and enhanced where possible, to retain and develop the Plan Area's cultural heritage. All unscheduled monuments will be identified and treated sympathetically at the time of operation in consultation with the County Archaeology team.

Raptor are known to nest and hunt within the forest areas. Herons are also known to regularly nest in the woodlands. Many of these species choose to rest in high well branched conifer trees and then feed over open ground, making the forests ideal raptor habitat in an otherwise varied landscape. The management of appropriate large or potentially large trees for long retentions will

ensure that habitat provision is maintained.



Streamsides and wet woodland found at the bottom of hollows and small valleys remain predominantly willow dominated broadleaf woodland. The majority of these sites will be managed at the time of intervention to aid the recruitment of suitable wet woodland species such as alder, willow and birch encouraged as well as patchy open space to create dappled shade and light penetration.



Road and rides sides will conform to the prescriptions outlined in the District document, *Design and Management of Environmental Corridors* (Lucas, 2006). The road and ride network within the Plan area will be utilised to extend and connect ride side habitats and transient open spaces, this will be achieved through targeted widening and unstocking of edges to some coupes following felling operations to create a mixed transient open and scrubby habitat for a multitude of species. In practice this means that regenerating vegetation on road sides will be regularly cut where access is easiest to create a dynamic edge habitat which the likes of Lepidoptera, insects and small birds choose to inhabit. Whilst wetter and less well used rides which are not used for deer control will be allowed to regenerate to provide habitat and linkage for a variety of species.

Lowland Mixed Deciduous Woodland is found across the Plan area. These are predominantly made up of Sessile oak, ash, birch and beech. Some evidence of coppicing of hazel exists and looks to reassert. Management of these areas will be sensitive to ensure the



quality is maintained in perpetuity. Thinning will be reviewed on a ten yearly cycle with the aim of enhancing and improving the condition of the habitat. Removal of invasive or un-suitable species, such as laurel, rhododendron or Western hemlock will ensure that this habitat is maintained and used as a building block for future native broadleaf restoration.



Water & Riparian Management

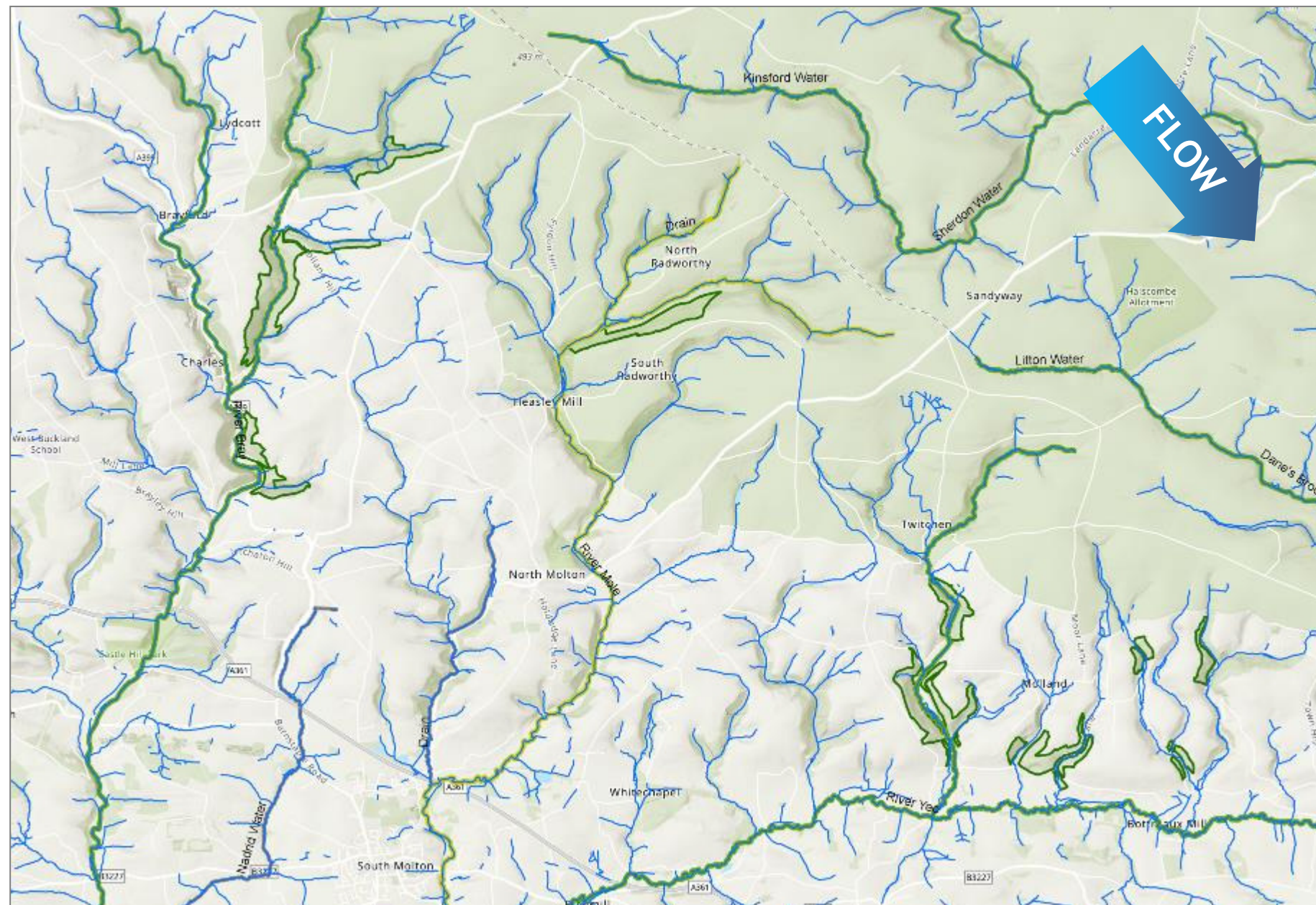
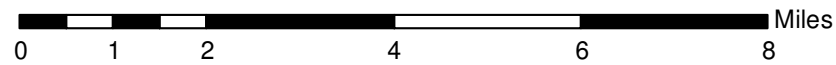
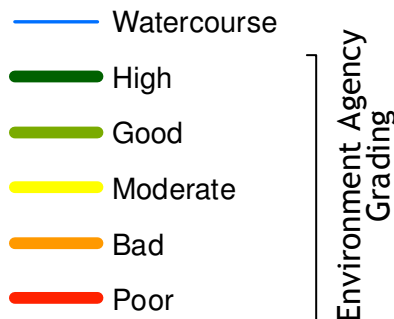
Riparian Management

