

Speech House Walk & Ruardean Walk Forest Plan 2025 - 2035

West England Forest District

Forest Blocks covered:

Astonbridge (42),
Serridge(43),
Crabtree Hill (43)

Francis Raymond-Barker

Forestry England and new FS File Ref: OP10/42 43
Old FS File Refs: FoD/2/74 and FoD/2/80
GL/1/5/2.51



Forestry England
forests and woodlands
have been certified in
accordance with the UK
Woodland Assurance
Standard (UKWAS)





West England Forest District

Application for Forest Plan Approval

Speech House Walk and Ruardean Walk Forest Plan

Forest District:	West England FD	
Woodland or property name	Beechenhurst, Kensley, Crabtree Hill, Crump Meadow, Serridge, Northern United, Trafalgar, Speculation, Ruardean Hill, Ruardean Woodside, Great Bourts, Astonbridge	
Nearest town, village or locality:	Lydbrook, Brierley, Ruardean Woodside, Drybrook, Cinderford, Ruspidge	
OS Grid references:- Hangerberry, Great Bourts, Horsley Flat, Smethers Tump, Barnedge Hill, Astonbridge Hill, Ware Slade, Newnham Bottom, Ruardean Hill Plantation, Hawkwell Inclosure The Delves, Little & Great God Meadow, Speculation, Serridge Green, Serridge Inclosure, Birch Wood, Northern United Crump Meadow, Lennets Hill, Crabtree Hill, Sammies Wood, Kensley, Woorgreen, Beechenhurst	Astonbridge Hill Serridge Kensley and Crabtree Hill	From west: SO 5984 1473 To northeast: SO 6434 1642 From west: SO 6117 1377 To northeast: SO 6453 1518 From west: SO 6089 1216 To northeast: SO 6495 1355
Local Authority District/Unitary Authority:	Forest of Dean District Council Gloucestershire County Council	

Signed
Forest Management Director

Date

Signed
Area Director

Date of approval

Date approval ends

Plan Area:	1671 Hectares
Conifer Felling:	81 Hectares
Broadleaved Felling:	18 Hectares

- I apply for Forest Plan approval for the property described above and in the enclosed Forest Plan.
- I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders that the FC agreed must be included. Where it has not been possible to resolve specific issues associated with the plan to the satisfaction of consultees, this is highlighted in the Consultation Record.
- I confirm that the proposals contained in this plan comply with the UK Forestry Standard.
- I undertake to obtain any permissions necessary for the implementation of the approved Plan.



Forestry England forests and woodlands have been certified in accordance with the UK Woodland Assurance Standard (UKWAS)



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How Our Shared Forest relates to the Forest Plan process

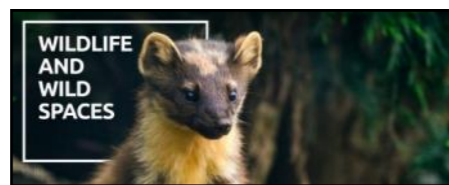
OUR SHARED FOREST

“To Nurture a shared Forest unlike any other”

The Speech House Walk and Ruardean Walk Forest Plan is the second of six Forest Plans that cover the main block of the Forest of Dean. These six Forest Plans tailor the management for the Forest of Dean through the lens of eight “principles of management”, outlined in the Our Shared Forest (OSF) land management plan. Published in 2019, these principals closely align with the UK Forest Standard (UKFS).

The Our Shared Forest looks to a future where the Forest of Dean main block :

“Has a scale, diversity and a continuity of management over time that supports a depth and breadth of habitats and species that is on a par with, or better than, many celebrated national nature reserves and protected landscapes.”



A Forest Plan’s core purpose is to ensure Forestry England is able to functionally implement the management of its woodlands and forests in line with the UK Forestry Standard (UKFS). This is achieved through the prescriptions identified within the Forest Plan, and having the Forest Plan approved by The Forestry Commission (previously referred to as Forest Services). It is this approval that attains the Plans operational status.

So how does the Forest Plan link and relate to reflect OSF ?

The Forest Plan integrates the OSF during the Analysis and Concept stage of the Forest Plan process. Structuring and focusing these stages around the eight “principles of management” within OSF allows recognition of topics in need of further investigation and development. Resolution is achieved through thorough field work, data-set analysis and consultation, covering the salient points documented in the Forest Plan Analysis. It is this process of identification and consideration that then helps inform the Concept and decisions made within the core of the Forest Plan.

This approach ensures that the local distinctiveness and uniqueness of the Forest is captured and maintained. At the same time it will ensure due process and regulatory context required by Forest Services for Forest Plan approval is met by Forest Planning process.

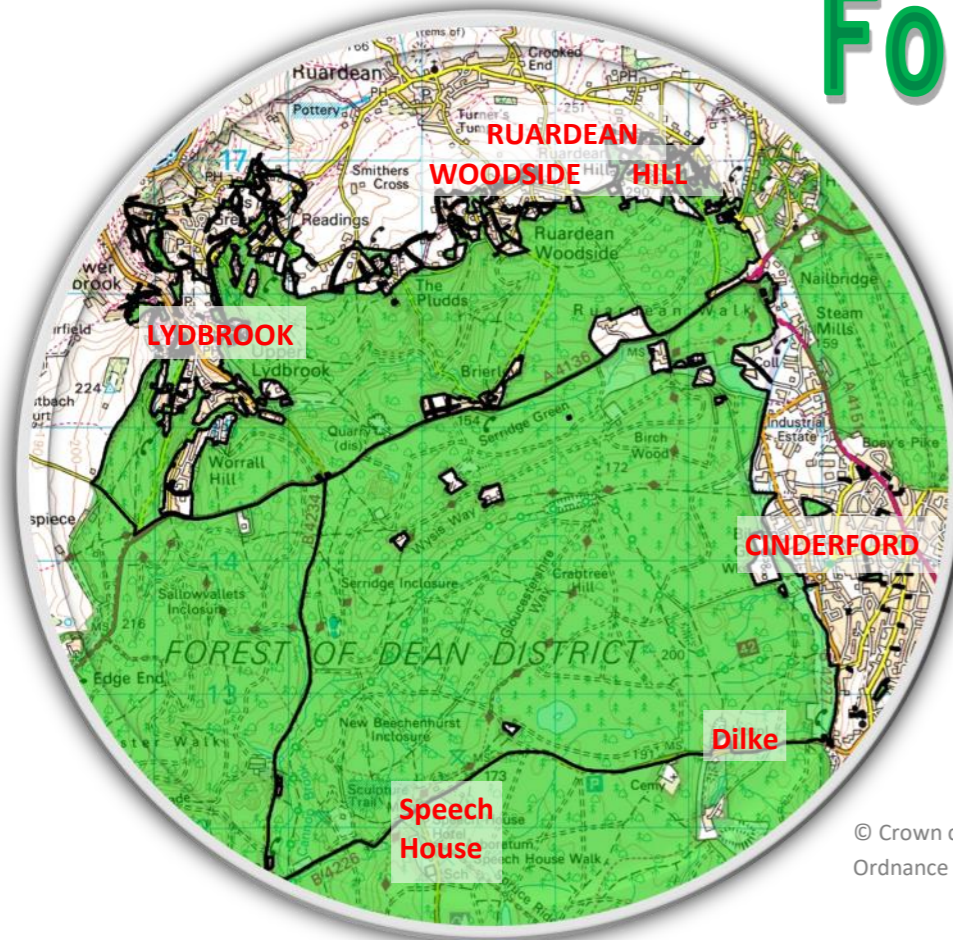
Our Shared Forest VISION

**TO NURTURE
A SHARED FOREST
UNLIKE ANY OTHER**

**By allowing the decisions we take
to be guided by the Natural potential of the land
as well as the varied influences
of our ever-changing world,
we will create a diverse and inclusive forest that
is a global example of what can be achieved
through forward-thinking forestry.**

Photo Above: Planted in the 1970s between Mireystock Cross Roads and Speculation, on western edge of the plan area; this Beech tree shows features suitable for bats, probably having been damaged by lightning in the past.

