Forestry Commission England

Dartmoor Forest Plan 2016-2026

West England Forest District

Ben Robinson

FCE File Ref: OP10/82
(Old PE69, 70, 71, 71/1)

Declaration by FC as an Operator.

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

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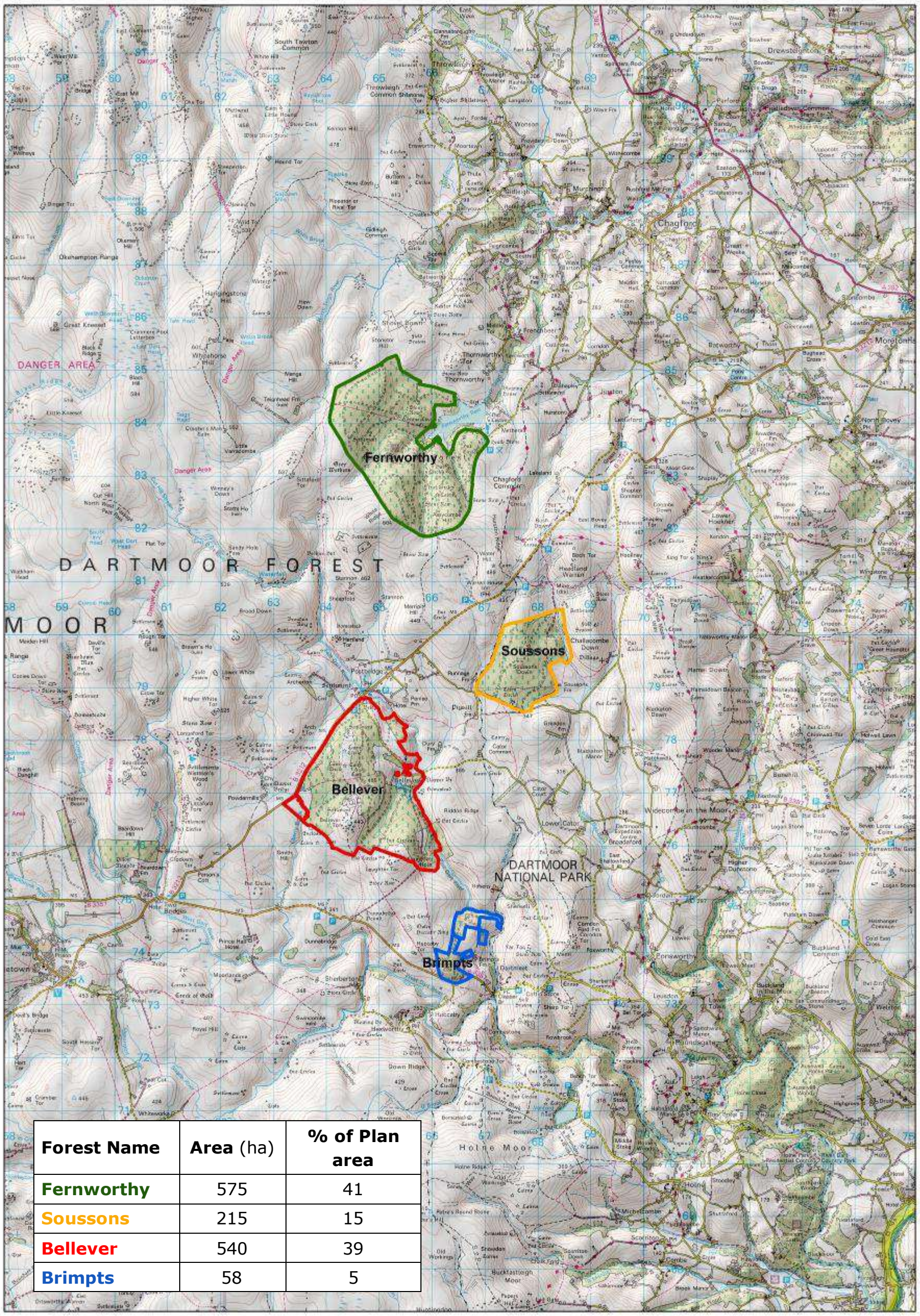
Location



Forest Name	Area (ha)	% of Plan area
Fernworthy	575	41
Soussons	215	15
Bellever	540	39
Brimpts	58	5

The Dartmoor Forest Plan area lies within the county of Devon and makes up around 1.5% of the **Dartmoor National Park**. The Plan area is made up of the four separate forest blocks of **Fernworthy**, **Bellever**, **Soussons** and **Brimpts** totalling 1388ha. The forests are close to the settlements of Chagford, Postbridge and Bellever.

The Plan area sits within a moorland landscape and provides both a visual feature and recreational attraction for the surrounding area. The majority of the land is at 300-400m above sea level (asl), but ranges between 250m and 500m asl. The climate is warm and fairly moist with an average annual rainfall of 1430—2030mm. The soils are developed over the Dartmoor granite intrusion series and are typically moist and moderately fertile. They are primarily acidic and of the peaty podzolic type with a tendency to form an ironpan and gley. Brimpts is slightly different in character with fairly fertile and free draining upland brown earths which are underlaid by a stony scree substrate.

Summary

About

The Dartmoor Forest Plan area is made up of 4 separate forest blocks totalling 1388 hectares in Devon. The forests lie within the Dartmoor National Park. As distinct individual forest blocks set within the distinctive moorland they have very high natural and landscape diversity and value.

The forests managed as part of the public forest estate stretch from Fernworthy in the north, 3 miles west of Chagford, through Soussons and Bellever close to the village of Bellever to Brimpts in the south which is 3 miles from.

The public forest here is a predominantly conifer having been planted after the First World War to address the national timber shortage by the Duchy of Cornwall. The area is known to produce exceptionally large and high quality Sitka spruce which makes up the vast majority of the trees here. 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 three Scheduled Monuments within Fernworthy, Bellever and Soussons. These are made up of numerous archaeological features from farmsteads, enclosures and settlements to mines, cairns and stone circles. The majority of these sites are free of tree cover.

The Plan area is a rich for ecology and includes a Site of Special Scientific Interest within Bellever forest at Laughter Quarry. The forests are important for a number of nationally important birds, including Red-backed shrike and nightjar.

The vast majority of the Plan area is Open Access, confirmed by the Countryside Rights of Way Act. The exception is Soussons which is de facto Open Access due to it being leased from another landowner. Bellever is the main focus of recreational activity and is a particularly nice place to picnic, walk, run or ride thanks to the river side setting, good path network and very large trees here.

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 conserve, maintain and enhance cultural and heritage assets, their setting and the historical environment.
- The provision and maintenance of recreation facilities.
- The diversification of woodland species and structure for greater ecological and economic resilience.
- Protect and enhance woodland and open habitats and their associated species.
- The delivery of well-designed proposals in keeping with the National Park character.

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 2026.

Crops in more exposed positions will continue to be managed primarily for conifer timber production under a clearfell and restock scheme. Crops in less exposed positions will be managed to continuous cover forestry prescriptions so as to create a diverse and resilient forest structure.

The Plan makes provision to remove trees required and improve the setting of heritage sites so as to enhance the rich historic environment of Dartmoor.

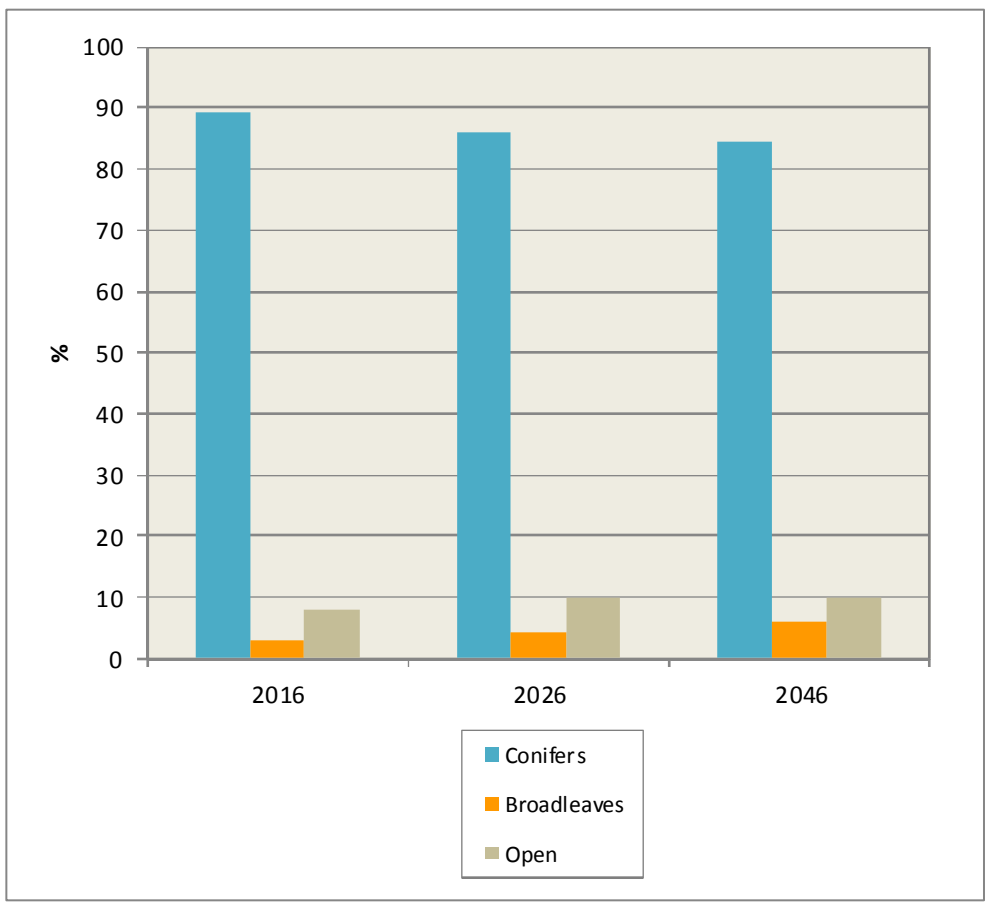
Implementation and maintenance of an environmental corridor system will continue to increase diversity of habitat and internal landscaping. Those on highly visible external edges will be restocked sympathetically to create a graded edge between high moor and high forest.

The planned areas of clearfelling, restocking and permanent open space creation during the ten years to 2026 are summarised in the chart below.

HECTARES	Conifers	Broadleaves	Open space
Clearfelling	230	0	-
Restocking/Regeneration	194	15	21

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.

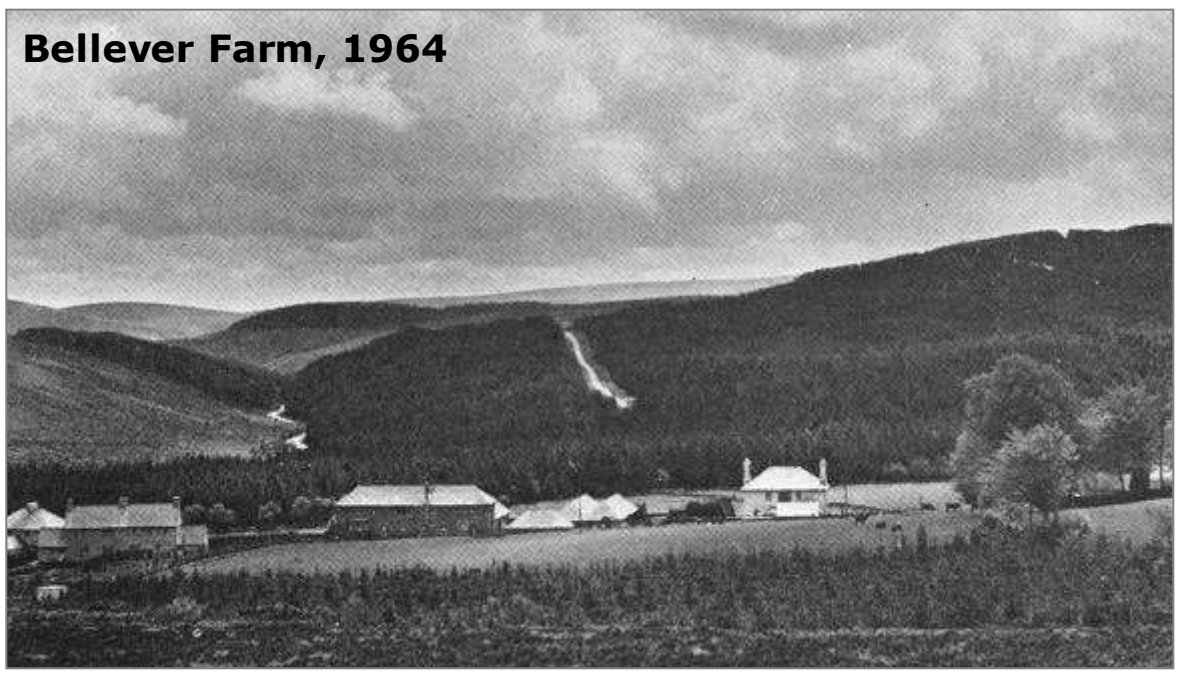


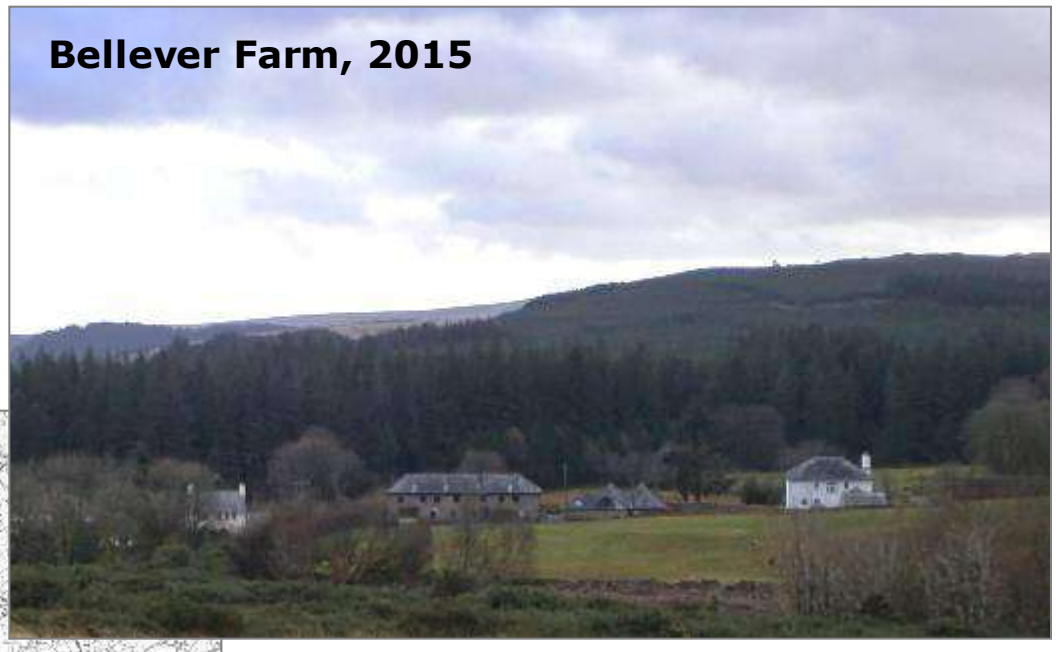
History

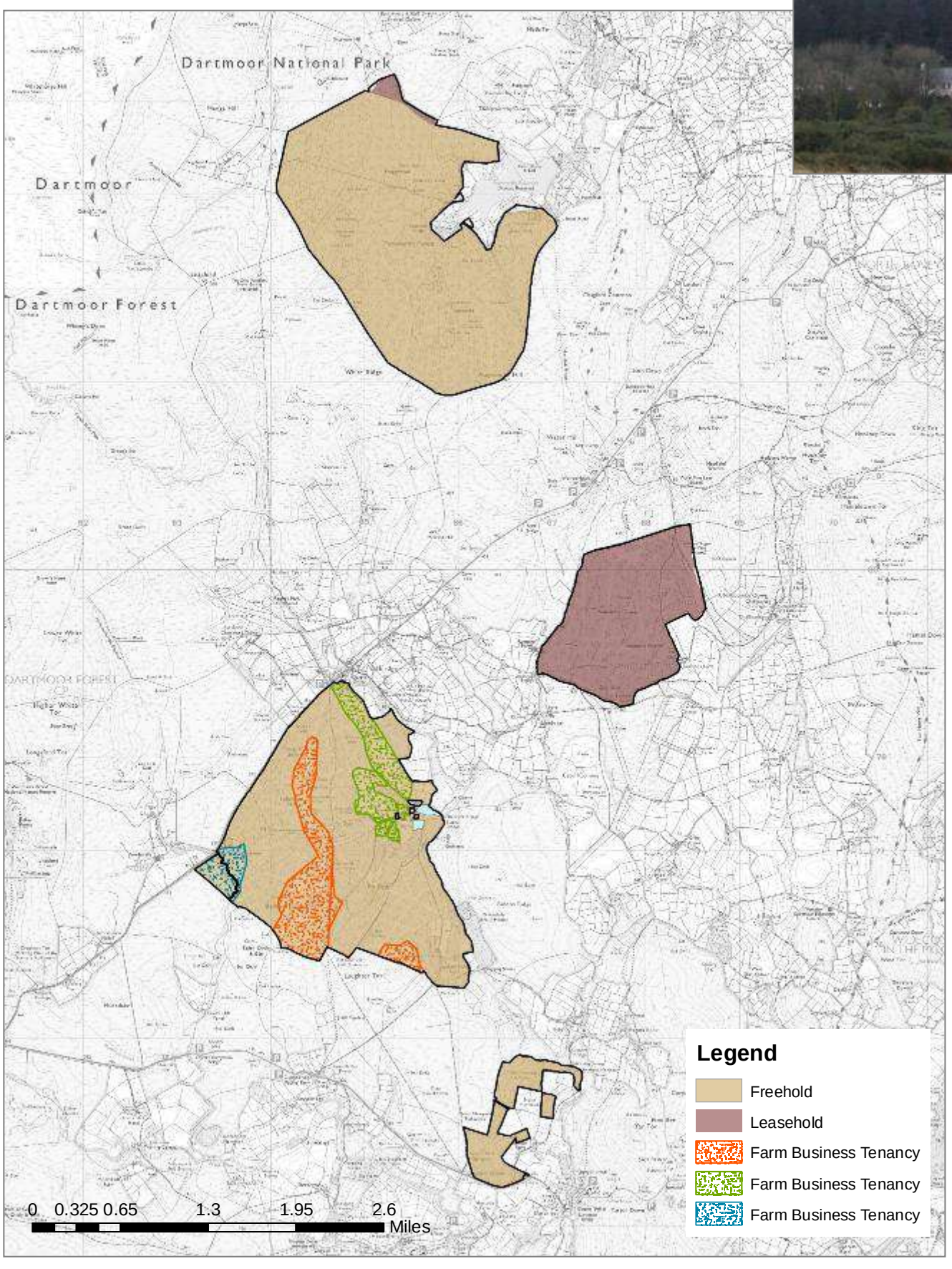
Trees have long been associated with Dartmoor with the 'Dartmoor Forest' area first recorded in 1204. The first serious tree-planting began in the nineteenth century with Scots pine, Norway spruce and European larch as well as oak, beech and sycamore planted predominantly to provide shelter from the inhospitable environment. The Duchy of Cornwall extended the plantations on the moor by establishing a conifer plantation at Brimpts in 1862.

The First World War acted as an impetus for the next major development in order to replenish the depleted timber reserves and alleviate the post-war unemployment in Plymouth. The Prince of Wales and his advisors conceived the scheme of planting 5000 acres (2000ha) of the moor. By 1930, 500 hectares had been established, mainly in Fernworthy but with smaller woods at Bear Down, Brimpts and Bellever.

By 1935 the remainder of Bellever Tor and Lakehead Hill had been completed with western slopes planted between 1940-43. Soussons was planted between 1947 and 1949 and finally in 1950 with the heavier mechanical equipment for ploughing and improved planting techniques the exposed tops above 450m were planted with Sitka spruce. This virtually completed the planting of all the areas available to the Forestry Commission, a total of 1,300ha and 800ha short of the target set by the Prince of Wales (Rouse, 1964). The lease for Bear Down from the Duchy of Cornwall was disposed of in 2011.







Tenure & Management Agreements

Bellever, Brimpts and the majority of Fernworthy are held under freehold acquired from the Duchy of Cornwall in the 1930, an area totalling 1157 ha. A small area in the north of Fernworthy and the entirety of Soussons is leased from the Duchy of Cornwall.

Areas of open space at Bellever are managed under three separate farm business tenancies. The majority of these are managed through low intensity grazing and annual cutting with the aim of grassland and meadow improvement for the benefit of associated species.

Within the Plan area numerous other long-term repeat and single agreements and permits are provided for economic, recreation and ecological activities.

The Plan area plays host to a number of small schemes as part of the 'Moor than meets the eye' HLF Project. This is a landscape partnership project which is 'helping people to explore Dartmoor's past, conserve its wildlife, improve understanding of this rich landscape and develop and share the skills to look after it for generations to come'. The schemes in the Plan area are based around improving access to the forest at Bellever and enhancing the setting of some of the numerous heritage features

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.

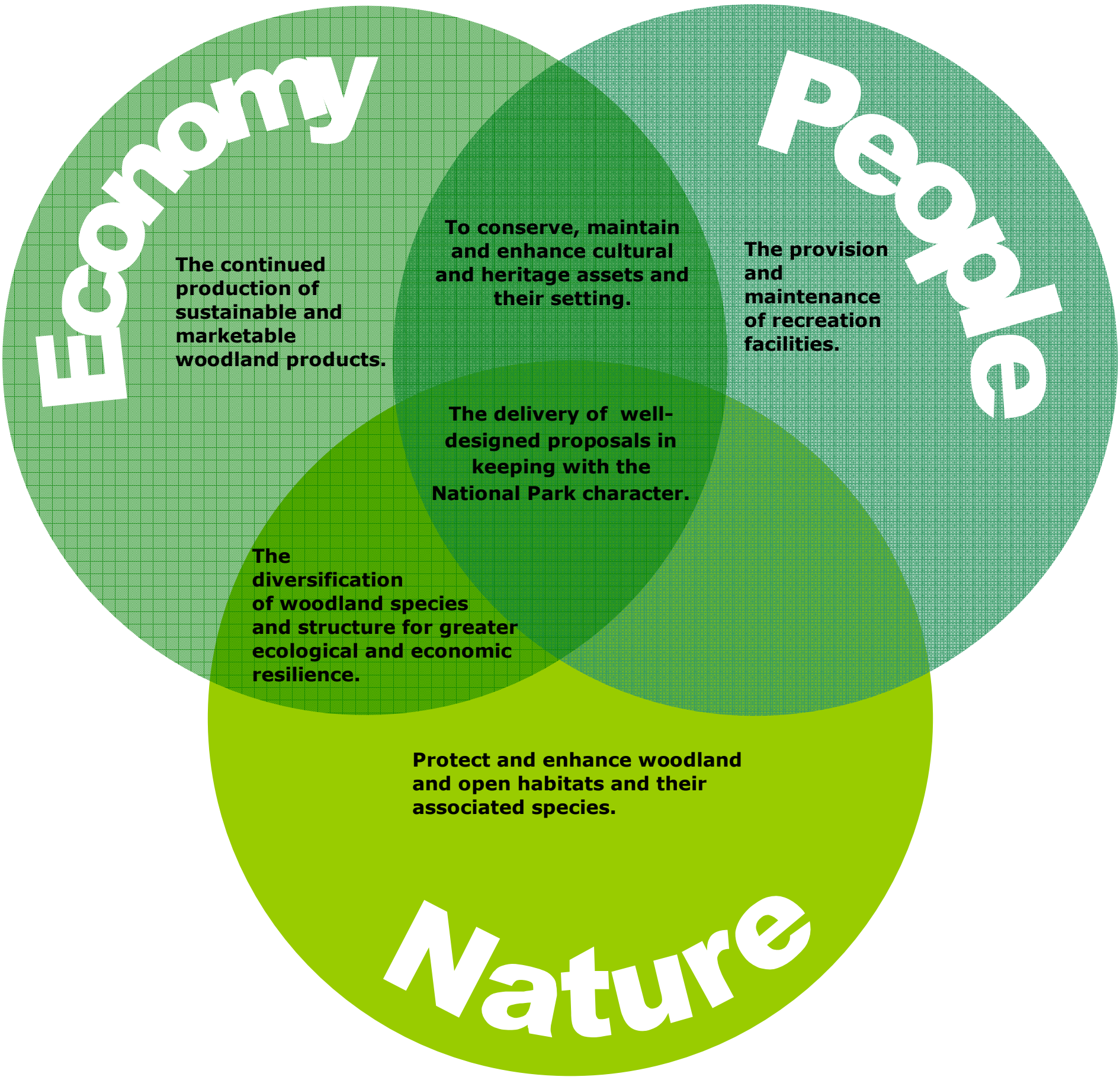
All timber arising from the Forest Enterprise estate represents a negligible risk under EUTR (No 995/210)

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

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.



Meeting Objectives

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. Some clearfell timber production will occur, majority from the conifers.	Comparison of average annual production forecast yield (20,000m³ (2021) and 33,000m³ (by 2026)) with actual production at the Forest Plan (FP) five and ten-year review.
To conserve, maintain and enhance cultural and heritage assets, their setting and the historical environment.	Create, link and maintain areas as open around significant and scheduled features. Manage to relevant SM management plans during the planning of operations. Liaise with National Park Authority and/or Historic England prior to the commencement of works.	Complete 6.97ha of heritage improvement felling by 2026 Operational site planning of harvesting and restocking operations will help monitor the effect of management. Feature condition monitored through Review process and records updated.
The provision and maintenance of recreation facilities.	Management of existing facilities will be maintained by the Beat team. Visitor numbers will be maintained. Road and ride corridor and car park aesthetics enhanced and maintained.	Beat team will monitor usage and ensure the up keep of the signage. Current figures (5000 paid visits to Bellever per year) compared at FP review. Condition monitored through Review process and Moor than meets the eye project monitoring.
The diversification of woodland species and structure for greater ecological and economic resilience.	Use of multiple silvilcultural approaches to deliver numerous simple and complex structures. Use of natural regeneration and replanting of site appropriate diverse and novel range of species.	Condition of CCF, clearfell and restock sites all monitored through Review and OGB4 process and records updated. CCF trial area monitoring through FCIN 14 to analyse the quality of regeneration and growing stock.
Protect and enhance woodland and open habitats and their associated species.	Felling together with a delayed restock program will continue to diversify stand and age structure. 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 Protection and enhancement of water supplies and soil quality through sensitive implementation of operations and improved restocking practices.	Monitored via Review process, through local records and updated sightings. Analysis and comparison of SCDB open space 10% through the Forest Plan review process. Operational site planning of harvesting and restocking operations will help monitor the effect of management Creation and/or maintenance of 67ha open space and 25ha diffuse/transient open space Ongoing monitoring of soil and water quality pre and post harvesting with input from outside stakeholders.
The delivery of well-designed proposals in keeping with the National Park character.	Implementation of proposals will soften and better integrate the woodland with the surrounding landscape	Creation and/or maintenance of 25ha diffuse/transient open space Fixed point photography analysis at Forest Plan review stage

Landscape Character

Dartmoor National Park (DNPA,2014)

Dartmoor's special qualities include:

- open, windswept **upland moors** with wide views and a sense of remoteness and wildness, distinctive granite tors surrounded by loose rock or 'clitter', and large expanses of grass and heather
- moorland blanket bogs, and valley mires providing habitats for distinctive wildlife such as skylark and cuckoo, and rarities including Vigur's eyebright and southern damselfly;
- **sheltered valleys** with upland oak woodland, rhôs pasture and fast-flowing boulder-strewn rivers, home to characteristic wildlife including the pied flycatcher and salmon, and rare species such as the marsh fritillary butterfly;
- **enclosed farmland** with small irregular pasture fields, bounded by dry stone walls and hedgebanks, providing a mosaic of different wildlife habitats, including hay meadows and species rich dry grasslands with wildlife such as the beautiful greater butterfly orchid;
- a **varied geology**, including the granite bedrock, providing the dominant building material throughout history, and a wide range of valued minerals including tin, copper, lead, silver and arsenic;
- **timelessness - a place** spared many of the intrusions of modern life, with dark night-time skies;
- **tranquillity**, where it is possible to find absolute peace, offering spiritual refreshment and opportunities for quiet reflection, escape and creativity;
- unrivalled opportunities to roam at will over the extensive open moorland, and an exceptional **rights of way network** for walking, riding and cycling;
- **traditional farming practices**, using the moorland commons for extensive grazing of hardy cattle, sheep and ponies including locally distinctive breeds;
- **clean water** - the catchment area for most of the rivers of Devon - historic leats still supply water to settlements. The peatlands and open water of the
- reservoirs provide an important water store helping to regulate the flow of water off the moor;
- one of the most **important archaeological landscapes** in western Europe revealing a chronology of human activity stretching back over 8,000 years, from ancient field systems to the legacy of tin mining;
- a wealth of **historic buildings, structures and townscape**s, including a strong medieval settlement pattern of **scattered farmsteads, hamlets, villages** and **towns**, set within enclosed farmland surrounding the open moor and linked by an intimate pattern of sunken lanes;

National Character Area — Dartmoor 150 (Natural England, 2014)

Dartmoor's extensive upland moorland core rises above the surrounding small-scale, enclosed, predominantly pastoral landscape. Granite unites and characterises the entire National Character Area (NCA). On the moors the distinctive tors create key landscape features, interrupting otherwise unbroken skylines and ridges, and provide focal points for visitors. Isolated farmsteads and scattered villages utilise granite for buildings and walls; and the area's strong time depth and rich cultural heritage are visually evident because of the granite, which includes the largest concentration of prehistoric stone rows in Britain. The high moors are overlaid with thick deposits of peat and support internationally important blanket bogs surrounded by large expanses of upland heathland and grass moorland. The bogs and valley mires absorb and store significant amounts of water, as well as carbon, released into the 16 rivers and 8 reservoirs that supply the surrounding urban and rural populations and industry. As rivers leave the high moor they flow through deep-cut valleys steeped in woodland – both semi-natural broadleaved and coniferous plantation. The fast-flowing rivers, strewn with granite boulders, are popular for recreation, both passive and active.

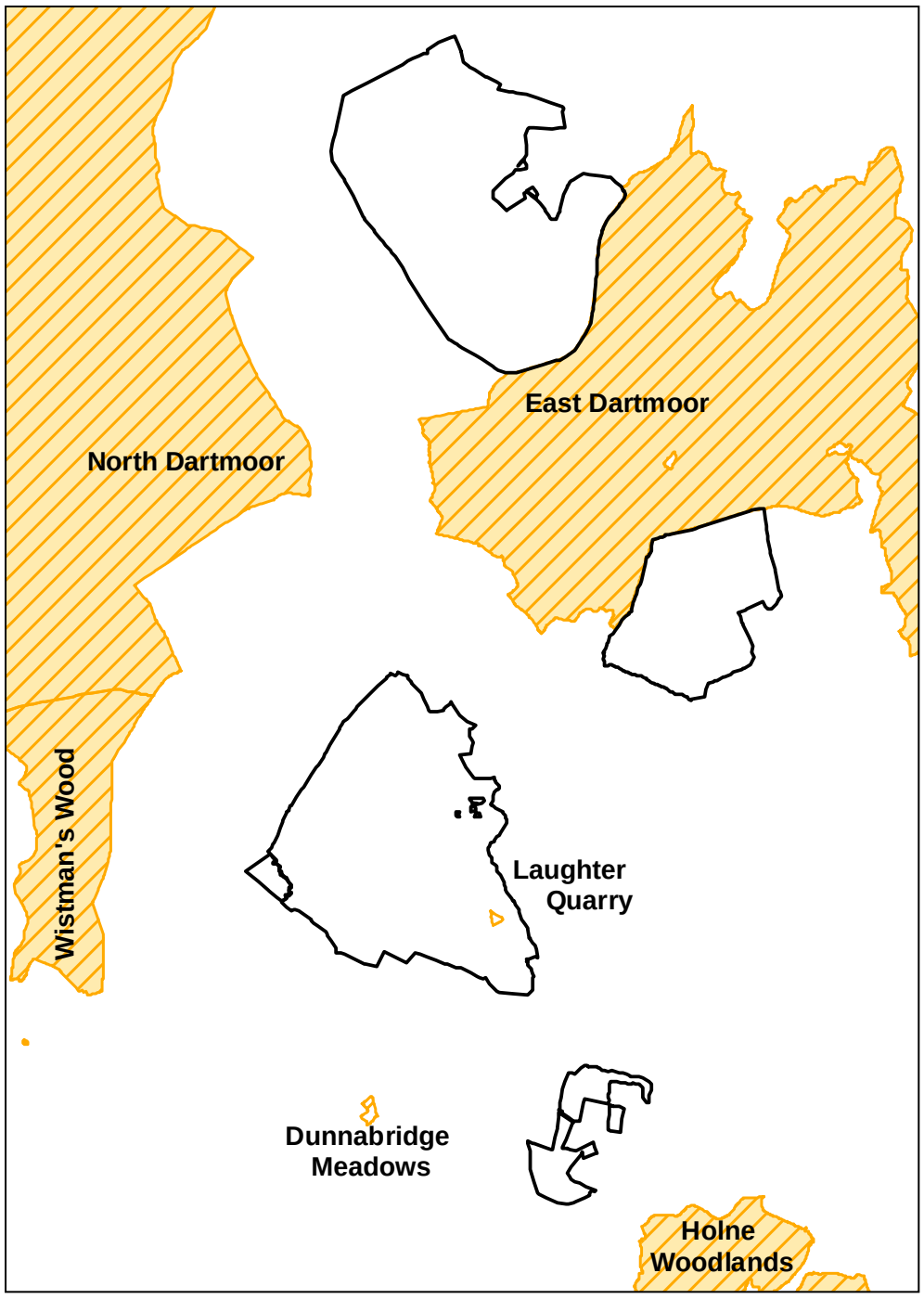
Dartmoor is not a highly wooded landscape, but woodlands are significant elements. Dark, regular-shaped blocks of coniferous plantation are prominent, incongruous features on the moors. These post Second World War plantations are reaching maturity and areas are being felled and forests restructured, changing their visual appearance, character and setting in the landscape. With climate change here might be increased pressure to plant further areas of coniferous plantation and woodland (impacting on open character); planted to enhance the landscape's roles in filtering water, minimising downstream flooding, storing and sequestering carbon dioxide and providing low-carbon fuel sources (through coppice management).

Opportunity
Protect and restore ancient and important woodland, managing and enhancing its contribution to landscape character, biodiversity and recreation. Seek opportunities to support the local economy through wood products.
For example, by:

- Planning for the long-term restructuring of conifer plantations on the open moor, softening hard visual edges and undertaking a phased removal programme and reversion to heather moorland.
- Planning and managing the extension and connection of areas of semi-natural woodland, particularly along the steep river valleys.
- Encouraging initiatives that promote the use of local timber and wood products and facilitate communication and greater understanding between wood producers (large and small), processors and users.
- Working with the local forestry industry and timber processors to ensure that the necessary skills and knowledge are maintained, shared and enhanced to enable sustainable woodland management.
- Encouraging management practices that ensure well-structured woodland with high-quality timber and, where appropriate, that achieve multipurpose objectives.
- Supporting community schemes that promote positive woodland management and the use of wood products.
- Supporting and encouraging local initiatives that promote the sustainable management of woodlands and hedgerows for wood fuel production. Encourage join-up between landowners and local communities and knowledge and skills sharing and enhancement.
- Encouraging the consideration of carbon storage as an integral part of woodland management, and promoting the sustainable management of woodlands not currently under a management regime.
- Supporting, planning and managing the use of forests and woodlands for both active and passive recreation.
- Supporting the restoration of ancient woodland sites by removing conifer plantations and managing sites for the benefit of biodiversity and a range of ecosystem services.

Designations

A number of important statutory designations are located within, or close to the Dartmoor Forest Plan area. These designations are overseen by the appropriate statutory authorities, namely Historic England for heritage designations and Natural England for ecological designations.



Conservation Designations

Laughter Quarry SSSI is a site of considerable geomorphological importance for its assemblage of periglacial and granite weathered features typical of Dartmoor. Situated within the south-east of Bellever, it is one of the best sites demonstrating many of the classic slope features of Dartmoor in a single exposure.

East Dartmoor SSSI (SAC) which dissects Fernworthy and Soussons contains the largest area of heather moorland remaining on Dartmoor. The sub-montane acidic dwarf shrub heath concerned is associated with acidic grassland and valley mires.

North Dartmoor SSSI (SAC) situated to the north-west of the Plan area contains one of the largest areas of upland semi-natural habitat in southern Britain. It is particularly important for western blanket bog and mixed valley mire communities, but also supports a diverse upland breeding bird community.