All watercourses and riverine areas will be managed sensitively to protect and enhance water and soil quality in line with best practice. Riparian zones will be developed to create and maintain areas of up to 50% continuous forest cover through gradual regeneration or enrichment with site appropriate tree species, such as *Alnus*, *Salix* and *Ulmus* spp. A gradual change to this type of wet woodland habitat through coppicing at the time of intervention (usually clearfell), will create an environment of dappled shade with good light penetration and aeration as well as buffer the riverine systems from forestry operations.

Clearfells within the area have been designed and phased to minimise surface water runoff and soil erosion ensuring the riverine systems are protected and improved into the future. All felling and restocking operations will work within the guidelines set out in UKFS, Forests and Water with the aim of developing further riparian areas at the time of intervention to stimulate native species regeneration.

The North Devon Plan area is a component of for the Bray and Mole and then the River Yeo catchment therefore soil stabilisation and surface runoff, retaining forest cover and a move towards continuous cover systems together with maintained drains and water storage will ensure this continues to slow down peak flows into the future.

Legend



South West Catchment District

Just over 3 million people live in the South West River Basin District. The economy is dominated by the service sector, and each year millions of visitors to the district make a vital contribution to the economy. However, the resulting seasonal fluctuations in population bring challenges for protecting the water environment, especially in coastal areas.

The district has a huge network of internationally, nationally and locally recognised wildlife sites, from the uplands of Dartmoor and Exmoor and outstanding rivers such as the Camel and Hampshire Avon, to the fantastic estuaries and coastline. There are two national parks, and the Jurassic Coast in Devon and Dorset is the only natural world heritage site in England.

The farming and land management sector has a big role in looking after and improving the quality of the rural environment. Agriculture accounts for approximately three quarters of the land area in the South West River Basin District.

North Devon Basin

The North Devon catchment covers an area of some 2,300 km sq (900 square miles) and includes the areas drained by the River Taw and River Torridge and their tributaries, and the North Devon Coastal Rivers that flow directly into the sea. Annual rainfall ranges from more than 2,300mm (90in) in the upland areas of Dartmoor and Exmoor to 800mm (31in) at the coast.

North Devon is a catchment with varied landscape, including the rare Culm grasslands, marshland, parts of the two National Parks of Exmoor and Dartmoor, and woodlands. Much of the countryside in the catchment is recognised for its environmental and cultural value including an Area of Outstanding Natural Beauty (AONB) and 500 Scheduled Monuments.

There are 130 river water bodies in the catchment, with a combined length of almost 1000 km, and eight lakes. Currently, 35 per cent of surface waters (284 km or 28 per cent of river length and six lakes which represent three quarters of the total) achieve good or better ecological status/potential. Waters at good ecological status now include the East and West Lyn, the Hole Brook and the river Dents. The main reasons for less than good status are, in order, high levels of phosphate, physical modification, impacted fish and diatom communities and high zinc concentrations. per cent of waters assessed for biology are at good or high biological status now.

Coupe Prescriptions

Detailed coupe prescriptions as a result of felling and restocking 2019-29 as outlined on pages 17-18.



	Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Restock	Area (ha)	Restock Proportion	Rationale/Prescription
Hunstone	71013	5.17	p.54 JL	Crop has reached maturity, is located on an ancient woodland site and continues to pose a plant health concern. Given its limited accessibility and proximity to large public roads clearfelling is appropriate over gradual thinning out of conifer.	71013a	5.17	90% Ev. conifer 10% Open	Site is mildly acidic and moist with soils thin brown earths somewhat limiting conifer species choice. Consider Scots pine, and Oriental and Sitka spruce.
	71012	2.19	p.55 NS p.55 WH	Stand is at economic maturity. With the high wind exposure, limited access and high landscape impact clearfell is the most appropriate form of felling with coupe design integral to success.	71012a	2.19	90% Ev. conifer 10% Open	Site is acidic and moist to wet, continued conifer production should be pursued with stocking robust to enable efficient access and production. Consider Oriental spruce, Sitka spruce and alder.
	71011	2.09	p.58 DF	Stand is well thinned and at economic maturity. With poor access, continued thinning to CCF is not feasible with clearfell is the most appropriate form of felling to aid thinning of the wider forest.	71011a	2.09	90% Ev. conifer 10% Open	Site is richer and fresher than the other close sites, on deep loamy brown earth. Productive forestry should be pursued. sympathetic to the sites complexities. Consider Douglas fir, Sitka spruce and Coast redwood.
Lower Molland	71006	0.82	p.64 WH	Crop is mature and seeding freely compromising the ancient woodland condition. Continued thinning will only exacerbate the issue therefore clearfelling is most appropriate.	71006a	0.82	90% N. broadleaf 10% Open	Restocking should use NVC type and site indicators as a guide. Native woodland restoration should be pursued through a mixture of planting and natural regeneration. Consider planting oak, cherry and field maple.
	71009	3.60	p.2000 SS	Stand is within the riparian corridor and casting heavy shade onto riparian wet woodland having a detrimental impact, premature felling required.	71009a	3.60	70% N. broadleaf 30% Open	Site should be allowed to naturally regenerate to create locally sourced native wet woodland with a high open component.
Gatcombe	71024	4.08	P.61-77 MC	Site is wet and underthinned causing windthrow risk and lack of light in riparian area. Removal of mature crop will ensure economic value is achieved. Intruded broadleaves should be retained where possible to protect watercourse.	71024a	4.08	90% N. broadleaf 10% Open	Restocking should use NVC type and site indicators as a guide. Native woodland restoration should be pursued through a mixture of planting and natural regeneration. Consider planting oak, cherry and field maple.
Sherracombe	71004	3.61	p.54 SS p.54 NS	Stand is well thinned and at economic maturity. With poor access and unsuitable species on site for the future, continued thinning to CCF is not feasible with clearfell is the most appropriate form of felling to aid thinning of the wider forest.	71004a	3.61	90% Ev. conifer 10% Open	Site is fairly rich and well drained and continued conifer production should be pursued. So restock design will need to be robust to enable efficient access and production but sympathetic to the sites complexities and high landscape profile. Consider Coast redwood, Sitka spruce and Douglas fir.
Kings Wood	71036	4.37	p.71 SS p.62 DF	Stand is well thinned and at economic maturity. With limited access and continued thinning to CCF not feasible with clearfell is the most appropriate form of felling.	71036a	4.37	90% Ev. conifer 10% Open	Site is relatively sheltered but most is north facing and therefore likely to be cold. Planting of relatively hardy productive conifer species which thrives on rich soils should be pursued. Consider Douglas fir, coast redwood or Serbian spruce.
Long Wood	71010	33.14	p.69 DF P.69 SS	Group Selection Up to 6 group fellings totalling 3.0 ha within Plan period will be used to diversify Douglas fir and Sitka spruce structure and accelerate native woodland cover restoration.	71010a	3.0	90% N. broadleaf 10% Open	Site is relatively rich and well drained loamy brown earths. Site is ancient woodland and must be restocked with native species using NVC type as defining palette. Consider Pedunculate oak in clusters, with hornbeam and Wild service.

