

Eggesford & Wistlandpound Forest Plan 2017 - 2027 West England Forest District



The mark of
responsible forestry

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



Declaration by FC as an Operator.

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

Ben Robinson
FCE File Ref: OP10/75
OLD Ref: PE29, 30, 30/1,
31, 32, 33



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SM Plan	
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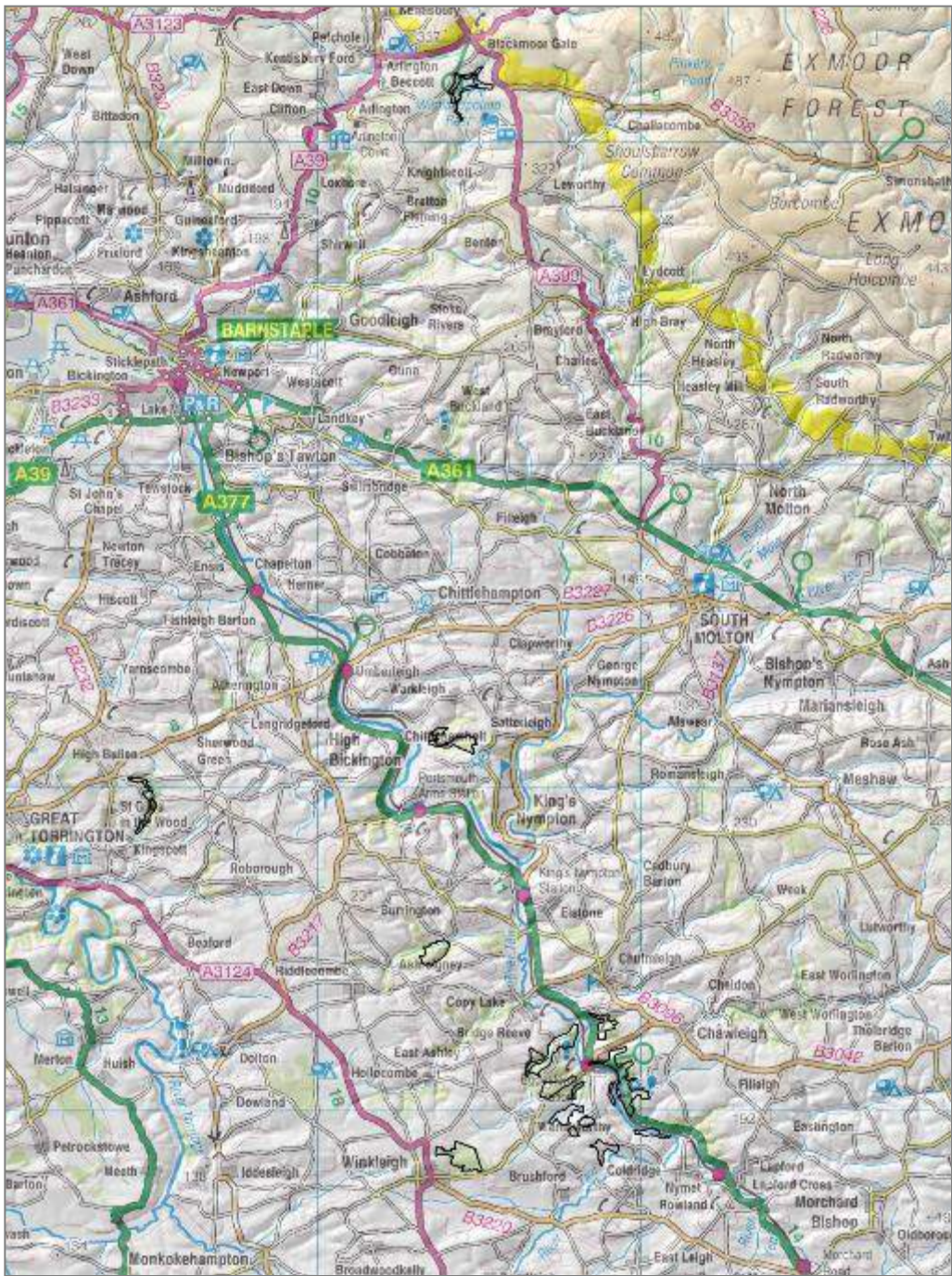
Location

The Eggesford and Wistlandpound Forest Plan area lies across mid and north Devon, with woodlands scattered 6 miles from Barnstaple in the north to 8 miles from Cridton in the south. The Plan area is made up of a number of discreet forest blocks totalling 527ha. The most substantial cluster of these is around the village of Eggesford.


















The Plan area sits within a wooded valley 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 River Taw.

The majority of the land is at 50-150 metres above sea level and is undulating to very steep in places. Wistlandpound is situated at significantly higher elevations of between 220-270 metres above sea level. The climate is warm and fairly moist with an average annual rainfall of 800–1700mm, a soil moisture deficit of around 140mm, and an accumulated temperature over 5°C of 1800°C.

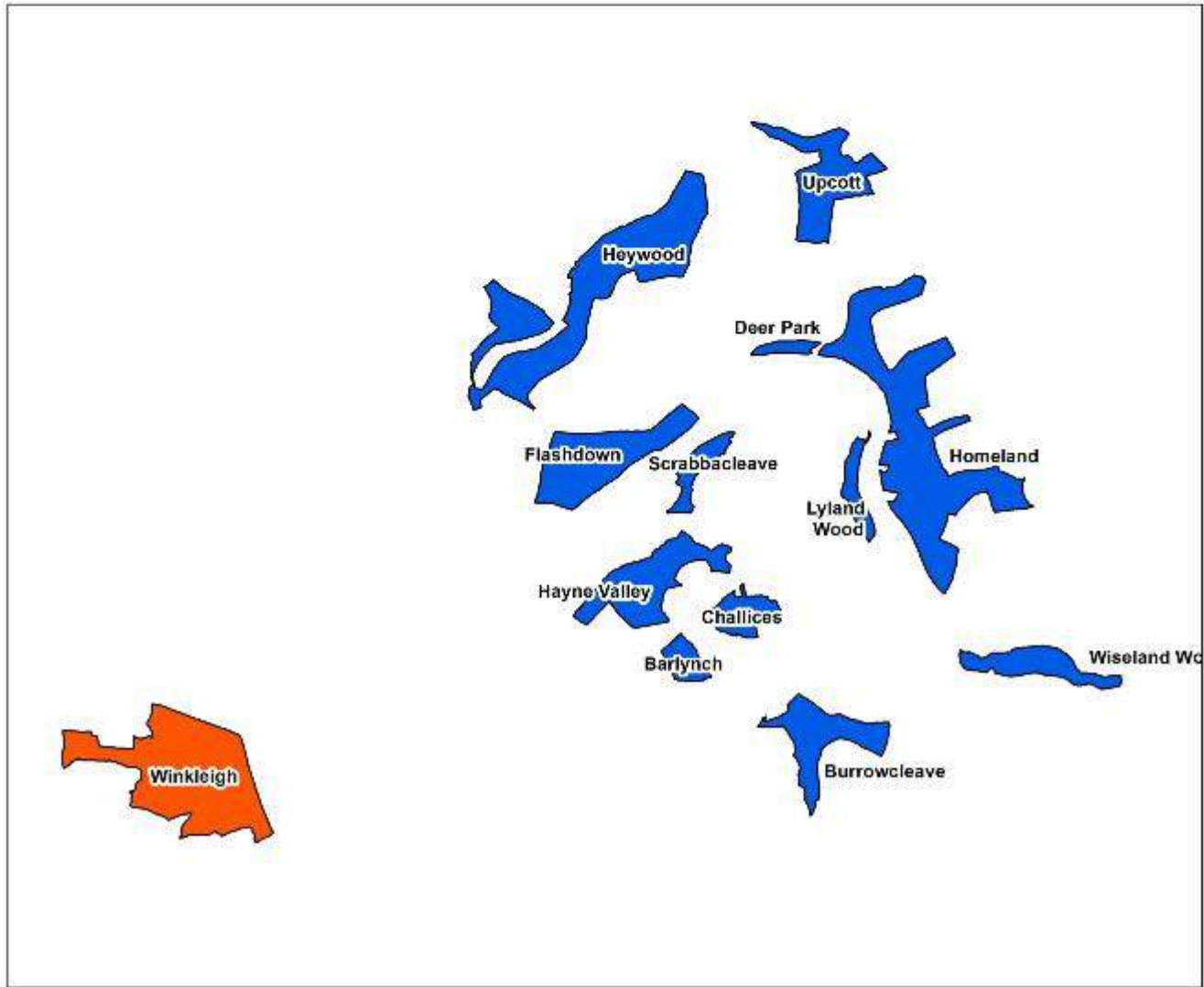
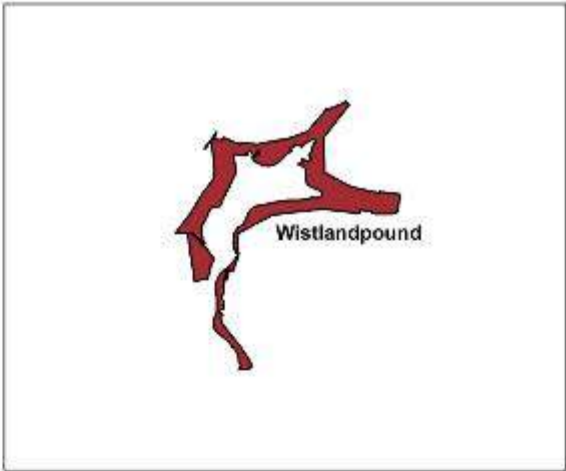
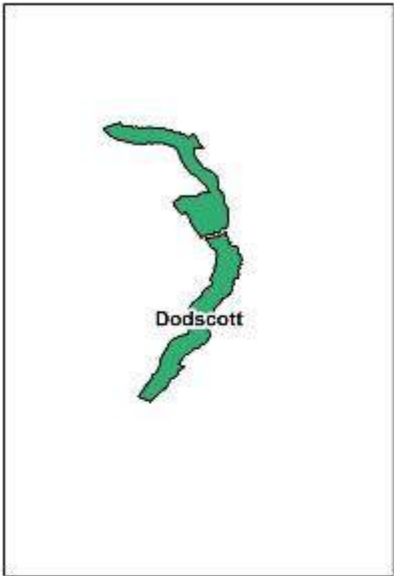
The soils are primarily poor and fresh upland brown earths (1u) with underlay of shallow rock.



0 0.5 1 2 3 4 Miles
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Forest Name	Area	Plan Area
 Wistlandpound	36.8	7%
 Dodscott	29.8	6%
 Bithefin	42.5	8%
 Shortridge	41.6	8%
 Winkleigh	65.3	12%
 Barlynch	6.3	1%
 Burrowcleave	21.8	4%
 Challices	10.3	2%
 Deer Park	3.2	1%
 Flashdown	32.8	6%
 Hayne Valley	27.8	5%
 Heywood	72.4	14%
 Homeland	80.7	15%
 Lyland Wood	6.6	1%
 Scrabbacleave	7.4	1%
 Upcott	26.6	5%
 Wiseland Wood	14.9	3%
	526.8 ha	100%

0 0.05 0.1 0.2 0.3 0.4 Miles



About

The Eggesford and Wislandpound Forest Plan area is made up of numerous separate forest blocks totalling 527 hectares in Devon. As forest blocks set within the intimate wooded valley landscape they have very high natural and landscape diversity and value.



The forests managed as part of the public forest estate stretch from Wistlandpound in the north, 6 miles from Barnstaple, through Shortridge, Dodscott, Bithefin and Winkleigh close to the village of the same name to Eggesford in the south which is 8 miles north of Crediton.

The public forest here is a predominantly conifer on ancient woodland, having been planted to address the national timber shortage of the early Twentieth Century. The Plan area saw the establishment of the Forestry Commission on December 8th, 1919 when the first trees were planted in Flashdown Wood, part of the old Eggesford Estate. The area is now known to produce high quality Douglas fir which makes up the majority of the trees here supplemented primarily with spruce and larch. Areas of remnant ancient semi-natural woodland do remain and are made up of oak and birch with beech. Most of the areas are actively managed to provide timber for local and national businesses, and to improve the quality of the remaining tree crop.

The Plan area contains one Scheduled Monument within Heywood which is a motte and bailey castle situated in a commanding location overlooking the valley of the River Taw. This site is free of tree cover and a popular site of interest.

The Plan area is a rich for ecology and includes NVC W10 Priority Lowland Mixed Deciduous (oak/birch) Woodland which is habitat in part for dormice, raptor and otter as well as NVC W8 Priority Lowland Mixed Deciduous (ash) Woodland in wetter areas which is also important for habitat and water regulation.

The vast majority of the Plan area is Open Access, confirmed by the Countryside Rights of Way Act. The exception being Wistlandpound and Winkleigh which are de facto Open Access due to it being leased from another landowner. The Eggesford and Wistlandpound woodlands are the main focus of informal recreational activity and both are particularly nice places to picnic, walk, run or ride thanks to the river and reservoir side settings, good path network and very large trees.

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 product 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 to:

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

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.

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

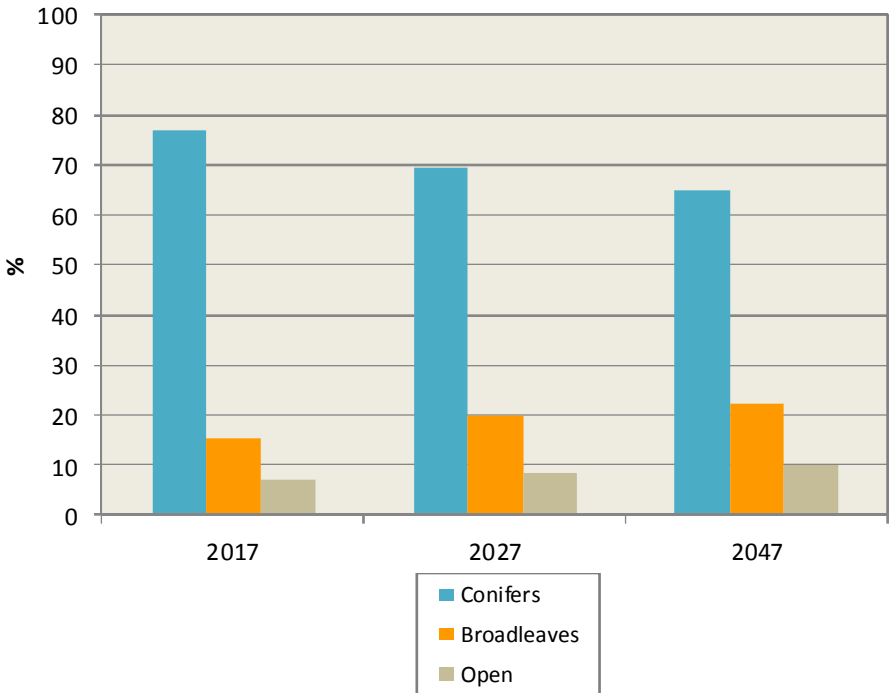
The Plan makes provision to ensure proposals are in keeping with the neighbouring intimate wooded landscape. Implementation and maintenance of an environmental corridor system will continue to increase diversity of habitat and internal landscaping.

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

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.

HECTARES	Conifers	Broadleaves	Open space
Clearfelling	47	0	0
Restocking/Regeneration	28	13	6



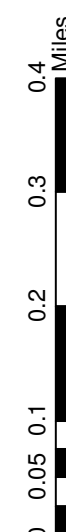
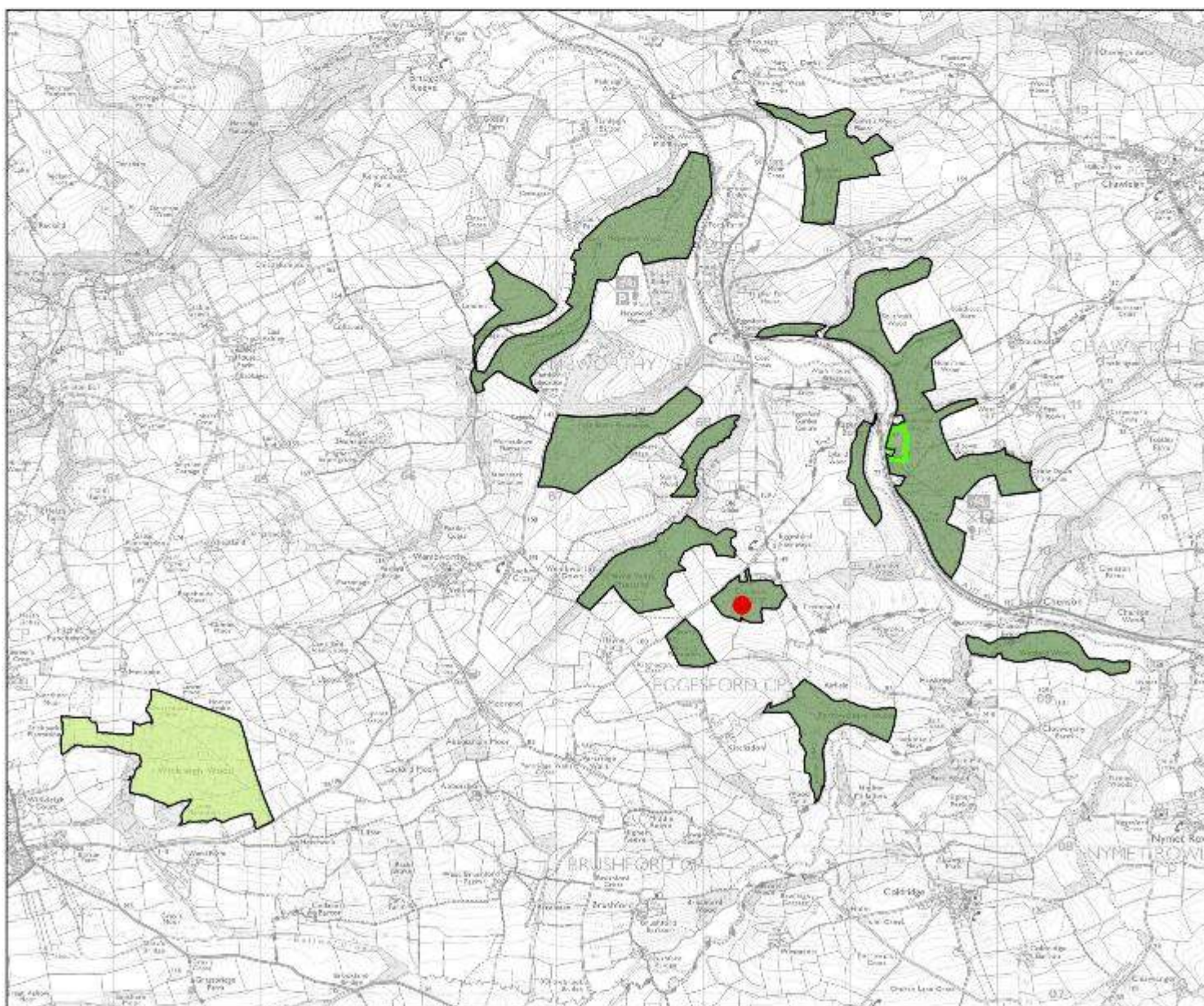
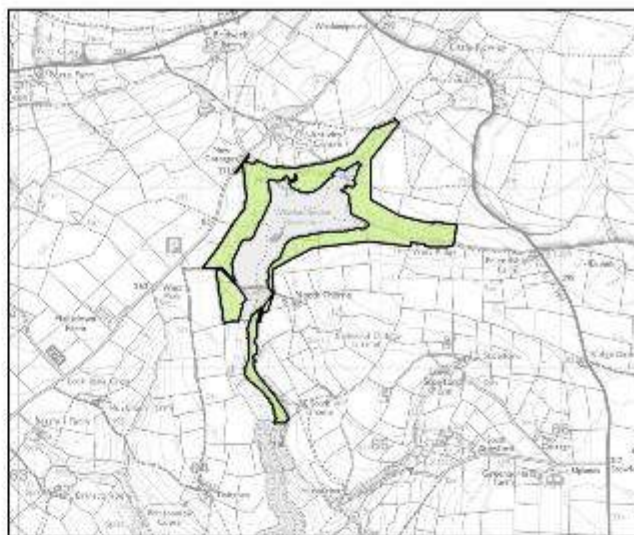


Forestry Commission
woodlands have
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rules of the Forest
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Legend

- Freehold
- Leasehold
- Grazing Unit
- Telephone Mast



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The majority of the Plan area (425ha) is held under freehold. Eggesford was acquired in the 1920s as one of the original planting sites for the Forestry Commission, with supplementary areas secured in the 1950s and 60s.

A contiguous woodlands of Winkleigh and Wistlandpound are held through leasehold totalling 102ha. The latter of which notably surrounds the reservoir which is owned by South West Water.

A grazing unit within Hilltown Wood and a telephone mast at Chalice Plantation are management agreements which need to be considered when considering management proposals for the Plan area.

History

December 8th, 1919 saw the first trees planted by the newly created Forestry Commission right here, in Flashdown Wood, part of the old Eggesford Estate. By 1956 the Commission had planted one million acres of woodland, an occasion commemorated by a granite stone unveiled by Her Majesty Queen Elizabeth II. The Queen's Stone can still be seen in Hilltown Woods picnic area.

All trains must stop at Eggesford Station, as the local landowner made it a condition of releasing the land to build the railway in 1854. "I arrived at Eggesford Station a little after four, and found there Lord Portsmouth's Brougham waiting to take me up to the house, so there was not trouble at all. The scenery here is lovely and the house very handsome." So wrote Thomas Hardy of the area, in 1885.

The forest itself possesses some magnificent Douglas fir, including a veteran on the Eggesford Estate, planted in around 1840. There is also a motte and bailey castle, a scheduled ancient monument that is all that remains of a once imposing Norman fort.



Management Objectives



WEST ENGLAND FOREST DISTRICT

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

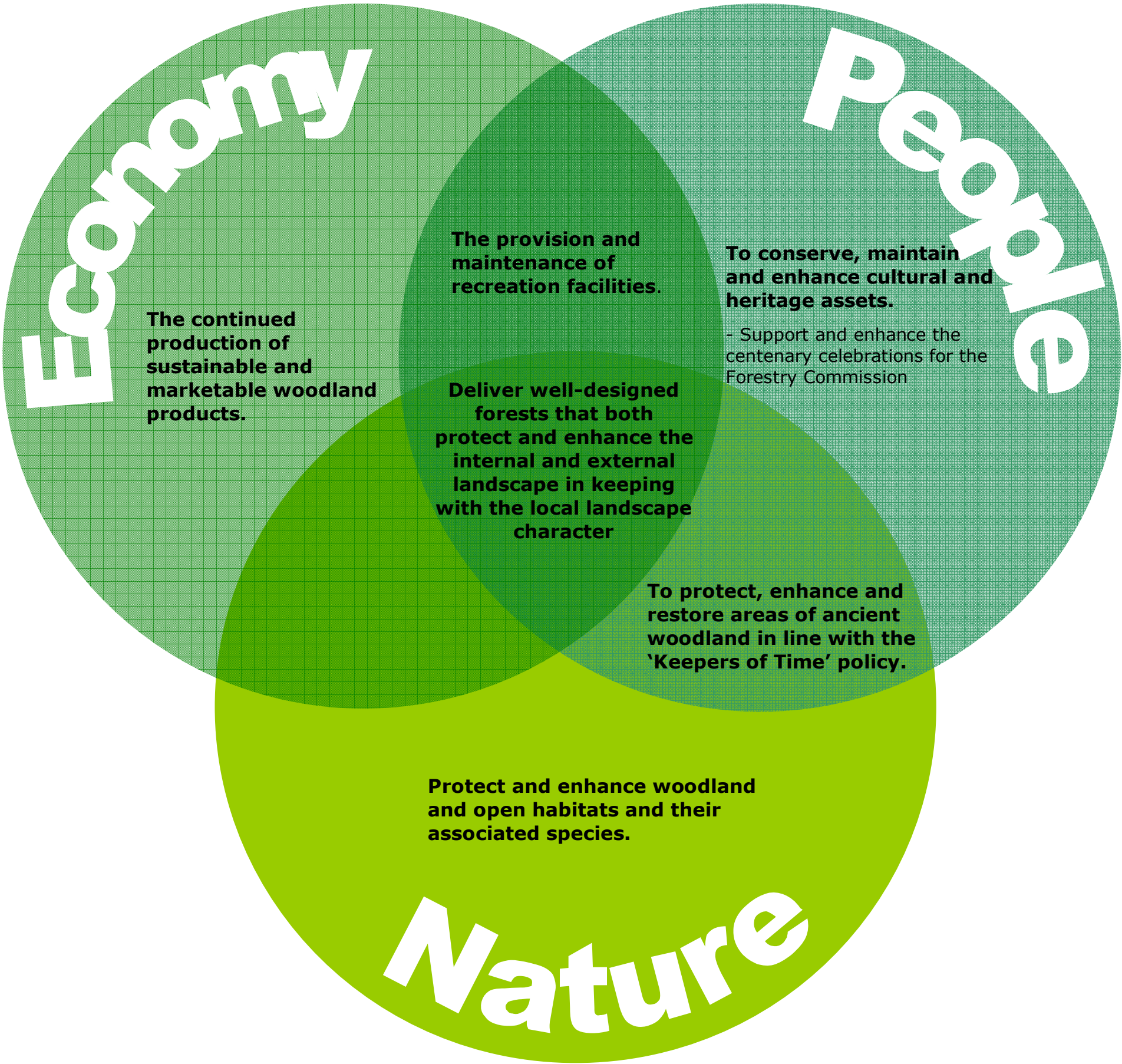
Declaration by FC as an Operator.
All timber arising from the Forest Enterprise estate
represents a negligible risk under EUTR (No 995/210)



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.





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.



District Strategy



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 thinning yield. Minimal clearfell timber production will occur from the conifers.	Comparison of total production forecast yield (15,000m ³ (2017-2021) and 30,000m ³ (2017-2027)) 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
To protect, enhance and restore areas of ancient woodland in line with the 'Keepers of Time' policy.	Targeted felling of conifer crops and suppression of non-native regeneration to aid natural native regeneration and native species replanting	Analysis of woodland naturalness at FP review Photographic survey at FP review
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	Ops 1 recording Priority Habitat condition survey
To conserve, maintain and enhance cultural and heritage assets. - Support and enhance the centenary celebrations for the Forestry Commission	Liaise with Devon Archaeology Service prior to commencement of works in proximity to heritage assets. Where appropriate limit shrub encroachment on features. Manage Eggesford SM in line with Management Plan Eggesford being a focal point of interest and celebration, commemorative planting and afforestation	Ops 1 recording Ground survey at FP Review SM Monument Plan assent and monitoring 3 hectares of commemorative planting. Release of short history of Eggesford forest
Deliver well-designed forests that both protect and enhance the internal and external landscape 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 Site visits checking for restock/regen species and diversity
The provision and maintenance of recreation facilities.	Management of existing facilities will be maintained by the Beat team, including road and ride corridors and car parks. Visitor numbers will be maintained.	Beat team will monitor usage and ensure the up keep of the signage and car parks.

Landscape Character



149 The Culm National Character Assessment Profile

Source: Natural England (2012)

All of the forest blocks, but Wistlandpound, are components within The Culm NCA. 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 very difficult to access coastal combes and steep-sided valleys of the Taw and Torridge; however, plantations at the centre of the area have the capacity to produce both hard and soft wood in significant volumes.

145 Exmoor National Character Assessment Profile

Source: Natural England (2012)

Only Wistlandpound lies within Exmoor NCA, which is predominantly a landscape of upland plateaux of Devonian sandstones and slates terminating in the north at the Bristol Channel with a spectacular cliff coastline. It lies across the counties of Devon and Somerset. This is a diverse upland landscape, rising abruptly out of the surrounding lowlands. Central high, treeless moorlands used for rough grazing, incised by steep wooded valleys and combes with occasional grass and arable fields.

CHARACTER DESCRIPTION – Taw Valley

Source: Devon County Council (2008)

This is an intricate, complex and varied landscape within a dramatic valley, which contrasts with the surrounding open, elevated farmland. Woodland and slopes combine with bends and spurs in the valley to hide views onward and create constant surprises. Tightly wooded sections unexpectedly open out to display wide vistas across the valley. Around Eggesford, the steep valley sides and mixture of broadleaved and coniferous woodland is evocative of continental Europe.

Strategy To protect the landscape’s scenic quality, peaceful character and strong sense of place through retention of its mosaic of parkland, woodland and farmland.