Other significant designations in the area include Holne and Wistman's Woodlands notified for their upland ancient semi-natural oak woodland character and Dunnabridge Meadows which is an herb-rich upland meadow

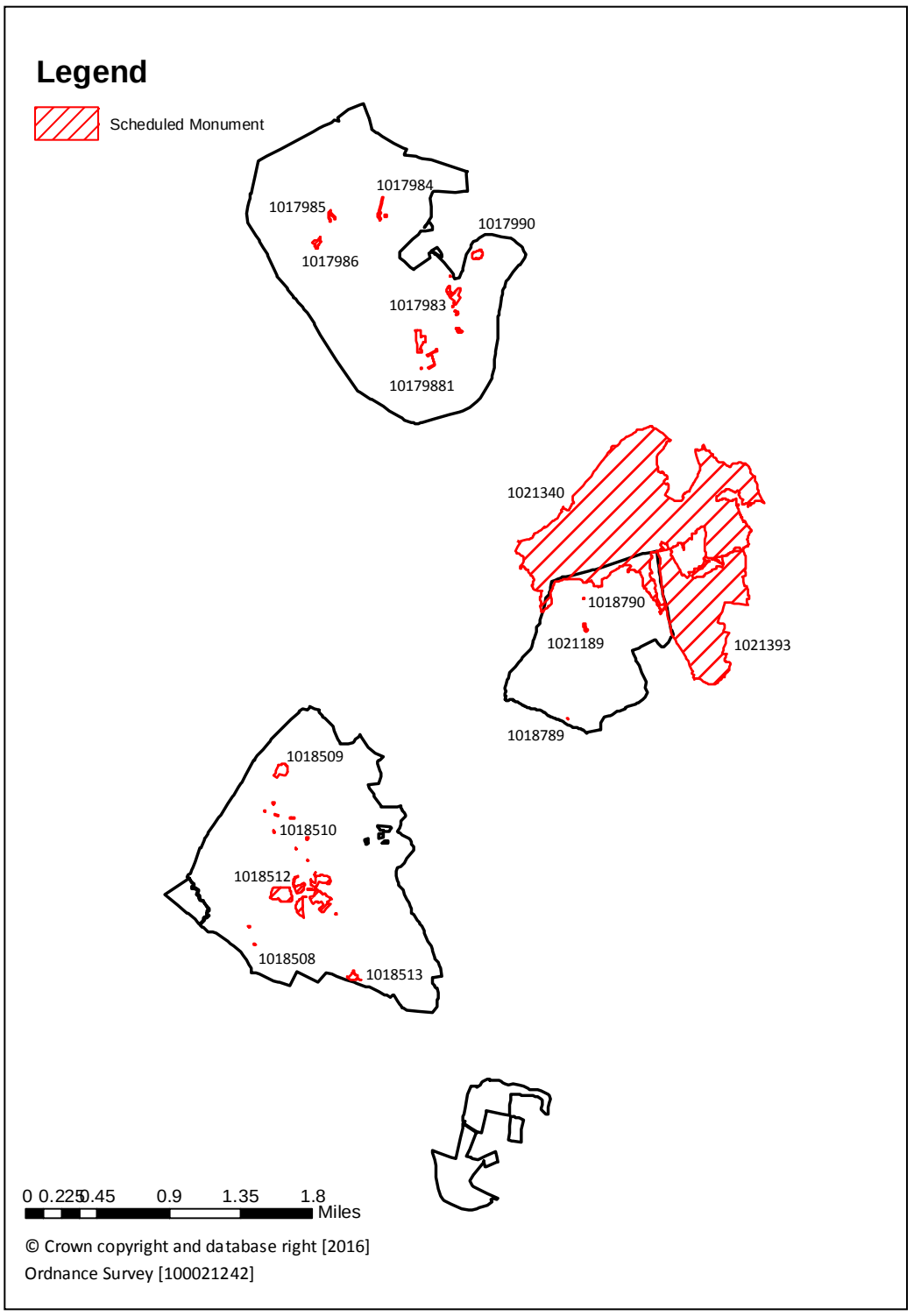
Although not designated Fernworthy, Soussons and Bellever between them support c.1.5% of the national nightjar population, exceeding by some way the threshold for qualifying as a Special Protection Area under the EU Wild Birds Directive.

Legend
Site of Special Scientific Interest
Special Area of Conservation

Heritage Designations

The Dartmoor area is renowned for its huge assemblage of heritage and archaeological features. A large number of these are designated as Scheduled Monuments (SMs).
The Plan Area contains seventeen SMs which are made up of thirty-six separate features. These are of varying age and size and are outlined below:

ID	Name	Area (ha)
1017981	Stone alignment, hut circle settlement, medieval long house and post -medieval farmstead at Assycombe	1.87
1017983	Dispersed stone hut circle settlement and associated fields 490m south east of Silk House	1.57
1017984	A stone circle, known as Fernworthy Circle, three stone alignments and five cairns 425m and 525m north west of Sandeman Bridge	0.46
1017985	Unenclosed stone hut circle settlement on Tom's Hill, 870m north west of Sandeman Bridge	0.22
1017986	Unenclosed stone hut circle settlement, two cairns and section of field system 330m north east of Hemstone Rocks	0.47
1017990	Partially enclosed stone hut circle settlement 780m south west of Metherall	0.84
1018508	A cairn and cist 380m west and a cairn and standing stone 370m south west of Bellever Tor, forming an outlying part of a cairn cemetery	0.04
1018509	Partially enclosed stone hut circle settlement known as Kraps Ring	1.35
1018510	Five cairns, two stone alignments and three cists, forming part of a ritual complex on Lakehead Hill	0.17
1018511	Two cairns with two cists and a stone hut circle on the east facing slope of Lakehead Hill forming part of a ritual complex	0.06
1018512	A prehistoric settlement with enclosures, an irregular aggregate field system and cairn north of Bellever Tor	9.03
1018513	An agglomerated enclosure and two stone hut circles 580m west of Laughter Hole Farm	0.54
1018789	A ring cairn 700m south east of Runnage Bridge, on the southern side of Soussons Down	0.02
1018790	Round cairn on Soussons Down, 1.2km north west of Soussons	0.01
1021189	Four round barrows on Soussons Down, 960m north west of Soussons	0.23
1021340	Tinworks, field systems, settlements, warren, cairns and a stone alignment at Headland Warren	237.13
1021393	Medieval strip field system, tinworks, part of a prehistoric settlement, a cairn and reave on Challacombe Down	81.50



Fernworthy Analysis & Concept

Fernworthy is a block of 575ha which sits in a small catchment surrounding the reservoir. The forest has a north easterly aspect with elevation mainly between 350 and 400m asl but reaching nearly 500m asl on Assycombe Hill. Soils are typically moist and moderately fertile and are primarily of the peaty podzolic type based on the characteristic Dartmoor granite intrusion. The forest is dominated by high yielding Sitka spruce reaching up to Yield class 24 and large diameter (3 m³) final crop trees, often on CCF systems which the forest is renowned for. Fernworthy plays host to an array of flora and fauna species including supporting c.1.5% of the national nightjar population and remains a quietly enjoyed forest within the Dartmoor landscape.

Analysis: There are considerable areas of example and trial CCF systems at various stages of implementation and varying degrees of successful regeneration.

Concept: An appraisal of stands and their suitability for CCF will occur with the majority remaining on the lower, more sheltered sites.

Analysis: Currently unstable and exposed crops managed on a shelter wood system are susceptible to wind blow.

Concept: Consider moving these coupes to a clearfell system with the fell year brought forward to reduce the risk and impact of windthrow.

Analysis: Fernworthy Reservoir is managed by South West Lakes Trust and is a popular visitor destination and ecological area as well as a key South West Water drinking supply for south Devon. The area surrounding the reservoir is mosaic of open space and scrubby mixed broadleaf woodland.

Concept: The prescriptions proposed will ensure the stability of the catchment, the high water quality it provides for south Devon and maintain the amenity value of the reservoir and its surroundings.

Analysis: Bryoria, a lichenized fungi, is found in abundance in the more open areas of the larch stands here.

Concept: Where appropriate gaps will be maintained and clearfelling minimised to create climate and conditions suitable for the bryoria.

Analysis: Multiple scheduled monuments are found throughout the forest. Some clear of tree cover and others fully stocked.

Concept: The aim is restore and maintain these heritage assets free from tree cover to preserve and enhance their cultural value for perpetuity, as agreed with Historic England.

Analysis: East Dartmoor SSSI (SAC) borders the forest boundary. Many of the units in proximity to forest are in 'unfavourable-recovering' condition.

Concept: Proposals will complement the SSSI where appropriate and aid its recovery to 'favourable' condition.

Analysis: The contrast between high forest and open moorland creates a significant step on the landscape, visible from considerable distance.

Concept: A feathered edge will be created over time and in line with standard operations to minimise the contrast between high forest and open moor.

Analysis: Assycombe Hill is the highest point of the forest at 497m asl) and is fully stocked with p.51 SS. The current crop is now fairly isolated with surround crops much younger and lower in height. This creates a significant feature and step on the landscape.

Concept: A feathered edge will be created following clearfelling to minimise the contrast between high forest and open moor. Given the height of planting, site suitable species will be considered carefully.

Analysis: Significant area of open space within high forest which was part of a historical larger landscape integration plan is showing significant scrub encroachment.

Concept: This is a suitable site for future compensatory planting for other, more appropriate landscape integration proposals.

Analysis: The Assycombe Brook, Lowton Brook, South Teign River and the watercourse around Thornworthy Down source in the Fernworthy catchment and traverse the forest creating stream sides, steep gradient slopes and low lying wet patches. The quality of the watercourses is of particular interest given the impact of dissolved peat on the coloration of the drinking water supply.

Concept: These will be managed sensitively as riparian zones, where soil and nutrient stability are prioritised. The target will be to reach a maximum of 50% forest cover of site appropriate wet woodland species.

0 0.075 0.15 0.3 0.45 0.6 Miles

Soussons Analysis & Concept

Soussons is a block of 215ha of coniferous forest leased from the Duchy of Cornwall. It is surrounded by open moorland with an elevation of between 300-400m asl. The soils are similar to that of Bellever and Fernworthy being deep, peaty and well drained with a tendency to form an ironpan and gley towards the north of the forest. The forest is almost entirely stocked with Sitka spruce the majority of which was planted by the Duchy in the 1940s. Much of this has now either been felled and restocked or is reaching the end of its rotation. The forest is relatively exposed and having been delayed in its first thinning the older crops do not lend themselves to CCF transformation. The forest is rich with cultural heritage which is in varying condition, this together with quality scrub and open habitat adjacent to conifer crops delivering quality habitat for a number of nationally important moorland species, creates a valuable forest in the landscape.

Analysis: Area of open space delivering quality scrub/ moorland habitat for variety of rare species together with valuable visual and ecological convergence with high forest.

Concept: The proposals will ensure the stability of this habitat and maintain their ecological and amenity value.

Analysis: Popular tourist route, B3212, has extensive views into the woodland from a higher promontory.

Concept: The Plan will look to create and maintain the forest as a valuable landscape feature.

Analysis: Tinworks, field systems, settlements, warren, cairns and a stone alignment at Headland Warren as well as round barrow found in northern region of the forest. Some of these are under tree cover and others on very uneven/steep ground.

Concept: The aim is to restore and maintain these heritage assets free from tree cover to preserve and enhance their cultural value for perpetuity, as agreed with Historic England.

Analysis: East Dartmoor SSSI (SAC) borders the forest boundary. Many of the units in proximity to forest are in 'unfavourable - recovering' condition

Concept: Proposals will complement the SSSI where appropriate and aid its recovery to 'favourable' condition.

Analysis: Area of managed open space showing significant scrub encroachment.

Concept: A suitable site for future compensatory planting for other, more appropriate open space creation proposals.

Analysis: Some small areas of crops are exposed and susceptible to wind blow.

Concept: Assess the stability of these crops and consider felling to reduce the risk and impact of windthrow.

Analysis: Significant area of spruce crops reaching economic maturity (p.48), having had first thinning delayed and then conventionally thinned

Concept: Manage through clearfell and restock despite some indication of natural regeneration now in evidence.

Analysis: A ring cairn (Scheduled Monument) is situated on the south edge of the forest and is in keeping with the rich cultural heritage of the region.

Concept: This heritage asset will be maintained free from tree cover to preserve its cultural value and enhance its setting as agreed with Historic England.

Analysis: Walla Brook and West Weyburn River flank the western and eastern edges of the forest with a number of small streams and drains flowing from within the forest into these watercourses.

Concept: Surrounding areas will be managed sensitively as riparian zones, where soil and nutrient stability are prioritised. With the objective to reach 50% continuous cover of site associated wet woodland species where appropriate.

Analysis: Soussons Farm is located in close proximity to the south-east corner of the forest with the trees providing substantial shelter from the wind.

Concept: Proposals will look to minimise the impact of felling on Farm as appropriate.

0 0.0750.15 0.3 0.45 0.6
Miles

Bellever Analysis & Concept

Bellever is a block of 416ha of predominately Sitka spruce much of which sits above 300m asl, with planting reaching 400m asl close to Bellever Tor. The soils tend to be acid, but reasonably fertile where drainage is good. However drainage is impeded over much of the forest due to a layer of reddish/brown clay which occurs at a depth of between 1 and 2 metres, with peat forming above this. There is a tendency for an iron pan to form. Despite this Bellever produces excellent Sitka spruce (YC14-18). Windblow can be a major problem throughout the woodland with the western side the area most exposed to the prevailing SW winds. The forest supports a variety of common, protected and rare ecological species and is the main focus for recreation visits for the Forestry Commission on Dartmoor with approximately 6000 paid car visits per year.

Analysis: The feathered edge creates an attractive margin between the high forest and the moor for the road user.

Concept: The development of this dynamic edge will continue with a mixture of transient open space, broadleaves and conifers.

Analysis: Multiple scheduled monuments are found throughout the forest. Some clear of tree cover and others are not.

Concept: The aim is restore and maintain these heritage assets free from tree cover to preserve and ehance their cultural value for perpetuity, as agreed with Historic England.

Analysis: Areas of open heathland and enclosed agricultural field systems managed by Devon Wildlife Trust for the primary benefit of grass and heathland ecology.

Concept: Proposals will ensure that these open areas are not compromised by felling and future management.

Analysis: Currently unstable and exposed crops managed on a shelter wood system are susceptible to wind blow.

Concept: Move this coupe to a clearfell system with the fell year brought forward to reduce the risk and impact of windthrow.

Analysis: Recent felling of relatively isolated and visible block, which had provided shelter for the residents.

Concept: Plant as a mixed amenity woodland which retains productive capacity whilst creating visual impact and continuous shelter for Bellever village.

Analysis: Significant area of spruce crops reaching economic maturity (p.49), with varying levels of regenerating spruce understorey.

Concept: A large proportion of this area will be managed through strip shelterwood to maintain wind resistance and stimulate CCF system where possible.

Analysis: Bellever village is a small settlement (population approx. 50-100) which also contains a popular Youth Hostel.

Concept: Proposals will be consulted on with local residents and in keeping with the local character.

Analysis: The East Dart open streamsides are the primary focus of recreation visits with car parking and toilet provision.

Concept: Management of surrounding crops will be in sympathy with the aesthetics for the visitor.

Analysis: Crops are currently unthinned, unstable and susceptible to wind blow.

Concept: Proposals will need to account for the high risk these crops are currently exhibiting but the protection they provide to adjacent crops.

Analysis: The water courses feed into the East Dart River. Stream sides, steep gradient slopes and low lying wet patches.

Concept: Managed sensitivity as riparian zones, where soil and nutrient stability are prioritised. With the objective to reach 50% continuous cover of site associated wet woodland species where appropriate.

Analysis: Bellever Tor is the highest point in the forest (443m asl), sits in an area of extensive open ground flanked by trees and is the focal point for walkers.

Concept: Proposals will ensure that the landscape value both of and from the Tor are maintained into the future.

Analysis: Areas of open heathland (81ha) managed through grazing of Dartmoor Pony under Farm Business Tenancy.

Concept: Proposals will ensure that these open areas are not compromised by felling and future management.

Analysis: Laughter Quarry SSSI, Notified for its outstanding exposed geological features, which typify the Dartmoor landscape.

Concept: Continue to manage in favourable condition as agreed with Natural England.

0 0.075 0.15 0.3 0.45 0.6 Miles

Brimpts Analysis & Concept

Situated on the south side of the East Dart, Brimpts rises steeply from the river bank from 250m to 350m asl and lies between the agricultural land of Brimpts Farm and the open moor. At 58ha, the forest is relatively small in comparison to the other Dartmoor blocks and is slightly more lowland in character. This is as a result of the fairly fertile and fresh upland brown earths which are undermined by a stony scree substrate. This combined with the exposure to SW winds means that some areas on the plateau are particularly wind vulnerable. The forest mainly consists of Sitka spruce with some of the larch removed in recent years. There is a relatively large broadleaf component which is focussed around the edges and lower slopes. The forest acts an area of transition from high open moor to the more lowland character and sees little recreation usage which is predominantly walkers.

Analysis: The planted broadleaf and conifer edge creates an attractive margin between the high forest and the moor

Concept: The development of this will continue with a mixture of transient open space, broadleaves and conifers.

Analysis: Crops with edges exposed to the prevailing wind are experiencing creeping windblow.

Concept: Consider clearing this area to minimise the impact of continued blow and replanted together with the wider felled area.

Analysis: Outstanding p.1880s and 1920s Douglas fir and oak on steep slopes delivering exceptional old riparian forest conditions with high cultural and ecological value.

Concept: Continue to manage sensitively through single tree selection to maintain the value of this distinctive woodland in an otherwise predominantly moorland landscape.

Analysis: Currently unstable and exposed crops are showing signs of creeping windblow, with a likelihood to create a break in forest cover.

Concept: Proposals will address the issue by removing vulnerable trees and the not restocking. This will create a corridor from the high moorland to the pasture of Brimpts Farm.

Analysis: Minimally thinned and particularly drawn up crops managed with long term objective to convert to broadleaf through CCF.

Concept: Move this coupe to a clearfell system to reduce the risk and impact of wind throw.

Analysis: Pinch point at risk of windblow following programmed and then SPHN felling

Concept: An adaptive approach will be used in this area, to minimise the impact of wind events with a threshold of when clearance of remaining trees will occur. Generally the aspect and shape of the forest and the resultant ongoing windthrow issues mean that larger targeted clearfells may be appropriate in the future.

Analysis: The East Dart river borders the forest in the north east corner with stream sides, steep gradient slopes and low lying wet patches.

Concept: Managed sensitivity as a riparian zone, where soil and nutrient stability are prioritised.

Analysis: The planted broadleaf edge creates an attractive margin between the high forest and the moor for the road user.

Concept: The development of this will continue with a mixture of transient open space, broadleaves and conifers.

Analysis: There is a rich tin mining heritage in the area surrounding the forest with the Brimpts Tin Mine Trail running through the woodland.

Concept: The recognition and protection of any features within the forest will be made and proposals will be sympathetic to the rich cultural heritage.

Analysis: Brimpts Farm neighbours the forest and offer a mixture of recreation, utilising the woodland and accommodation facilities as well as traditional farming.

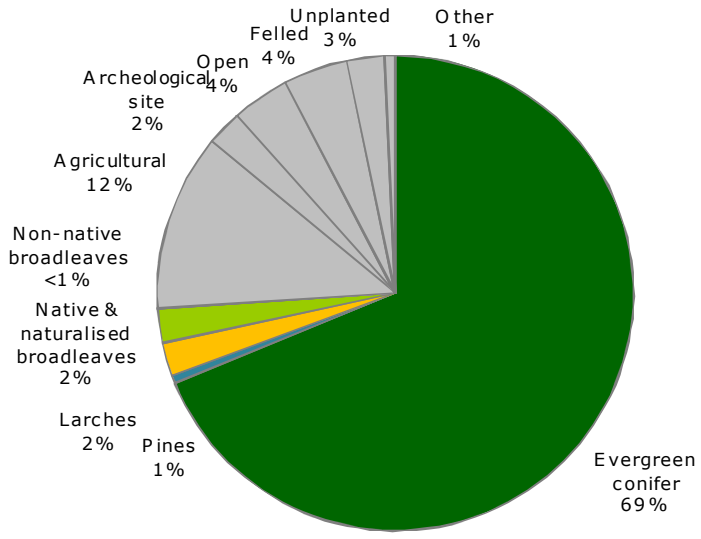
Concept: Proposals will be in consultation with neighbours and compliment the features of the Farm.

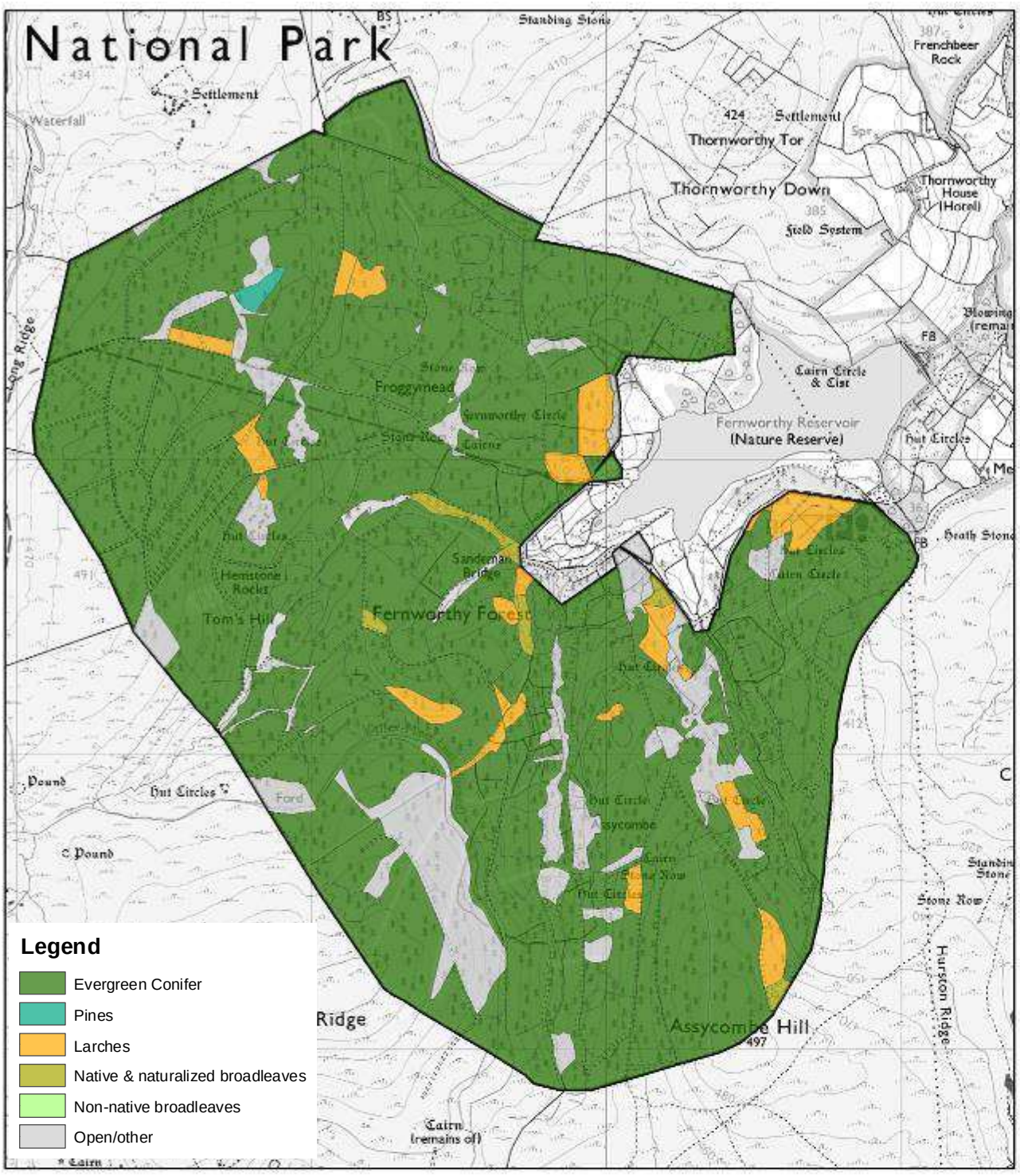
0 0.0750.15 0.3 0.45 0.6
Miles

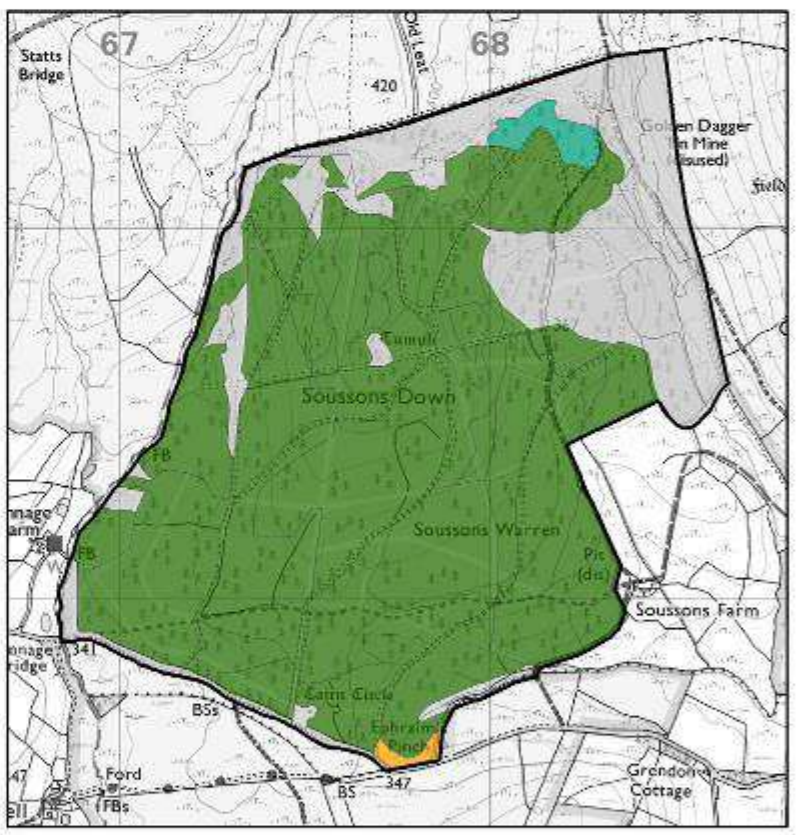
Current Species

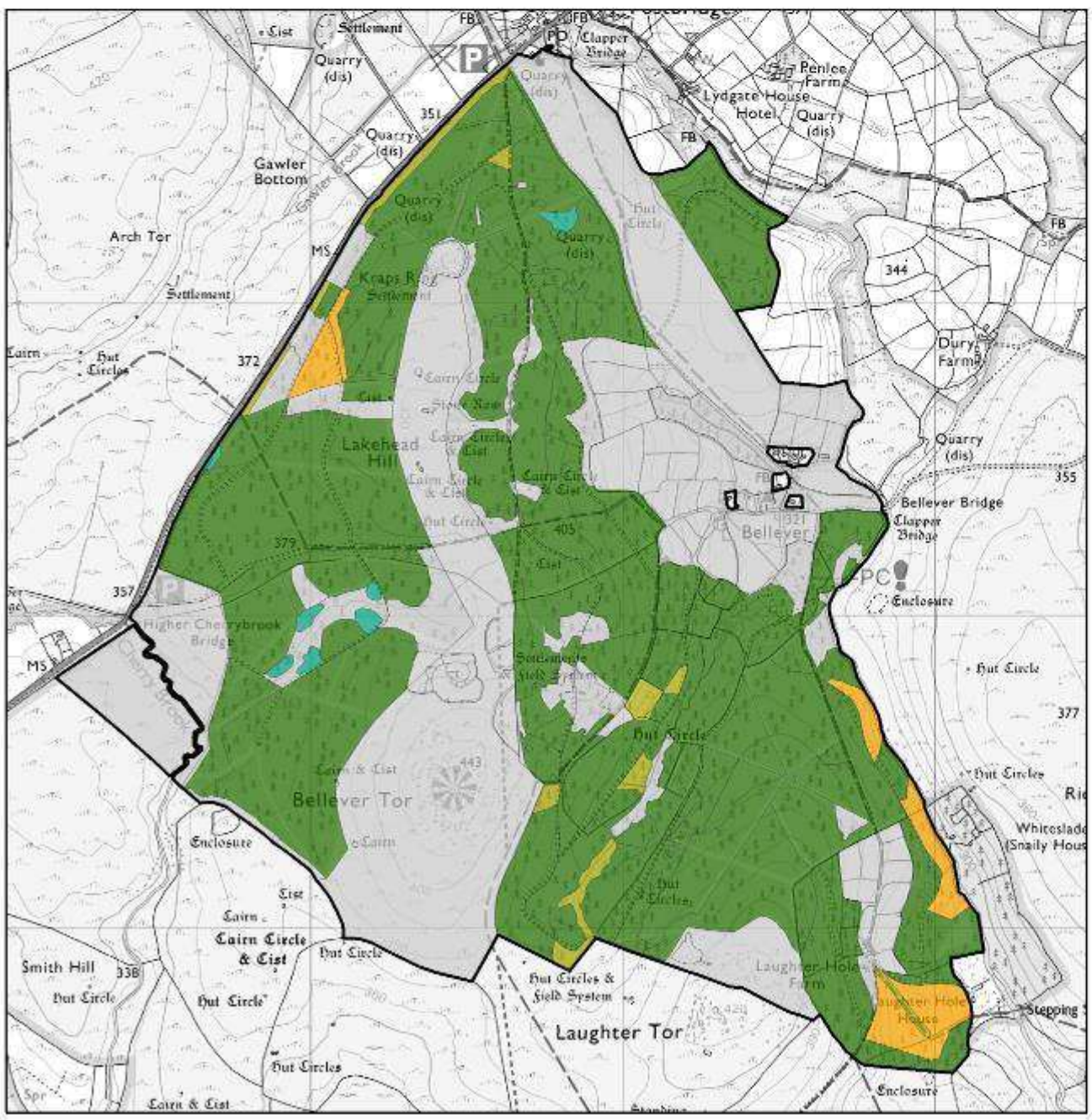
The species composition of the Dartmoor forests is predominantly made up of Sitka spruce, 65% (904ha) of the Plan Area. The minor species are primarily made up of other conifers such as Japanese larch, Norway spruce and Douglas fir. The small broadleaf components which make up 2% of the Plan Area are predominantly planted beech, with birch, rowan and willow naturally regenerating in places.

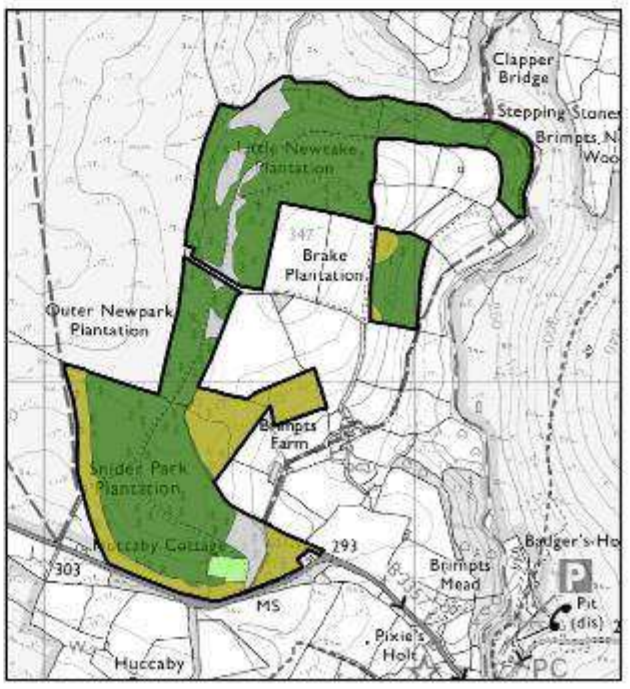
There is significant amount of open space within the Plan Area, much of which is grazed agricultural land. The remaining areas are managed open space, archaeological features, transient open space and felled and unplanted areas.











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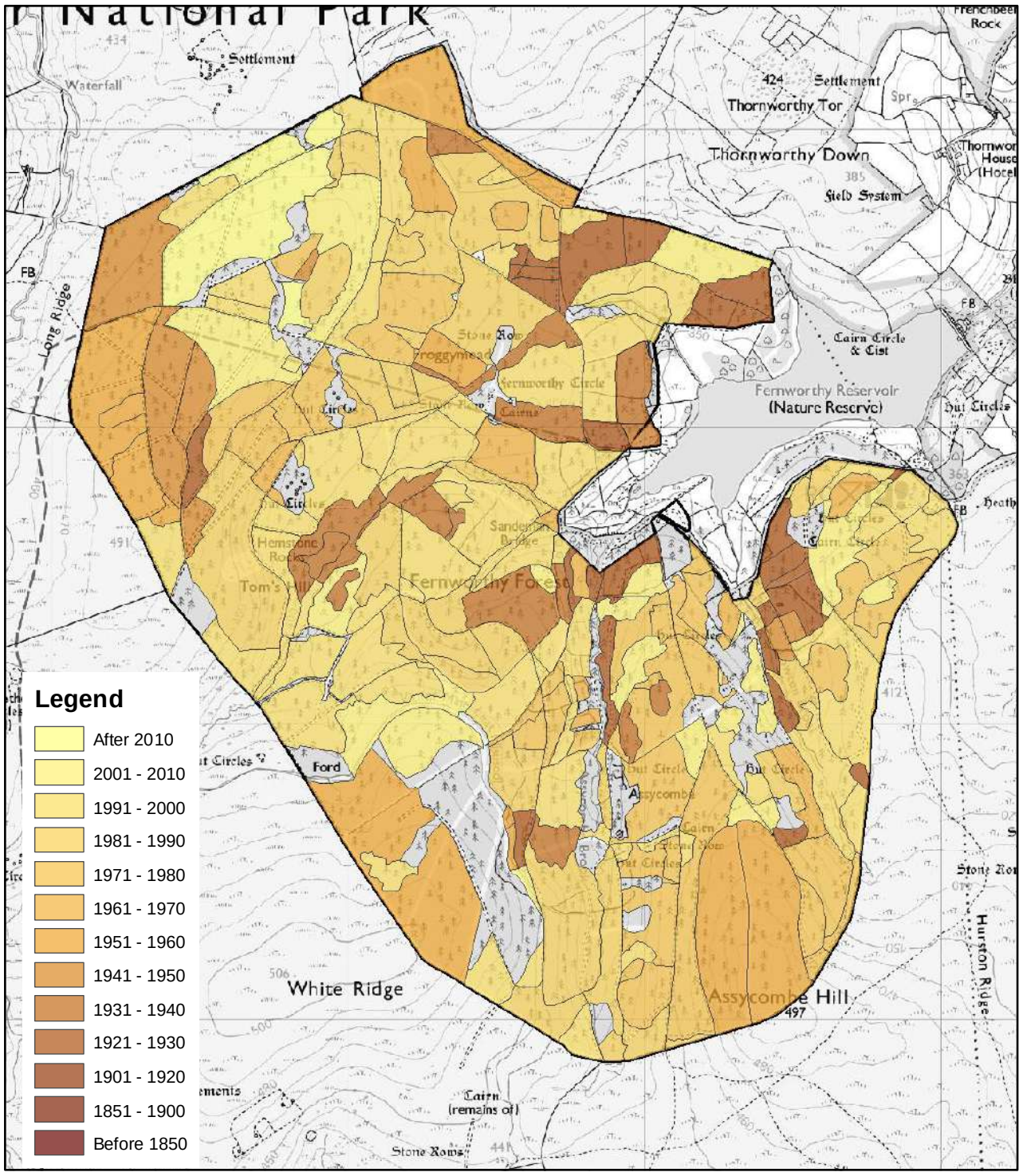
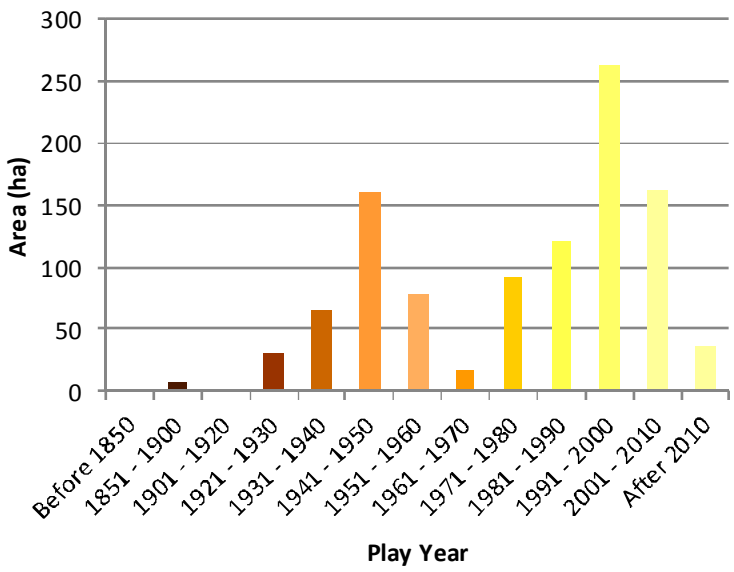
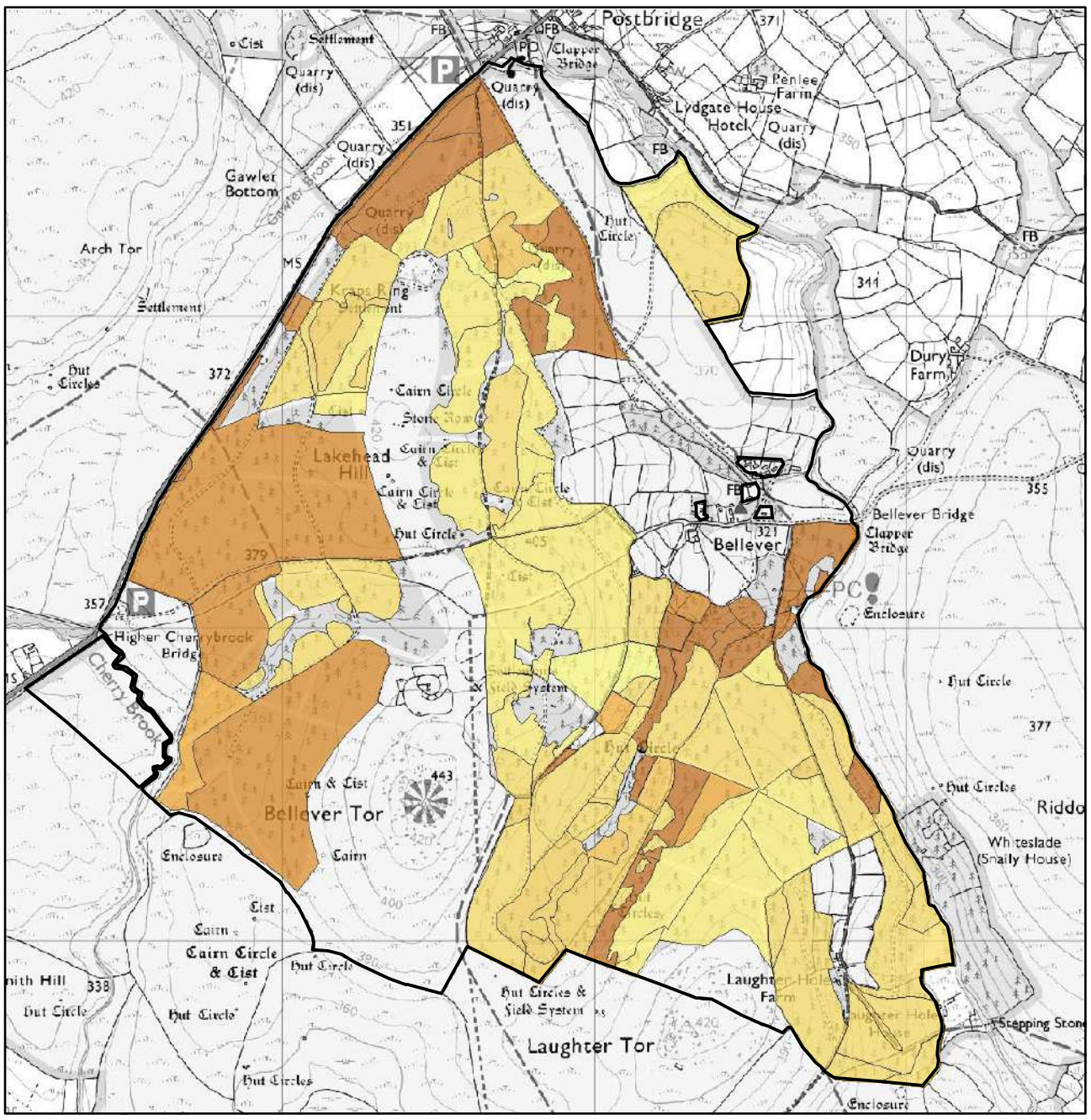
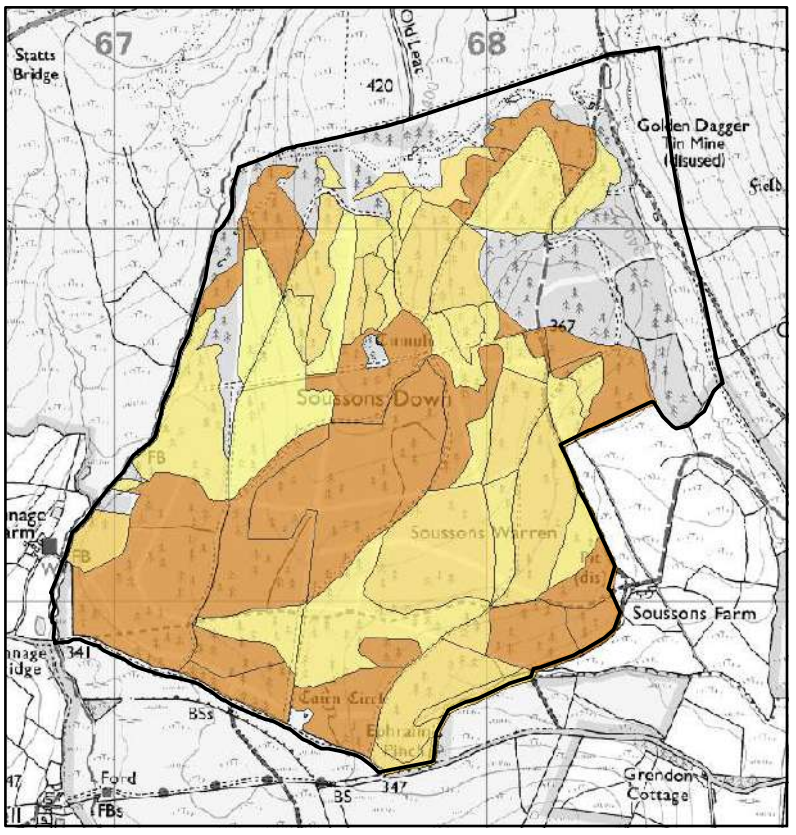
Current Age Class