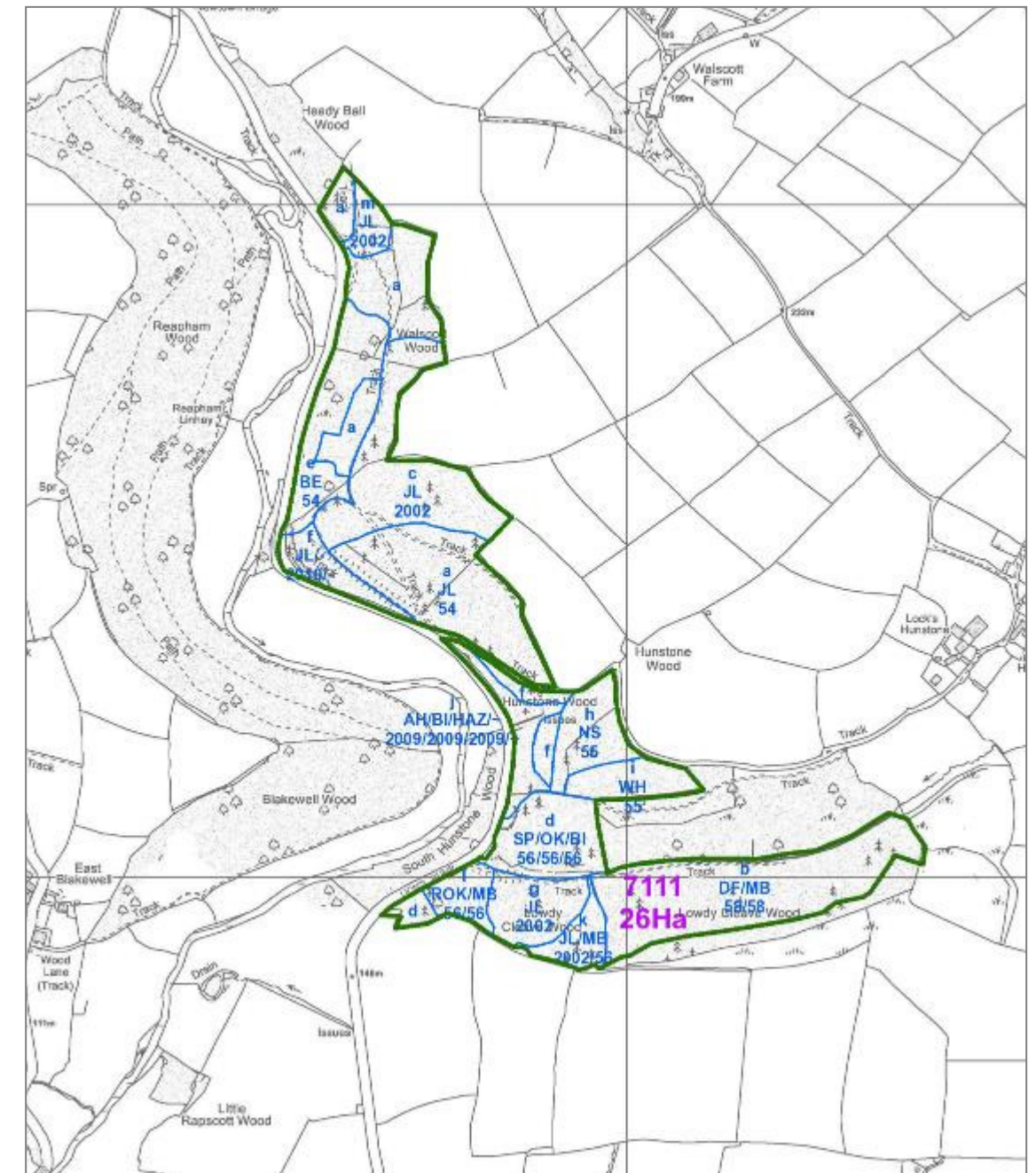
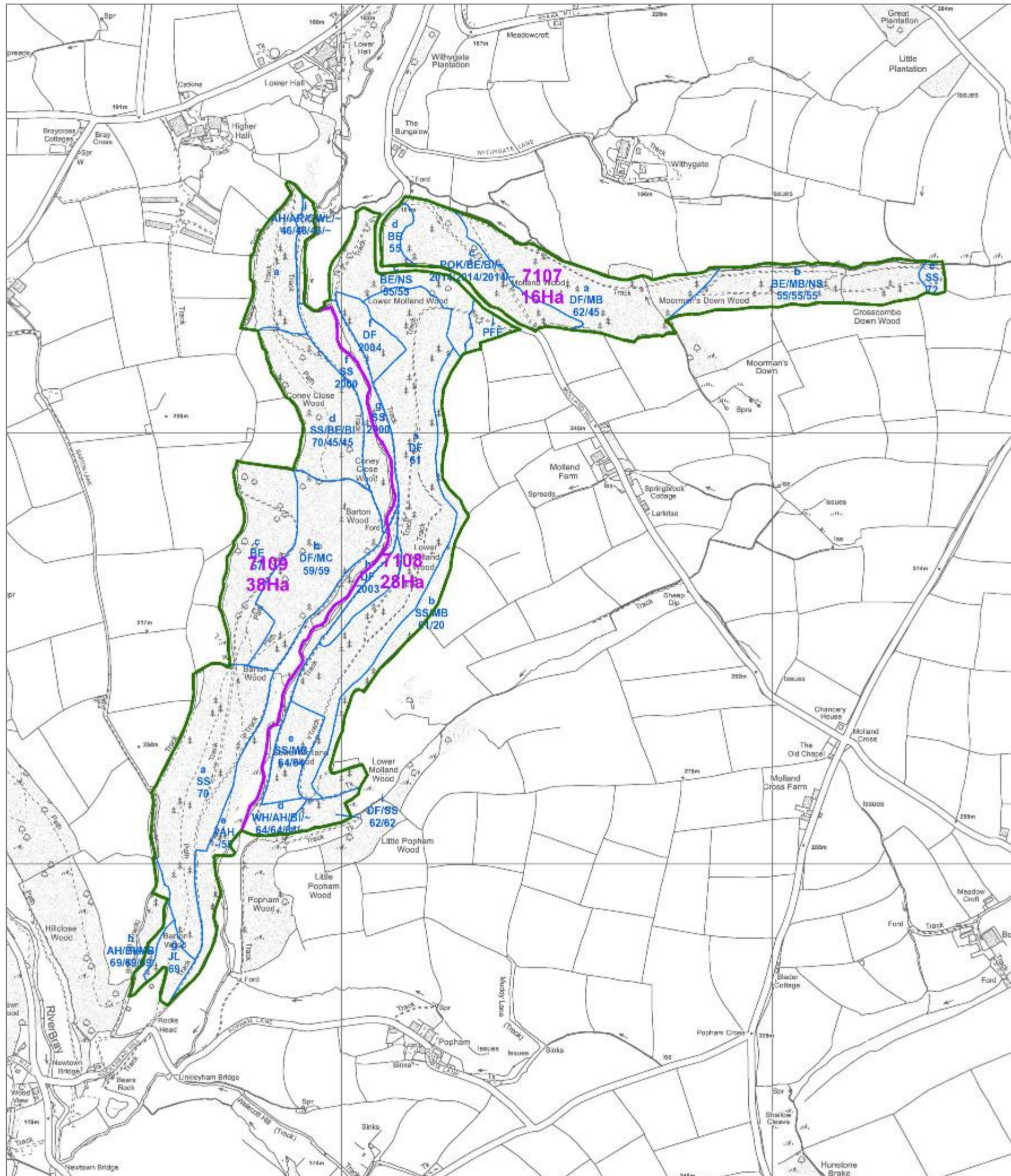