Protect	Manage	Plan
Protect the lightly settled and tranquil character of the valleys, and their dark night skies.	Manage woodland, including through traditional techniques such as coppicing and extensive grazing to maximise age and species diversity and a rich ground flora.	Plan to revert coniferous plantations to broadleaved woodlands on maturity or felling, possibly retaining some sites for recreation facilities such as mountain-bike trails.
Protect open skylines on adjacent high ground which form the backdrop to the valleys.	Manage plantations for sustainable timber production and wildlife interest.	Plan to extend and link woodland and wetland

CHARACTER DESCRIPTION – High Culm Ridge

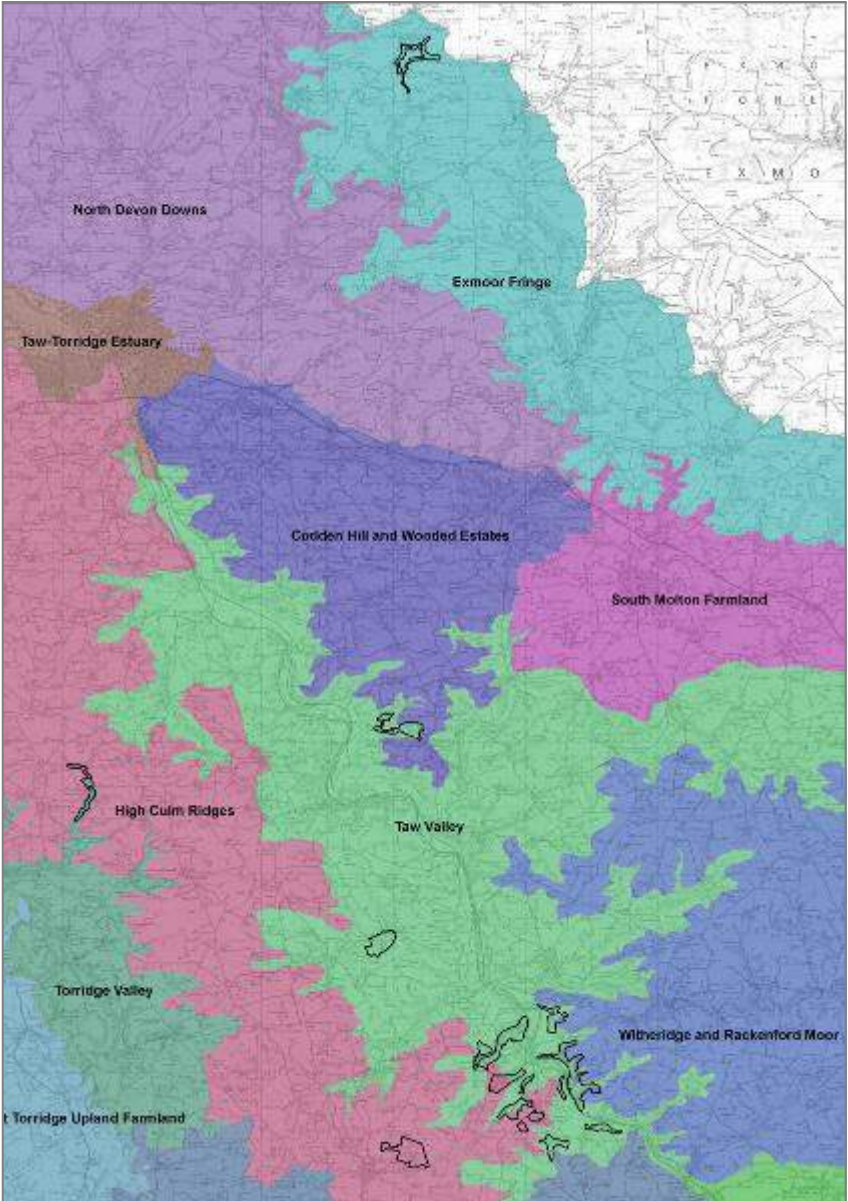
Source: Devon County Council (2008)

An open, elevated landscape, where the long views out make an important contribution to the sense of place. The high land of Exmoor (to the north) and Dartmoor (to the south) provide orientation, and a backdrop of seasonally-changing colour. In the north, views out to sea and across the north Devon coast lend a strong maritime influence. Views across and into the neighbouring Taw and Torridge valleys emphasise the contrast between this open farmland and the wooded, enclosed and intimate valley landscapes on either side. Skylines are very important, with clumps of trees and square church towers acting as prominent features and landscape focal points. Woodland and occasional patches of unimproved grassland contribute to the seasonally-changing colour and texture of the landscape.

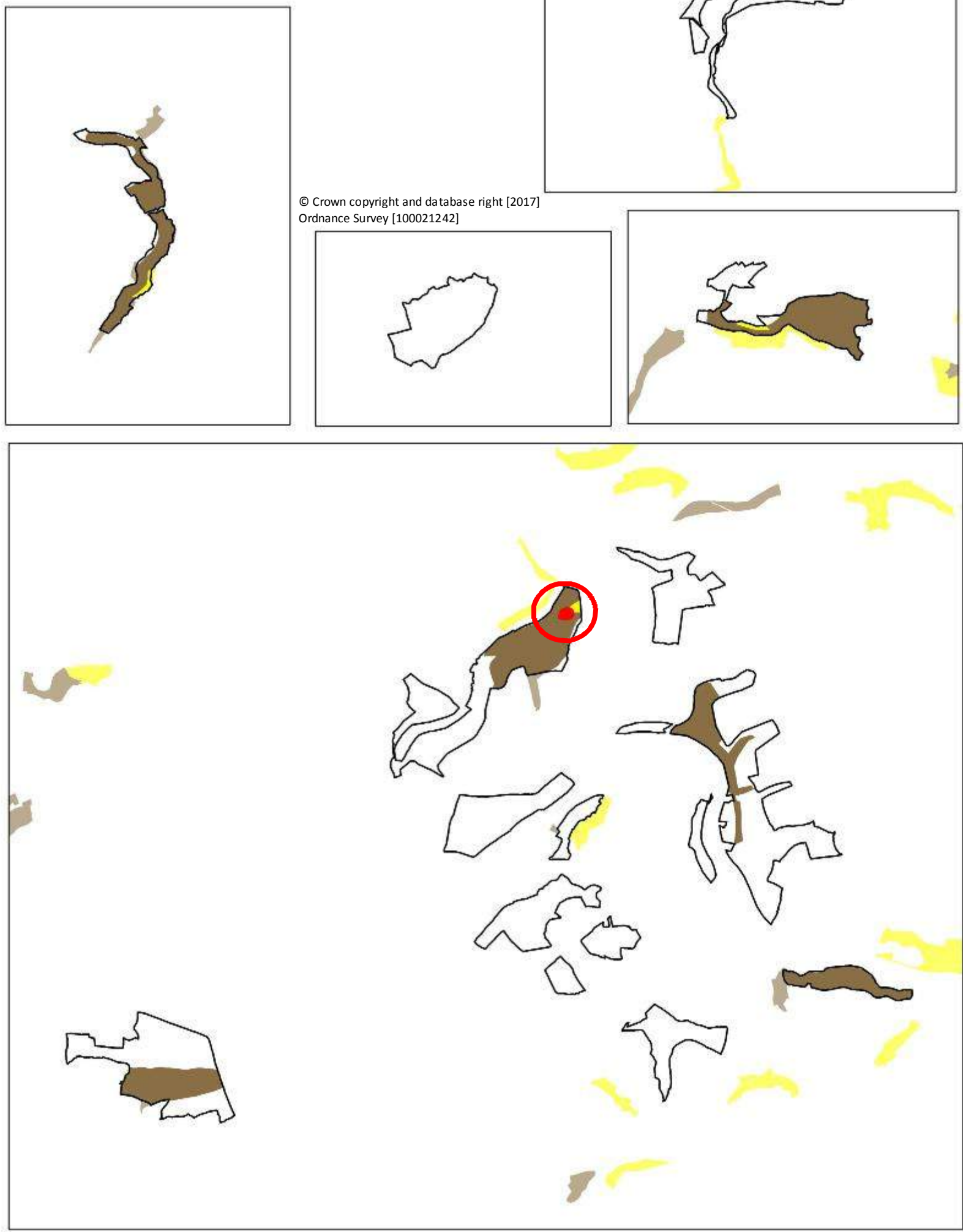
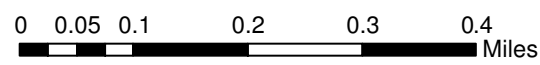
CHARACTER DESCRIPTION – Exmoor Fringe

Source: Devon County Council (2008)

This landscape of rolling, interlocking ridges, deeply incised by river valleys and patterned by beech hedges, provides an important setting and transition to Exmoor. The upland river valleys drain southwards from the high moorland, forming deep clefts in the landscape that contain clean, fast-flowing water and are clothed in ancient oak woodlands. The Bray valley is the major landscape feature of the western part of the area; further east the valleys are shorter, steeper and narrower. Tree features and hilltop clumps form notable landmarks. The area is sparsely settled, with individual farmsteads and small hamlets and vernacular buildings that are mainly of sandstone and slate. Seen from the south, the area forms the foreground landscape to Exmoor. Seen from the north it forms a diverse and strongly patterned patchwork of fields and wooded valleys.



Designations



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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.

Legend

- Scheduled Monument
- FC Ancient Woodland**
 - Ancient Semi-Natural Woodland
 - Plantation on Ancient Woodland Sites
- Neighbouring Ancient Woodland**
 - ASNW
 - PAWS

Heywood Castle

The Plan area contains one Scheduled Monument, Heywood Castle. This monument includes a motte and bailey castle which is situated in a commanding location overlooking the valley of the River Taw. The castle is thought to date from the 1130s-40s and the fact that two castles are so close together may reflect civil war antagonism or replacement of one by the other.



Ancient Woodland

The Plan area and local landscape is host to considerable areas of designated Ancient Woodland sites (AWS), both remnant ancient semi-natural woodland (ASNW) and plantation on ancient woodland sites (PAWS). Of the total Plan area, over 28% is designated Ancient Woodland (146.8ha). This is mainly focused within Shortridge, Dodscott and the Eggesford and Winkleigh woodlands. The vast majority of this Ancient Woodland is PAWS, having been planted with non-native conifer throughout the 1900s. The few areas of remaining ASNW are small, fragmented and oak dominated.

Area			
ASNW	PAWS	Secondary	TOTAL
2.8 ha	144.0 ha	380.0ha	526.8 ha

Analysis & Concept

Wistlandpound



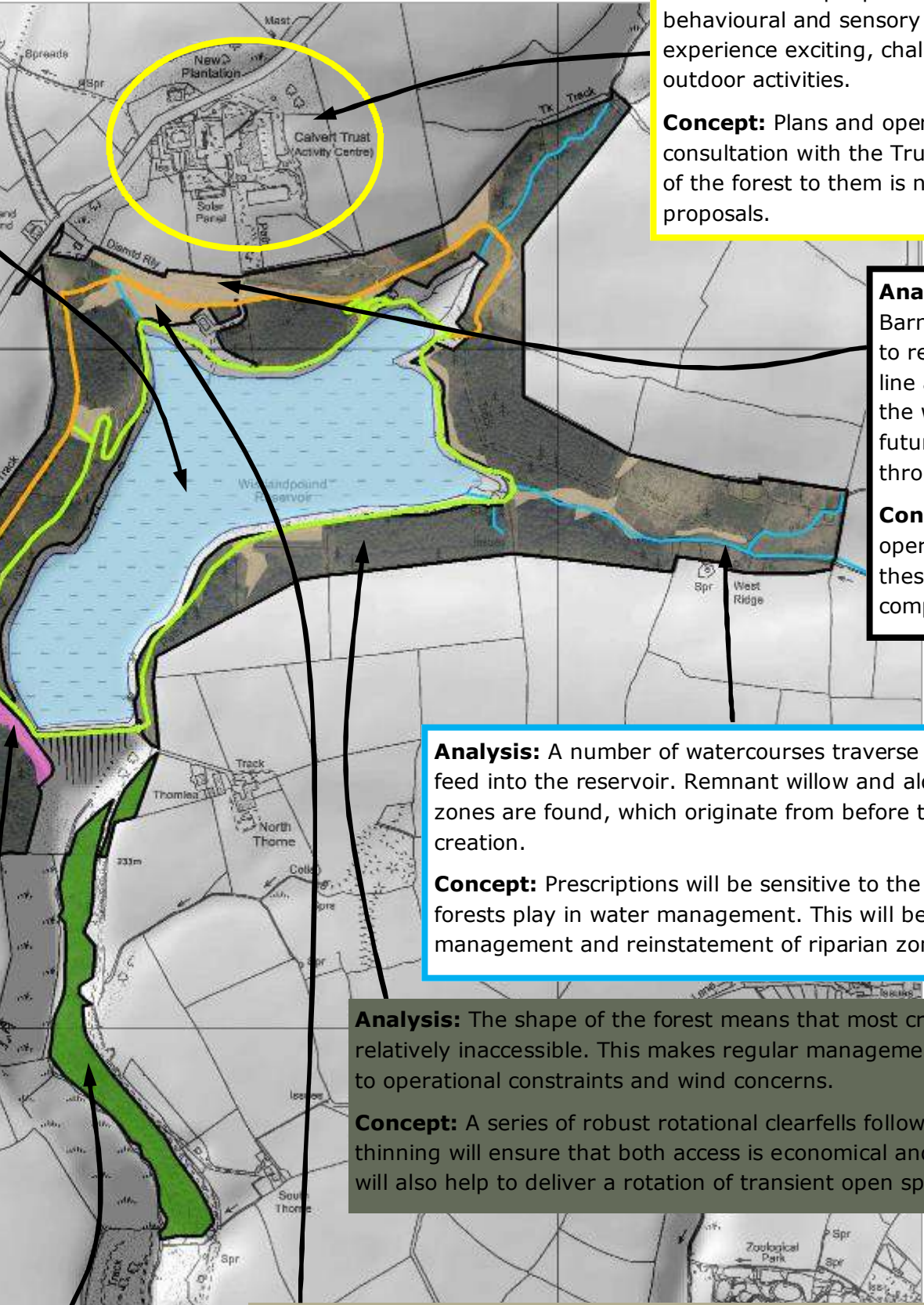
Wistlandpound forest is located in the north of Devon, close to Exmoor National Park at around 250m asl. It is a unique forest given its interaction with the reservoir it surrounds and the added benefits this integration provides. It is an important site for recreation and internal landscape quality affirmed by the Discover Wistlandpound Partnership which sees Calvert Trust, SWLT and FC working together to deliver a high value recreation experience. However the shape and nature of the holding means that access and crop stability is a concern, therefore the primary objective in this forest will be to maintain landscape and recreation value efficiently. This will be achieved principally through a rolling rotation of robust clearfells, which create transient open space mixed with mature crop. Thinning of crops will generate minimal volume and therefore will only be pursued when economic to do so, i.e. when combined with other operations.

Analysis: The Wistlandpound Reservoir, created in 1956 is managed by South West Lakes Trust. It is used primarily for walking, bird watching and angling as well as used by the nearby Calvert Trust.

Concept: Plans and operations will be in consultation with the South West Lakes Calvert Trusts to ensure the value of the forest to the reservoir and its tributary watercourses is not diminished by proposals.

Analysis: The Calvert Trust has a large residential centre close to the forest. This centre enables people with physical, learning, behavioural and sensory disabilities to experience exciting, challenging and enjoyable outdoor activities.

Concept: Plans and operations will be in consultation with the Trust to ensure the value of the forest to them is not diminished by proposals.



Analysis: Two footpaths circuit the reservoir and include interactive play in places. These are very popular trails given the accessibility, length and fact that they are a loop around a scenic vista

Concept: The management of roads and ride sides in line with the District policy will ensure that the quality of these are maintained. The continued intervention will also continue to provide good internal views.

Analysis: Lynton and Barnstaple Railway intend to re-open the old railway line and create a stop in the woodland with a future phase run the line through the forest.

Concept: Plans and operations will ensure these intentions are not compromised

Analysis: A charged car park, not administered by the Forestry Commission is a key focal point for entrants into the forest. Additional access is also provided through a car park close to the Calvert Trust and public rights of way.

Concept: Proposals will ensure that the entrance and quality of access into the woodland is maintained to ensure that forest remains a popular visitor destination.

Analysis: A number of watercourses traverse the forest and then feed into the reservoir. Remnant willow and alder dominated riparian zones are found, which originate from before the reservoir's creation.

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 shape of the forest means that most crops are narrow and relatively inaccessible. This makes regular management more difficult due to operational constraints and wind concerns.

Concept: A series of robust rotational clearfells following sufficient thinning will ensure that both access is economical and crops stable. This will also help to deliver a rotation of transient open space.

Analysis: A deeply incised valley below the dam creates a significant bank covered in ash and fir which is difficult to access and manage.

Concept: This area will be managed with minimal input to ensure safety and slope stability but limit investment and cost implications.

Analysis: Following the compulsory felling of diseased larch crops, a number of transient felled areas have been created. Some of these have been restocked, others allowed to regenerate, predominantly with willow, hazel and ash.

Concept: Regeneration with broadleaf species with some conifer intrusion is sufficient to re-establish. The creation of transient open space creates good visual diversity across the internal landscape which will continue to be created.

Legend

- Easy Walking Trail
- Moderate Walking Trail
- Watercourses
- Reservoir
- Car Park
- Isolated Woodland



This small, secluded Douglas fir dominated ancient woodland is situated along an east facing slope of a small but steep valley which borders the Dodscott Brook. The soils are deep and rich and support NVC type W10, with regenerating native components found along the valley floor and mature tree remnants found particularly in the northern section. The primary objective within this woodland is to enable ancient woodland restoration to native species cover and the associated ecosystem functioning in an economically efficient way; that is through the gradual removal of non-native trees in favour of native species.

Analysis: Dodscott Brook runs along the eastern edge of the forest which then flows into the River Torridge. The riparian zone is dominated by ash, alder and hazel having recently had the remaining conifer cover removed

Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through the management towards 50% open 50% dappled shade, provided by regenerated broadleaves.

Analysis: The woodland is found at the bottom of a deeply incised valley and is otherwise surrounded by agricultural fields connected via hedgerows.

Concept: Proposals will be in consultation with neighbours to ensure management complements adjacent visual habitats.

Analysis: Recent intervention and removal of mature conifer along the stream side has initiated the proactive restoration and regeneration of the ancient woodland.

Concept: Proposals will build on this approach to precipitate the intrusion and establish of native woodland functioning further up the slope.

Analysis: The vast majority of the woodland is Ancient Woodland and was most likely managed as oak with hazel coppice in the past. The majority of these areas are now Douglas fir and therefore PAWS. Areas of ASNW, often ash dominated W8, remain in small pockets.

Concept: Proposals will outline a plan of restoration to native species cover in line with Keepers of Time policy. This will be achieved through a process of thinning out the conifer to favour ancient woodland features and native regeneration and protecting areas of remnant ancient woodland —see page 17.

Analysis: A small area of secondary woodland is in the north west of woodland which is similar in character to the rest of the woodland.

Concept: This area will be managed in similar way to the rest of the woodland; through continuous cover forestry. This will be to achieve a resilient complex structured broadleaf dominated, mixed woodland.

Analysis: Much of the forest block sits in an intimate wooded landscape and is surrounded by small neighbouring rich and biodiverse broadleaf woodlands situated along the valley bottoms.

Concept: Proposals will be in consultation with neighbours to ensure management complements adjacent crops and habitats.

Analysis & Concept
Shortridge

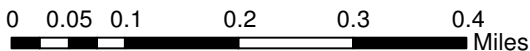
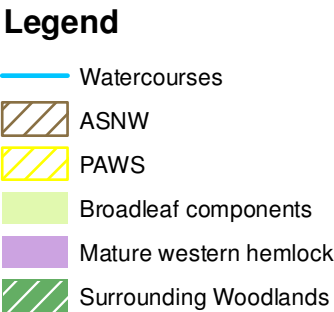
The woodland is a small rich ancient woodland close to the village Chittlehamholt. The soils are deep and rich and support a mixture of NVC type W10 and W8 along the riparian areas/ Large areas of mature Douglas fir and western hemlock, some of which is intruded with ash and oak, are found throughout the woodland with younger crops of Sitka spruce, Douglas fir and hybrid larch also present. The main objective within the majority of this woodland is to enable ancient woodland restoration to native species cover and the associated ecosystem functioning in an economically efficient way; that is through the gradual removal of non-native trees in favour of native species. In areas not designated, the objective will be to maintain economic output in sympathy with the surrounding ancient woodland.

Analysis: A number of watercourses traverse the forest and then feed into the River Taw. Areas of remnant ancient ash and alder dominated riparian woodland are situated along the stream sides and act as a regulator for water quality.

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

Analysis: Profusely seeding or increasingly shade bearing conifers, notably western hemlock, are threatening the condition and restoration potential of the ancient woodland.

Concept: Targeted economic removal of these stands will be prioritised so as to ensure that restoration of a rich biodiverse broadleaf woodland is not threatened. Areas of young conifer directly adjacent to the streams will also be targeted to allow broadleaf intrusion and establishment.





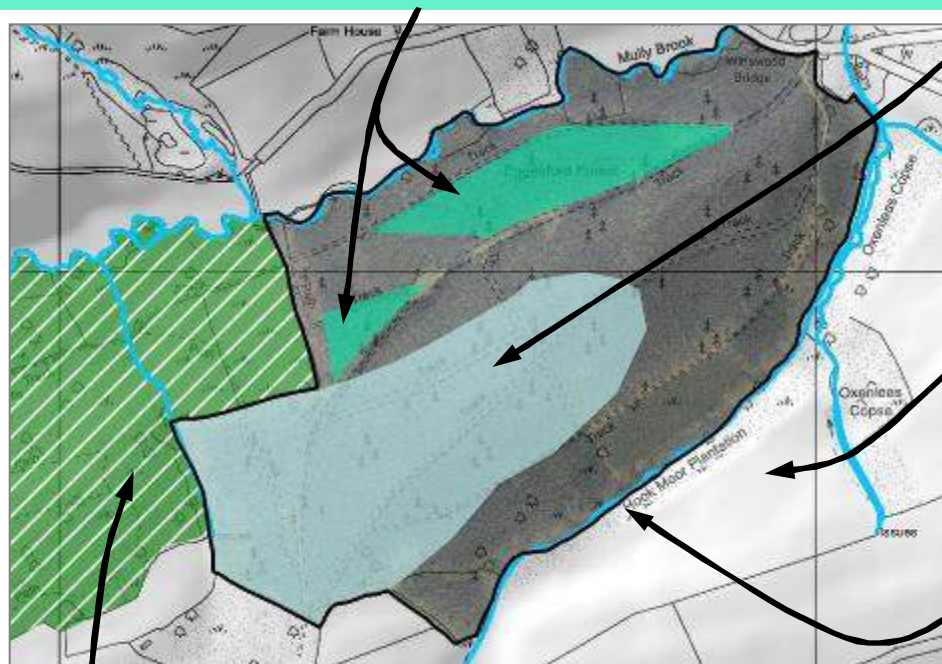
This relatively remote secondary woodland site is situated on an old piece of moorland and is surrounded by agricultural pastures and scrub woodland. The soils are therefore poor with the site relatively dry. The main productive species are Douglas fir and Sitka spruce which is managed to clearfell/restock prescriptions. The soil conditions mean that whilst productive species diversification is an key objective, this form of forest management will remain for the majority of the areas. The richer and wetter northern and southern edges have greater broadleaf intrusion, yield and forest structure diversity. These areas will be managed more sensitively to maintain water and visual quality. A number of rights of way and informal paths and trails are used by local residents and the woodland is a popular destination for quiet recreation.

Analysis: Original plantings of Douglas fir, Norway spruce and Japanese larch, some of which are in shelterwood, remain on the north side where soils are deeper.

Concept: A strategic approach will be taken retaining or perpetuating these stands where possible.

Analysis: Soils are poorer and drier to the western and slightly higher elevations. Windblow remains a going concern in this area.

Concept: Clearfelling will remain the mainstay of forest management in this area, with suitable future species considered to ensure stable resilient crops are perpetuated.



Analysis: Much of the forest block sits in an intimate landscape with a small number of discreet scrubby but biodiverse woodlands and copses close and adjoining the woodland.

Concept: Proposals will be in consultation with neighbours to ensure management complements adjacent crops and habitats.




Analysis: Before being afforested the area was moorland. Surrounding areas remain nutritionally poor and are used for pastoral agriculture or have been allowed to colonise with willow, hazel and oak scrub.

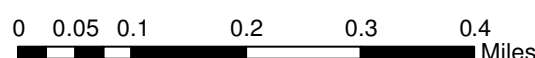
Concept: Proposals will be in consultation with neighbours to ensure management complements adjacent visual habitats.

Analysis: A number of watercourses border the forest and then feed into the River Taw. Areas of remnant oak, willow and ash dominated riparian woodland are situated along the stream sides and act as a screening fringe around the forest edge.

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

Legend

- Watercourses
-  Poor Soils
-  First Plantings
-  Surrounding Woodlands



Analysis: Profusely seeding or increasingly shade bearing conifers, notably western hemlock and Grand fir, are threatening the condition and restoration potential of the ancient woodland.

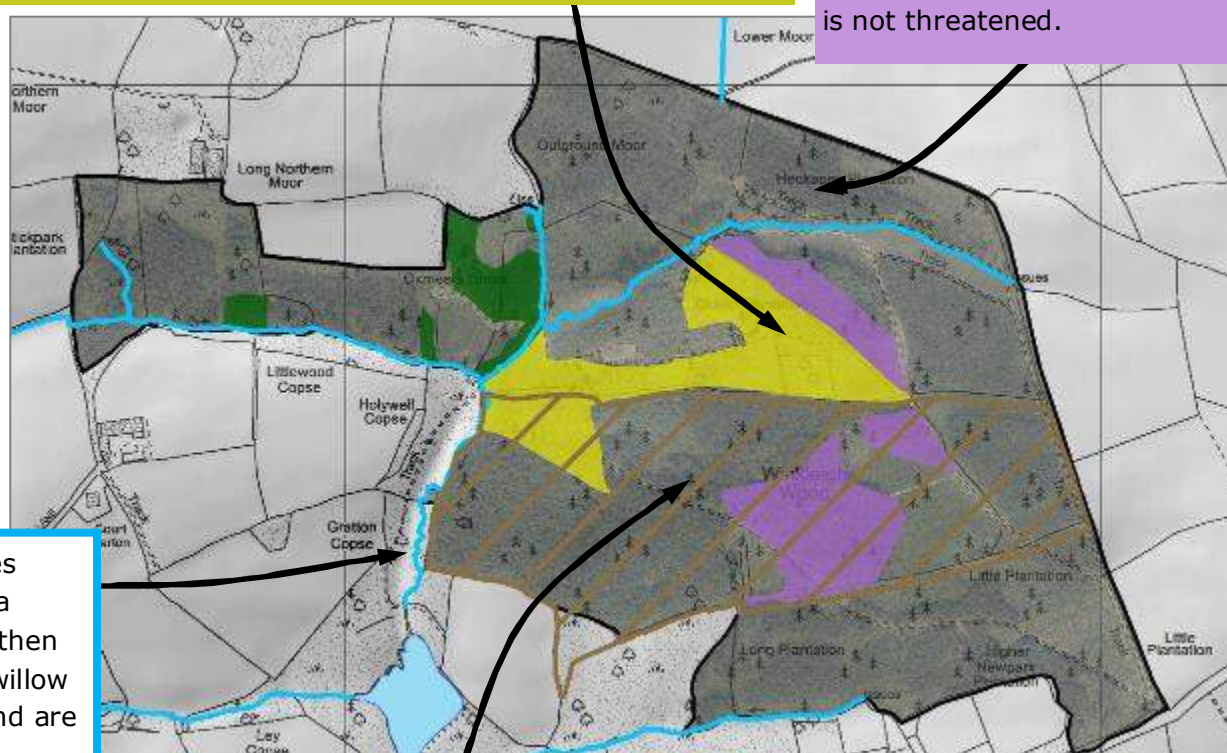
Concept: Targeted economic removal of these stands will be prioritised so as to ensure that restoration of a rich biodiverse broadleaf woodland is not threatened.

Winkleigh

This small but busy woodland is situated close to the village of Winkleigh and is situated across secondary woodland and some richer areas of registered ancient woodland. The soils are relatively poor with the some areas of surface-water gley. The woodland is defined by the large regenerating conifers, such as Douglas fir, Grand fir and western hemlock most of which are in diverse mixtures, together with single remnant broadleaf standards and regenerating broadleaf scrub. The main objective within the ancient woodland areas is restoration to native species cover and the associated ecosystem functioning in an economically efficient way; that is through the tackling of immediate threats and then gradual removal of non-native trees in favour of native species. In other areas the continued production and diversification of timber species will be pursued whilst maintaining a woodland valued for biodiversity, recreation and amenity.

Analysis: A diverse and resilient woodland of mature mixed conifer and intruding broadleaf is located in the centre of the woodland.

Concept: A proactive silvicultural approach will ensure that both condition and productivity of this site is maintained as the stand develops. This will be achieved by ensuring that conifer remains a key component but does not over dominate through continuous cover management.



Analysis: A band of Ancient Woodland runs through the woodland and was most likely managed as oak with hazel coppice in the past. The areas are now coniferised and therefore PAWS.

Concept: Proposals will outline a plan of restoration to native species cover in line with Keepers of Time policy. This will be achieved, chiefly through a process of thinning out the conifer to favour ancient woodland features and native regeneration and protecting areas of remnant ancient woodland—see page 17.

Legend

- Watercourses
-  Open Water
-  PAWS
-  Mixed Woodland
-  Mature seeding G. fir
-  Mature seeding w. hemlock

Analysis: A number of watercourses traverse the forest, some feed into a pond outside of the landholder and then into the River Taw. Areas of alder, willow and ash dominated riparian woodland are situated along the stream sides.

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

Analysis & Concept

Eggesford



This collection of woodlands focussed around the small village and train station of Eggesford is rich in cultural and ecological value. Whilst fragmented, together they make up visually and ecologically (almost) contiguous habitat which produces significant amount of quality Douglas fir timber. Flashdown Forest was the site of the first Forestry Commission planting and numerous trials were conducted across the woodlands to establish which species were best suited to the local soils. Remnants of this remain both in productive shelterwood systems and as part of an arboretum. Some of the area is designated ancient woodland and therefore native species and associated ecosystem function restoration is a key aim in these areas. Otherwise a proactive approach to productive conifer timber production, in continuous cover forestry systems where possible, will be pursued. The scale and access limitations of some of the woodlands mean that a strategic approach to management and landscape principles will be needed.

Analysis: Heywood Castle, a Scheduled Monument includes a motte and bailey castle which is situated in a commanding location overlooking the valley of the River Taw. The castle is thought to date from the 1130s-40s and is free of tree cover and a popular site of interest.

Concept: This will protected so that it remains free of tree cover and with limited public access. The setting is good and does not need enhancing. The specific management of the monument is covered in Appendix 5.

Analysis: An arboretum of major conifer species, *Thuja gigantea*, *Lawson's Cypress* and *Cupressus macrocarpa* as well as ash, oak, beech, chestnut and poplar was established in 1919 with the purpose of species establishment testing, thinning experiments and yield statistics. The remnants of this remains in Heywood.

Concept: This will be protected in perpetuity as a valuable component of the cultural history of the forest.