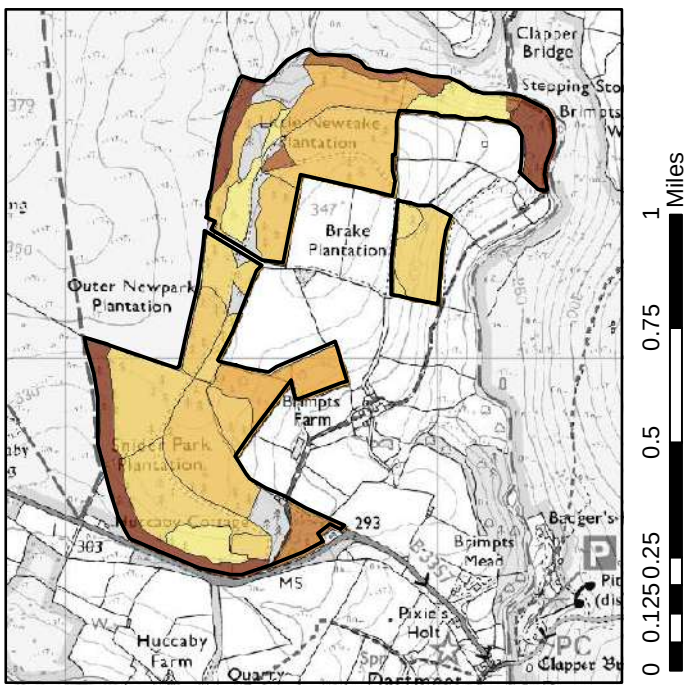


The initial planting of the Dartmoor forests commenced on the moorland in the early 1920s, with the exception of some small areas in Brimpts. These crops are now either coming to the end of their first rotation or beginning their second as shown in the chart below. Most are single-aged standards originally intended to be managed on a clearfell rotation. However, some more sheltered areas are now being managed through shelterwood systems and delivering simple and complex multi-aged stands which is diversifying the age class.





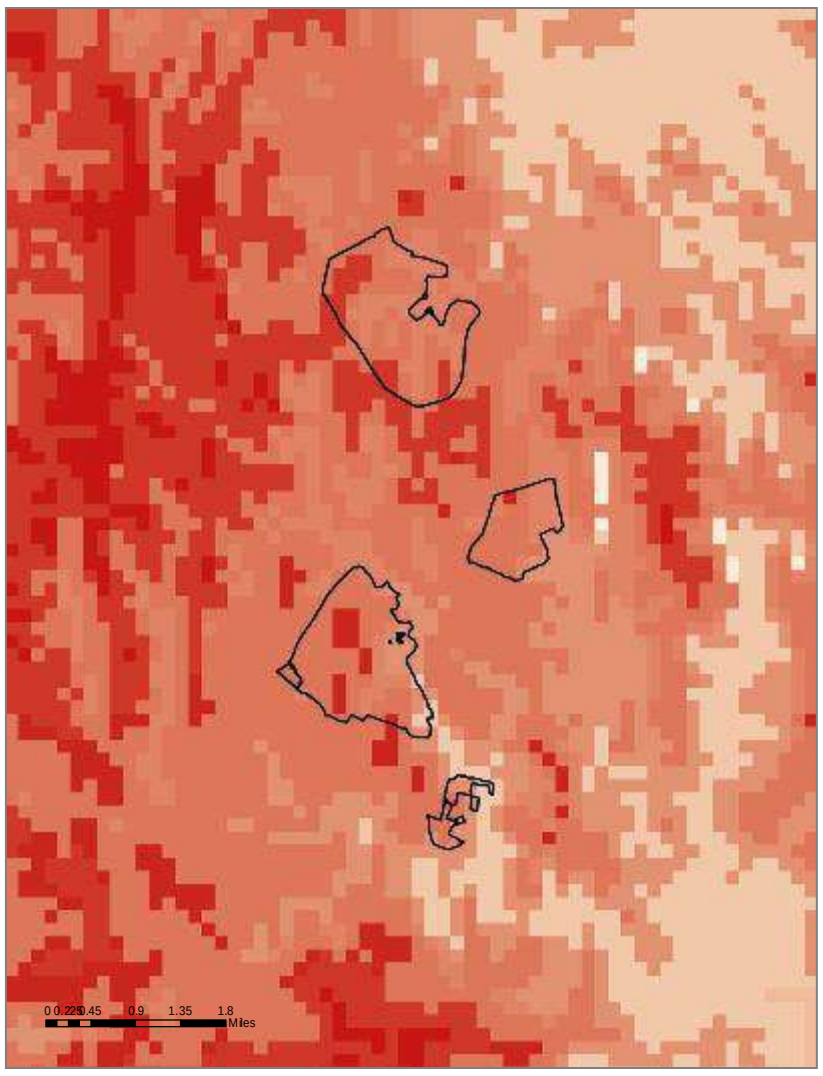


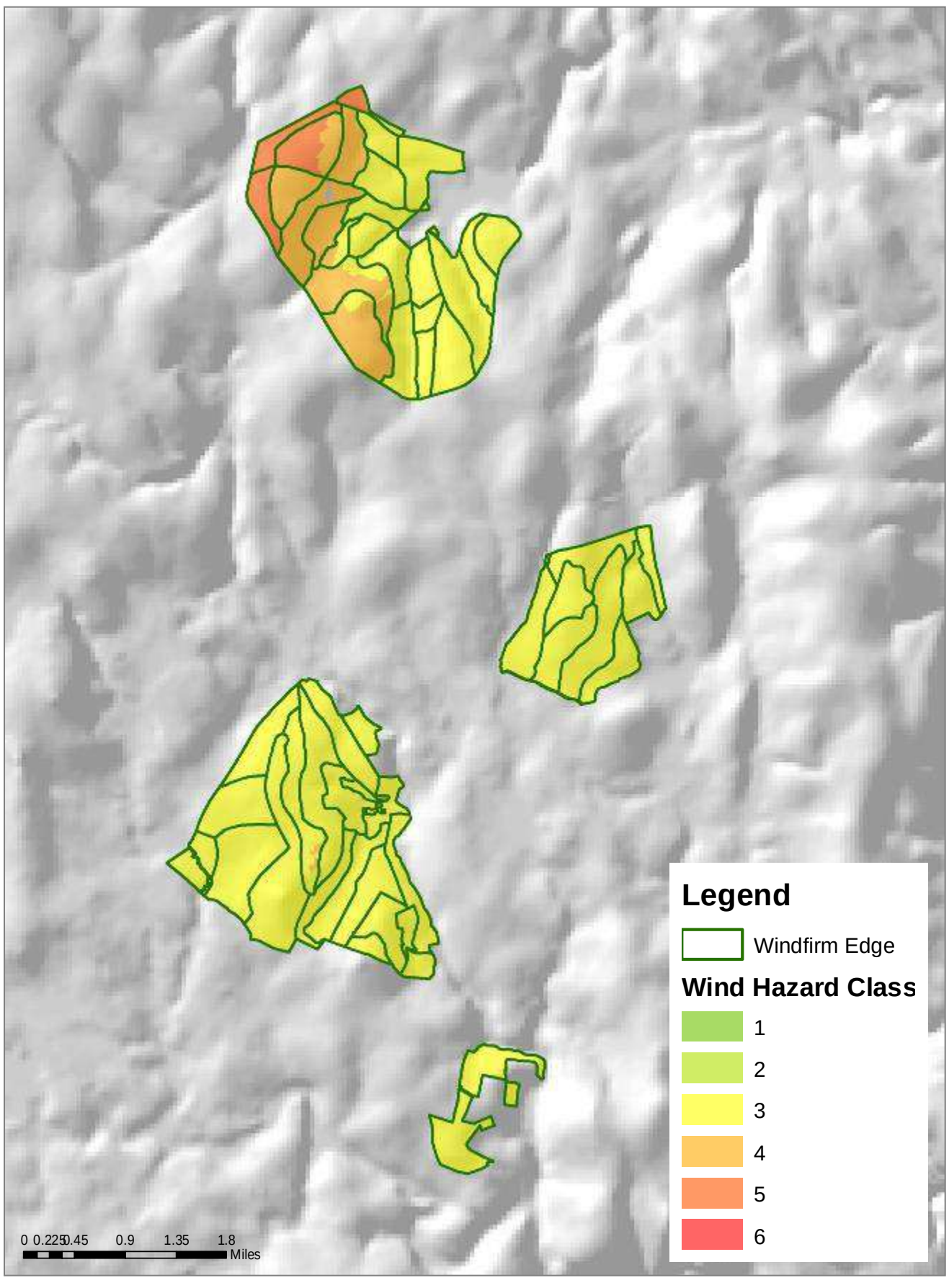


Wind Hazard

Windiness & Exposure

The Dartmoor Forest and surrounding landscape is characterised and shaped by its exposure and windiness. The elevation, aspect and topography of the forests all contribute the sites being very windy in places. The highest, western edges of Fernworthy are notably windy given their situation and the limited shelter around them. Bellever's windiest areas are not wooded but still the western edges experience significantly high winds. High winds threaten the integrity of crops and windthrow can either occur in single catastrophic events or gradually encroach as a weak spot is opened up. The wind hazard class of a site is measure through a sites DAMS (Detailed Aspect Method of Scoring) and the nature of the crops on which it sits.





Managing Wind Hazard

On sites where the wind hazard is high (i.e. 4 and above) and crops exposed, a clearfell and restock approach is often the only viable way of delivering sustainable forest management. Working to wind firm edges, created through road and ride management as well as well-designed thinning regimes, the economic potential of the crop is realised. A high wind hazard class can also mean that thinning should be avoided and rotations shortened. Sites with a lower wind hazard class are those which can be considered for management through CCF. The shape and extent of Brimpts means that this forest is also prone to windthrow and should be managed through a number of large clearfells.

Where windthrow does occur tidying and clearance will be required with an assessment of whether the remaining crop is stable enough or economically efficient to retain. If large clearance is required as a result of windthrow an appraisal of adjacent crops is required. Approval to remove standing trees following windthrow will be sought according to the following tolerance table.

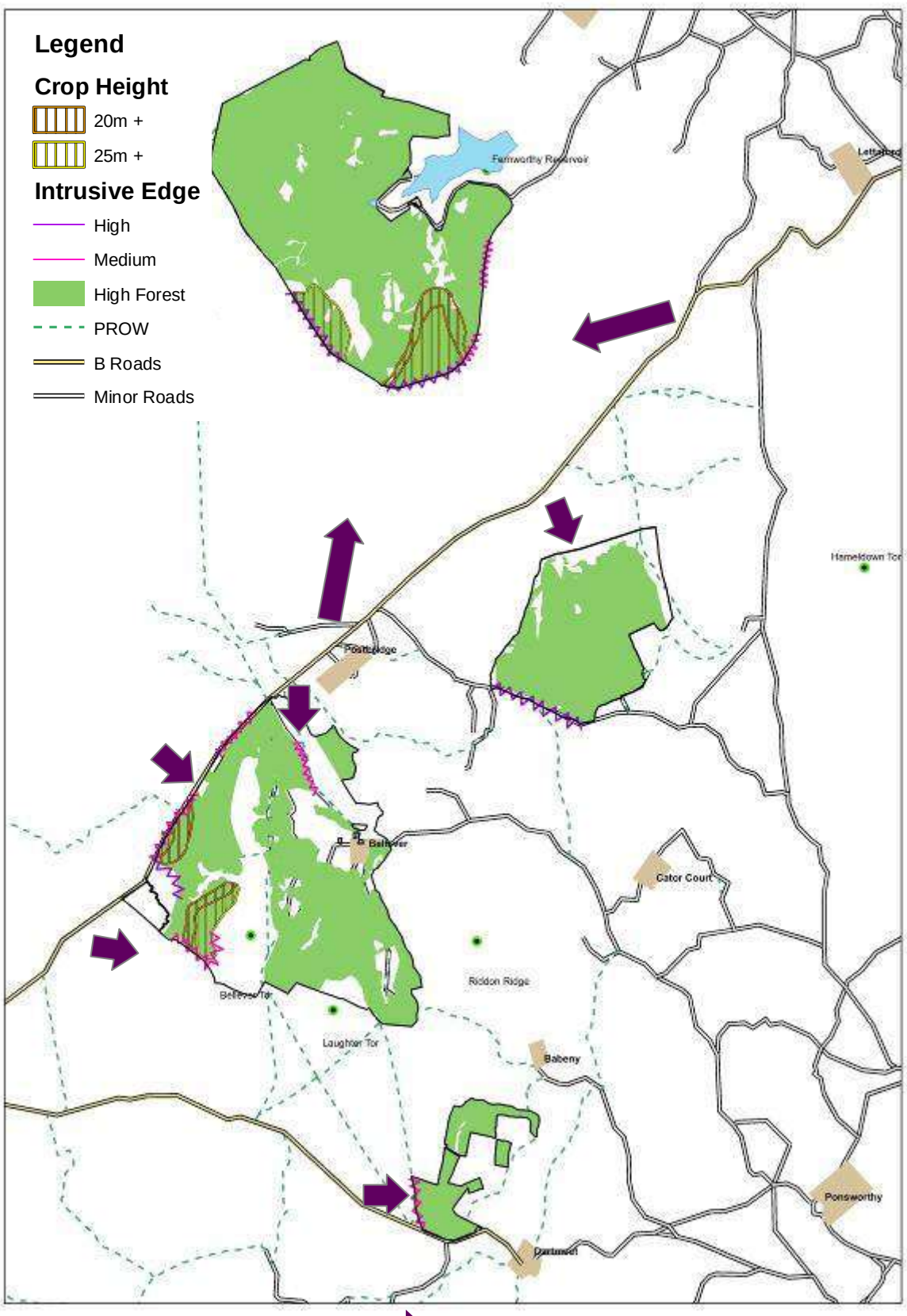
	Clearance of standing trees
FC Approval normally not required	Up to 0.5ha
Approval by exchange of letters and map	0.5ha to 2ha - if mainly windblown trees > 2ha to 5ha in areas of low sensitivity
Approval by formal plan amendment	> 5ha

Resilience

The Dartmoor Forest Plan area over relies on Sitka spruce as its major timber producing species. This is due to its exceptional yield and a constant demand for its supply. The advent of increased threat to tree health from pests and diseases (see page 46) in recent years has highlighted the need for forests to be resilient to change and threats. As a result steps should be taken in thinning to diversify stand structure and in planting to diversify tree species. A comprehensive (but by no means exhaustive) list of suitable alternative species are outlined below:

Species		Site requirements	Notes for Dartmoor
Noble fir *Abies procera*		Prefers a cool and moist (i.e. >1000 mm rainfall) climate; can cope with exposure and is more frost resistant than other firs, therefore most suited to upland Britain including higher elevations. Grows best on fresh to moist mineral soils of poor nutrient status, but suffers severely from heather competition.	Suitable to be used on some of the most exposed large clearfell sites. Should be planted both solely and in mixture with Sitka spruce. Concerns around timber quality but strength considered better than other silver firs. Grand fir also has a role in less exposed clearfell sites.
Pacific silver fir *Abies amabilis*		It is suited to a cool maritime climate with rainfall of >1250 mm well distributed across the year. Cold hardy in Britain but can be vulnerable to late frosts and does not withstand exposure or drought. Grows on soils of poor to rich nutrient status provided these have fresh to moist soil moisture.	A species suited to many sites as a substitute for larch. Lacks timber quality but should not be overlooked a sub-species when restocking clearfell sites or for underplanting as part of CCF. Seed remains difficult to source so European silver fir could be used as a suitable alternative.
Douglas fir *Pseudosuga menziesii*		Likes a wetter climate and moist soil but can be damaged by late frost and will not tolerate serious exposure. Needs a deep, well-drained soil and is unsuited to waterlogged soils.	A good alternative to Sitka spruce on more sheltered, richer and better drain sites. It has the potential to work well in tandem with the Sitka and make a significant contribution to the CCF areas.
Western hemlock *Tsuga heterophylla*		A shade tolerant species best suited to moister climates in Britain with >1000 mm rainfall. It is cold hardy throughout Britain, but is very sensitive to late frosts, does not tolerate exposure and is drought sensitive. Best growth is on acid brown earths on lower valley sides in upland forests.	A number of crops are already being managed on clearfell rotations and well established complex CCF stands at the north of Fernworthy and valley sides of Brimpts. Known to be susceptible to *Sirrococcus tsugae* in Fernworthy.
Swamp cypress *Taxodium distichum*		Prefers a humid and moist sub-humid climate with around 1000—1500mm of annual rainfall. It often grows in intermittently flooded or very poorly drained sites and does not grow well on alkaline soils.	An experimental species with great potential as a high quality timber producer. Should only be used on wetter sites with an acknowledgement of future climatic projections.
Wellingtonia *Sequoiadendron giganteum*		Best growth is on poor to medium soils of slightly dry to fresh soil moisture status such as acid sandy loams. Is not suited to heavier gleys, peats or very poor dry soils. It appears somewhat more cold tolerant than coast redwood and it is more tolerant of drought and exposure than that species.	A suitable species on slightly more sheltered sites, Coast Redwood (*Sequoia sempervirens*) is also suitable on the least exposed sites. Has the potential to be a resilient species for the future and for amenity value, but, for now, should be used in discreet areas and number.
Oriental spruce *Picea orientalis*		A species that is adapted to warm summers and cold winters. Best suited to soils of poor to rich nutrient status and slightly dry to moist soil moisture. Should be cold hardy throughout Britain but only moderately tolerant of exposure; a late flushing species and can therefore be used on sites prone to late spring frosts.	Only suitable on a few, less exposed and better draining sites, namely Brimpts and some parts of Soussons. Seed may be difficult to source in the coming years. Serbian spruce is also a suitable alternative for Dartmoor, given its relative tolerance to exposure and cold.
Aspen *Populus tremula*		A light demanding species which grows on a wide range of sites from slightly dry to wet soil moisture and of poor to rich soil nutrient status. Moderately tolerant of exposure and is cold hardy and frost resistant.	Will grow well in mixture with various broadleaves or on the fringes of conifer crops across Dartmoor. Small plantings as part of a feathered edge would deliver high landscape value.
Grey alder *Alnus incana*		It is a light demanding pioneer species and cold hardy in Britain; however, it often spreads by root suckers which can be invasive. It is only moderately tolerant of exposure. It has a rather wider site tolerance than either common or red alder, being suited to moderately dry to wet soils of poor to medium nutrient regime.	Small plantings in wetter areas could improve soil fertility and provide visual diversity. Could be substituted with red (*Alnus rubra*) and common (*Alnus glutinosa*) alders.
Beech *Fagus sylvatica*		A shade tolerant species which withstands wind exposure and is cold hardy but is susceptible to frost damage when young. It can be found on mineral soils of poor to medium nutrient status including calcareous soils but does not tolerate compacted, waterlogged or very dry soils.	Small plantings particularly open forest edge will provide visual diversity. Given the isolated nature of the blocks, squirrels should not be have too detrimental an impact on timber quality.
Rowan *Sorbus aucuparia*		This is a light demanding pioneer species which often grows in mixture with other broadleaves or on the edges of conifer stands. It is cold hardy, frost tolerant and can withstand severe exposure, even if it does not grow to a large size.	Small plantings of select seed from good form source could produce significant timber yields on the edge of large plantings and as part of a feathered edge.

Landscape Integration



Landscape Impact

The forests are significant features in the National Park landscape and can be seen from considerable distances. There are a number of p.1950 spruce crops on the forest edge which sit in exposed and visible locations. The contrast between high forest and heathland is stark, with clear notches visible in the landscape.

Whilst a number of intrusive edges do feature within the internal forest landscape the majority of the intrusive edges are found on the forest edge and accentuated by the contrast with the open moorland.

The Plan will make a targeted effort to soften some of these edges and deliver a forest that integrates better into the landscape. The focus and extent of this softening will be determined by how visible the edges are and their impact on the wider landscape (see Landscape Analysis, pages 35-36).

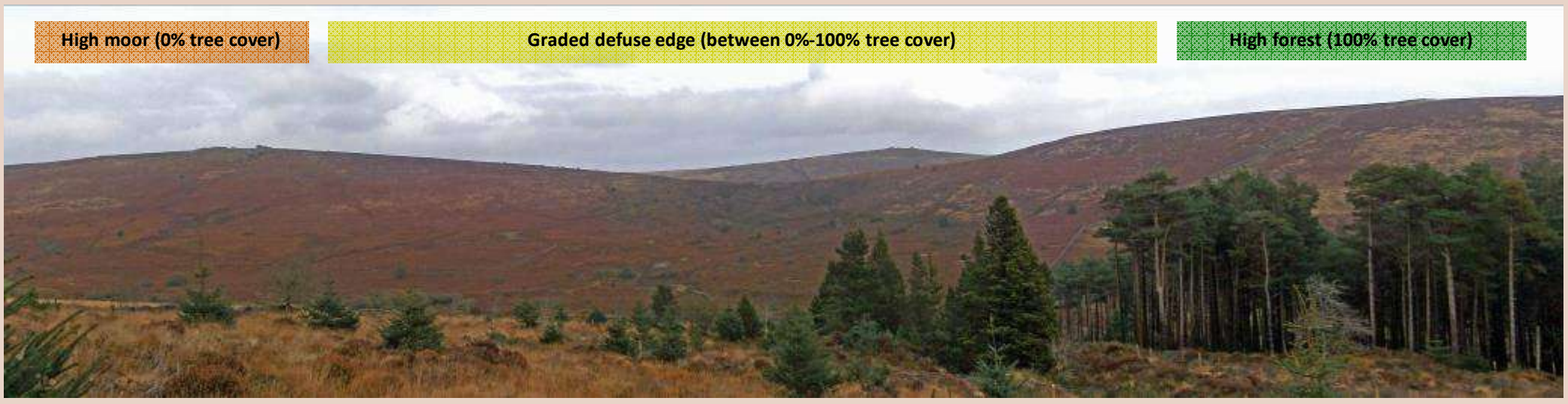
This integration will be achieved by two mechanisms:

1) feathered edge creation as and when edge crops reach economic maturity (as described below).

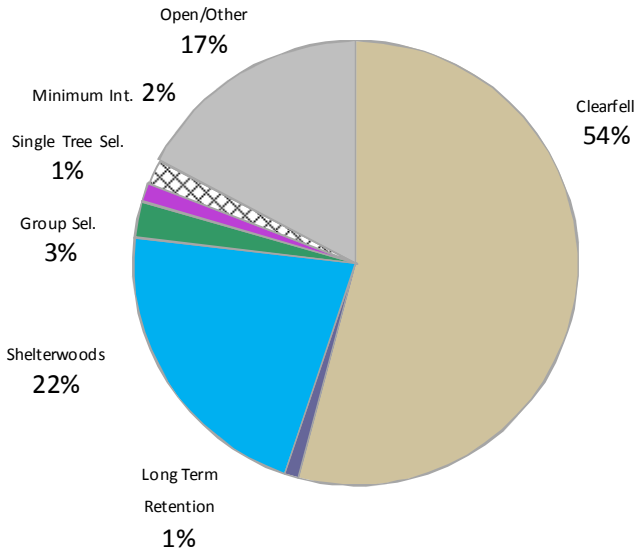
2) clumped planting along existing edges where open space is available and not considered an ecological priority, as illustrated below. A diffuse edge of open space and tree cover, and not simply a broadleaf belt, will be achieved over time.

Feathered Edge

A feathered edge will be created in areas of greatest landscape impact to minimise the contrast between high forest and open moor. The aim will be to create a more gradual visual and natural convergence between the high forest and moorland. The edge will consist of a transient area of open space and regenerating forest. The area may replanted by up to 50% to allow greater species and visual diversity but natural regeneration will be favoured where possible to create a natural graded edge. Any planting will occur in clumps to create clusters of trees in an open surrounding rather than contiguous strips. The initial creation of the edge area will be done at the time of programmed clearfelling so as not to compromise the integrity of windfirm edges. Once felled, as transient zones, these areas will be maintained at the time of programmed operations and then first economic opportunity and therefore may become up to 100% forested at times. However the aim will be to maintain these areas at around 50% open and 50% forested as illustrated in the photograph below. The extent and timing of the creation of these areas is prescribed on pages 20-23, the landscape implications of this is outlined on pages 35-36.



Silviculture



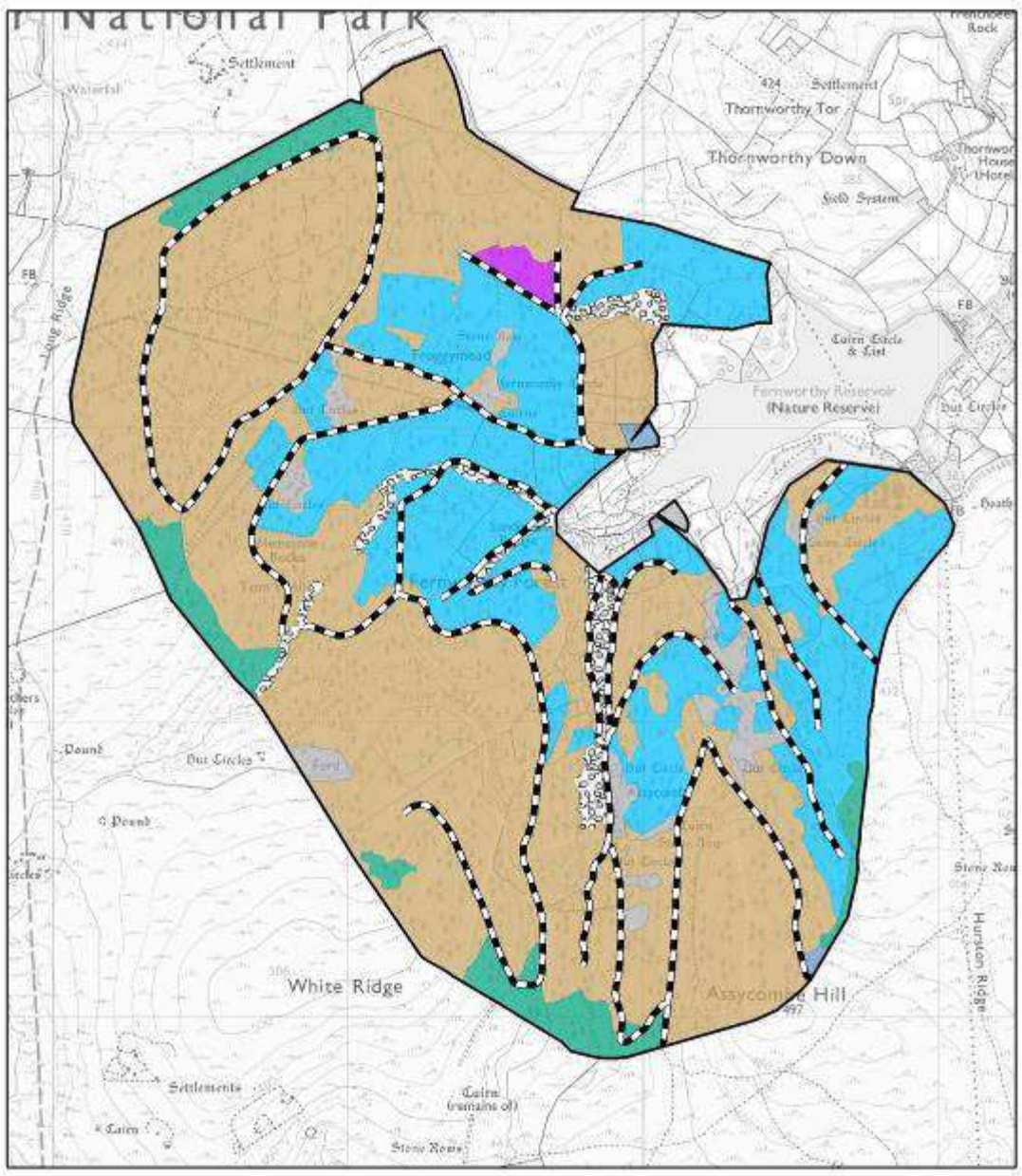
Clearfell coupes will be managed through clearcutting (of over 0.25ha) and then restocked either through natural regeneration, replanting or a combination of the two.

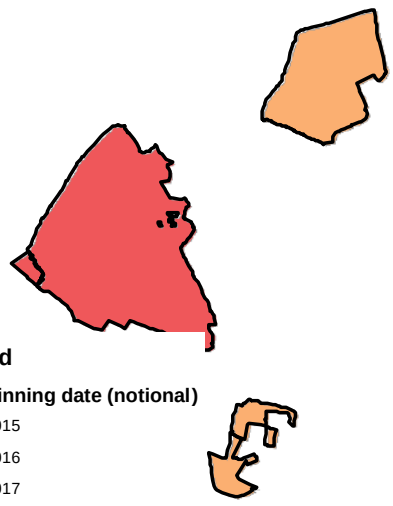
Long term retentions are in place where the landscape value of the forest is key by maintaining structural diversity, shelter and a potential seed supply.

Continuous Cover Forestry systems will continue to be developed where soils are deep and better drained and sites have a lower wind hazard class. The application of shelterwoods and selection systems is outlined on page 20.

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

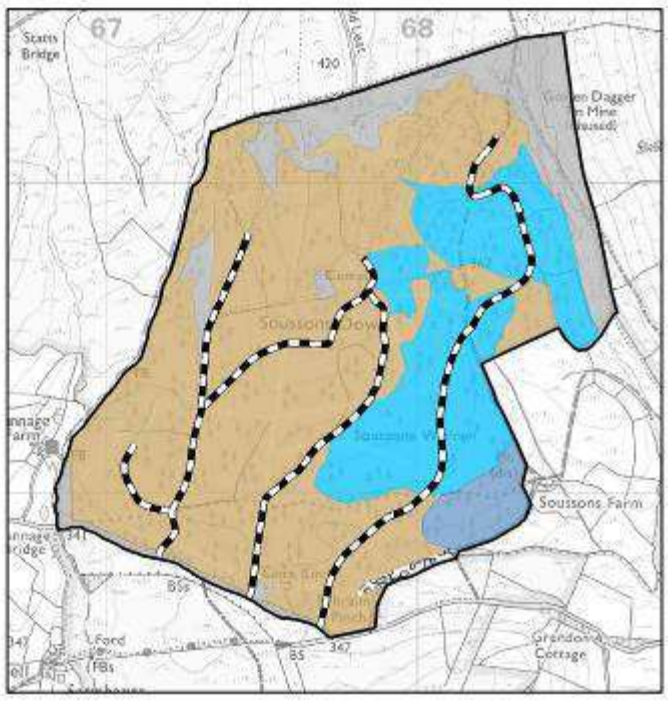
Open space is managed to ensure forest cover does not exceed 2m in height, with up to 20% forest cover accepted depending on the site objectives i.e. ecology or landscape.

