Forestry Commission England

Hartland Forest Plan

2017 - 2027

West England Forest District

Ben Robinson

FCE File Ref: OP10/70
OLD Ref: PE27/28

Forestry Commission England

Application for Forest Plan Approval

Forest District:	West England FD	
Woodland or property name	Hartland and Melbury	
Nearest town, village or locality:	Hartland / Powlers Piece	
OS Grid reference:	Summerwell (AccessPoint)	SS27712089
Local Authority District/Unitary Authority:	Torridge District	

Plan Area:	718ha
Conifer Felling:	123ha
Broadleaved Felling:	0ha

1. I apply for Forest Plan approval for the property described above and in the enclosed Forest Plan.

2. I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders that the FC agreed must be included. Where it has not been possible to resolve specific issues associated with the plan to the satisfaction of consultees, this is highlighted in the Consultation Record.

3. I confirm that the proposals contained in this plan comply with the UK Forestry Standard.

4. I undertake to obtain any permissions necessary for the implementation of the approved Plan.

Signed ..... pp GS Stannard

Forest Management Director

Date 22nd March 2017

Signed .....

Area Director

Date of approval 15th June 2017

Date approval ends 15th June 2027

Forestry Commission England

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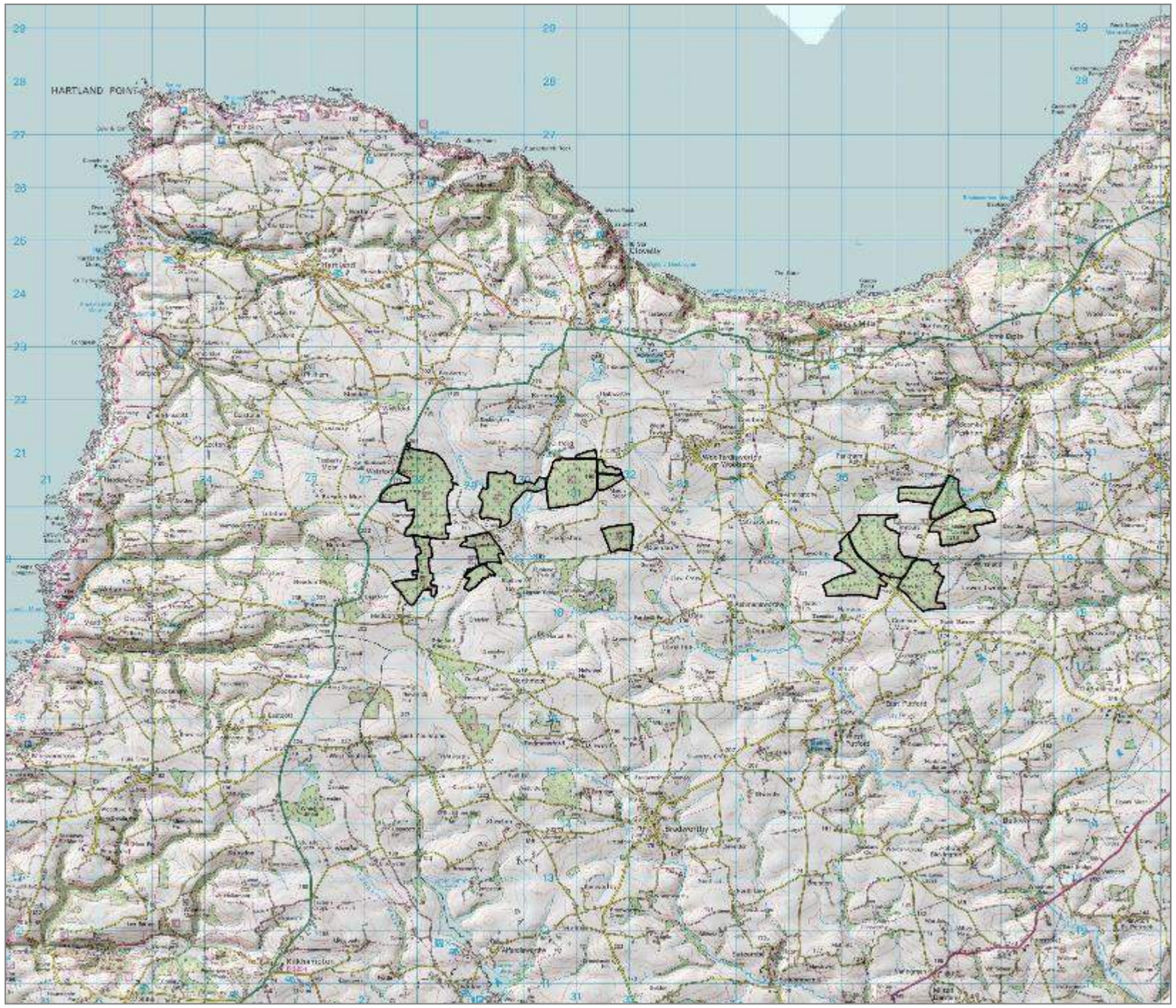


Location

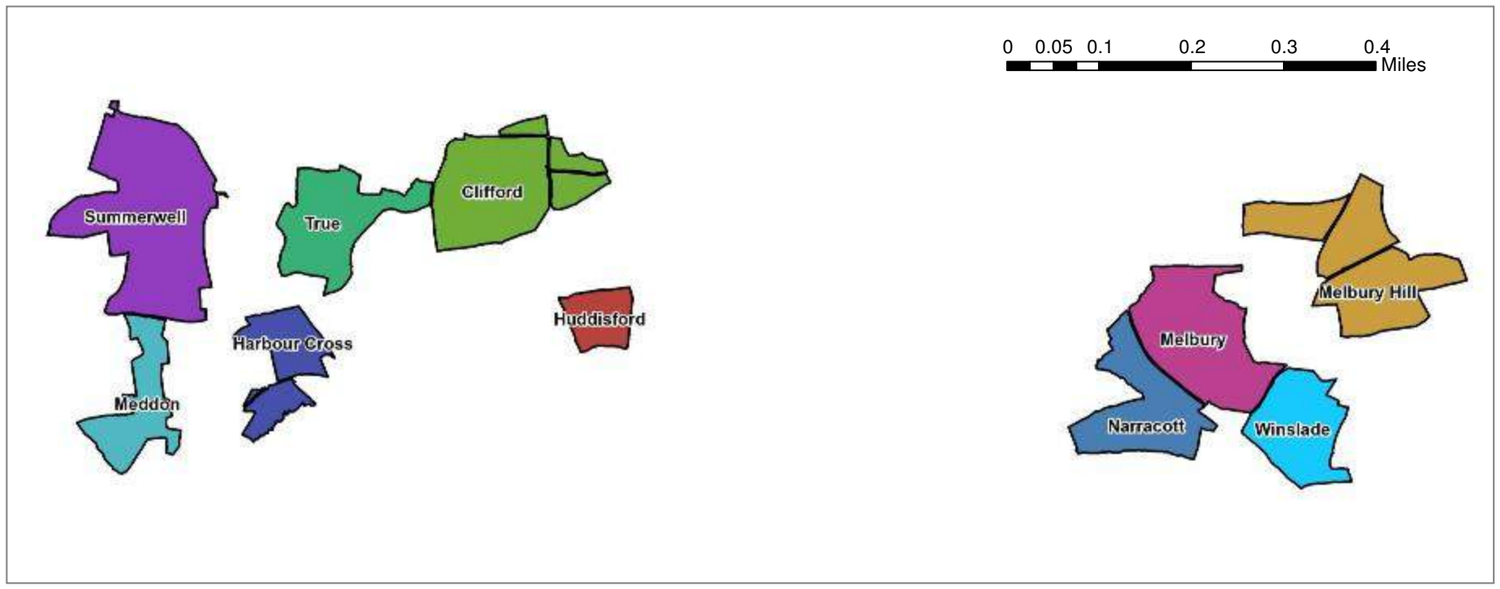
The Hartland Forest Plan area lies in north Devon between the coastal towns of Bideford and Bude. The Plan area is made up of a number of coniferous forest plantations on the north Devon plateaux totalling 718ha.

The Plan area sits within a relatively flat grassland landscape and provides both a visual feature and recreational attraction for the surrounding area. Numerous watercourses dissect the forest blocks which then feed into and make up the Torridge River.

The majority of the land is at 145-215 metres above sea level and is predominantly on top of the flat plateau with a few moderate gradients in places. The climate is warm and fairly moist with an average annual rainfall of 1100—1400mm, a soil moisture deficit of around 135mm, and an accumulated temperature over 5°C of 1785°C. The close proximity of the blocks to the Atlantic coast mean that wind exposure and salt burn is a common issue.

The soils are primarily poor and wet surface water gleys (6 & 7), some with a high peat content. This is underlain by Culm clay, notorious for high water holding and very poor nutrient retention.

Forest Name	Area	Plan Area
Clifford	97.9	14%
Harbour Cross	40.8	6%
Huddisford	23.3	3%
Meddon	43.7	6%
Melbury	88.0	12%
Melbury Hill	102.5	14%
Narracott	63.5	9%
Summerwell	141.0	20%
True	63.5	9%
Winslade	54.4	8%
	718.6 ha	**100%**



About

The Hartland Forest Plan area is made up of a number of separate forest blocks totalling 718 hectares in Devon. The forests lie within the North Devon Biosphere. As individual forest blocks set within the distinctive elevated plateau grassland they have very high natural and landscape diversity and value.

The forests managed as part of the public forest estate stretch from Summerwell in the west, 3 miles west of Hartland village and the coast, through True and Clifford to Melbury in the east which is clustered around Powlers Piece.

The public forest here is a predominantly conifer having been planted after the First World War to address the national timber shortage. The area is known for its production of high quality Sitka spruce which makes up the vast majority of the trees here. Most of the areas have historically been managed for timber for local, national & international markets using non-thin rotation silvicultural practices due to high wind exposure.

The Plan area contains a rich cultural heritage including scheduled and unscheduled monuments. These are made up of numerous archaeological features of barrows and mounds which are free of tree cover.

The Plan area is a rich for ecology and neighbours a number Site of Special Scientific Interest and Special Conservation Areas. Most notably the Culm Grasslands which contains the largest cluster of sites for marsh fritillary in the south-west. The forests are important for a number of nationally important birds, including nightjar.

The vast majority of the Plan area is Open Access under the Countryside Rights of Way Act. The exception is an area of Melbury Hill which is de facto Open Access due to it being leased from another landowner. Recreational activity is light and informal with walkers along the public rights of ways the main users.

Objectives

The core aim of the plan is to produce woodlands with increased conservation and landscape benefits whilst maintaining a viable timber output. The long term aims of management here are to continue the substantial timber production while increasing resilience to climate, pest and disease risks, and to deliver the forest for people and nature.

The social, economic and environmental objectives of management here are:

- The continued production of sustainable and marketable woodland products.
- Protect and enhance woodland and open habitats and their associated species.
- To conserve, maintain and enhance cultural and heritage assets.
- The diversification of woodland species and structure for greater ecological and economic resilience.
- Deliver well-designed forests in keeping with the local landscape character.
- The provision and maintenance of recreation facilities.

Summary

What we'll do

The current plan outlines management proposals including felling and restocking over several decades, with felling licence approval for operations up until 2027.

Crops in more exposed positions will continue to be managed through non-thin for conifer timber production under a clearfell and restock scheme. Whereas more sheltered areas will be structurally diversified through thinning.

The Plan makes provision to diversify the species composition and move away from a reliance on Sitka spruce by investigating and advocating suitable alternatives delivering a resilient, climate change ready forest.

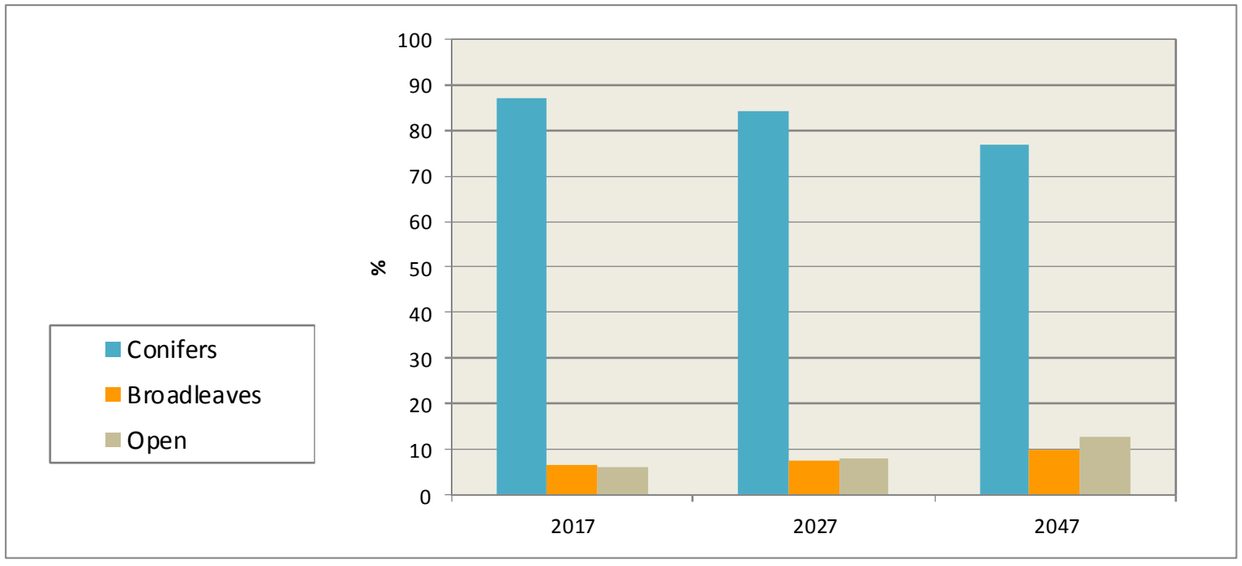
Implementation and maintenance of an environmental corridor system will continue to increase diversity of habitat and internal landscaping.

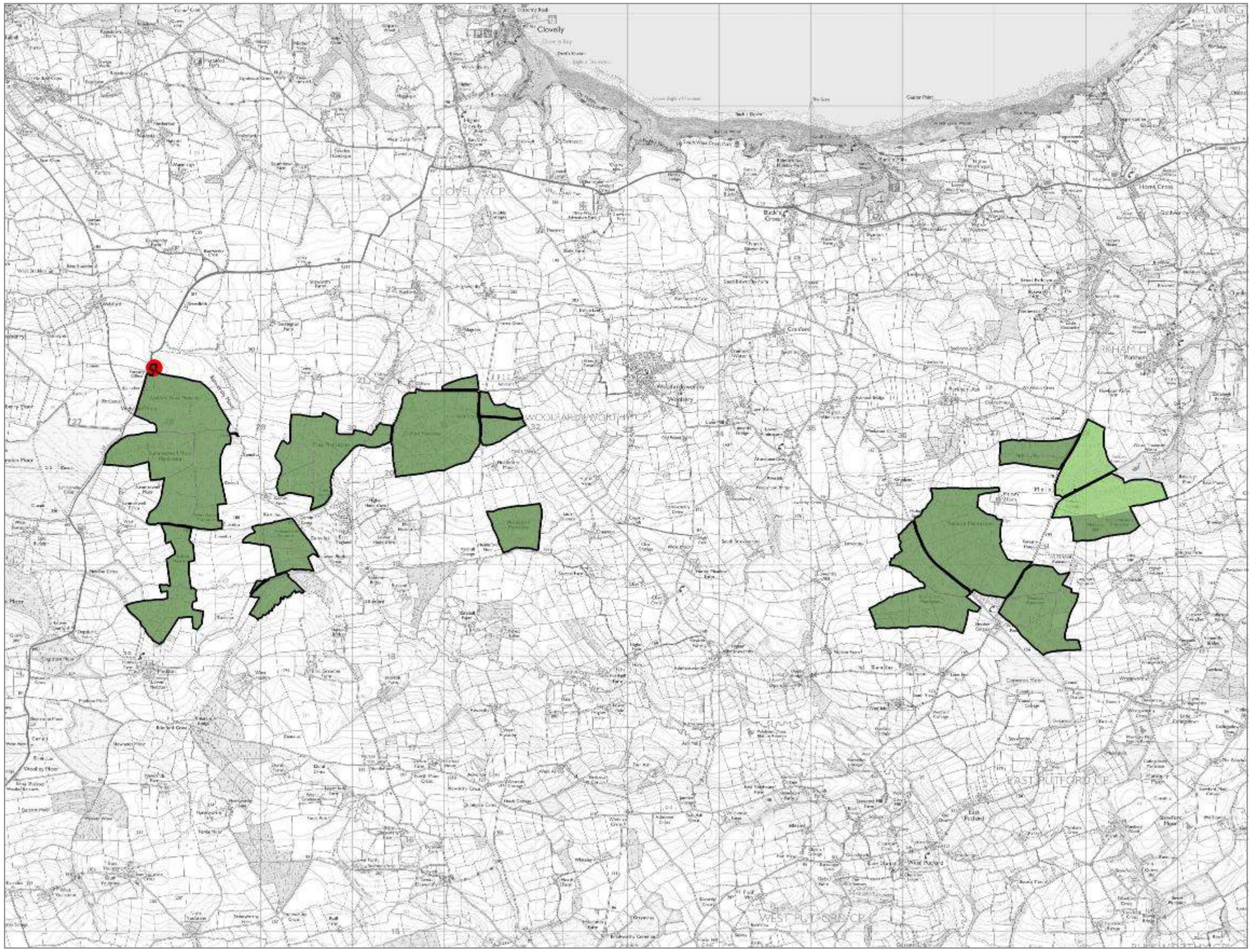
The planned areas of clearfelling, restocking and permanent open space creation during the ten years to 2027 are summarised in the chart below.

HECTARES	Conifers	Broadleaves	Open space
Clearfelling	123	0	-
Restocking/Regeneration	103	7	13

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 and open space expected within the plan period and over time is indicated in the middle and right hand columns of the chart.





Tenure & Agreements

The majority of the Plan area (655ha) is held under freehold. Most of this was acquired in the 1930s, with supplementary areas secured in the 1960s.

A contiguous area of Melbury Plantation is held through leasehold totalling 63ha. Notably this surrounds the reservoir outside of the estate.

One shooting let across Summerwell Meddon and Clifford plantations and a telephone mast at Summerwell are management agreements which need to be considered when developing management proposals for the Plan area.

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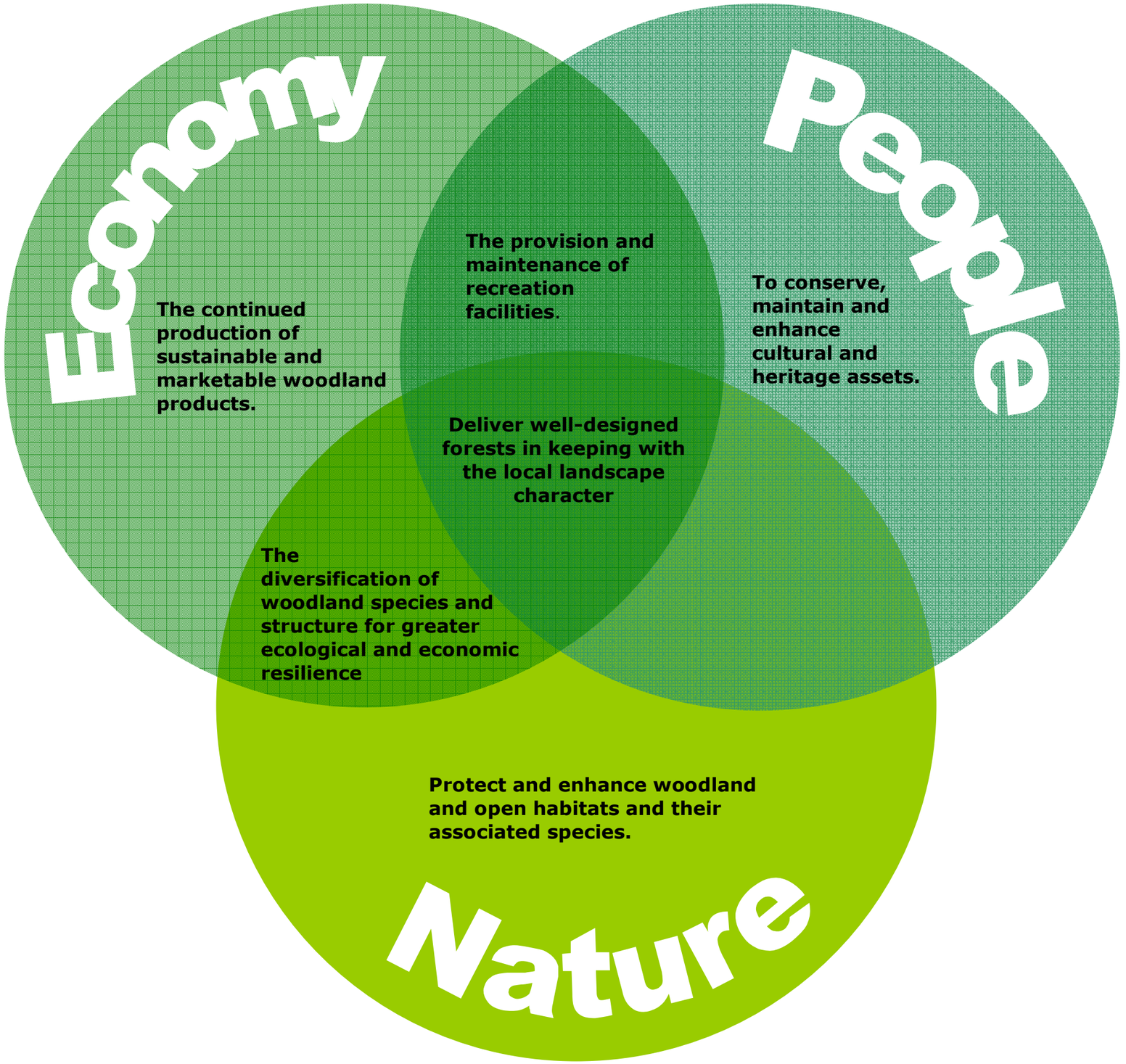
Miles



Management Objectives

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.