Legend

- Eggesford Railway Station
- Railway line
- Watercourses
- Heywood Castle SM
- ▨ PAWS
- Arboretum
- Original Douglas fir planting
- Douglas fir
- ▨ Surrounding Woodlands

Analysis: A large areas of Ancient Woodland run through the woodland and was most likely managed as oak with hazel coppice in the past. The majority of areas are now coniferised and therefore PAWS.

Concept: Proposals will outline a plan of restoration to native species cover in line with Keepers of Time policy. This will be achieved, chiefly through a process of thinning out the conifer to favour ancient woodland features and native regeneration and protecting areas of remnant ancient woodland—see page 17.

Analysis: The Tarka train line which has linked North and South Devon since 1854, follows the River Taw and is a popular and picturesque way to visit Barnstaple or to reach the great cathedral city of Exeter. It stops at Eggesford.

Concept: Proposals will ensure that the forests continue to enhance this scenic rail ride and continue to support Eggesford as a popular place to stop.

Analysis: Much of the forest block sits in an intimate wooded landscape and is surrounded by small neighbouring rich and biodiverse woodlands situated along the valley bottoms.

Concept: Proposals will be in consultation with neighbours to ensure management complements adjacent crops and habitats.

Analysis: Flashdown was the site of the first FC planting with 12 beech and 12 larch in 1919.

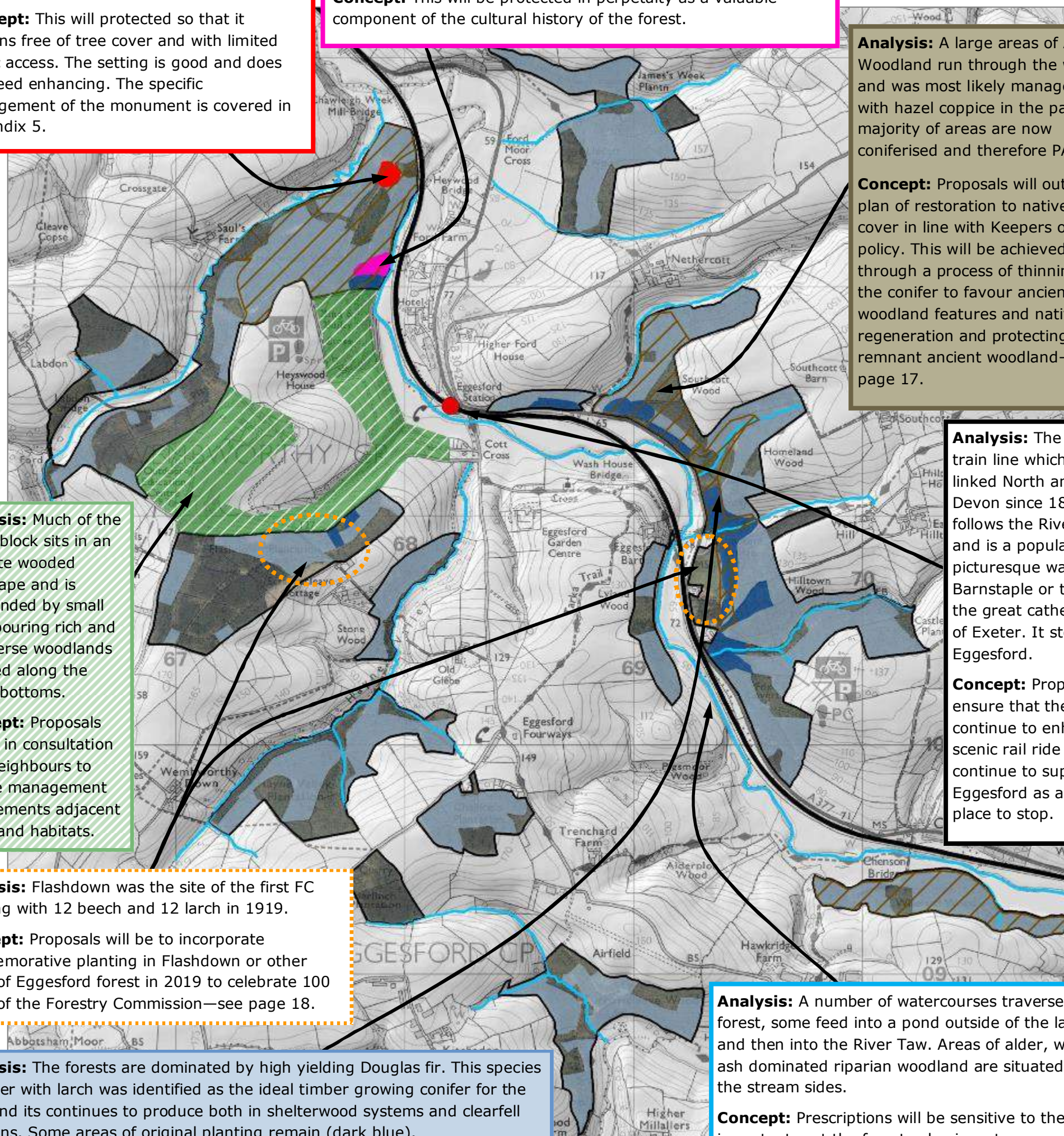
Concept: Proposals will be to incorporate commemorative planting in Flashdown or other areas of Eggesford forest in 2019 to celebrate 100 years of the Forestry Commission—see page 18.

Analysis: The forests are dominated by high yielding Douglas fir. This species together with larch was identified as the ideal timber growing conifer for the area and its continues to produce both in shelterwood systems and clearfell rotations. Some areas of original planting remain (dark blue).

Concept: Douglas fir has a key role to place in the future of the forest. Regeneration is limited in some shelterwood systems and this needs to be addressed. Opportunities to diversify the stand structure, with other firs and similar will also be taken either at the time of thinning and then restock or through underplanting—see page 18.

Analysis: A number of watercourses traverse the forest, some feed into a pond outside of the landholder and then into the River Taw. Areas of alder, willow and ash dominated riparian woodland are situated along the stream sides.

Concept: Prescriptions will be sensitive to the important part the forests play in water management. This will be through targeted removal of some overly shade bearing conifers and management towards 50% open 50% dappled shade, provided by regenerated broadleaves. This may in places be achieved through the clearfelling of mature conifer cops on stream sides.

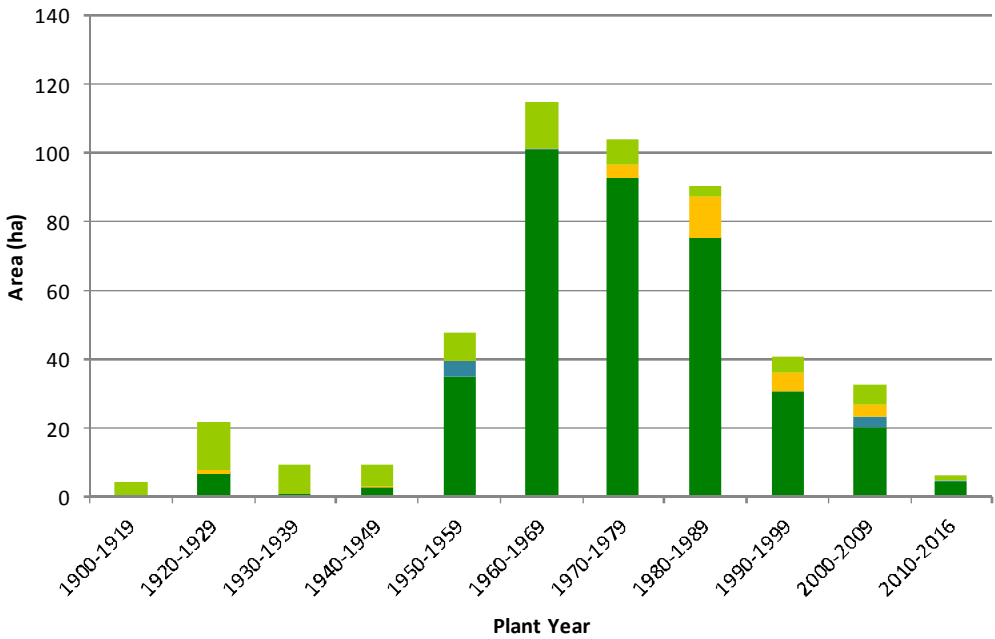


Woodland Composition

The Plan area is conifer dominated with some ancient semi-natural and native broadleaf remnants. It is renowned for the historic and substantial Douglas fir which grows, often in establishing shelterwood and particularly at Eggesford. The Plan areas also contains some significant larch components despite some crops being recently removed following *Phytophthora ramorum* infection and Statutory Plant Health Notice felling. This has led to a number of recently felled and now planted or regenerating areas. The vast majority of conifer components are made up of quality Douglas fir (235ha) with Japanese larch, Norway and Sitka spruce the major supplementary species. The broadleaf components are predominantly made up of ash, beech and sessile oak. Birch, alder and wild cherry are evident as pioneer species within discrete areas of the Plan area.

The age of conifer crops is well spread with considerable levels of planting having occurred in the 1960s, 70s and 80s. Broadleaf crops also vary in age with significant planting and regeneration establishment occurring in the early 1900s. The thinning of conifer crops has ensured that understorey development is beginning to establish, which in time will deliver a more structurally diverse woodland composition.

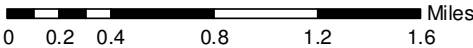
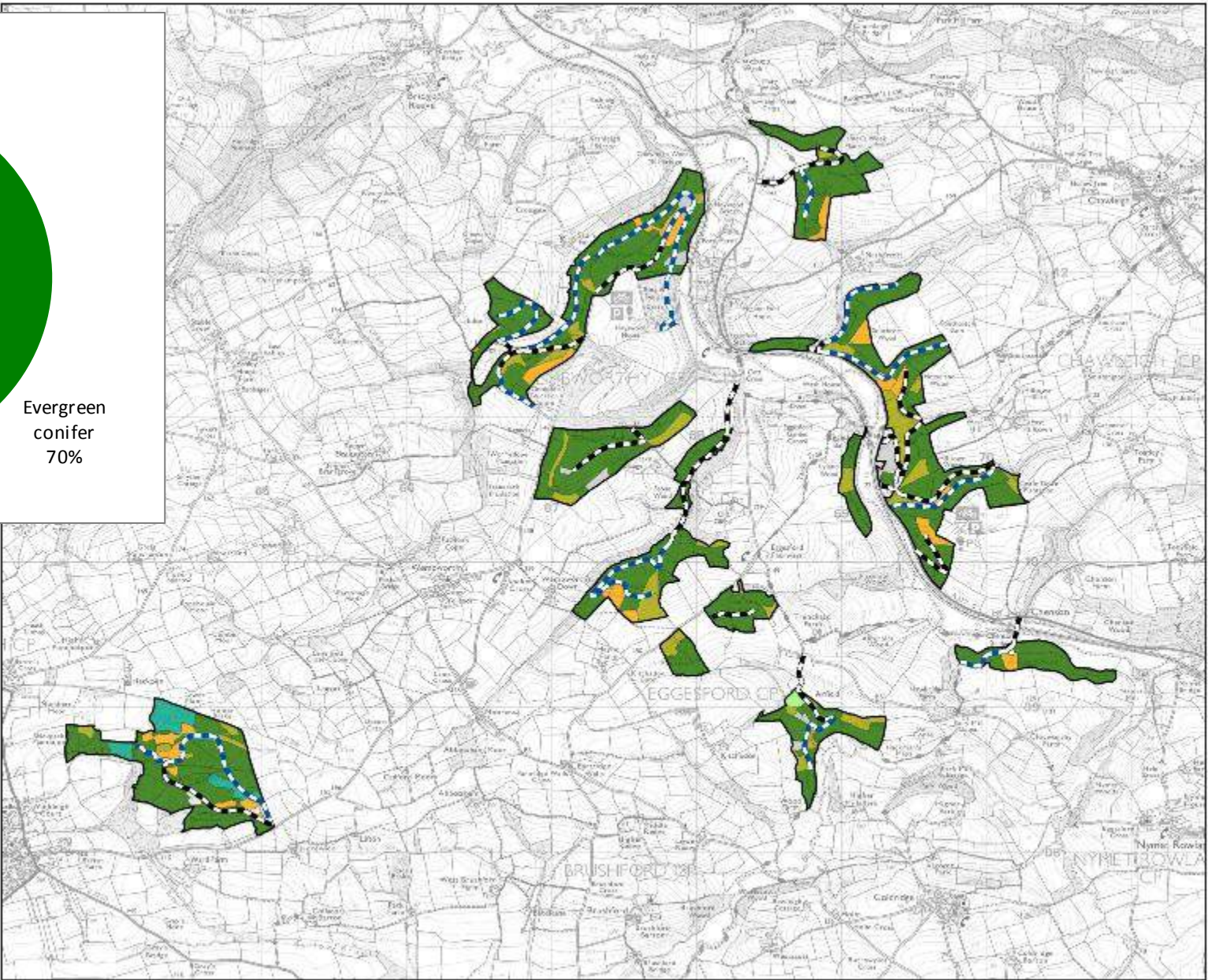
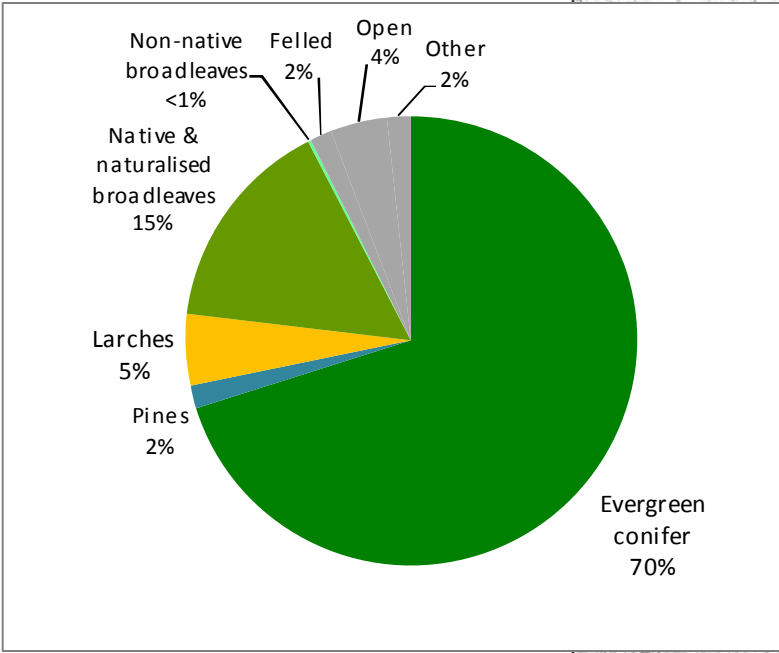
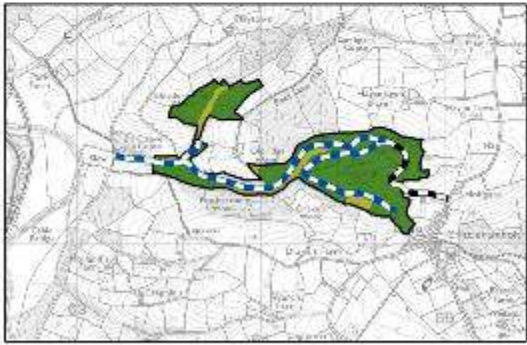
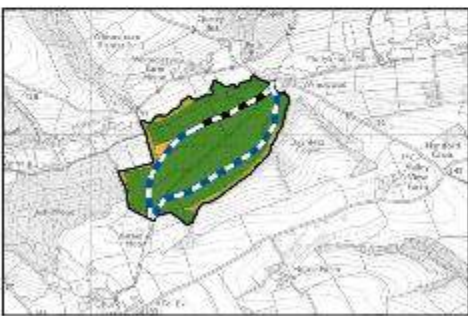
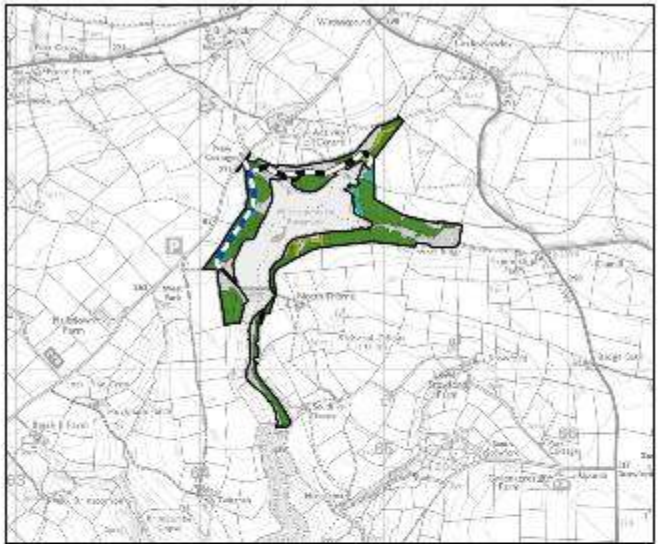
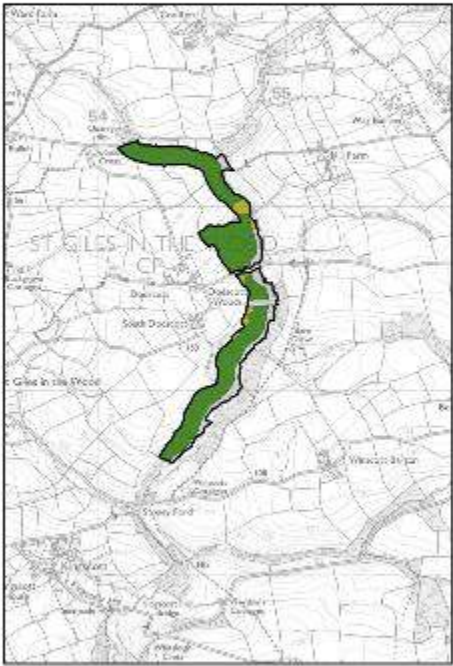
The broadleaf components of the Plan area comprise a mixture of ancient semi-natural oak, ash and beech assemblages and younger plantings and regeneration. The majority of stands are even aged with understory development evident but not always establishing as a secondary crop. Where broadleaf features within conifer crops these have been favoured and halo thinned where appropriate to assist crown development.



Legend

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

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





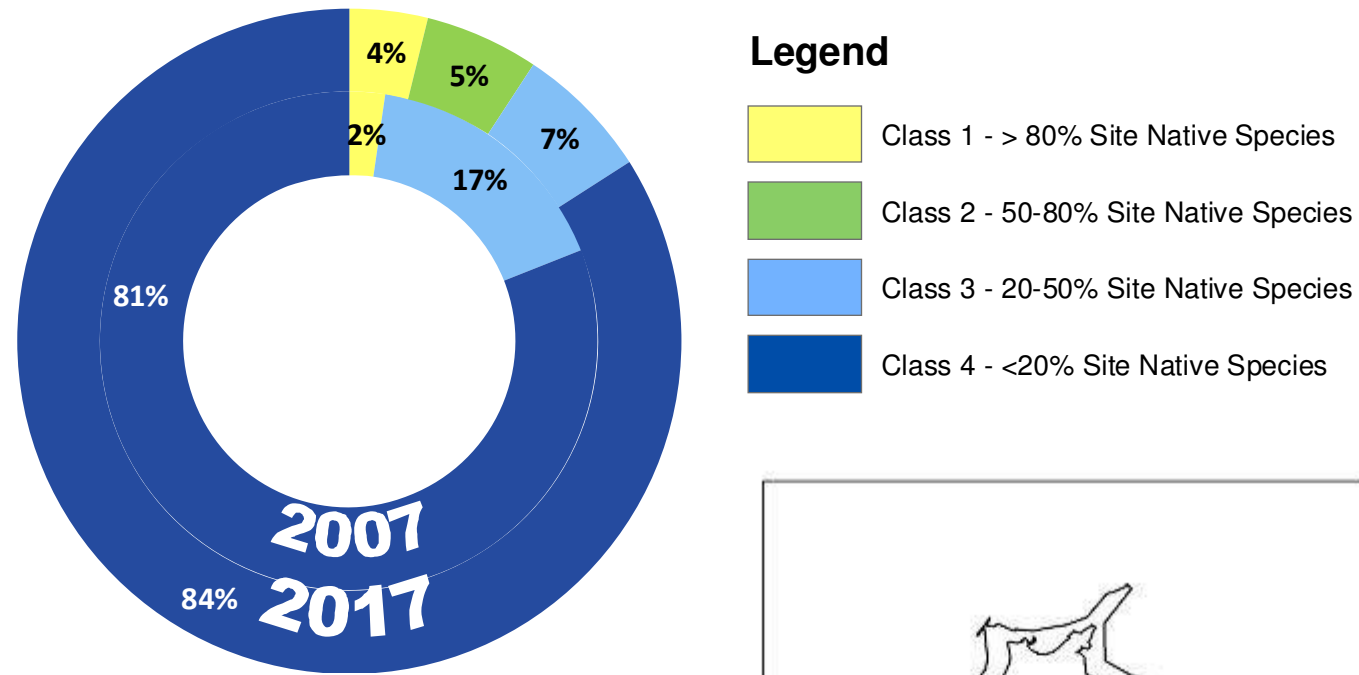
Naturalness is the measure to show the percentage of site native tree species in a given area. This measure is used to record and monitor the condition and restoration of Ancient Woodland Sites previously planted with non-native species.

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

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

There has been gradual yet significant change in the naturalness of the AWS across the Plan area since 2006. The development of native species within stands has occurred in all three

Naturalness in 2017



Class 1 – Semi-Natural Woodland & Restored Plantation Woodland
(> 80% site native species)



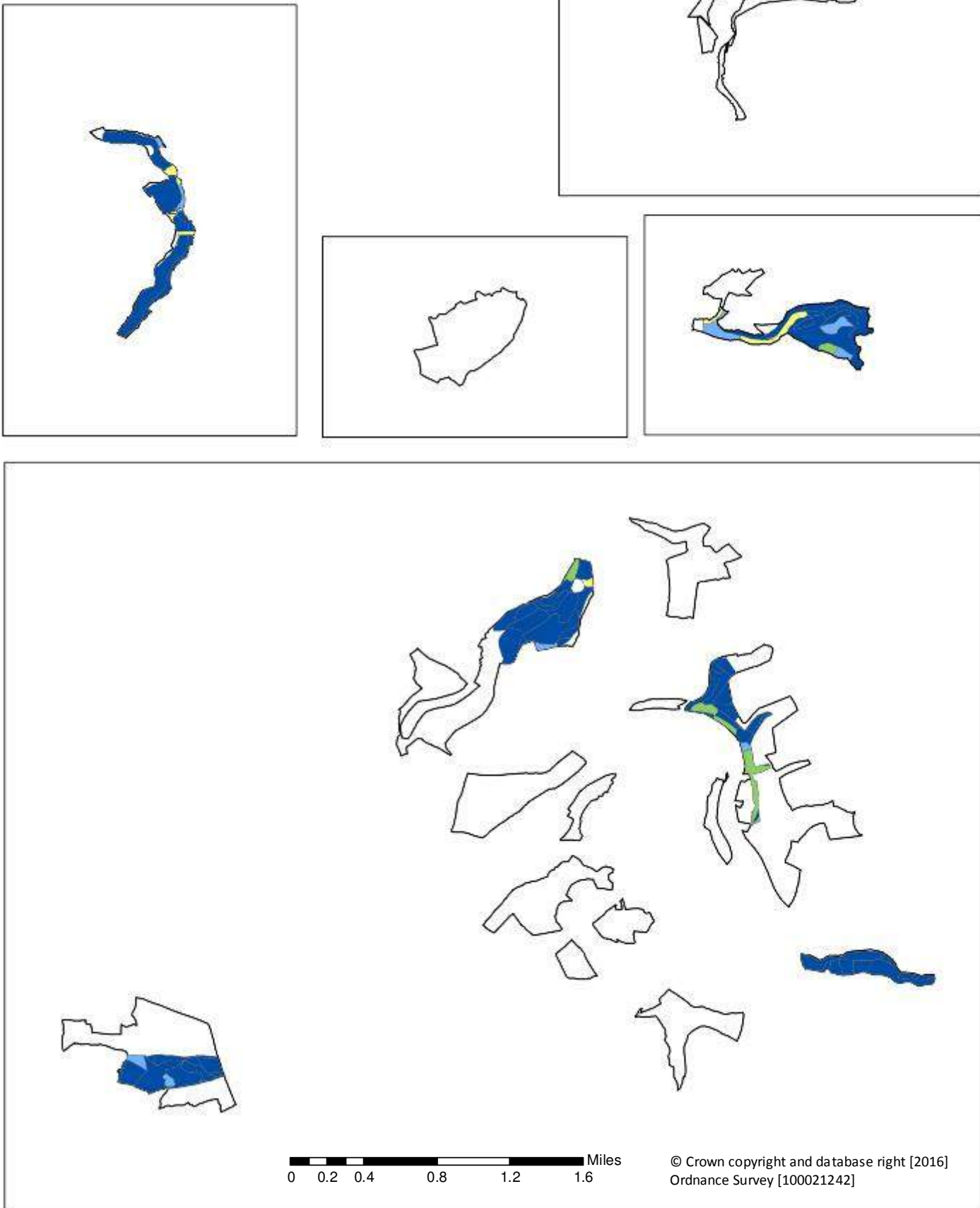
Class 2 – Plantation Woodland
(50 - 80% site native species)



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



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



PAWS Restoration

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

Therefore a proactive yet realistic approach will be used to transform these sites over a period of time.

The aim of the transitional period to woodland containing 80% or more of native species should be to achieve:

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



PAWS Restoration Approach

Transition Zone

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

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

Preparation Zone

Areas within this category contain less than 50% of native tree species but have a proportion greater than 20% of the crop and the area neighbours an area of significant native species cover which can be utilised as a seed source. Enhancement of native content will continue through thinning of the conifer content.

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

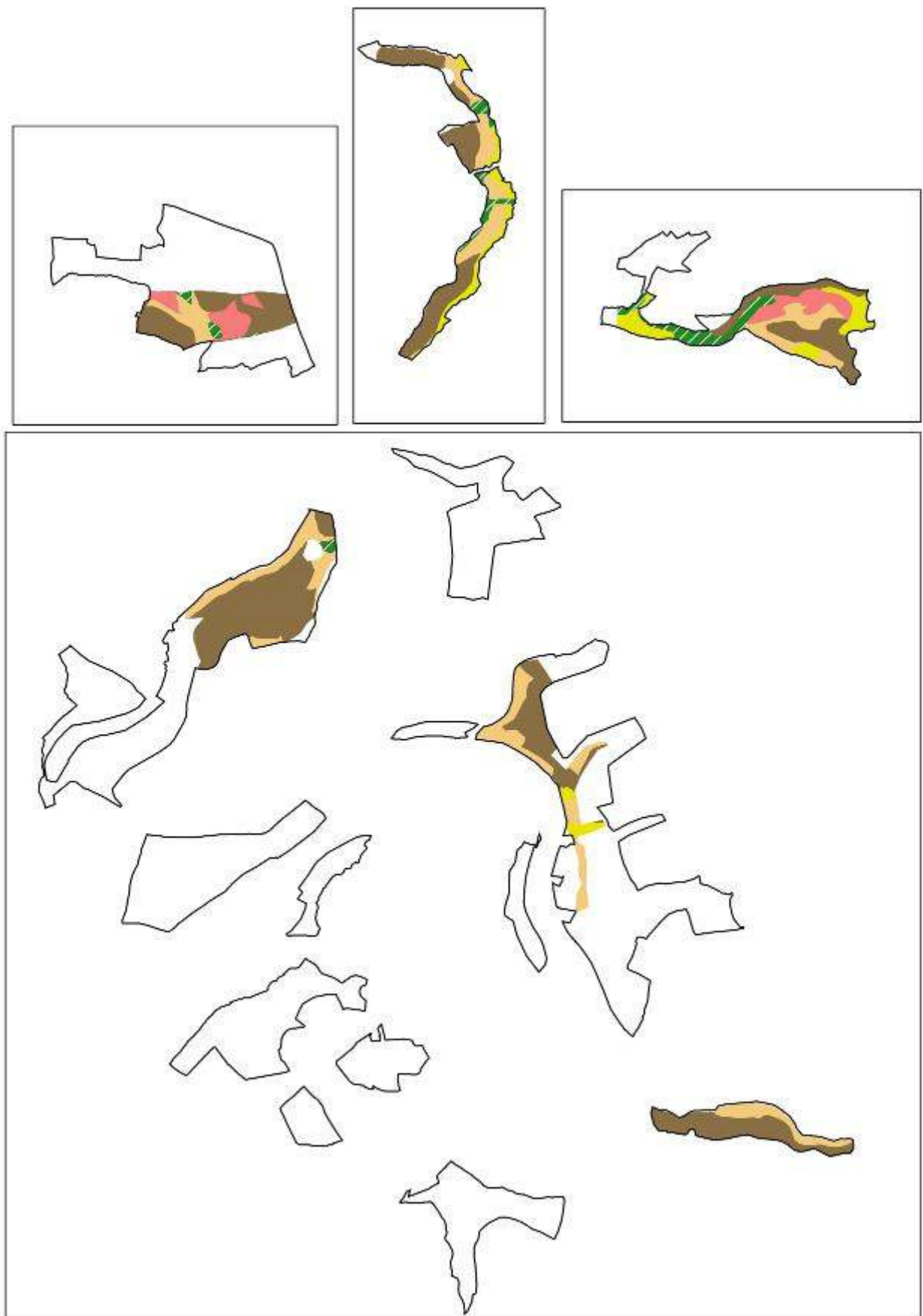
The anticipated time scale for establishment of predominantly native species is expected be around 50 – 60 years or so, but could be as long as 70 - 80 depending on success of establishing the future crop.