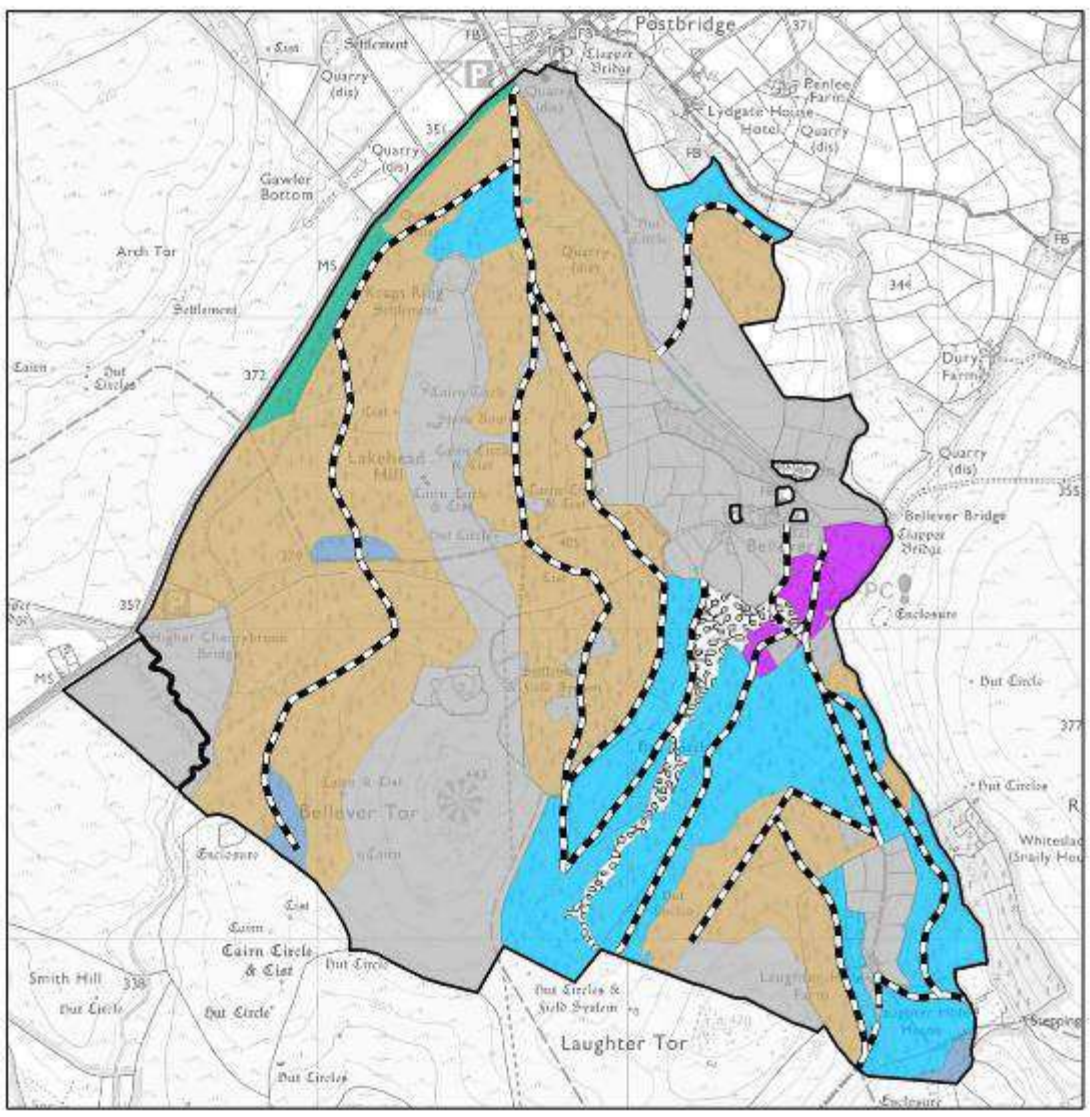


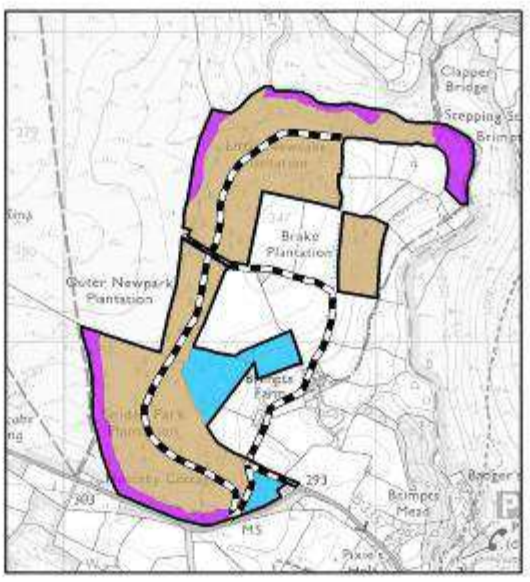


Thinning

There is a presumption towards thinning in all stands on Dartmoor, 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.





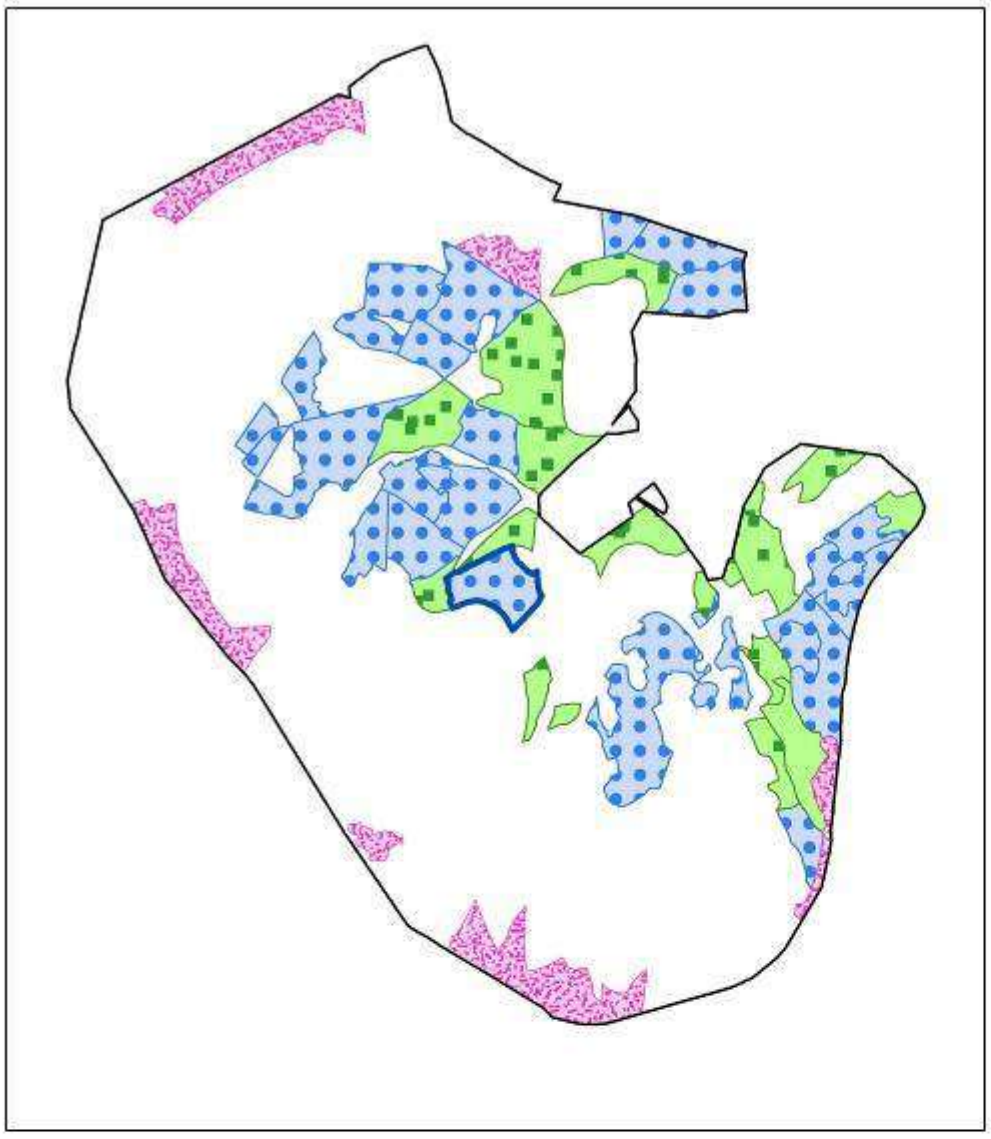


Legend

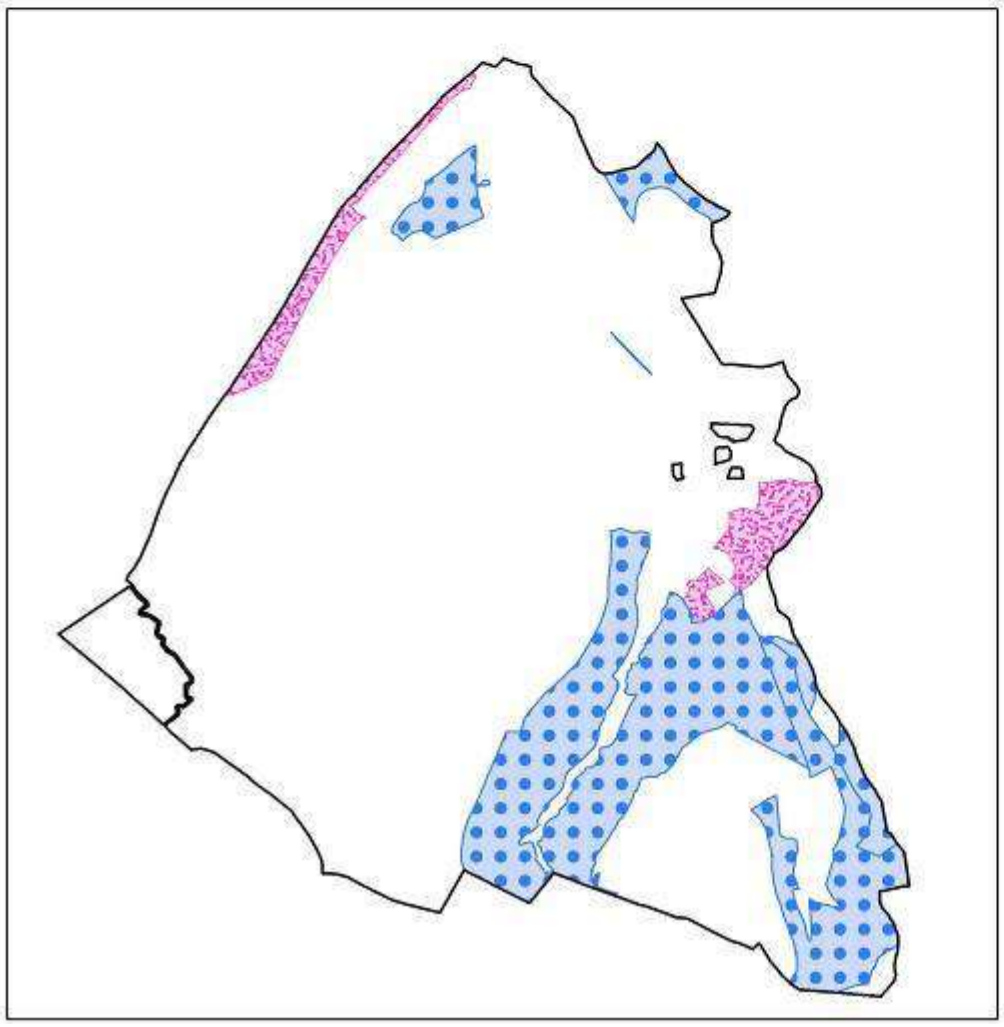
- Clearfell
- Long Term Retention
- Shelterwoods
- Group Selection
- Single Tree Selection
- Minimum Intervention
- Open/Other Land
- Roads

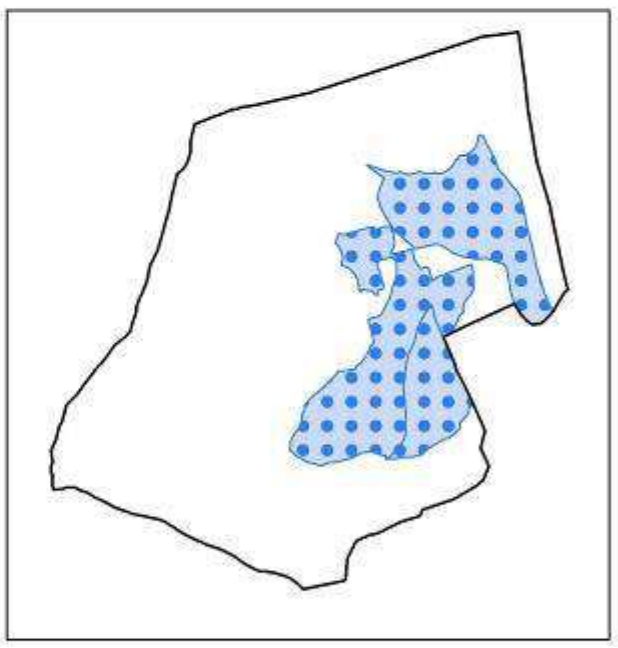
Continuous Cover Forestry

The Dartmoor Plan area has the propensity to regenerate freely in certain areas. This is a result of the site conditions, the growing stock and the legacy of management through the decades. Fernworthy is host to a Continuous Cover Forestry (CCF) trial researching and illustrating the development of simple and complex systems. The use of CCF as a management prescription will continue to be utilised, and enhanced where feasible, so as to develop a more economically and ecologically resilient set of forests.

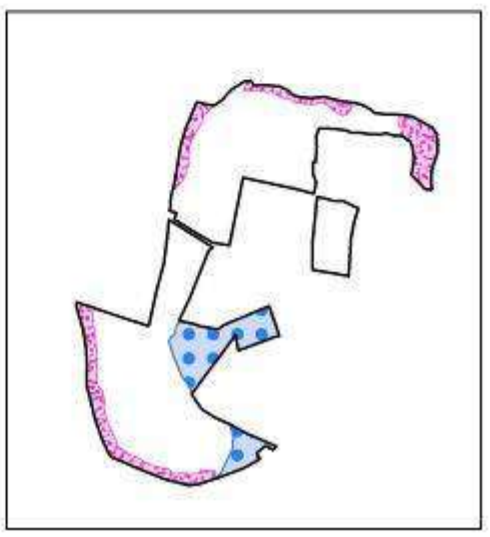


Simple (or Uniform) Systems — are the predominant CCF silvicultural prescription of choice across the Plan area. They are prescribed on sites where soils are deep, exposure is less and crops have either been thinned to CCF prescriptions and therefore have the crown and root development to be wind stable or on young crops which can be converted to CCF over time through thinning. The ultimate aim is to establish an evenly spread understorey through regeneration fellings (as shown below). Once the understorey is established but still robust enough to endure operations the overstorey will be removed in one or two interventions. If the understorey is not >2m felling approval is required. Underplanting with alternative will be used to supplement the understorey, where regeneration is not established.





Strip Systems - are employed sparingly on wind vulnerable crops which may also have a significant landscape impact. They will be worked north to south and east to west to ensure that felling occurs on the leeward edge. These fellings will be restocked through natural regeneration of surrounding seeding conifer crops. Where more than the recognised seed broadcasting distance is felled wind stable blocks will be retained as a seed source.



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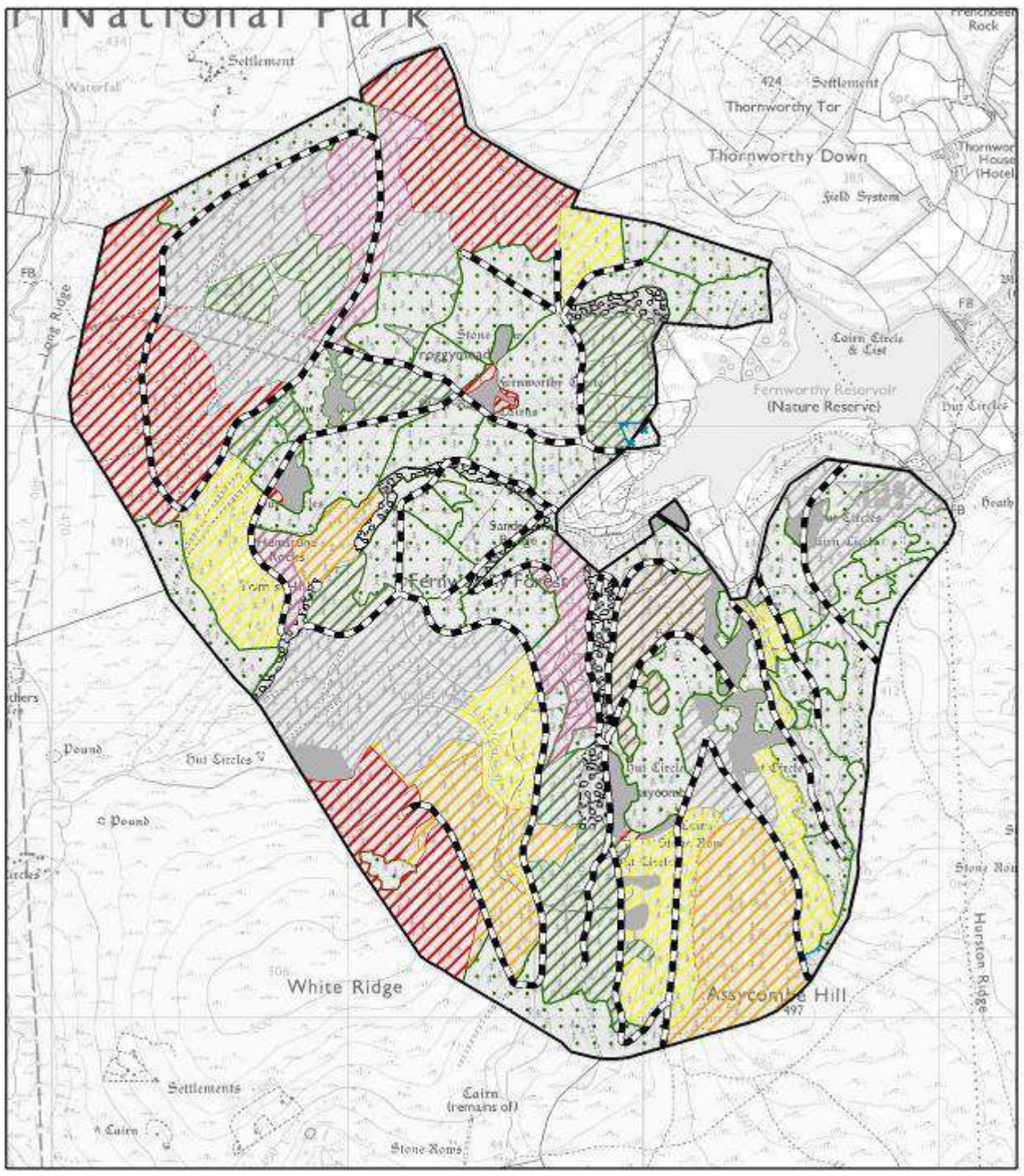
Miles

Selection Systems — are used on windfirm, accessible crops to proactively diversify the woodland structure and composition through group fellings or in established complex systems where single-tree selection will achieve management objectives whilst maintaining production. Group selections are mainly used for landscape purposes to create a complex matrix of transient open space and high forest. Single tree selections are used on established complex old age crops with an established understorey where the overstorey is intended to be retained.

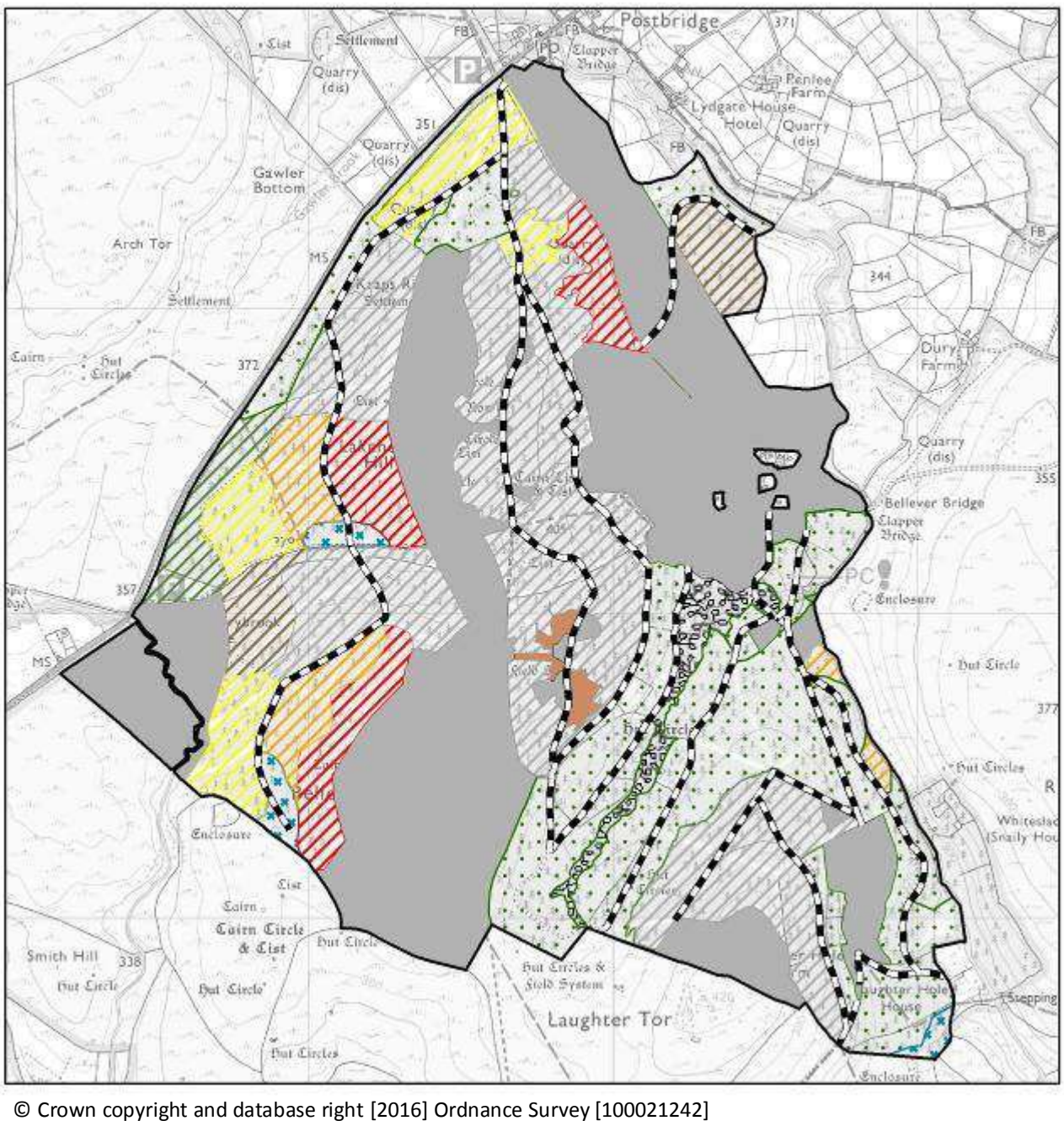
Complex (or Group) Systems — are mainly used in Fernworthy as a alternative to the simple system application. The complex system requires stands to be more windfirm given the exposure group fellings will inflict. Soils must be deep and established crops thinned to CCF regimes whereby crown and root development is established. Through the felling of small groups and clusters of trees at multiple interventions the complex structure is initiated. 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. Underplanting may be used to supplement the groups where regeneration is not in sufficient evidence.

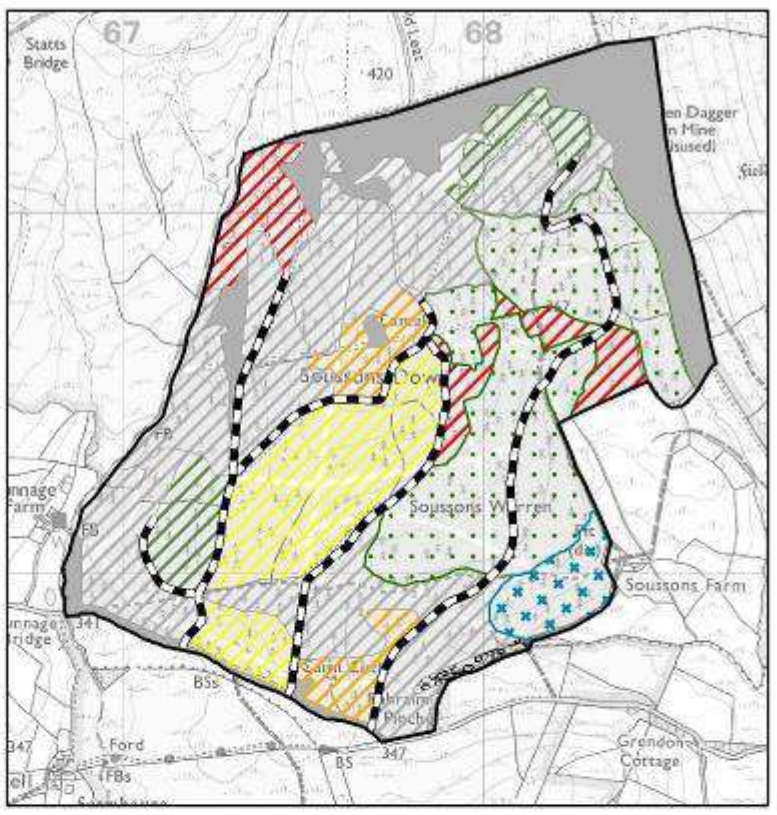
Management Prescriptions 2016 –2046

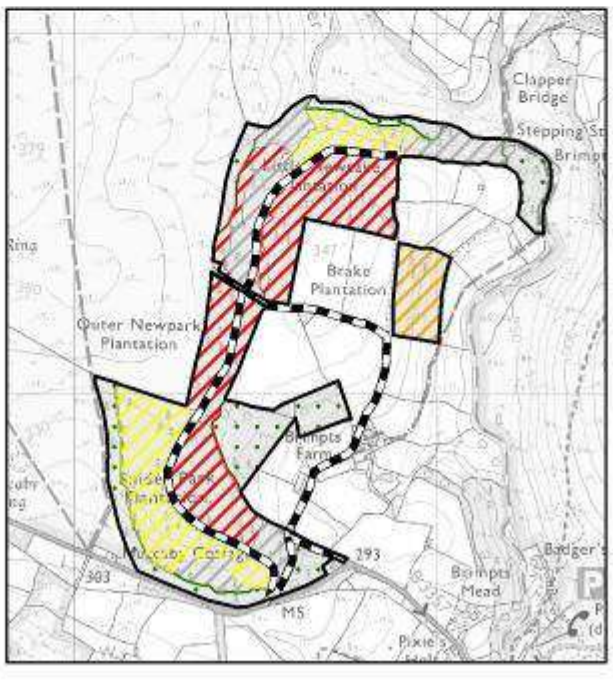


Legend

- Alternatives to Clearfell
- Fell 2012 - 2016
- Fell 2017 - 2021
- Fell 2022 - 2026
- Fell 2027 - 2031
- Fell 2032 - 2036
- Fell 2037 - 2041
- Fell 2042 - 2046
- Fell post 2046
- Coppice
- Wood Pasture
- Retentions
- Minimum Intervention
- Natural Reserve
- Open
- Roads







0 0.125 0.25 0.5 0.75 1 Miles

Felling and Restocking 2016 –2026

Fernworthy

Legend

- Fell 2012 - 2016
- Fell 2017 - 2021
- Shelterwood Overstorey Removal 2017-2011
- Fell 2022 - 2026
- Retentions
- Minimum Intervention
- Natural Reserve
- Open

Coupe 82737 (0.20ha)
Fell 2017-21 (Sitka spruce)

Restock 82737a (0.20ha)
100% Open
(Scheduled Monument)

Coupe 82406 (23.85ha)
Fell 2017-21 (Sitka spruce & Western hemlock)

Restock 82406a (23.85ha)
80% Evergreen conifer
20% Broadleaf

Proposed species
50% Sitka spruce
30% Swamp cypress
10% Willow
5% Sycamore
5% Birch

Coupe 82447 (0.71ha)
Fell 2017-21 (Sitka spruce)

Restock 82447a (0.71ha)
100% Open
(Scheduled Monument)

Coupe 82862 (4.85ha)
Fell 2022-26 (Sitka spruce)

Restock 82862a (4.85ha)
60% Broadleaf
40% Evergreen conifer

Proposed species
20% Willow (NR where viable)
20% Birch (NR where viable)
10% Common alder
10% Wych Elm
20% Sitka spruce (NR where viable)
20% Swamp cypress

Coupe 82734 (5.19ha)
Shelterwood Overstorey Removal 2017-21 (Sitka spruce)

Restock 82734a (5.19ha)
100% Evergreen conifer

Proposed species
80% Sitka spruce (NR where viable)
20% Pacific silver fir

Coupe 82337 (38.58ha)
Fell 2017-21 (Sitka spruce)

Restock 82337a (38.58ha)
100% Evergreen conifer

Proposed species
60% Sitka spruce (NR where viable)
40% Noble fir

Coupe 82796 (18.88ha)
Fell 2017-21 (Sitka spruce)

Restock 82796a (12.45ha)
100% Evergreen conifer

Proposed species
60% Sitka spruce
40% Pacific silver fir

Restock 82796b (6.43ha)
<100% Evergreen Conifer

Coupe 82946 (19.29ha)
Fell 2022-26 (Sitka spruce)

Restock 82946a (19.29ha)
100% Evergreen conifer

Proposed species
40% Douglas fir
40% Norway spruce
20% Wellingtonia

Coupe 82298 (0.26ha)
Fell 2017-21 (Sitka spruce)

Restock 82298a (0.26ha)
100% Open
(Scheduled Monument)

Coupe 82661 (22.79ha)
Fell 2022-26 (Sitka spruce)

Restock 82661a (12.65ha)
100% Evergreen conifer

Proposed species
60% Sitka spruce (NR where viable)
40% Noble fir

Restock 82661b (10.15ha)
<100% Evergreen Conifer

Declaration by FC as an Operator.

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

0 0.05 0.1 0.2 0.3 0.4 Miles

Felling and Restocking 2016 –2026

Soussons

Declaration by FC as an Operator.

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

Legend

- Fell 2012- 2016
- Fell 2017 - 2021
- Fell 2022 - 2026
- Retentions
- Minimum Intervention
- Natural Reserve
- Open

Coupe 82748 (6.39ha)
Fell 2017-21 (Sitka spruce)

Restock 82748a (3.66ha)
100% Evergreen conifer

Proposed species
30% Scots pine
30% Sitka spruce
30% Pacific silver fir
10% Grey alder

Restock 82748b (2.73 ha)
100% Open
(Scheduled Monument)

Coupe 82356 (8.36ha)
Fell 2017-21 Sitka spruce)

Restock 82356a (8.36ha)
100% Evergreen conifer

Proposed species
40% Sitka spruce
40% Western hemlock
20% Aspen

Coupe 82953 (4.95ha)
Fell 2022-26 (Sitka spruce)

Restock 82953a (4.95ha)
80% Evergreen conifer
20% Open space

Proposed species
40% Noble fir
20% Douglas fir
20% Sitka spruce

Coupe 82375 (1.96ha)
Open Space

Restock 82375a (1.96ha)
50% Open
30% Broadleaf
20% Evergreen conifer

Proposed species (planted in clumps)
10% Beech
10% Aspen
10% Rowan
10% Sitka spruce
10% Scots pine

Coupe 82539 (4.44ha)
Fell 2022-26 (Sitka spruce)

Restock 82539a (4.44ha)
90% Evergreen conifer
10% Open

Proposed species
40% Sitka spruce
30% Noble fir

0 0.05 0.1 0.2 0.3 0.4 Miles

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

Felling and Restocking 2016 –2026

Bellever

Coupe 82496 (8.38ha)
Fell 2017-21 (Sitka spruce)

Restock 82496a (8.38ha)
100% Evergreen conifer

Proposed species
60% Sitka spruce (NR where viable)
20% Douglas fir
20% Western hemlock

Coupe 82798 (5.98ha)
Fell 2017-21 (Norway spruce)

Restock 82798a (5.98ha)
70% Evergreen conifer
30% Open

Proposed species
40% Norway spruce
20% Serbian spruce
10% Wellingtonia

Coupe 82516 (7.21ha)
Fell 2022-26(Sitka spruce)

Restock 82516a (7.21ha)
100% Evergreen conifer

Proposed species
60% Sitka spruce (NR where viable)
20% Noble fir
10% Beech
10% Aspen

Coupe 82218 (3.88ha)
Felled 2014 (Sitka spruce)

Restock 82218a (3.88ha)
50% Broadleaf
50% Evergreen conifer

Proposed species
30% Sessile oak
30% Scots pine
10% Sitka spruce
10% Coast redwood
10% Sweet chestnut
10% Red alder

Coupe 82341 (9.51ha)
Fell 2022-26 (Sitka spruce)

Restock 82341a (9.51)
100% Evergreen conifer

Proposed species
60% Sitka spruce (NR where viable)
20% Noble fir
20% Western hemlock

Coupe 82955 (3.07ha)
Fell 2016 (Sitka spruce)

Restock 82955a (3.07ha)
100% Open
(Scheduled Monument)

Coupe 82552 (8.49ha)
Fell 2017-21 (Sitka spruce)

Restock 82552a (8.49ha)
100% Evergreen conifer

Proposed species
60% Sitka spruce (NR where viable)
20% Pacific silver fir
20% Norway spruce

Coupe 82583 (2.20ha)
Fell 2017-21 (Norway spruce)

Restock 82583a (2.20ha)
70% Evergreen conifer
30% Open

Proposed species
30% Douglas fir
20% Red alder
20% Rowan

Legend
- Fell 2012- 2016
- Fell 2017 - 2021
- Fell 2022 - 2026
- Retentions
- Minimum Intervention
- Natural Reserve
- Open

0 0.05 0.1 0.2 0.3 0.4 Miles

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 (Ev.) Conifer the use of suitable broadleaves to build in resilience and utilise site conditions is anticipated and in places is proposed.

Felling and Restocking 2016 –2026

Brimpts

Declaration by FC as an Operator.