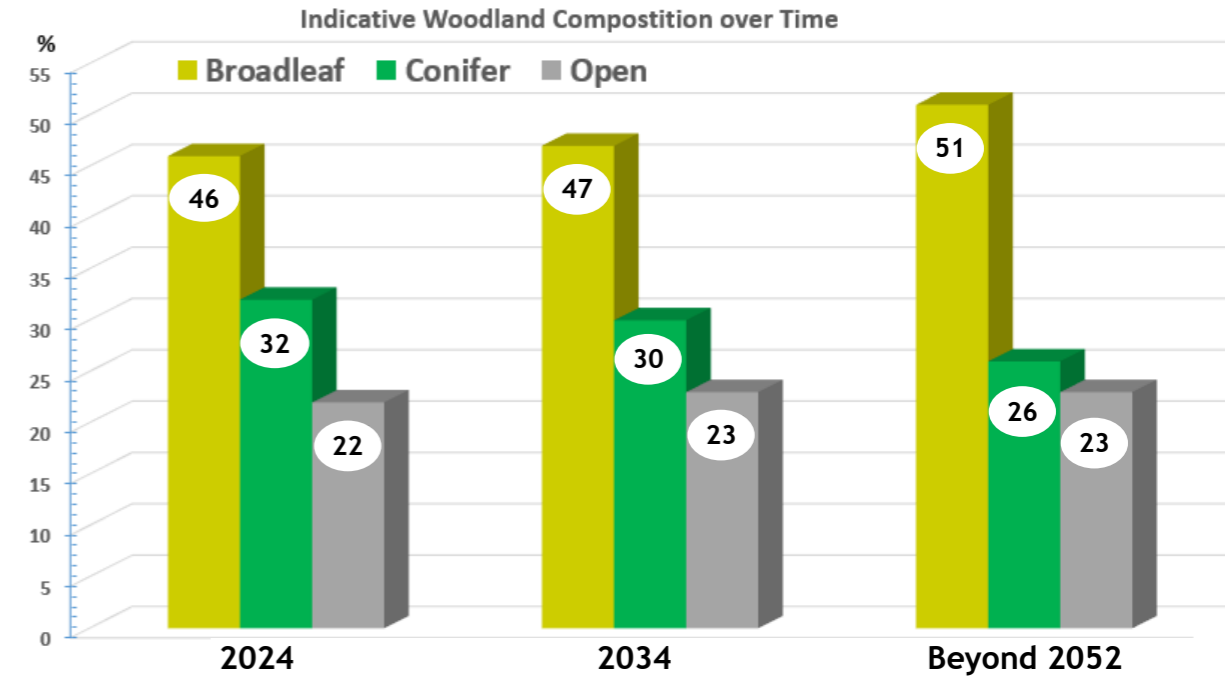
Forest Plan SUMMARY



Forest name	Area	% of plan area
Crabtree Hill and Kensley	706 Ha	42
Serridge	391 Ha	23
Astonbridge	574 Ha	35
	1671 Ha	100 %

(Area given to the nearest Ha and percent to nearest %)

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About

The Plan lies within the Statutory Boundary of the Forest of Dean, The Hundred of St. Briavels and the county of Gloucestershire. The plan covers 6.5 square miles, or around 1700 hectares, with mixed coniferous and broadleaved woodland. Numerous villages nestled along the peripheral edges of the forest are integral to the feel of the woodland, and Sense of Place that makes the Forest unique.

Commanding a prominent location, external views into the block remain oblique, seen by driving along the A4136 from Lydbrook to Steam Mills. Minor roads give an indication as to the varied nature of topography that lies within, especially from Brierley to The Pludds. The A4136 and New Road at Speculation both evoke ruminations of the past industrialisation of the Forest¹ that have lent to the diverse Sense of Place.

At Woorgreens², statutory removal of diseased Larch in 2021 expanded existing heathland by 12 hectares, exposing the "Rig and furrow". This is a technique originally used to enhance tree establishment, following reinstatement of the coal opencast that closed in 1983. As a result, Woorgreen now encompasses greater variety and diversity of habitat, featuring a selection of ponds and scrapes that enhance the ecological and landscape value of the site. It is designated a Key Wildlife Site and benefits a wide breadth of bird, Invertebrate, amphibian, reptile, flora and fungi species. Unfortunately, *Phytophthora ramorum* continues to threaten woodlands within this plan, but offers Forestry England opportunity to further diversify tree species composition, improving connectivity of habitats e.g. the recent forest operations at The Delves.

The mixed woodland and open space provide a rich mosaic of habitat for a wide range of wildlife and flora. These include a stable population of Goshawk, Fallow deer and Wild Boar, with recent reintroduction of Pine Marten and Beaver. It is hoped Pine Marten will have a positive effect on reducing Grey Squirrel numbers, while Beavers at Greathough Brook help control water flow and further improve the woodland's ecology. The plan also features several watercourses³ that are punctuated with ponds and lakes⁴ and feed into both the River Severn and River Wye.

The Forest of Dean remains one of England's prime Ancient Woodland forests that contain remnant Napoleonic Oak and Sweet Chestnut, yet is also able to produce quality hard and softwood timber.

People are also able to enjoy the woodlands in this plan area through a good network of trails. This includes the Colliers Trail (was the Family Cycle Trail), with Beechenhurst being home to the start of the celebrated and cherished Sculpture Trail and for the more adventurous a tree-top adventure provided by Go-Ape.

¹for stone, coal and iron as well as the timber.

²Woorgreens was open cast between 1979 and 1983 producing some 402,753 tonnes of coal

³Cannop Brook, Brierley Brook, Greathough Brook, Littlehough Brook and Cinderford Brook

⁴Woorgreens, Mireystock, Meadow Cliff and Steam Mills.

Aims and Objectives

The Forest Plan aims are to protect and enhance existing habitats, through sustainable management that is in context with the surrounding landscape and character, whilst providing a sustainable flow of timber to market throughout the plan duration. Not in any particular order, the plans objectives are:

- ◇ The diversification of woodland species and structure for greater ecological and economic resilience.
- ◇ Protect and enhance woodland, open habitats and their associated species.
- ◇ Deliver well-designed forests that both protect and enhance the internal and external landscape, in keeping with the local landscape character.
- ◇ To protect and enhance areas of Ancient & Semi-Natural Woodland with reference to increasing native diversity, structure, resilience and natural capital.
- ◇ The protection and enhancement of veteran trees (VT)/trees of special interest (TSI) and recruitment of future generations of both.
- ◇ The continued production of sustainable and marketable woodland products.
- ◇ To conserve, maintain and enhance cultural and heritage assets.
- ◇ The restoration and management of Sites of Special Scientific Interest / Scheduled Monuments / Key Wildlife Species.
- ◇ The provision and maintenance of recreation facilities.

What we will do

The Forest Plan outlines management proposals, including felling and restocking, permanent open habitat and creation of transient open habitat, with felling licence approval for operations until 2035. Summary of planned areas for the next ten years are (in hectares):

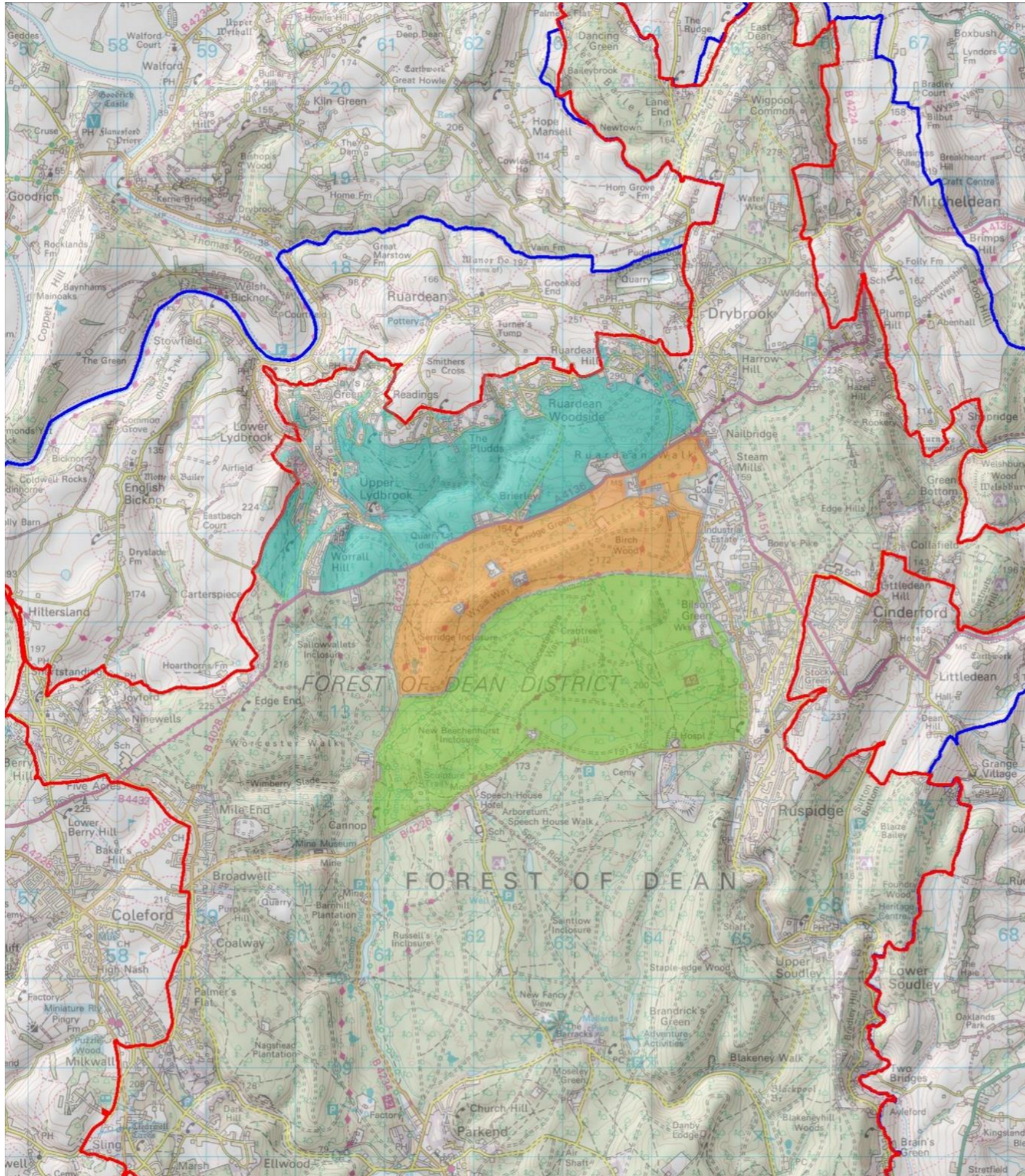
- * Clearfelling, Restocking/regeneration of broadleaves: 18Ha
- * Clearfelling, Restocking/regeneration of conifer: 81Ha
- * Open space and open habitats: <10Ha