Non-native Zone

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

Clearfell Zone

One clearfell will be used to convert PAWS in 15-20 years time. This is felling of Western hemlock and is required to ensure the integrity of the coupe which is predominantly secondary woodland. This will be restocked with site suitable native species



Legend

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

Centenary Celebrations

The Eggesford area got its name from Eggesford House which was owned by Lord Portsmouth, his estate was broken up and sold around 1910. The woodlands were then sold to Messrs Bartlett Bayliss & Co timber merchants who clear-felled the hardwoods and softwoods during the 1st World War 1914 -18 often using prisoners of war to complete the work. After the war and the felling, the woodlands were offered to the 'Authority' (Forestry Commission) who purchased them for a reduced price of 35/- per acre and commenced replanting the woodlands originally belonging to the Estate .



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

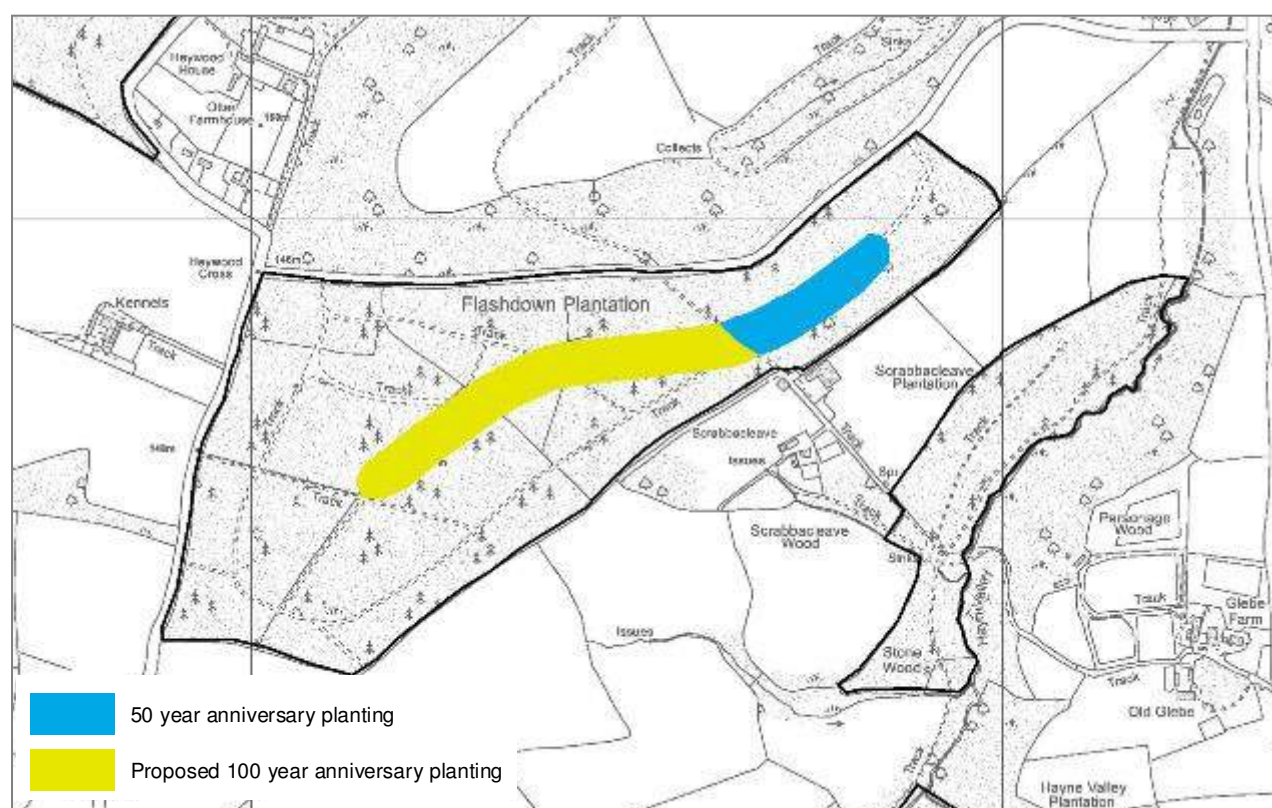


On December 8th 1919 the Forestry Commission planted a total of 12 trees (Beech and European Larch) in Flashdown and a granite stone monolith was erected on the site to commemorate this with names of those involved with the planting inscribed on a plaque. As Eggesford was the first of the Forestry Commission's forests to be planted, the choice of species was of necessity very limited. Douglas fir is predominant throughout, with Norway and Sitka spruces on the clay and in damper valleys. Some Japanese larch and European larch were used to break up the Douglas fir (the larches in very small quantities), and Scots pine was planted when available on some of the poorer and higher ground.

To celebrate the 100 year anniversary of this planting, and thus of the Forestry Commission, this Plan makes a number of proposals.

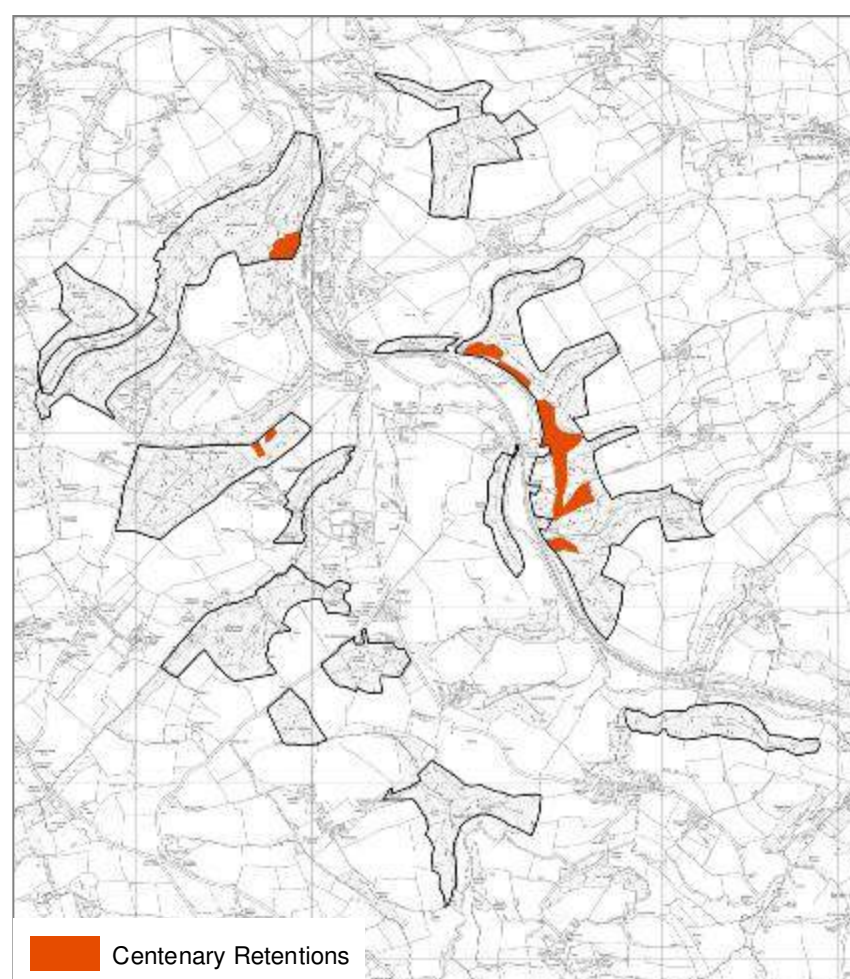
1. **100 tree avenue planting in Flashdown Wood**
2. **Retention of stable p.1919 and 1920 plantings in perpetuity**
3. **Short article on the history of the forest**

1. 100 tree avenue planting in Flashdown Wood



An avenue of copper beech was planted within the forest in 1969 to commemorate the 50 year anniversary of the Forestry Commission . This remains together with the stone which marks the site of the first planting.

A proposal for a 100 tree avenue is made, which will follow the removal of windfirm Norway spruce and Douglas fir edge trees. Proposals for species are still being considered, but sequoia, silver fir, walnut as well as any other species key to next 100 years of UK forestry are being considered.



2. Retention of stable p.1919 and 1920 plantings in perpetuity

Some areas of original planting from 1919 and 1920 remain. The majority of these are Douglas fir or Japanese larch, although areas of beech, ash and oak plantings from the period are also still evident. Some also occur within the Arboreteum at Heywood and are remnants of the species trials which occurred at the time.

Stable crops of Douglas fir and Japanese larch which originate from the time have now exceeded their economic purpose but are an artefact of the cultural history of the woodlands. Some (identified within the map) are therefore to be retained in perpetuity as a historical feature. Some of these are near to roads and pathways so may require thinning out or removing to protect the integrity and safety of the crop. Some are also on an ancient woodland site, however their significance and limited adverse impact on the quality of woodland ecosystem means that they can be retained.

Douglas fir Shelterwoods

Douglas fir is key and valuable component of the Plan area. It is exceptionally productive, culturally significant and often functioning within a shelterwood system. Where it is growing on an ancient woodland site, these crops will be managed to favour broadleaf regeneration and in time, deliver native restoration (this is covered on page 17). On secondary woodland sites Douglas fir and other associated conifer species still have a strong part to play in the forest’s future composition. This is particularly the case at Eggesford forest where soils are rich and deep and when the first plantings occurred it was a species which presented itself to be best suited to the site.



Whilst a number of original crops (i.e. 1920s) and others of similar ages are still standing, natural regeneration is limited. This could be for a number of reasons but is most likely due to insufficient light levels (the minimum percent of incident light required is 15%). This Plan outlines an approach to the management of Douglas fir towards complex systems resilient for the future. The primary objective on these sites is resilient timber production and therefore a proactive approach to mildly diversifying stand structure and composition whilst maintaining output is proposed.

Simple (or Uniform) Systems — are prescribed on less accessible and/or more exposed sites which have either been thinned to CCF prescriptions (i.e. 25–35 m² ha⁻¹) or on young crops which can be converted to CCF over time through thinning. Whilst they have the crown and root development to be wind stable, potential rooting depth means that these crops can not withstand group felling.

The aim is to establish an evenly spread understorey from 150 to 200 seedbearing trees ha⁻¹ before removing the overstorey in one or two interventions, whilst the understorey is established but still robust enough to endure operations. If the understorey is not >2m in height, felling approval is required.

Basal area (m ² ha ⁻¹) guidance for natural regeneration	
Establishment	Seedling growth
35-40	30-35

Restocking will predominantly be through natural regeneration unless where it is unviable.

Underplanting will occur on sites unlikely to achieve any suitable natural regeneration establishment and enrichment planting will be used to aid and diversify the understorey using shade tolerant species. Planting of European silver fir and western red cedar will be considered on the richer sites whereas Grand fir and oriental spruce on the slightly poorer sites.



Complex (or Group) Systems — requires stands to be more windfirm given the exposure group fellings will inflict. Soils must be deep and established crops thinned to CCF regimes whereby crown and root development is established, more often in the sheltered valley bottoms. Through the felling of small groups of around 40m².

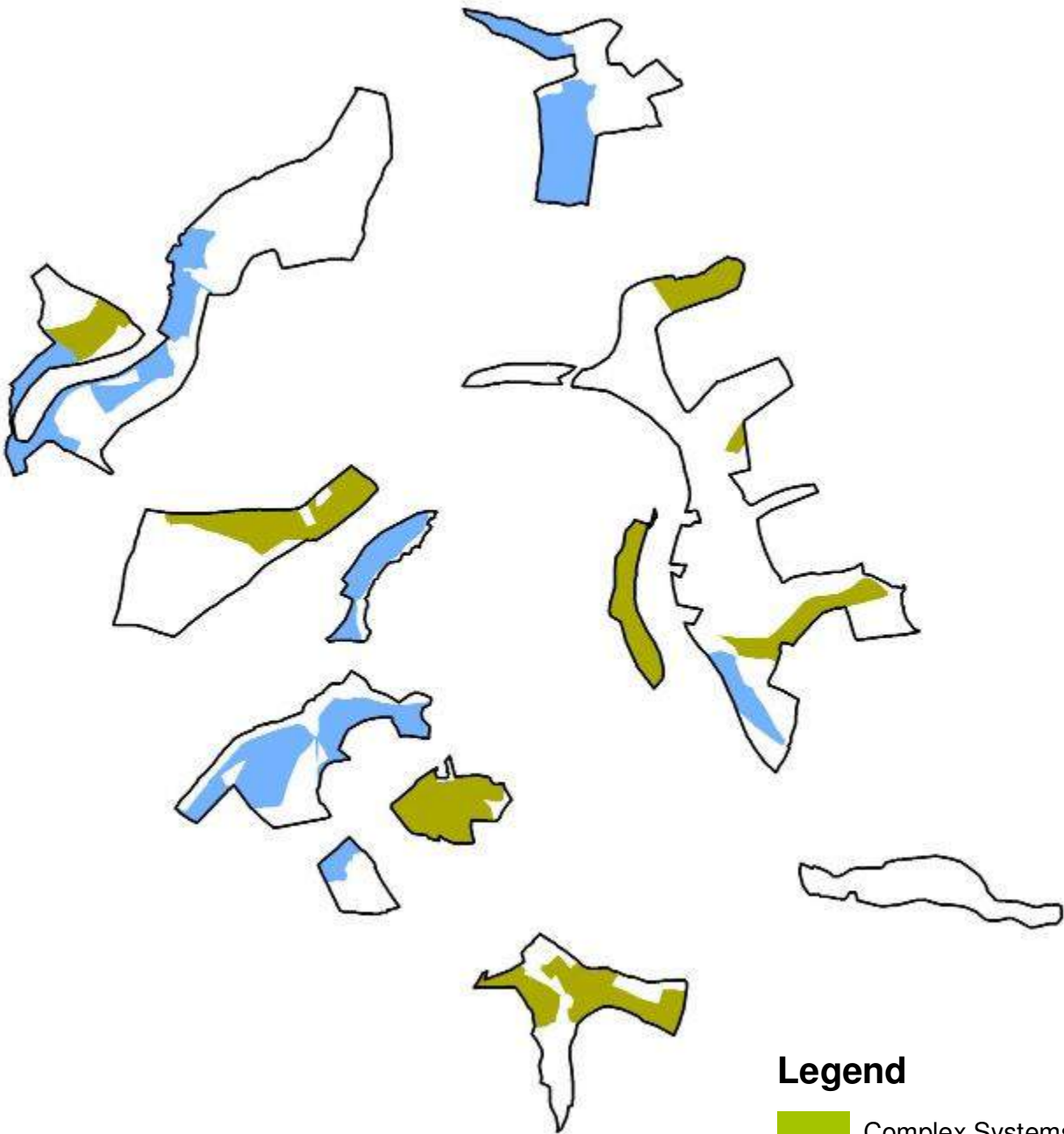
Where possible this approach will be favoured across all potential sites, to address the light level concerns and to help deliver a more diversely structured woodland. The phased felling of groups, and resultant regeneration over a prolonged period will ensure that a complex system of storeys is established over time. Groups may be distributed randomly or evenly across the coupe and multiple interventions can look to extend the size of the gap.



Felling of no more than 0.25ha per 2ha every five years is proposed in areas identified as group shelterwood (green below).

Restocking will predominantly be through natural regeneration. Underplanting will occur in clumps where sites are unlikely to achieve suitable natural regeneration establishment and enrichment planting will be used to aid and diversify the group.

Conifer CCF on secondary woodland



Legend

Complex Systems

Simple Systems

Silviculture

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.



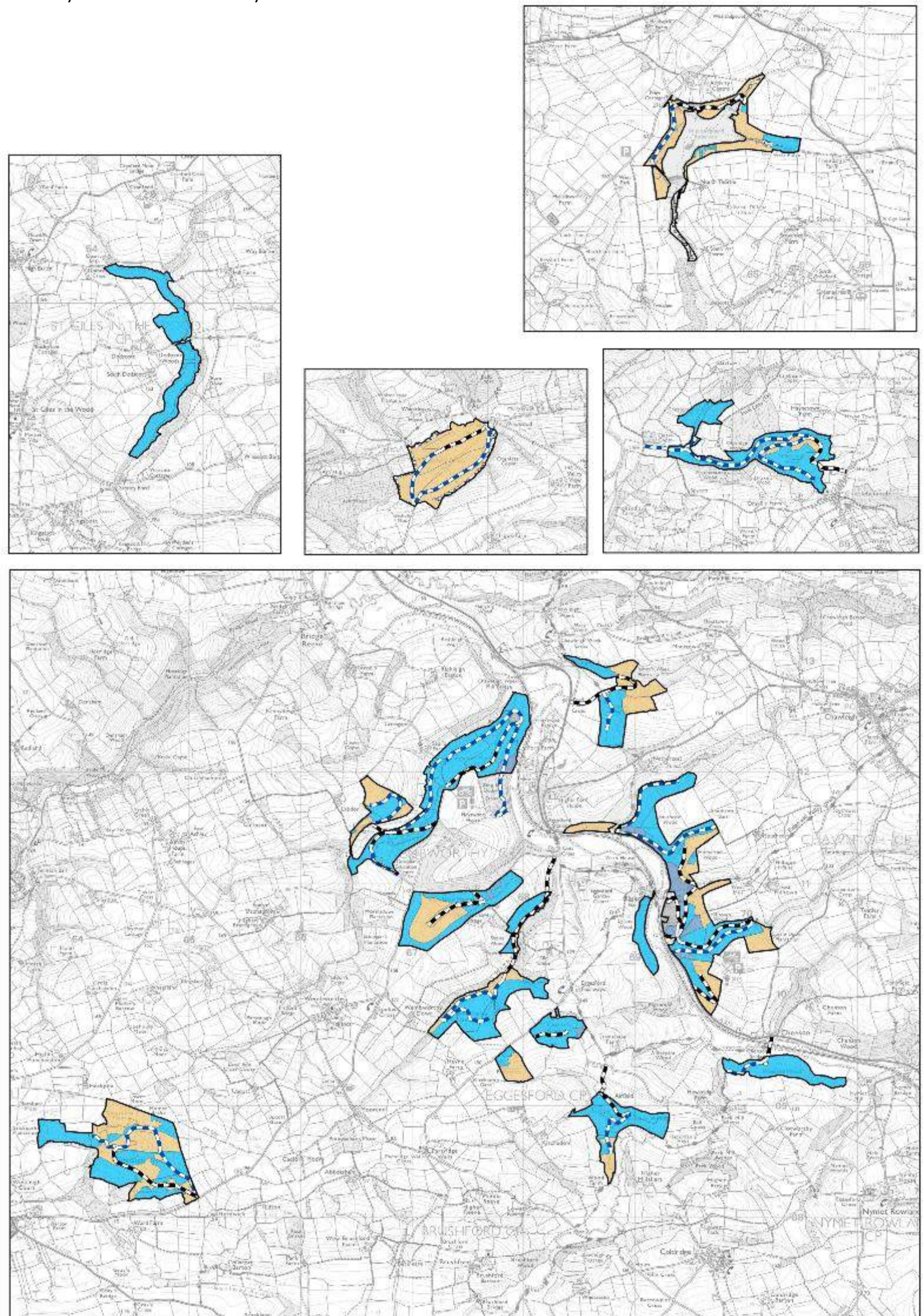
Legend

- Clearfell
- Long Term Retention
- Shelterwoods
- Selections
- Open
- Minimum Intervention
- Class A/B Roads
- Class C Roads

Thinning

There is a presumption towards thinning in all stands and that these stands will be thinned as early as possible (circa 16-18 years). Areas are assessed for thinning every 5 years with the removal of larch species a key objective, due to its susceptibility to *Phytophthora ramorum*. 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 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.



Proposed Species
80% Sitka spruce (planted)
10% Italian alder (planted)

Legend

-  Fell 2017 - 2021
-  Fell 2022 - 2026
-  Fell 2027
-  Coppice
-  Wood Pasture
-  Retentions
-  Minimum Intervention
-  Natural Reserve
-  Open
-  Class A/B Roads
-  Class C Roads

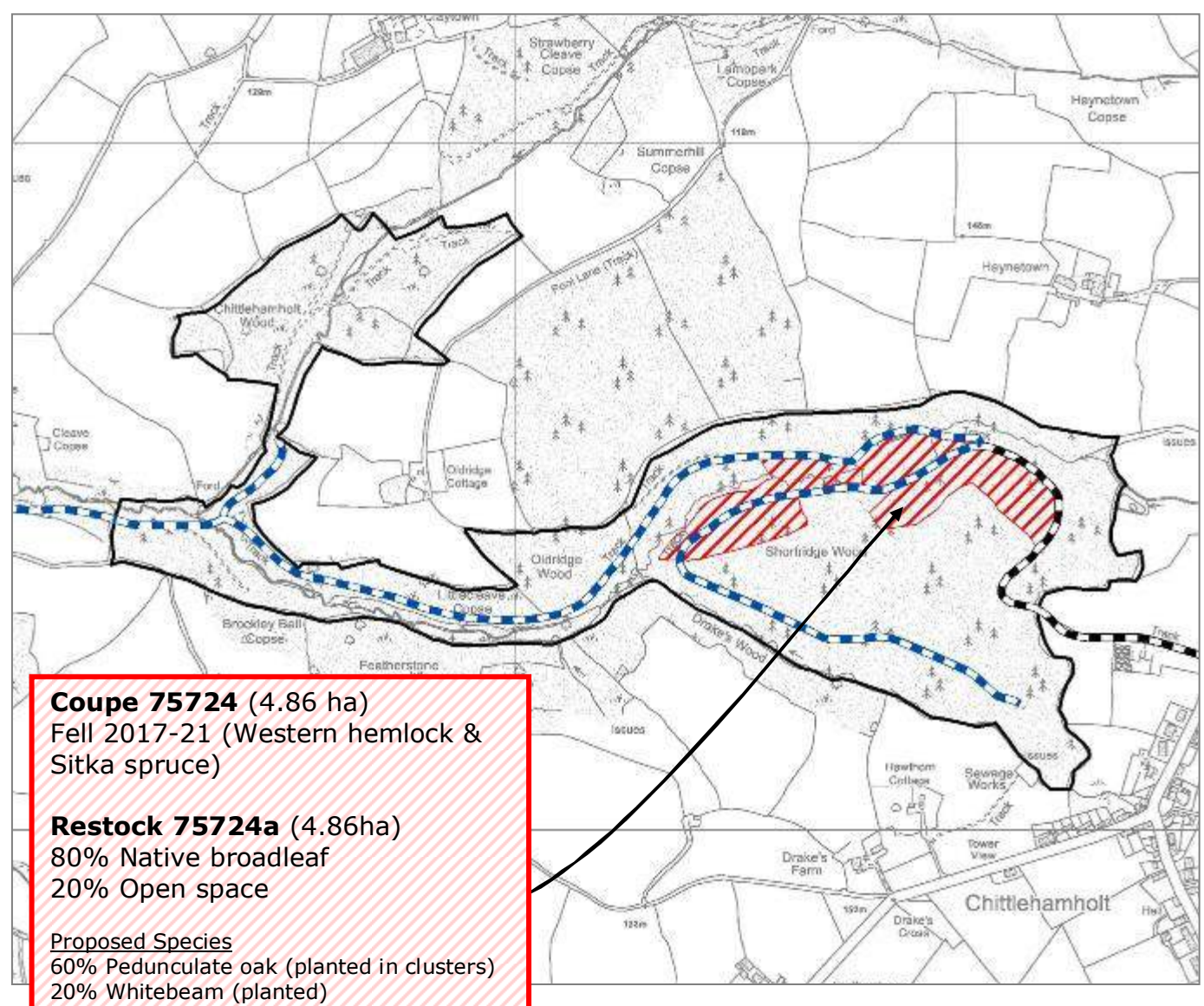
Felling and Restocking 2017 - 2027 Shortridge

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.

A horizontal scale bar with tick marks at 0, 0.05, 0.1, 0.2, 0.3, and 0.4. The word "Miles" is written at the right end of the bar.



Coupe 75724 (4.86 ha)
Fell 2017-21 (Western hemlock & Sitka spruce)

Restock 75724a (4.86ha)
80% Native broadleaf
20% Open space

Proposed Species
60% Pedunculate oak (planted in clusters)
20% Whitebeam (planted)



Felling and Restocking 2017 - 2027 Bithefin

Legend

- Fell 2017 - 2021
- Fell 2022 - 2026
- Fell 2027
- Coppice
- Wood Pasture
- Retentions
- Minimum Intervention
- Natural Reserve
- Open
- Class A/B Roads
- Class C Roads

Coupe 75593 (3.81 ha)
Fell 2017-21 (Douglas fir, Norway spruce & Japanese larch)

Restock 75593a (3.81ha)
100% Evergreen conifer

Proposed Species
60% Coast redwood (planted)
40% European silver fir (planted)

Coupe 75216 (3.69ha)
Fell 2022-26 (Sitka spruce)

Restock 75216a (3.69ha)
100% Evergreen conifer

Proposed Species
80% Sitka spruce (planted)
20% Open

Coupe 75118 (5.17ha)
Fell 2022-26 (Grand fir & western hemlock)

Restock 75155a (5.17ha)
100% Evergreen conifer

Proposed Species
60% Douglas fir (planted)
20% Grand fir (Nat. regeneration)
20% Scots pine (planted)

Felling and Restocking 2017 - 2027 Winkleigh

Coupe 75659 (3.25 ha)
Fell 2017-21 (Grand fir)

Restock 75695a (2.03ha)
80% Evergreen conifer
20% Native broadleaf

Proposed Species
80% Grand fir (Nat. regeneration)
20% Oak & Hazel (Nat. regeneration)

Restock 75695b (1.22ha)
80% Native broadleaf
20% Open space

Proposed Species
40% Broadleaf (Nat. regeneration)
10% Pedunculate oak (planted)
10% Wych elm (planted)
10% Wild service (planted)

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 0.05 0.1 0.2 0.3 0.4 Miles

Legend

-  Fell 2017 - 2021
-  Fell 2022 - 2026
-  Fell 2027
-  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)**



Felling and Restocking 2017 - 2027 Eggesford

Coupe 75337 (1.96ha)
Fell 2022-26 (Norway spruce
& Douglas fir)

Restock 75337a (1.96ha)
40% Native broadleaf
40% Open space
20% Evergreen conifer

Proposed species
40% Broadleaf (nat. regeneration)
20% Sitka spruce (planted)

Coupe 75264 (3.35ha)
Fell 2022-26 (Western hemlock
& Sitka spruce)

Restock 75264a (3.35ha)
75% Evergreen conifer
20% Native broadleaf
5% Open space

Proposed species
70% Douglas fir (planted)
20% Broadleaf (nat. regeneration)

Coupe 75431 (0.91 ha)
Fell 2017-21 (Douglas fir)

Restock 75431a (0.91ha)
100% Evergreen conifer

Proposed species
60% Douglas fir (planted)
40% Wellingtonia (planted)

Coupe 75616 (3.01 ha)
Fell 2017-21 (Norway spruce)

Restock 75616a (3.01ha)
100% Evergreen conifer

Proposed species
50% Wellingtonia (planted)
50% Whitebeam (planted)

Coupe 75582 (6.92ha)
Fell 2017-21 (Sitka spruce)

Restock 75582a (6.92ha)
40% Native broadleaf
40% Open space
20% Evergreen conifer

Proposed species
40% Broadleaf (nat. regeneration)
20% Douglas fir (planted)

Coupe 75513 (4.60ha)
Fell 2017-21 (Sitka spruce &
Western hemlock)

Restock 75513a (4.60ha)
100% Evergreen conifer

Proposed species
60% Douglas fir(planted)
40% Noble fir (planted)