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

The mark of responsible forestry

Promoting Sustainable Forest Management

Declaration by FC as an Operator.

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

Forestry Commission England

National Vision and Overall Goal:

To secure and grow the economic, social and natural capital value of the Public Forest Estate for the people of England.

Meeting Objectives

District Strategy

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

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

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

Forest Plan Objective	Meeting Objective	Monitoring
The continued production of sustainable and marketable woodland products.	The majority of the Plan area will remain productive through clearfell yield. Increasing timber production will occur from the thinning of stable conifer crops.	Comparison of total production forecast yield (4,000m³ (2021) and 8,500m³ (2027)) with actual production at the Forest Plan (FP) five and ten-year review. Pre– thinning survey and post thinning control. Site planning and site supervision
Protect and enhance woodland and open habitats and their associated species.	Operational site planning should highlight opportunities where conservation benefits can be delivered. Appropriate reinstatement works will be carried out once operations have been concluded. Creation of >10% transitory and permanent open space	Monitored via Review process, through local records and updated sightings. Analysis and comparison of SCDB open space 10% through the Forest Plan review process. Operational site planning of harvesting and restocking operations will help monitor the effect of management
To conserve, maintain and enhance cultural and heritage assets.	Liaise with Devon Archaeology Service (and Historic England for scheduled sites) prior to commencement of works in proximity to heritage assets. Where appropriate limit shrub encroachment on features. Manage Summerwell SM in line with Management Plan	Operational site planning of harvesting and restocking operations will help monitor the effect of management. Feature condition monitored through Review process and records updated.
The diversification of woodland species and structure for greater ecological and economic resilience	Delayed felling program where possible will continue to diversify stand and age structure. Proactive increased diversity in species planting and regeneration Continued introduction of thinning in suitable	Analysis and comparison of SCDB open space 10% through the Forest Plan review process. Operational site planning of harvesting and restocking operations will help monitor the effect of management
Deliver well-designed forests in keeping with the local landscape character.	Implementation of proposals will soften and better integrate the woodland with the surrounding landscape	Fixed point photography analysis at Forest Plan review stage
The provision and maintenance of recreation facilities.	Management of existing facilities will be maintained by the Beat team, including road corridors.	Beat team will monitor usage and ensure the upkeep of the access points and routes.

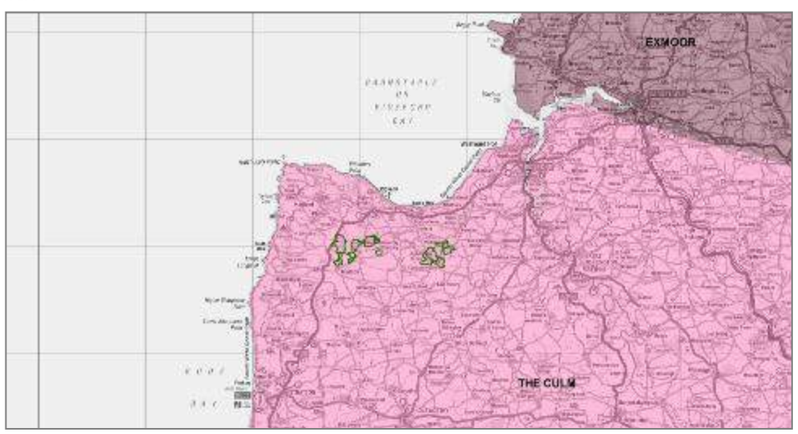
149 The Culm National Character Assessment Profile

Source: Natural England (2012)

The rolling ridges and plateaux of the Culm extend across north-west Devon and north-east Cornwall, reaching from the foot of Dartmoor in the southwest and the edge of the Cornish Killas in the west, to the spectacular Atlantic coast of cliffs and sandy beaches in the north. North-eastwards they meet the Exmoor landscape and stand high above the Devon Redlands. The open, often treeless, ridges are separated by an intricate pattern of small valleys forming the catchments of the Rivers Taw, Torridge and Mole. This is largely a remote and sparsely populated landscape.

The area is defined by rolling, open plateaux – in places steeply undulating – with many small but deep valleys, fast-flowing rivers and streams that drain the area (principally to the west and south), and wide views across a remote landscape. Heavy, poorly-drained soil is found across the area, which supports a pastoral landscape of low agricultural quality but high nature conservation interest.
The relatively high proportion of woodland in this area (13%) is not reflected in the availability of timber. Much of the woodland is located in the difficult to access coastal combes and steep-sided valleys of the Taw and Torridge; however, plantations at the centre of the area have capacity to produce both hard and soft wood in significant volume. These substantial areas of post-war conifer plantations, mainly of Sitka spruce, on the high, poor ground are significant visual and recreational features on the plateaux.

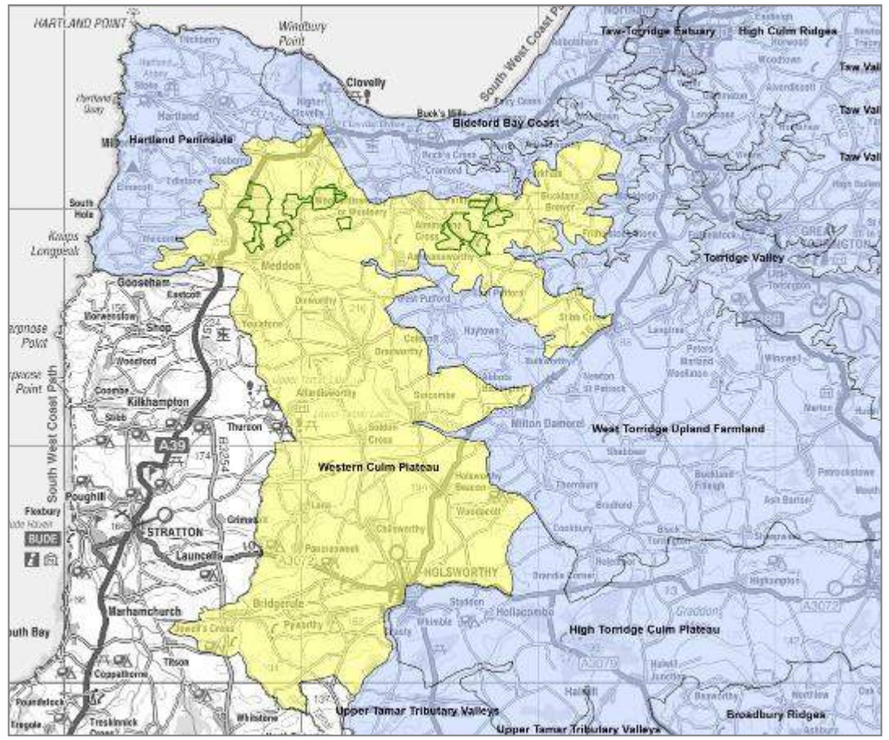
The area contains one of the greatest concentrations of species-rich grasslands in the UK. The Culm grasslands are a distinctive element of the landscape, containing uncommon plant communities including purple moor grass, ruspasture, wet heath, mires and fens, as well as communities punctuated with seasonally bright wildflowers including meadowsweet, ragged robin, devil's bit scabious and many types of orchid.



CHARACTER DESCRIPTION — Western Culm Plateau

Source: Devon County Council (2008)

This extensive area is located on the western edge of Torridge District, and comprises elevated upland farmland and Culm grassland. Its western boundary is defined by the county boundary with Cornwall. To the north are the Hartland Peninsula and the Bideford Bay Coast, where the landscape changes from grassland and plantation to more intensive agricultural use and coastal influences become stronger. To the east is the more incised landscape of the Western Torridge Upland Farmland; while to the south there is a gradual transition into the High Torridge Culm Plateau and the Upper Tamar Tributary Valleys.



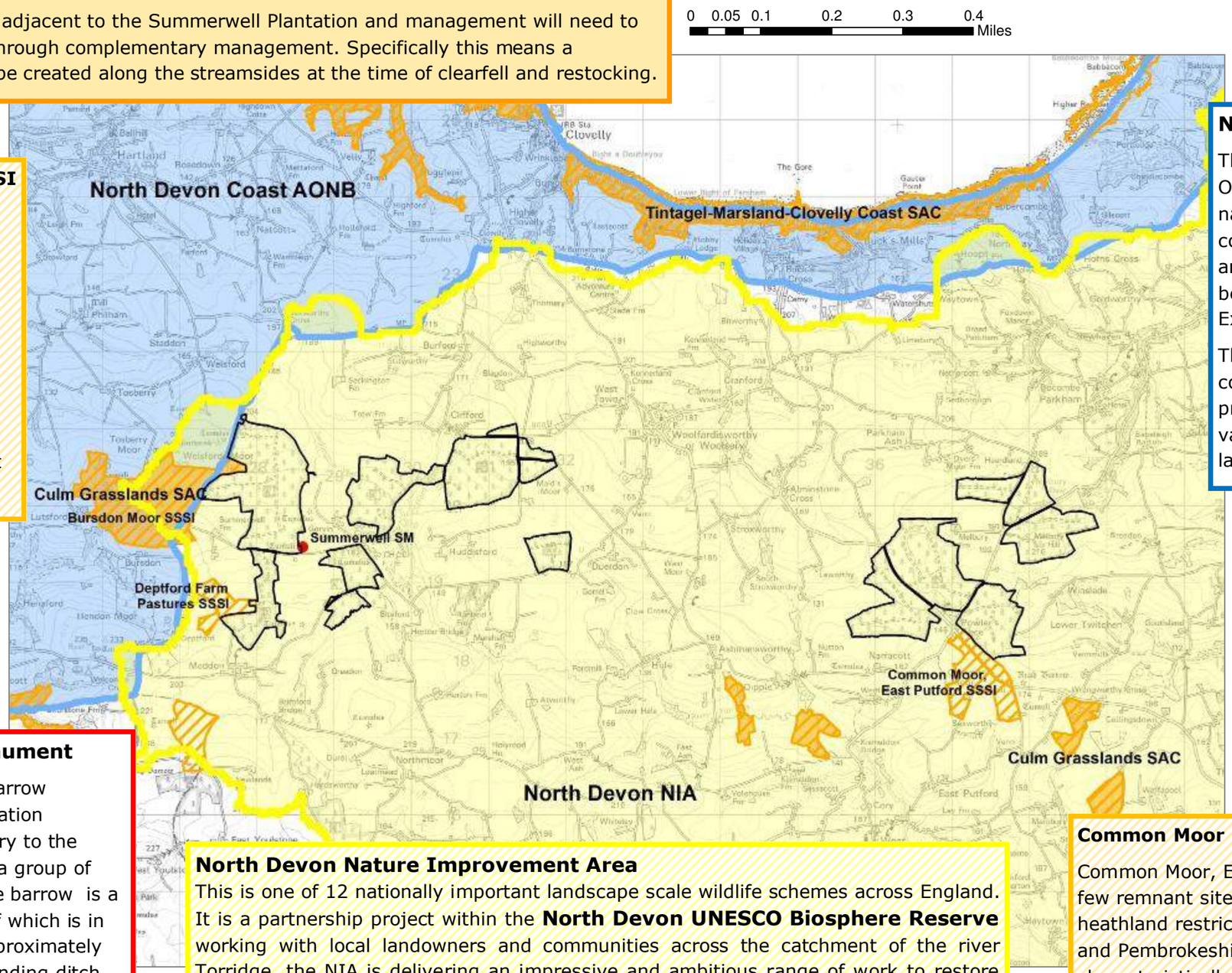
Vision: To protect and manage the open, rural qualities of the landscape, the valuable Culm grassland habitats, and agricultural landscape features. The locally-distinctive features of the landscape are protected and restored where necessary. The area's Culm grasslands are well-managed, restored and linked to maximise their biodiversity. Sustainable agriculture is supported and the agricultural landscape is in good condition. Plantations and woodlands are well managed, and sustainable levels of recreation and access to the countryside are encouraged.

Protect	Manage	Plan
• Protect **locally-distinctive built features** such as linhays, sandstone bridges and white finger-posts; ensure that any new building respects local vernacular styles (whilst incorporating sustainable design). • Protect (and appropriately manage and interpret) the **prehistoric archaeology** of the area. • Protect valuable **Culm grassland habitats**, and do not allow further loss to agriculture or forestry • Protect the area's **rural quality and openness**, avoiding poorly-sited development.	•Manage Culm grassland and wetland habitats (with locally-appropriate levels of grazing) to maximise their biodiversity and strengthen their resilience to climate change. •Manage areas within the North Devon Biosphere Reserve in accordance with management guidelines. •Manage forestry plantations for sustainable timber production and to enhance their wildlife interest. Explore the potential for community use of woodfuel as a sustainable resource, and the use of plantations as recreational sites, reducing visitor pressure on more sensitive Culm grassland habitats. Consider softening the edges of plantations with native broadleaved species. •Manage the area's varied hedgerows and hedgebanks, retaining local diversity.	Plan to link fragmented areas of Culm grassland to improve habitat connectivity. Plan for the long-term reversion of prominent conifer plantations to open habitats on maturity and felling, including re-creation of Culm grassland and other semi-natural habitats within open rides and on wet ground. Plan to increase levels of accessibility of the countryside through enhancement of the public rights of way network, particularly around larger settlements

Designations

Culm Grasslands Special Area of Conservation (including Bursdon Moor SSSI)
Bursdon Moor SSSI is a key component of grassy heath dominated *Molinia caerulea* with *Calluna vulgaris* with wet *Erica tetralix heath* typical of the Culm Grasslands, Molinia meadows in south-west England. Structural diversity accounts for the conservation of a wide range of flora and fauna. Culm Grasslands in south-west England contains the largest cluster of sites for marsh fritillary in the south-west.

The SSSI and SAC are immediately adjacent to the Summerwell Plantation and management will need to ensure its condition is maintained through complementary management. Specifically this means a significant linkage area (15ha) will be created along the streamsides at the time of clearfell and restocking.



Deptford Farm and Pastures SSSI

Deptford Farm Pastures contain representative examples of certain traditionally managed heath, mire and fen communities which are collectively known as Culm Grassland, but are not within the SAC.

A small proportion (0.6ha) of the SSSI is within the Forest Plan area. This area is managed as permanent open space.

North Devon Coast AONB

The North Devon Coast Areas of Outstanding Natural Beauty are nationally designated to protect and conserve the 171 km^2 of distinctive and magnificent coastal landscapes between the Cornish border and Exmoor National Park.

This designation abuts but does not cover the Plan area and therefore proposals will acknowledge the value of the local and surrounding landscape.

Summerwell Scheduled Monument

This monument includes a bowl barrow situated in an elevated upland location overlooking the valley of a tributary to the River Torridge, and forms part of a group of barrows recorded in this area. The barrow is a diameter of 25.4m the majority of which is in the adjacent field and extends approximately 5m into the Plan area. The surrounding ditch from which material to construct the mound was derived survives as a buried feature approximately 4m wide.

Management will be to preserve and enhance this feature where possible, see Appendix 5 for the specific SM Management Plan.

North Devon Nature Improvement Area

This is one of 12 nationally important landscape scale wildlife schemes across England. It is a partnership project within the **North Devon UNESCO Biosphere Reserve** working with local landowners and communities across the catchment of the river Torridge, the NIA is delivering an impressive and ambitious range of work to restore culm grassland and woodlands, create new wildlife habitat and improve water quality.

Proposals will be in keeping and consultation with the NIA Management Plan and appropriate Forums. This will ensure that the Plan area contributes to and enhances the natural value of the NIA as well as the cultural and economic value of the Biosphere. Specially this means a number of significant areas of grassland and bog areas will be created whilst the likes of rare nightjar and willow tit habitat will be maintained, enhanced and monitored.

Common Moor & East Putford SSSI

Common Moor, East Putford is one of a few remnant sites for a type of wet heathland restricted to North Devon and Pembrokeshire. These heathlands characteristically have a composite nature where wet and dry heathland communities are interspersed with tall herb fen. The site supports a diverse invertebrate fauna. The site is immediately adjacent to the Forest Plan area so will be taken into account when planning proposals.

Analysis & Concept
Hartland

Analysis: The Bursdon Moor SSSI and Culm Grassland SAC are immediately adjacent to the Summerwell Plantation. These areas are managed through grazing by the Bursdon Moor Commoners

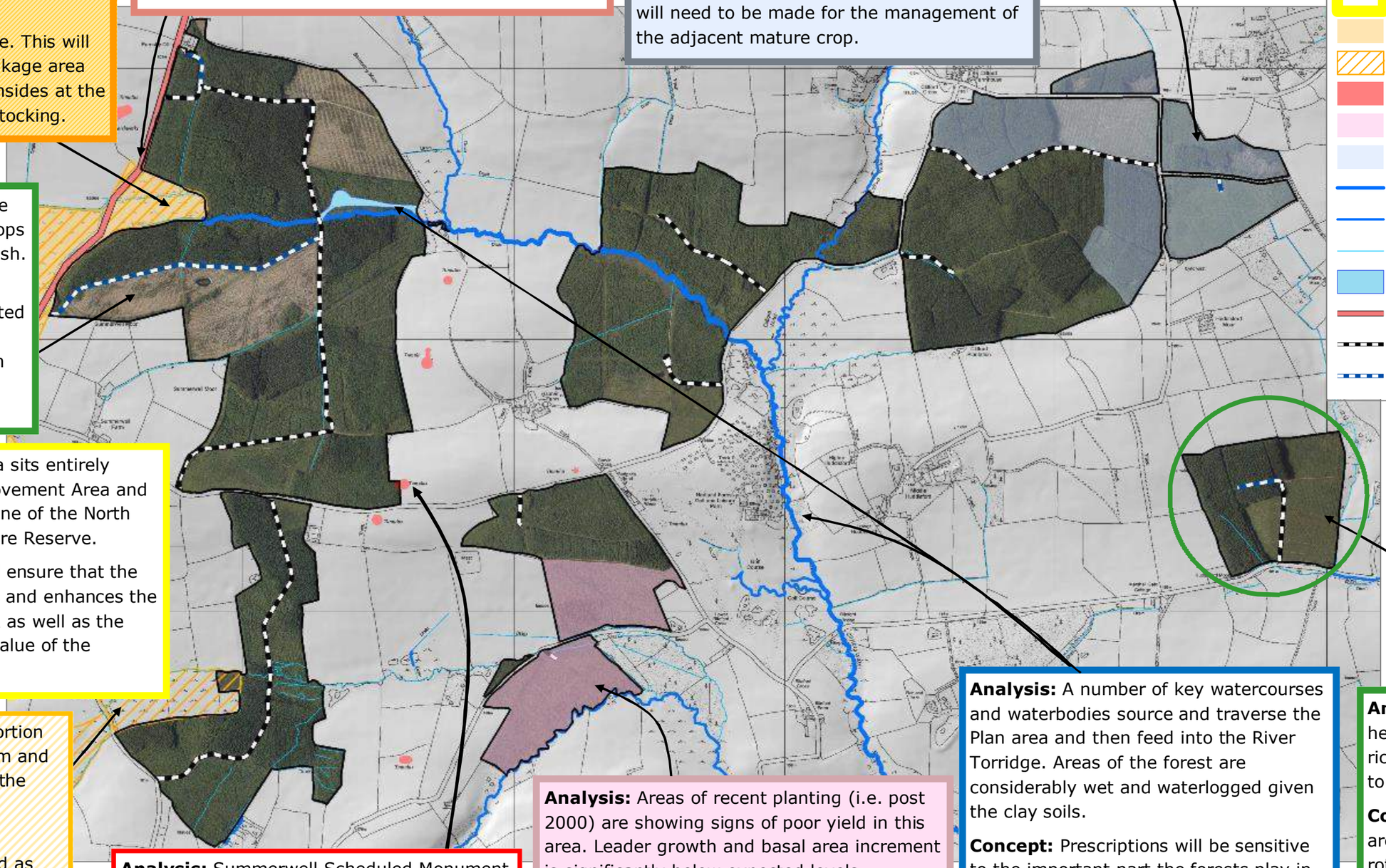
Concept: Management will be to ensure its condition is maintained and enhanced given its international significance. This will result in a significant linkage area (15ha) along the streamsides at the time of clearfell and restocking.

Analysis: The Atlantic Highway, a major tourist and transport route across north Devon runs adjacent to Summerwell plantation and views across the forest from the road are significant.

Concept: Good coupe and corridor design will ensure that the short and long views of the forest are of a high value. This will be measured and monitored through modelling and fixed photography.

Analysis: Area of recent windblow following programmed felling has meant that significant areas have been or are due to be felled.

Concept: This area will be restocked and managed with windthrow hazard in mind. Through the use of planted buffers, thinning and mindful coupe design. Acknowledgement will need to be made for the management of the adjacent mature crop.



Legend
- North Devon NIA
- SAC
- SSSI
- Scheduled Monument
- Recent Planting
- Windblow
- Primary River
- Secondary River
- Tertiary River
- Open Water
- A Roads
- Class A/B Roads
- Class C Roads

Analysis: The soils here are waterlogged and crops are struggling to establish.

Concept: A significant area of bog will be created with anticipation that a wide array of sphagnum and associated bog species will flourish.

Analysis: The Plan area sits entirely within the Nature Improvement Area and Woodland Enterprise Zone of the North Devon UNESCO Biosphere Reserve.

Concept: Proposals will ensure that the Plan area contributes to and enhances the natural value of the NIA as well as the cultural and economic value of the Biosphere.

Analysis: A small proportion (0.6ha) of Deptford Farm and Pastures SSSI is within the Forest Plan area.

Concept: This area will continue to be managed as open space to maintain the SSSI in 'favourable condition' . A considerable area of linkage (4ha) will be created along the streamsides at the time of clearfell and restocking.

Analysis: Summerwell Scheduled Monument forms part of a group of barrows recorded in this rich historic landscape.

Concept: Management will be to preserve and enhance this feature and other unscheduled features where possible.