Crops will be managed for a mixture of objectives, including timber production. Low Impact Silvicultural Systems will be favoured, seeing a reduction of approximately 60% in clearfelling for the next 10 years until 2034, although diseased areas will still require statutory felling.

Priority watercourses will see integration of a varying degree of open habitat with removal of non-native conifer species and some Beech and Oak. Native broadleaf content will increase through planting, coppice, or natural regeneration, including species like Alder, Aspen, Willow.

Wet woodland and open habitat will be expanded, consolidating, connecting and protecting priority habitats. Adders and other priority species such as Lepidoptera will benefit from this work. This will include beginning to regenerate areas of stored coppice. Delivery of this work will improve, increase and enhance woodland permeability, diversity of habitat, and quality of internal landscaping.

Routine thinning of both conifer and broadleaf will occur at five and ten-year intervals.



Location and Description

The Forest Plan for Speech House Walk and Ruardean Walk lies on the plateau of the Forest of Dean main block. It is adjacent to the northern boundary of the Parkend Walk & Blakeney Hill Walk Forest Plan. It follows the B4226 from Cannop cross roads to Cinderford Bridge; extending from the upper reaches of the Cannop Valley to the west with Cinderford town to the east. Integral to the character of the plan area are the villages of Lydbrook, Worrall Hill, The Pludds, Ruardean Hill, Ruardean Woodside and Drybrook, nestled along the peripheral northern edges. From Worrall Hill in the west, the A4136 runs eastward through the plan area to Steam Mills with the town of Coleford lying to the west.

The plan sits wholly within the county of Gloucestershire, The Statutory Forest (outlined in red on map) and The Hundred of St. Briavels (outlined in blue on map), encompassing three blocks of woodland previously split over three plans.




Tree species composition, along with varied terrain, often contribute to the Sense of Place that is so invariably and uniquely distinctive in different parts of the plan area. The area comprises of mixed conifer and broadleaf woodland totalling 1671 hectares, covering 6.5 square miles:- Kensley and Crabtree Hill form the southern most parts of the plan and sit on a plateau, divided from Serridge to the north, by The Wysis Way, a long distance footpath. Within Serridge there is a prominent ridge orientated east to west. The ridge drops away to the north giving way to flatter ground. North of the A4136 lies Astonbridge Hill that slopes north-west forming an incised valley, along the bottom of which runs Greathough Brook. Flowing westward, it makes its way through Lydbrook and on down to the River Wye, while Cannop Brook runs along the western peripheral boundary, following the B4234 from Mireystock crossroads, southward to Cannop crossroads, before continuing southwards out of the plan area to Cannop Ponds.

There are limited views over the wider forest and adjoining countryside from the higher ground, with the exception of places like Pan Tod, on the northern peripheral edge of the plan just west of Drybrook, that enjoys extensive views to the northwest deep into the Welsh hills.

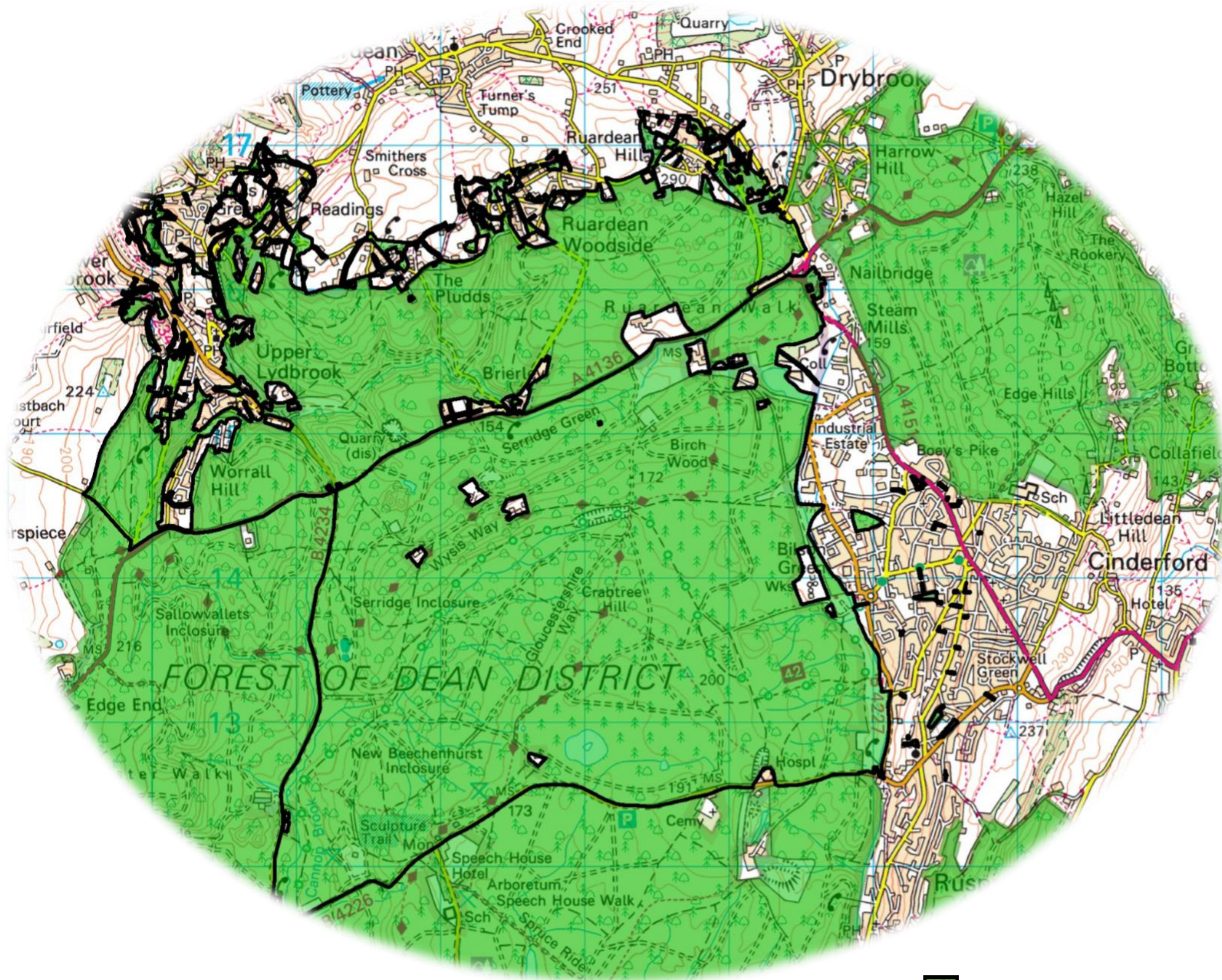
The remnants of historic mining for stone, coal and iron, greatly influence the topography of the plan area, especially at Northern United, the last deep gale in the Forest. Reaching a depth of 696ft & producing 450 tons of coal a week, it closed on Christmas day in 1965. Old tips from mines like these were often planted with conifer, specifically Scots or Corsican Pine.

Whilst the ridge in Serridge tops out at 200m above sea level (asl), it is by no means the highest point, which is in Ruardean Inclosure at 280m. With the lowest point being 90m asl in Lydbrook. These ridges also give rise to woodlands with varying topology, whose aspect and slope mainly face east or west. These slopes have elevations ranging from 35-75m asl along the eastern boundary of the plan and elsewhere 75-175m asl.

The area benefits from around 900mm of rainfall a year, and the fertile soils (brown earths and rich gleys) derived from Carboniferous Limestone and Devonian Old Red Sandstone, mean the woodlands are capable of achieving good growth rates. For conifers, these rates are in the range of Yield Class (YC) 10 to YC 24, and for broadleaves, one may expect a YC of between 4 and 8.