0 0.05 0.1 0.2 0.3 0.4
Miles

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

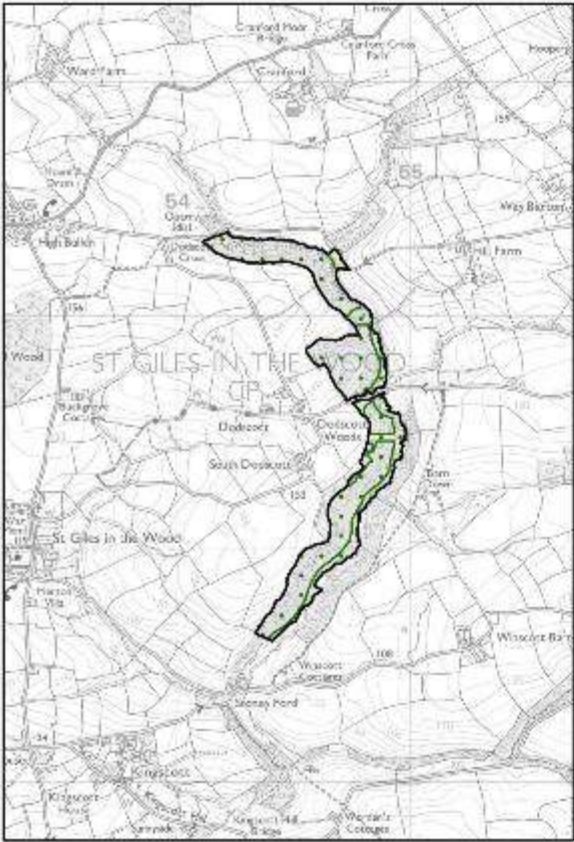
Management Prescriptions

2017 - 2047

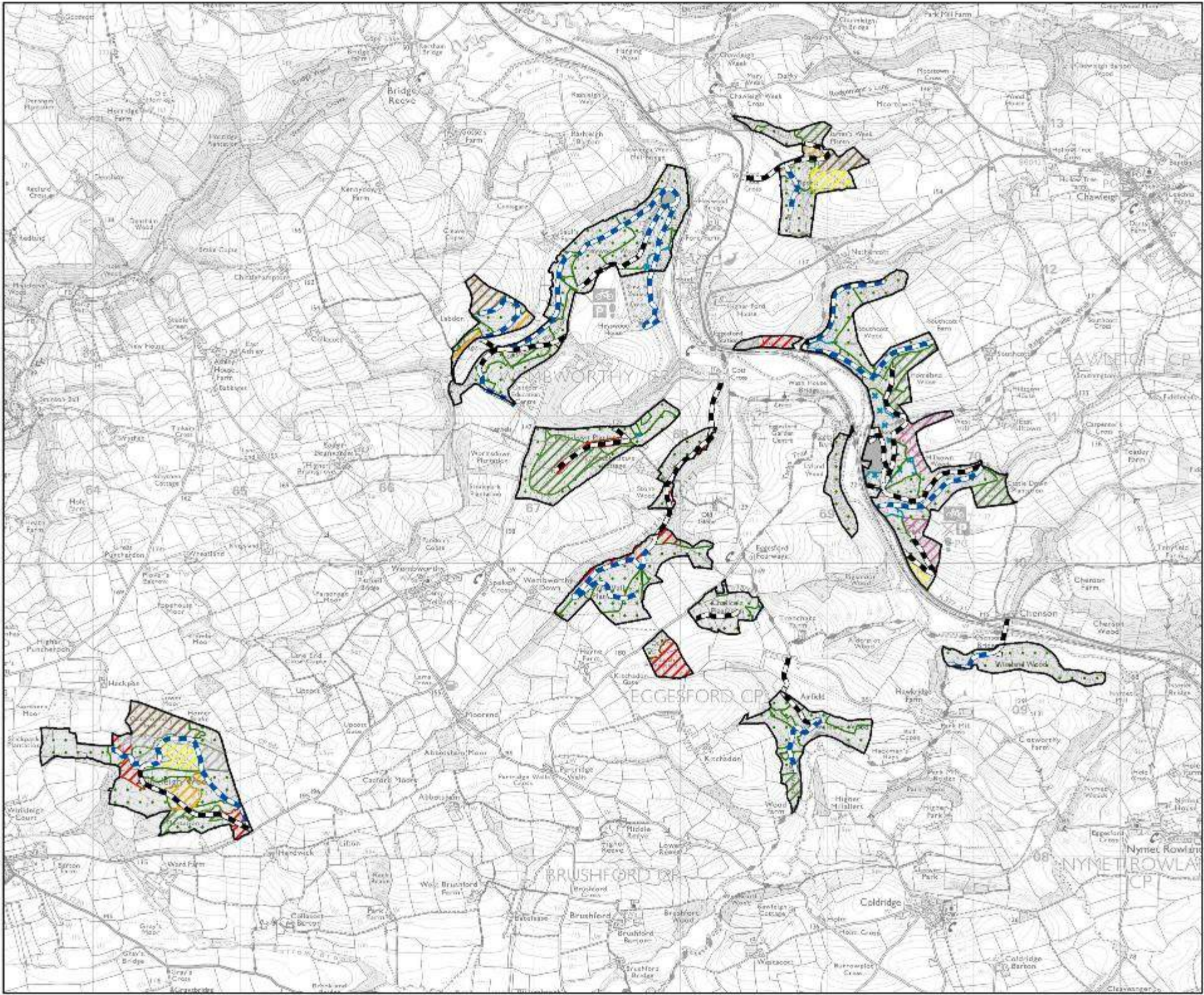
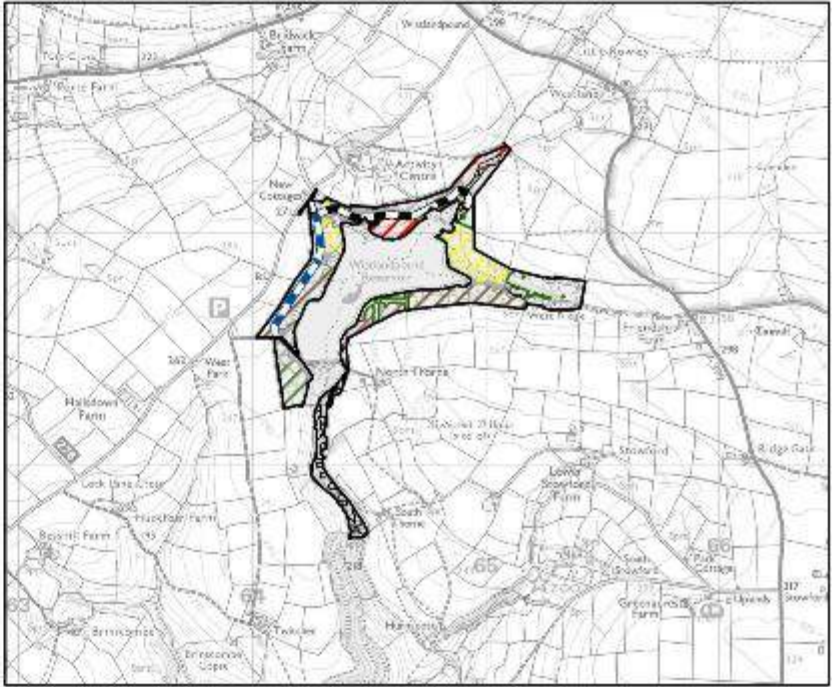
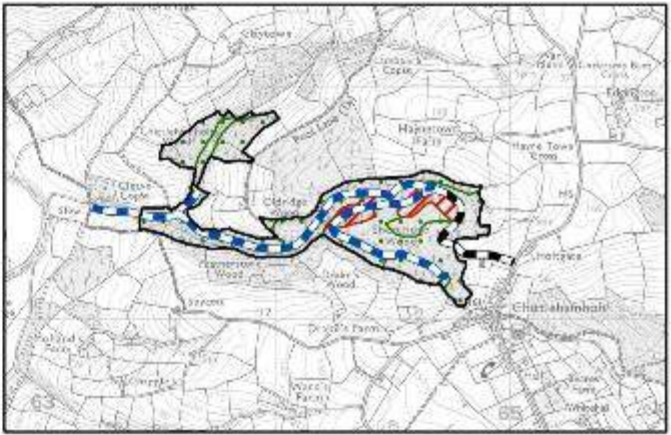
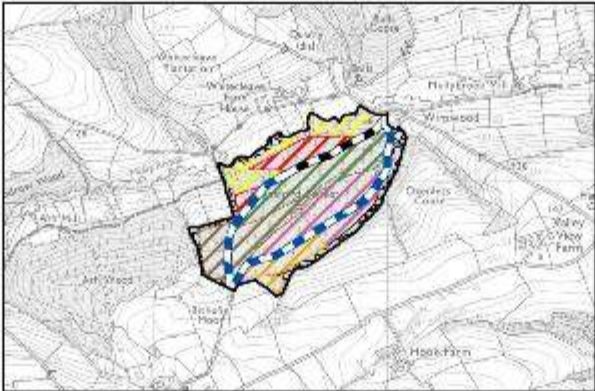


Legend

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



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Ordnance Survey [100021242]



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Ordnance Survey [100021242]

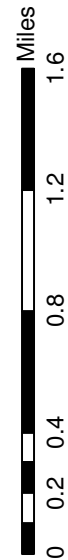
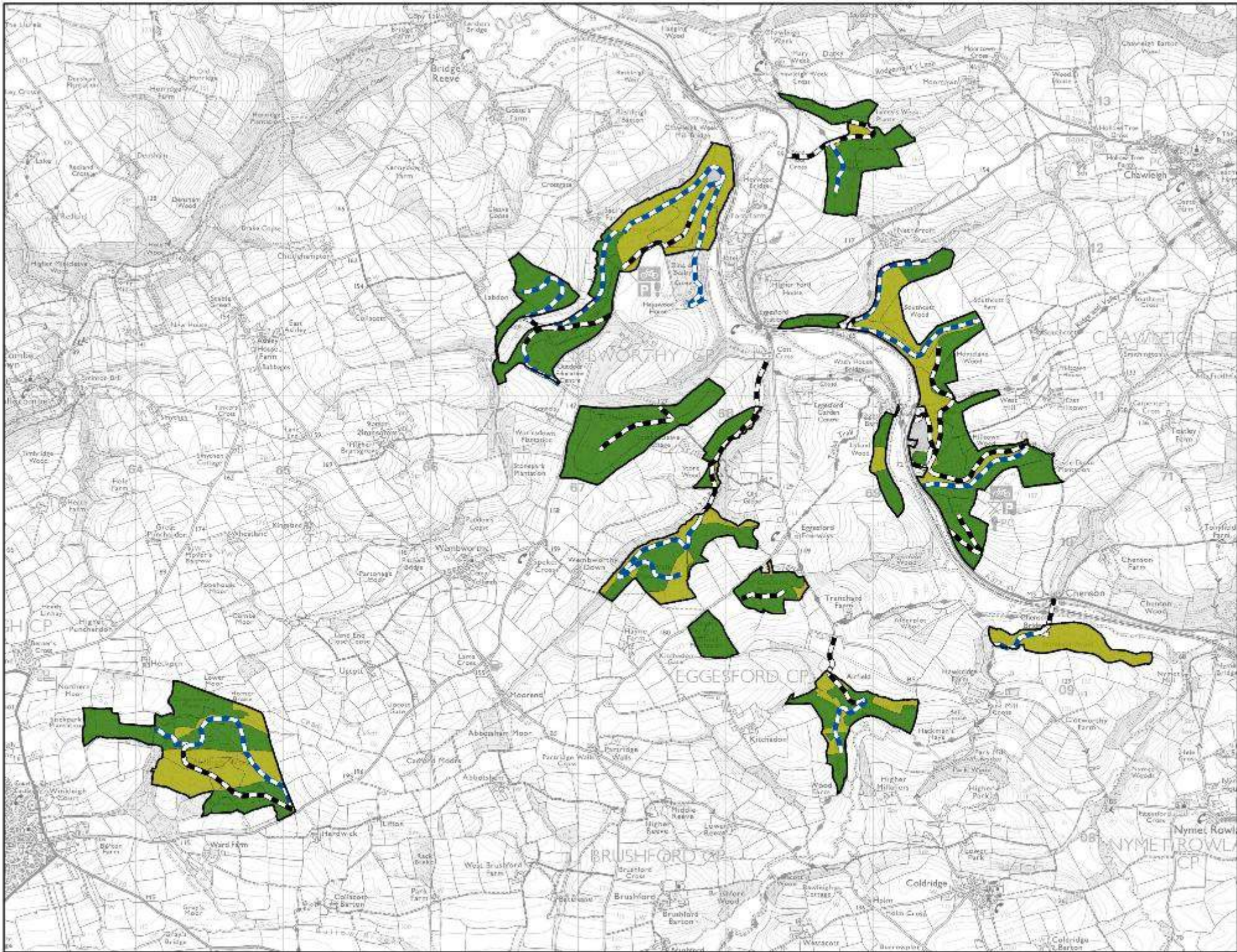
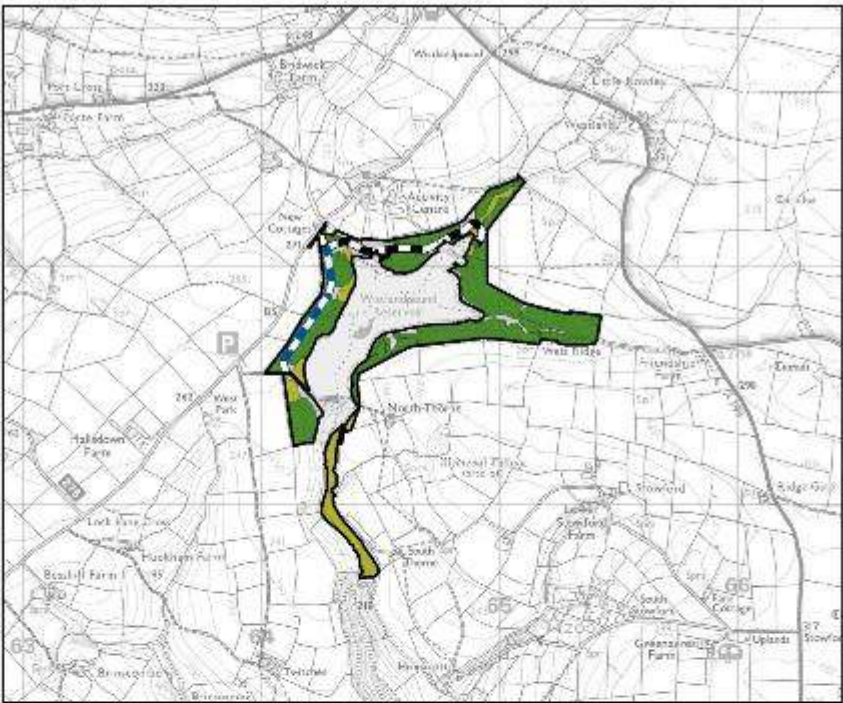
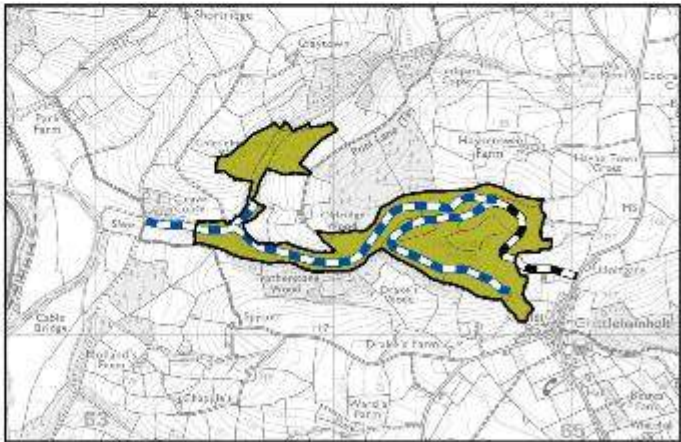
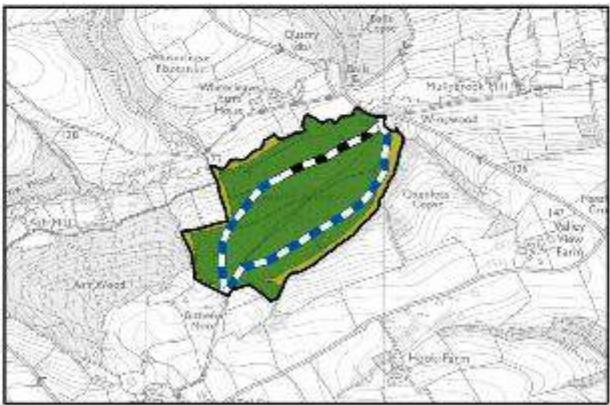
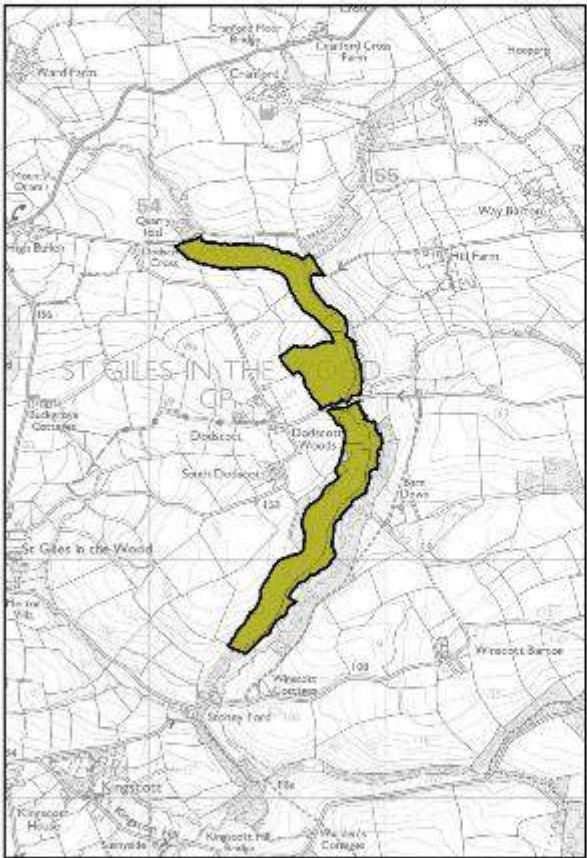
Restock Prescriptions

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



Legend

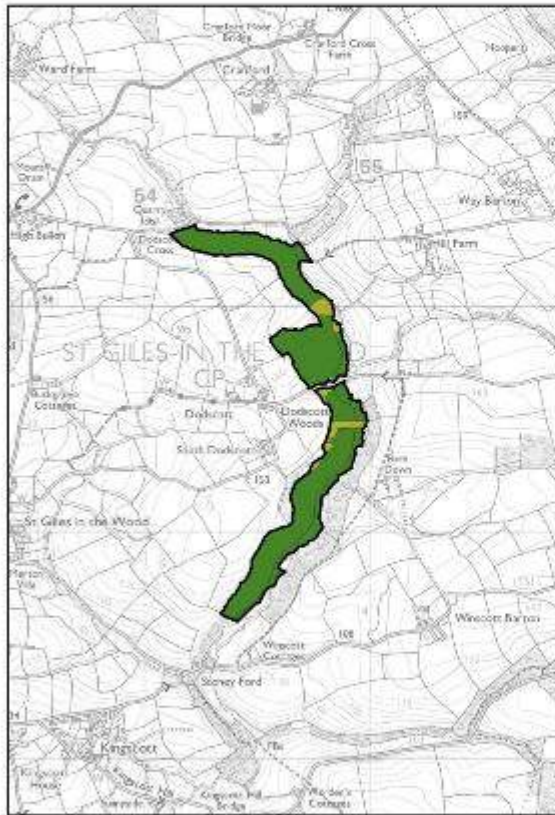
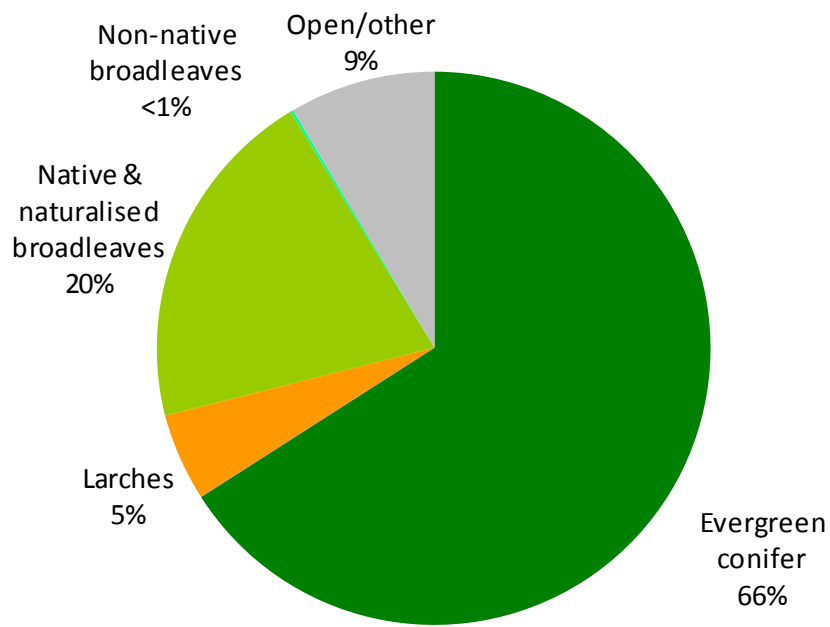
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- Deciduous Conifer
- Native & naturalized broadleaves
- Non-native broadleaves
- Open/other
- Class A/B Roads
- Class C Roads





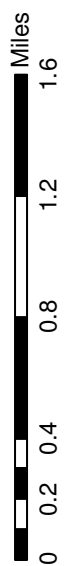
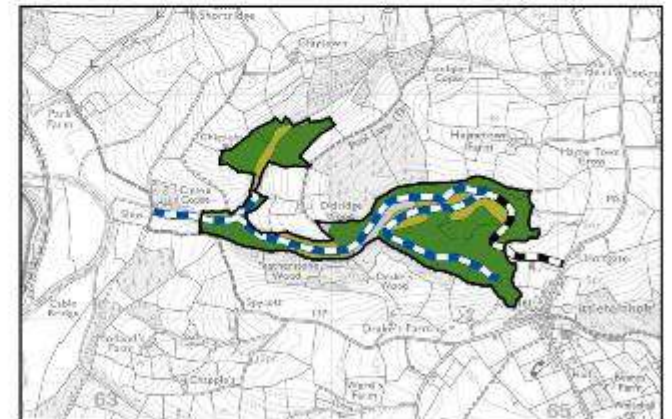
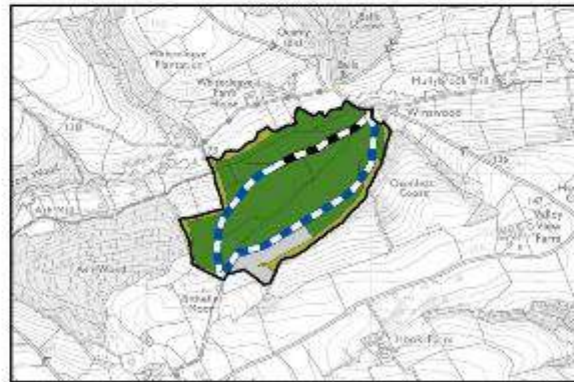
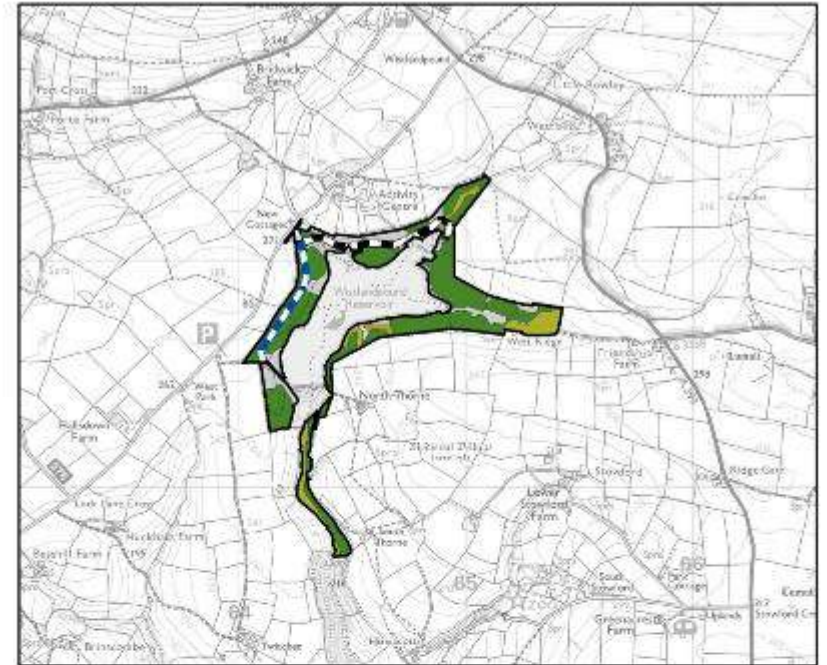
Indicative Future Species 2027

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.



Legend

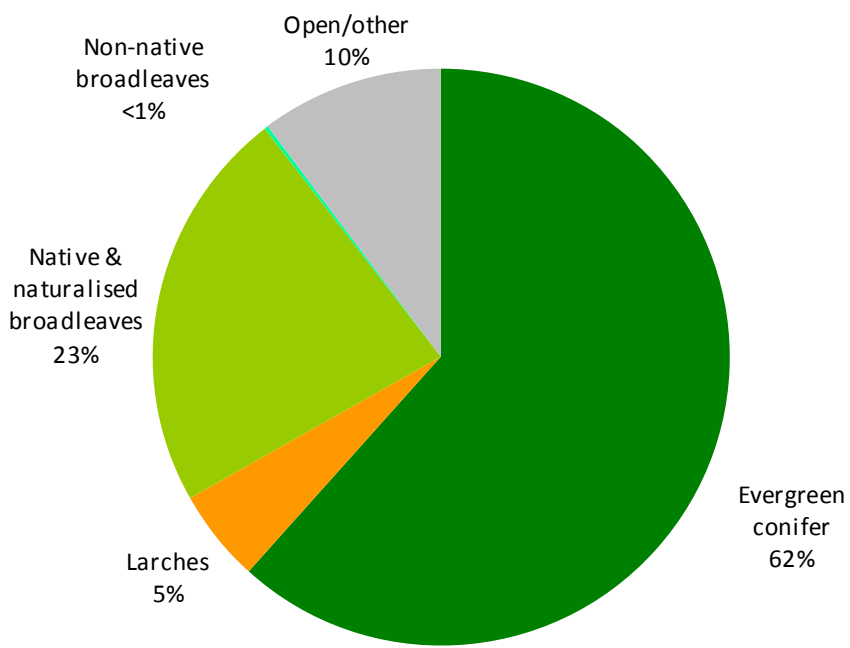
- Evergreen Conifer
- Deciduous Conifer
- Native & naturalized broadleaves
- Non-native broadleaves
- Open/other





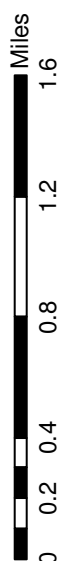
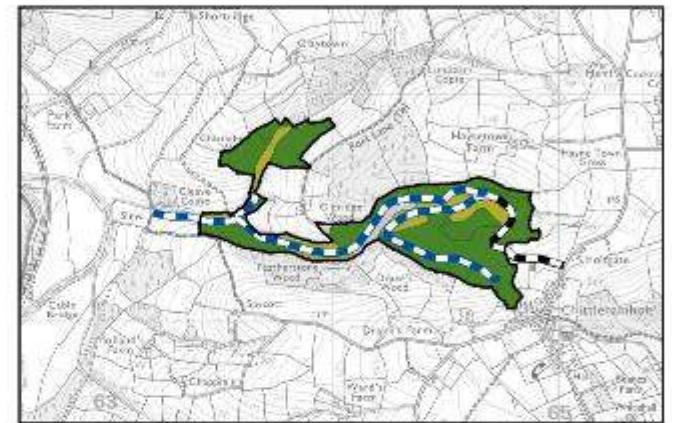
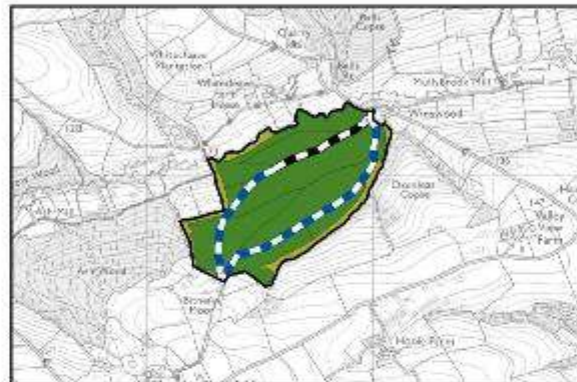
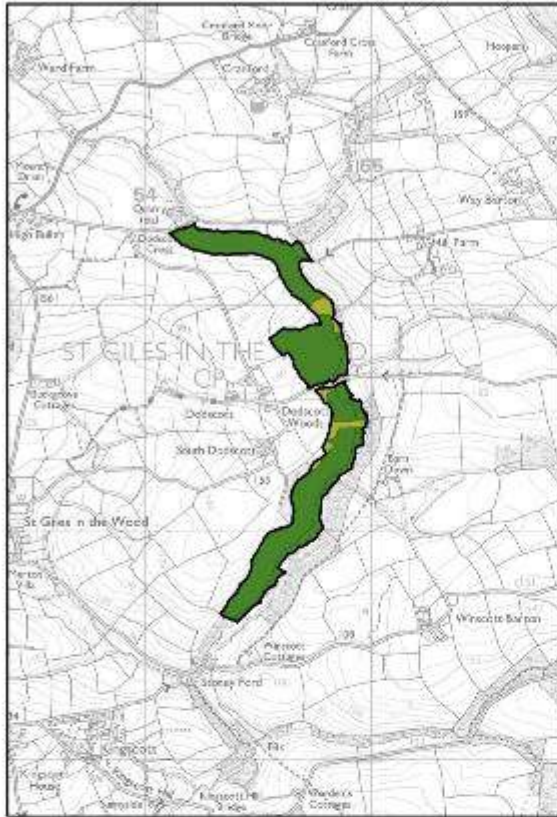
Indicative Future Species 2047

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.



Legend

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



Corridors

Ride and road sides, together with watercourses and hedgerow management will conform to the prescriptions outlined in the District document, *Design and Management of Environmental Corridors* (Lucas, 2006). This document outlines the management of light levels, pinch points and forest edge dynamics. 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 develop 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 as 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.

Riparian Areas

The streamsides and wet woodland found at the bottom of valley remain predominantly wooded with either ASNW broadleaf woodland or planted with Douglas fir or Sitka spruce. The majority of these sites will be managed through thinning and 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.

Resilience

The Forest Plan area is used by a vast array of common and rare flora and fauna. The considerable contribution the forests and their associated areas make to habitat provision in the landscape is widely recognised. Some flora and fauna species can have a detrimental impact on the forest and its features if their numbers are too high. Species such as rhododendron, Japanese knotweed, 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.

Heritage Features

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 Heywood Castle 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.

Lowland Mixed Deciduous Woodland

A number of areas of remnant lowland mixed deciduous woodland (as shown right) are found across the Plan area. These are predominantly made up of Pedunculate oak, ash, birch and beech. Some evidence of coppicing of hazel exists and looks to reassert.

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



Dormouse favourable habitat is found throughout the Plan area, particular in Winkleigh, Wistlandpound and Shortridge and therefore this species could be inhabiting the woodlands. This European Protected Species requires pinch points across corridors to allow habitat connectivity between broadleaved woodland, particularly in stands with a high hazel and/or sweet chestnut components. The increase in coppicing in hazel dominated stands will significantly enhance habitat quality with prescriptions outlined in the Environmental Corridors document also ensuring appropriate habitat provision and management will be in line with Best Practice Guidance (FC & NE, 2007).

Otter - are known to inhabit the Wistlandpound Reservoir and its tributaries within the Plan area. This European Protected Species experienced a decline in previous decades but has recovered well in the south west of England. They inhabit streamside and wetland areas and the riparian woodland habitats found within the Plan area are ideal for nesting otter. The management of riparian wet woodland will ensure that a lush diversity of open space, scrub and high forest will ensure otter habitat is enhanced and preserved to support this species.