Analysis: Areas of recent planting (i.e. post 2000) are showing signs of poor yield in this area. Leader growth and basal area increment is significantly below expected levels.

Concept: A prescription to aid soil amelioration to improve productivity will be explored, with the preface of using minimal financial input, given that the crop is in mid-rotation.

Analysis: A number of key watercourses and waterbodies source and traverse the Plan area and then feed into the River Torridge. Areas of the forest are considerably wet and waterlogged given the clay soils.

Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through the management and reinstatement of riparian zones.

Analysis: The soils here are slightly richer with crops able to be thinned.

Concept: This is area will see longer rotations, and a more diverse species pallet used in the future.

0 0.05 0.1 0.2 0.3 0.4 Miles

Analysis & Concept
Melbury

Analysis: Willow tit are found throughout Melbury which is likely due to the good habitat provision and condition there. It is a Red Listed species, meaning it is rare and declining.

Concept: Road sides will continue to be cut on a rotation basis to provide an supply of suitable habitat whilst wetter and more remote rides which are not used for deer control will be allowed to regenerate with willow over time to provide a considerable amount of habitat.

Analysis: Melbury Reservoir lies outside the Plan area but a number of watercourses feed into it. The Reservoir is a popular fishing destination.

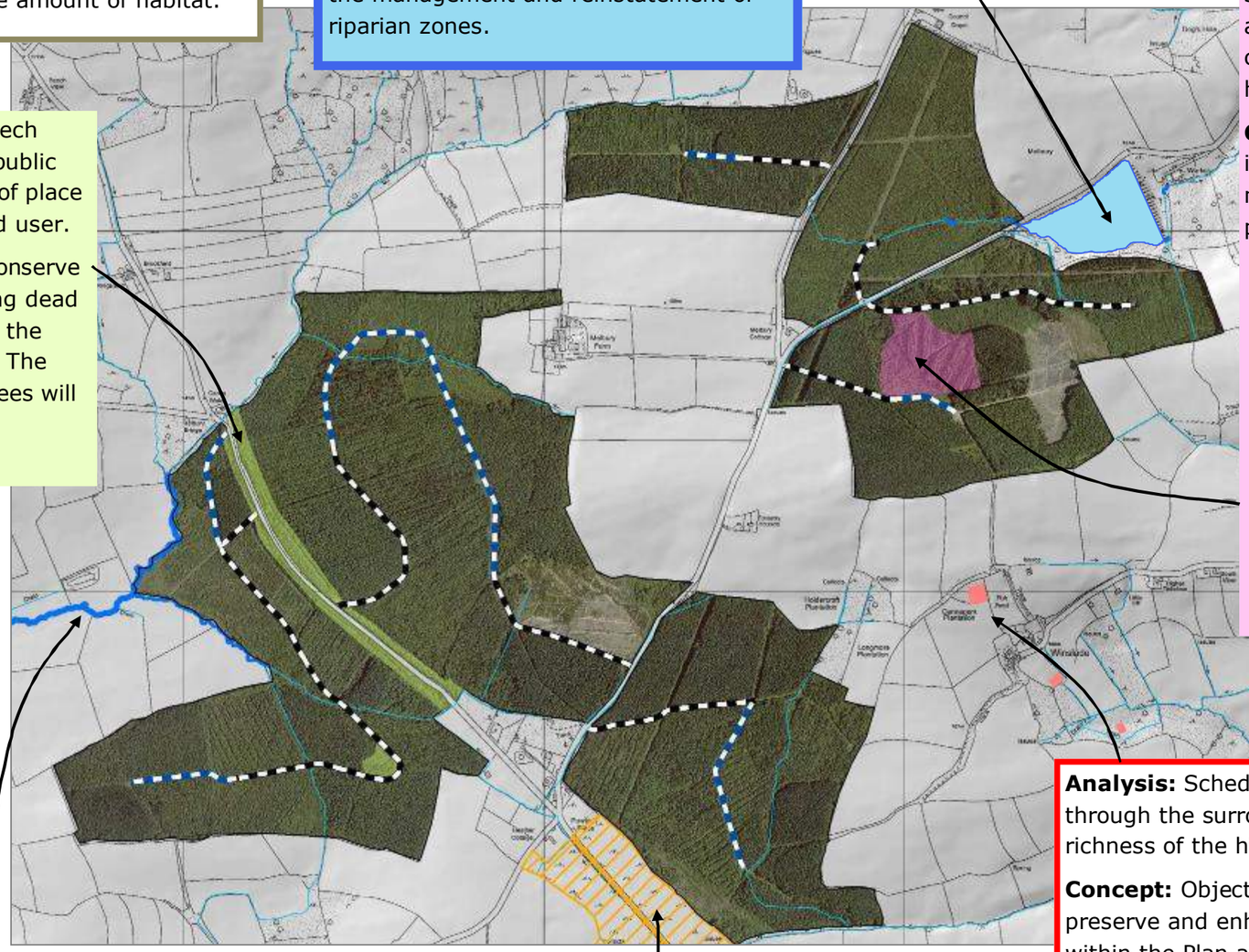
Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through the management and reinstatement of riparian zones.

Analysis: Strips of mature Lodgepole pine, hemlock and Western red cedar are found in this richer and more sheltered area of the block. The lodgepole has defoliated and died in some cases creating a 'pyjama effect', this can not be seen in the landscape. Complex understories have developed under the canopy (see photo).

Concept: Prescriptions will look to address the wind instability and operation complexity of this area whilst maximising the site condition and timber production potential.

Analysis: A large intact mature beech hedgebank runs either side of the public road which creates a strong sense of place and cultural experience for the road user.

Concept: Prescriptions will be to conserve and protect this feature by removing dead and decaying material and keeping the bank free of conifer encroachment. The long-term management pf these trees will be fell and replant once they reach senescence.



Analysis: Scheduled Monuments are found through the surrounding area demonstrating the richness of the historic landscape.

Concept: Objectives and prescriptions will be to preserve and enhance the unscheduled features within the Plan area where possible.

Analysis: A number of key watercourses and waterbodies source and traverse the Plan area and then feed into Dipple Water and then the River Torridge. Areas of the forest are considerably wet and waterlogged given the clay soils.

Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through the management and reinstatement of riparian zones.

Analysis: Common Moor, East Putford SSSI is immediately adjacent to the Forest Plan area and is one of a few remnant sites for a type of wet heathland restricted to North Devon and Pembrokeshire.

Concept: Management will need to ensure its condition is maintained through complementary management. This means that at the time following clearfell the area will not be restocked and instead allowed to regenerate with broadleaves to create a transient habitat between high forest and wet heathland

Legend

- Beech hedge
- Lodgepole Pine
- Scheduled Monument
- SSSI
- Primary River
- Secondary River
- Tertiary River
- Reservoir
- Class A/B Roads
- Class C Roads

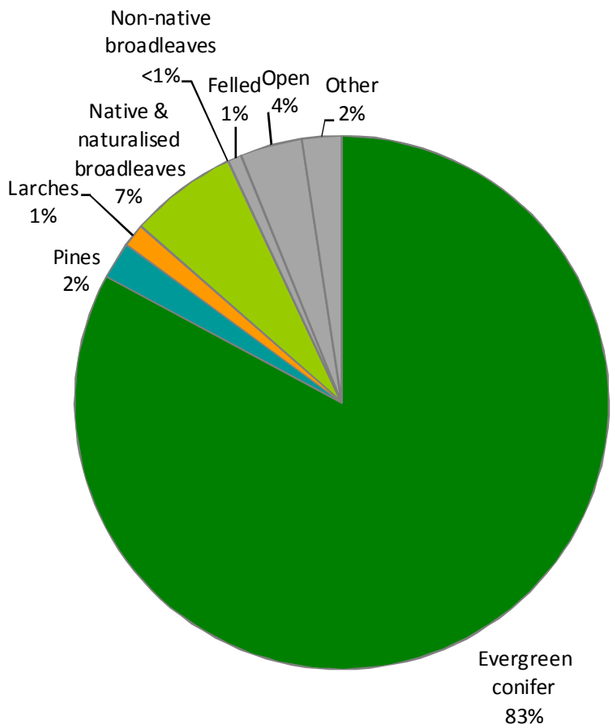
0 0.05 0.1 0.2 0.3 0.4 Miles

Woodland Composition

The Plan area is conifer dominated with Sitka spruce making up over 80% of Plan area. The use of Sitka spruce is extensive due to the wet site conditions where the species can achieve YC 16-18. However, its use has resulted in extensive monocultures with little species diversity. Norway spruce, Lodgepole and Scots pine and larches play a supplementary role in the woodland's production composition.

The soil condition, high clay content and therefore water retention means that productivity is waning in areas. This is sporadic but particularly noticeable on more marginal sites which are on a third rotation. As a result remedial rotations are being advocated, which also build in wind resilience (see Page 15 and 16).

The broadleaf components are predominantly made up of regenerating scrubby birch and oak assemblages with discrete areas of plantation beech and Red oak. Willow is an evident pioneer species and in places can compete with established crops. Broadleaf crops vary in age and quality depending on their location. Most are of unmarketable quality or size and provide more value for amenity, habitat and soil improvement.



Legend

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

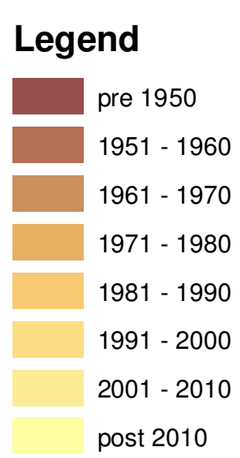
Note: Beech, sycamore and sweet chestnut are considered to be not within their native range but are considered to be 'naturalised'

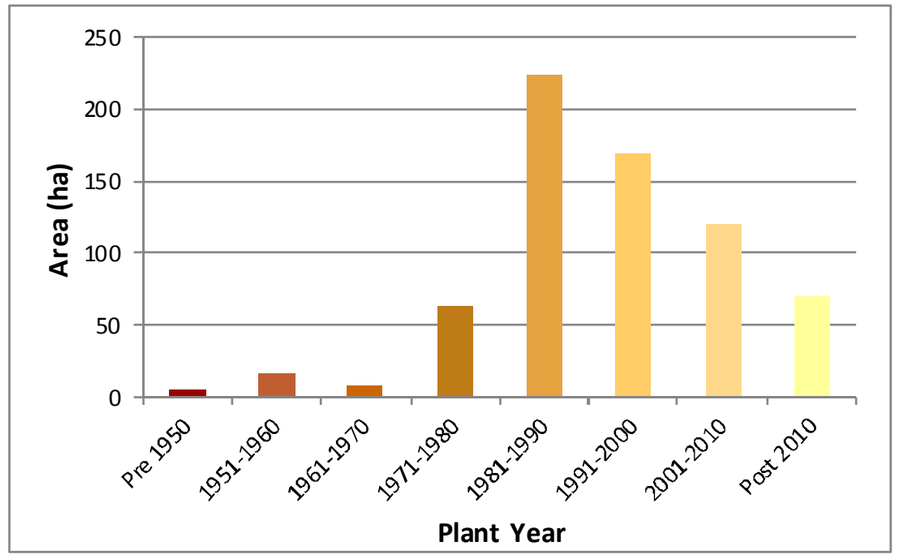
0 0.05 0.1 0.2 0.3 0.4 Miles

Age Structure

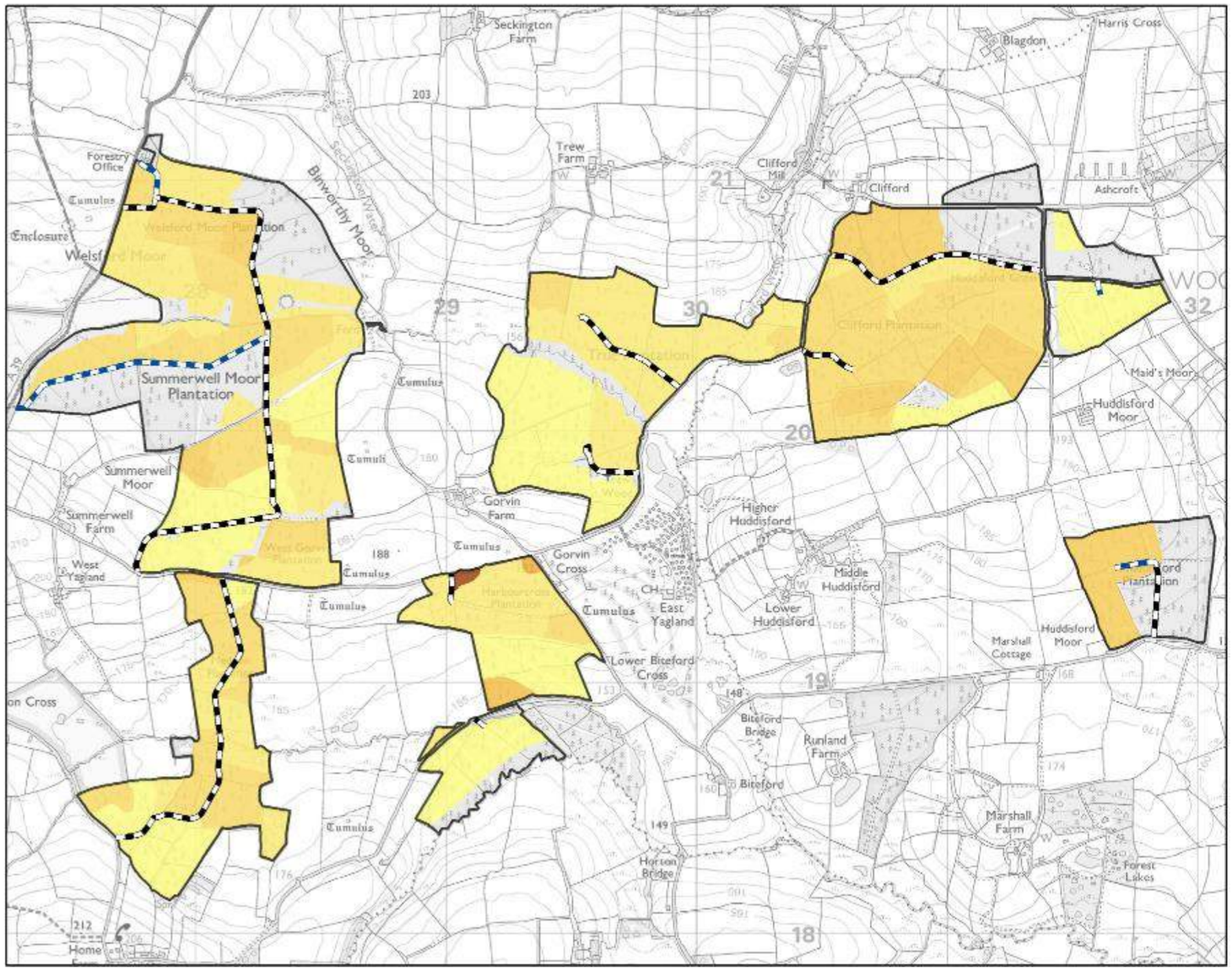
The age structure through the Plan areas is fairly uniform and short. This is due to the high exposure to coastal winds meaning that many are unthinned for fear of windblow. As a result most crops are on shorter rotations (i.e. 35-40 years) than that typical of lowland Britain. As a result the blocks are even aged and many sites are on their third rotation. Areas of Melbury and to a lesser degree Clifford have deeper, fresher soils which mean that thinning can be safely implemented and therefore rotations are longer.

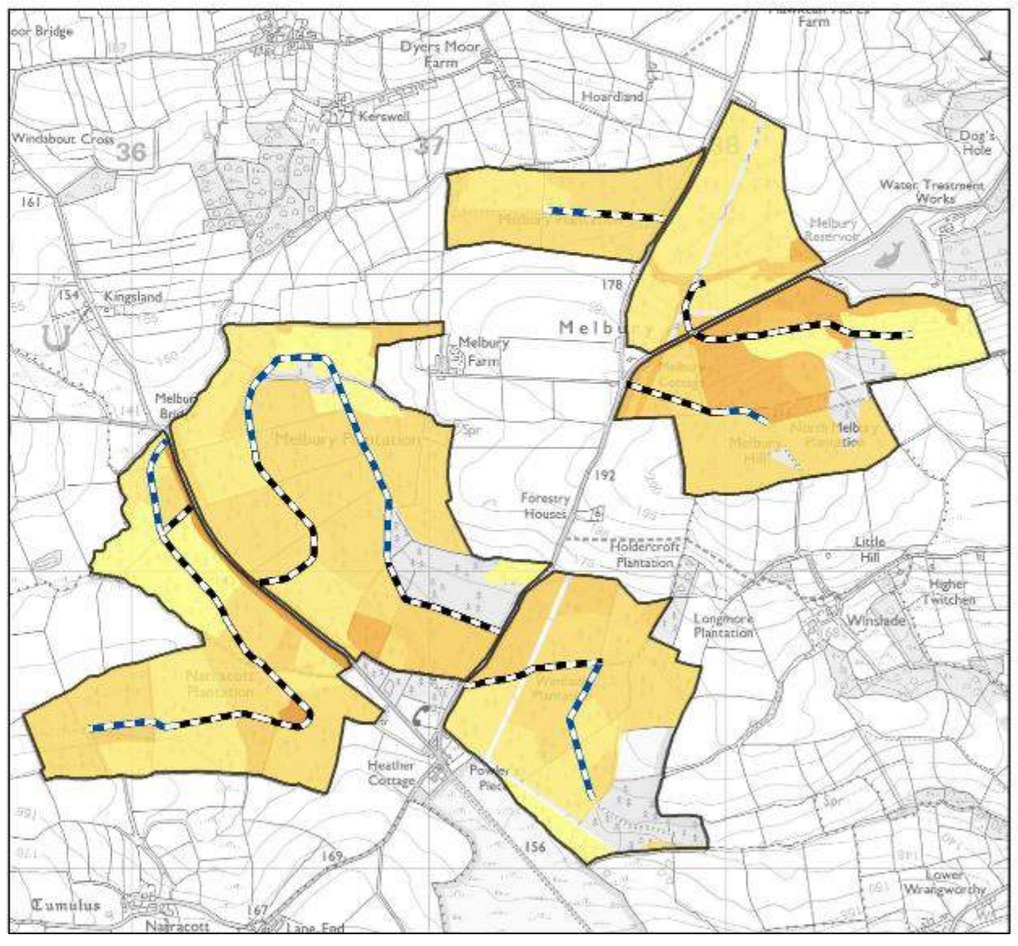
The lack of thinning, and therefore recycled brash material could a factor be contributing to the productivity issues across the Plan area. Options to implement thinning more widely are being experimented at an operational level. The Plan will also look to extend rotations where possible to try to develop a more resilient forest structure.





0 0.05 0.1 0.2 0.3 0.4 Miles



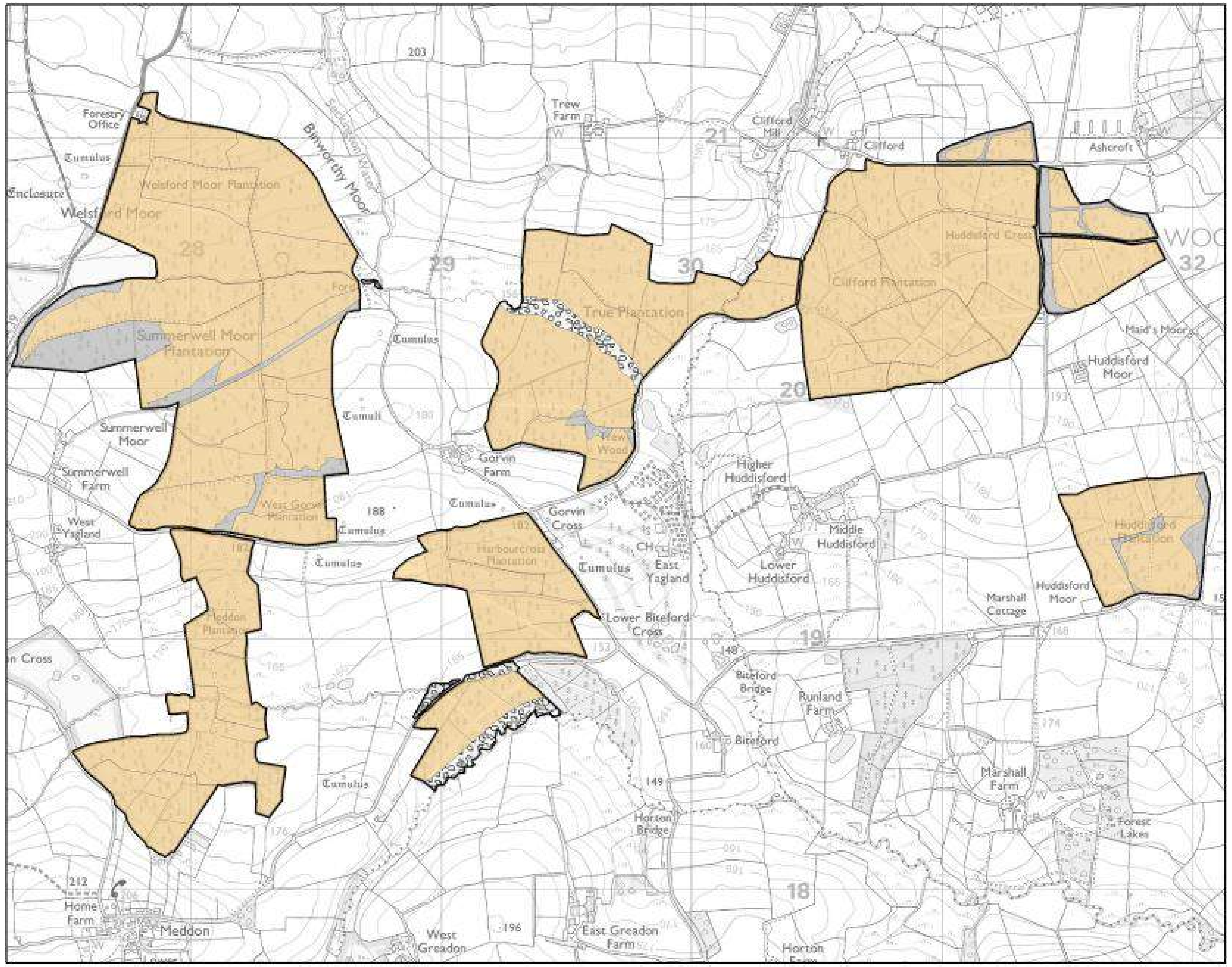


Resilience

The Plan area over relies on Sitka spruce as its major timber producing species. This is due to its exceptional yield and a constant demand for its supply. The advent of increased threat to tree health from pests and diseases (see Page 37) in recent years has highlighted the need for forests to be resilient to change and threats. The additional complication of high wind exposure and hazard and the poor yield in second and third rotation spruce crops means that steps should be taken in thinning to diversify stand structure and in planting to diversify tree species. The guidance outlined below is in line with the current thinking as a 'Culm Clay Strategy'. As understanding on this issue progresses, guidance and actions should reflect this. A comprehensive (but not exhaustive) list of suitable options are outlined:

Species		Site requirements	Notes for Hartland
Noble fir *Abies procera*		Prefers a cool and moist (i.e. >1000 mm rainfall) climate; can cope with exposure and is more frost resistant than other firs, therefore most suited to upland Britain including higher elevations. Grows best on fresh to moist mineral soils of poor nutrient status, but suffers severely from heather competition.	Suitable to be used on some of the less exposed clearfell sites. Can be planted both solely and in mixture with Sitka spruce. Concerns around timber quality but strength considered better than other silver firs although Pacific silver fir (*Abies amabalis*) is another alternative given the high rainfall, on less exposed sites.
Scots pine *Pinus sylvestris*		A light demanding pioneer species that grows well on acid to neutral, light soils of low fertility. Is better suited to drier soils but will colonise and grow slowly on peat. Does not tolerate alkaline soils. The species is frost hardy, drought tolerant and windfirm but suffers from exposure.	Another species suitable to be used on some of the less exposed clearfell sites. Can be planted both solely and in mixture as an alternative to Sitka spruce. Salt exposure is a concern with a history of burn occurring on some 'coastalward' sites.
Swamp cypress *Taxodium distichum*		Prefers a humid and moist sub-humid climate with around 1000—1500mm of annual rainfall. It often grows in intermittently flooded or very poorly drained sites and does not grow well on alkaline soils.	An experimental species with great potential as a high quality timber producer. Should only be used on wetter sites with an acknowledgement of future climatic projections.
Aspen *Populus tremula*		A light demanding species which grows on a wide range of sites from slightly dry to wet soil moisture and of poor to rich soil nutrient status. Moderately tolerant of exposure and is cold hardy and frost resistant.	Will grow well in mixture with various broadleaves or on the fringes of conifer crops across Hartland. Small plantings as part of a feathered edge would deliver high landscape value and wind resilience.
Grey alder *Alnus incana*		It is a light demanding pioneer species and cold hardy in Britain; however, it often spreads by root suckers which can be invasive. It is only moderately tolerant of exposure. It has a rather wider site tolerance than either common or red alder, being suited to moderately dry to wet soils of poor to medium nutrient regime.	Small plantings in wetter areas could improve soil fertility and provide visual diversity. Could be substituted with red (*Alnus rubra*) and common (*Alnus glutinosa*) alders.
Rowan *Sorbus aucuparia*		This is a light demanding pioneer species which often grows in mixture with other broadleaves or on the edges of conifer stands. It is cold hardy, frost tolerant and can withstand severe exposure, even if it does not grow to a large size.	Small plantings of select seed from good form source could produce significant timber yields on the edge of large plantings and as part of a feathered edge. Improved birch could also be considered.

Technique	Purpose	Description	Notes for Hartland
Ground Preparation	Nutrient availability Water regulation	The general aim of cultivation is to make improvements to the site for planting which result in enhanced survival, improved early growth, reduced establishment costs, better access and prepared planting sites with moderate or heavy brash.	History of 'ditch dolloping' has hindered stand manipulation and replanting. Shallower hinge mounding, scratching and scarifying or brash being spread throughout the site deliver good planting and maximise nutrient provision. The decision of what and where ground preparation will be used will be made by the local Beat team.
Enrichment Planting	Nutrient Availability	The planting of different species within areas of regeneration or monoculture planting helps bolster and diversify the range of species and in doing so can make it more resilient to future climate change and threats from disease.	Use of the species outlined above, particularly nitrogen fixing broadleaves will provide ongoing soil amelioration throughout the crop rotation. It also provides resilience in the evident of disease or pest as well as diversifying habitat provision. These plantings will be prescribed but additional planting is also possible.
Buffer Planting	Wind resilience Water regulation	Planting of deep and tap rooting species, such as broadleaves or pines, can provide protection to both soil and water courses as well as the standing productive crop. This can allow operations to be more interventionist whilst not compromising the soil or stand stability.	The high wind hazard and exposure to the coastal air means that buffer planting could have real benefit on the stability, condition and workability of the crops at Hartland. The use of species such as of aspen, rowan and Scots pine will provide a suitable buffer and marketable crop. These plantings will be written into the Coupe layer to aid the local team by but additional planting is also possible
Fallow Rotation	Nutrient availability	Following the felling of the mature crop the site is left unstocked for a prolonged period of time (e.g. 20-30 years) in the anticipation that regeneration will colonise and re-ameliorate the soil. After a period of time the scrub can be cleared and restocked at productive spacing will some retention of broadleaf cover, particularly along crop edges to maintain corridor habitat and a windfirm buffer. The removal of broadleaf and replacement with conifer is approved by Forest Services provided there is no net loss in broadleaf cover across the Plan area.	The propensity for willow and birch to regenerate freely mean that a marketable crop can be realised across fallow sites within the Plan area. They will therefore remain sustainable and ecologically resilient whilst delivering soil and water regulation and restoration to aid better productive yield in the future. The decision of when and where this will be implementation will be made by the local Beat team however where year 1 establishment of conifer planting is below 65% then a fallow rotation should be considered.



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Silviculture

Thinning

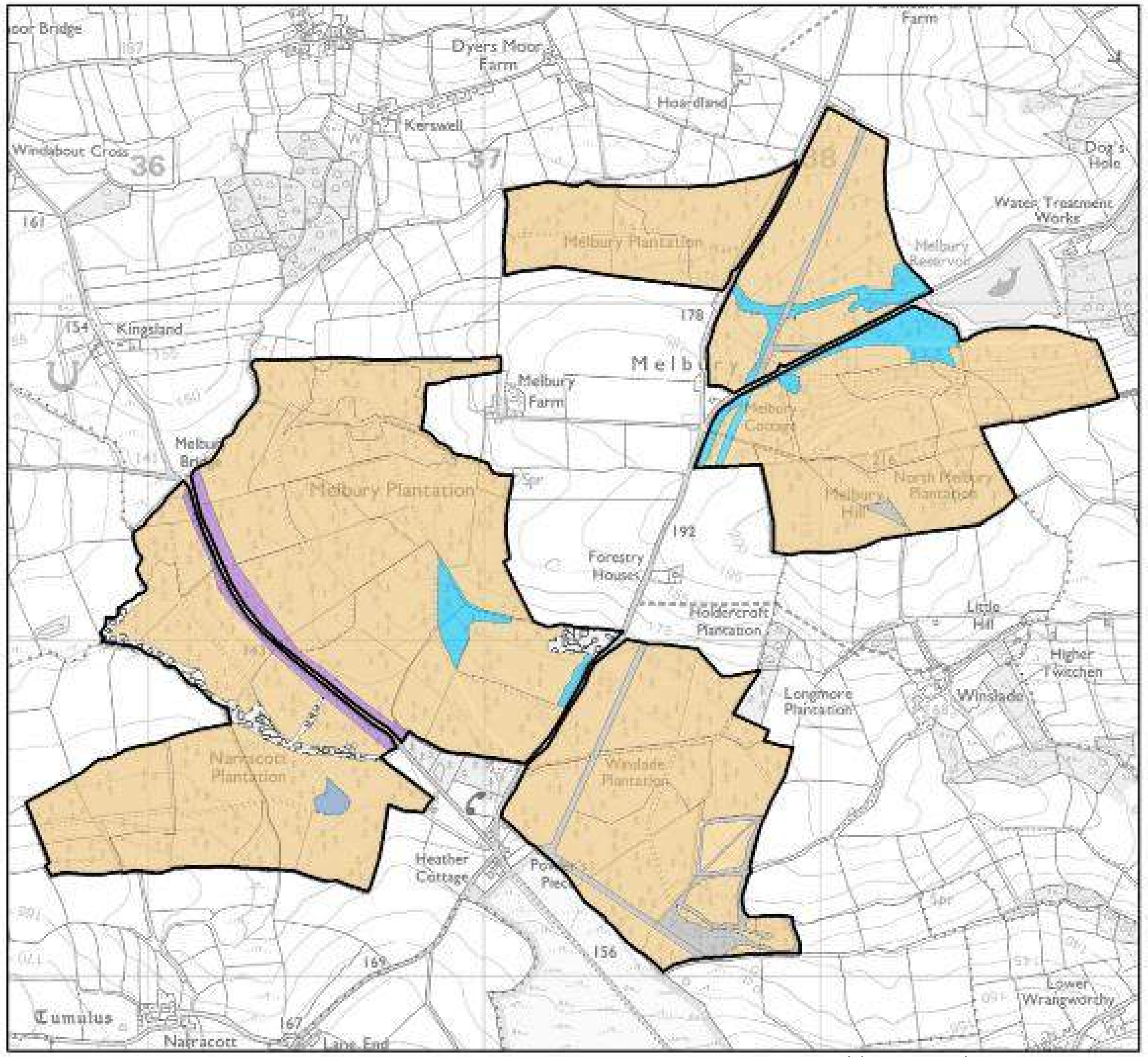
Areas will be assessed and approved for thinning on a site-by-site basis by the local Beat Team. As attempts to improve the structural diversity of the crops are made, initiation of thinning may be made early (uneconomic) or later to address windfirm concerns. The intention to intervene every 5 years 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.



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

Coppicing of hazel, oak and sweet chestnut stands will be used in discrete riparian areas. Coupes will be no larger than 0.5ha and will only be used where resources allow for adequate deer proof fencing. Standards will be retained where deemed as appropriate future crop trees.

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

Single-tree selections are used on existing complex structured stands or sensitive sites often important for amenity value, such as in close proximity to the Forest Holidays site.

Legend

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

Felling and Restocking
Hartland
2017 - 2027

Coupe 70304 (12.94ha)
Fell 2022-26 (Sitka spruce)

Restock 70304a (7.13ha)
100% Evergreen conifer

Proposed Species
30% Western hemlock
30% Sitka spruce
30% Macedonian pine
10% Beech

Restock 70304b (5.81ha)
80% Open
20% Broadleaf

Coupe 70823 (7.80ha)
Fell 2017-21 (Sitka spruce)

Restock 70823a (7.80ha)
100% Evergreen conifer

Proposed Species
40% Scots pine
40% Sitka spruce
20% Aspen

Coupe 70115 (5.58ha)
Fell 2017-21 (Sitka spruce)

Restock 70115a (3.83ha)
100% Evergreen conifer

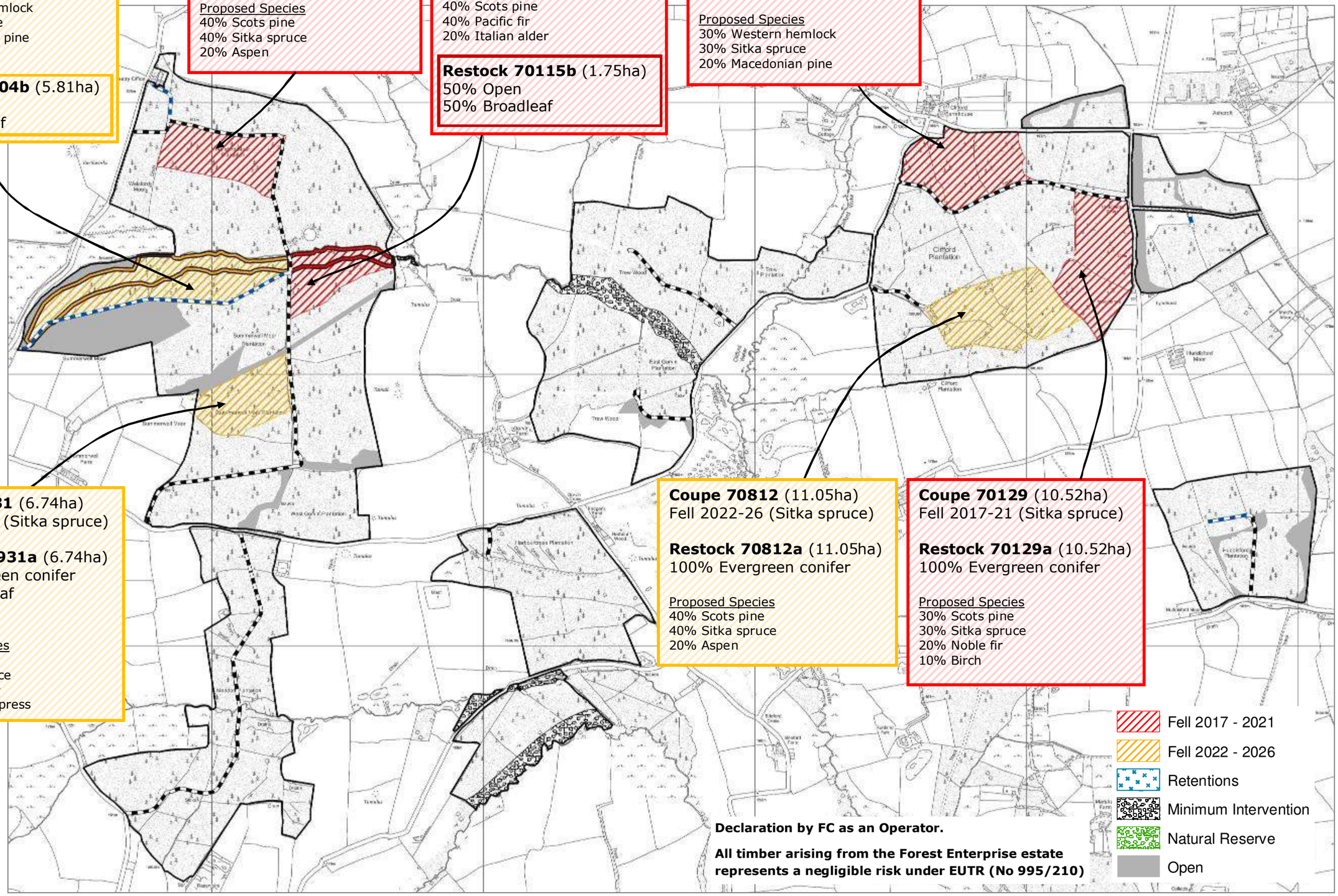
Proposed Species
40% Scots pine
40% Pacific fir
20% Italian alder

Restock 70115b (1.75ha)
50% Open
50% Broadleaf

Coupe 70240 (9.99)
Fell 2017-21 (Sitka spruce)

Restock 70240a (9.99ha)
90% Evergreen conifer
10% Open

Proposed Species
30% Western hemlock
30% Sitka spruce
20% Macedonian pine



Coupe 70931 (6.74ha)
Fell 2022-26 (Sitka spruce)

Restock 70931a (6.74ha)
60% Evergreen conifer
20% Broadleaf
20% Open

Proposed Species
30% Pacific fir
20% Sitka spruce
20% Grey alder
10% Swamp cypress

Coupe 70812 (11.05ha)
Fell 2022-26 (Sitka spruce)

Restock 70812a (11.05ha)
100% Evergreen conifer

Proposed Species
40% Scots pine
40% Sitka spruce
20% Aspen

Coupe 70129 (10.52ha)
Fell 2017-21 (Sitka spruce)

Restock 70129a (10.52ha)
100% Evergreen conifer

Proposed Species
30% Scots pine
30% Sitka spruce
20% Noble fir
10% Birch

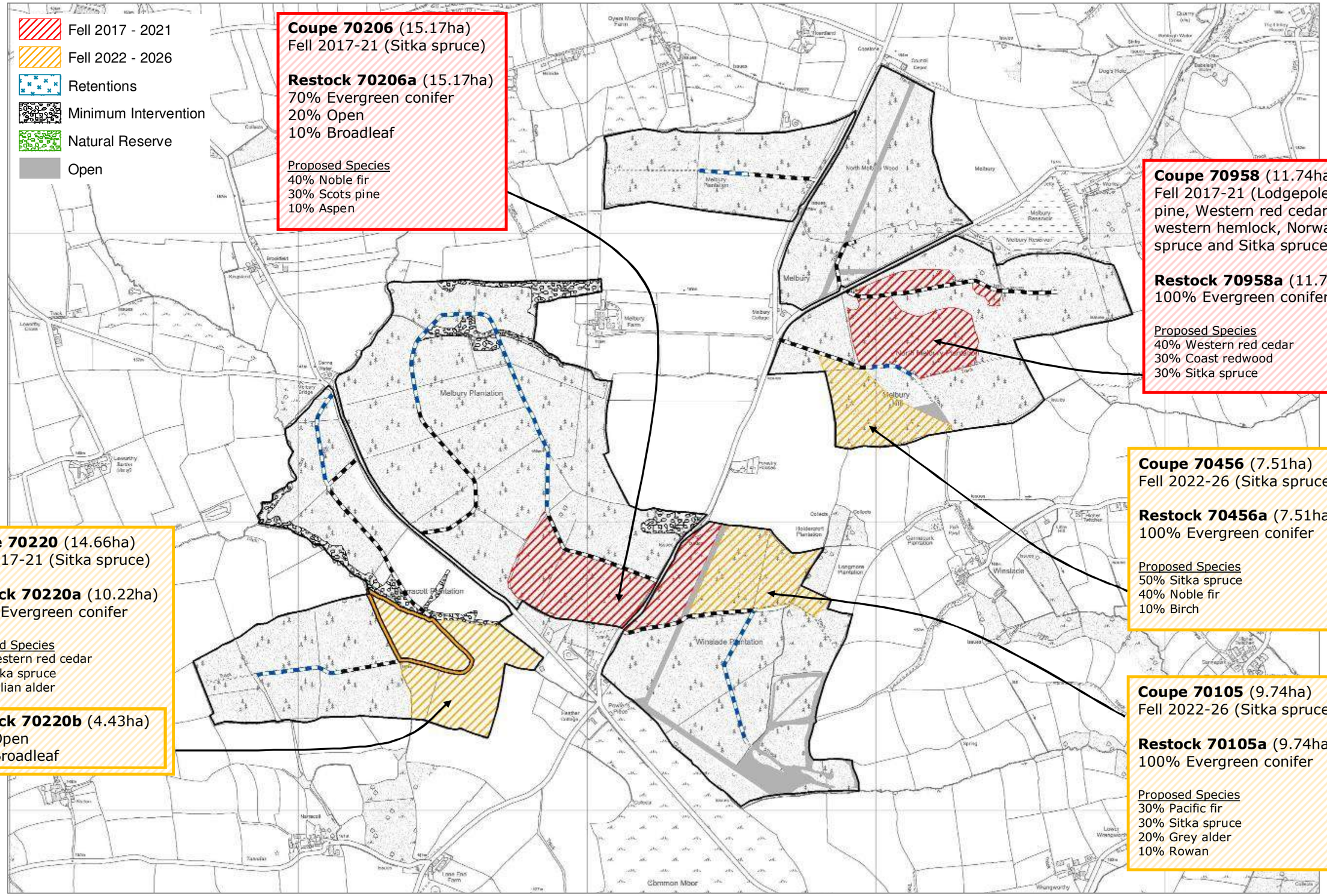
Fell 2017 - 2021
Fell 2022 - 2026
Retentions
Minimum Intervention
Natural Reserve
Open

Declaration by FC as an Operator.

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

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.

0 0.125 0.25 0.5 0.75 1 Miles



Coupe 70206 (15.17ha)
Fell 2017-21 (Sitka spruce)

Restock 70206a (15.17ha)
70% Evergreen conifer
20% Open
10% Broadleaf

Proposed Species
40% Noble fir
30% Scots pine
10% Aspen

Coupe 70958 (11.74ha)
Fell 2017-21 (Lodgepole pine, Western red cedar, western hemlock, Norway spruce and Sitka spruce)

Restock 70958a (11.74ha)
100% Evergreen conifer

Proposed Species
40% Western red cedar
30% Coast redwood
30% Sitka spruce

Coupe 70456 (7.51ha)
Fell 2022-26 (Sitka spruce)

Restock 70456a (7.51ha)
100% Evergreen conifer

Proposed Species
50% Sitka spruce
40% Noble fir
10% Birch

Coupe 70105 (9.74ha)
Fell 2022-26 (Sitka spruce)

Restock 70105a (9.74ha)
100% Evergreen conifer

Proposed Species
30% Pacific fir
30% Sitka spruce
20% Grey alder
10% Rowan

Coupe 70220 (14.66ha)
Fell 2017-21 (Sitka spruce)

Restock 70220a (10.22ha)
100% Evergreen conifer

Proposed Species
40% Western red cedar
30% Sitka spruce
30% Italian alder

Restock 70220b (4.43ha)
50% Open
50% Broadleaf

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.

0 0.125 0.25 0.5 0.75 1 Miles

Management Prescriptions
2017 - 2047

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

Legend

- Alternatives to Clearfell
- Fell 2017 - 2021
- Fell 2022 - 2026
- Fell 2027 - 2031
- Fell 2032 - 2036
- Fell 2037 - 2041
- Fell 2042 - 2046
- Fell post 2046
- Coppice
- Wood Pasture
- Retentions
- Minimum Intervention
- Natural Reserve
- Open
- Class A/B Roads
- Class C Roads

Declaration by FC as an Operator.