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(Area given to the nearest Ha and percent to nearest %)



Tenure & Management Agreements

The whole 1671Ha of this plan area is freehold, all of which is dedicated under Countryside Rights of Way Act.

There are numerous management agreements in place for a variety of purposes, from grazing to radio masts (Joys Green) and from hospitality/recreation (Beechenhurst) to planning mitigation (Northern Quarter bat roosts) and sport provision (Cinderford Bridge)

- Speech House Walk and Blakeney Hill Walk plan area
- Acquisition Freehold (A/FH)

Management Objectives

WEST ENGLAND FOREST DISTRICT

HELPING TACKLE SOME OF SOCIETY'S BIGGEST CHALLENGES WITH THRIVING TREES, WOODS AND FORESTS¹

SECURING AND GROWING THE SOCIAL, ECONOMIC AND NATURAL CAPITAL OF THE NATIONS FORESTS IS AT THE HEART OF EVERYTHING WE DO

The objectives of this Plan will reflect and help deliver the West England Forest District Strategic Plan and the National Strategic Plan for the Nations Forests in England: Growing Our Future 2021-2026.

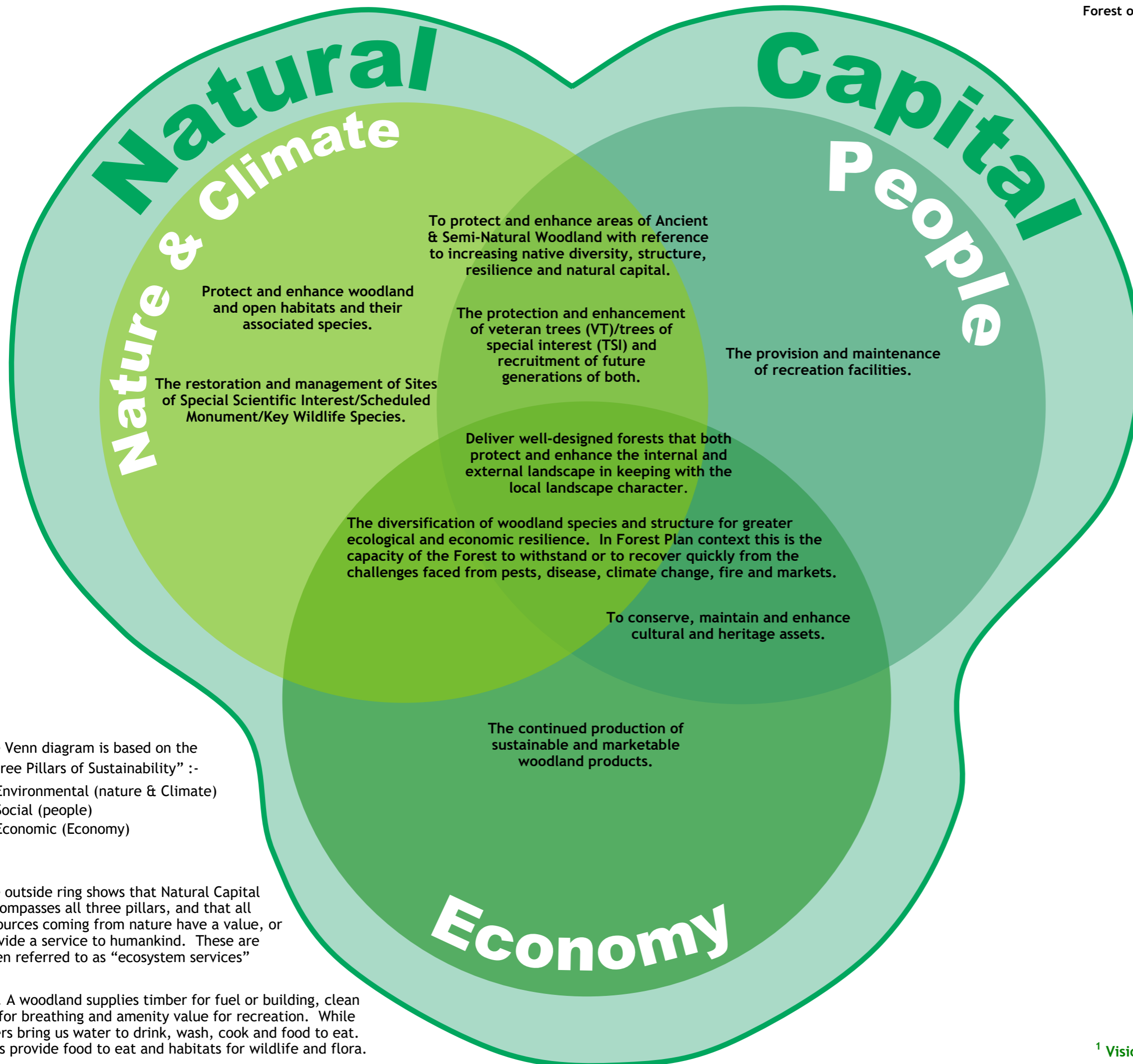
WE MAKE PLANS TODAY FOR A BETTER TOMORROW

All of our forests and woodlands in this Forest District are certified by the Forest Stewardship Council® (FSC®) and the Programme for the Endorsement of Forest Certification (PEFC).

All Forestry England forests and woods are independently certified as sustainably managed, to continue to benefit future generations.

TOGETHER WE ARE GROWING THE FUTURE FOR WILDLIFE, FOR PEOPLE AND FOR THE CLIMATE

The meeting and monitoring of the Forest Plan objectives shown opposite is outlined on the following page.



The Venn diagram is based on the "Three Pillars of Sustainability" :-

- Environmental (nature & Climate)
- Social (people)
- Economic (Economy)

The outside ring shows that Natural Capital encompasses all three pillars, and that all resources coming from nature have a value, or provide a service to humankind. These are often referred to as "ecosystem services"

E.g. A woodland supplies timber for fuel or building, clean air for breathing and amenity value for recreation. While rivers bring us water to drink, wash, cook and food to eat. Soils provide food to eat and habitats for wildlife and flora.

¹ Vision from the Forestry Commission Strategy 2023-28

Meeting Objectives

(Objectives are not listed in any priority order)



National Vision and Overall Goal: To secure and grow the economic, social and natural capital value of the Nations Forest. Delivering Superb Forests and increasing Natural Capital

District Strategy

Forest Plan Objective

Meeting Objective

Monitoring

Nature

Increase our Natural Capital, Superb Forests and Telling our story
Increase diversity of tree species and stand structure, incorporating changes to silvicultural practices to maximise diversity resilience and carbon storage.
Give space and time for nature to protect and enhance biodiversity, recognising and responding to needs of wildlife using natural processes.
Ensure that natural and cultural heritage values of our forests are understood and widely shared.

People

Increase our Natural Capital and Telling our story
We will maintain and enhance working relationships & partnerships with conservation organisations such as Wildlife Trusts / Butterfly Conservation.
Support / encourage healthy lifestyles focussing on powerful benefits of nature improving mental / physical wellbeing.
Raise awareness & understanding of sustainable forestry and increase engagement with and understanding of Forest Plans.

Economy

Superb Forests and Increase our Natural Capital
Maximise diversity in tree species and stand structure and increase long-term resilience, incorporating changes to silvicultural practices all of which will be delivered in accordance with the UK Woodland Assurance Standard.

The diversification of woodland species and structure for greater ecological and economic resilience. In Forest Plan context this is the capacity of the Forest to withstand or to recover quickly from the challenges faced from pests, disease, climate change, fire and markets.

Clearfell used where appropriate, gives opportunity to enhance ecological and/or economic value of sites and add species diversity, highlighted in the Forest Plan and Operational Site Planning (OSP) process. The plan also sees a gradual increase in the use of Low Impact Silviculture (LIS) methods (60% previously clearfell) as well as an increase in broadleaf tree cover.

Monitoring will be achieved through the OSP process & Forest Plan review process, including Sub-Compartment Database (SCDB) analysis.

To protect and enhance areas of Ancient & Semi-Natural Woodland with reference to increasing native diversity, structure, resilience and natural capital.

Restoration will be a gradual process, targeting removal of conifer crops & non-native regeneration through clearfelling & thinning, to aid establishment of native species through regeneration & planting. Conifer crops will be planted where appropriate following survey prior to restocking.

Analysis and comparison of naturalness scores derived from the SCDB and field observation through the FP review process.

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

Through a mixture of thinning & clearfelling, the approach will be dependant partly on steepness & awkwardness of terrain and prominence within the landscape, along with coupe design that will aim to minimise risk of adverse impact on the landscape and adjacent SSSIs. OSP will help integrate the Forest Plan intentions.

Fixed point photography to be used during the FP review process, helping in analysis of how the implementation of the plan is effecting external landscape and character. OSP will help identify opportunity for enhancement to landscape character and identify safeguards for SSSI.