Raptor - notably goshawk and buzzard are known to nest and hunt within the forest areas. Many of the species choose to rest in high well branched conifer trees and then feed over open ground, making the forests ideal raptor habitat in an otherwise varied landscape. The management of appropriate large or potentially large trees for long retentions will ensure that habitat provision is

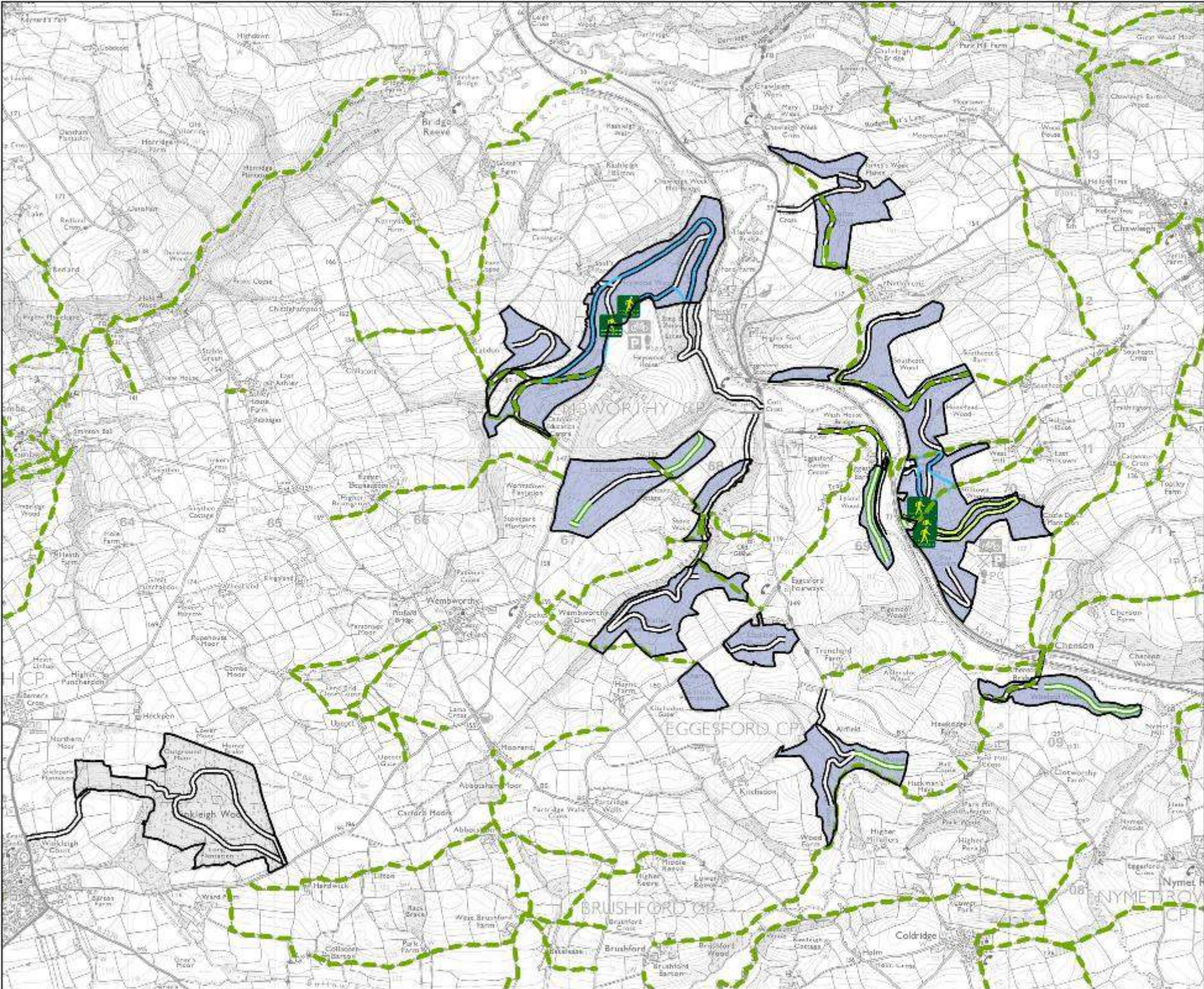
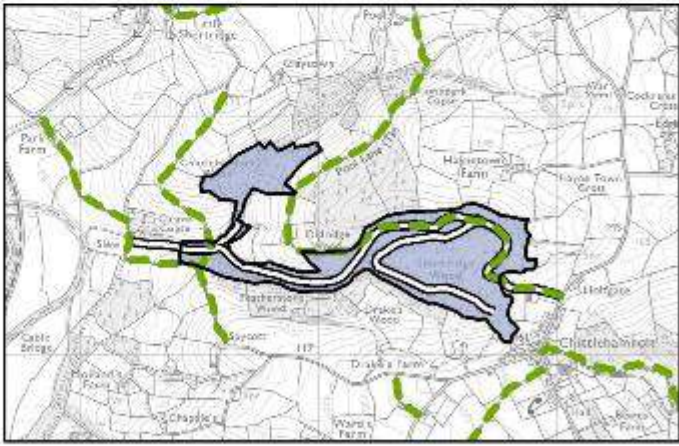
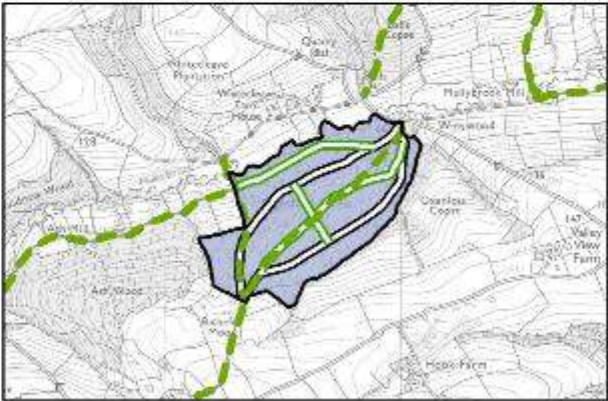
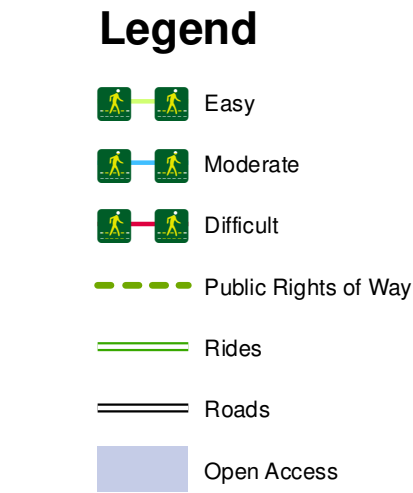
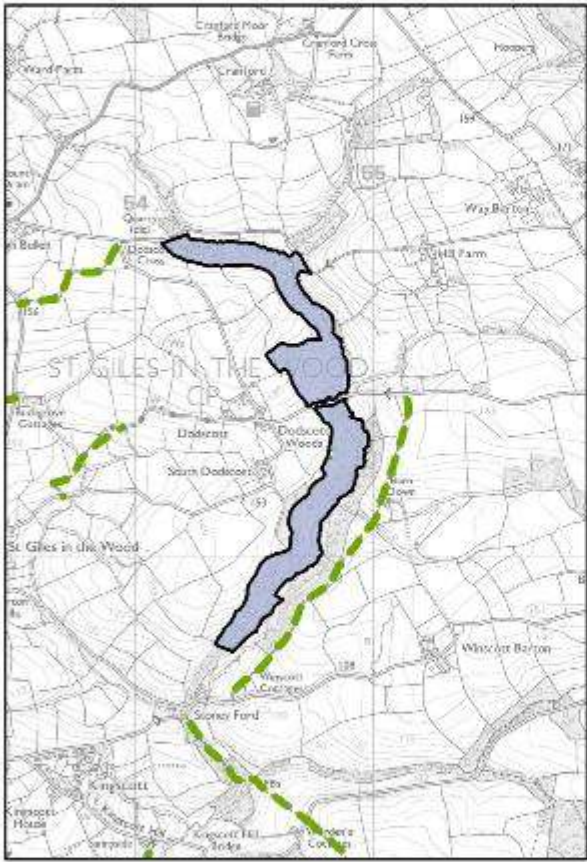
Willow tit — is a rare and declining bird which is often found in willow thickets in damp places, such as the edge of lowland peat bogs, marshes, and around gravel pits. Wistlandpound is a known site for Willow tit which is likely due to the good habitat provision and condition there. As a result tracks sides will continue to be cut on a rotation basis to provide an supply of suitable habitat whilst wetter and streams rides will be allowed to regenerate with willow

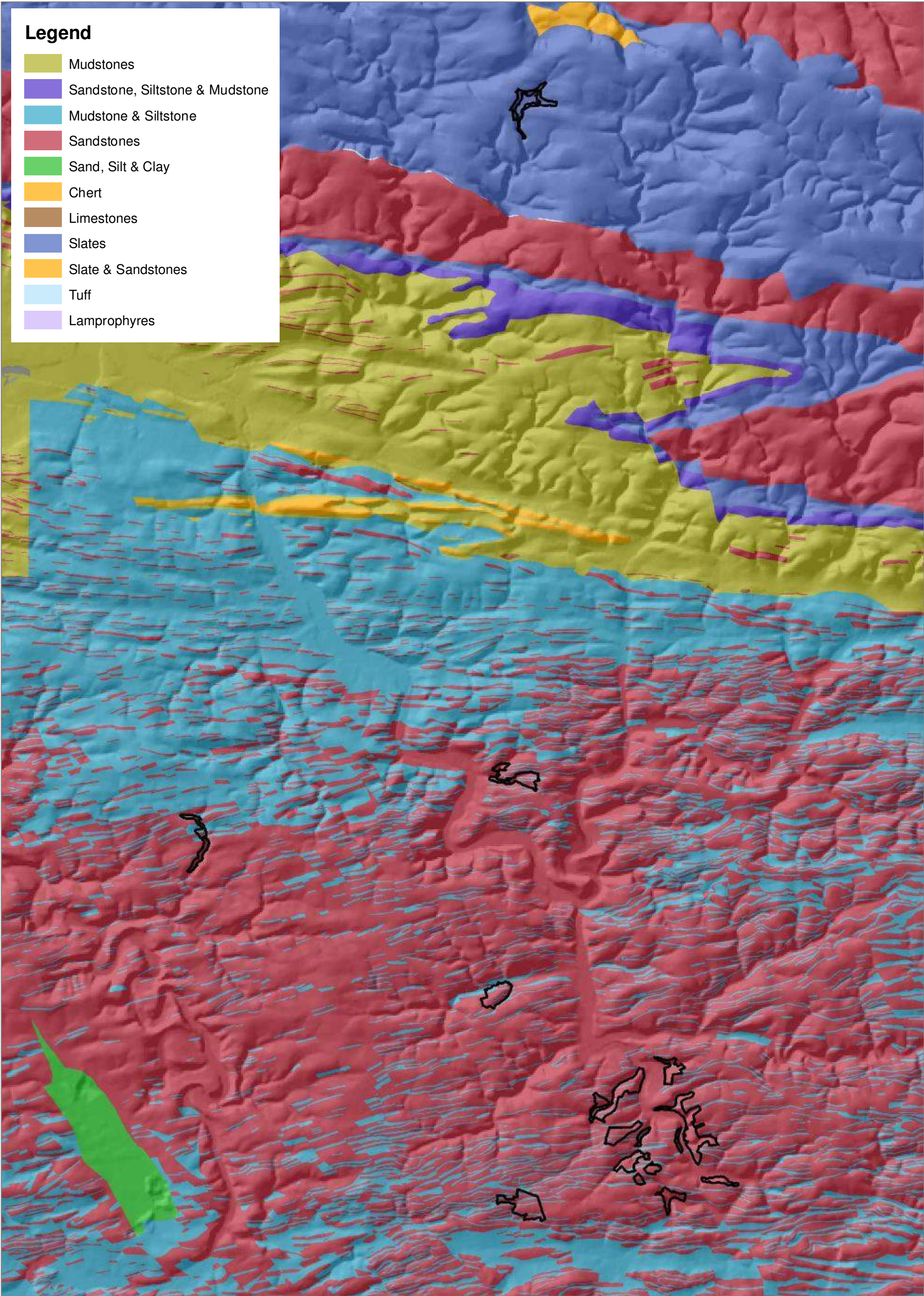


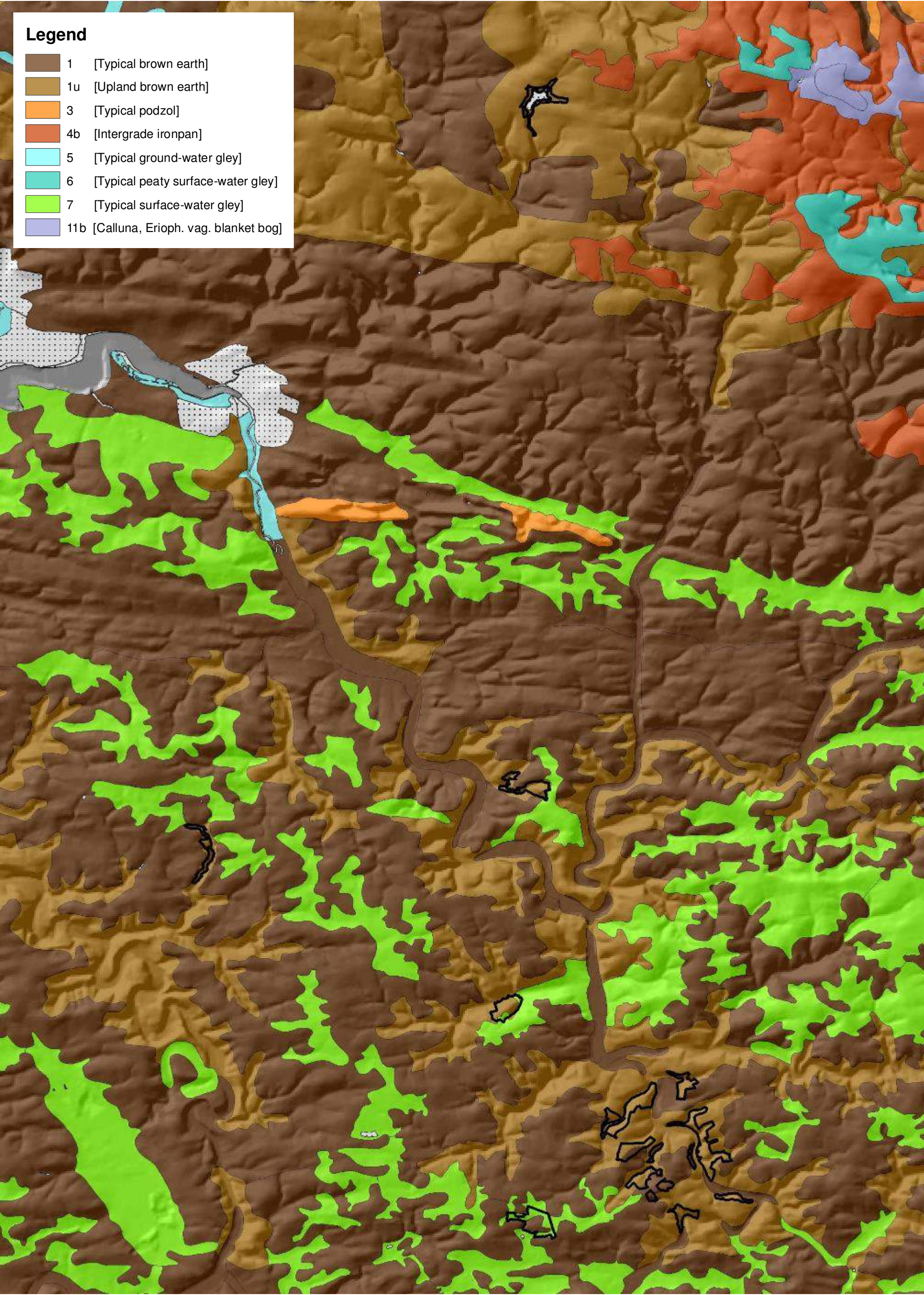
Recreation and Public Access

The Plan area experiences a relatively high level of informal recreational usage. Many blocks are held under freehold and are therefore Open Access. The Wistlandpound has a greater focus on recreation provision with a number of waymarked trails in place, supported by the South West Lakes Trust.

The use of the Plan area by local individuals as well as numerous visitors and tourists demonstrates the value of the forests to the local community, these features will be maintained in balance with ecological value.



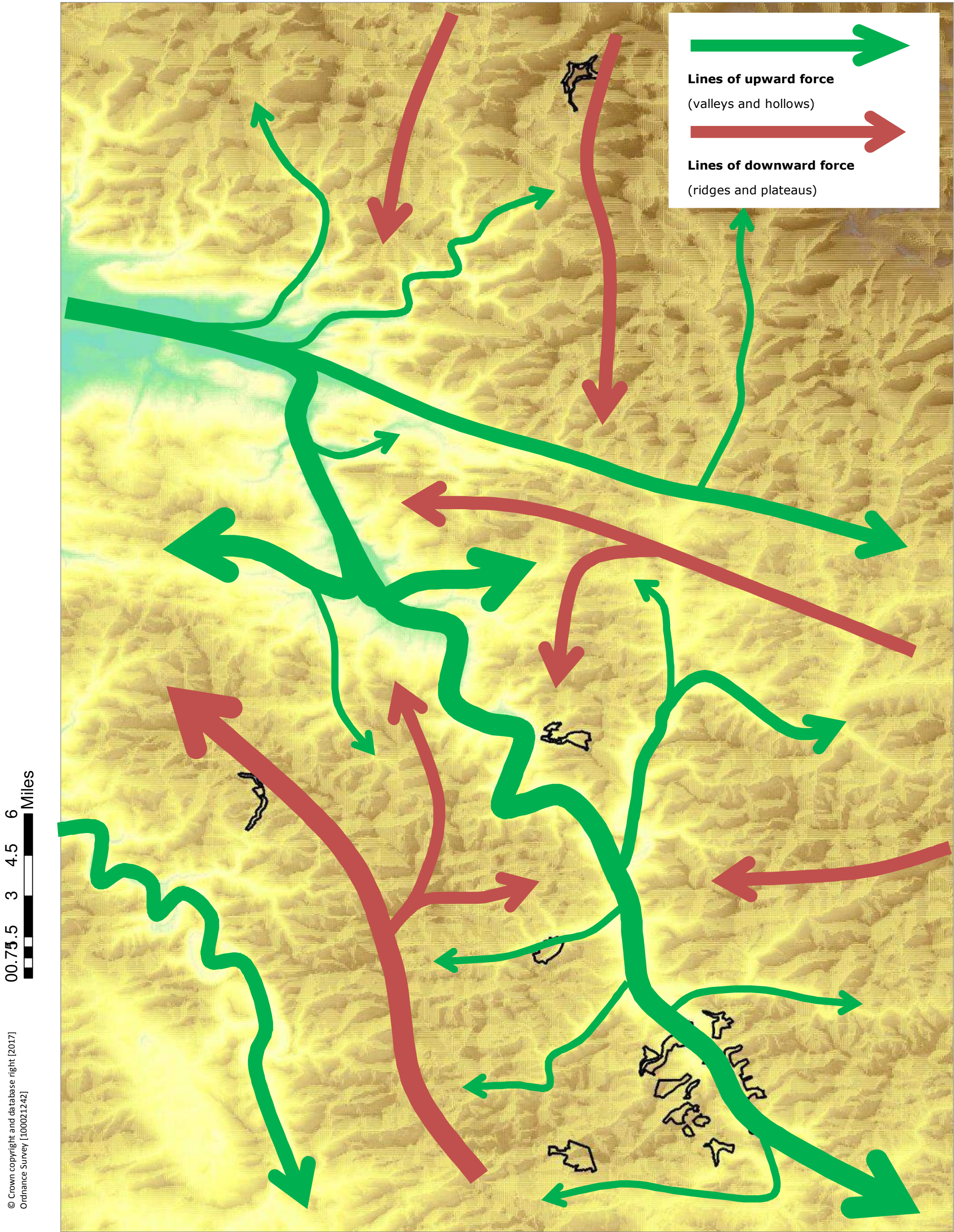




Landform Analysis

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. Ensuring that the shape and size of felling and restocking areas do not detract from the natural appearance of the forest and its contribution to the landscape character,





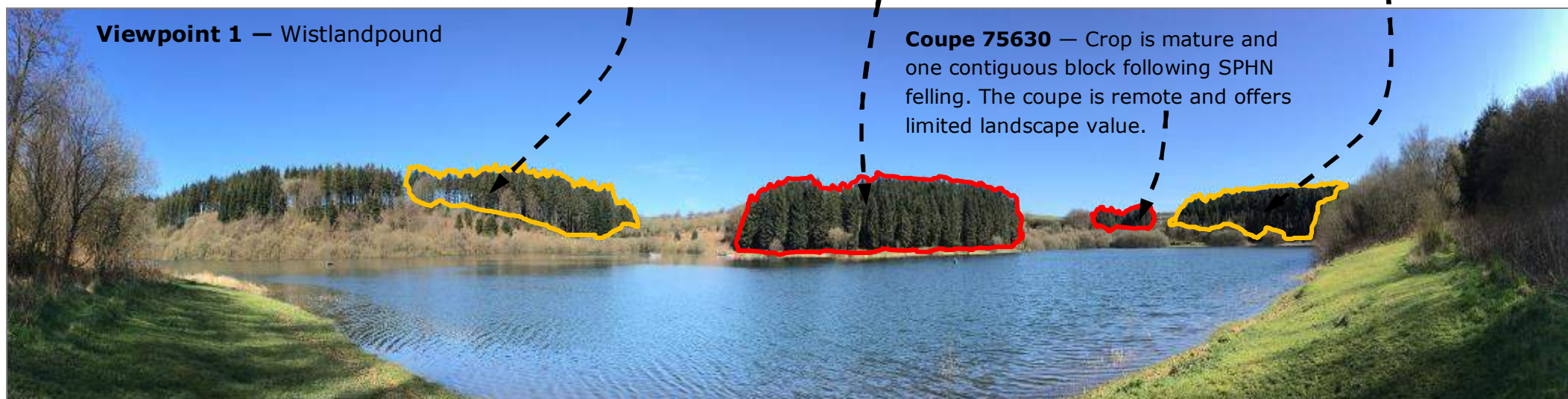
The intimate nature of the incised valley landscape mean that multiple short distance views are more common than long distance vistas. As a result opportunities to complete long-distance landscape analysis is limited. The proposed felling and restocking of coupes has been analysed from a number of significant 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.



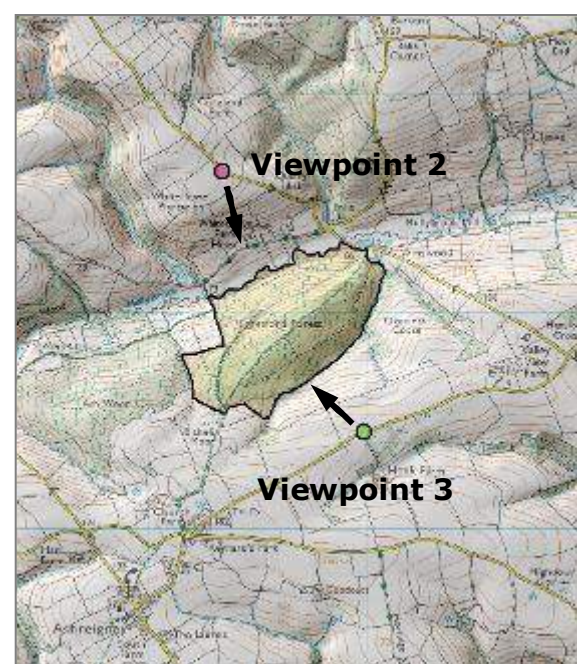
Coupe 75127 — Felling is due in 2022-2026 due to maturity and vulnerability of crop to southerly winds. The coupe is exposed and has impact in the landscape. Restocking will be sympathetic of this with a mixture of fir and pine proposed.

Coupe 75636 — Crop is mature and one contiguous block. The coupe is exposed, provides value to the reservoir infrastructure and has impact in the landscape. Restocking will be sympathetic of this with a mixture of spruce and pine proposed.

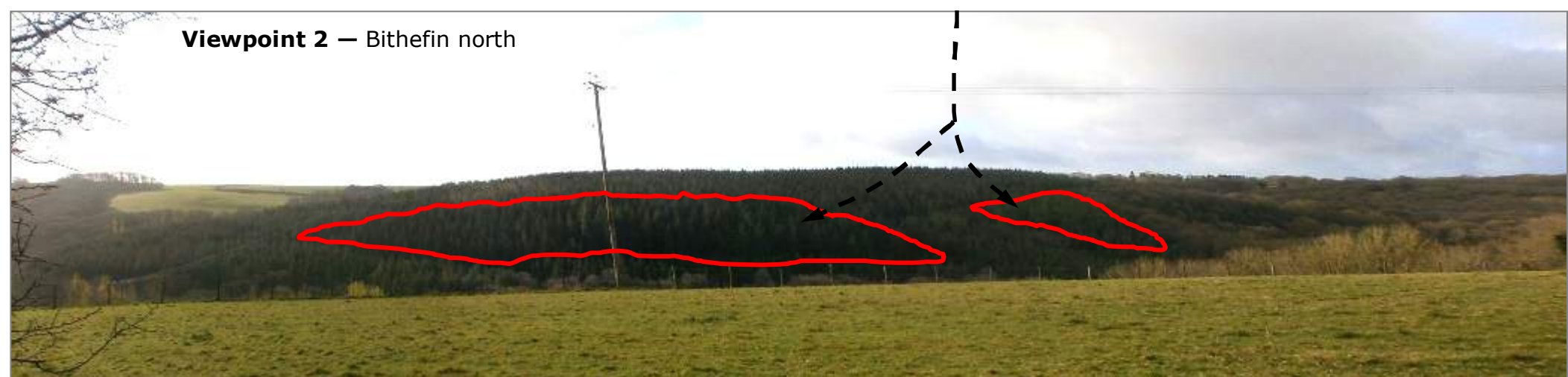
Coupe 75910 — Crop has reached maturity and increasingly vulnerable to blow, exacerbated by the high moisture content. The coupe is exposed and has impact in the landscape. Restocking will be sympathetic of this with a mixture of fir, pine and alder proposed.



Coupe 75630 — Crop is mature and one contiguous block following SPHN felling. The coupe is remote and offers limited landscape value.

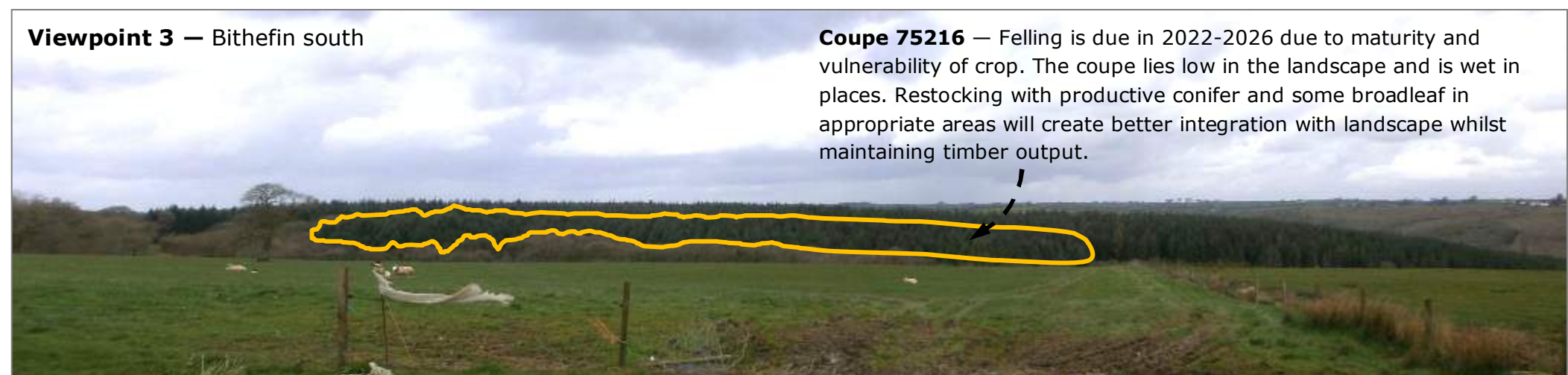


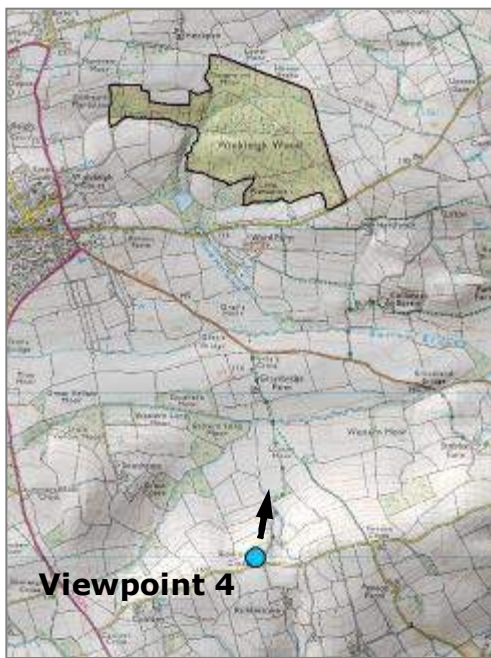
Coupe 75593 — Felling is required in 2017-2021 due to maturity of original planting. The coupe lies low in the landscape and mildly fragmented but the coupe shape is appropriate and restocking with similar species will restore the landscape impact.