Stock Data 2019 Higher and Lower Moll and

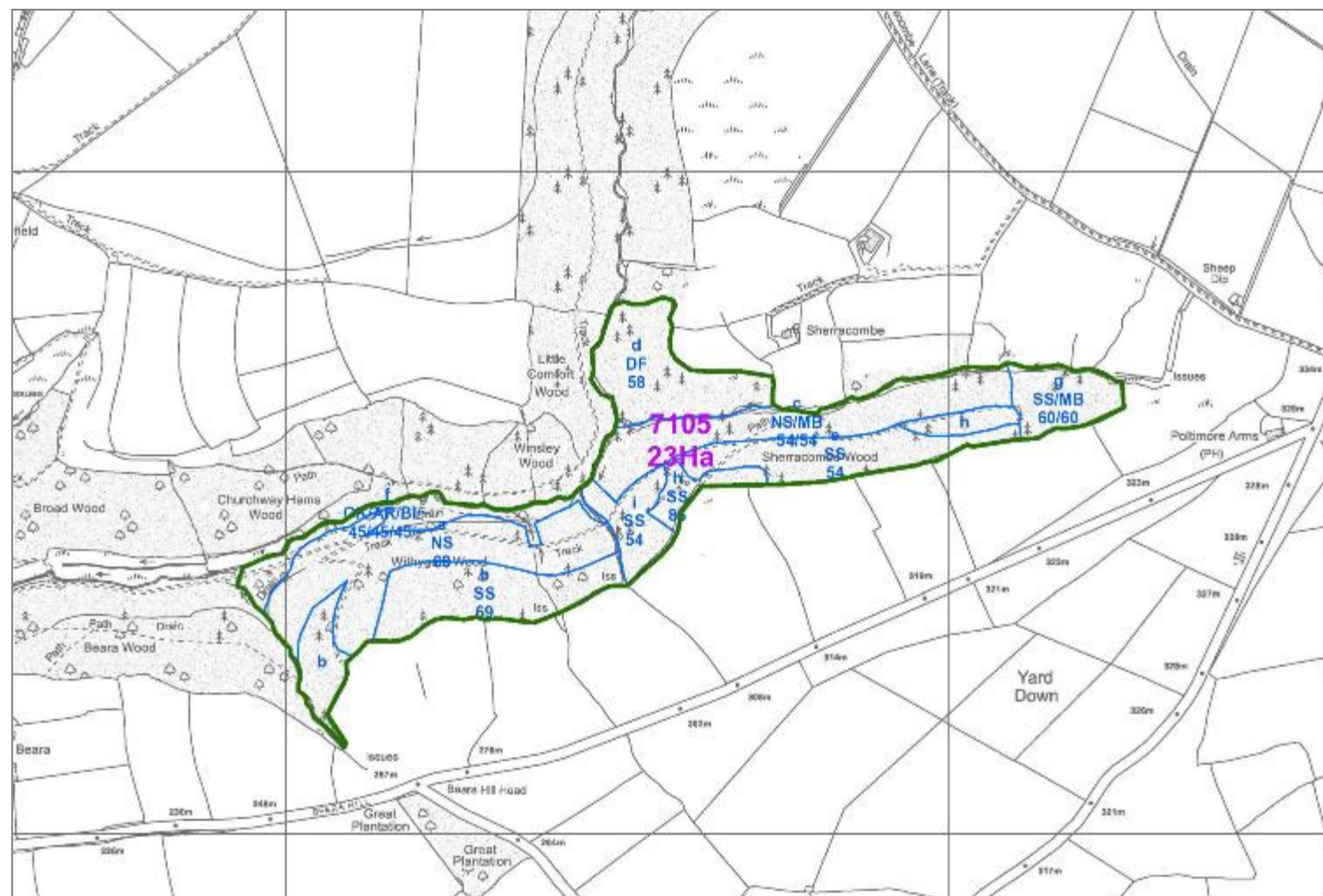
Legend

- Compartments
- Sub-Compartments

Hunstone and Lowdy





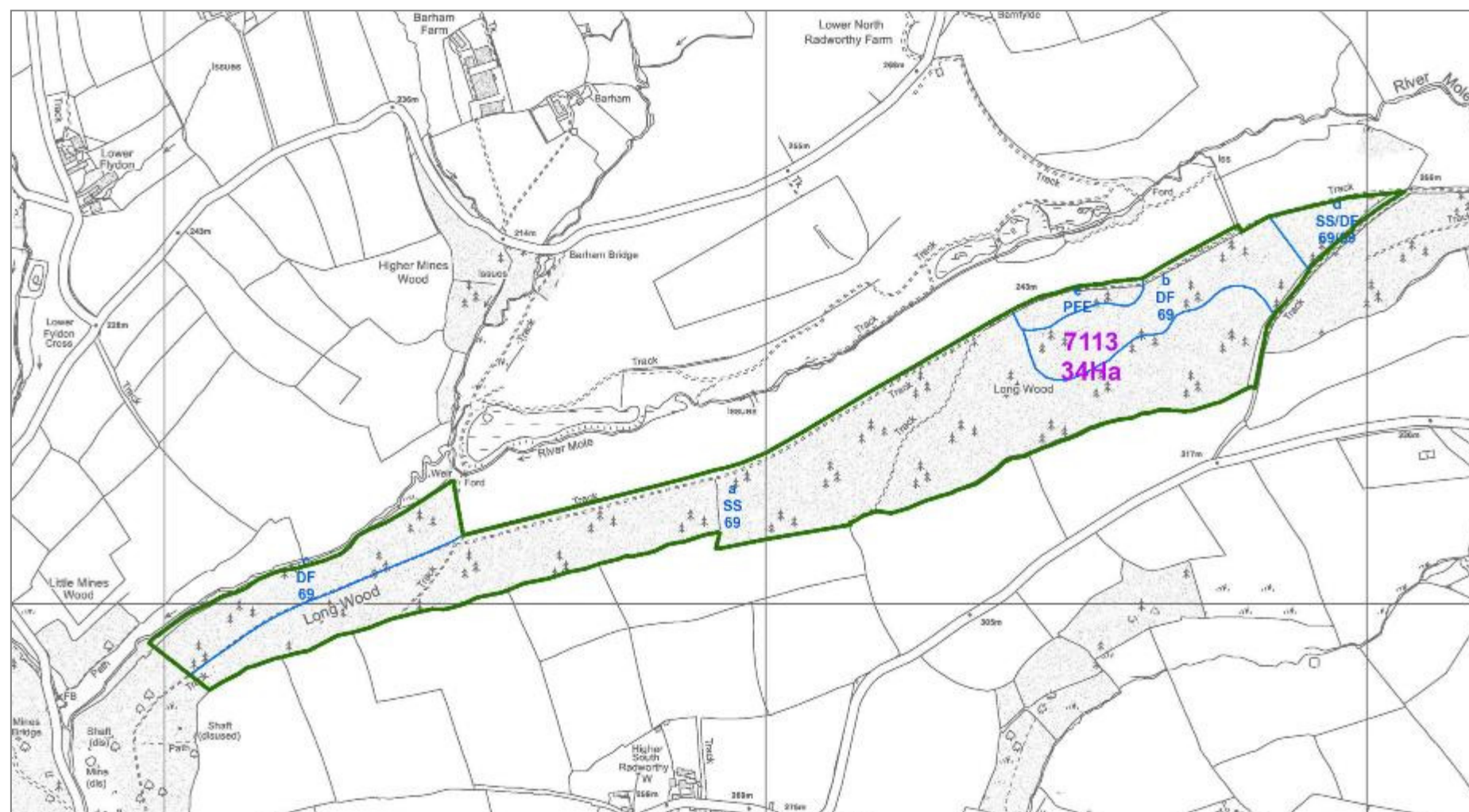
0 0.075 0.15 0.3 0.45 0.6 Miles