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

Coupe 82767 (8.36ha)
Fell 2017-21 (Sitka spruce)

Restock 82767a (8.36ha)
100% Evergreen conifer

Proposed species
60% Sitka spruce (NR where viable)
40% Noble fir

Coupe 82477 (1.48ha)
Fell 2017-21 (Sitka spruce)

Restock 82477a (1.48ha)
100% Evergreen conifer

Proposed species
40% Sitka spruce (NR where viable)
30% European silver fir
30% Aspen

Coupe 82972 (3.27ha)
Fell 2022-26 (Sitka spruce)

Restock 82972a (3.27ha)
60% Evergreen Conifer
40% Broadleaf

Proposed species
40% Douglas fir
20% Oriental spruce
40% Sessile oak

Coupe 82302 (9.53ha)
Fell 2017-21 (Sitka spruce)

Restock 82302a (5.07ha)
100% Evergreen conifer

Proposed species
50% Sitka spruce (NR where viable)
30% Scots pine
20% Wellingtonia

Restock 82302b (4.46ha)
80% Open
10% Retained conifer
10% Retained broadleaf

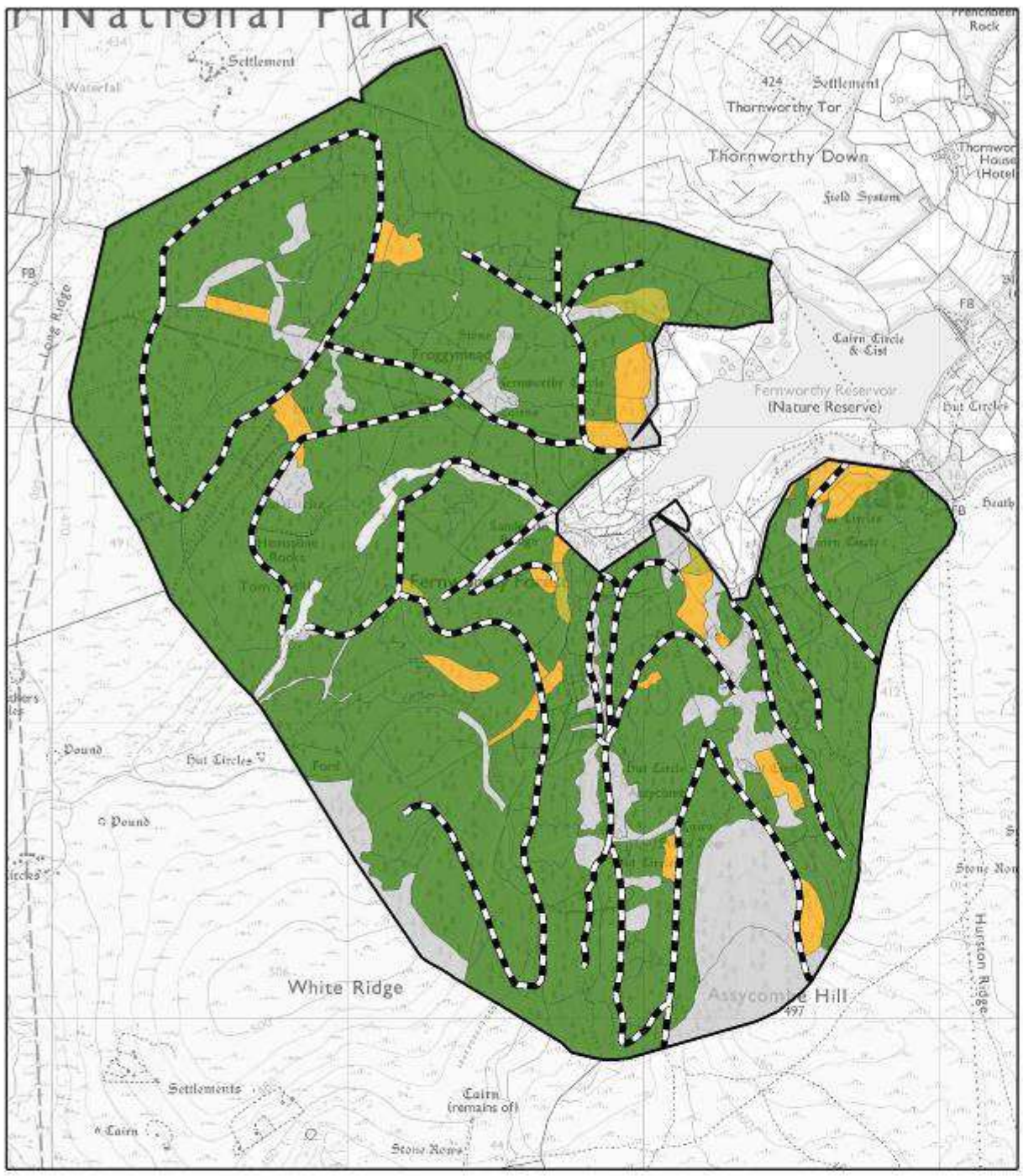
Legend

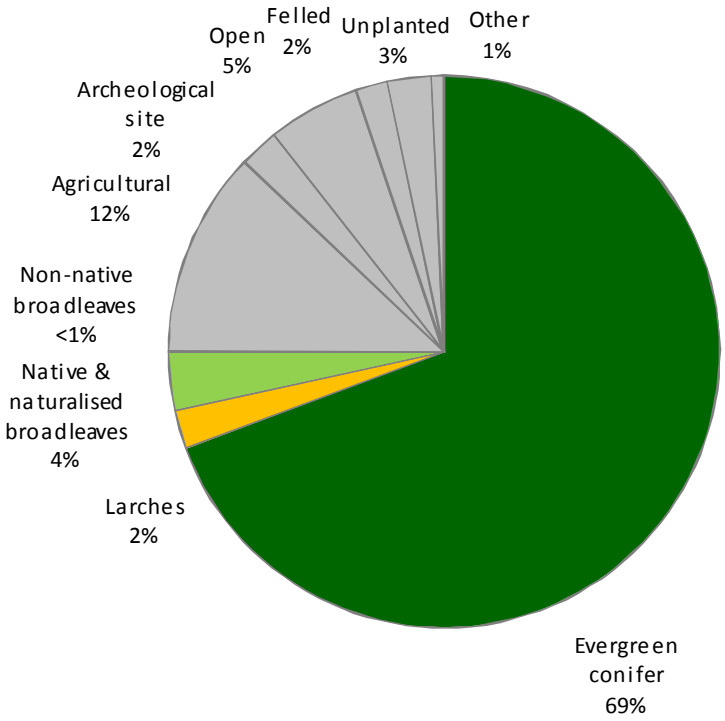
- Fell 2012- 2016
- Fell 2017 - 2021
- Fell 2022 - 2026
- Retentions
- Minimum Intervention
- Natural Reserve
- Open

0 0.05 0.1 0.2 0.3 0.4 Miles

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

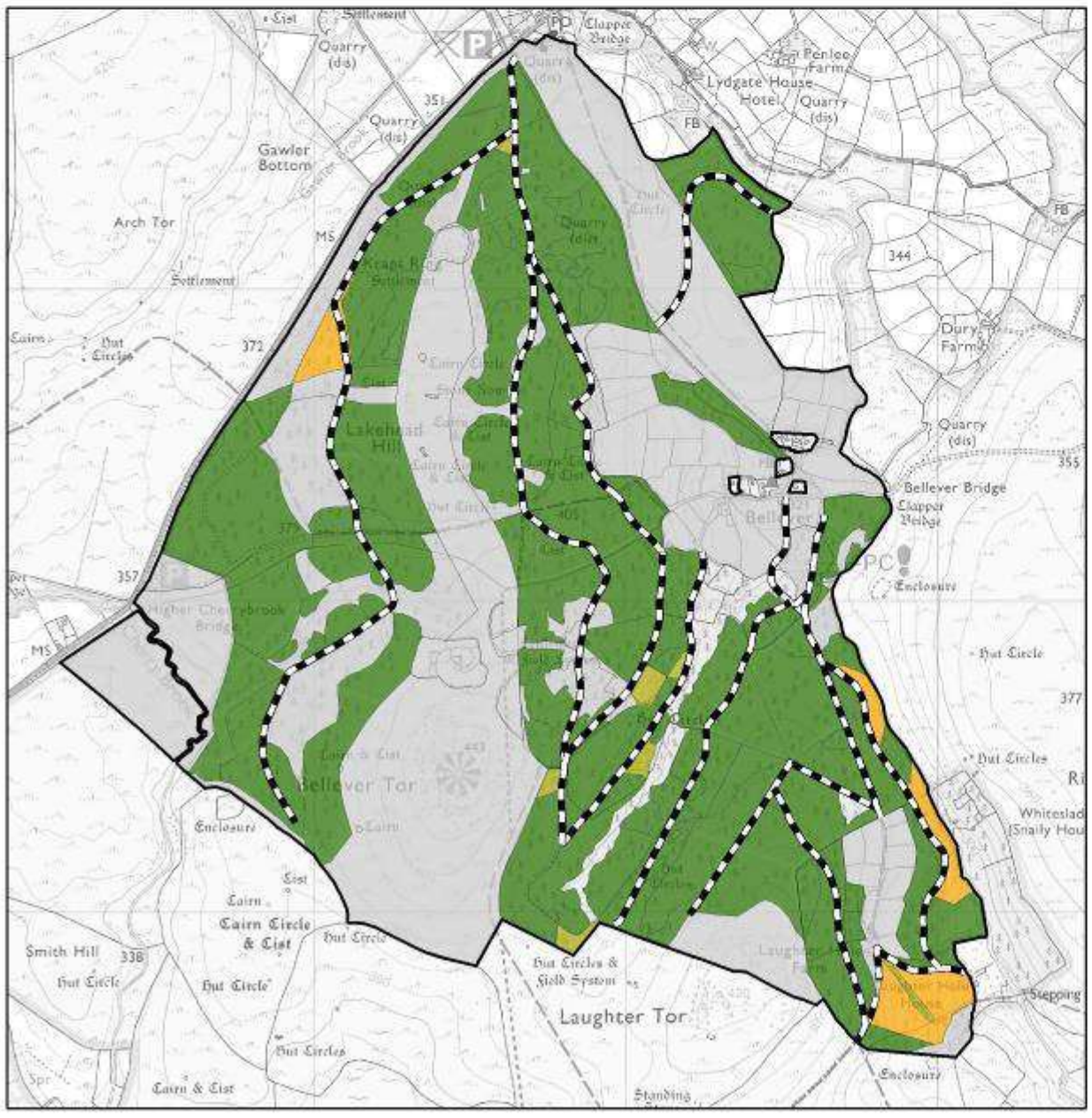
Indicative Future Species 2026

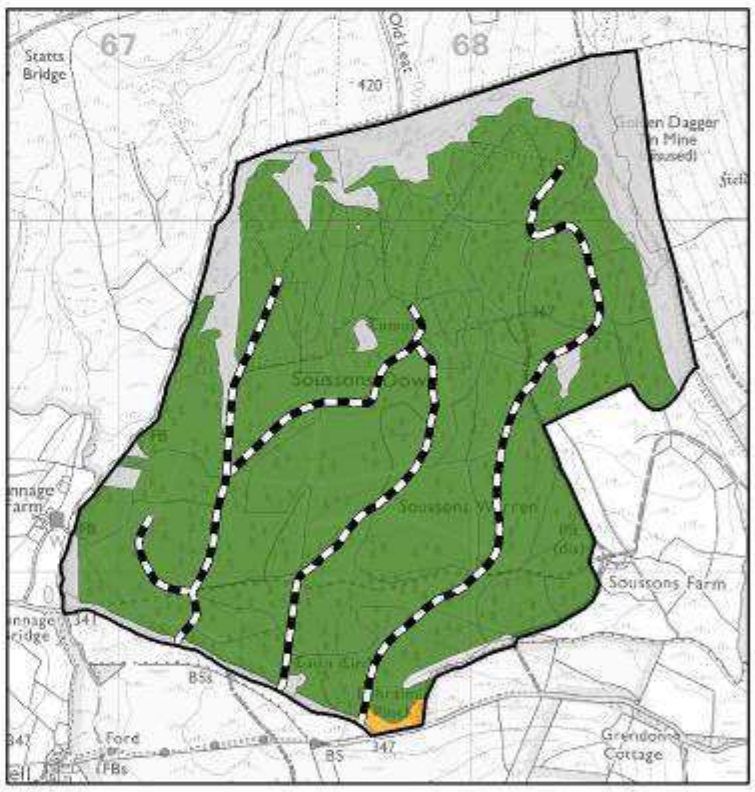


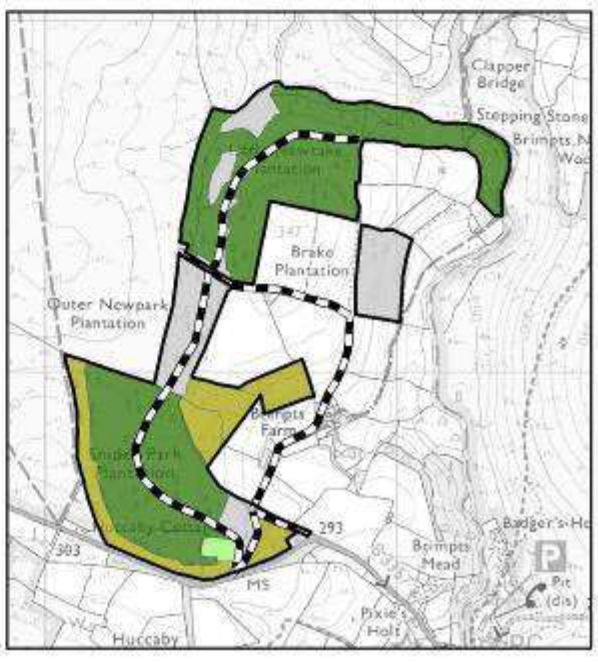


Legend

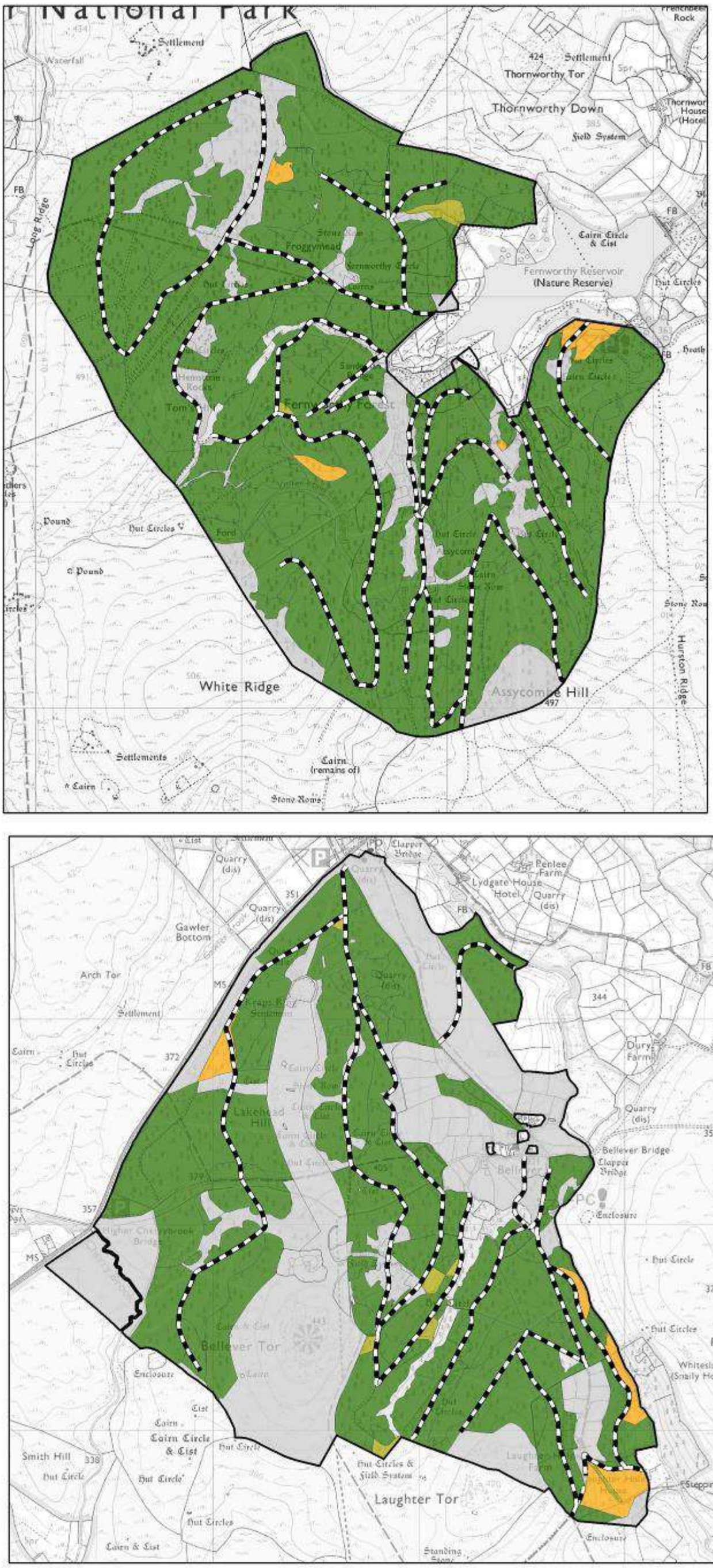
- Evergreen Conifer
- Deciduous Conifer
- Native & naturalized broadleaves
- Non-native broadleaves
- Open/other
- Roads

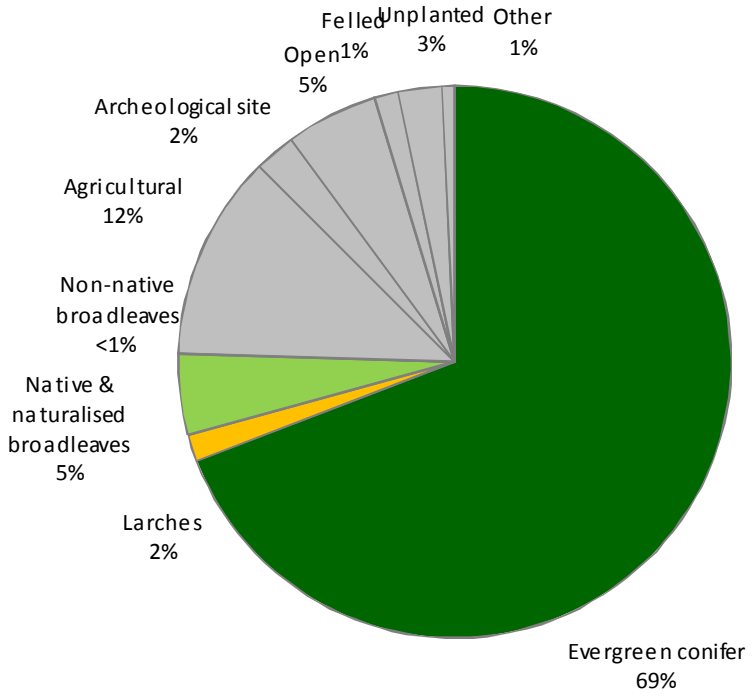






Indicative Future Species 2046





Legend

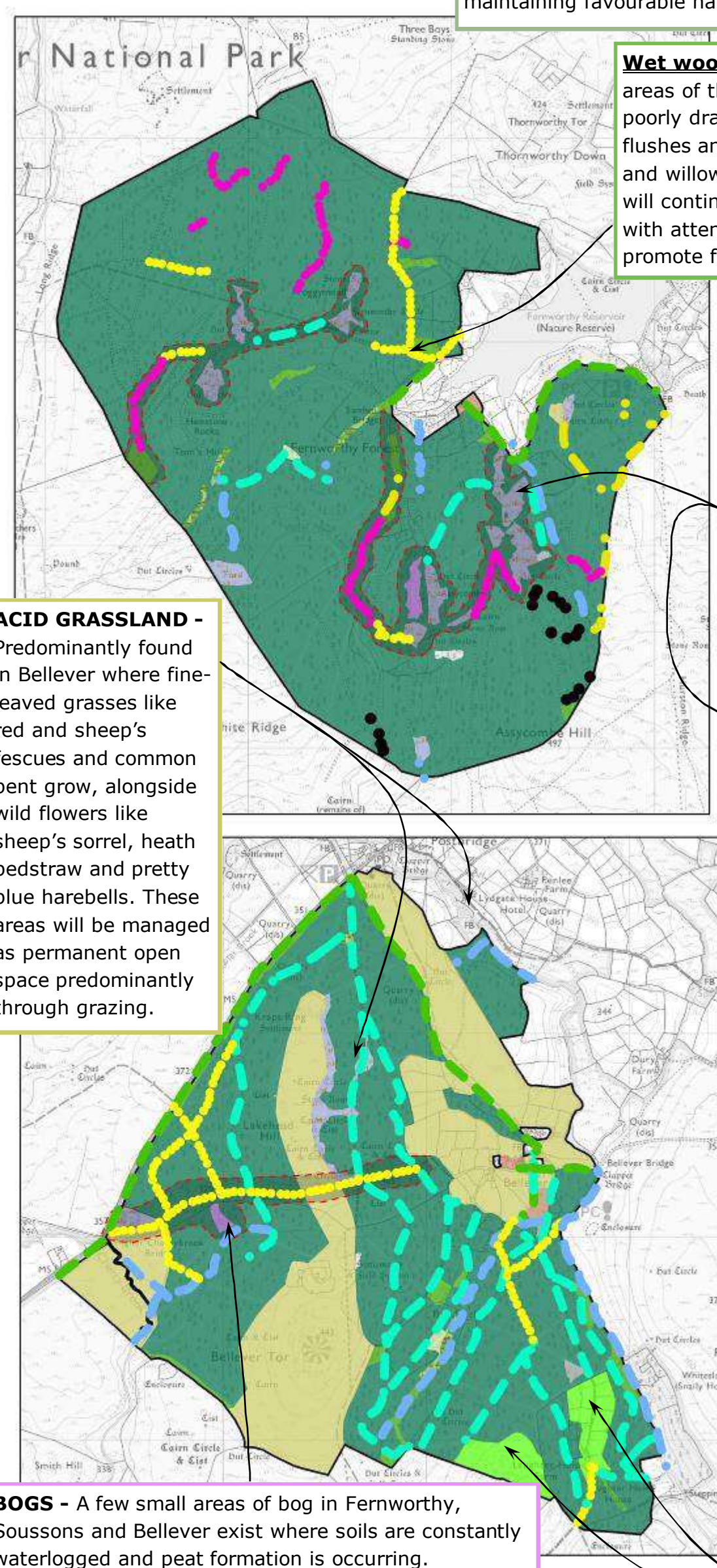
- Evergreen Conifer
- Deciduous Conifer
- Native & naturalized broadleaves
- Non-native broadleaves
- Open/other
- Roads

Conservation - Habitats

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 and is agreed with Forest Services. The objective is to use the ride network to extend and connect with the surrounding heathland, this will be achieved through proactive, targeted widening and unstocking of edges to some coupes following felling operations to create a mixed transient open and diffuse scrubby habitat. Where appropriate, following felling and cleaning operations, opportunities will taken to extend and buffer the priority habitats underlined. This work will be focussed on areas highlighted with red hatch ------

Upland Oakwood - Some very small areas of remnant oakwood exist in Fernworthy and offer valuable habitat for a multitude of woodland species. These will be managed though thinning where necessary with the objective of maintaining favourable habitat condition.

Wet woodland - Occurring in a number of areas of the Plan area where soils are poorly drained or seasonally wet such as flushes and streams ides with alder, birch and willow the predominant species. These will continue to be managed sensitivity with attention paid to ensuring light levels promote favourable habitat conditions.



Legend

Corridors

- Moor and Heath
- Hedgerow
- Forest Road Edge
- Conservation + Recreation
- Public Roadside
- Windthrow protection
- Watercourse
- Broadleaved Belt

Broad Habitat Type

- BROADLEAVED; MIXED/YEW WOODLANDS
- CONIFEROUS WOODLANDS
- ACID GRASSLAND
- IMPROVED GRASSLAND
- DWARF SHRUB HEATH
- BOGS
- INLAND ROCK
- BUILT UP AREAS & GARDENS

Priority Habitat Type

- Upland Oakwood
- Wet woodland
- Upland heathland

Upland heathland and DWARF SHRUB HEATH - Typically made up of an assemblage dwarf shrubs such as heather, bilberry, crowberry as well as grasses such as *Erica tetralix* and *Molinea caerula* on shallow peats. The majority of these are found internally within Fernworthy and edges of Soussons and Bellever and are similar to the surrounding typical habitat. These are managed as permanent open space with no more than 20% tree cover through mechanical cutting of regenerating tree species. The plan will look to connect these areas through the ride network

ACID GRASSLAND - Predominantly found in Bellever where fine-leaved grasses like red and sheep's fescues and common bent grow, alongside wild flowers like sheep's sorrel, heath bedstraw and pretty blue harebells. These areas will be managed as permanent open space predominantly through grazing.

0 0.125 0.25 0.5 0.75 1 Miles

BOGS - A few small areas of bog in Fernworthy, Soussons and Bellever exist where soils are constantly waterlogged and peat formation is occurring. *Sphaganum* and *Juncus* are in abundance and these areas will remain open and free from tree cover.

IMPROVED GRASSLAND - A number of agricultural field systems have been improved over years of use. Similar management will continue into the future, most likely through grazing.

Conservation - Features

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

On the other hand some non-native flora and grazing fauna species can have a detrimental impact on the forest and its features if their numbers are too high. Species such as rhododendron, encroaching sheep and ponies, wild deer, squirrel and goat 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.

Raptor - notably hobby (above), goshawk and buzzard are known to roost 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 minimally treed landscape. The management of 14ha of appropriate large or potentially large trees for long retentions will ensure that habitat provision is maintained.

Pearl-bordered fritillary - is found across a number of sites in the more sheltered parts of the high moor. These, like many other Lepidoptera, choose to inhabit woodland clearings and ride and roadsides. Continued forest management through felling and notably corridor work (outlined on page 27) will ensure that their habitat is maintained and that the Plan area continues to make a valuable contribution to the Two Moors Threatened Butterfly Project, of which pearl-bordered fritillary is a key species.

Nightjar - is a nationally rare bird and the Dartmoor forests supporting at least 65 churring males and nearly 5% of the south west England population. The Dartmoor forests are of national importance, exceeding the SPA qualifying threshold. The bird nests in freshly cleared areas, most notably clearfell sites. The provision of both permanent and transient open space through rotation clearfelling (230ha in Plan period) and scrubby open space creation (16ha) will continue to support this important species into the future.

Bryoria - is a lichenized fungi (*parmeliacea lecanorales)* which is found in abundance in the more open stands in the lower areas of north Fernworthy. It grows on the stem and low branches of the Sitka spruce. Where suitable, the maintenance of widely spaced large trees will ensure the right microclimate is retained and conditions suitable for the bryoria to thrive into the future.

Crossbills - although widespread throughout many parts of the UK are relatively uncommon to the south west of England. A noisy bird which feeds off the seeds of conifer, crossbill populations are known to use the Dartmoor Forest Plan area for feeding and nesting . The continued sustainable forest management techniques prescribed in the Plan will ensure their longevity.

Otter - are known to use the full length of both the Rivers Dart and Teign and is widespread across most rivers in Devon and Cornwall This 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 14ha of riparian wet woodland (see page 37), where a minimal intervention prescription will be employed will ensure that a lush diversity of open space, scrub and high forest will ensure otter habitat is preserved to support this species.

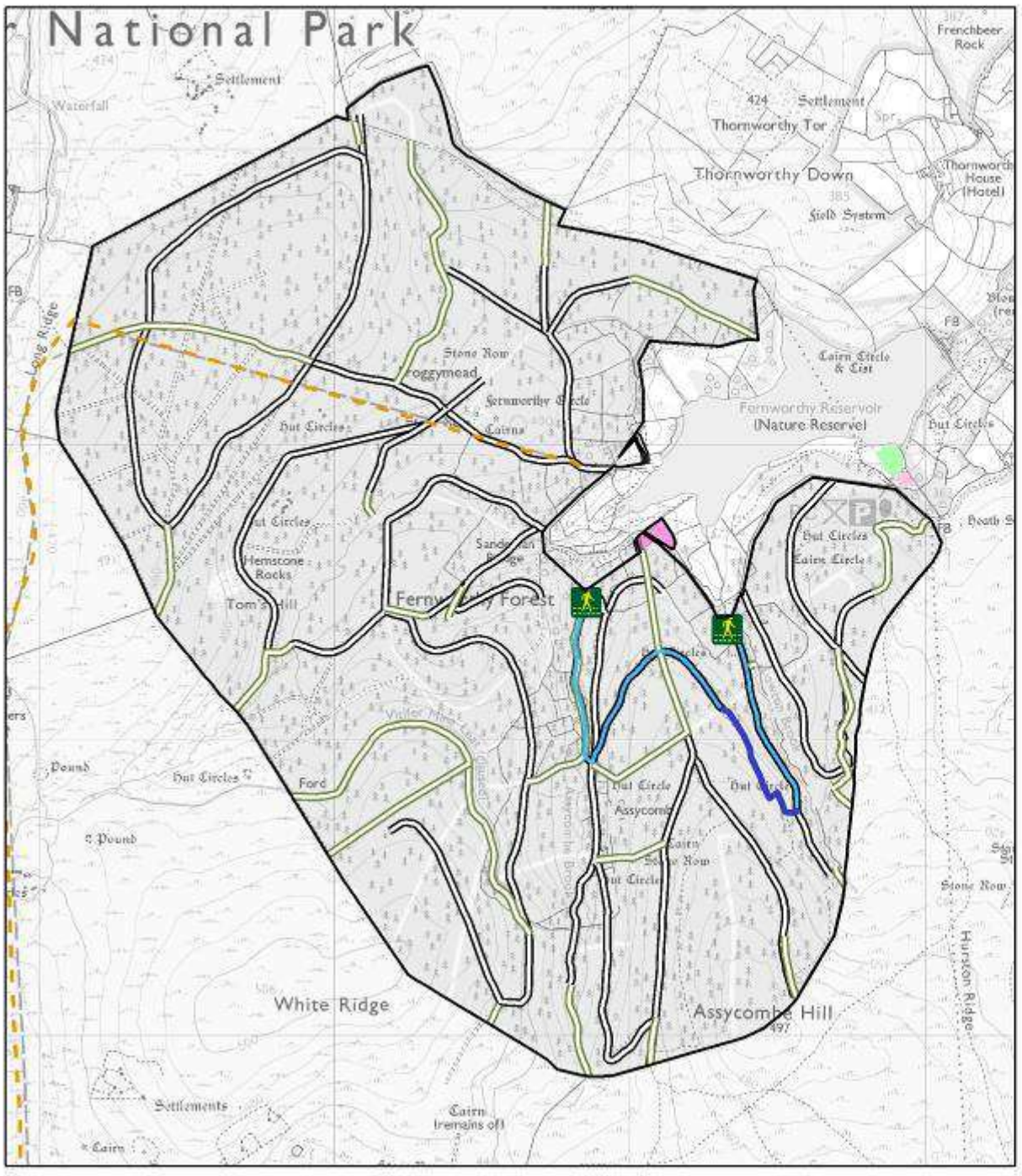
Red-backed Shrike - is a bird exceptionally rare to the UK which is known to have established a number of breeding sites across Dartmoor. Nesting in marginal habitat of scrub and open grassland greater than 2 ha, close to rivers and streams and moorland this bird is extremely elusive.

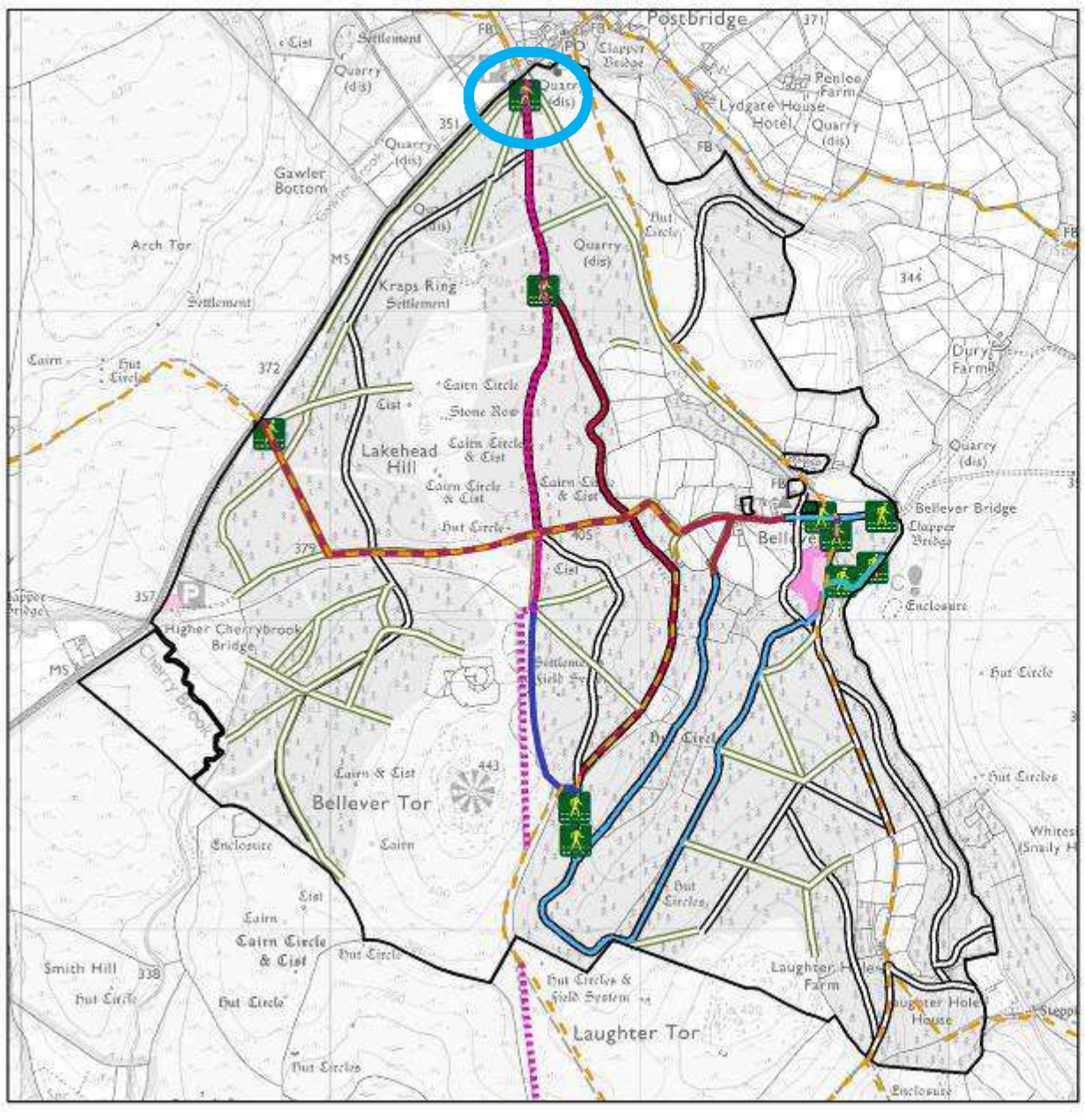
The maintenance of 25ha of quality permanent open space around suitable locations (i.e. within 15m of a watercourse and not within 15m of a track or road) and creation of 16ha of suitable transient open space (and an additional 14ha of remote clearfells close watercourses) over the lifetime of the Plan will significantly contribute to the Living Dartmoor Action Plan. The aim of which is to 'retain and increase the population of RBS through protection and habitat management/creation to 5-10 breeding pairs on Dartmoor by 2022' (DNPA, 2014).

Laughter Quarry SSSI - is important for displaying an outcrop curvature of the periglacial and granite weathering features typical of Dartmoor. The site includes many type sections and has yielded a rich and diverse fossil fauna. These sites are currently in 'favourable condition' and proposals will ensure there will be no loss in condition quality. The Quarry will be managed in accordance with it's current SSSI management plan (Appendix 5) as agreed with Natural England. Essentially this will involve maintaining exposed rock free from scrub and vegetation encroachment to ensure the geological features are visible and can be studied.

Recreation and Public Access

Dartmoor Forest Plan area experiences a high level of low-key recreational usage. The vast majority of the Plan area is Open Access, this is confirmed by the Countryside Rights of Way Act with the exception Soussons which is de facto Open Access due to the nature of the landholding. 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. The Plan area also absorbs a lot of the recreational pressure which would otherwise be placed on the National Park and therefore protects the fragile moor land.





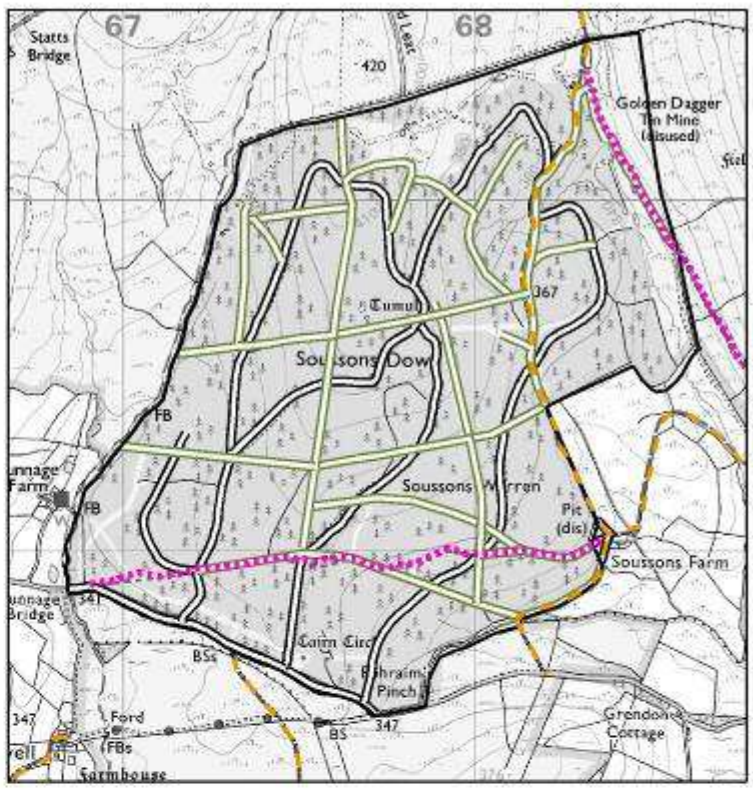
Three formal maintained car parks form the focal points for entry, one of which is charged at Bellever. The usage is predominantly made up of walkers, horse riders and mountain bike riders with approximately 5,000 paid visits per year.

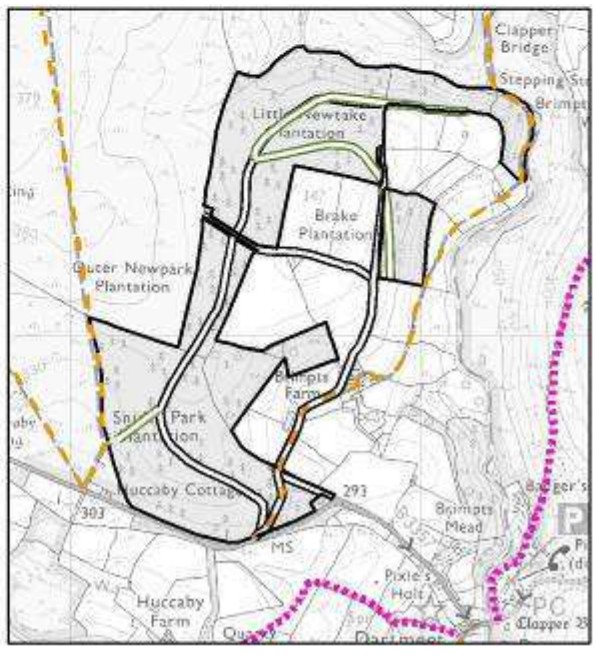
A number of Public Rights of Way in the form of footpaths and bridleways traverse the Plan area and connect with the surrounding landscape. Many of these Rights of Way are designated and/or signposted.

Numerous one-off and annual permissions are granted throughout the Plan area for recreational purposes. These include educational visits, sports and mountain biking events and cultural events.