The protection and enhancement of veteran trees (VT)/trees of special interest (TSI) and recruitment of future generations of both.

These woodlands contain TSI & VT of varying description. OSP should record TSI and VT; updating GIS layer files for future reference. At the same time the process should promote the retention of both standing and fallen deadwood.

The Forest Plan review process at years 5 and 10 should check data held on GIS. Site visits and operational site plans will help in verifying appropriate TSI and VT management.

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

Through a mix of clearfell, thin and coppice the provision for open habitats and associated species will be enhanced. Opportunities should be highlighted in the OSP process where conservation benefits can be delivered. Appropriate reinstatement works will be carried out once operations have been concluded.

Monitored through Forest Plan review process, looking at local records for updated sightings.
Analysis and comparison of SCDB open space through the Forest Plan review process.

To conserve, maintain and enhance cultural and heritage assets.

The identifying and recording of any unscheduled features is an on-going process, aimed at improving the quality of existing data sets that subsequently feed into the OSP of harvesting and restocking sites, identifying features of interest and outlining appropriate measures to avoid and minimise damage.

Monitoring will be achieved through the OSP, contract supervision and the Forest Plan review process.

The continued production of sustainable/ marketable woodland products.

Plan delivery achieved through thinning and clearfelling will continue to produce a mixture of wood products, both conifer and broadleaf, that will be in keeping with and help progress and or enhance other management objectives.

Comparison of plan production forecast with actual production at the Forest Plan five and ten-year review. Plan Forecast = 129,000m3 (56k Thin & 73k Felling)
OSP and contract supervision.
Pre- thinning survey and or post thinning control.

The restoration/management of Sites of Special Scientific Interest / Scheduled Monuments / Key Wildlife Species.

These features will be managed by following their respective management plans and utilising OSP to implement the required works.

Monitoring will be achieved through OSP, and the Forest Plan review process.

The provision and maintenance of recreation facilities.

Maintained by Recreation department. Certain sites may require capital investment. Waymarked trails in process of being revised.

Forest Plan review and the Our Shared Forest review processes.

National Character Profile: 105 Forest of Dean and Lower Wye source: Natural England (April 2014)

The NCA area is centred around an undulating well wooded plateau of ridges and valleys. Sitting over shallow Coal Measures, it is contained by an outer rim of a more open landscape on Carboniferous Limestone and Devonian Old Red Sandstone. The NCA enjoys areas of extensive woodland concentrated on the central plateau that are contained within the Statutory Forest. The eastern edge of the central plateau falls away steeply into the Severn flood plain, the estuary of the Severn, and the Severn and Avon Vales NCA. From clear, unwooded higher ground along this eastern edge, the Cotswold scarp can be seen rising out of the flat vale.

Sitting between the River Severn and Wye with only 3 main roads (A4136, A40 and A48) there is a sense of isolation and historically the rivers - and then the railways were the main trade and communication corridors (most of which are now obsolete and derelict, but now many contribute to both nature conservation and also means of exploring the forest on foot or bike) - while the rest of the Dean is criss-crossed by relatively small roads and narrow lanes, continuing the relative isolation of some of its communities.

The woodlands feature rich wildlife habitats including grassland, heathland and traditional orchards. Wooded areas range from managed coniferous plantations to broadleaved woodlands, many of which are ancient woodland - defined as being continuously wooded since 1600; the Statutory Forest is an ancient forest, having been heavily exploited for timber, although the majority is considered either as ancient or semi-natural woodland. These woodlands form one of the largest remaining areas of broadleaf semi-natural woodland in the country, and are home to suites of nationally important assemblages of woodland birds, butterflies, internationally important woodland, river and bat sites; and a range of other rare flora and fauna. The Forest Waste within the Statutory Forest retains characteristic acid grassland habitat, although the dwindling of grazing due to foot and mouth means scrubbing up of many of these areas is now apparent.



View from PROW west of Drybrook Quarry looking along the northeasterly aspect of Ruardean Hill [Astonbridge]

Often sprawling and linear in nature, encircling the edge of the Statutory Forest is a ring of villages and hamlets where buildings are interspersed with industry, open grazing land and often associated with iron ore and coal deposits, whose remnant workings are often subsumed by woodland canopy.

Statement of Environmental Opportunity (SEO)

SEO1: Protect and manage the extensive internationally important woodland for its biodiversity, landscape, and ability to store and sequester carbon. Provide a sustainable timber resource while recognising the woodland's recreational value and heritage, and its contribution to a sense of place and tranquillity. **The FP will achieve this through:** 1) An increased use of CCF through LIS, but use clearfelling where appropriate. 2) Diversifying species composition and age structure of the wood 3) Improving the management of wet woodland habitats 4) Increasing connectivity of habitats and provision of woodland edge.

SEO 4: Protect and enhance assemblages of internationally important species associated with the River Severn estuarine Special Area of Conservation (SAC), employing good land management practice throughout the Forest of Dean to improve water quality, reduce soil erosion and regulate water flow. **The FP will achieve this through:** 1) creation of water catchment plans for all 4 main watercourses within the main block 2) buffering watercourses to 10 or 20m 3) creating coupes for each of these buffers within the plan so they are easily identifiable 4) Planting of appropriate native species to enhance ecological and natural value.

LANDSCAPE CHARACTER ASSESSMENT (Character makes each part of the landscape distinct and gives each its particular sense of place, regardless of perceptions of quality or value)

The grain of the landscape is generally north to south although this is rarely evident in the landscape, due to dense woodland obscuring even the most dramatic relief features such as slades, valleys and ridges, with exceptions being Serridge ridge and Greathough valley that run east-west. The biggest influence on the landscape has been that of industry and mining. The forest now being almost a continuous extensive blanket of both coniferous and broadleaved woodland, draped across the syncline, contributing to a strong and coherent "forest" identity that is carefully managed for its commercial timber, scenic qualities, amenity value.

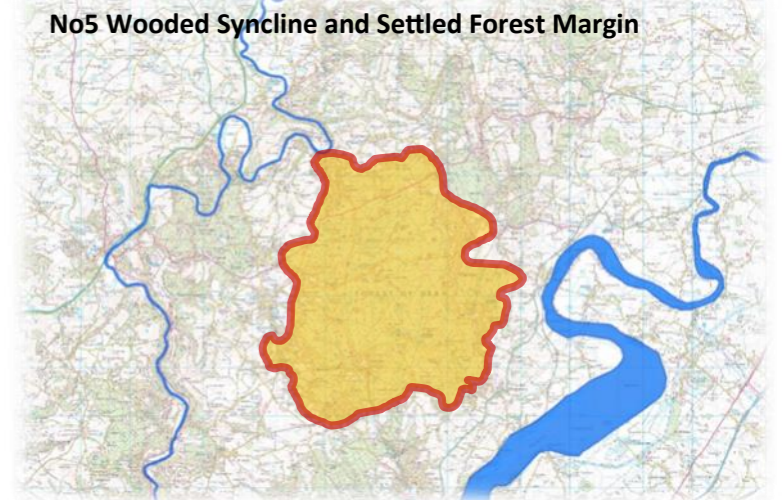
The 17th to early 19th centuries saw extensive areas of woodland cleared either for war efforts or for local industries, with the 1808 Dean Forest Timber Act seeing large scale enclosures for the planting of Oak, and survivors from this period can be seen most notably around Speech House and Cannop Valley, with extensive younger generations of Oak in Astonbridge and Kensley. Deciduous woodlands occupy approximately half of the forested areas and are characteristically Oak, grown as dense standards although Birch, Sweet Chestnut and Sycamore are also prevalent. These are often remnant areas of ancient semi natural woodland or replanted ancient semi natural woodland.

The extensive and dense woodlands harbour both small and large scale coal workings often visible in the landscape. For the smaller ones, colonisation by birch and gorse ensures they remain prominent and visible in the landscape, with larger ones developing massive spoil tips e.g Northern United. Elsewhere the local term "scowle" refers to and indicates the location of ancient iron ore extraction.

The outer edge of the Forest has a high number of settlements generally located close to the Crease Limestone band that contains the iron ore, where as the central parts are almost devoid of settlement, with the notable exception of Parkend, Edge End and Brierley. The forest creates a backdrop and edge to most settlements and so it is rare for buildings to break the skyline, although there are many instances of houses being in clusters that can be seen to climb up the sides of valleys in characteristic, informal loose terraces.