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

0 0.05 0.1 0.2 0.3 0.4 Miles

Restocking Prescriptions
2017 - 2047

An outline of the intended restocking prescriptions for the Plan area for the next 30 years.

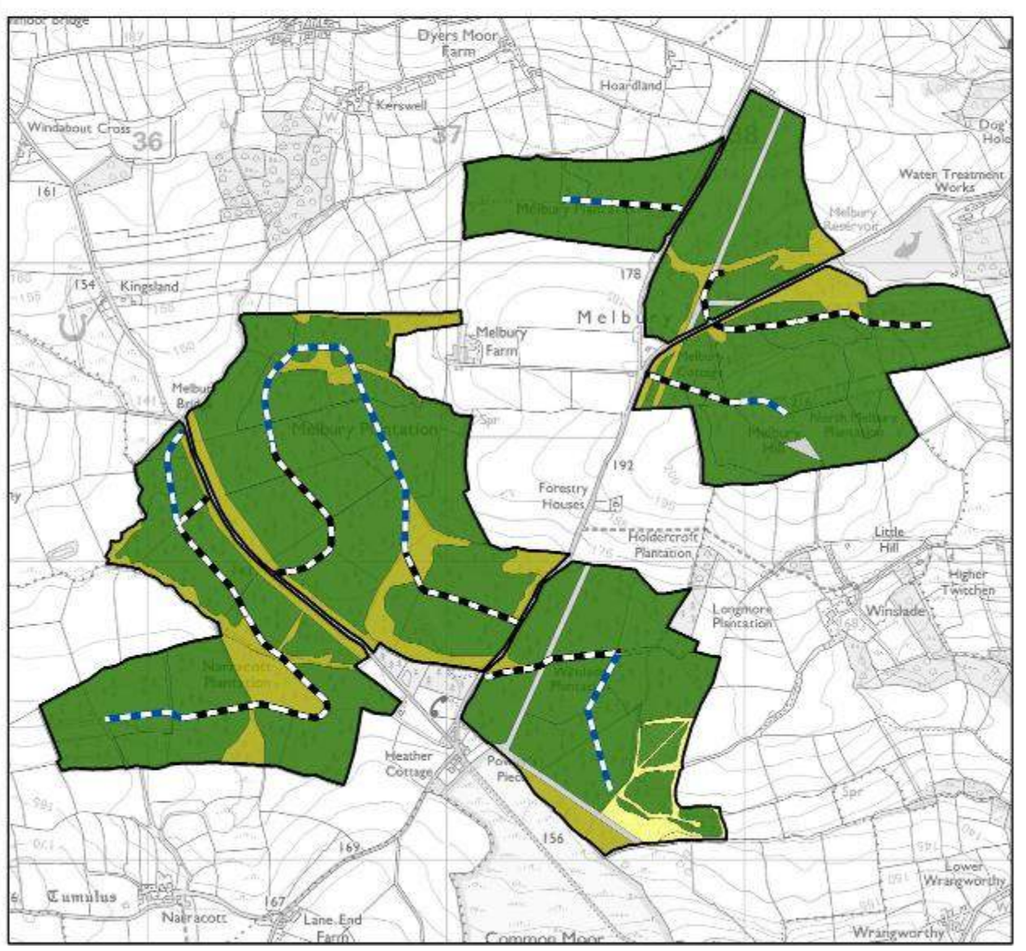
Legend

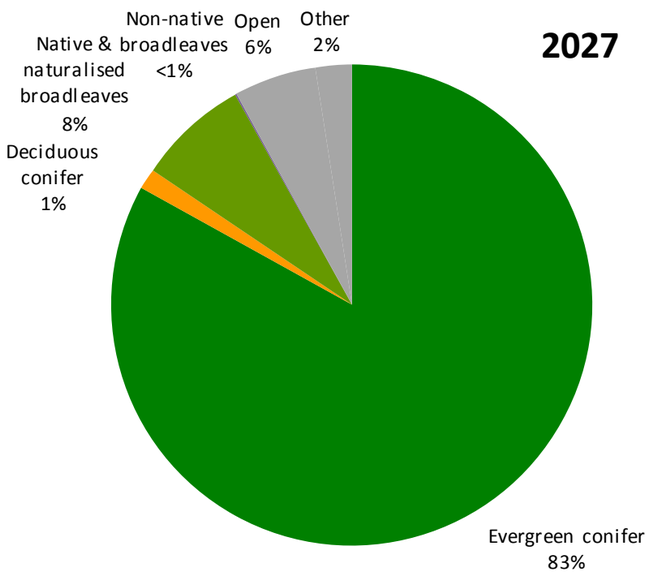
- Successional Habitat
- Broadleaf Forest
- Coniferous Forest
- Open Space

Declaration by FC as an Operator.

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

0 0.05 0.1 0.2 0.3 0.4 Miles





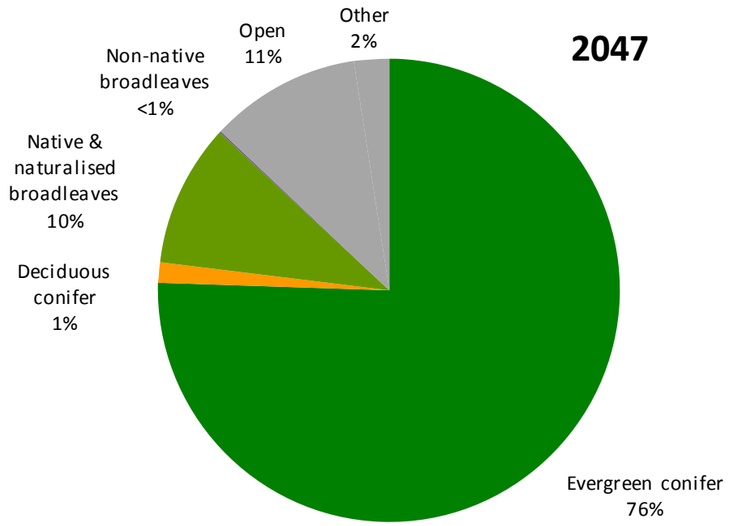
Legend

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

Indicative Future Species 2027

The projections made are indicative of species composition in ten and 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.

0 0.05 0.1 0.2 0.3 0.4 Miles



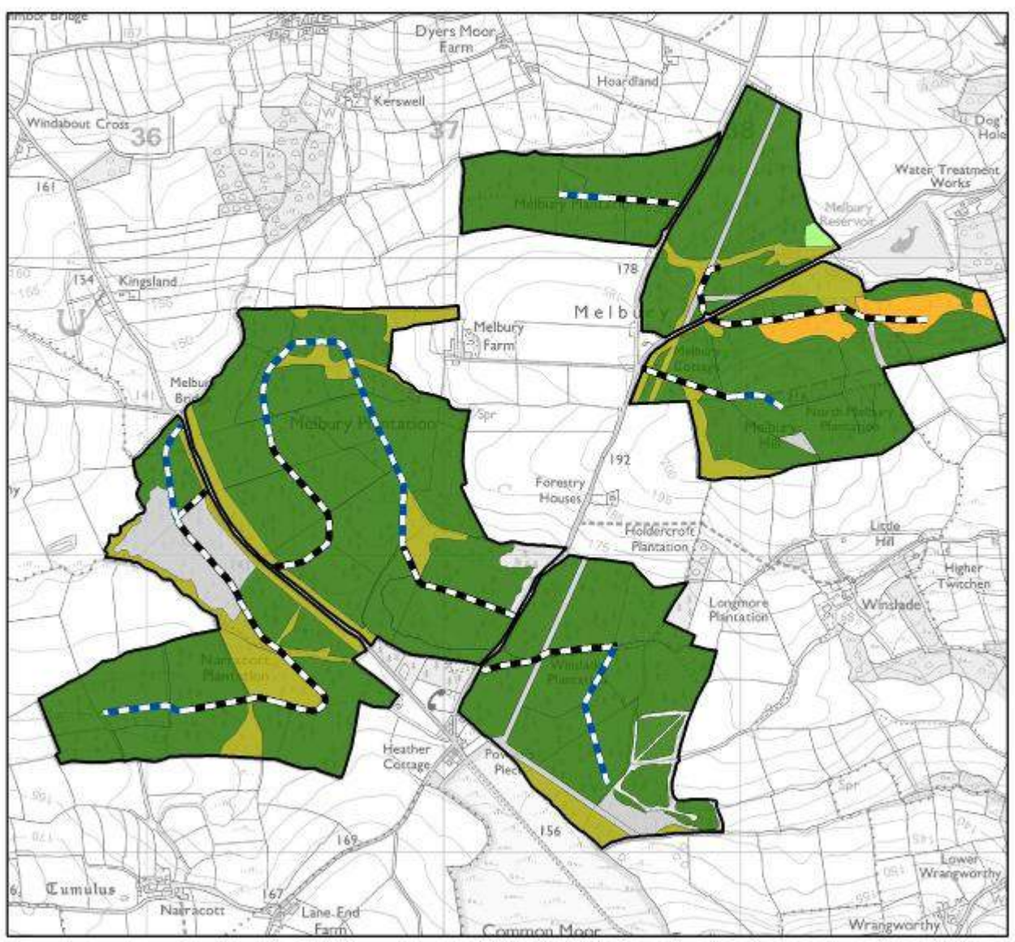
Legend

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

Indicative Future Species 2047

The projections made are indicative of species composition in ten and 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.

0 0.05 0.1 0.2 0.3 0.4 Miles



Conservation - Habitats

Bogs and Grassland

Areas of significant water inundation will be managed as bogs. These areas may be enhanced by blocking drains and increasing the water table to better support the array of sphagnum assemblages which have already presented themselves. Opportunities to build on areas adjacent to, and/or creating linkage between, grassland habitats will be taken at the time of felling, this is outlined on page 20. Given the significant water logging in these areas willow colonisation may be slower than elsewhere but this will need to monitored and kept below 2m and 20% of the area.

Riparian Habitats

The streamsides and wet woodland found at the bottom of 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. See page 30 for more detail.

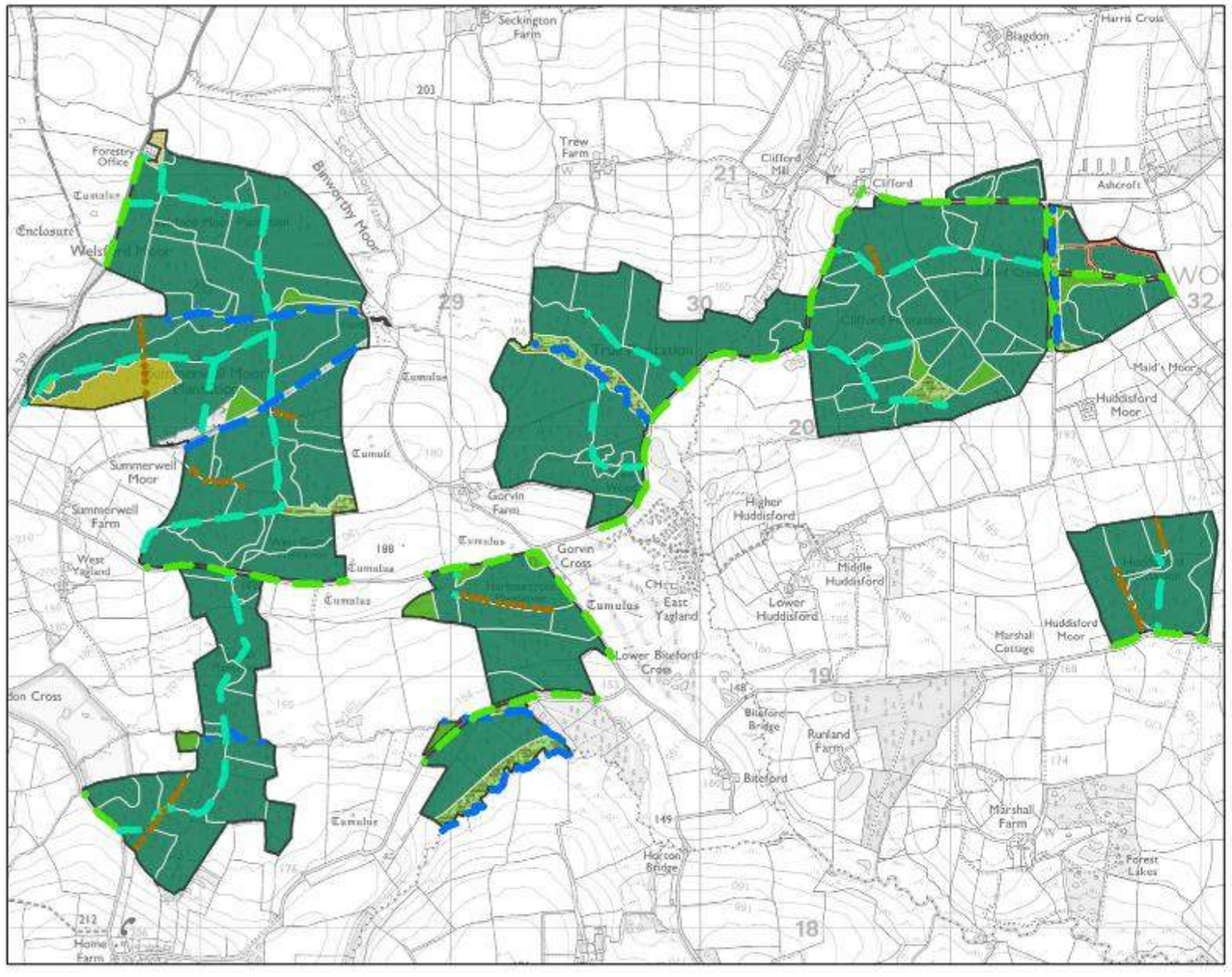
Corridor Habitats

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 and nightjar choose to inhabit. Whilst wetter and often remote rides which are not used for deer control will be allowed to regenerate, notably with willow, to provide habitat and linkage for a variety of species including willow tit.

Deadwood

Mature established broadleaved trees with their moss and fauna will be retained as much as possible, and allowed to developed in senescent habitats. A variety of deadwood will be retained according to the level of ecological value and in line with Guidance (Humphrey & Bailey, 2012). Retaining decaying snags and logs as well senescent trees throughout the forest will create suitable deadwood habitat for numerous associated species including raptor, smaller birds (including willow tit) and an array of insects.



Legend

- Moor and Heath
- Hedgerow
- Forest Road Edge
- Conservation + Recreation
- Public Roadside
- Windthrow protection
- Watercourse
- Broadleaved Belt
- Wet woodland
- Lowland mixed deciduous woodland
- BROADLEAVED; MIXED/YEW WOODLANDS
- CONIFEROUS WOODLANDS
- BOUNDARY & LINEAR FEATURES
- BOGS

0 0.05 0.1 0.2 0.3 0.4 Miles

Conservation - Natural and Cultural Heritage Features

The Forest Plan area is used by an array of common and rare flora and fauna some of which are highlighted below. The considerable contribution the forests and their associated areas make to habitat provision in the otherwise grassland dominated landscape is widely recognised.

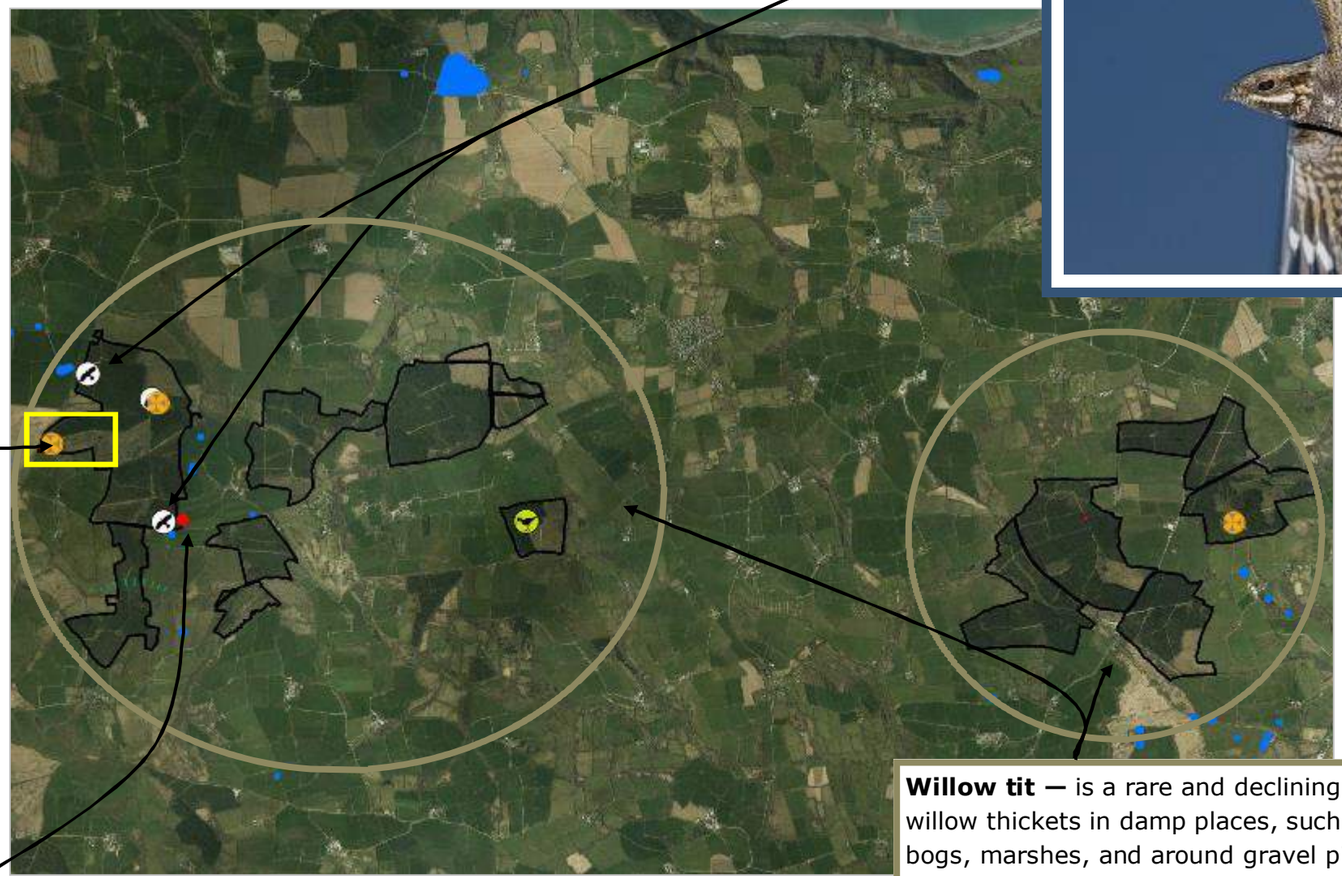
On the other hand some non-native flora and grazing fauna species can have a detrimental impact on the forest and its features if their numbers are too high. Species such as rhododendron, Himalayan balsam, wild deer and squirrel will all be managed in line with District Strategy to ensure that their 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.

The Plan area is also an area of significant cultural heritage value. With a number of unscheduled and one scheduled monument in the area the internal surrounding landscape needs to be preserved, and enhanced where possible, to retain and develop this cultural heritage. The management of the Summerwell bowl barrow is outlined in detail in Appendix 5. Otherwise all unscheduled monuments will be identified and treated sympathetically at the time of operation in consultation with the county archaeology team.

Nightjar - is a nationally rare bird and the Hartland forests, particularly Summerwell support a number of churring males . The bird nests in freshly cleared areas, most notably clearfell sites. The provision of both permanent and transient open space through rotation clearfelling (230ha in Plan period) and scrubby open space creation (16ha) will continue to support this important species into the future.

Unscheduled Monuments - are found across the Plan area, demonstrating its rich cultural significant. The reservoir earthworks in Summerwell Plantation dates back to the nineteenth century and before and is an example of the features found. They will be taken in to consideration at the time of felling, restocking and management to protect and enhance their condition.



Summerwell - Scheduled Monument comprises a bowl barrow and forms part of a larger group of barrows situated on a ridge overlooking the upper reaches of the river Torridge. Only the outer, southwestern portion of the ditch is located on Forestry Commission and this contains the boundary hedge. This part of the scheduled area was originally planted with conifer in the 1940s and was cleared in the mid 1990s and left unplanted.

Its ongoing management is outlined in Appendix 5.