The northern entrance to Bellever, close to Postbridge, is to be developed and enhanced as part of the 'Moor than meets the eye' HLF project. Using hard landscaping, arboriculture and new planting the scheme will look to complement the Dartmoor National Park Visitor Centre and improve access into the forest

0 0.125 0.25 0.5 0.75 1
Miles





Legend

Public Rights of Way
- Footpath
- Bridleway
- Byway
- Restricted Byway

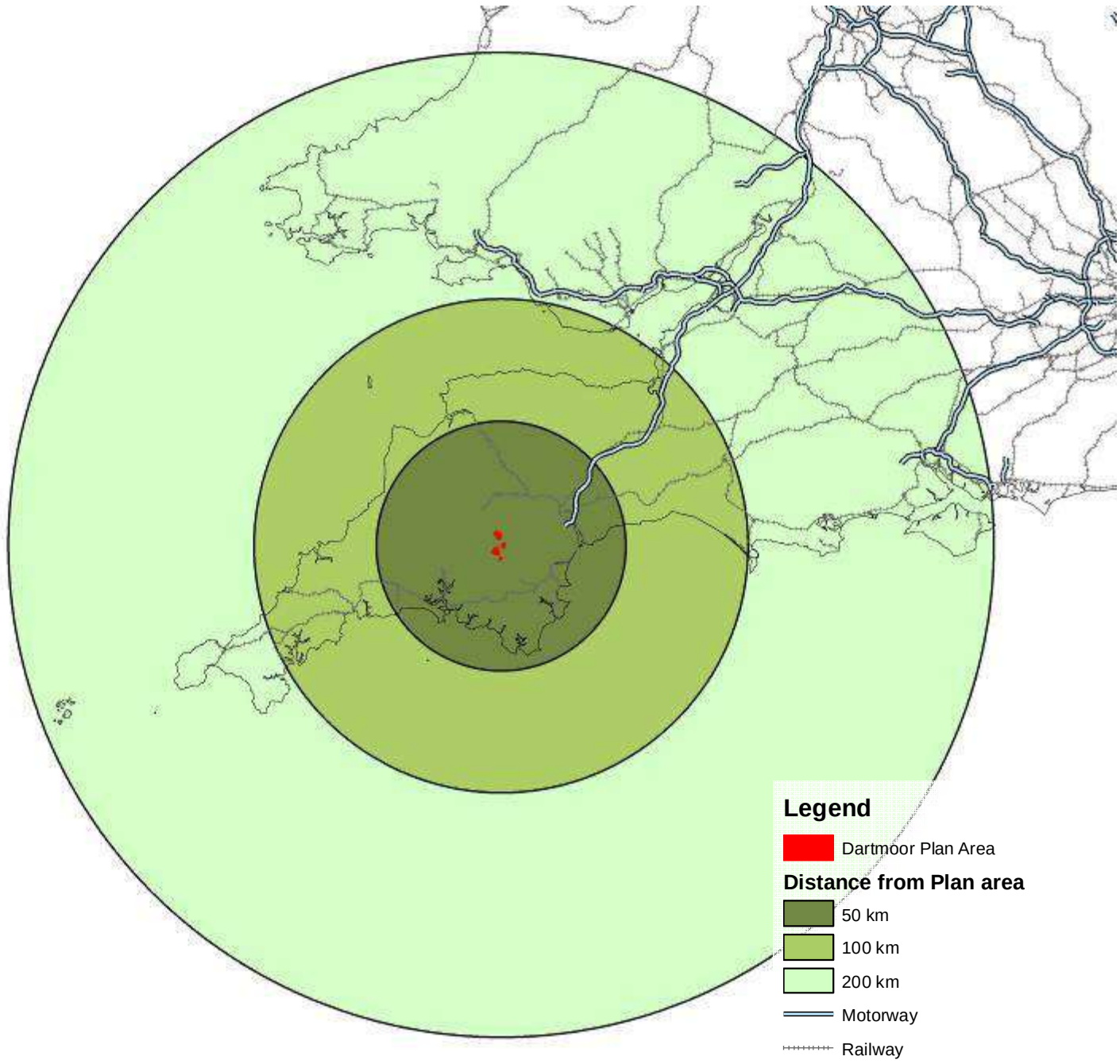
Forest Trail
- Path
- Trail
- Ride
- Board Walk
- Track
- Car Park
- Forest Rides
- Forest Roads

Economic Contribution

The Dartmoor Plan area makes a significant contribution to the economy both through the substantial timber resource and numerous non-timber products and benefits. The effects are felt both locally and regionally. It is estimated that the harvesting work planned between 2017—2021 will create 1000 man days work per year (including harvesting, haulage and supervision), whilst forest management operations, such as planting, weeding, fencing and roading creates an additional 350 days per annum.

Timber production on Dartmoor also makes a significant contribution to the Forestry Commission's, West England Forest District. The planned production in 2017 – 2021 will make up over 7.5% of the District's total volume. Future contribution is anticipated to continue at around 5-7% .

The role that forests play in the recreation economy is significant too, with multiple leisure businesses working in and around the forests. As part of the wider National Park and its strong tourist industry the forests are an attraction which bring many visitors to the area.

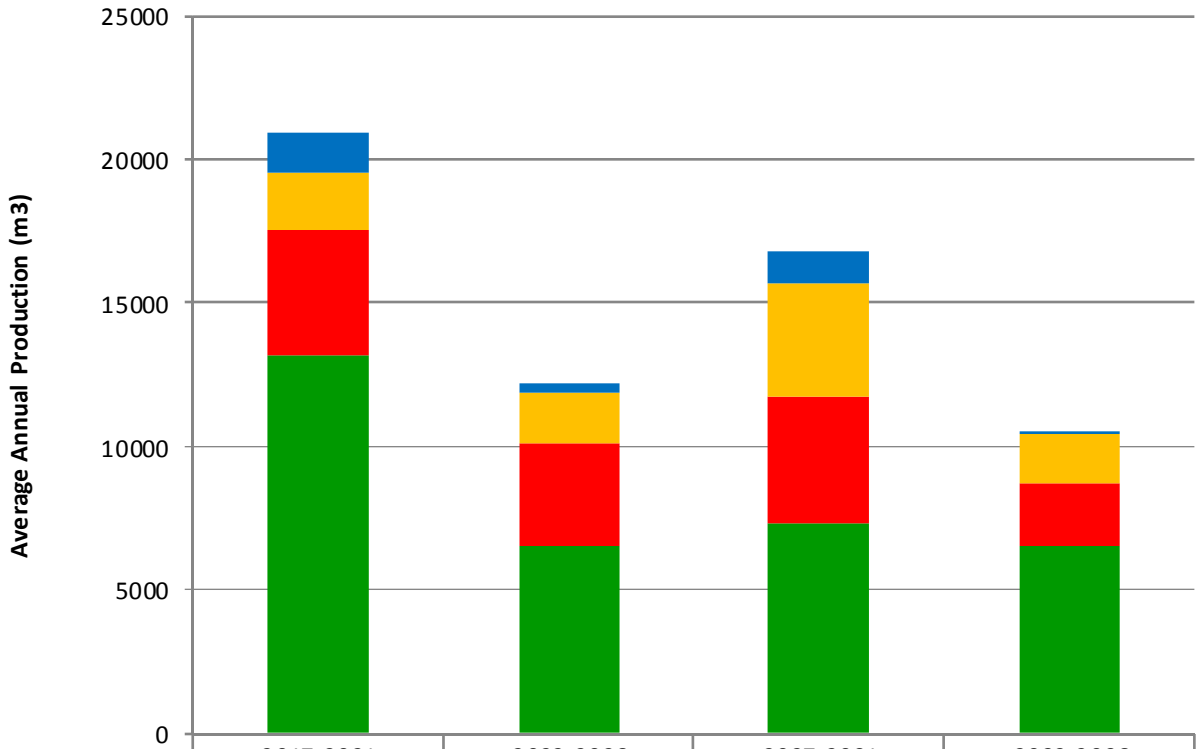


Timber Revenue

The quality and size of softwood log produced on Dartmoor means that the timber fetches a healthy price at market (approximately £40-50 per m³ at roadside).

Produce is utilised widely across the south of England. Sawlogs can easily travel 200 km by road or rail with merchants attracted by the clean and consistent quality log.

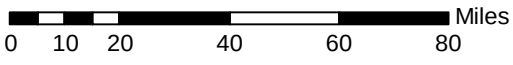
The smaller material stays closer to home, with most staying with a 50km radius, either going for fencing or bars or is chipped. The chip is then used either for re-engineered timber or biomass products.



	2017-2021	2022-2026	2027-2031	2032-2036
Brimpts	1397	365	1115	73
Soussons	1979	1710	3956	1708
Bellever	4389	3623	4417	2187
Fernworthy	13156	6507	7311	6522

Timber Production

The planned operations for the Dartmoor Plan area see considerable production in Fernworthy between 2017-21 (13,000m³ per year), with production returning to around 7000m3 per year after 2022. Bellever production remains fairly constant at around 4000 m³ per year with Soussons and Brimpts seeing minor fluctuations as expected given their size.



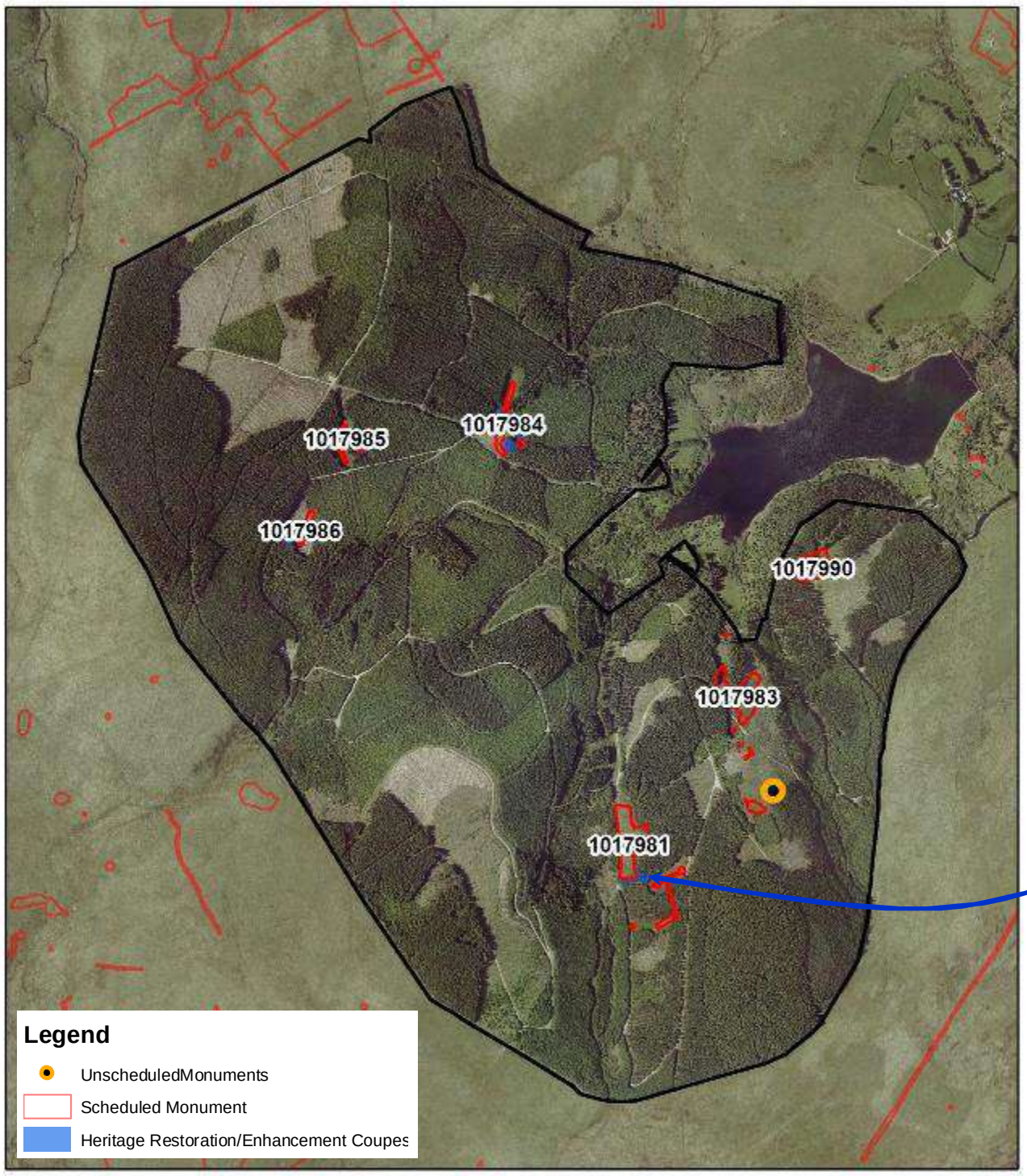
Heritage Assets

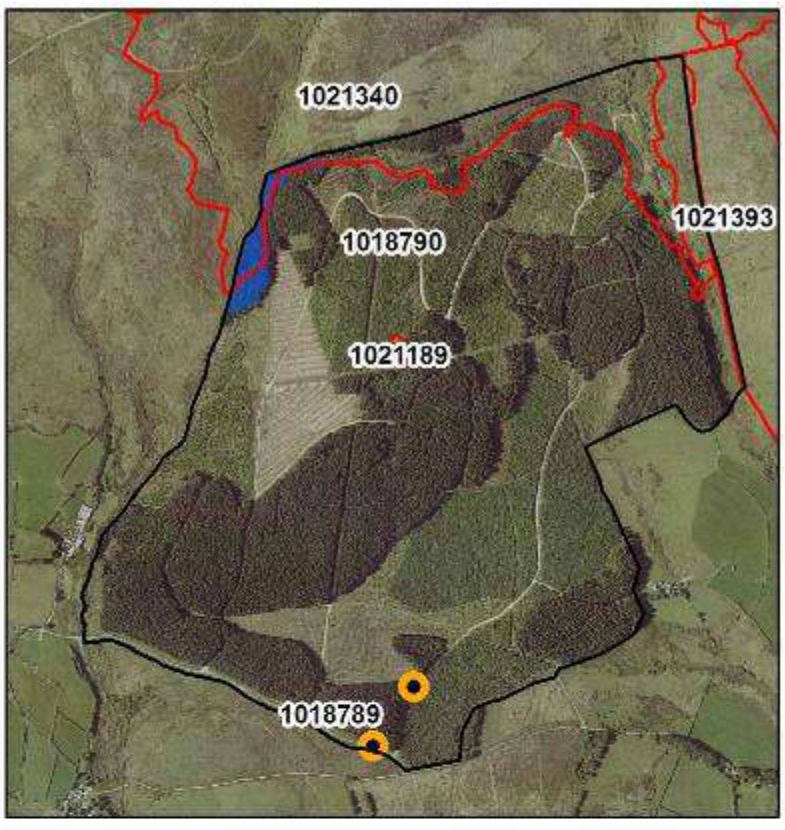
Dartmoor Forest Plan area sits within an exceptionally rich cultural and archaeological landscape. The Plan area itself contains an incredibly rich heritage with 36 scheduled monuments (SMs) and numerous unscheduled monuments, including settlements, enclosures, field systems, cairns and stone circles.

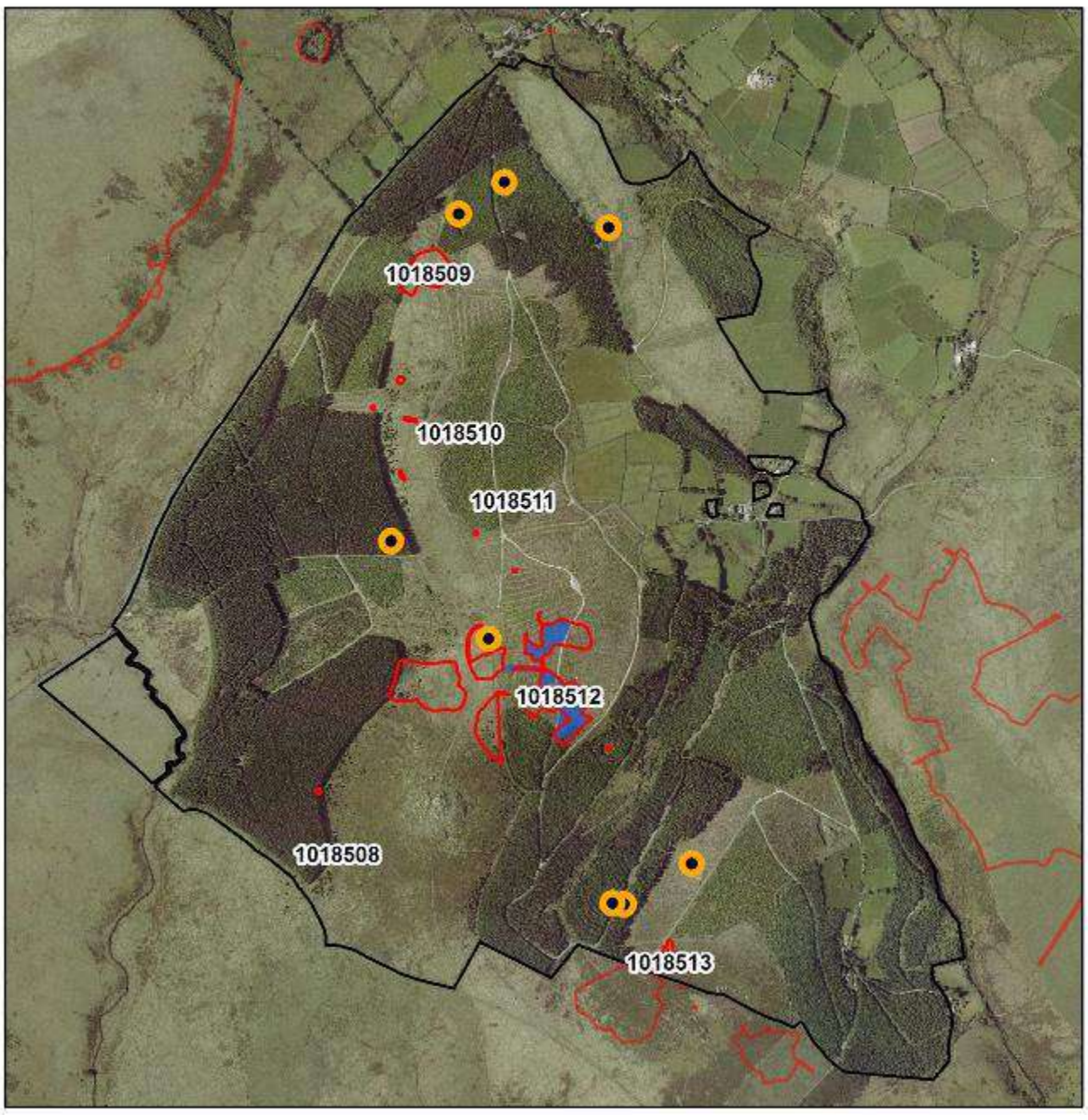
The majority of the SMs on Forestry Commission are now free of tree cover with many having been planted over in previous decades. Monuments that do still have trees growing on them will be cleared as appropriate. Once trees are removed, where safe to do so, SM's will be managed as permanent open space with only up to 20% of tree encroachment permitted.

Unscheduled monuments will be protected and managed during forestry operations in order to preserve and where possible and appropriate enhance them.

Improving the setting of many of the monuments, particularly in Fernworthy, is a key aim of the 'Moor than Meets the Eye' HLF project following extensive field work (Newman, 2013). This Plan takes steps to improve the visual and physical connectivity of the features. Like that at Assycombe Farm, as shown below, with planned removal shown in blue.



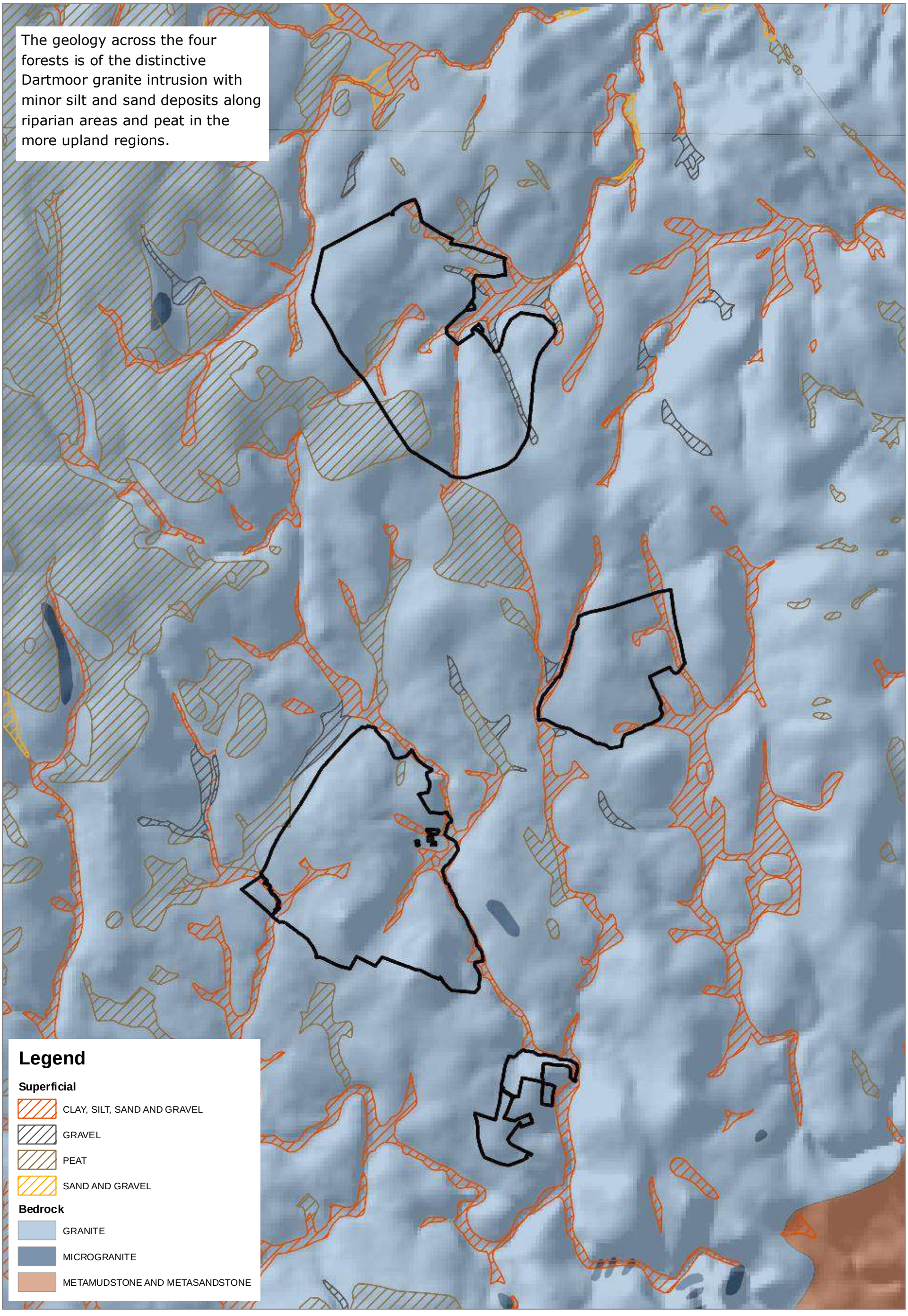




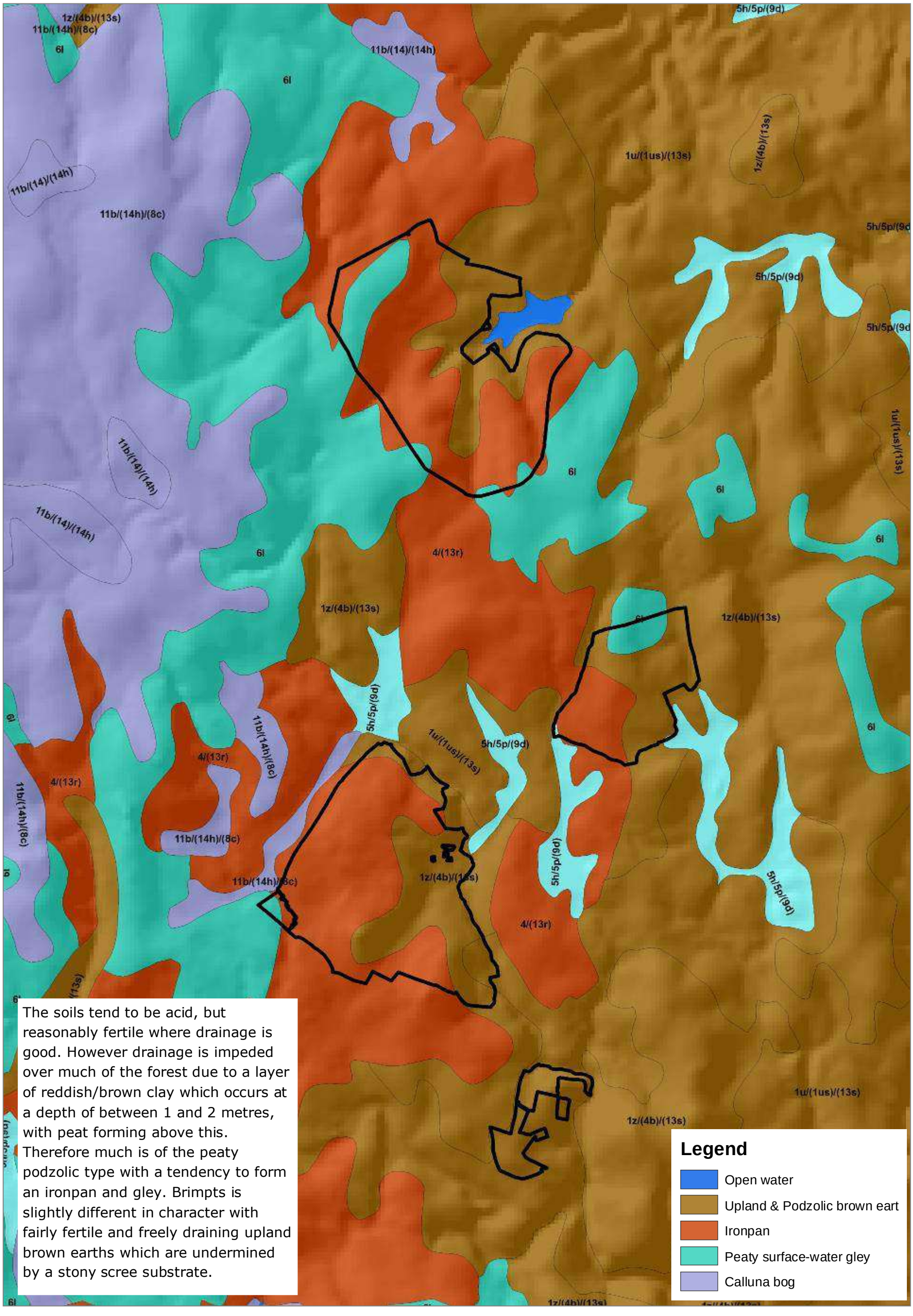
0 0.125 0.25 0.5 0.75 1 Miles

APPENDIX 1 - Geology

The geology across the four forests is of the distinctive Dartmoor granite intrusion with minor silt and sand deposits along riparian areas and peat in the more upland regions.



Soils



The soils tend to be acid, but reasonably fertile where drainage is good. However drainage is impeded over much of the forest due to a layer of reddish/brown clay which occurs at a depth of between 1 and 2 metres, with peat forming above this. Therefore much is of the peaty podzolic type with a tendency to form an ironpan and gley. Brimpts is slightly different in character with fairly fertile and freely draining upland brown earths which are undermined by a stony scree substrate.

Landform

Lines of upward force

(valleys and hollows)

Lines of downward force

(ridges and plateaus)

0 0.3 0.6 1.2 1.8 2.4 Miles

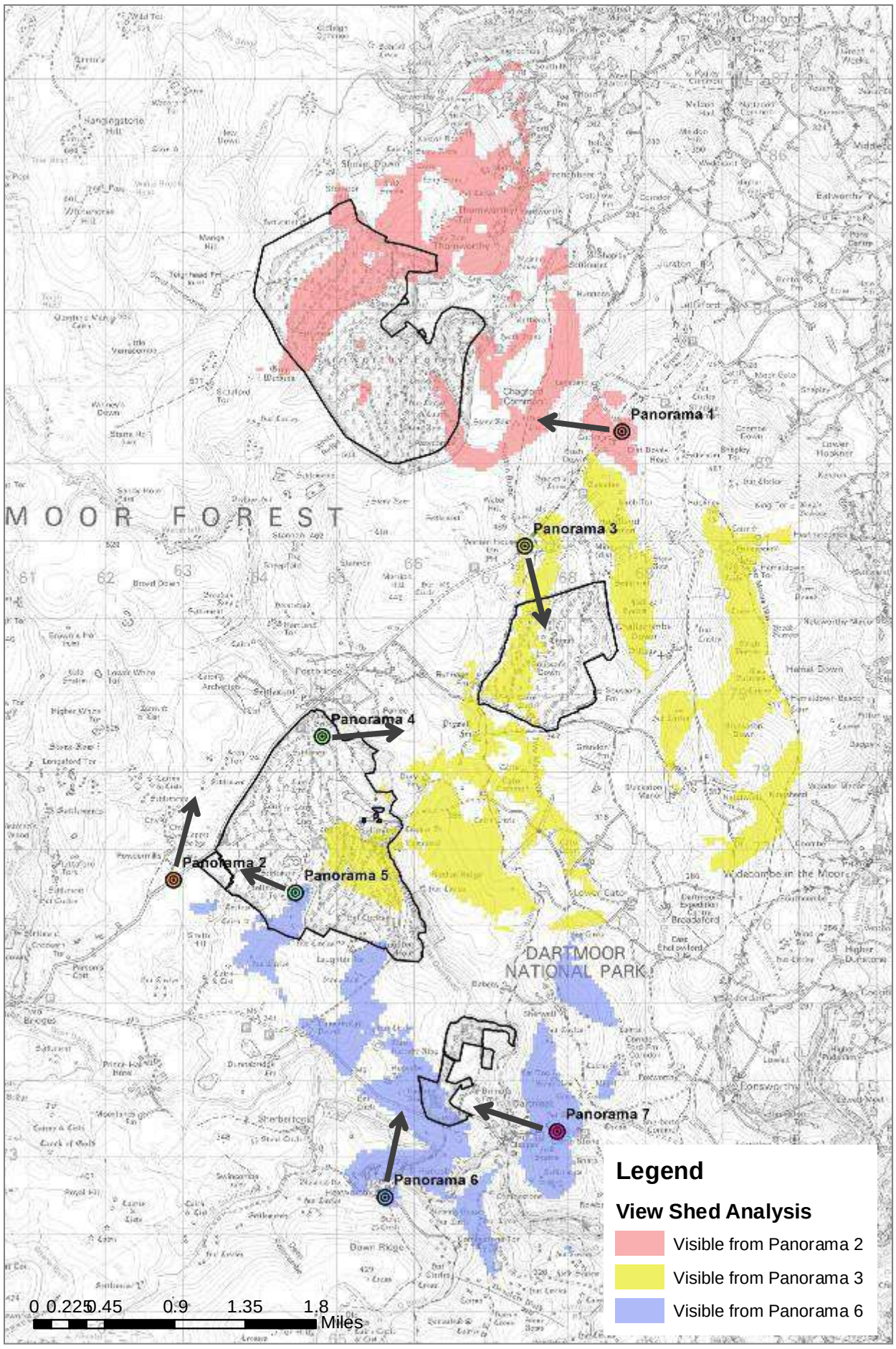
The Dartmoor Plan area sits in an upland moorland landscape at between 250 - 500 metres above sea level

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.

Landscape Analysis

The proposed felling and restocking of coupes has been analysed from a number of significant viewpoints. These viewpoints have been identified because of the amount of foot and vehicle traffic they experience and the influence the forest has at these locations. Given the nature of the landscape on Dartmoor, there are minimal settlements from which the Forest Plan area can be seen. The B3212 and B3357 are popular tourist routes and two of the main arterial roads across the moor. Therefore the majority landscape analyses have been done along highpoints of these roads. The views from the popular walking destination of Bellever Tor has also been analysed given its comprehensive views of the surrounding landscape.



Panorama 1
Fernworthy South East

Coupe 82661 is in an elevated position and is clearly visible from a distance. The felling will see the removal of a large proportion of the cover, with fringes retained and the diffuse edge creation (10ha) the landscape impact will be addressed.

Coupes 82337 & 82406 are visible from a distance and interlock well with the landscape. Diffuse edge creation would be unsuitable here given the distance.

Panorama 1 - 2026 Impression
(showing planned coupe clearfells)

Landscape Analysis 2

Panorama 2
Fernworthy South West

Coupe 82796 sits exposed in the landscape due to delay in felling. The Creation of the diffuse edge (6.5ha) will address future landscape impact.

Coupe 82661 is in an elevated position and is clearly visible from a distance. The felling will see the removal of a large proportion of the cover, with fringes retained and the diffuse edge creation (10ha) the landscape impact will be addressed.

Panorama 2 - 2026 Impression
(showing planned coupe clearfells)

Panorama 3
Soussons West

Coupe 82748 sits low in the landscape at this popular tourist stop-off, with established crops behind to ensure the visual landscape is not compromised. The creation of open space for heritage restoration will make a contribution to the cultural landscape.

Panorama 3 - 2026 Impression
(showing planned coupe clearfells)

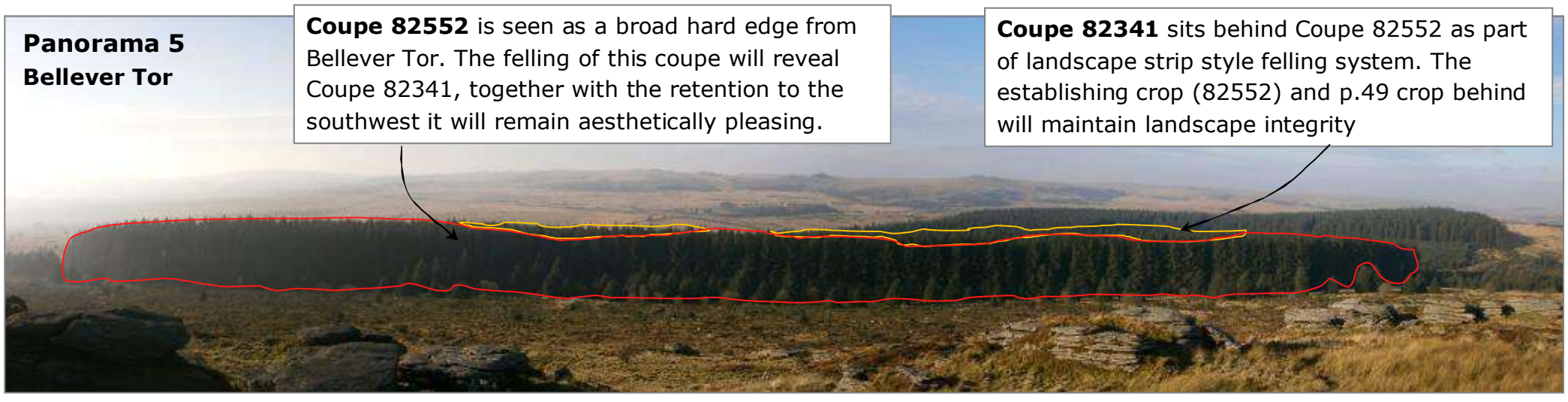
Panorama 4
Soussons South

Coupe 82748 sits low in the landscape and at a distance when viewed from the south.

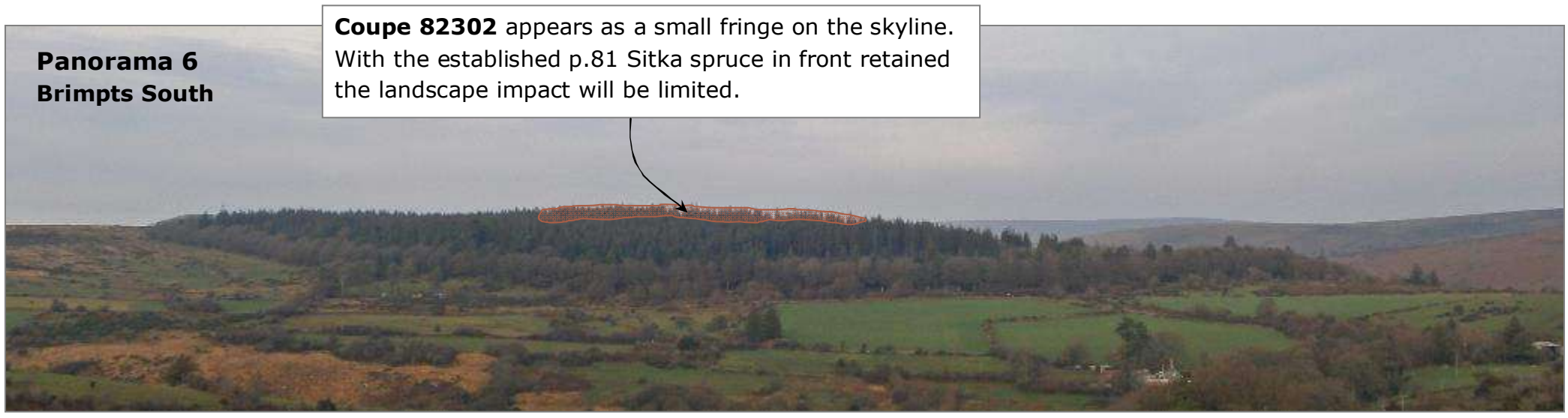
Coupe 82539 appears at an angle and falls behind the hill. The staged clearfelling of this exposed edge together with progressive additional amenity planting will limit the impact on the landscape.

Landscape Analysis 3

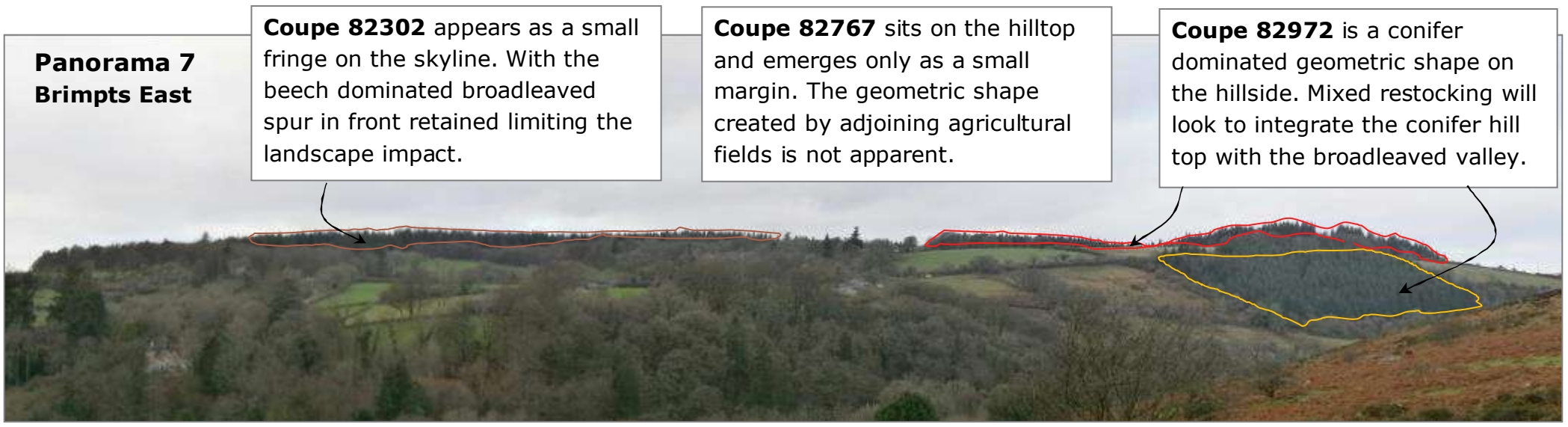
Panorama 5
Bellever Tor



Panorama 6
Brimpts South



Panorama 7
Brimpts East



Panorama 7 - 2026 Impression
(showing planned coupe clearfells)

Water Management

South Devon Basin

The South Devon Basin covers the catchments of the Rivers Teign, Dart, Erme and Avon, which flow east and south from Dartmoor into the estuaries and sea. The area is environmentally rich, containing several important environmental sites and a very high quality river system.