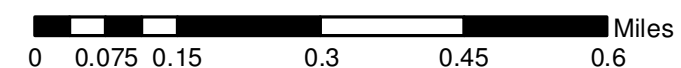
Stock Data 2019 Sherracombe

Legend

-  Compartments
-  Sub-Compartments

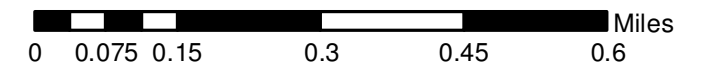
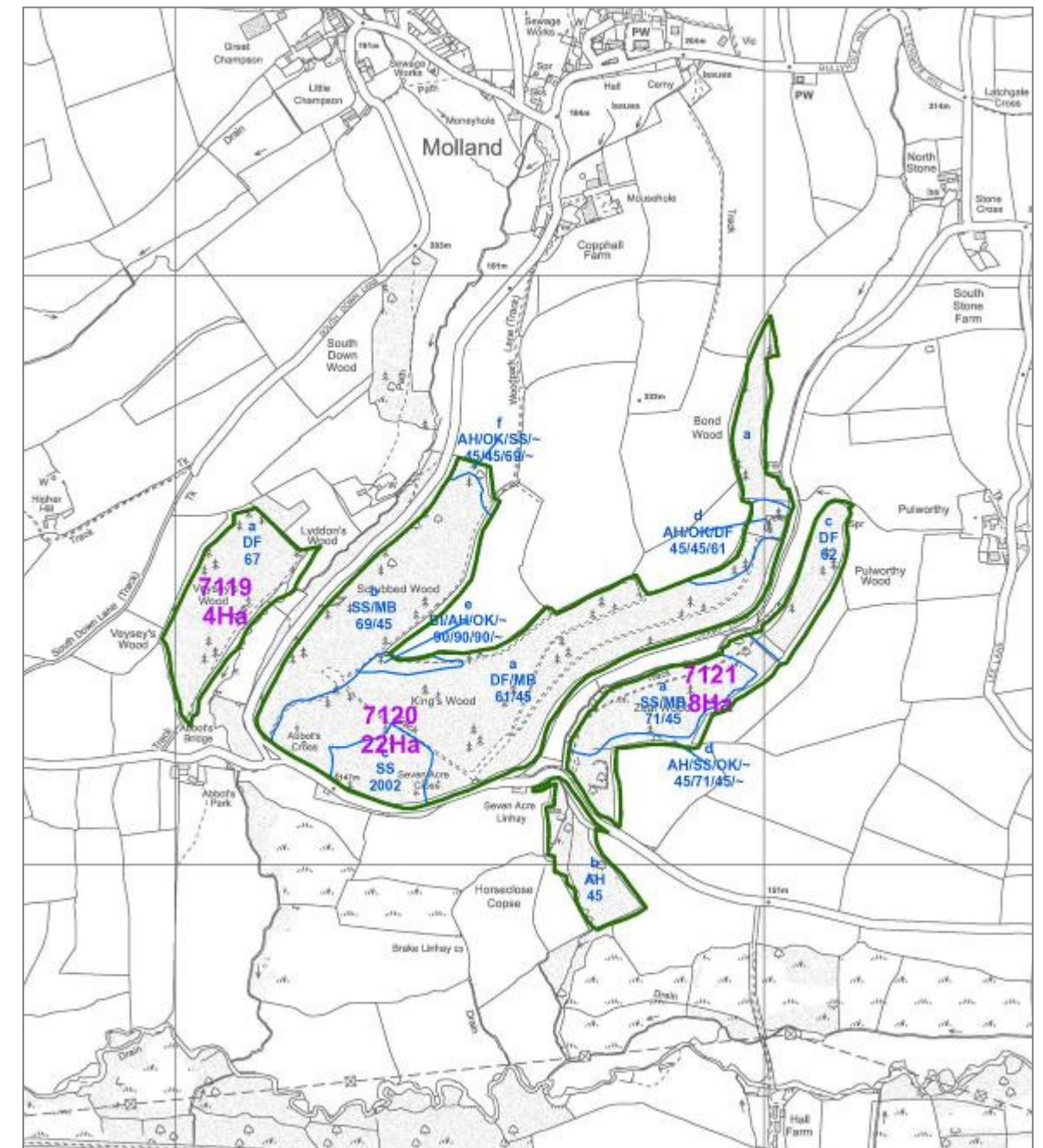