Legend

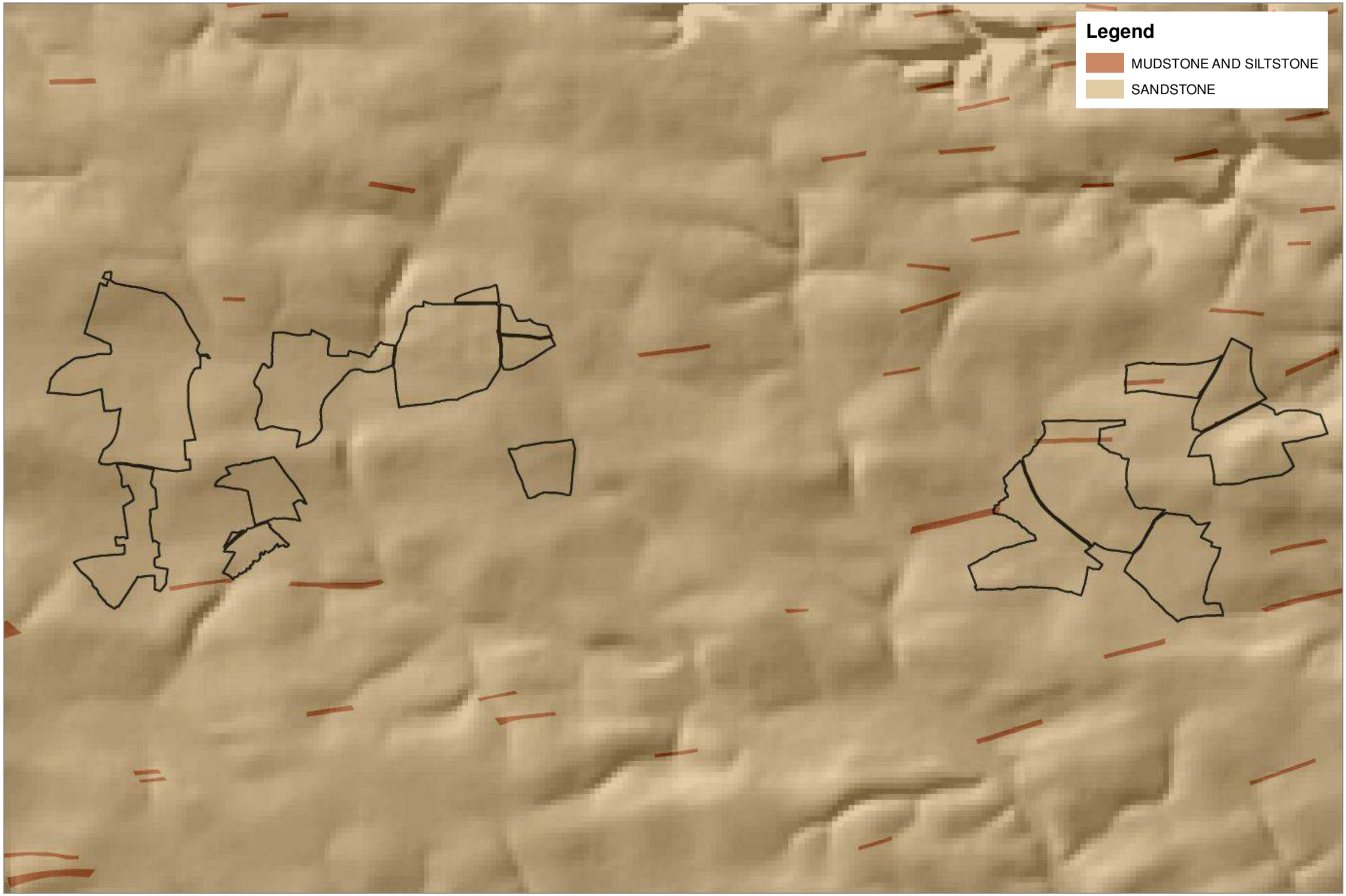
- Scheduled Monument
- Summerwell Scheduled Monument
- Unscheduled Monument
- Bird
- Nightjar
- Deer Glade

0 0.05 0.1 0.2 0.3 0.4 Miles

Willow tit — is a rare and declining bird which is often found in willow thickets in damp places, such as the edge of lowland peat bogs, marshes, and around gravel pits. Both the Melbury (and to a slightly lesser degree) the Hartland Plantations are known sites for Willow tit which is likely due to the good habitat provision and condition there. As a result road sides will continue to be cut on a rotation basis to provide an supply of suitable habitat whilst wetter and more remote rides which are not used for deer control will be allowed to regenerate with willow over time to provide a considerable amount of habitat.

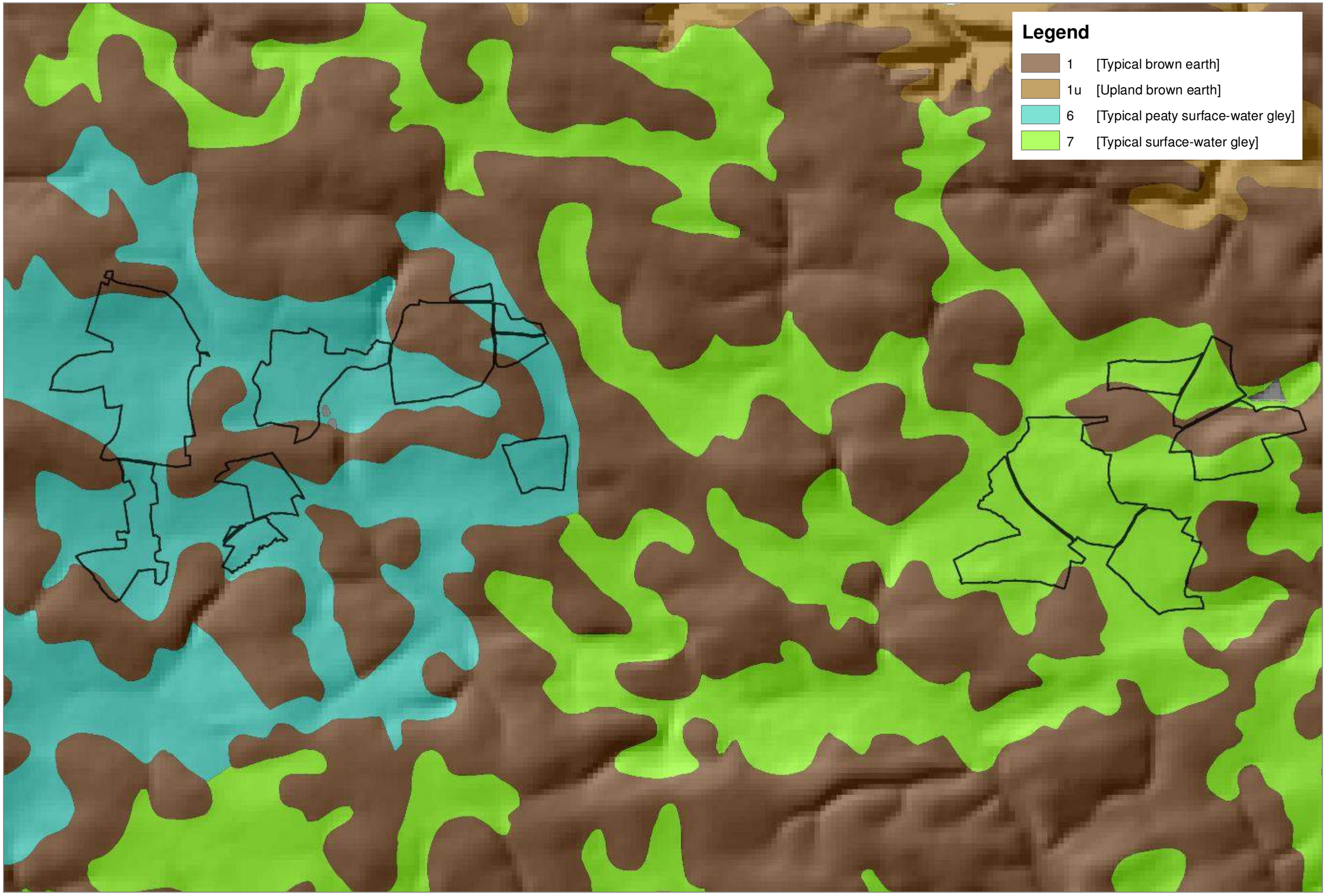
0 0.05 0.1 0.2 0.3 0.4 Miles

APPENDIX 1- Geology



0 0.05 0.1 0.2 0.3 0.4 Miles

Soils

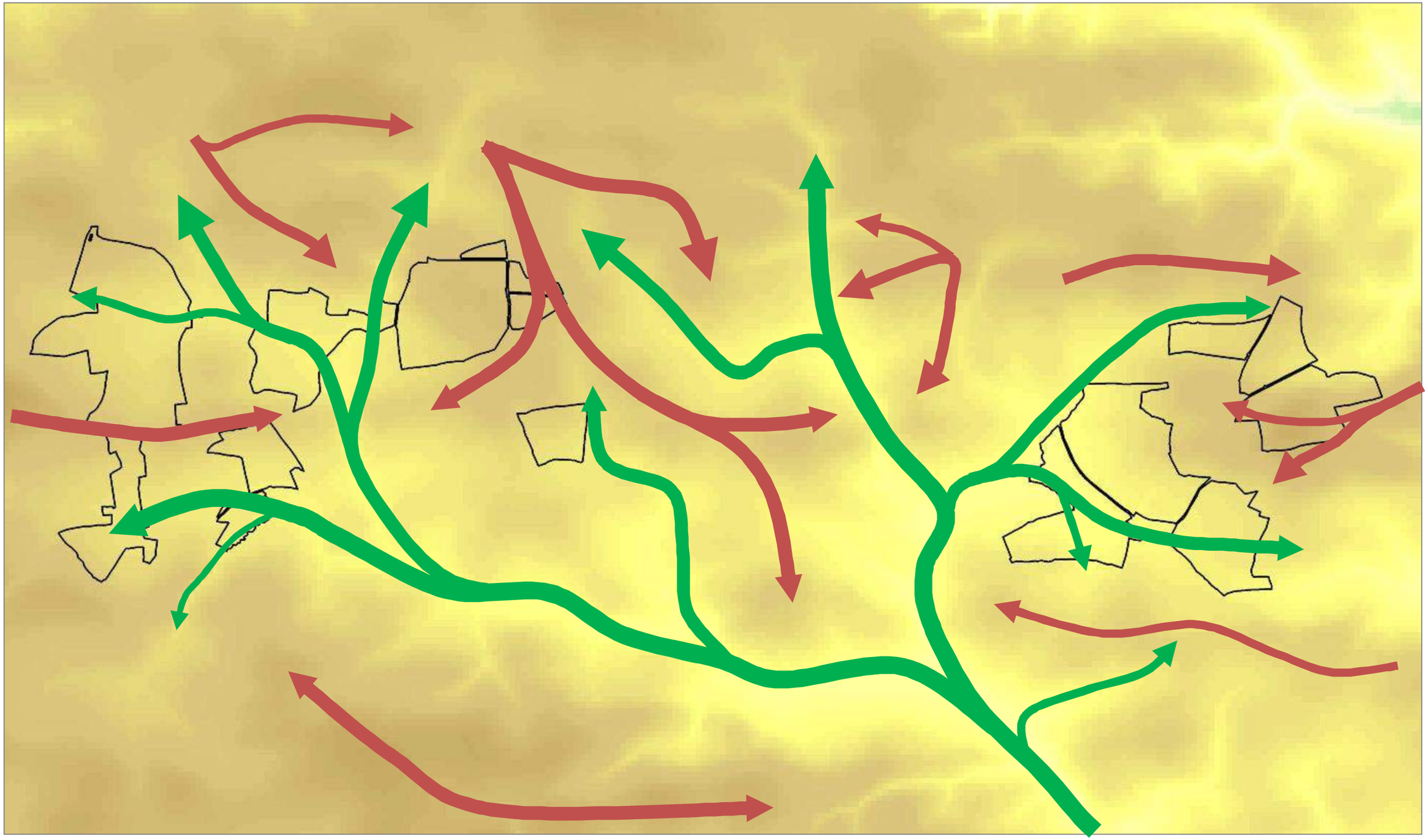


Landform Analysis

The landscape analysis is used to assess the landform patterns and demonstrates how it is in keeping with the surrounding landscape character.

One's eye is naturally drawn up the valleys and down the ridges. These principles will be used to design the shape of future coupes. Following the principles of good landscape design the shape and size of felling and restocking will ensure forests do not detract from the landscape appearance and character.

0 0.05 0.1 0.2 0.3 0.4
Miles



Landscape Analysis

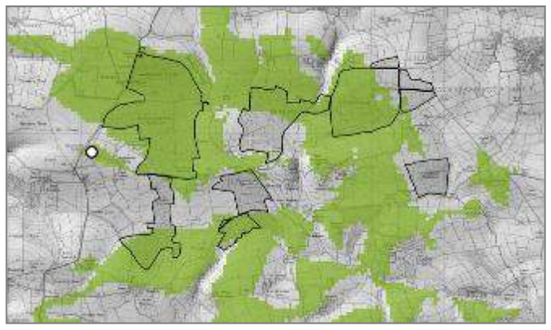
The proposed felling and restocking of coupes has been analysed from a number of significant viewpoints. These viewpoints have been identified because of the amount of foot and vehicle traffic they experience and the influence the forest has at these locations. Given the nature of the landscape around the Plan area, there are minimal settlements from which the Forest Plan area can be seen. The majority landscape analyses have been done along highpoints of these roads.

Hartland

1 Summerwell

Coupe 70823 — Felling is required 2017-2021 due to ongoing windblow. Felling may appear geometric but will be softened by being internal and with appropriate restocking.

Coupe 70304 — Felling to occur 2022-2026. Restocking will be sympathetic to the neighbouring SAC to the north and newly created bog to the south



Legend

- Panorama 1
- Visible

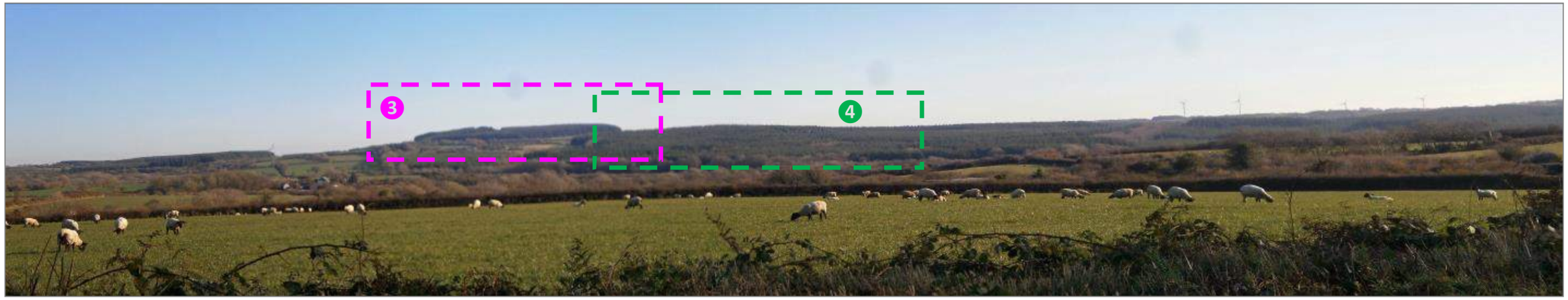
2 Clifford

Coupe 70240 — Felling is imminent due to catastrophic windblow. Restocking will build in future wind resilience and amenity value given its prominent position

Coupe 70812 — Felling to occur 2022-2026. Restocking will build in future wind resilience

Coupe 70129 — Felling is imminent due to catastrophic windblow. Restocking will build in future wind resilience

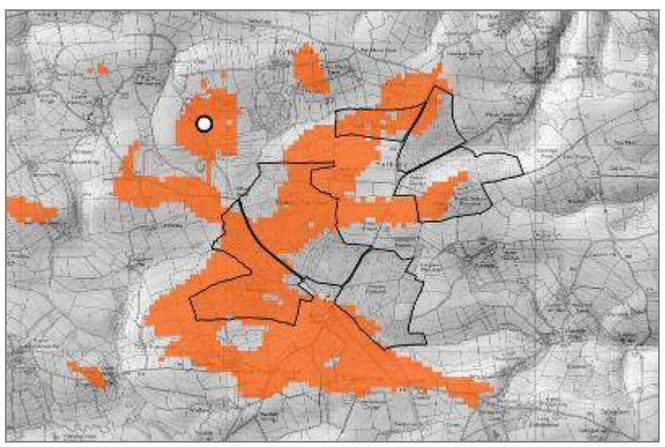
Melbury Hill



3 Melbury Hill

Coupe 70958 — Felling is required 2017-2021 due to maturity and vulnerability of crop. Felling will be visible from 360° given its elevation. But the coupe shape and appropriate restocking will soften the impact.

Coupe 70958 — Felling is due 2022-2026 due to maturity and vulnerability of crop. Restocking will build in future wind resilience and amenity value given its high impact.



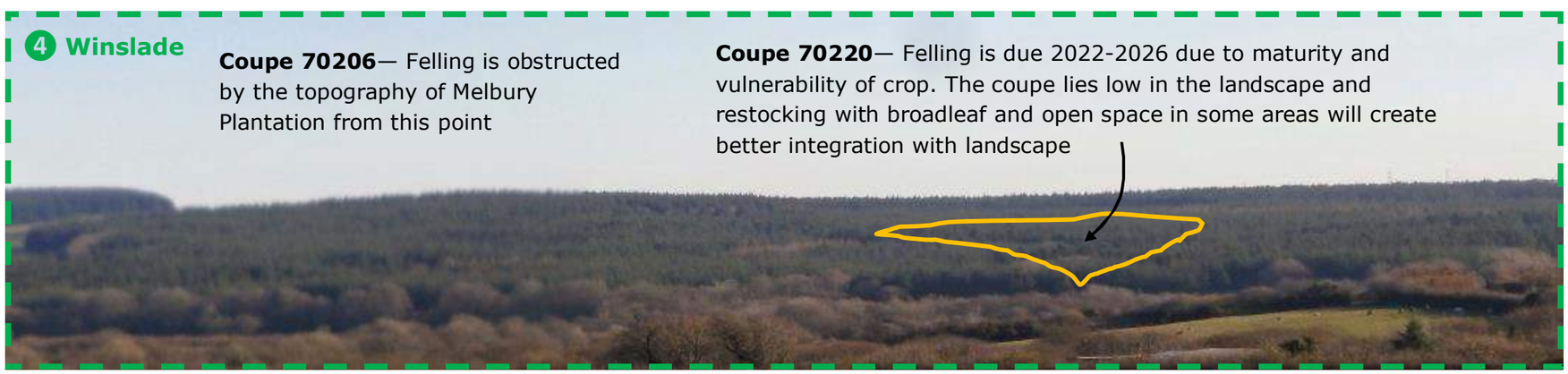
Legend

- Panorama 2
- Viewshed - Visible

4 Winslade

Coupe 70206— Felling is obstructed by the topography of Melbury Plantation from this point

Coupe 70220— Felling is due 2022-2026 due to maturity and vulnerability of crop. The coupe lies low in the landscape and restocking with broadleaf and open space in some areas will create better integration with landscape



Water & Riparian Management

Riparian Management

All watercourses and riverine areas will be management sensitively to protect and enhance water and soil quality in line with best practice. The 'riparian zones' (18ha) identified 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 at the time of intervention (usually clearfell), will create a 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 and SSSI 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 Hartland Plan area are a component of flood alleviation for the Torridge river and the wider North Devon catchment through 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.

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.

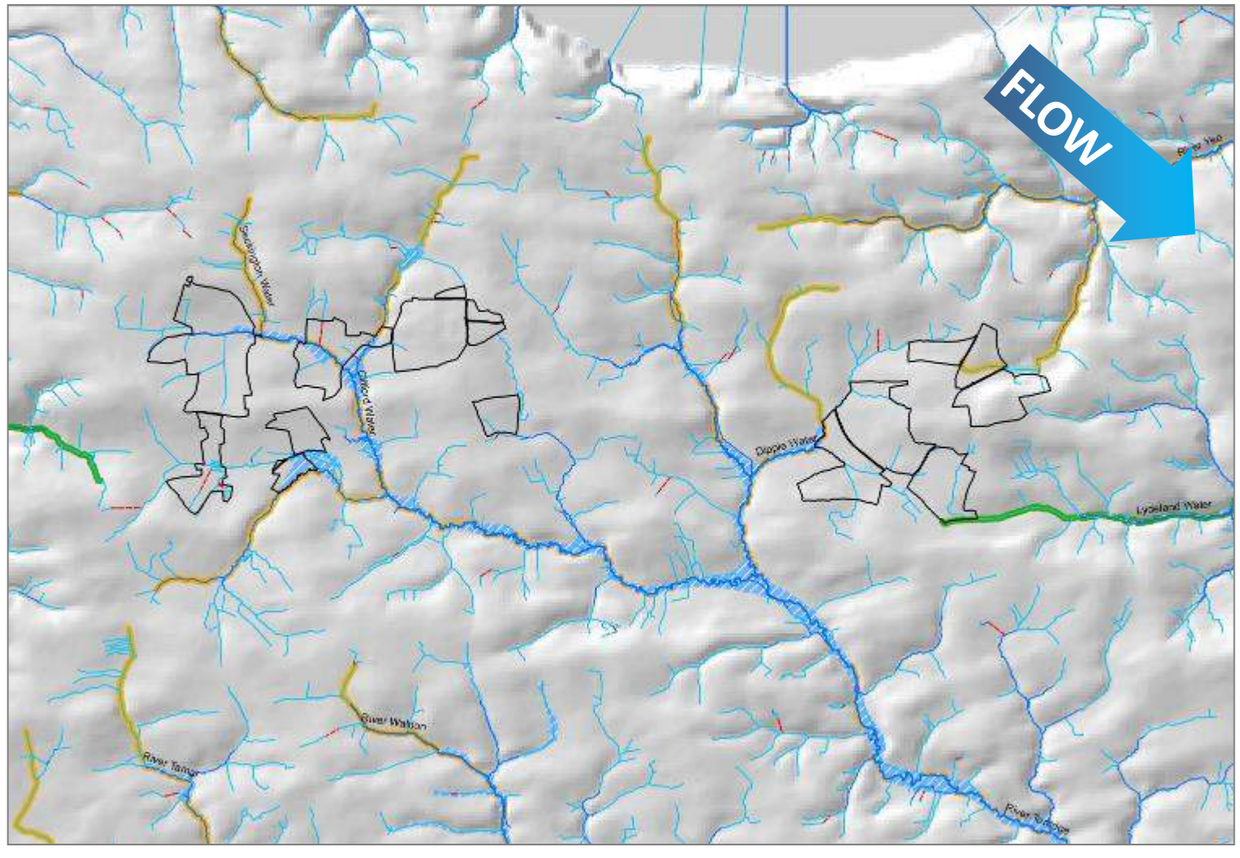
South Devon Basin

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 Duntz. 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. 69 per cent of waters assessed for biology are at good or high biological status now.