Viewpoint 3 — Bithefin south

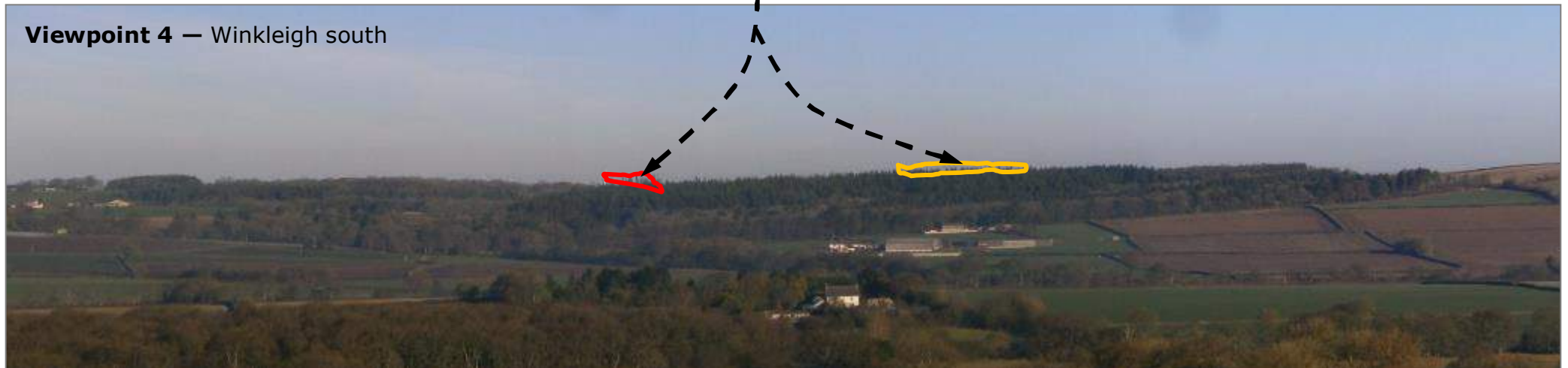
Coupe 75216 — Felling is due in 2022-2026 due to maturity and vulnerability of crop. The coupe lies low in the landscape and is wet in places. Restocking with productive conifer and some broadleaf in appropriate areas will create better integration with landscape whilst maintaining timber output.



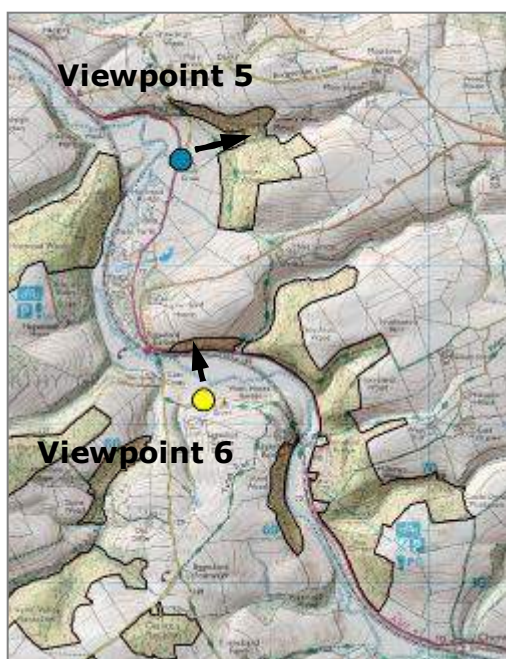


Viewpoint 4

Coupes 75659 and 75155 — Felling is largely obstructed by the topography and screening from other crops. The skyline, often punctuated by large Grand fir will be affected, and improved, this will aided by the staging of felling. Restocking will largely be with broadleaf species or similar to those existing as appropriate.



Viewpoint 4 — Winkleigh south



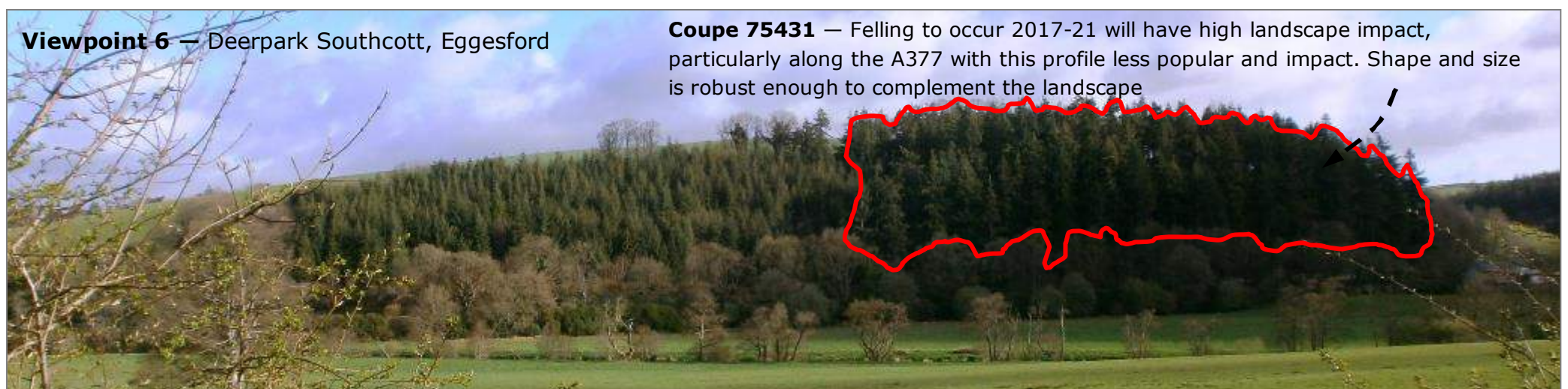
Viewpoint 5

Viewpoint 6

Coupe 75337— Felling is planned for 2022-26 to improve riparian zone quality in preparation for future clearfells planned in the locality. Landscape impact is anticipated to be minimal with retained edge trees and sympathetic restocking.



Viewpoint 5 — Upcott, Eggesford



Viewpoint 6 — Deerpark Southcott, Eggesford

Coupe 75431 — Felling to occur 2017-21 will have high landscape impact, particularly along the A377 with this profile less popular and impact. Shape and size is robust enough to complement the landscape



North Devon Basin

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

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

There are 130 river water bodies in the catchment, with a combined length of almost 1000 km, and eight lakes. Currently, 35 per cent of surface waters (284 km or 28 per cent of river length and six lakes which represent three quarters of the total) achieve good or better ecological status/potential. Waters at good ecological status now include the East and West Lyn, the Hole Brook and the river 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.

FLOW

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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.

Riparian Management

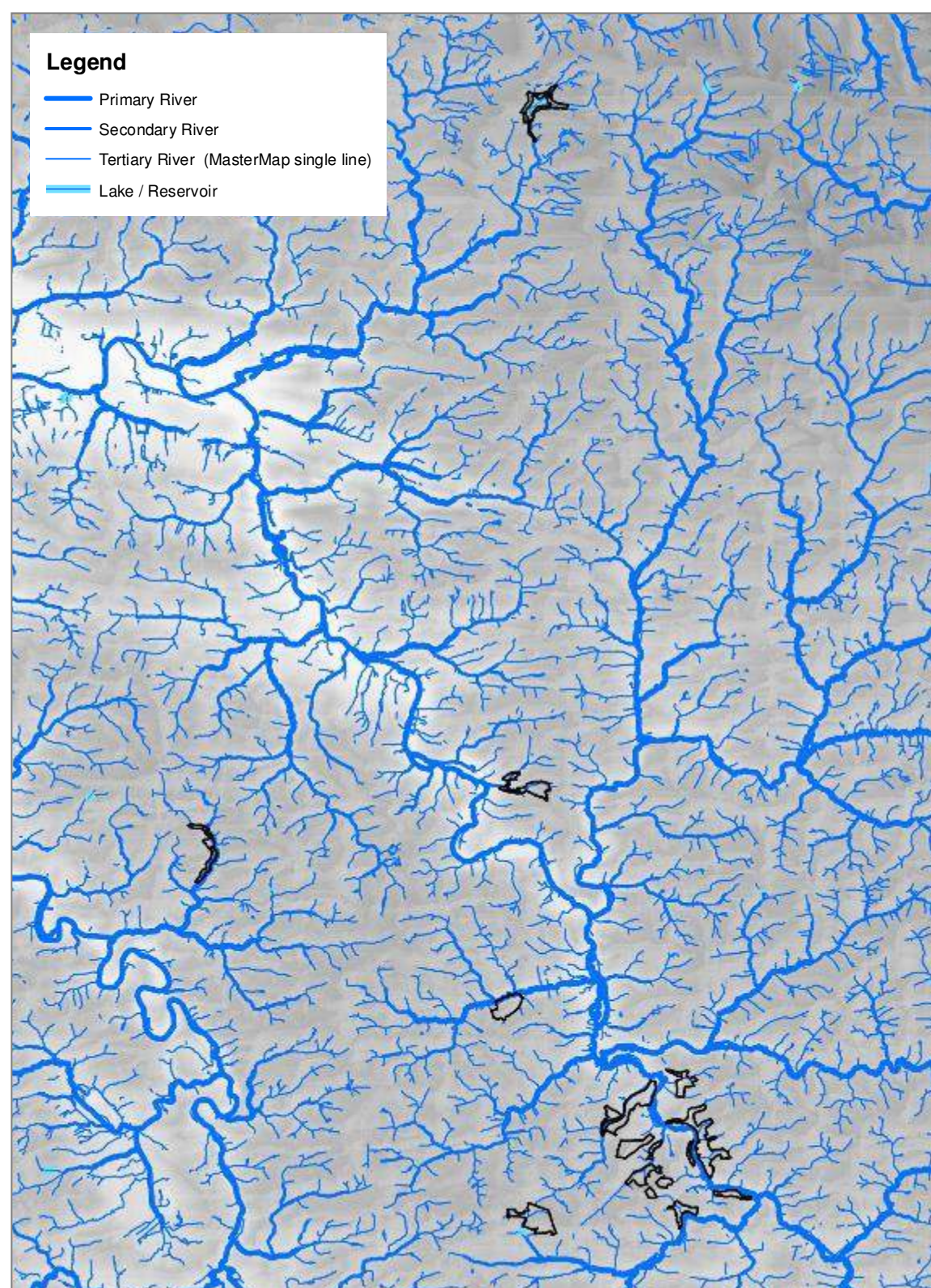
The Eggesford and Wistlandpound forests are a component of flood alleviation for the Taw and Torridge and the wider North Devon Catchment through soil stabilisation and surface runoff, retaining forest cover and a move towards continuous cover systems together with maintained drains and water storage will ensure this continues to slow down peak flows into the future.

All watercourses and riverine areas will be management sensitivity to protect and enhance water and soil quality in line with best practice. Riparian zones (14ha) will be developed to create and maintain areas of upto 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 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 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 through heavier thinning of conifer and stimulating native species regeneration.

Critical Load Area

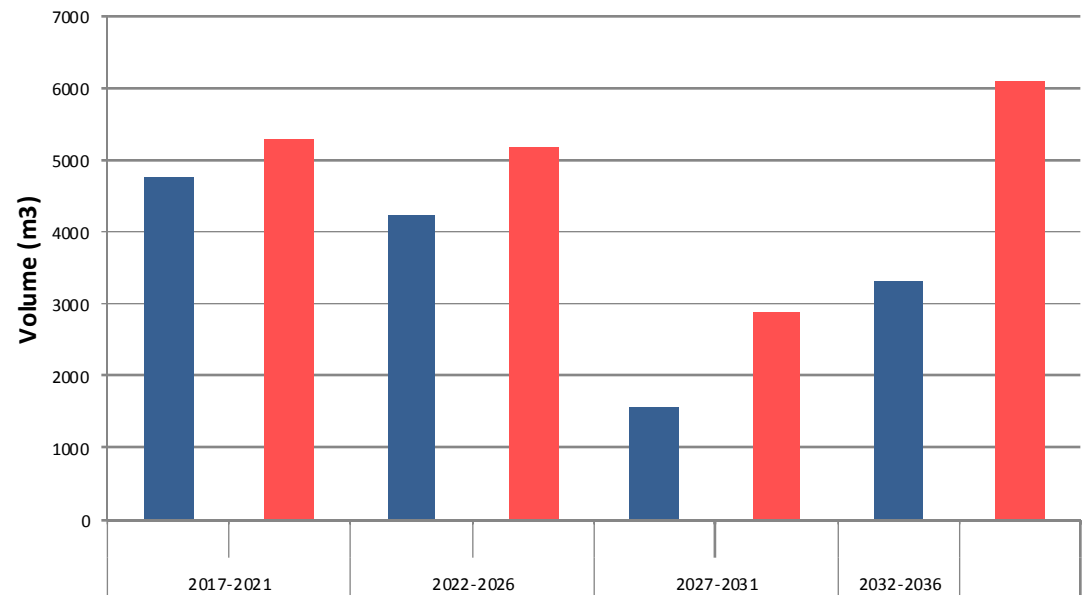
Some of the forests sit entirely within a high impact critical load area. As a result felling will be phased and co-ordinated with consideration given to minimising residues, whole tree harvesting, stump removal and short rotation forestry.



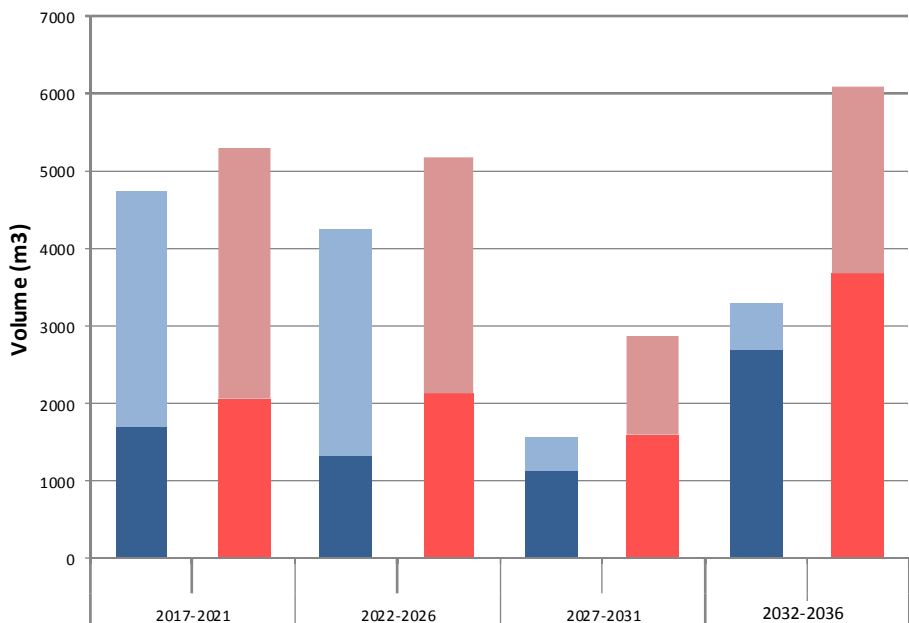


Option 1 – Current Forest Plan (Master)	Option 2 – Proposed Forest Plan (Scenario)
The continued production of sustainable and marketable woodland products.	
Significant peaks and troughs in production, mainly due to loss in thinning volume in 2027-31, potentially weaken the sustainability of the woodlands timber production. Clearfell remains the key method of realising volume, including on ancient woodland sites.	The felling and thinning programme is balanced across the decades which stabilises the sustainability of timber production. This is achieved by resequencing coupes and increasing the amount of thinning volume by switching suitable coupes to CCF.
Deliver well-designed forests that both protect and enhance the internal and external landscape in keeping with the local landscape character.	
The proposals acknowledge the importance of delivery of well-designed coupes and management but are, in places, reliant on clearfell. Where possible coupe shapes and sequencing have been retained with adjustments made in light of changes in woodland structure.	The Plan makes acknowledgement and provision for the forests contribution to the local landscape character. Coupes are designed in a way to enhance the local character both from a short and long-distance, Steps have been taken to reduce the amount of clearfelling as well as using corridors to improve internal landscape views.
To conserve, maintain and enhance cultural and heritage assets. - Support and enhance the centenary celebrations for the Forestry Commission	
The Plans makes minimal reference to location and importance of the woodlands to the cultural landscape and heritage assets within them.	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. This includes the planning for the Centenary celebrations.
Protect and enhance woodland and open habitats and their associated species.	
The Plan makes provision for open space and other valuable habitats such as ASNW but does not make them a core objective.	The Plan identifies and prescribes management for current and future key habitats and corridors as well identifying and
The provision and maintenance of recreation facilities.	
Plans makes minimal reference or significance of recreational potential or facilities.	The Plan acknowledges the value of the woodland to low key recreation provision and takes steps to ensure this is maintained.

Total Annual Average Production Forecast Comparison

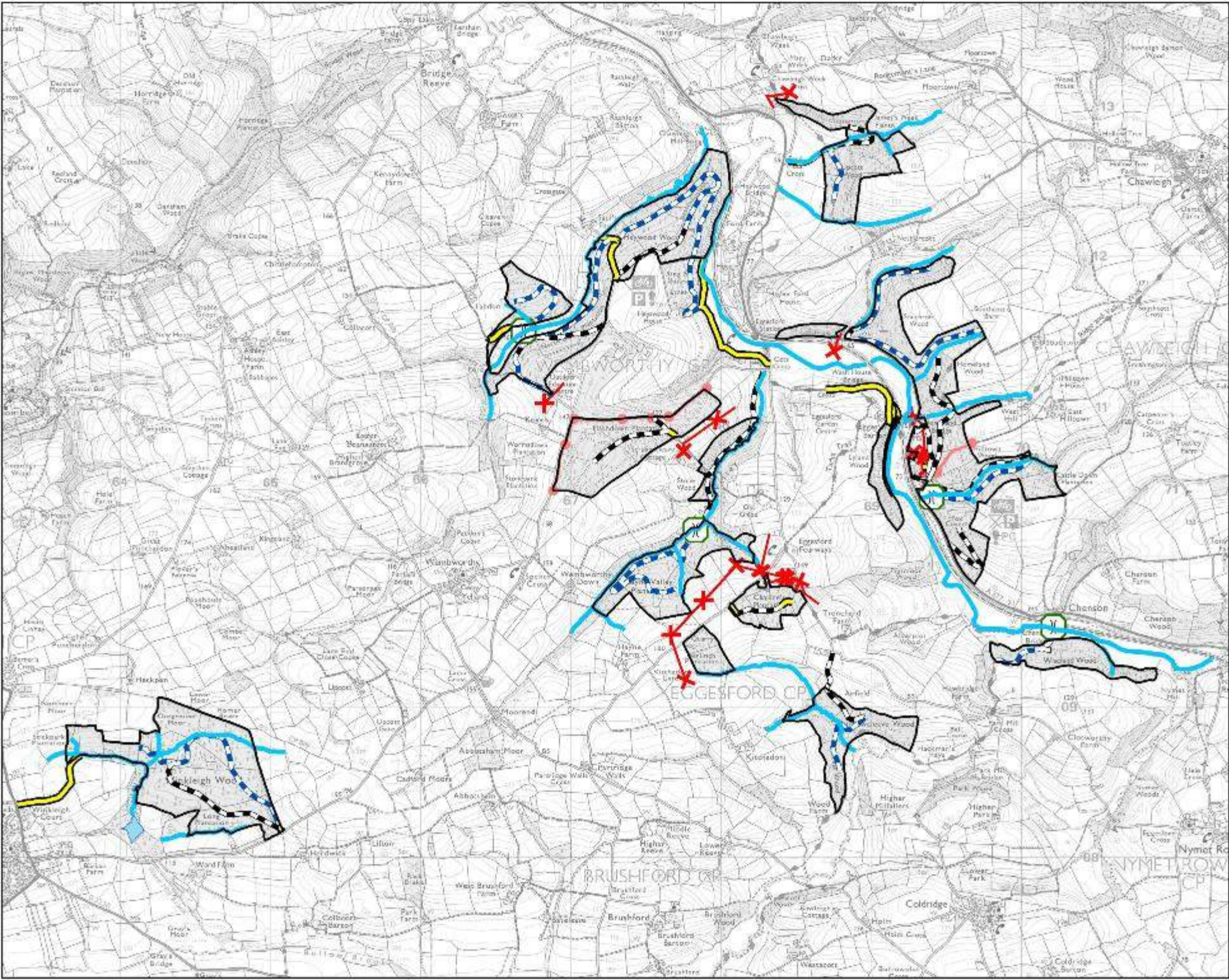
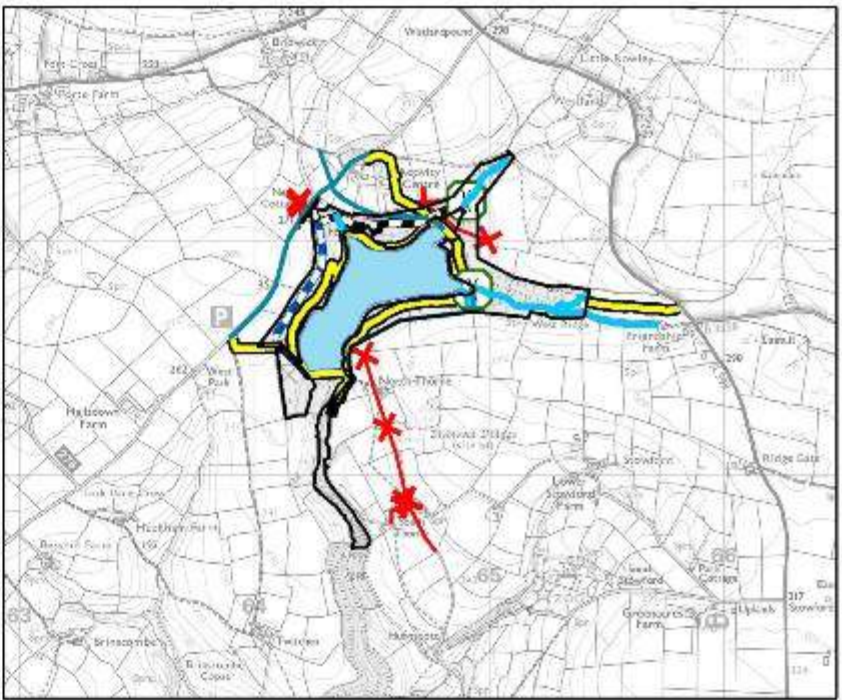
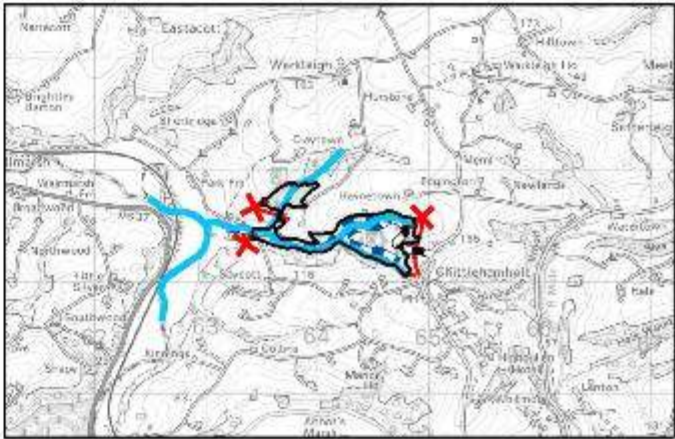
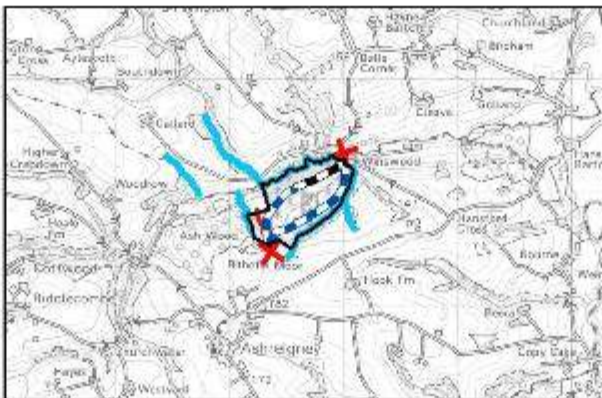
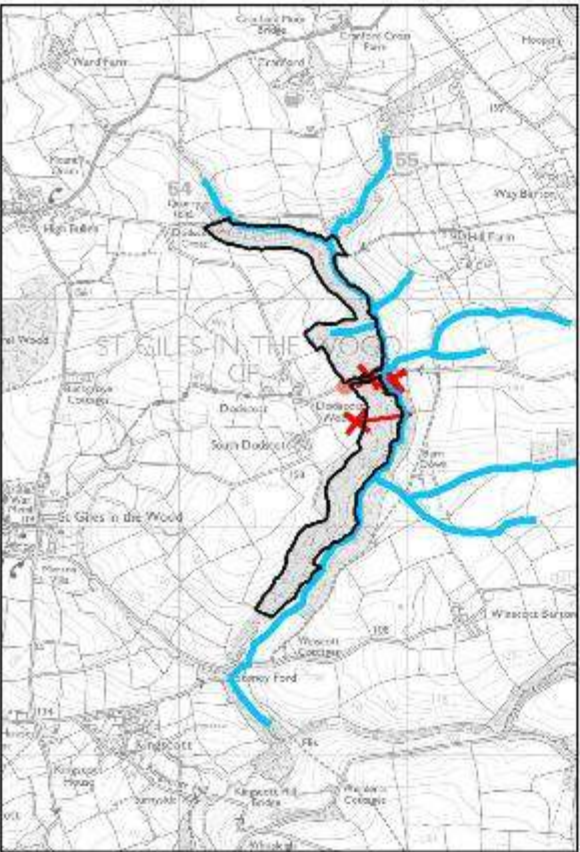


Thinning and Felling Average Annual Production Forecast Comparison



Legend

- Drain
- Watercourses
- Water Supply Point
- Water Pipeline
- Open Water
- Reservoirs
- Quarries

DamsBridgesClass A/B RoadsClass C RoadsLegal access/UnclassifiedClassification unassignedLoading/transfer pointPowerline OverheadPowerline UndergroundGas PipelineTelephone Line UndergroundTelephone Line Overhead