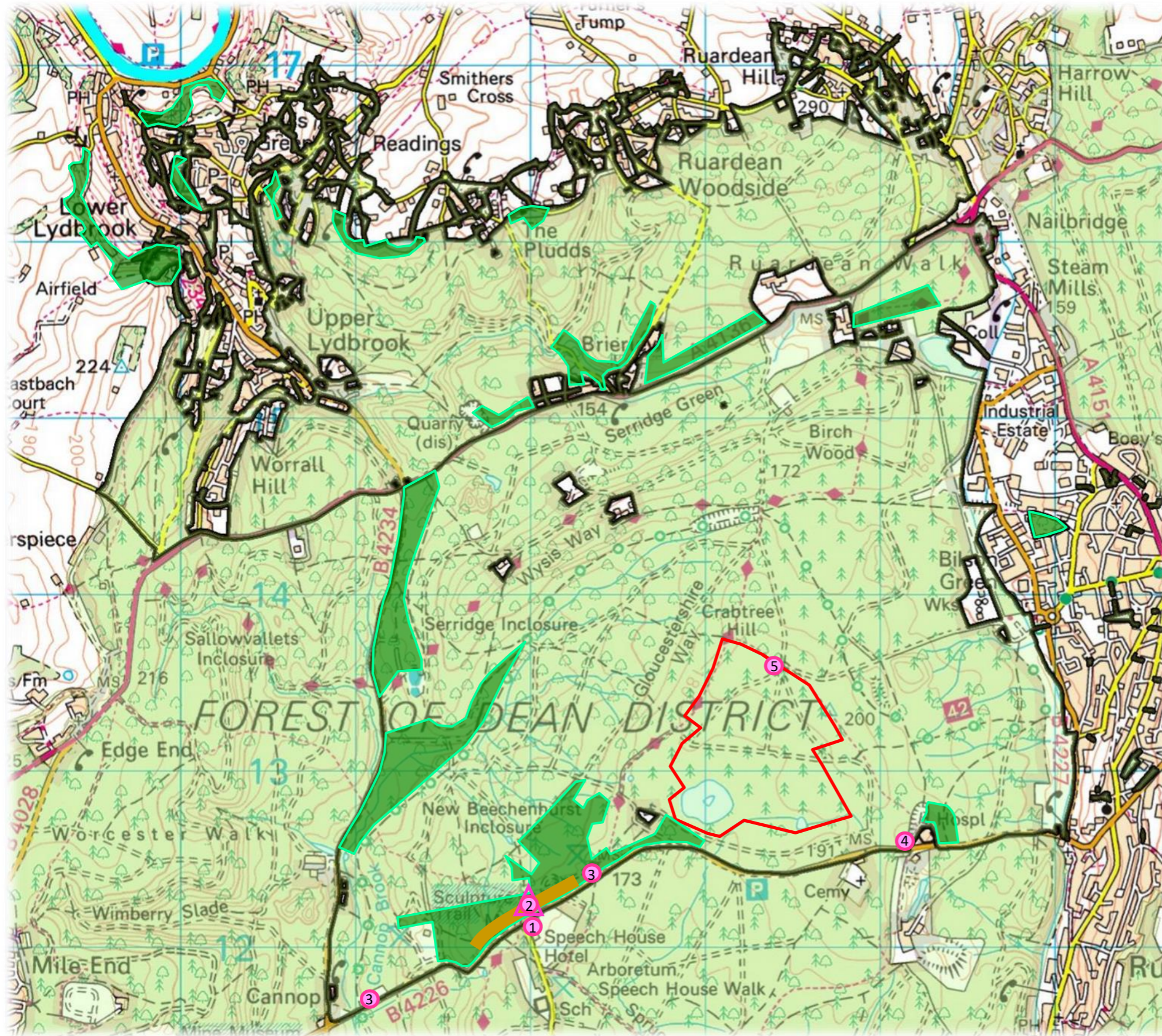
The internal landscape is often small in scale and the dense woodland significantly limits long distance views. Vantage points from which to survey the extent of woodland within the syncline exist, but these views are rare. The dense woodland is extensive and attracts thousands of visitors a year thanks to the perceived "wilderness" of many areas. This is especially the case within the Forest Core where the sense of isolation and wilderness is retained.

The syncline is asymmetrical, allowing water to collect in the central basin in a multitude of streams and brooks, such as Cinderford Brook, whilst deep valleys (slades) such as Greathough Valley are formed by streams draining the slopes of the rim. The majority of streams join the main central drainage basin of the Cannop Brook, which emerges from the forested syncline at Park Hill, before joining the Lyd and entering the Severn. The majority of these watercourses are virtually invisible amidst the woodlands, with many bordered by alder and riparian habitats containing wetland species, e.g. reeds and Flag Iris. These represent the most important locations for standing water habitats in the Forest of Dean.



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Designations



Special Area of conservation

Westbury Brook Iron Mine and the Buckshaft Mine are both components of the "Wye Valley and Forest of Dean Bat SAC" and lie circa 1.5 miles to the east of the plan area. The whole plan area provides functionally linked habitat for the Wye Valley and Forest of Dean Bat SAC, meaning it is vital to the long term conservation of the Greater and Lesser Horseshoe Bats, for which the SAC has been designated. A Habitats Regulations Assessment (HRA) assessing the plans potential impact on the SAC has been undertaken, and can be viewed in Appendix 2:- "Management Considerations".

Sites of Special Scientific Interest



 Speech House Oaks (8.5ha out of 17Ha)

Key Wildlife Areas

 Woorgreens

Scheduled Monuments


There is one SM within the plan area:

 Bledisloe Obelisk 

Listed Buildings

-  Speech House Hotel
-  Bledisloe Obelisk
-  Milestones
-  Railway Bridge at Dilke Hospital
-  Enclosure Marker

Provisional Ancient Woodland Inventory

 Ancient Woodland

Falling completely within the Statutory Forest of Dean, the remainder of the plan area is recorded on Natural England's provisional Ancient Woodland Inventory as Plantation Ancient Woodland.

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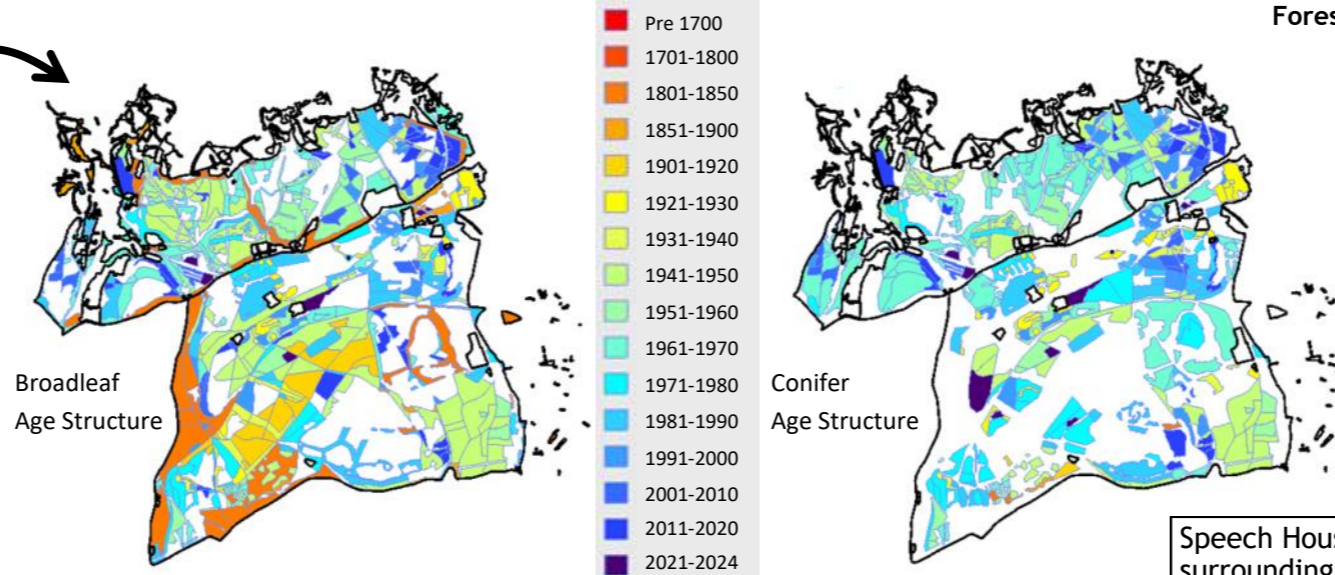


Right: Maps show that conifer has a confined and generally much younger age range compared to the Broadleaves, and the quantity of pre-1900 species is predominantly broadleaf but finite. The Peak of planting for conifer versus broadleaf is offset by 2 decades (1940s/1960s respectively), and note that age structure is much younger in Astonbridge than either Serridge or Crabtree Hill.

Concept

Age structure will be diversified through targeted Clearfelling, with use of Low Impact Silviculture evaluated for use on certain sites. Establishment and restocking for the next rotation will be achieved through the use of both planting and natural regeneration. This mixed approach will enable a more diverse woodland structure to be developed, to benefit and deliver against ecological, social & economic objectives. In general the plan will contain a more diverse range of tree species that reflect the changing soil and topography. In the long term there will be a higher proportion of broadleaf, with conifer retaining a prominent part in composition.