0 0.25 0.5 1 1.5 2 Miles

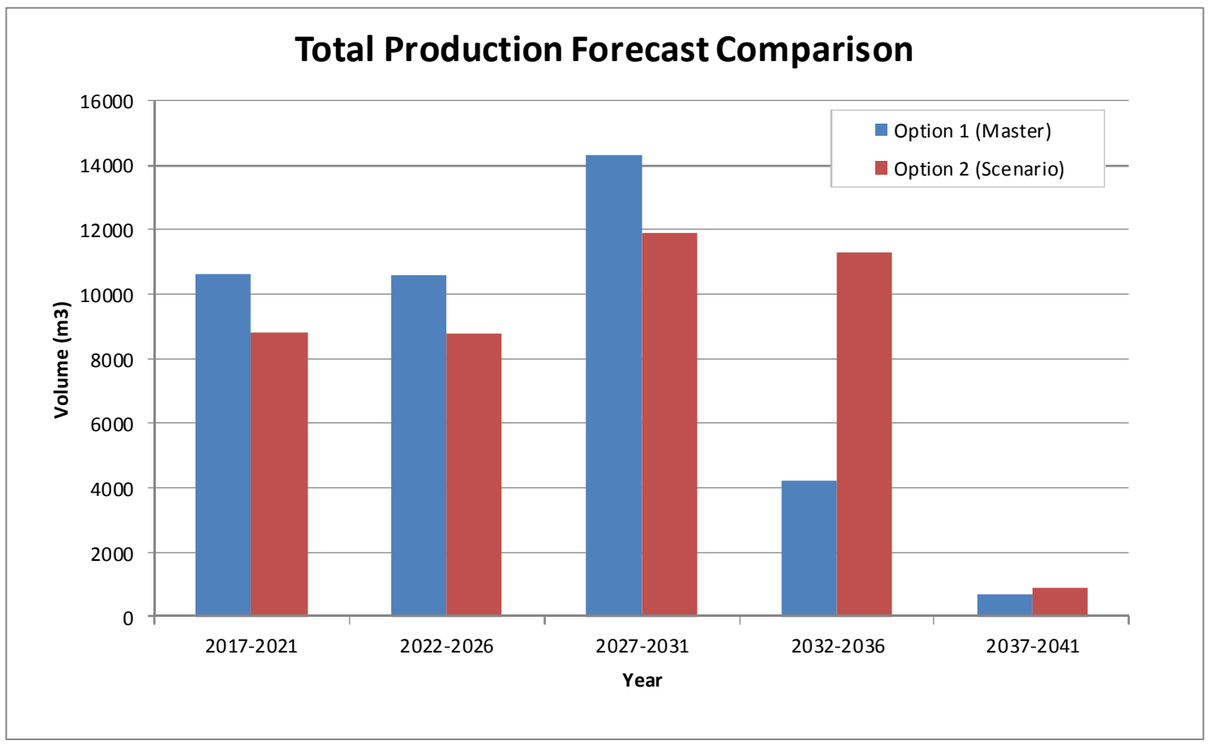


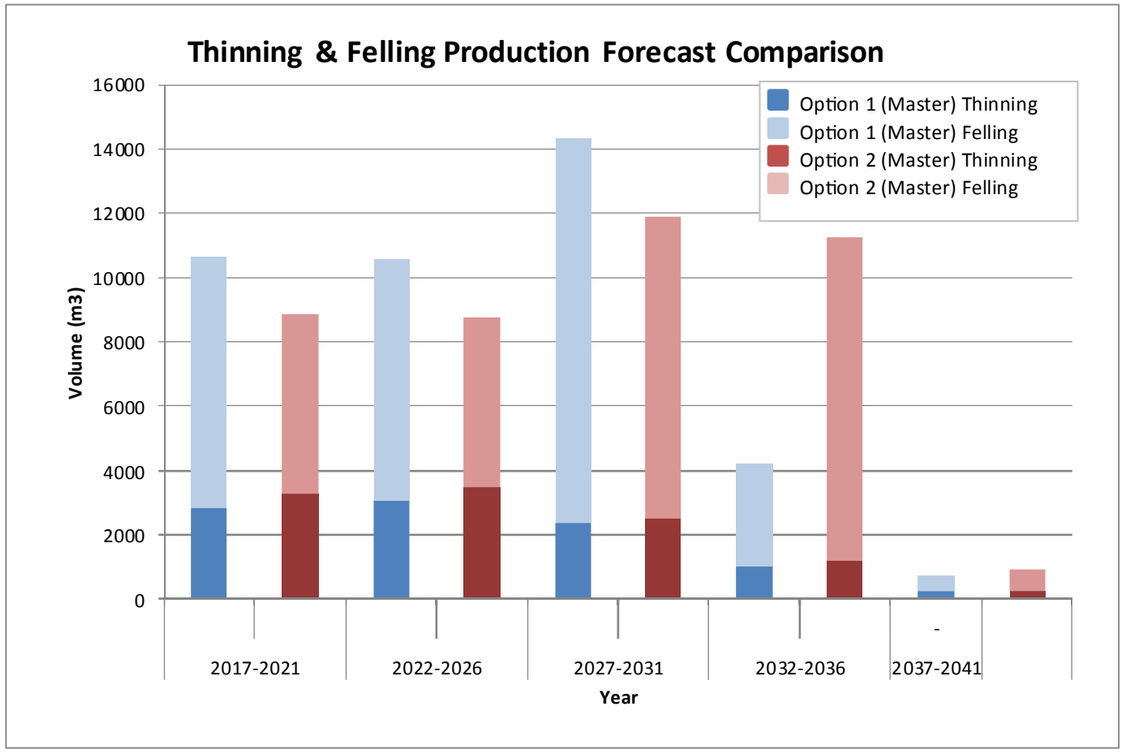
Legend

River Type	Current Status
Primary River	High
Secondary River	Good
Tertiary River	Moderate
Lake / Reservoir	Poor
Extended Culvert	Bad
Floodzone	

APPENDIX 2 — Option Testing

Option 1 – Current Forest Plan (Master)	Option 2 – Proposed Forest Plan (Scenario)
The continued production of sustainable and marketable woodland products.	
The Plan delivers a significant amount of volume in the next twenty years with a significant drop following. This is typical of non-thin rotation forestry.	The Plan attempts to spread the production over a longer period by extending rotations where possible. The initiation and impact of thinning is not demonstrated due to this being implemented at a operational level and the fact that only a relatively small proportion of crops are suitable for thinning and therefore do not affect production, this may change in subsequent rotations.
The diversification of woodland species and structure for greater ecological and economic resilience	
The Plan makes little attempt to diversify woodland species composition and structure. Scots pine is identified as a suitable alternative but structural diversity or addressing of the Culm Clay issues is not tackled.	The Plan directly confronts and addresses the issues around establishment and monocultural single structured species reliance. This is dealt with by looking to integrate thinning, species choice and establishment techniques to diversify the Plan area.
To conserve, maintain and enhance cultural and heritage assets.	
The makes minimal reference to location and importance of cultural landscape and heritage assets.	The Plan looks to integrate both scheduled and unscheduled heritage assets as well as considering the cultural significance of the landscape and forests role within this.
Deliver well-designed forests that both protect and enhance the internal and external landscape in keeping with the local landscape character	
The proposals make appropriate provision to deliver high quality, well design forests both internally and externally. This is not demonstrated pictorially.	The majority of coupes have been retained. Where appropriate these have been altered in an attempt to extend rotations and address wind issues. This has then been modelled and projected to ensure proposals contribute to a high value landscape.
Protect and enhance woodland and open habitats and their associated species.	
The Plan makes appropriate provision for future open space deliver at the time of restocking, particularly along riparian areas and ride sides.	The proposals go beyond the original Plan and seizes upon opportunities to buffer and enhance areas, and particularly neighbouring SSSIs.
The provision and maintenance of recreation facilities.	
The makes no reference to recreation.	The Plan acknowledges the role of informal recreation and public rights of way as well as the role tourism has in the wider area.





Fell 2017 - 2021

Fell 2022 - 2026

Coupe Prescriptions

Hartland

	Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Restock	Area (ha)	Restock Proportion	Rationale/Prescription
Summerwell	**70823**	7.80	p.80-85 SS	Crop has reached terminal height having not been thinned and is at risk of catastrophic blow. Sporadic blow is found on edge and within crop and therefore this coupe should be prioritised. Coupe works to wind firm edge, although southern edge could be a little soft following, natural/broadleaf break.	70823a	7.80	100% Ev. Conifer	Site is located on peaty gley but is better drained than other sites within plantation. Thinning should be viable if initiated early and the site is expected to yield good timber production. The site is relatively exposed so therefore consider Scots pine, Sitka spruce with birch and aspen as wind breaks.
	70115	5.58	p.83-98 SS	Western edge is showing considerable signs of windblow following extensive felling to the west. Proposal looks to only take p.83 crop however small area of p.98 to the east is unlikely to withstand the exposure of this felling and will therefore also be removed.	70115a	3.83	100% Ev. Conifer	Site is nutrient poor and whilst drier than other areas of the coupe it is still fresh to wet. Planting should reflect this so consider Italian alder, Scots pine and Pacific fir.
					70115b	1.75	50% Open 50% Broadleaf	Area should be managed as a riparian zone allowing natural regeneration of broadleaf species, upto 50% cover to create a dynamic mosaic of open space and scrubby forest cover to benefit the watercourse and wider river basin.
	70304	12.94	p.84-97 SS	Crop has reached terminal height having not been thinned. Adjacent felling to the south means that the crop is inherently unstable and needs removing soon. The shape of the crop and lack of windfirm edges creates an elongated shape which abuts a small watercourse to the north.	70304a	7.13	100% Ev. Conifer	Site is drier than other areas of the coupe but is still fresh to wet and is a peaty surface water gley. Despite poor nutrient availability it should yield good timber production, consider using a mixture of Scots pine, Swamp cypress and Italian alder.
					70304b	5.81	80% Open 20% Broadleaf	Site borders Bursdon Moor SSSI part of Culm Grassland SAC and a small watercouse. The intention to not restock should look to complement the SSSI. This area of the coupe sits within the lower reaches of the basin and establishment of a timber crop would likely be a struggle. Vegetation to be managed below 5m and less than 20% of area.
	70931	6.74	P.73-88 SS	Crop has reached terminal height having not been thinned and with the crop now at economic maturity felling is required. The more mature crop to the west and north is showing considerable signs of blow. The coupe shape is robust with good windfirm and stable adjacent crops to the north. south and east.	70931a	6.74	60% Ev. Conifer 20% Open 20% Broadleaf	The site is wet to waterlogged with a number of flushes and springs found in the west of the coupe. Restocking should be sympathetic of this with greater proportions of open space and broadleaf planting or regeneration in these areas. See Coupe layer for buffer area and prescription suggestion. Consider Pacific fir, Sitka spruce, Swamp cypress and grey alder.
Clifford	**70129**	10.52	p.74 NS P.74 SS P.82 NS	Felling is imminent due to catastrophic windblow. This operation has been approved separately by CSM6 Amendment but is included in this application for clarity.	70129a	10.52	100% Ev. Conifer	Site is a gleyed brown earth with a high peat content. It is relatively well drained but nutrient poor but realtively un exposed. Thinning should be viable if initiated early with wind resilient buffers planted and the site is expected to yield good timber production. The site is relatively exposed so therefore consider Scots pine, Sitka spruce, Noble fir with birch and aspen as wind breaks.
	70240	9.99	p.78 SS	Felling is imminent due to catastrophic windblow. This operation has been approved separately by CSM6 Amendment but is included in this application for clarity.	70240a	9.99	90% Ev. Conifer 10% Open	Site is located on peaty gley but is better drained than other sites within plantation. Thinning should be viable if initiated early and the site is expected to yield good timber production. See Coupe layer for buffer area and prescription suggestion. The site is relatively exposed so therefore consider western hemlock and Sitka spruce with pine, beech and aspen as wind breaks.
	70812	11.05	P.74-89 SS	Coupe contains a range of differently aged crops, many of which are now at risk of blowing. This will be exacerbated by the earlier adjacent felling. The coupe shape is robust using existing tracks as boundaries to the east, north and south. Young crop to the south is to be retained, as should any internal broadleaf components. Ensure this coupe is only felled once the restocking of coupe 70129 reaches more than 2m in height. This may mean delaying until later in the period or into another phases.	70812a	11.05	100% Ev. Conifer	Site is primarily located on a peaty gley with some gleyed brown earth to the east. Thinning should be viable if initiated early and the site is expected to yield good timber production. The site is relatively exposed so therefore consider Scots pine, Sitka spruce with birch and aspen as wind breaks. See Coupe layer for buffer area and prescription suggestion.

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

Fell 2017 - 2021

Fell 2022 - 2026

Coupe Prescriptions

Melbury

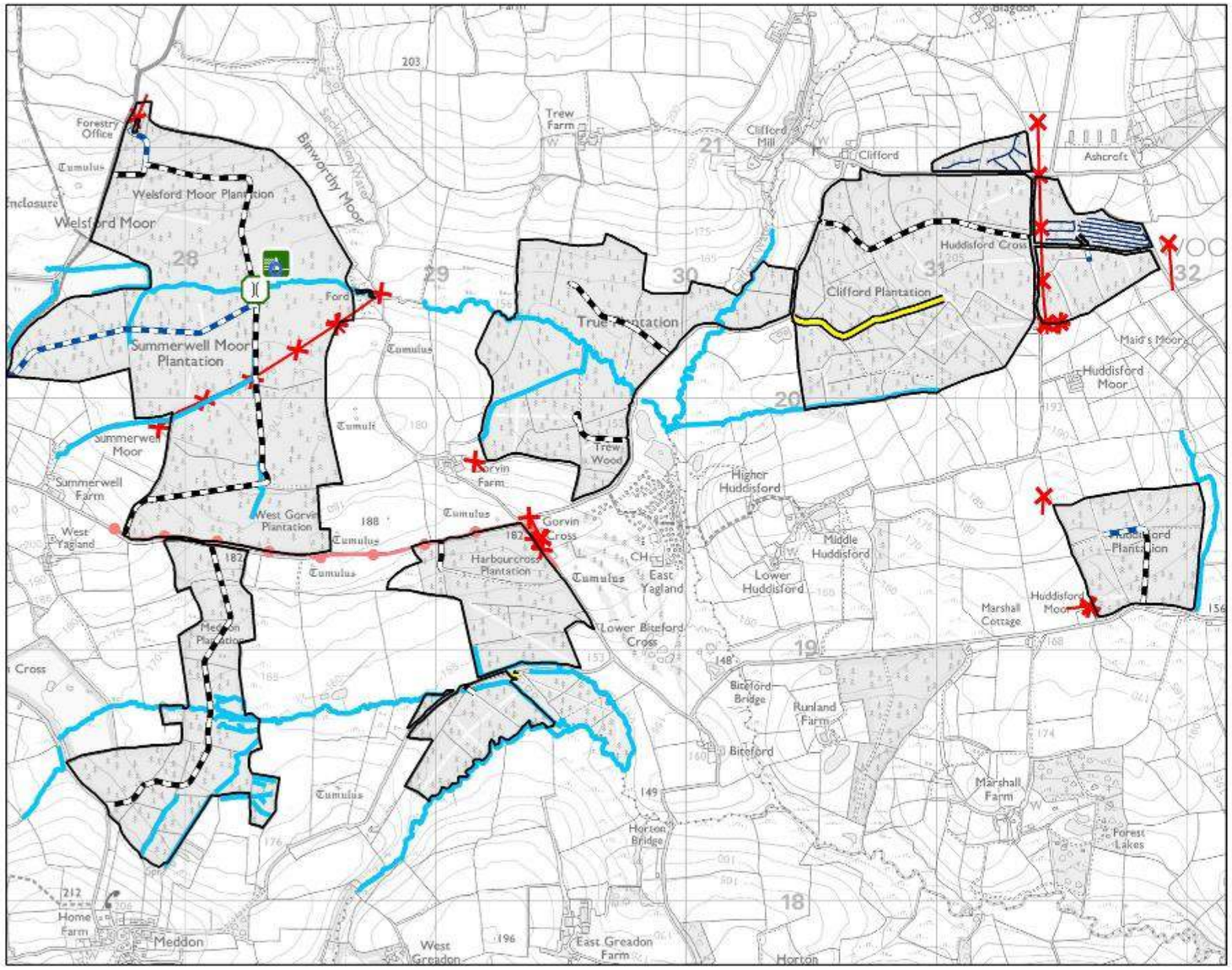
	Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Restock	Area (ha)	Restock Proportion	Rationale/Prescription
Narracott	**70220**	13.94	p.80-85 SS	Crop is nearing terminal height and has considerable intruded broadleaf, with wet flushes found throughout the coupe. Broadleaves should be retained and have used as windfirm boundaries where possible.	70220a	10.22	100% Ev. Conifer	Site is nutrient neutral and whilst drier than other areas of the coupe it is still fresh to wet towards the middle and west of the coupe. Planting should reflect this so consider Italian alder, Western red cedar and Sitka spruce.
					70220b	4.43	50% Open 50% Broadleaf	Area should be managed as a riparian zone allowing natural regeneration of broadleaf species, upto 50% cover to create a dynamic mosaic of open space and wet woodland to benefit the watercourse and wider river basin.
Melbury / Winslade	**70206**	15.17	p.40-78 SS	Crop has now reached economic maturity and terminal height having not been thinned and given its proximity to a busy road and risk of catastrophic blow should be prioritised. Coupe works to wind firm edges either side of the public road, using wayleaves and forest roads. This felling should be done as early as possible to minimise adjacency concern with coupe 70105.	70206a	15.17	70% Ev. Conifer 20% Open 10% Broadleaf	Site has a large road frontage with a relatively high exposure and should be planted sympathetically accordingly. The site is relatively well drained and medium nutrient availability despite being a surface water gley with a high clay component. See Coupe layer for buffer area and prescription suggestion. Consider Noble fir, Scots pine and aspen.
	70105	9.74	p.75-83 SS	Crop has recently been thinned for the first time and looks to be stable and benefitted from the intervention. Coupe uses wayleave to the east and road to the south as windfirm edges. Ensure this coupe is only felled once the restocking of coupe 70206 reaches more than 2m in height. This may mean delaying until later in the period or into another phases.	70105a	9.74	100% Ev. Conifer	The site is wet to fresh with poor drainage on a surface water gley. Restocking should be sympathetic of this with greater proportions of open space and broadleaf planting or regeneration in these areas. Consider Pacific fir, Sitka spruce, grey alder and rowan.
North Melbury	**70958**	11.74	p.54 LP p.54 RC p.55 WH p.55-64 NS p.54-64 SS	Coupe felling is now overdue and at risk of blowing significantly, notably at the higher elevations towards the south. The site is well visible from surrounding areas given its raised position on top of a small hill. Areas of Lodgepole pine have significant broadleaf and conifer regeneration intrusion. This should be retained where practicable.	70958a	11.74	100% Ev. Conifer	The site is well drained and relatively high in nutrient as a typical brown earth with a high clay component. The site has grown good quality Western red cedar as well as hemlock and spruce. The site is exposed on the high ridge and but is more sheltered towards the north. Consider Coast Redwood, Western red cedar and Sitka spruce
	70456	7.50	p.83 SS p.83 JL	Crop has now reached economic maturity and terminal height having not been thinned. Coupe works to wind firm edges using wayleaves and forest roads.	70456a	7.50	100% Ev. Conifer	The site is well drained and relatively high in nutrient as a typical brown earth with a high clay component. The site is exposed to the south and west see Coupe layer for buffer area and prescription suggestion. Consider Sitka spruce, Noble fir and birch

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

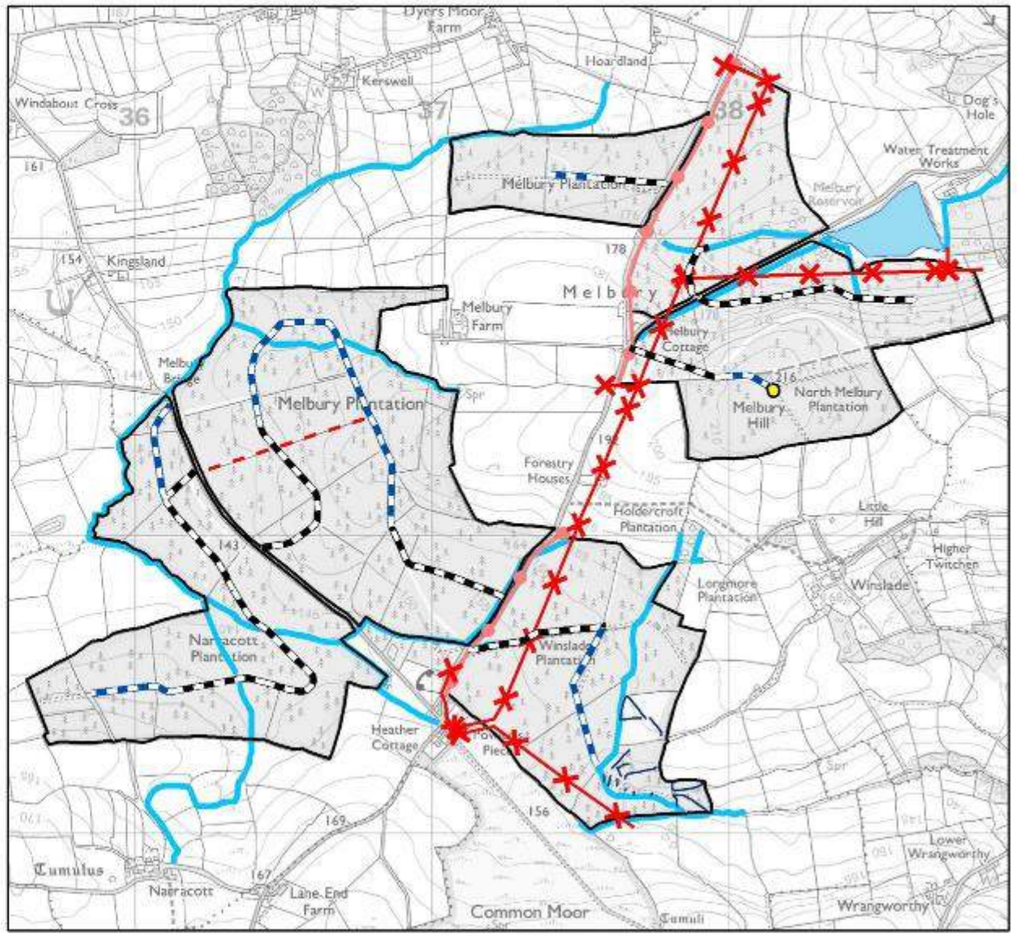
Utilities

Legend

- Reservoirs
- Quarries
- Dams
- Bridges
- Drain
- Water courses
- Water supply point
- Water pipeline
- Open water
- Powerline Overhead
- Powerline Underground
- Gas Pipeline
- Telephone Line Underground
- Telephone Line Overhead
- Class A/B Roads
- Class C Roads
- Legal access/Unclassified
- Classification unassigned
- Loading/transfer point