The South Devon Basin covers an areas of some 1,500 square kilometres (580 square miles). The main physical characteristics of the catchments are steeply sloping watercourses rising in the Dartmoor National Park, that then flow into wider, more permeable valleys in the lower reaches. Annual rainfall ranges from more than 2,300mm (90in) in upland areas to less than 1,000mm (39in) on the coast. The England and Wales average is 920mm (36in).

There are 113 river water bodies in the catchment, with a combined length of almost 700 km, and 10 lakes. Currently, 43 per cent of surface waters (199 km or 29 per cent of river length and 5 of the lakes) achieve good or better ecological status/ potential. 49 per cent of surface waters assessed for biology are at good or high biological status now.

Fernworthy Forest is an integral component in the supply of the Fernworthy Reservoir. The Reservoir is a key drinking water supplier for South Devon and the colour of the water is currently an issue, caused by dissolved peat.

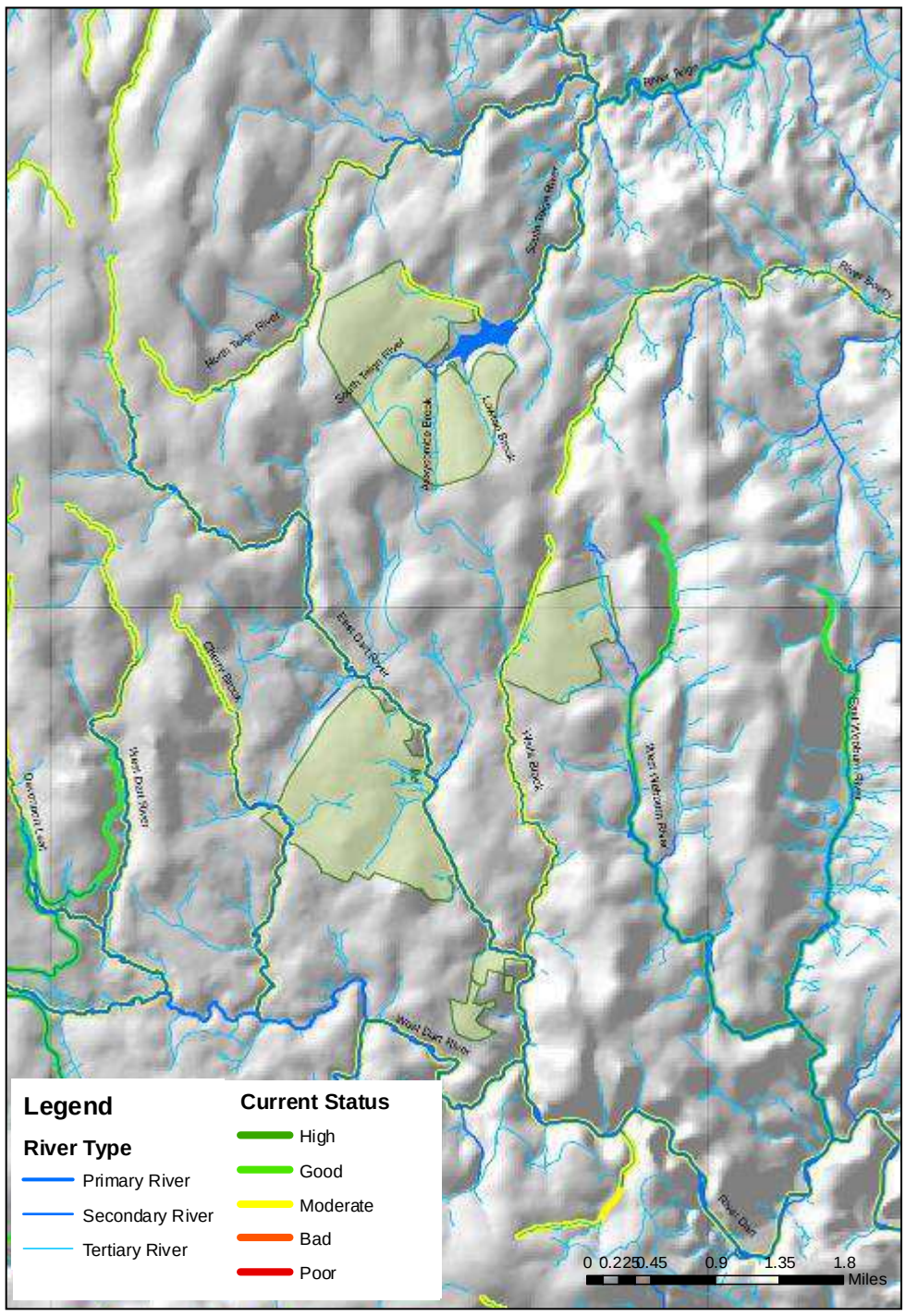
FLOW

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.

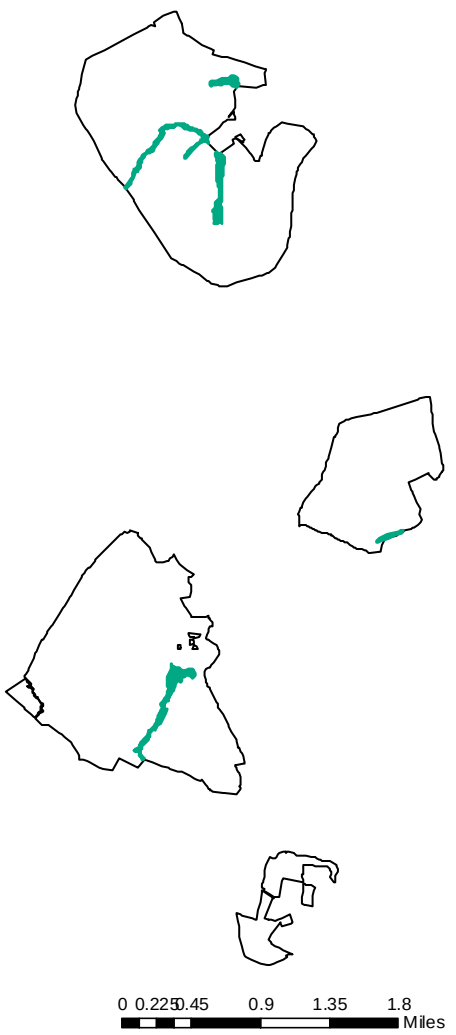


Riparian Management

All watercourses and riverine areas will be management sensitivity to protect and enhance water and soil quality in line with best practice. The 'riparian zones' (14ha) identified 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 and SSSI are protected and improved into the future. All felling and restocking operations will work within the guidelines set out in UKFS, Forests and Water with the aim of developing further riparian areas at the time of intervention through heavier thinning of conifer and stimulating native species regeneration.

The Dartmoor forests is a component of flood alleviation for the Dart and Teign and the wider South 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.



Critical Load Area

The Dartmoor 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.

Wildfire Resilience

Fire Risk

Wildfires are relatively rare however their impacts can be disproportionately large and costly to society and their frequency are predicted to increase due to increased land pressure and climate change. Young coniferous woodland of pine, spruce or fir are at particularly high-risk from wildfire as are dwarf shrub heath, gorse, bracken and grasses. This makes the Dartmoor Plan area at specific risk due to both the nature of the tree crops, the planned management in future decades and the significant amount of heath grassland which surrounds it.

The vast majority of wildfires are caused by people, accidentally or deliberately. The risk of this is increased by periods of dry hot weather. The nature of the site, its topography, land use and vegetation type as well as tree health and wind all determine the ferocity and extent of a fire.

The Dartmoor Plan area does experience periods of high visitor numbers, particularly in Bellever. The National Park as a 'wild' visitor destination does mean that whilst prohibited camping and camp fires do occur within the Plan area. Therefore sites close to car parks and popular trails are at greatest risk of experiencing the initiation of a fire event.

Legend

- Recreation Trail
- Recreation Area
- Thicket Stage Crops
- Internal Heathland/Felled Areas
- Surrounding Heathland

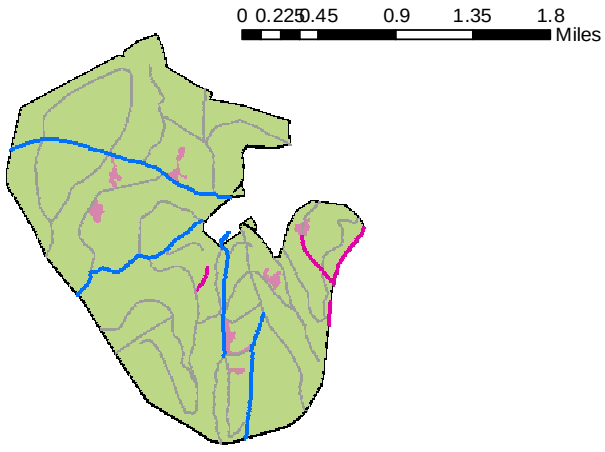
Crop Stage Risk

Stage	Likelihood of surface fire	Likelkihood of crown fire	Likelihood of ladder fire
New Planting	M	N/A	N/A
Pre-thin	H	H	H
Post-thin	L	L	L
Fell & Restock	M	N/A	N/A

Mitigation and Management

Mitigation of wildfire risk can be achieved by managing vegetation and fuels, creating fire breaks and belts, improving forest design and silvicultural diversity and the management and education of people. The key principles outlined here follow the FC Practice Guide (2014).

Vegetation will be managed as part of standard forest operations and maintenance. Fire breaks have been identified and located at critical locations such as at the bottom of slopes and in conjunction with other fire resistance liner features, such as roads, rides and rivers. Fire belts already exist in places and predominantly consist of fire retardant broadleaves. The criteria for location and extent of these is much the same for fire breaks and they offer an alternative to these forms of wildfire mitigation

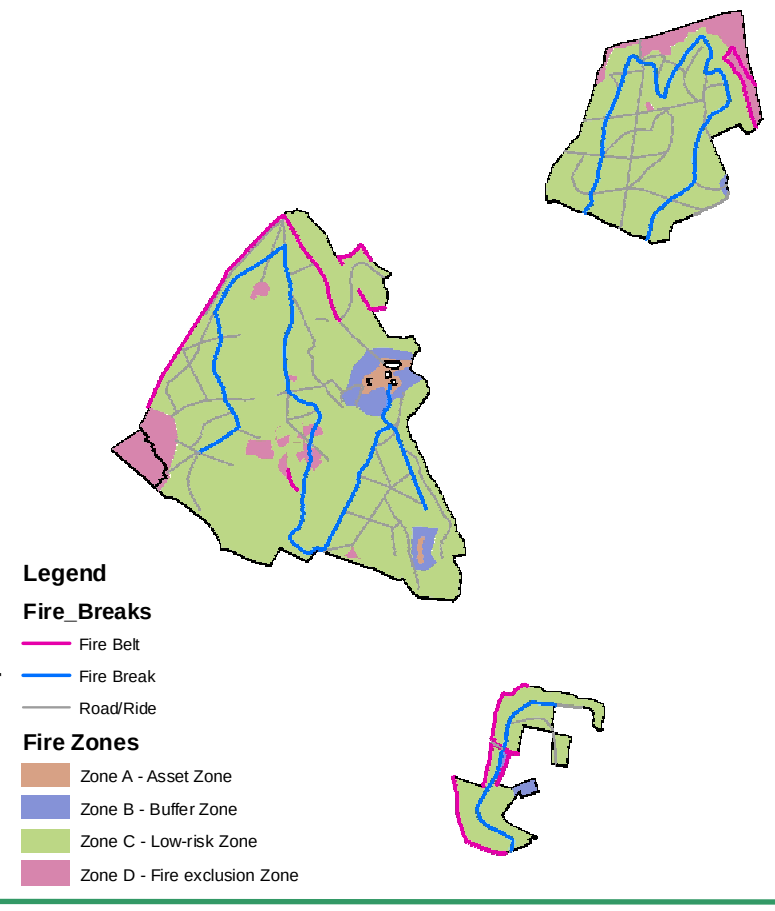


Management Regimes

Management Practice	Zone A - Asset Zone Protect human life &	Zone B - Buffer Zone A buffer areas around	Zone C - Low-risk Low to medium risk area	Zone D -Fire excl. Zone Protect habitats and
Vegetation management	Vegetation and other combustible materials should be minimised	Fuel loading and deadwood should be reduced	Conventional vegetation management practices	
Fire Belt	30-40 metres	20 metres	20 metres	20 metres
Fire Break	3 x vegetation height	1 x vegetation height	1 x vegetation height	3 x vegetation height

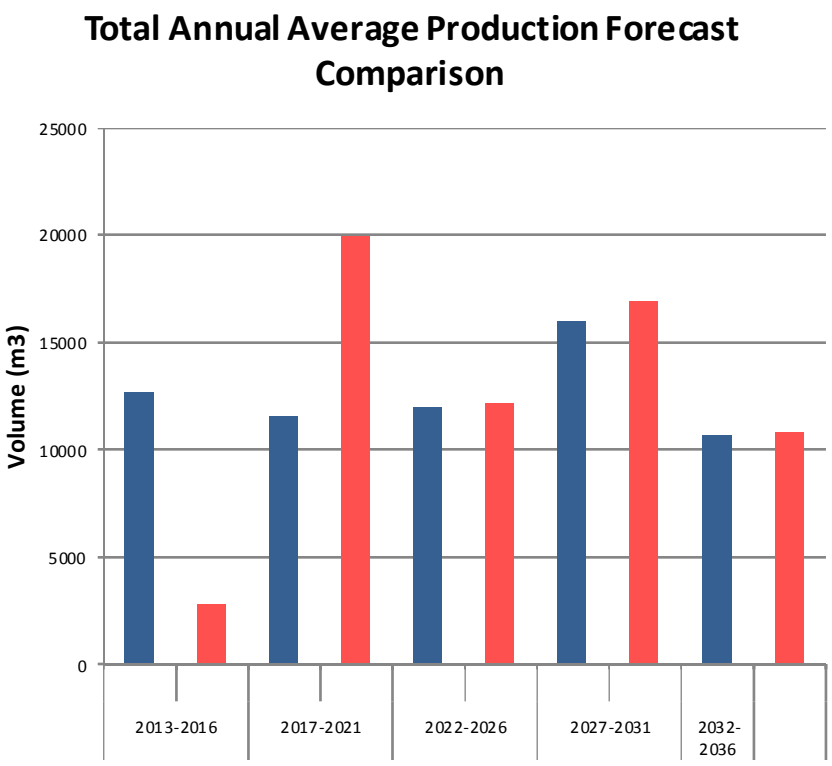
Clearance of windthrow and deadwood in high risk areas as well as remaining wood residues and products will contribute to lowering the fuel load factor and minimising the risk of ladder fires.

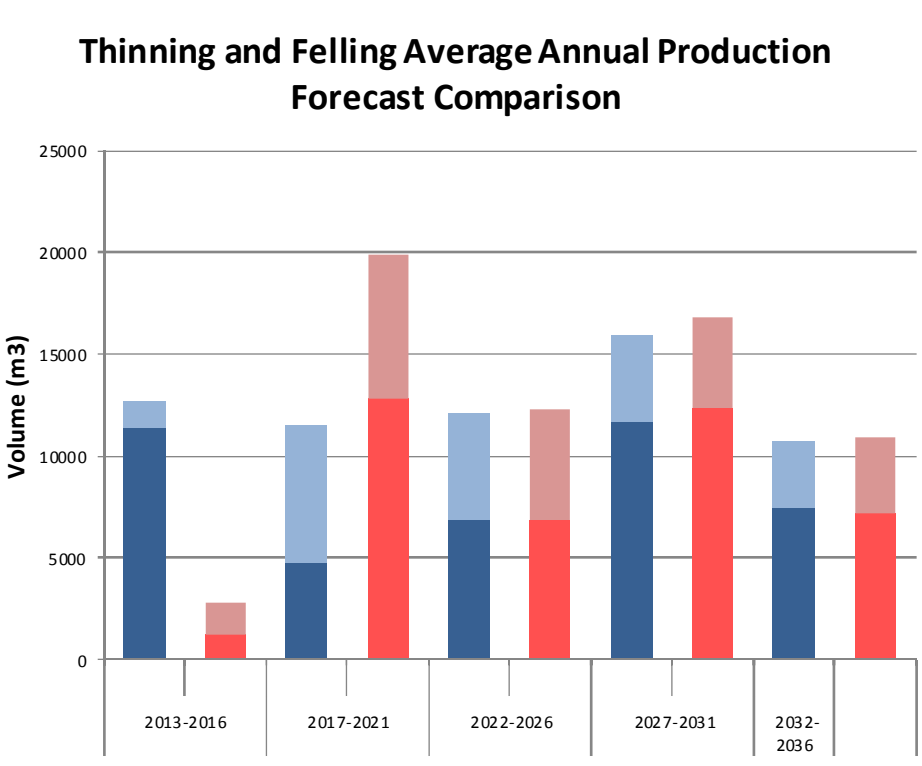
Education as well as provision of practical information are the key factor to wildfire mitigation, this will be focused around areas of highest recreational footfall. Vegetation management around key recreation sites, notably Bellever car park and along well used trails will lower the fuel load factor and thus the risk of fire ignition. Provision of robust retardant facilities are also key to limiting fire ignition and spread.



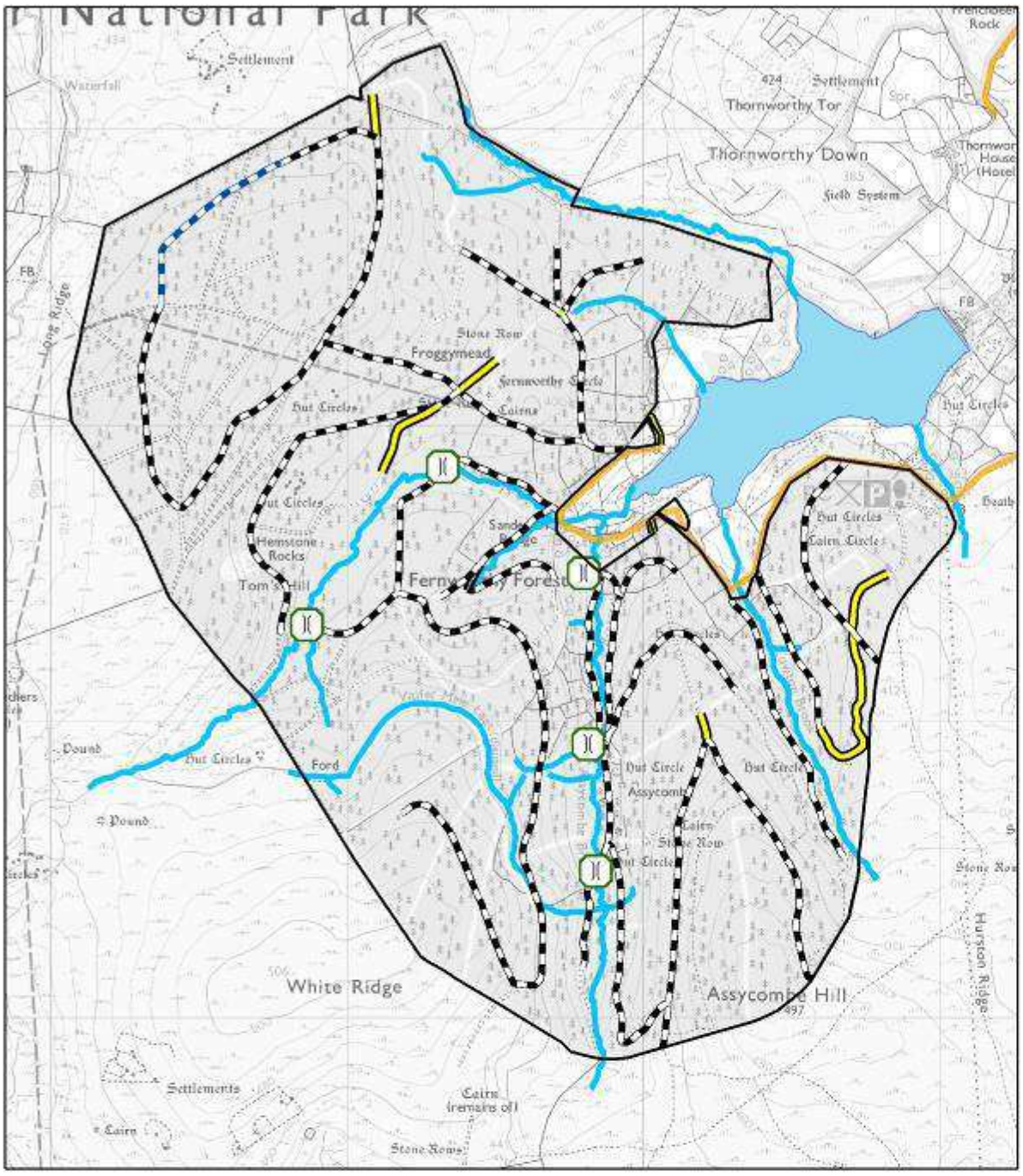
APPENDIX 2 - Option Testing

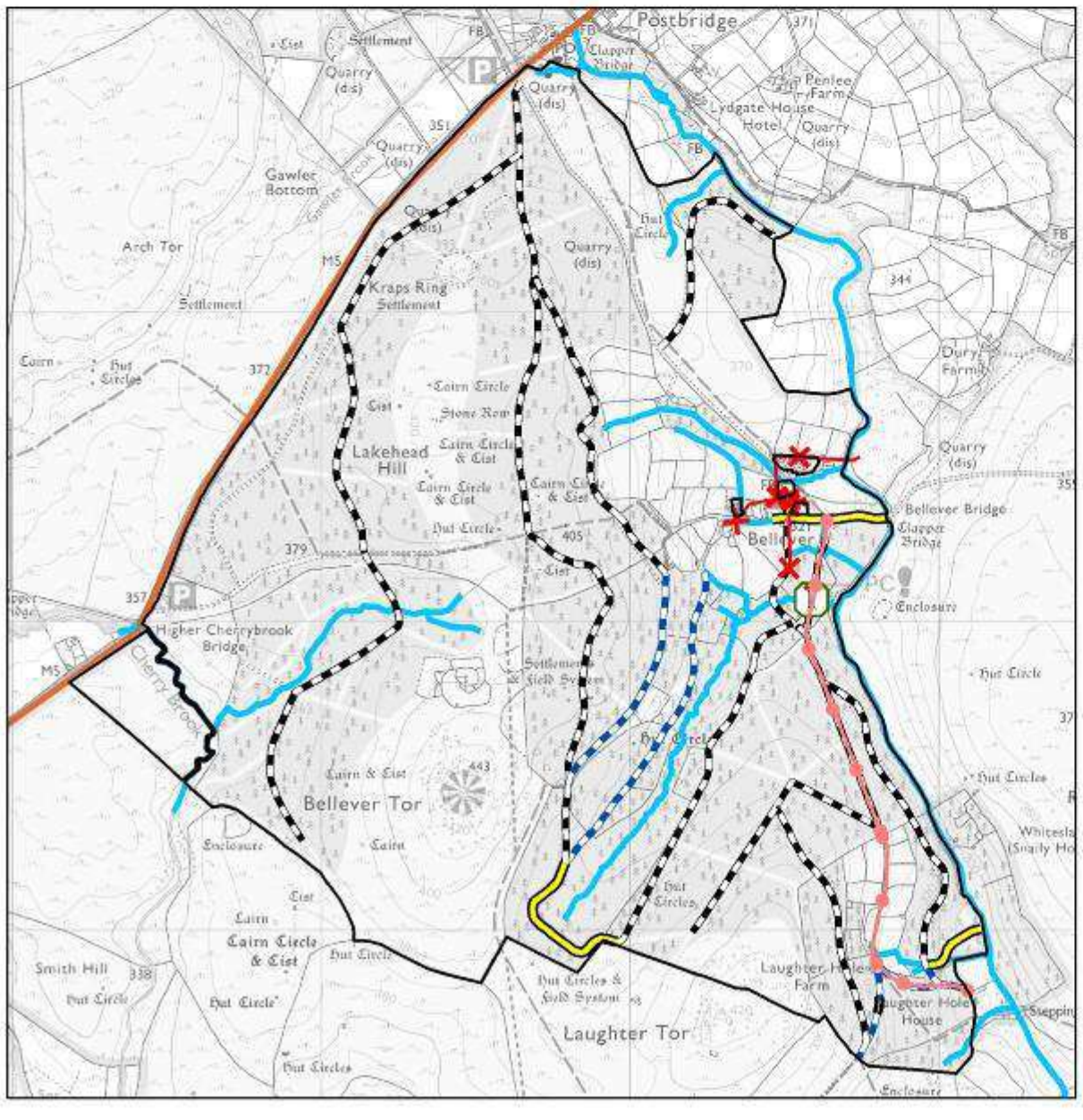
Option 1 – Current Forest Plan (Master)	Option 2 – Proposed Forest Plan (Scenario)
The continued production of sustainable and marketable woodland products.	
Multiple postponements of programmed felling has led to a backlog in production for 2016. This level of felling in 2016 is unachievable in such a short time frame. Production in the following periods is steady.	The proposals address the backlog in production between 2017-2021 and then restore production back to meet with economic suitability. Crops are reaching a stage where further felling postponement, and thus spreading out of production, is not advisable given windthrow and operational concerns.
To conserve, maintain and enhance cultural and heritage assets and their setting.	
Whilst proposals make acknowledgement of the value of heritage assets, plans to ensure their restoration, preservation and enhancement are lacking. In reality proposals would have minimal impact or improvement on the features.	A clear and measurable set of proposals have ensured the restoration of many of these valuable features. Specific steps to enhance the setting and connectivity of many of the heritage features will make significant contributions to the historic landscape.
The provision and maintenance of recreation facilities.	
The plans and proposals acknowledge and make allowance for recreation in the Plan area. The methods for achieving this are not stipulated or measurable.	The proposals recognise and make provision for the role the forests can plan for recreation and access in the National Park. These are clear, achievable and measurable.
The diversification of woodland species and structure for greater ecological and economic resilience.	
The proposals make no reference or objective to diversify tree species and thus fails to build-in resilience for the future. The presumption is for continued reliance on Sitka spruce. Whilst prescribed in places, the recognition of structure diversification through a mixture of silvilcultural prescriptions is not made.	Proposals make clear and concerted effort to address over reliance on one species. The identification and then suggested application of suitable alternative species ensures that resilience has been built in to the planning of the Dartmoor Forest Plan area.
Protect and enhance woodland and open habitats and their associated species.	
The majority of proposals are based around broadleaf habitat and corridors maintenance. However acknowledgement and further enhancement to habitats and recognition of significant species is not identified.	The significance of multiple dynamic habitats and the significant role they play for particular species is identified and proposals made to ensure the perpetuity of this in a clear and measurable way.
The delivery of well-designed proposals in keeping with the National Park character.	
The proposals acknowledge the importance of delivery of well-designed coupes and management but are, in places, either unachievable in the current climate or operationally unsound. The core coupe shapes are suitable with sequencing being the main hindrance.	The proposals address failed commitments and attempts to soften landscape impact. Instead it looks to implement a set of operationally rational and achievable proposals which address internal and external landscape issues through the creation of dynamic diffuse edges and internal corridor work.

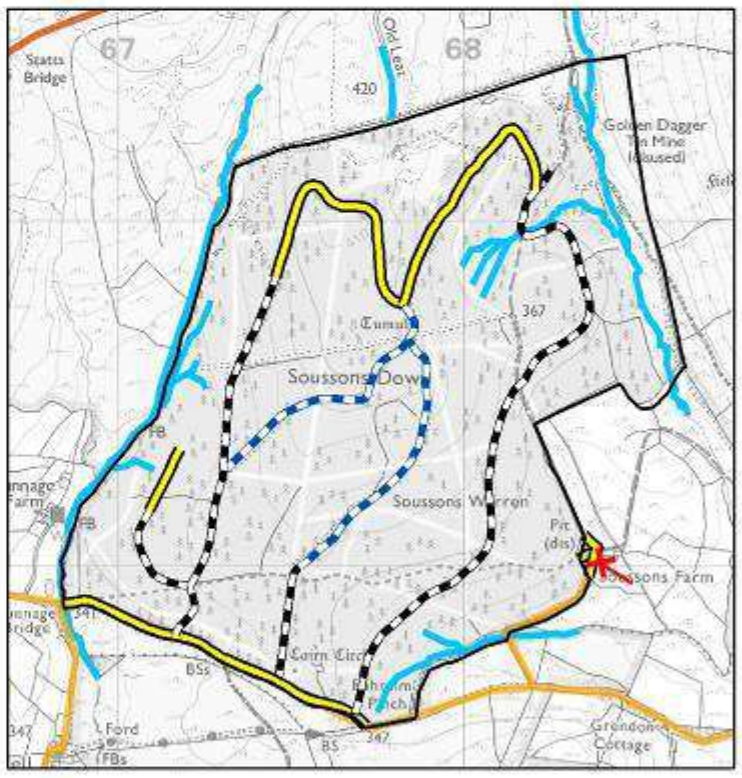


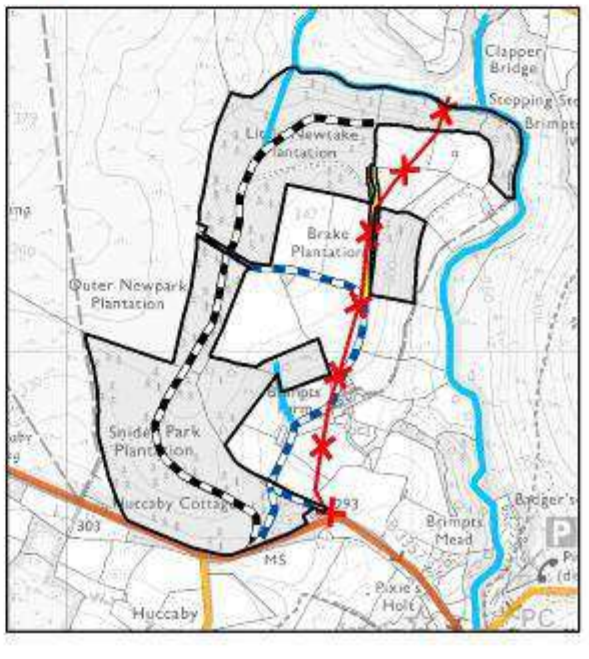


Utilities









Legend

- Powerline Overhead
- Powerline Underground
- Gas Pipeline
- Telephone Line Underground
- Telephone Line Overhead
- Drain
- Water courses
- Water supply point
- Water pipeline
- Open water
- Bridges
- Dams
- Quarries
- Reservoirs
- Class A/B Forest Road
- Class C Forest Road
- Legal access/Unclassified
- A Road
- B Road
- Minor Road

0 0.1 0.2 0.4 0.6 0.8 Miles

Plan Period Coupe Prescriptions (Part 1)

Fell 2012- 2016
Fell 2017 - 2021
Fell 2022 - 2026

FERNWORTHY

Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Restock	Area (ha)	Restock Proportion	Rationale/Prescription
82447	0.71	p.35 SS	Identified as an area suitable for felling to enhance the setting of the Froggymead complex, Scheduled Monument whilst maintaining windfirm integrity. Selectively clearfell as agreed with Historic England.	**82447a**	0.71	100% Open	Maintain as open as necessary with forest cover not exceeding 2m in height or 20% of area, to maintain an enhanced setting for the Scheduled Monument in a forest environment.
82737	0.20	p.67 SS	Identified as an area suitable for felling to enhance the setting of the Hemstone Scheduled Monument. Selectively clearfell maintaining windfirm integrity as agreed with HE.	**82737a**	0.20	100% Open	Maintain as open as necessary with forest cover not exceeding 2m in height or 20% of area, to maintain an enhanced setting for the Scheduled Monument in a forest environment.
82298	0.26	p. 71 SS	Area is suitable for felling to enhance the setting of the Assycombe Farm and the Stone Row Scheduled Monuments. Selectively clearfelled as agreed with Historic England.	**82298a**	0.26	100% Open	Maintain as open as necessary with forest cover not exceeding 2m in height or 20% of area, to maintain an enhanced setting for the Scheduled Monuments in a forest environment.
82796	18.88	p.51 SS	Crop is approaching terminal height and experiencing windblow in discrete areas. Clearfell had been programmed to follow 82946 but was delayed due to operational constraints. The clearfelling of this Coupe should be prioritised to ensure timing is maximised in light of adjacent coupe 82946.	**82796a**	12.44	100% Ev. Conifer	Site is elevated and exposed and much sits on a small plateau. Soils are poorly drained, with gleying and peat found throughout. Restocking with resilient, exposure hardy species is needed to ensure establishment. Use Sitka spruce regeneration where evident, restock with conifer where necessary (consider Sitka spruce and Noble fir).
				82796b	6.44	<100% Ev. Conifer	Area is exposed on the crest of the hill. The site will not be restocked but will be allowed to regenerate felling to soften the hard edge. Enrichment planting may occur to add further amenity value. Regeneration will be removed at the age of first thinning of Coupe 82796a, allowance for retention of a few stable trees will be made to enhance diffuse edge.
82337	35.58	p.27 SS p.50 SS p.55 SS P.74 SS	Crops have reached economic maturity and are of considerable quality despite conditions and location. Sporadic windblow continues to occur. Clearfelling of entire crop is required to ensure wind stability of adjacent crops is maintained. This felling should be prioritised to ensure the impact of young crops to the east are minimally detrimentally affected.	**82337a**	35.58	100% Ev. Conifer	Restocking with evergreen conifer will occur eastwards of the track where drainage, soil quality and exposure conditions are more favourable. Use Sitka spruce regeneration where evident, restock with evergreen conifer where necessary (consider Sitka spruce and Noble fir).
82406	23.85	p.54 WH p.54 SS p.81 SS	p.54 crops are of good form having been unthinned on a wet site. Sporadic wind throw is found throughout but crop is fundamentally stable as a block. P.39, 59 and 85 have all be well thinned but required clearfelling to ensure future wind stability. Waterlogged soils and deep peats necessitates consultation with DWT and EA prior to upgrading roading and felling operation to ensure water and soil quality is maintained.	**82406a**	23.85	80% Ev. Conifer 20% Broadleaf	Site is complex with significant issues with very poor drainage towards the north despite quality soil in places. Planting of evergreen conifer, establishment and future thinning will need to account for these complexities (consider Sitka spruce, swamp cypress, with sycamore, alder and willow)
82734	5.19	p.37 SS	Simple shelterwood system with overstorey due for removal as understorey is nearing establishment. Unlikely to reach 2m in height so requires felling consent	**82734**	5.19	100% Ev. Conifer	Restocking anticaticipated to be through naturalregernation of Sitka spruce. Where full restocking is not reached, enrichment with alternative conifer species is expected (consider enriching with Pacific silver fir)
82862	4.85	p.33 SS	Crop has reached economic maturity, is on a wet site and as a result is showing increasing signs of wind blow. Felling of this crop is required to negate this problem.	**82862**	4.85	60% Broadleaf 40% Ev. Conifer	Site is moist to wet and waterlogged in places with soils richer and peaty. Evergreen conifer species choice is key given the site conditions (consider Swamp cypress with alder, willow and Wych elm)
82946	19.29	p.2008 SS p.51 SS p.22 SS	Area of historical open space creation for landscape purposes not achieving objectives and now reaching full stocking. This is to be removed at first economic opportunity for replanting. p.51 and p.22 consistently blowing following previously felling and thinning operations. Clearfell these to windfirm edge.	**82946**	19.29	100% Ev. Conifer	Site is diverse given its gradient from high elevation and exposure in the west to sheltered valley sides towards the east. Soils are rich and generally well drained making it suitable for evergreen conifer replanting (consider Douglas fir, Norway spruce and Wellingtonia)
82661	22.79	p.51 SS	Crops are of exceptional quality and stability considering elevation, age and exposure. Clearfelling will occur upto the track on the eastern side and crop boundary on the western side. This is considered to be sufficiently windstable**.**	**82661a**	12.65	100% Ev. Conifer	Restocking with evergreen conifer will occur on the lower slopes of Assycombe Hill to maximise productive capacity. Soils are poor but relatively well drain. Elevation and exposure are the greatest constraints. Use Sitka spruce regeneration where evident, restock with evergreen conifer where necessary (consider Sitka spruce and Noble fir).
				82661b	10.14	<100% Ev. Conifer	Area is exposed on the crest of the hill. The site will not be restocked but will be allowed to regenerate felling to soften the hard edge. Enrichment planting may occur to add further amenity value. Regeneration will be removed at the age of first thinning of Coupe 82661a, allowance for retention of a few stable trees will be made to enhance diffuse edge.