This photo shows an example of a site that would usually be clearfelled, but assessment found it suitable to be underplanted instead, thanks to clean ground conditions that mean faster establishment due to minimal weed competition.



IMPORTANT FOR SENSE OF PLACE: Across the plan area, mature conifer stands of Douglas Fir, Red Cedar, Norway Spruce, Scots Pine, but also those of Oak and Beech, all vary in stocking density and size, adding uniqueness and distinctiveness. These crops are often a valuable component in the internal landscape, adding structure and diversity, often engendering a sense of tranquillity. Externally, these areas can be visually impressive, offering a sense of scale, awe and grandeur, with steep terrain in Astonbridge also bringing a certain sense of drama to the landscape. Along council roads, on many occasion the age, spacing or species of tree define the character of the landscape; it could be the veteran Oaks along Speech House road, the mature Douglas Fir at Dances Corner, the large Corsican Pine at Steam Mills, the Copper Beech along Brierley Straight and Hawkwell or the scenic character along the Speech House to Cinderford Bridge road that gives a perspective of sense of depth.

Concept

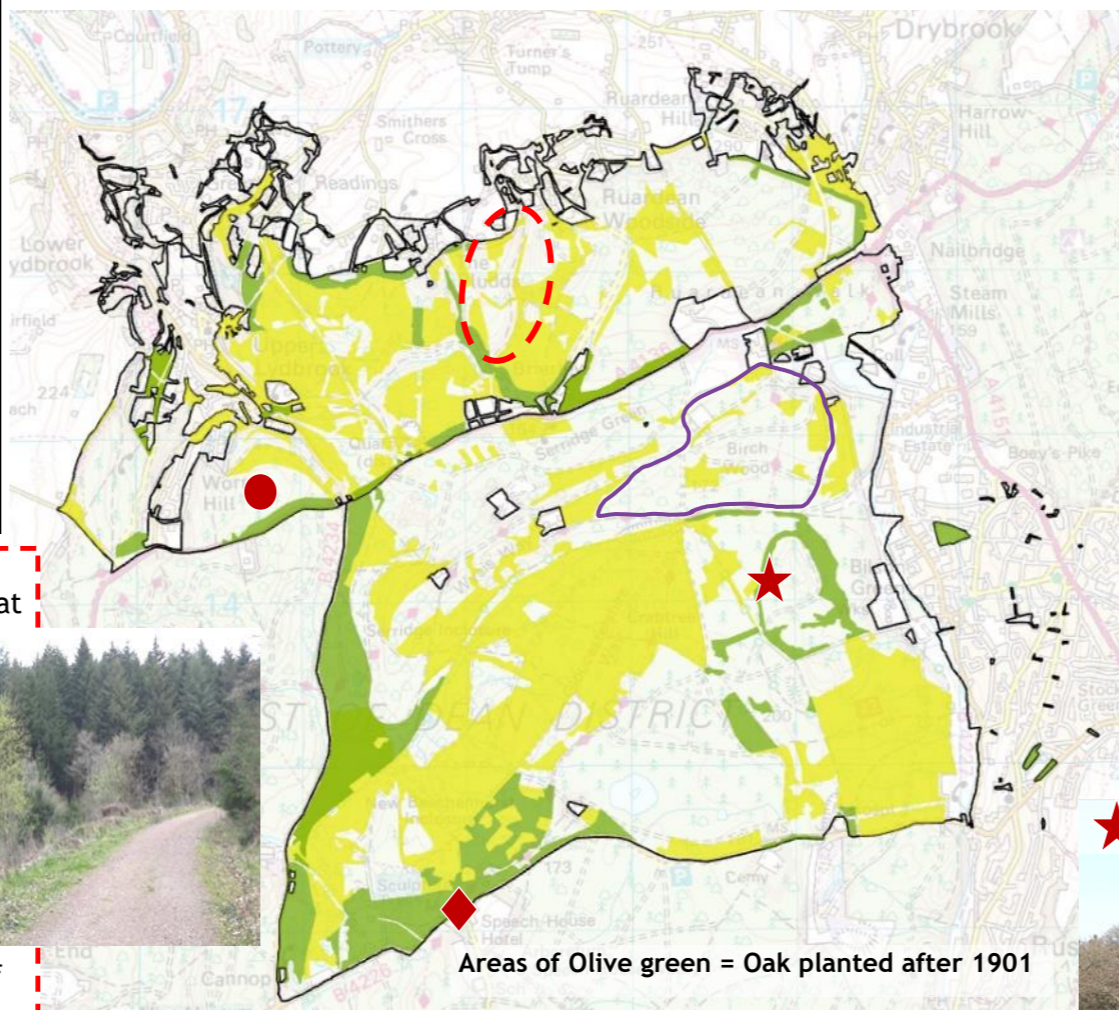
These types of landscape contexts contribute their own uniqueness and local distinctiveness to the "Sense of Place" at external and internal levels, and will be managed so as to sympathetically retain and enhance the Sense of Place.

Scale of landscape varies, often being linked to the complexity of landform and topography. Some earlier plantings from the 1960s, are at odds with what one would expect.

Concept

Coupes will be designed so as to take scale, landform and topography into account. In some areas such as Newham Bottom, this is more to do with species and scale so should be rectified though a mixture of clearfelling and heavy thinning, use of natural regeneration, restocking and enrichment planting.

As a rule of thumb, conifer should appear on higher ridges and upper slopes, with broadleaves in valleys and gullies. With this guidance, the conifer on the slope to the left of the photo would be all broadleaf; extending from the valley bottom to the skyline.



Speech House is the traditional centre of the Forest, with the surrounding woodland being some of the oldest oak in the Forest. The Speech House Oaks is an important SSSI, cited for their Woodland Type and associated internationally important lichen assemblages, mostly found on the understory of veteran holly. The character and composition of the SSSI continues outside the SSSI boundary into woodland to the north. The Napoleonic Oaks here were originally planted for ship building, but now provide a variety of habitats for a diverse range of flora and fauna as well as contributing to the variety of deadwood, Sense of Place and contributing towards the mental wellbeing of woodland users.

Concept

These sites will be maintained in accordance with the SSSI plan, generally requiring occasional scrub clearance, with odd trees requiring tree surgery*, along with vegetation management and options to retain deadwood habitat. The adjacent areas of p1800 Oak will be managed sympathetically, encouraging similar spacing and opportunities for holly recruitment, thus extending opportunities for the lichen population to spread. (*Note that felling will be a last resort in order to facilitate longevity of the tree and provide deadwood habitat in varying degrees of condition, with pollarding potentially considered, but on suitable younger candidates)

Old Napoleonic oak within the plan area generally occur in small fragmented and scattered groups. They are a finite resource that are invaluable to both nature and society.

Concept

These areas will be protected through minimum intervention and natural reserve, but maybe thinned help with crown condition or ecological condition of the site.

Some areas of woodland e.g. Birch Wood and Ruardean, are planted primarily with Larch which is affected by Phytophthora ramorum, making the restructuring process much less predictable, as infected sites are subject to Statutory Plant Health Notices.

Concept

Some Larch areas within a mile of recently felled diseased sites will be felled earlier on in the plan period, others will be given a felling date for some point in the future, but may need felling earlier due to infection. The idea is not to pre-empt felling because of infection, but try to maintain a sustainable flow of timber to market, as well as steadying the pace of the restructuring programme.





Looking up the valley in a southerly direction from Horslea

Both sides of the A4136 feature numerous specimen Copper Beech, between Hawkwell Row and Brierley.

Concept

Forestry Operations will look out for and protect such feature trees during operations. There maybe opportunity for planting more Copper Beech in the right locations to perpetuate the feature.



Scattered old Oak and community woodland that can be diverse in nature, occur typically within the peripheral woodland edges and associated villages. They often coincide with areas of Forest Waste too. The old Oak are appealing due to their species and age. These peripheral areas are well used and explored by the public, and supported by a network of desire lines that are important for quality of life.

Concept

Maintain these areas as community and amenity orientated woodlands. Thinning will be permitted for ecological or health benefits.

▲ There are numerous dwellings that lie nestled within the woodland, these include the “Forest Lodges” and clusters of houses, often found on the peripheral edges of the plan area. This illustrates the interwoven nature of woodland and people within the plan area (see photo above).

Concept

Prescriptions and operations will reflect this interwoven nature by adopting sympathetic management that align with plan objectives and landscape context.



Scots Pine at Waterloo Screens

◆ The slopes of the spoil heaps around Waterloo Screens and Trafalgar Mine feature mature Scots Pine, being characteristic of many old mining sites within the plan, they are features within the landscape that also add ecological value.

Concept

Scots Pine will be retained and thinned to develop crowns and character, where practical.