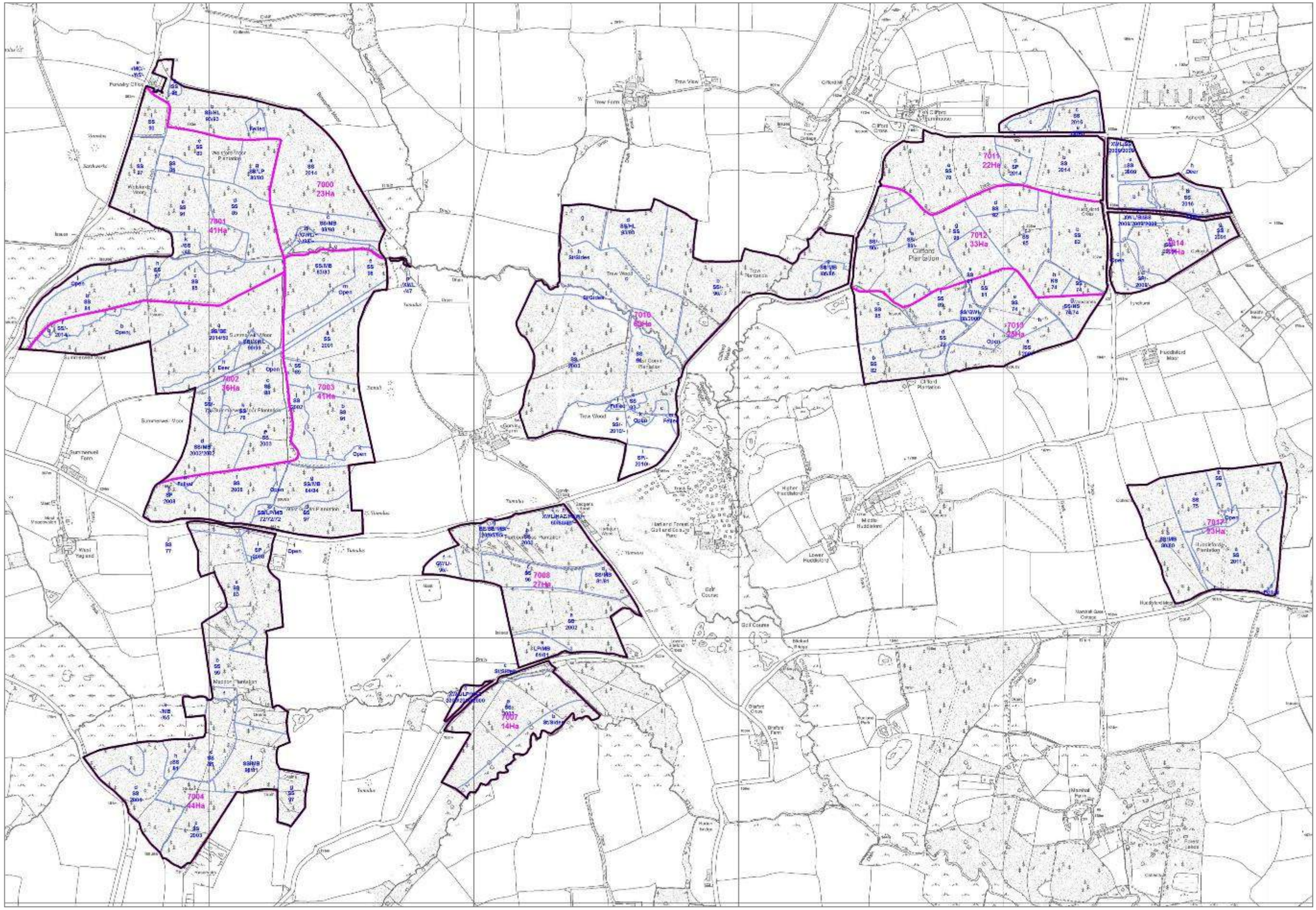


0 0.05 0.1 0.2 0.3 0.4 Miles



Stock Data Hartland

2016



Stock Data
Melbury

2016

7025
21Ha

7026
29Ha

7027
33Ha

7021
50Ha

7022
38Ha

7020
63Ha

7023
54Ha

0 0.05 0.1 0.2 0.3 0.4 Miles

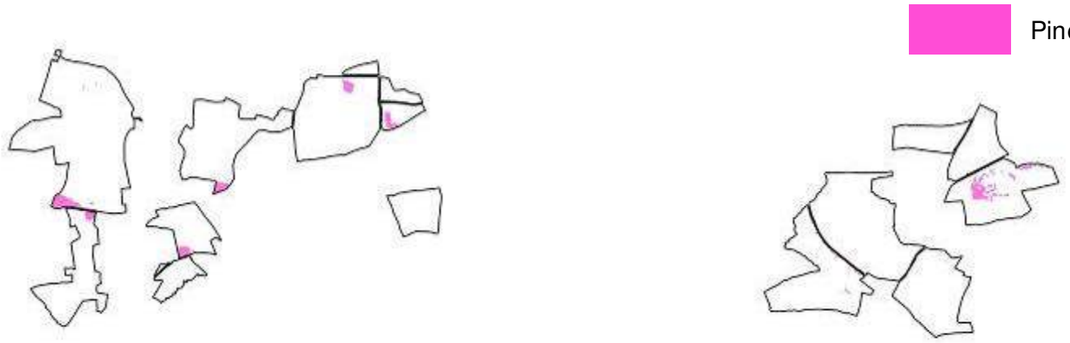
Pests & Diseases

Name: Dothistroma Needle Blight (DBN)

First appearance: mid 1990s

Attacks: Pine species

Often referred to as Red Band Needle Blight (RBN) and can reduce growth rates by between 70 and 90%. Effects of RBN are managed through thinning the wood more heavily than you would normally to introduce higher levels of air flow through the remaining crop. However, Hartland contains a relatively small component and therefore its impact has been fairly limited.

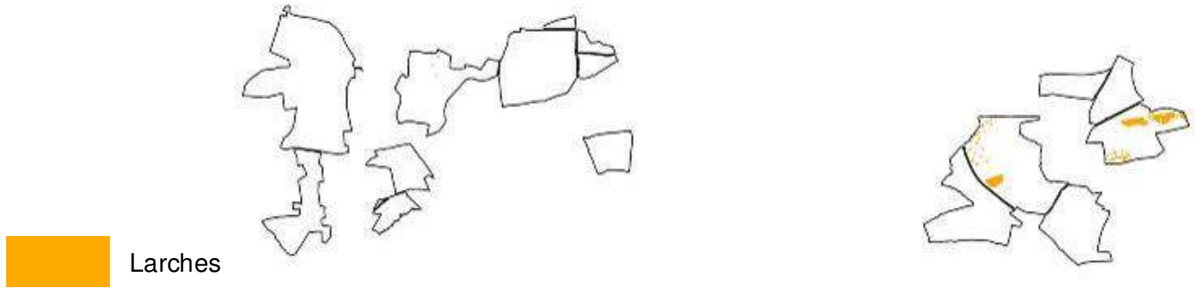


Name: *Phytophthora ramorum* (PR)

First appearance: 2009

Attacks: Larches

P. ramorum was first found in the UK in 2002 and until 2009 in the woodland environment had largely been associated with rhododendron species acting as a host from which spores are produced. In August 2009 P. ramorum was found on a small number of dead and dying Japanese Larch in South West England, causing particular concern since some affected trees were not close to infected rhododendron and showing a significant change in the dynamics of the disease than experienced previously. Following this testing in Devon and west Somerset confirmed the presence of PR in mature Japanese larch as well as species in its under-storey, including sweet chestnut, beech, birch, oak, Douglas fir and Western hemlock. On some sites there is little or no rhododendron present. It is now known that Japanese larch can produce very high quantities of disease-carrying spores when actively growing in spring and summer, at much higher levels than those produced by rhododendron. These can be spread significant distances in moist air. PR is a notifiable disease dealt with by felling the infected area under a statutory plant health notice (SPHN) issued through FERA and the Forestry Commission.

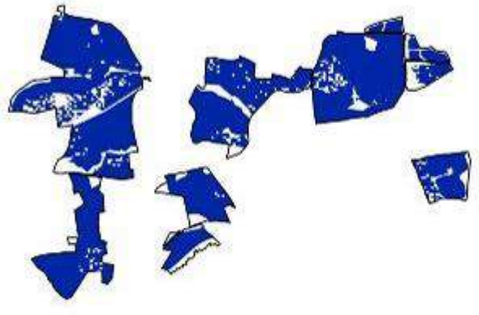


Dendochtronus micans

Also known as great spruce bark beetle, this pest is found throughout continental Europe and increasingly in west England, Wales and southern Scotland. It damages spruce trees by tunnelling into the bark of living trees to lay its eggs under the bark. The spread of *D micans* across west England has been unrelenting having developed a stronghold in north Devon and continues to move ever south and east wards, usually assisted by the wind. The beetle is particularly drawn to the smell of resin and thus fresh cut or broken timber. It prefers moist, warm and therefore unthinned stands of all types of spruce, but particularly Norway and Oriental although its ultimate destructive capability on Sitka is greater. The spread of *D micans* can be controlled by the release of *Rhizophagus grandis,* a natural predator in its native range.

Factor	Increased risk of attack
Location	• Within 7km of infested stands • Close to public roads and forest roads leading from infested areas
Tree/stand age	• Mature and veteran trees
Climate	• Conditions giving rise to tree stress: Low rainfall, low soil moisture, exceptionally dry (or wet summers)
Windthrow	• High incidence of wind-related problems such as snapped top, windthrown trees and root disturbance.
Site	• Poorly suite to spruce growth • Previous management • Extraction damage, brashed trees • Soil compaction • Climber damage
Tree growth	• Poor growth. Malformed trees with multiple forks and other growth irregularities

The Plan area is at significant risk of infection from *Dendochtronus micans* not least because of the high proportion of spruce. Therefore steps need to be taken to diversify these crops where site conditions allow. Minimising stress of the spruce through good planting and species choice as well as regular thinning can limit the susceptibility of the spread.



0 0.25 0.5 1 1.5 2 Miles

APPENDIX 3

Glossary

Term	Abbreviation	Description
Ancient Semi-Natural Woodland	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 Woodland 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		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. *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. "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.
Shelterwood		A management system that is applicable to conifer or broadleaf, where tree canopy is maintained at one or more levels without the need to clear-fell 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" 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.
Silviculture		A term coined during late 19th century from the Latin *silva meaning* 'wood' and the French *culture* 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.
Stand		A group or area of trees that are more or less homogeneous with regard to species composition, density, size, and sometimes habitat.
Thin	TH	Selective removal of trees from a wooded area, giving remaining trees more space to grow into larger trees. Thinning is done to: 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. **NOTE:** This list is not in any order of priority and will vary depending on management objectives.
Yield Class	YC	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.

References

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APPENDIX 4 - Consultation Record

Citizen Space Consultation 3rd February to 3rd March 2017

Consultee Name	Consultee Comment	FC Response
STATUTORY		
Devon CC	The forest plan document looks very interesting at first glance, I will have a look in more detail at the historic features within the Plan areas and consult before the March deadline.	No Action Required
Natural England	Melbury – area adjacent to Common Moor SSSI planned for regeneration of broadleaves as transitional habitat. Ideally the plan would also include keeping some glades free of scrub. Hartland, Summerwell (Pg 20) – Open space from Bursdon Moor to Binworthy Moor is critical to link two Marsh Fritillary Culm grassland sites. The habitat under the electricity wayleave and to the west of the pond offers suitable habitat for the species, with devil's bit scabious (larval food plant) present. The open area in west adjacent to Binworthy moor and to the west of the forest pond would ideally be larger. Could the area of broadleaved be sited to the west instead? Open space in Summerwell (Pg20) has reverted to broadleaves by 2027 (Pg 21) and then once again open space in 2047 (Pg22). This should be managed as open space as Culm and a corridor for Marsh Fritillary. Hartland, Meddon (Pg 20) – The open area along stream is particularly valuable for water quality as this section of stream is often heavily polluted with sediment run off from the forestry. True plantation (Pg 20) – the area following the river is currently largely open, species rich grassland with some willow scrub. This should be kept as open area (ideally with some clearance of scrub) as links two areas of culm grassland (Binworthy Moor and Huddisford) and is important for migration of species such as the Marsh Fritillary and Willow Tit. This also applies for the section following the stream from Clifford to Huddisford. Page 23 Riparian Corridors – if these areas are to be managed as wet woodland with 'patchy open spaces' then open spaces should link across the area and to sites adjacent to the woodland AND be managed to remain open. Soil run off from plantations can be substantial and as these areas are also generally linkages for Culm grassland it would seem sensible to site larger areas of open space along watercourses instead of a minimal buffer and 'enrichment with site appropriate trees'. There is mention of the invasive species, Himalayan Balsam which is a huge problem in this area. Will the FC carry out works to tackle this? Pg11 – Bursdon Moor managed by Bursdon Moor Commoners association Not DWT	This area has been scrubby broadleaf woodland with existing open space for a considerable time. Glades, consistently free of scrub are being delivered along the power line wayleaves, an area totalling 2.5ha. The Plan already makes considerable effort to connect the two Moors over the lifetime of the of crops. Approximately 15ha of open space, with some allowance for broadleaf has been proposed. The broadleaf has mainly been prescribed along water courses which are less likely to support Culm Grassland habitat and better reflect the historical landscape. The reason for the perceived discrepancy between open space in Summerwell on Pages 20, 21 and 22 is because Page 20 outlines intended restocking over 30 years and the area in question is not due to be felled until 2037-41 and therefore will not be open in 2027. The open space area referred to within Meddon is to be expanded significantly at the time of felling 2030-2041 to create a larger buffer and improve water quality. The area around the stream (4ha) in True Plantation is managed as wet woodland, meaning that a approximately 50% broadleaf cover, 50% open is prescribed on page 23. Management will continue in this manner and will be replicated across all identified riparian areas and wet woodland, including that from Clifford to Huddisford. The purpose of these corridors is to regulate water and deliver wet woodland habitat for associated species assemblages. Given the propensity for willow to regenerate and its value to species such as willow tit, open space and scrub regeneration will be cyclical and dynamic with intervention objectives to maintain dapple shade and habitat connectivity. Page 30 addresses soil stability and water runoff . Dappled tree cover is widely recognised to improve water quality through light regulation and filtration as well as stabilising soil structure. The creation of 'larger areas of open space' in these areas could jeopardise this. Himalayan balsam is now referenced as an invasive species on Page 24 and will be treated as necessary at the time of other weeding interventions Following changes made accordingly. *These areas are managed through grazing by the Bursdon Moor*
Environment Agency	No Response	No Action Required
Historic England	With regard to the SM Management plan included in the consultation documents, I am entirely content that this serves the interest of the monument and will contribute to keeping it a low risk and improving it's condition.	SM Management plan to be sent to HE for final signature.
Torridge District Council	It is good to see that the affect on the landscape has been considered and the growing importance of recreation and tourism within North Devon has been acknowledged. Developing more diverse areas of planting and open spaces is welcomed and the acknowledgement that climate change and the rise of new pest and diseases means that different species of conifer need to be planted to try and sustain good timber production is good.	No Action Required

Consultee Name	Consultee Comment	FC Response
STATUTORY cont.		
Hartland Parish Council	No Response	No Action Required
Parkham Parish Council	No Response	No Action Required
Woolfardisworthy Parish Council	No Response	No Action Required
East Putford Parish Council	No Response	No Action Required
NGOs		
RSPB	It is great to see species such as Nightjar highlighted along with the buffering of SSSIs are being buffered and the retention and creation of open habitats. The species I have most direct involvement with is the Willow tit, and these are to be found throughout the Hartland plantations as well as Melbury, therefore the proposed management to retain and benefit this declining species, such as ride management, is welcomed but should be incorporated across both forestry blocks. Concerns have been raised to the RSPB regarding the proposed imminent clearfell of part of Melbury Hill. One particular area of conifer here which is destined for priority felling was apparently largely destroyed by fire more than 10 years ago and left untouched providing an area of scrub and regenerating native trees together with plenty of standing dead wood. There has been a Willow Tit territory there every year over the last 10 years at least and until last year the area held breeding Spotted Flycatcher too. I do not know the site and the plan makes no reference to a fire damaged area but it may be that this comment refers to area 70958 where the plan states. Areas of Lodgepole pine have significant broadleaf and conifer regeneration intrusion. This should be retained where practicable. I would support this approach both here and where such regeneration has occurred elsewhere in the forest plan area. The proposed fallow rotations at Hartland will likely create suitable pockets of habitat for willow tit (and other species) which will of course be lost once they are returned to the cropping cycle. To reduce the risk to willow tit it would be beneficial to ensure any such areas are part of established ecological corridors. Any retention of habitat during restocking would also be beneficial. There is a missed opportunity within the Venn diagram on Page 7 to link between people & nature. These well established links are accepted elsewhere to have positive health and emotional benefits and that natural assets and associated heritage are valued as much as, and often intertwined with our cultural heritage.	No further action required Page 23 changed and now states, *both the Melbury (and to a slightly lesser degree) the Hartland Plantations are known sites for Willow tit which is likely due to the good habitat provision and condition there.* Page 33, in particular reference to Coupe 70958, already states, *areas of Lodgepole pine have significant broadleaf and conifer regeneration intrusion. This should be retained where practicable.* This is particularly appropriate in the area to the west of the coupe damaged by fire which has considerable broadleaf intrusion. The strips of Lodgepole pine within the coupe are much darker, have less intrusion and therefore are unlikely to be retained. As a general rule where broadleaf intrusion is established and stable it will retained where practicable across the forest plan area in line with Broadleaf Policy. The exception of this is the reversion of fallow rotation units. This approach will ensure that the bird assemblage is not detrimentally affected Already acknowledged on page 15, *the removal of broadleaf and replacement with conifer is approved by Forest Services provided there is no net loss in broadleaf cover across the Plan area.* Wording has been changed to also state, *after a period of time the scrub can be cleared and restocked at productive spacing will some retention of broadleaf cover, particularly along crop edges to maintain corridor habitat and a windfirm buffer.* Comment disputed. The link is already suggested through the crossing of the venn circles and placement of objectives between principles — and is the same for economy and people and economy and nature. This is a standard method of demonstrating sustainable forest management.
Butterfly Conservation	No Response	No Action Required
North Devon Biosphere	No Response	No Action Required
Devon Wildlife Trust	No Response	No Action Required

Consultee Name	Consultee Comment	FC Response
OTHER STAKEHOLDERS		
South West Water	No Response	No Action Required
South West Lakes Trust	No Response	No Action Required
EA Technology	No Response	No Action Required
Beckland Game Shoot	No Response	No Action Required
Bursdon Moor Commoners	No Response	No Action Required
Hartland Forest Golf Course	No Response	No Action Required
Member of public	Would like to see paths better maintained as in paths trimmed as some have become impassable and more routes that loop around.	Not a Forest Plan issue. Comment has been passed to Beat team and District Recreation Lead.
Member of public	The older established trees with their moss and fauna should be kept as much as possible, and the diverse native species left as well.	Page 23 now reads *Mature established broadleaved trees with their moss and fauna will be retained as much as possible, and allowed to developed in senescent habitats.*
Member of public	My main area of concern is the provision and protection of habitat for Willow Tit (WT). I am most familiar with the Melbury area which supports a significant population of WT - I have identified at least 12 territories over the last 7+ years from observations along paths and rides covering only part of the 'suitable' area. I have also observed WT on occasional visits to Summerwell, Trew etc leading me to believe that that area holds a significant population and general comments about Melbury will apply there too. The majority of sites where WT have been located are characterised by being within or close to 'neglected' areas. For example, the broad verge habitat of neglected willow, birch, etc bordering the main road running through the Melbury Hill block has held several WT territories each year, providing as it does, ample standing dead wood for nest sites and scrub for feeding. Management over recent years has been confined to trimming along the very edge of the road. Such 'neglect' should in fact be considered an important management tool alongside occasional regeneration of successional vegetation always ensuring that sufficient dead wood remains. It could be applied to all edge habitats whether along roads, rides or edges of forest blocks. On Melbury Hill, coupe 70958 is of particular importance to WT and other bird species. Again the 'neglected' area of dead/dying Lodgepole Pine in this coupe with regenerating rowan, oak, birch etc holds a WT territory each year and has also held Spotted Flycatcher - also Red Listed - which have nested here regularly. I believe that this area should remain untouched in its entirety providing a refuge for these species. Similarly the area immediately to the N of the track through this coupe is again characterised by 'neglect' and supports a rich assemblage of bird species including the aforementioned WT and Spotted Flycatcher, Marsh Tit (Red listed), Raven and, in good cone years, Crossbill have	Comment acknowledged, however 'neglect' cannot compromise the public and business access required of the road and ride network. Page 24 therefore remains, *road sides will continue to be cut on a rotation basis to provide an supply of suitable habitat whilst wetter and more remote rides which are not used for deer control will be allowed to regenerate with willow over time to provide a considerable amount of habitat.* Page 33, in particular reference to Coupe 70958, already acknowledges, *areas of Lodgepole pine have significant broadleaf and conifer regeneration intrusion. This should be retained where practicable.* This is particularly appropriate in the area to the west of the coupe damaged by fire which has considerable broadleaf intrusion. The strips of Lodgepole pine within the coupe are much darker, have less intrusion and therefore are unlikely to be retained. Willow intrusion to the north of the track will also be retained where practicable. This approach will ensure that the bird assemblage is not detrimentally affected.