Long Wood



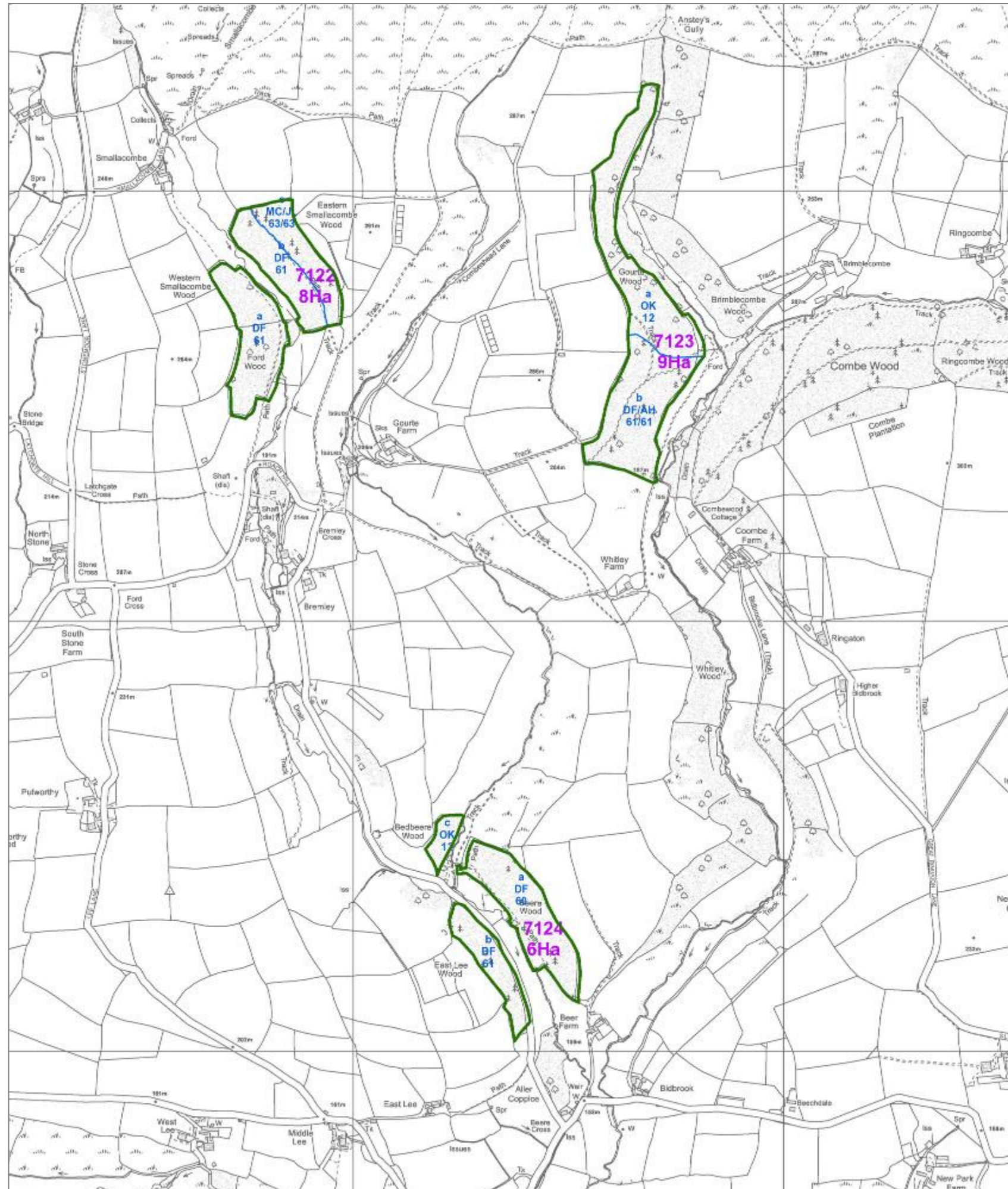
Legend

- ## Kings Wood





- Compartments
- Sub-Compartments





APPENDIX 3 Glossary

Term	Abbreviation	Description
Ancient Semi-Natural Wood-land	ASNW	An ancient woodland site, where trees and other plant species appear to of established naturally rather than having been planted. Predominantly these sites will contain 80% or over of site native species or species native to the surrounding area.
Alternatives to Clearfell	ATC	Alternative to Clearfell is similar to CCF and refers to management systems where stands are regenerated without clearfelling.
Ancient Wood-land Site	AWS	A site that has technically been wooded since 1600AD and is unlikely to have been converted to farmland in the last few centuries.
Continuous Cover Forestry	CCF	Continuous Cover Forestry is an approach to forest management that enables an owner of woodland to manage the woodland without the need for clearfelling. This enables tree cover to be maintained, usually with one or more levels and can be applied to both conifer or broadleaf stands. With Conifer it is possible to regenerate the crop a lot faster than in broadleaf crops, where the canopy is generally removed a lot slower and over a much longer time span. A decision to use CCF must be driven by management objectives and will have long-term vision often aimed at creating a more diverse forest, both structurally and in terms of species composition. There are no standard prescriptions meaning CCF is very flexible in ensuring opportunities can be taken advantage of as they arise. This development of a more diverse forest is a sensible way to reduce the risks posed by future changes in the climate and biotic threats.
Clearfell	C/F or CF	To cut and remove all trees from a certain area of woodland.
Crop		A stand of trees. Often associated with stands completely or partially managed for its timber. Just as farmers manage crops so does forestry the only difference is a farmers' rotation is shorter and often realised in 1 year. Trees are a much longer term crop with rotations varying from 6 years to 400 years. (also see definition for rotation)
Enrichment planting		Planting different species within areas of regen that helps diversify the range of species in a wood and in doing so can make it more resilient to future climate change and future threats from disease. Enrichment may be desirable in areas where success of regeneration is uneven, patchy or where a regen crop is limited by the number of species present.
Group felling / group planting		This is where small areas of woodland are felled hence the name “group felling” and then either allowed to develop through the use of nat-regen or in this case planted hence “group planting”. These techniques can help to develop structure* within a wood over a given length of time and is often used in conjunction with continuous cover. *Either in terms of age or number of tree species present, since shelter and shade are provided by the remaining upper storey one can consider a larger number of tree species when deciding what to plant.
Hectare	Ha	Unit of area equating to 2.47 acres.
Native (and honorary native)		The trees making up the woodland are part of England’s natural, or naturalised flora. Determined by whether the trees colonised Britain without assistance from humans since the last ice age (or in the case of ‘honorary natives’ were brought here by people but have naturalised in historic times); and whether they would naturally be found in this part of England.
Natural Regeneration	Regen or nat-regen	Trees growing on a site as a result of natural seed fall, and can be used as a management process and can allow cleared areas of woodland to germinate, grow and develop naturally. This process can happen anywhere and woods can be managed to encourage nat-regen although there is no guarantee of success. In these instances, or if nat-regen is unlikely for a variety of reasons, one can use enrichment planting or group planting to achieve the same affect. The process usually relies on an overstorey of “parent trees” being present or on parent trees being close by to provide the seed. These parent trees will usually of been thinned and managed with natural regeneration in mind. Existing areas of nat-regen are then usually developed through carefully thinning the surrounding woodland over a number of years, to give more light and space to ensure the young trees can establish themselves into larger trees eventually allowing them to be incorporated (‘recruited’) into the main crop for the next rotation at some point in the future. Usually done in small groups or in strips this system can allow a varied woodland structure to develop over time. Protection from competing plant species and mammal browsing might be required in the early stages by fencing or using tree shelters.