Plan Period Coupe Prescriptions

 Fell 2017 - 2021

 Fell 2022 - 2026

 Fell 2027

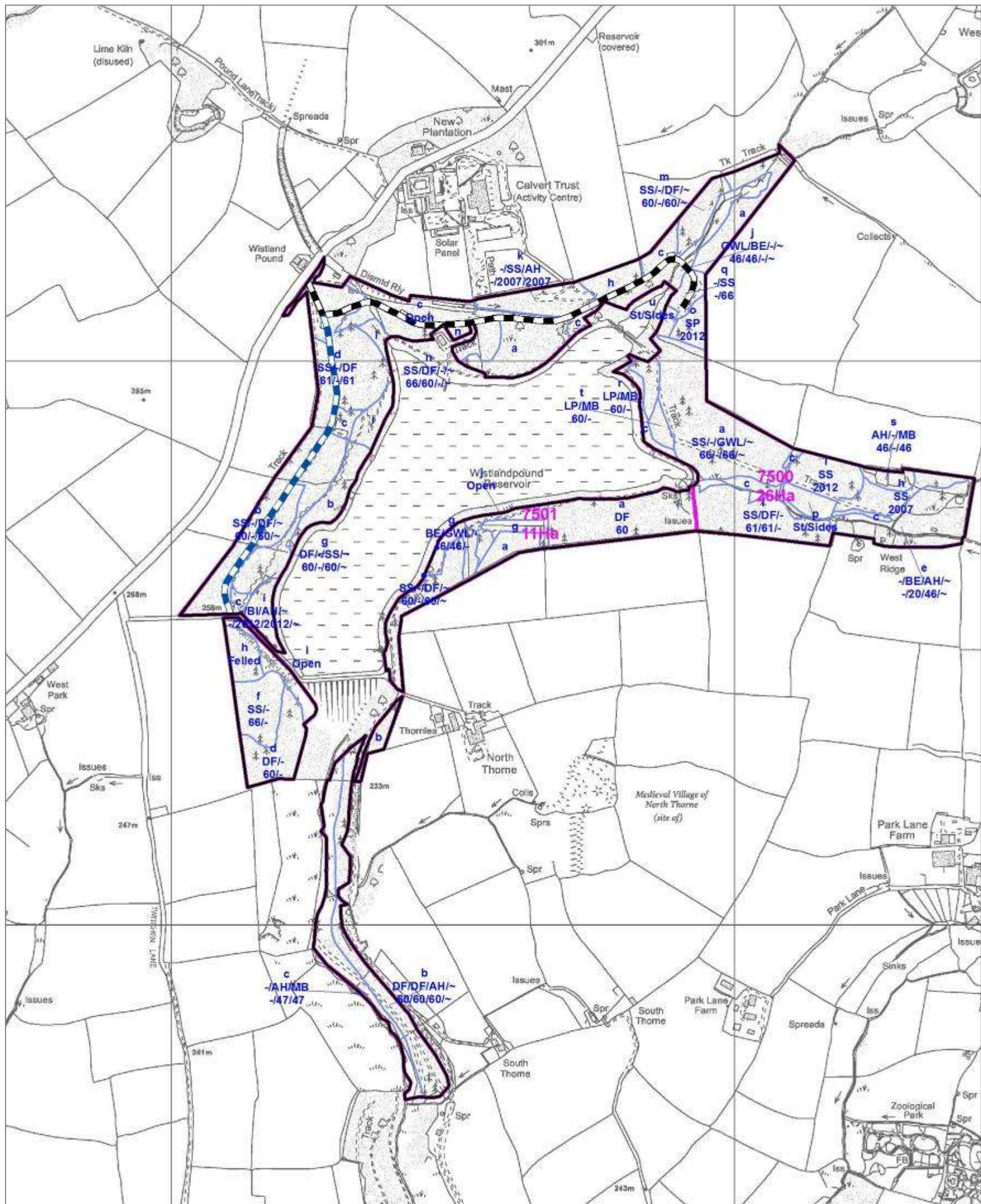


	Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Restock	Area (ha)	Restock Proportion	Rationale/Prescription
Wistlandpound	75630	1.90	SS	Crop is fragmented and exposed having now reached terminal height. Economic felling is required, with allowance provided for the riparian area through the centre.	75630a	1.90	90% Ev. Conifer 10% Open	Restock with productive conifer, with allowance for integration with the riparian wet zone which runs through the centre. Consider Sitka spruce, Italian alder, Scots pine and Serbian spruce.
	75636	1.69	SS	Large contiguous block of mature conifer no longer thinnable is well designed to be removed in a single intervention.	75636a	1.69	80% Ev. Conifer 20% Open	Restock sympathetically with the recreation routes and internal landscape in mind, with allowance for open space. Site is exposed, wet and has a high landscape impact. Consider Italian alder, Scots pine and Douglas fir.
Shortridge	75724	4.86	WH & SS	Mature and regenerated western hemlock poses a significant risk to the restoration of the forest towards broadleaf cover, with regeneration shading out ground flora and other regenerating components.	75724a	4.86	80% N. Broadleaf 20% Open	Restocking through planting of native species will be required. Some Oak, ash and hazel natural regeneration can be anticipated. Consider planting in clusters with Pedunculate oak and whitebeam.
Bithefin	75593	3.81	DF, NS & JL	Crop has now reach economic maturity and further thinning will yield little result. Some evidence of underplanting needs to be protected where possible during operation.	75593a	3.81	100% Ev. Conifer	Site is steep, well-drained and richer than the higher tops of the plantation. Build on any understorey with productive species. Consider Norway spruce, Pacific silver fir and coast redwood.
	75216	3.69	SS	Crop is showing signs of windblow, but will withstand another thinning. Final thinning should look to prepare adjacent crop for increased exposure following felling.	75216a	3.69	100% Ev. Conifer	Site is relatively flat, sheltered and moderate in both nutrient and moisture regime. Restock productive conifer, with allowance for the riparian zone which runs through the north. Consider Sitka spruce, Lawsons cypress and Red alder.
Winkleigh	75659	3.25	GF	Grand fir has reached economic maturity with tops damaged on many trees. Regeneration is prolific in areas and is having a detrimental impact on old mature Oak belts, particularly within the riparian zones.	75659a	1.88	80% Ev. Conifer 20% N. Broadleaf	Utilise existing understorey and then enrich with productive conifers except in broadleaf dominated areas which should be protected and built on. Consider Scots pine, Sitka spruce Noble or Grand fir.
					75659	1.37	80% N. Broadleaf 20% Open	Minimal replanting should be required given the sites propensity to naturally regenerate oak and hazel. Consider enriching in clusters with Pedunculate oak, elm, alder and wild service.
	75779	2.12	NS & JL	Site is experiencing significant windblow and open space is proving unsustainable to manage, This robust coupe will ensure forest cover integrity at the main entrance to the woodland.	75779a	2.12	100% Ev. Conifer	Site is relatively flat, sheltered and moderate in both nutrient and moisture regime. Restock productive conifer, with allowance for the entrance which runs through the north. Consider Coast redwood, Sitka spruce and Pacific silver fir.
	75155	3.48	WH	Mature western hemlock continues to pose a risk to the restoration of the forest towards broadleaf cover, with regeneration shading out ground flora and other regenerating components.	75155a	3.48	80% N. Broadleaf 20% Open	Oak and hazel natural regeneration can be anticipated given the sites situation within the valley and the soil condition. Consider enriching with Pedunculate oak, Wych elm, hornbeam and wild service.
	75118	5.17	GF & WH	Crops have now reached economic maturity and the Grand fir is either nor blowing over or breaking down. Hemlock continues to seed into neighbouring stands having a detrimental impact. Retain all stable broadleaves	75118a	5.17	100% Ev. Conifer	Utilise existing understorey and broadleaf components and then enrich with productive conifers except in broadleaf dominated areas which should be protected and built on. Consider Scots pine, Douglas fir and Grand fir.
Eggesford	75616	3.01	NS	Site for commemorative planting of avenue to celebrate 100 years of the Forestry Commission. Site is enclosed and follows either side of the main access track of Flashdown forest.	75616	3.01	100% Ev. Conifer	Site is flat and relatively fertile. Species choice will be for aesthetic and cultural reasons and could include broadleaves. Consider common walnut, Coast redwood, European silver fir and Douglas fir
	75431	1.96	DF	Small discrete original planting with high road frontage is not appropriate for retention. Robust clearfell is propose including younger crop to the north.	75431a	1.96	100% Ev. Conifer	Site is steep sloped, with high road frontage and limited access. Planting should be with productive conifers with consideration for visual impact from the road. Consider Coast redwood, Scots pine and Douglas fir.
	75582	5.36	SS	Stressed and mature spruce is having a limiting effect on the water course. Clearfell is to improve light penetration and riparian zone quality, operation will need to address soil erosion potential.	75582a	5.36	40% N. Broadleaf 40% Open 20% Ev. Conifer	Coupe follows water course and is therefore sloped and wet with some areas of remnant broadleaves. This should be built on with natural regeneration and some planting of conifers can be considered on higher areas. Consider Sitka spruce and Douglas fir.
	75513	4.60	SS & WH	Crop is reaching maturity with some minor blow, but will benefit from one additional thinning. Watercourse, wet woodland and quarry features will need protecting.	75513a	4.60	100% Ev. Conifer	Site gently sloping, well drained and nutritionally poor. Site should be fully stocked with productive conifers with allowance for riparian area in the south. Consider Noble or Douglas fir and Sitka or Serbian spruce.
	75337	1.96	NS & DF	Area of mature spruce and fir is having a limiting effect on quality of wet woodland the water course. Clearfell is to improve riparian zone quality in preparation for future clearfells planned.	75337a	1.96	40% N. Broadleaf 40% Open 20% Ev. Conifer	Site is flat and wet with some areas of remnant broadleaves. This should be built on with natural regeneration and planting of conifers can be considered on higher areas. Consider Sitka spruce and Douglas fir.
	75264	3.35	WH & SS	Discrete area of mature western hemlock is having a detrimental effect on the watercourse. Sitka spruce is experiencing windblow. Clearfell is to improve riparian zone quality and stand integrity.	75264a	3.35	75% Ev. Conifer 20% N. Broadleaf 5% Open	Site is moderately sloping, well-drained to fresh with medium nutrient availability. Given the distance for the water course suitable conifers can be considered. Consider Scots pine and Douglas fir.

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 proposed.

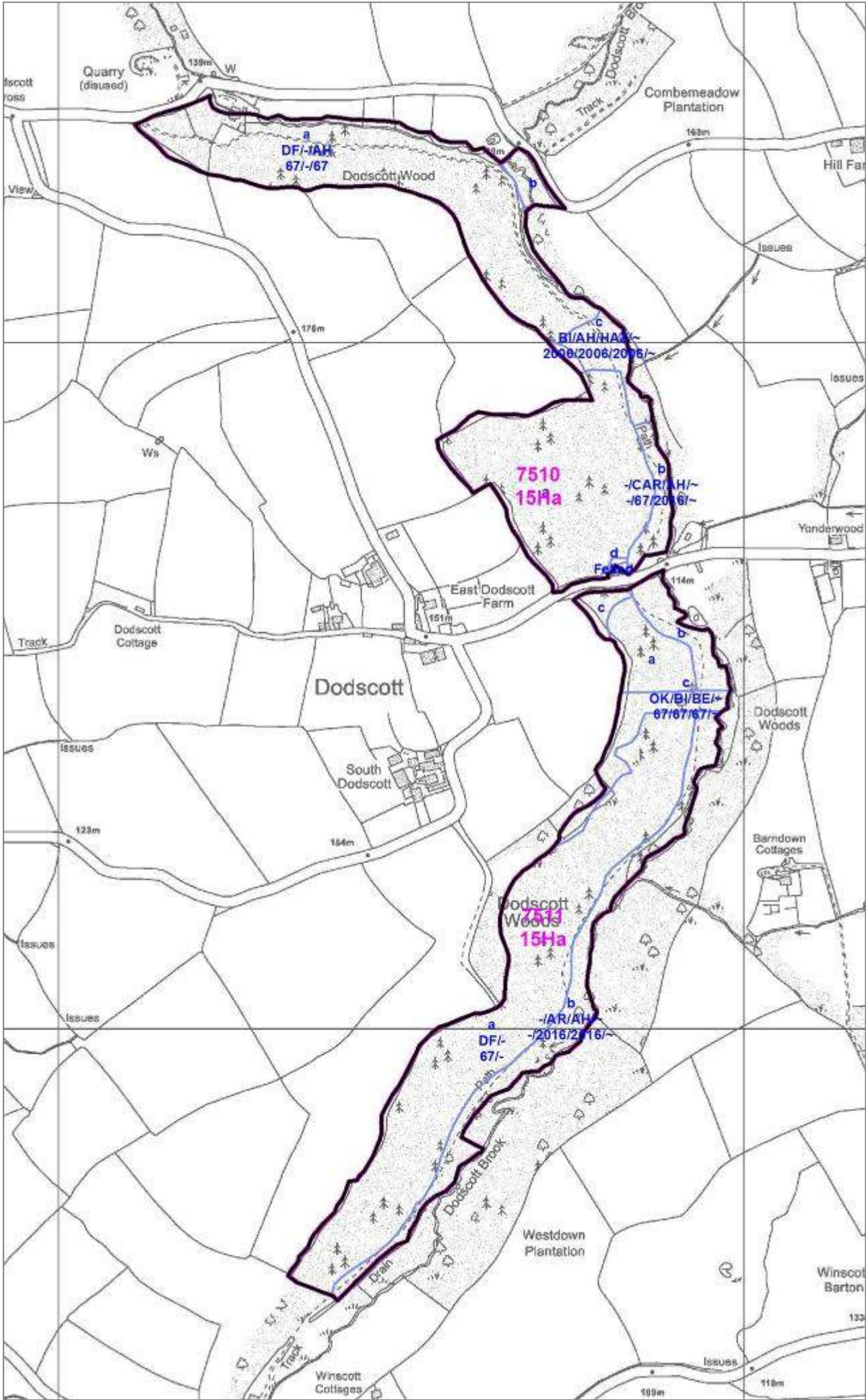


Wistlandpound





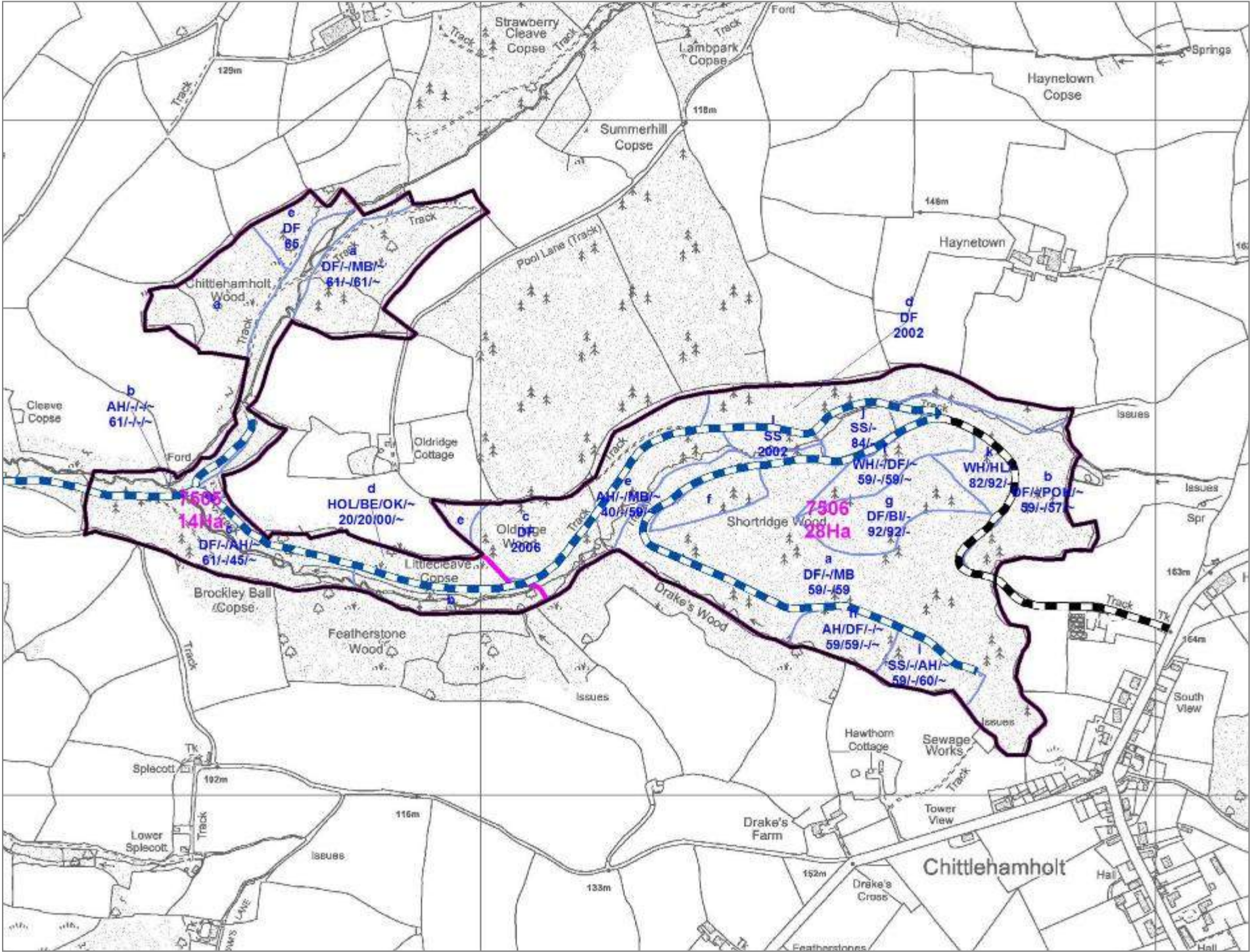
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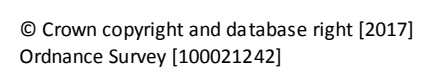




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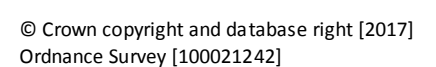
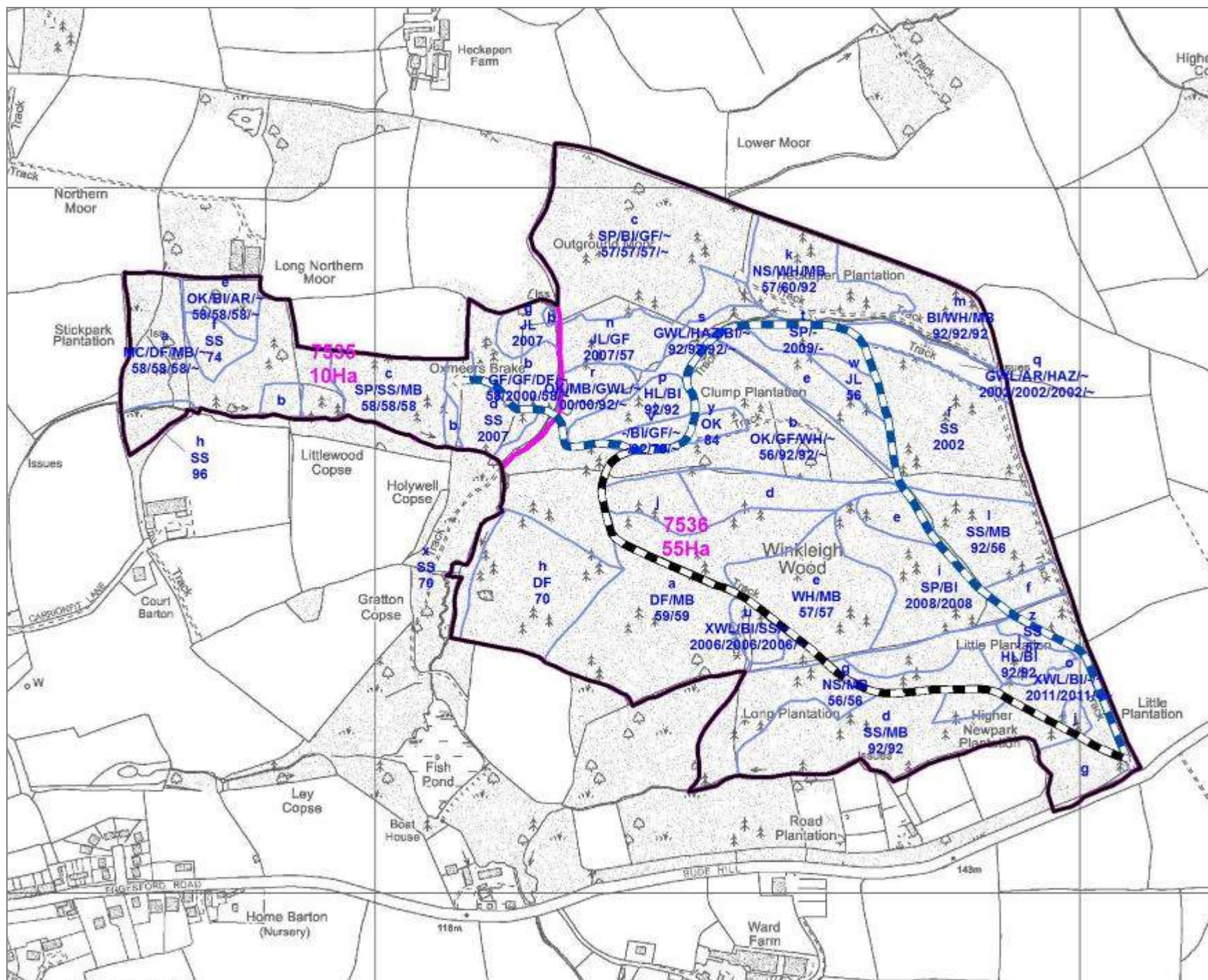
Shortridge





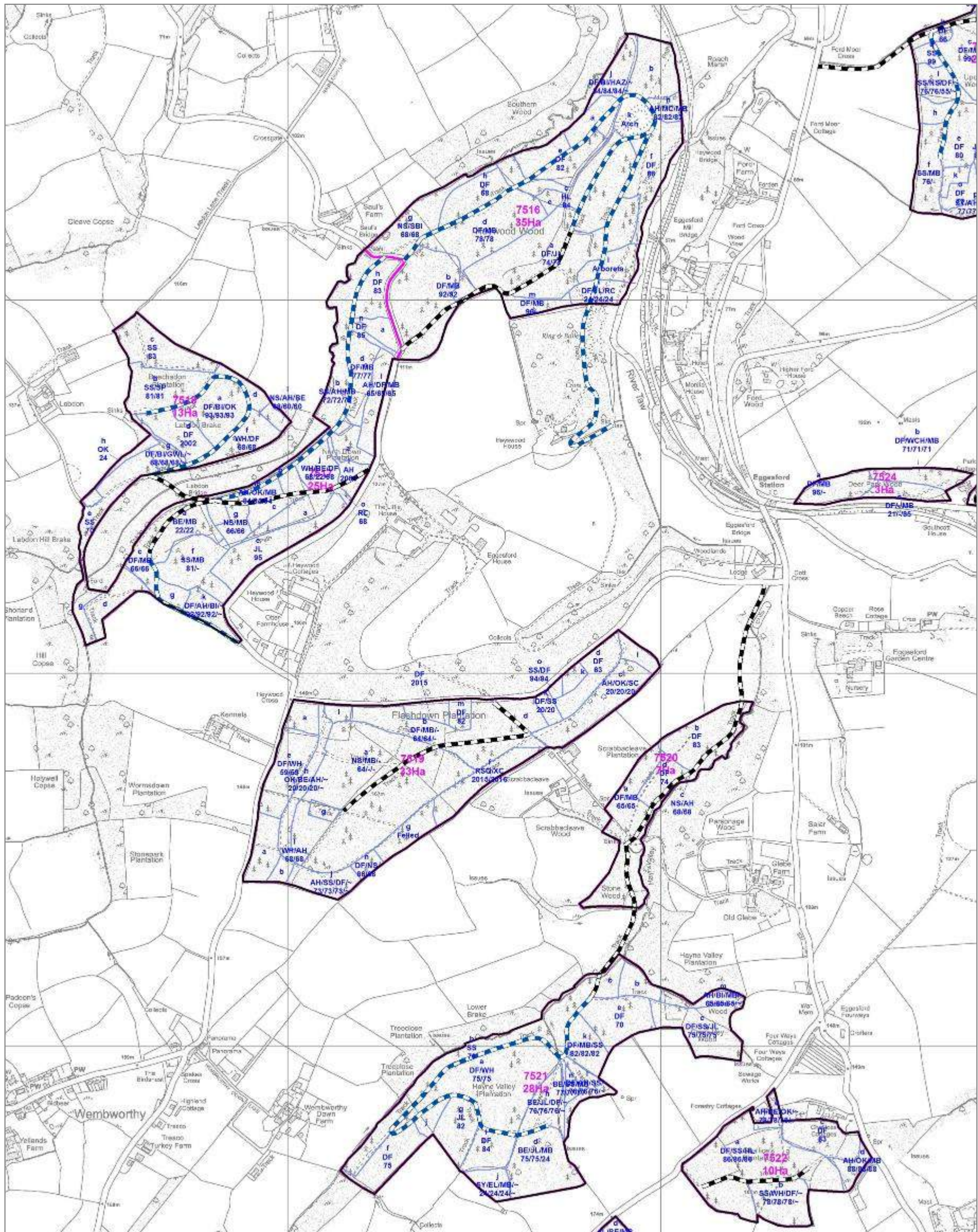
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Winkleigh



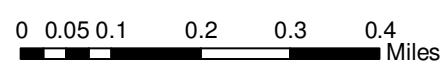


Eggesford (West)





Eggesford (East)



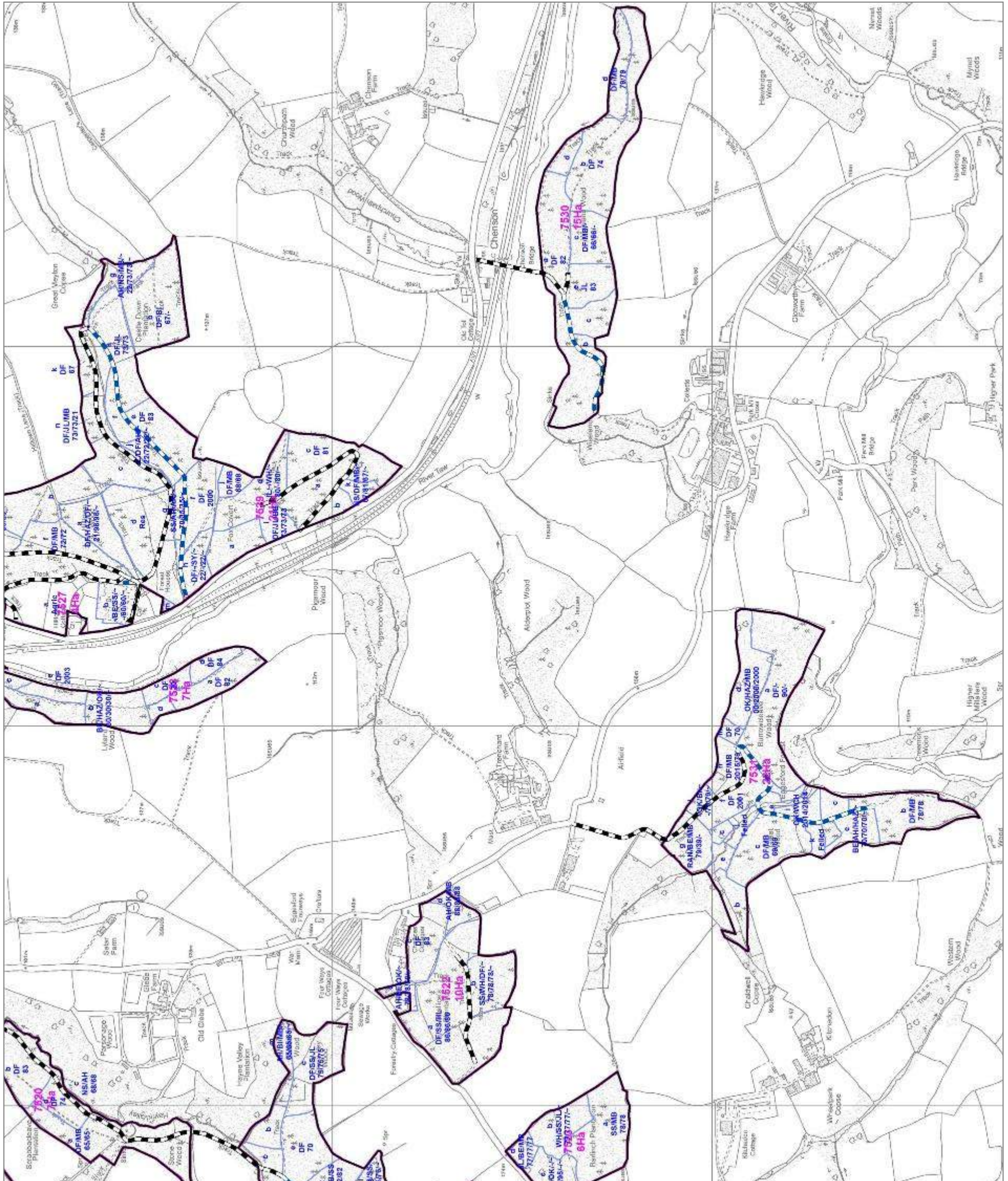


Forestry Commission
 woodlands have
 been certified in
 accordance with the
 rules of the Forest
 Stewardship Council



Stock Data-2017

Eggesford (South)





Dendroctonus 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.

The Eggesford & Wistlandpound forests are at significant risk of infection from *Dendochtronus micans* not least because of their extensive reliance on 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.

Factor	Increased risk of attack
Location	<ul style="list-style-type: none">• Within 7km of infested stands• Close to public roads and forest roads leading from infested areas
Tree/stand age	<ul style="list-style-type: none">• Mature and veteran trees
Climate	<ul style="list-style-type: none">• Conditions giving rise to tree stress: Low rainfall, low soil moisture, exceptionally dry (or wet summers)
Windthrow	<ul style="list-style-type: none">• High incidence of wind-related problems such as snapped top, windthrown trees and root disturbance.
Site	<ul style="list-style-type: none">• Poorly suite to spruce growth• Previous management• Extraction damage, brashed trees• Soil compaction• Climber damage
Tree growth	<ul style="list-style-type: none">• Poor growth. Malformed trees with multiple forks and other growth irregularities

Phytophthora ramorum

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 number of Japanese Larch in South West England. 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. 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. To date a number of SPHNs have been issued for larch removal within the Plan area. Whilst pre-emptive felling is not prescribed across the area due to the relatively small proportion made up by susceptible species, where in mixture with spruce and other resilient crops, the thinning out of larch will be favoured.

Dothistroma Needle Blight

Often referred to as Red Band Needle Blight (RBN), infection from *Dothistroma septosporum* can reduce growth rates of susceptible species (namely pines) 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. The small areas of symptomatic Lodgepole pine have been targeted for felling due to their loss in yield and wind vulnerability.

Name: Chalara fraxinea

First appearance: currently N/A
Attacks: Ash
Pretty rampant in Europe, showing up in the United Kingdom 2012 mainly in East Anglia and along the East coast of England. The disease has now spread significantly throughout the country and is found in the local region. The disease cause considerable bleeding and defoliation leading to the death of the tree.

Name: Oak 'dieback' or 'decline'

First appearance: unknown
Affects: Oak
Oak 'dieback' or 'decline' is the name used to describe poor health in oak trees and can be split into Chronic decline and Acute decline. Chronic decline is protracted taking effect on the Oak over a number of decades whilst Acute decline is much swifter acting over much shorter periods usually five years or so. Symptoms can be caused by a range of living agents e.g. insect and fungal attack, or non-living factors, e.g. poor soil and drought. Factors causing decline can vary between sites, as can the effects of the factors through time. Oak decline is not new; oak trees in Britain have been affected for the most part of the past century. Both native species of oak are affected, but Pedunculate oak (*Quercus robur*) more so than Sessile oak (*Quercus petraea*). Successive exposure to any of these agents on a yearly/seasonal basis further reduces the health of the tree(s) and predisposes it to other living (Biotic) agents that can often spell the eventual death knell for the tree.

APPENDIX 3 - Glossary of Terms



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		<p>A management system that is applicable to conifer or broadleaf, where tree canopy is maintained at one or more levels without the need to clearfell the whole site. Felling can occur, but generally in small “groups” whose size shape and spatial distribution will vary depending on site conditions. The “groups” are then either: allowed to develop and establish by the use of natural regeneration, are planted or are established using a mixture of both techniques. This known as a “group shelterwood system”</p> <p>A variation on this is “Single tree selection”. This variation removes individual trees of all size classes more or less uniformly throughout the stand to maintain an uneven-aged stand and achieve other stand structural objectives. While it is easier to apply such a system to a stand that is naturally close to the uneven-aged condition, single tree selection systems can be prescribed for even-aged stands, although numerous preparatory thinning interventions must be made to create a stand structure where the system can truly be applied.</p>
Silviculture		A term coined during late 19th century from the Latin <i>silva</i> meaning 'wood' and the French <i>culture</i> meaning 'cultivation' and so Silviculture is the art and science of controlling the establishment, growth, composition, and quality of forest vegetation to achieve a full range of forest resource objectives.
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	<p>Selective removal of trees from a wooded area, giving remaining trees more space to grow into larger trees. Thinning is done to:</p> <ul style="list-style-type: none"> Improve the quality and vigour of remaining trees. Remove trees interfering with mature or veteran broadleaf trees. Give space for tops (or “crowns”) of broadleaf trees to develop and potentially act as a future seed source. Give space for natural regeneration to grow and develop with the intention of recruiting these younger naturally grown trees as a part of the future woodland structure. Create gaps for group planting or enrichment. Remove species of tree that may compromise the intended management objective of the woodland eg: non-native or invasive species such as Sycamore, Western Hemlock or birch. Improve the economic value of a wood. Help realise opportunities to enhance ecological value. <p>NOTE: This list is not in any order of priority and will vary depending on management objectives.</p>
Yield Class	YC	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.

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