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

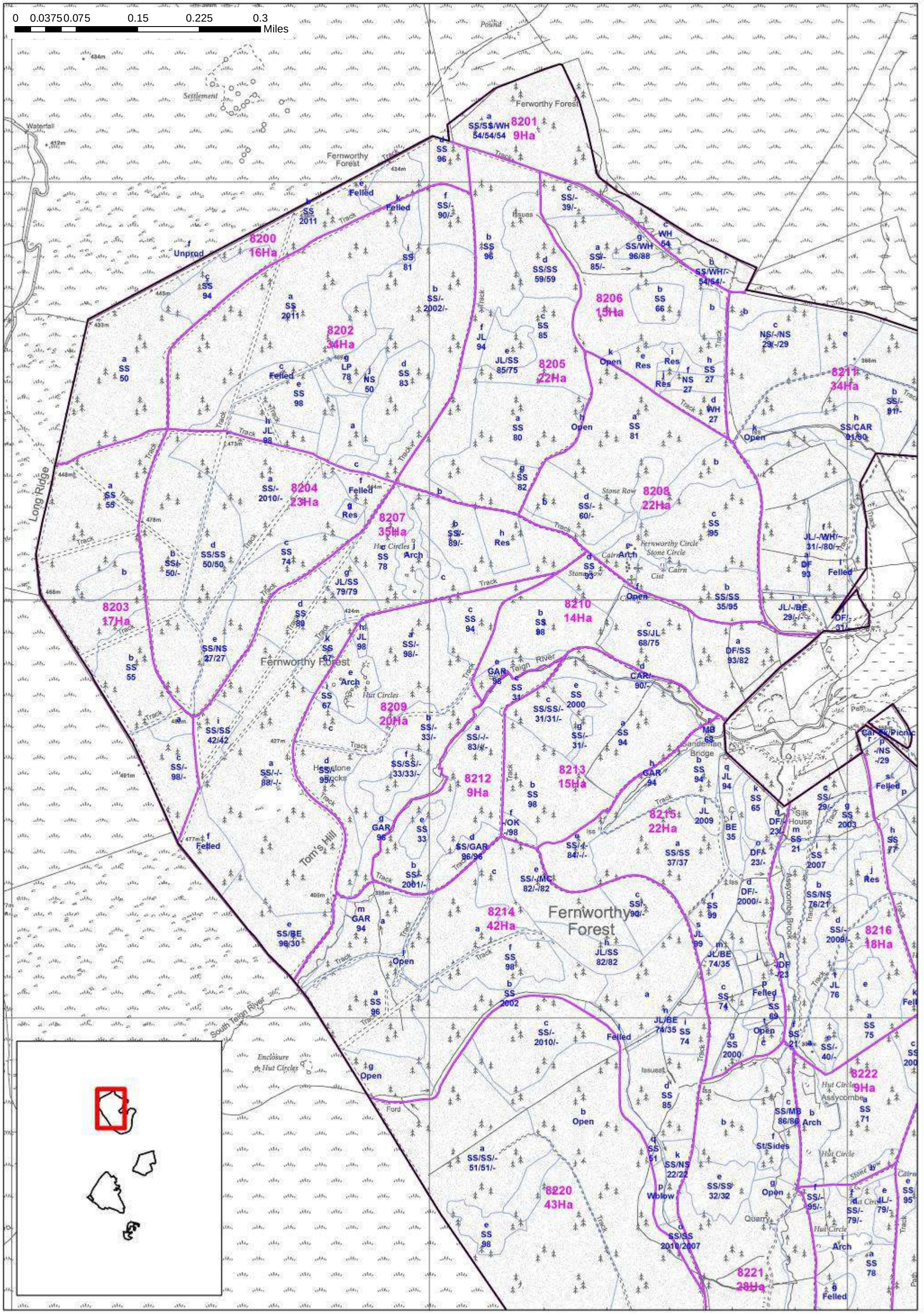
Plan Period Coupe Prescriptions (Part 2)

Fell 2012- 2016
Fell 2017 - 2021
Fell 2022 - 2026

	Coupe	Area (ha)	Existing Crop	Rationale/Prescription	Restock	Area (ha)	Restock Proportion	Rationale/Prescription
SOUSSONS	**82748**	6.39	p.48 SS p.49 SS	Crops have reached maturity, sit within a small valley and parts are on top of a designated Scheduled Monument. Clearfell all crops in consultation with Historic England.	**82748a**	3.66	100% Ev. conifer	Site is exposed, with soils poor and more moist towards the west. Restocking will enhance the forest edge and adjacent Scheduled Monuments (consider Sitka spruce, Scots pine, Pacific silver fir and Grey alder).
					82748b	2.73	100% Open	Maintain as open as necessary with forest cover not exceeding 2m in height or 20% of area, to restore SM .
	82356	8.36	p. 48 SS	Crops are fragmented and windprone following previous felling operations. Removal of remaining trees (once adjacent crops are >2m) will address these issues.	**82356a**	8.36	100% Ev. Conifer	Sites are exposed and frost prone. Restock with hardy evergreen conifer and a small proportion of broadleaf (consider Sitka spruce, Western hemlock and Aspen)
	82953	4.95	p.48 SS p.80 SS	Crops are fairly exposed following previous felling operations. Removal of this economically mature crop is due and to windfirm roadsides.	**82953a**	4.95	80% Ev. conifer 20% Open	Restocking will consist of evergreen conifer will allowance for open space to enhance the setting of Scheduled Monument found at its centre (consider Sitka spruce, Douglas fir and Noble fir)
	82539	8.92	p.48 SS	The crops present a strong hard line on the landscape and have reached maturity. Clearfell to windfirm roadsides and crop boundaries. The timing of this felling is key to limit the detrimental exposure to young crops to the north.	**82539a**	8.92	90% Ev. Conifer 10% Open	Site is extremely exposed to prevailing wind. Restocking should allow for enhancement of Scheduled Monument and amenity improvement in coordination with 82484a planting through open space provision in clumps. Use of hardy conifer is required for restocking (consider Sitka spruce, Noble fir and Wellingtonia pine).
	82484	1.96	-	Currently road side open space delivering minimal ecological or amenity value.	**82484a**	1.96	50% Open 30% Broadleaf 20% Ev. Conifer	Planting of upto 50% of area in clumps to create diffuse edge will seek to minimise the impact of high forest to moorland edge (consider Beech, Aspen, Rowan, Sitka spruce, Scots pine)
BELLEVER	**82218**	3.88	p.52 SS p.53 WH	Felled in 2014	**82218a**	3.88	50% Broadleaf 50% Ev. Conifer	Site is moist and complex with a number of watercourses and relatively sheltered. Restock with a diverse, amenity led pallet with economic productivity in mind (consider Sessile oak, Scots pine Coast redwood, Sweet chestnut and alder).
	82955	3.07	p.2005 SS p.2008 SS p.2011 SS	Crops planted on Scheduled Monument. Clearfell areas designated and create connectivity and enhance setting.	**82955a**	3.07	100% Open	Maintain as open as necessary with forest cover not exceeding 2m in height or 20% of area, to restore SM.
	82798	5.98	p.36 NS p.2003 SS	Crop is suffering from creeping windblow, with open corridor of trees now established exacerbating the issue. Clearfelling coupe only realistic solution. Retain beech where possible.	**82798**	5.98	70% Ev. Conifer 30% Open	Coupe has strong amenity impact so planting should be clumpy with large allowance for open space to created broken edge. (Consider, Norway spruce, Serbian spruce and Wellingtonia
	82496	8.38	p.49 SS	Crop has reached maturity and is adjacent to grazed open area and Scheduled Monument around Bellever Tor. Clearfell as part of a strip -style system, working the leeward edge.	**82496a**	8.38	100% Ev. conifer	Site is moist to fresh with soils peaty and relatively rich. Use Sitka spruce regeneration where evident, restock with evergreen conifer where necessary (consider Sitka spruce, Douglas fir and Western hemlock).
	82552	8.49	p.48 SS p.48 LP p.40 NS	Crop has reached maturity and is adjacent to grazed open area. Clearfell as part of a strip-style system, working the leeward edge and using road as windfirm coupe boundary.	**82552a**	8.49	100% Ev. conifer	Site is moist to fresh with soils peaty and rich. Use Sitka spruce regeneration where evident, restock with evergreen conifer where necessary (consider Pacific silver fir and Norway spruce).
	82583	2.20	p.32 NS p.32 SS	Crop has reached maturity and is increasingly prone to windblow. Site is sensitive given adjacent to East Dart River. Clearfell to windfirm edge.	**82583a**	2.20	100% Ev. Conifer	Site is fresh and soils fertile given riverine location. Restock with evergreen conifer and wet woodland suitable broadleaves (consider Douglas fir, Rowan and Red alder)
	82516	7.21	p.49 SS	Clearfell as part of continued strip-style system, working the leeward edge and using road as windfirm coupe boundary.	**82516a**	7.21	70% Ev. Conifer 30% Open	Site is moist to fresh with soils peaty and rich. Use Sitka spruce regeneration where evident, restock with evergreen conifer where necessary (consider Sitka spruce, Noble fir, beech and aspen).
	82341	11.94	p.48 SS p.48 LP p.40 NS	Crop has reached maturity and is adjacent to grazed open area and Scheduled Monument around Bellever Tor. Clearfell as part of a strip -style system, working the leeward edge.	**82341a**	11.94	100% Ev. conifer	Site is moist to fresh with soils peaty and rich. Use Sitka spruce regeneration where evident, restock with evergreen conifer where necessary (consider Sitka spruce, Noble fir and Western hemlock).
BRIMPTS	**82302**	9.53	p.75 SS p.80 SS p.80 SP	Southern crop is very widely spaced following SPHN with windthrow an increasing issue. The narrow corridor to the north continues to suffer from windblow. These crops should be felled to overcome this issue with the retention of wind stable trees for amenity, at the discretion of the forester.	**82302a**	5.07	100% Ev. conifer	Use Sitka spruce and Scots pine regeneration where evident and restock with evergreen conifer where necessary (consider Sitka spruce, Scots pine and Wellingtonia).
					82302b	4.46	80% Open 10% Broadleaf 10% Ev. Conifer	The site will not be restocked due to significant continued windblow risk and value in creating open space linkage.
	82477	1.48	p.80 SS	Crops at considerable risk from creeping windblow. Clearfell crops prone to windblow back to a windfirm edge.	**82477a**	1.48	100% Ev. Conifer	Site is moist and fairly sheltered with good soils. Use Sitka spruce regeneration where evident, restock with evergreen conifer and broadleaf where necessary (consider European silver fir and aspen).
	82767	8.36	p.72 SS p.75 SS	Crop is stable and well thinned. However a large clearfell to a wind stable edge is required given the issues experienced at Brimpts.	**82767a**	8.36	100% Ev. conifer	Site is fresh with Upland brown earths through out but fairly exposed in places. Use SS regeneration where evident and restock with evergreen conifer where necessary (consider and Noble fir)
	82972	3.27	p.85 SS	Crop is under thinned and difficult to work given slope gradient but considerably visible and geometric in the landscape. Clearfell and retain any suitable broadleaves.	**82972a**	3.27	60% Ev. Conifer 40% Broadleaf	Site has deep fertile and well drained soils, but fairly exposed despite aspect. Restock with conifer broadleaf mixture 60:40 and plan to thin early (consider Douglas fir, Oriental spruce, Sessile oak).

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.

Stock Data—Fernworthy North



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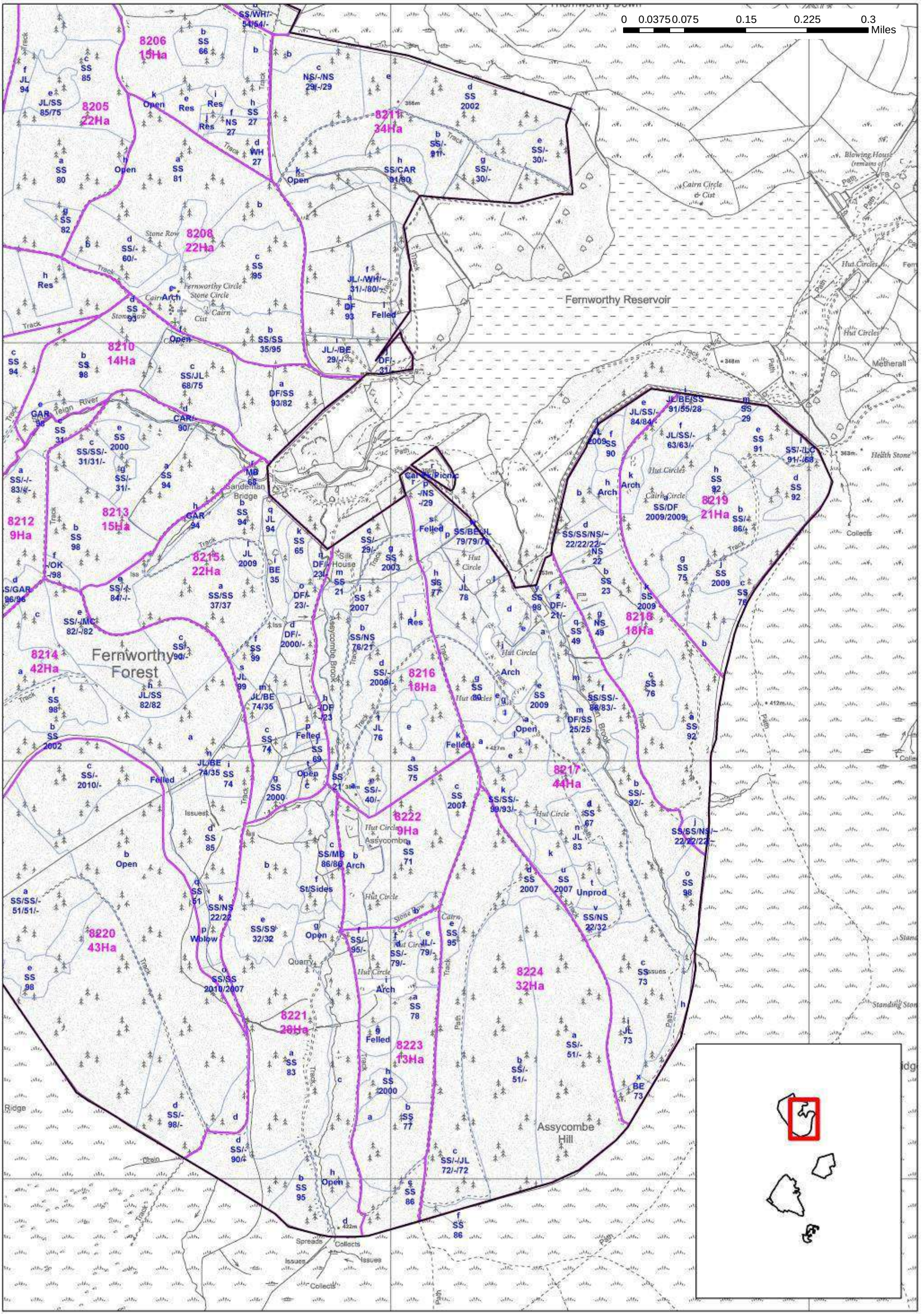
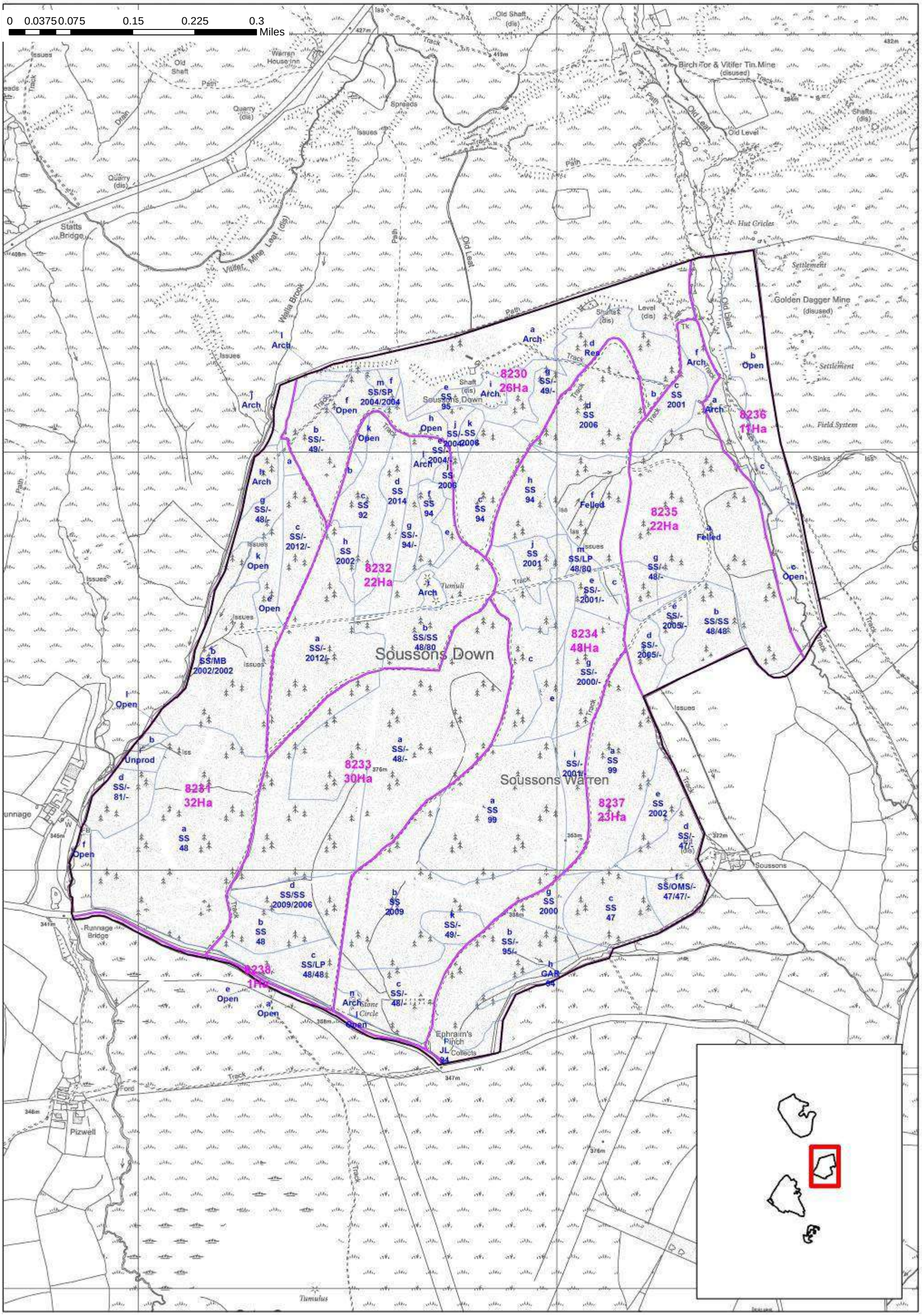


Stock Data—Soussons



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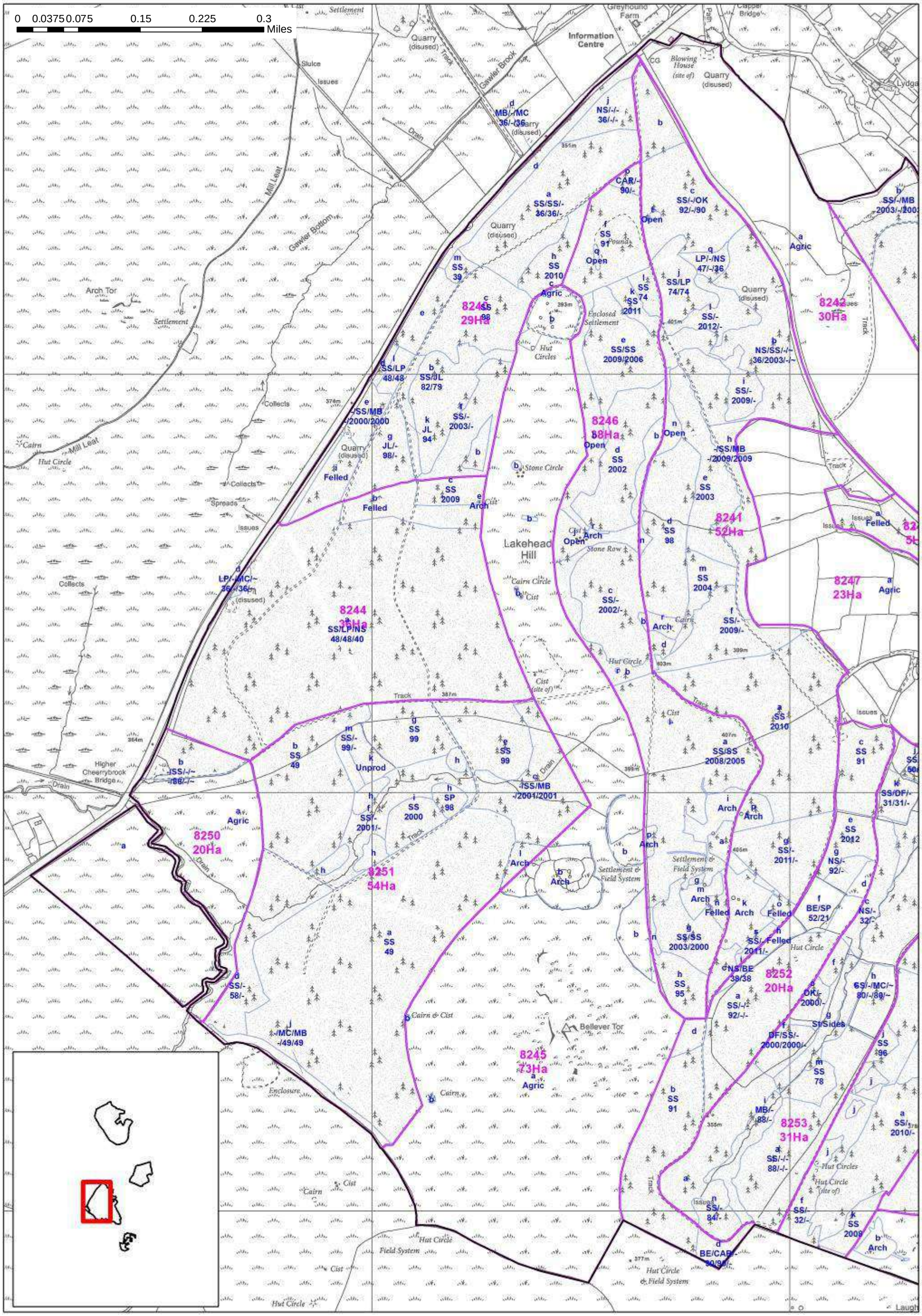

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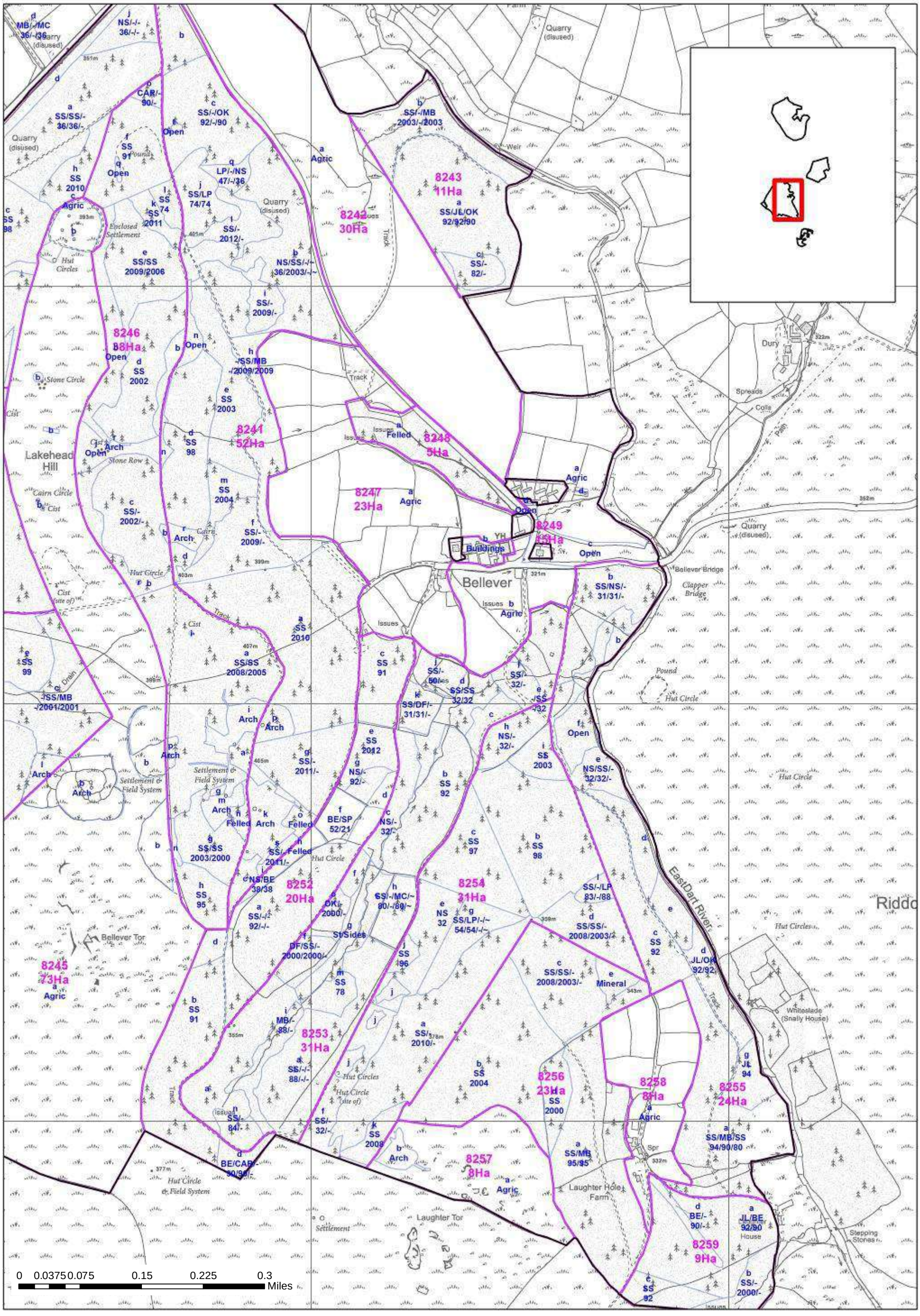

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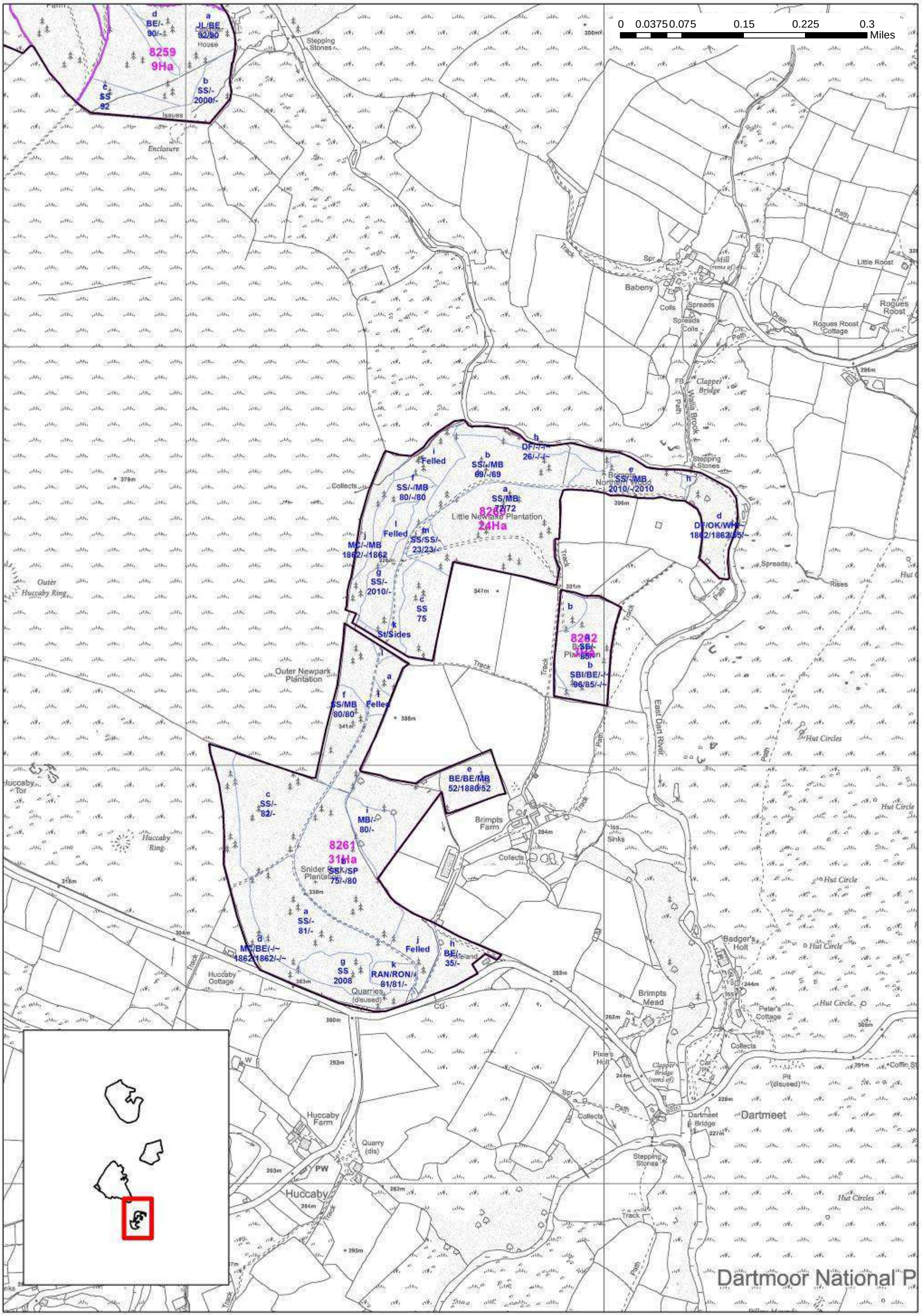
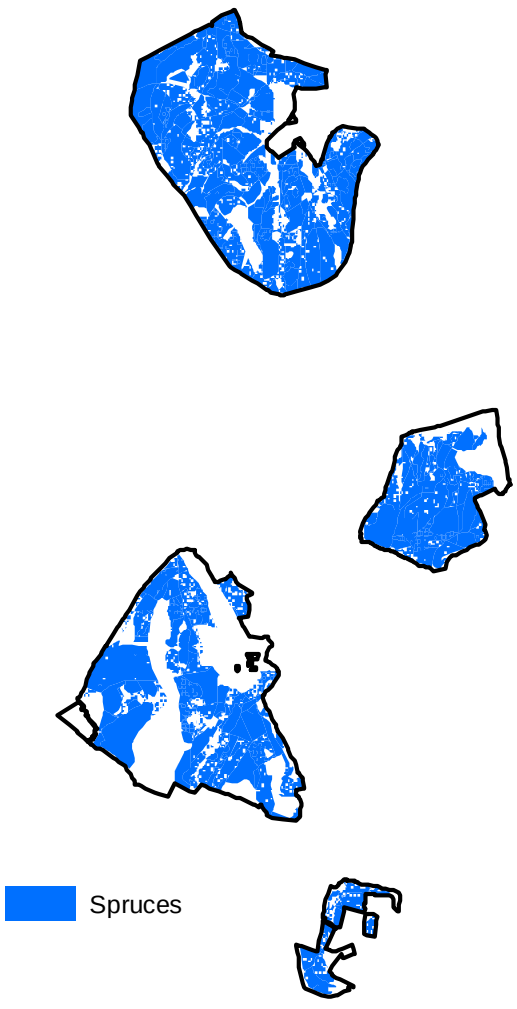


Pests and Diseases



Dendochtronus micans

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

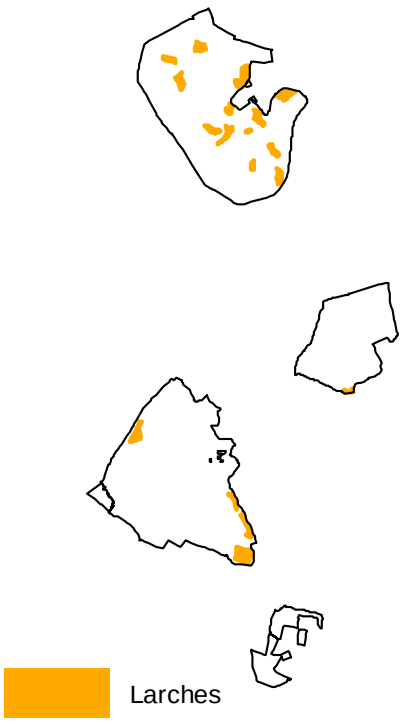
The Dartmoor forests are at significant risk of infection from *Dendochtronus micans* not least because of their extensive reliance on spruce. Therefore steps need to be taken to diversify these crops where site conditions allow. Minimising stress of the spruce through good planting and species choice as well as regular thinning can limit the susceptibility of the spread.

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

Phythophthora 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.

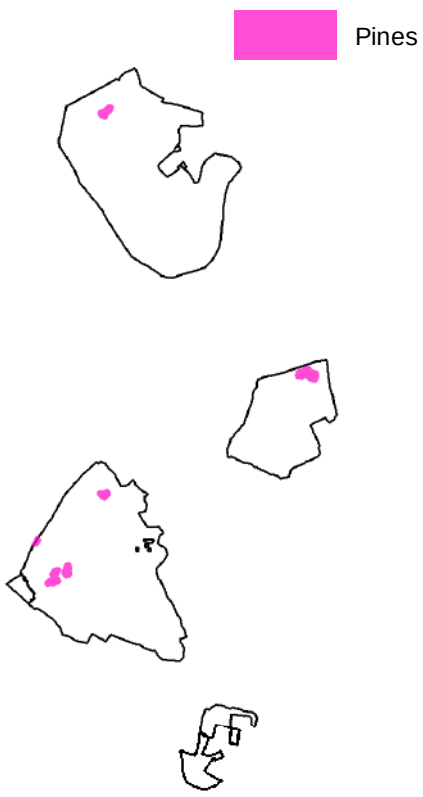
PR is a notifiable disease dealt with by felling the infected area under a statutory plant health notice (SPHN) issued through FERA and the Forestry Commission. To date two SPHNs have been issued for larch removal within the Plan area. One in Soussons and one in Fernworthy. Whilst pre-emptive felling 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.



0 0.5 1 2 3 4 Miles

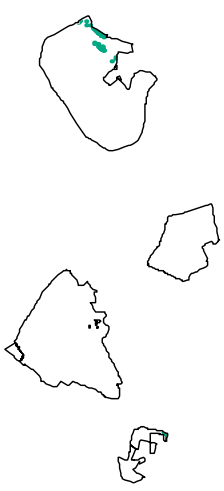
Dothistroma Needle Blight

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.



Sirococcus tsugae

A fungus causing shoot blight found in originally in cedar and now hemlock species. Spread is caused through rain splash and planting stock with one crop in Fernworthy known to be infected. No effective control mechanism is known but given its limited infection or potential spread future retention or new planting of Western hemlock is yet to be compromised.



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
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
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
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

Shelterwood		A management system that is applicable to conifer or broadleaf, where tree canopy is maintained at one or more levels without the need to 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" A variation on this is "Single tree selection". This variation removes individual trees of all size classes more or less uniformly throughout the stand to maintain an uneven-aged stand and achieve other stand structural objectives. While it is easier to apply such a system to a stand that is naturally close to the uneven-aged condition, single tree selection systems can be prescribed for even-aged stands, although numerous preparatory thinning interventions must be made to create a stand structure where the system can truly be applied.
Silviculture		A term coined during late 19th century from the Latin *silva meaning* 'wood' and the French *culture* meaning 'cultivation' and so Silviculture is the art and science of controlling the establishment, growth, composition, and quality of forest vegetation to achieve a full range of forest resource objectives.
Stand		A group or area of trees that are more or less homogeneous with regard to species composition, density, size, and sometimes habitat.
Thin	TH	Selective removal of trees from a wooded area, giving remaining trees more space to grow into larger trees. Thinning is done to: Improve the quality and vigour of remaining trees. Remove trees interfering with mature or veteran broadleaf trees. Give space for tops (or "crowns") of broadleaf trees to develop and potentially act as a future seed source. Give space for natural regeneration to grow and develop with the intention of recruiting these younger naturally grown trees as a part of the future woodland structure. Create gaps for group planting or enrichment. Remove species of tree that may compromise the intended management objective of the woodland eg: non-native or invasive species such as Sycamore, Western Hemlock or birch. Improve the economic value of a wood. Help realise opportunities to enhance ecological value. **NOTE:** This list is not in any order of priority and will vary depending on management objectives.
Yield Class	YC	A method of measuring the growth rate or "increment" of a crop of trees by age and height; measured in m3 per Ha per annum. E.g. A crop with a YC of 16 is one that has an annual increment of more than 16m3 but less than 17m3, although generally only even numbers are used when stating YC.

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