Rotation		<p>Generally a commercial term used to describe the length of time an area of trees is growing for, from the time of planting to the time of felling. For broadleaves a rotation is generally a lot longer than that of conifer species* and can broadly speaking be anywhere between 80 years to 3-400 years, as opposed to conifer crops whose rotation is generally shorter but can vary from 20-25 years to 120 years plus.</p> <p>*The exception being that of coppice where rotation length can vary from 5 or 6 years up to 30 years plus depending on management objectives.</p> <p>“First rotation” would refer to an area of wood planted on open ground not previously wooded. And so “second rotation” is one where woodland has been cleared and replanted.</p>
Shelterwood		<p>A management system that is applicable to conifer or broadleaf, where tree canopy is maintained at one or more levels without the need to clearfell the whole site. Felling can occur, but generally in small “groups” whose size shape and spatial distribution will vary depending on site conditions. The “groups” are then either: allowed to develop and establish by the use of natural regeneration, are planted or are established using a mixture of both techniques. This known as a “group shelterwood system”</p> <p>A variation on this is “Single tree selection”. This variation removes individual trees of all size classes more or less uniformly throughout the stand to maintain an uneven-aged stand and achieve other stand structural objectives. While it is easier to apply such a system to a stand that is naturally close to the uneven-aged condition, single tree selection systems can be prescribed for even-aged stands, although numerous preparatory thinning interventions must be made to create a stand structure where the system can truly be applied.</p>
Silviculture		<p>A term coined during late 19th century from the Latin <i>silva</i> meaning 'wood' and the French <i>culture</i> meaning 'cultivation' and so Silviculture is the art and science of controlling the establishment, growth, composition, and quality of forest vegetation to achieve a full range of forest resource objectives.</p>
Stand		<p>A group or area of trees that are more or less homogeneous with regard to species composition, density, size, and sometimes habitat.</p>
Thin	TH	<p>Selective removal of trees from a wooded area, giving remaining trees more space to grow into larger trees. Thinning is done to:</p> <ul style="list-style-type: none"> Improve the quality and vigour of remaining trees. Remove trees interfering with mature or veteran broadleaf trees. Give space for tops (or “crowns”) of broadleaf trees to develop and potentially act as a future seed source. Give space for natural regeneration to grow and develop with the intention of recruiting these younger naturally grown trees as a part of the future woodland structure. Create gaps for group planting or enrichment. Remove species of tree that may compromise the intended management objective of the woodland eg: non-native or invasive species such as Sycamore, Western Hemlock or birch. Improve the economic value of a wood. Help realise opportunities to enhance ecological value. <p>NOTE: This list is not in any order of priority and will vary depending on management objectives.</p>
Yield Class	YC	<p>A method of measuring the growth rate or “increment” of a crop of trees by age and height; measured in m³ per Ha per annum. E.g. A crop with a YC of 16 is one that has an annual increment of more than 16m³ but less than 17m³, although generally only even numbers are used when stating YC.</p>



References

Devon County Council, 2008, *CHARACTER ASSESSMENT – Broadbury Ridges*, Devon CC, Exeter

Devon County Council, 2008, *CHARACTER ASSESSMENT – High Taw Farmland*, Devon CC, Exeter

Environment Agency, 2011, *River Basin Management Plan, South West River Basin District*, DEFRA, Bristol

Forestry Commission, 2011, *The UK Forestry Standard*, Forestry Commission, Edinburgh

Forestry Commission, 2013a, *West England Forestry District Strategy 2013-2020*, Forestry Commission, Bristol

Forestry Commission, 2013b, *Strategic Plan for the Public Forest Estate in England*, Forestry Commission, Bristol

Humphrey, J. & Bailey, S., 2012, *Managing deadwood in forests and woodlands*, Forestry Commission, Edinburgh

Lucas, O., 2006, *Design and Management of Environmental Corridors*, Peninsula Forest District, Forestry Commission, Exeter

Natural England, 2012, *149 The Culm National Character Assessment Profile*, Natural England, York

UKWAS, 2012, *United Kingdom Woodland Assurance Standard*, UKWAS, Edinburgh