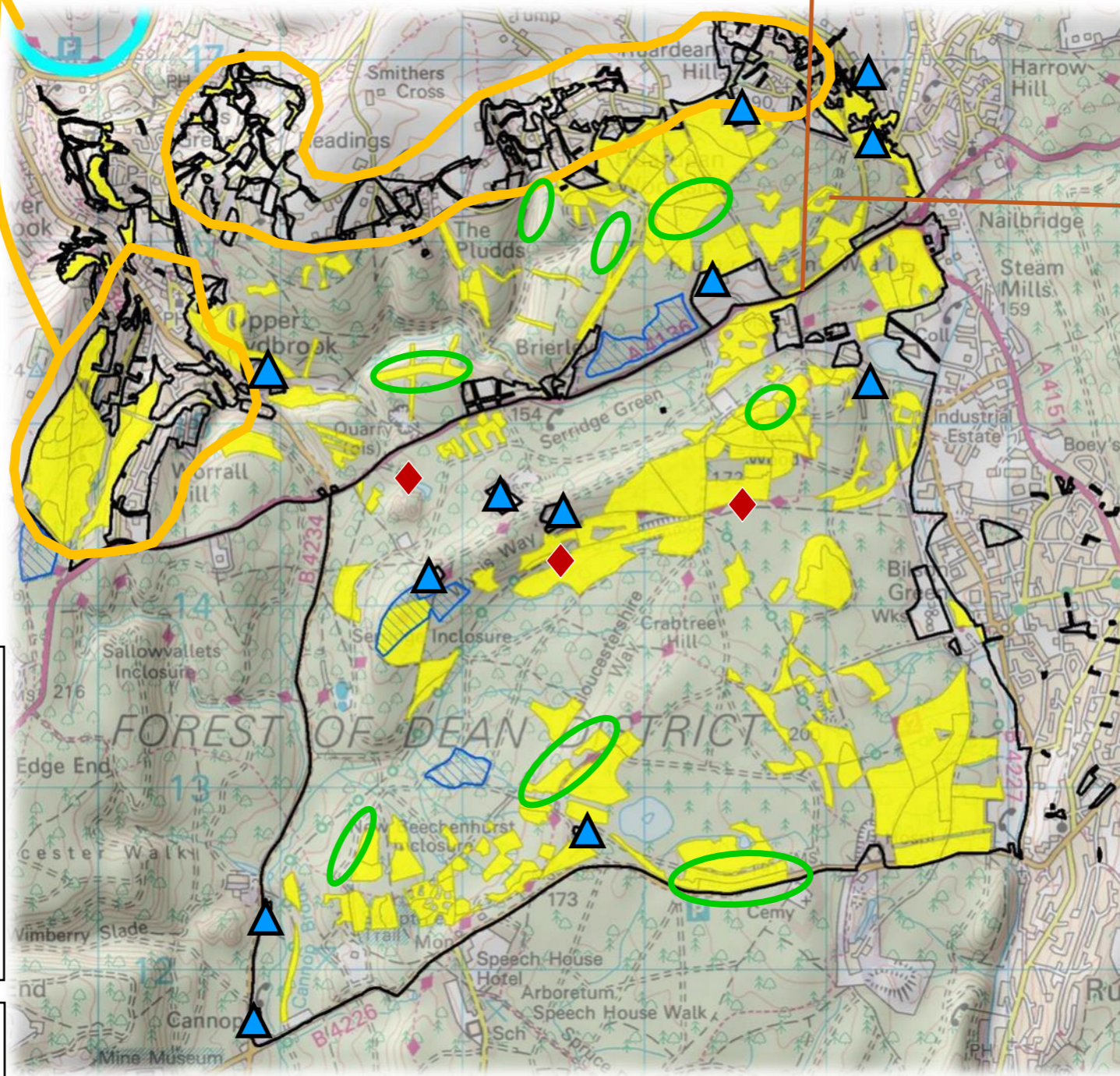
◆ Running east from Drybrook Road Station, there is a strip of Scots Pine that follows a section of the Wysis Way that helps develop the character of the trail. There is a similar strip along the bottom of Trafalgar that follows the Colliers Trail.



Scots Pine at Trafalgar

Concept

Adding visual interest and aesthetical appeal to the woodland users experience, the Scots Pine will be retained and perpetuated.



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The plan area contains 38% (189Ha) Larch and Sweet Chestnut, a further 33Ha is Corsican Pine, with Ash at 2%. Oak accounts for 50% of the area at 266Ha. All these species are at risk from pests and disease, such as Phytophthora on Larch and Sweet Chestnut, Dothistroma Needle Blight on Corsican Pine, Hymenoscyphus (was Chalara) on Ash, Chronic/Acute Oak decline and Oak Processionary Moth on Oaks.

Concept

This is about diversity. Pests and diseases will be managed through a variety of silvicultural means that include clearfelling, thinning, mulching, under-planting and species choice. This approach will diversify woodland composition and see an increase in the use of mixed woodland, i.e. conifer with broadleaf and vice-versa. Forest Research may actively monitor chosen sites to learn more and trial potential control techniques and measures for pests and disease.

Compartment 4214a features some conifer planted with the initials GR (King George V)

Concept

This feature will be protected during forestry operations to ensure it remains a feature.

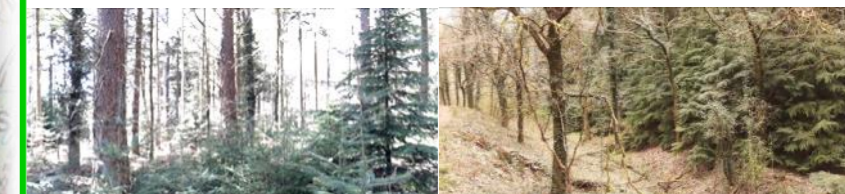


Evidence of conifer and/or broadleaf natural regeneration is confined to small areas, with most stands typically being only a few hectares. Whilst some areas of natural regeneration hamper and challenge the potential to optimise the woodland ecosystem and landscape. Other sites may not feature natural regeneration but have potential for underplanting instead.

Concept

Recruitment of regeneration will only be encouraged in suitable stands and locations that meet with Forest Plans objectives. Within other areas, underplanting can be utilised and in some, clearfelling and restocking will be more appropriate. Enrichment planting is a consideration where the species of regeneration needs diversifying or is too sparse in stocking density. E.g. Western Hemlock next to Ancient Woodland or within a water buffer would require removal and replacement with an appropriate species. It is also likely that in order to achieve successful establishment, adequate levels of protection against predation and fraying will need consideration, e.g. fencing, topical treatment, tree shelters or lethal means.

An example is the conifer adjacent to the watercourse at Newham Bottom that will benefit from remodelling, restoring native broadleaves along the bottom of the valley.



Douglas Fir Regen at Ruardean Hemlock regen at Newham Bottom

Left photo shows the right natural regen in the right place. Right photo shows the wrong regen in the wrong place.

The plan has several registered seed stands for the collection of seed, acorns and chestnuts at: Brierley Banks, Kensley Enclosure and Trafalgar Lodge.

Concept

Stand management will be more individually tailored than other crops, retaining and developing crowns of dominant seed, acorn or nut producing trees.

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TSI Oak at Speculation

Whilst there are numerous veteran and ancient trees, there are even more that have potential to become ancient and veteran that are in various states of health, providing a variety of habitat types. Some can be classed as “Trees of Special Interest” (TSI) and can be of any species, conifer or broadleaf. Trees with this potential are always valued and being discovered, whether through operational planning, community projects or members of public observing and reporting them.

Concept

The Forest Plan recognises these trees as important features. Their location and context within the wood will determine how best to manage them. Eg halving to remove interfering conifer or invasive species such as Western Hemlock, the Oak at Speech House designated as SSSI, or the many veterans in and around the villages and communities on the periphery of The Forest. All these contexts have differing management needs. The prime objective is to retain the tree, with felling being an absolute last resort. The retention of deadwood will raise the quality of soil and the ecological value of the woodland.

The belt of Norway Spruce along the western edge of the field adjacent to Herbert Lodge is performing well at YC 20, and was due for clearfelling in the 2017-2021 period.

Concept

Whilst the belt of spruce feels out of context with the adjacent stands of Sweet Chestnut and Oak, the belt is showing signs of good regeneration in its northern half and provides some shelter to the field. The site will be managed through Low Impact Silviculture, potentially with some enrichment planting required in the southern half at some point.



★ There are numerous areas of mixed conifer and broadleaf woodland like the ones just north of Brierley, other similar areas would include sites around Beechenhurst and Serridge.

Concept

To ensure a forest that is robust and resilient in all its forms for the future, we will see a higher proportion of mixed rather than pure sites. Not only does this achieve the resilience needed, but provides a more diverse complex of habitat, as well as Sense of Place.

The spatial restructuring of conifer to the higher ground and broadleaves to lower valleys and slopes, has pretty much been achieved by previous plans. However, most stands of Oak remain monocultured in their nature, ▲, with some on drier and sometimes more skeletal soils (e.g. Ware Slade and Horsley Flat), that indicate Oak may become less favourable on those types of sites in the future, due to a warming climate.

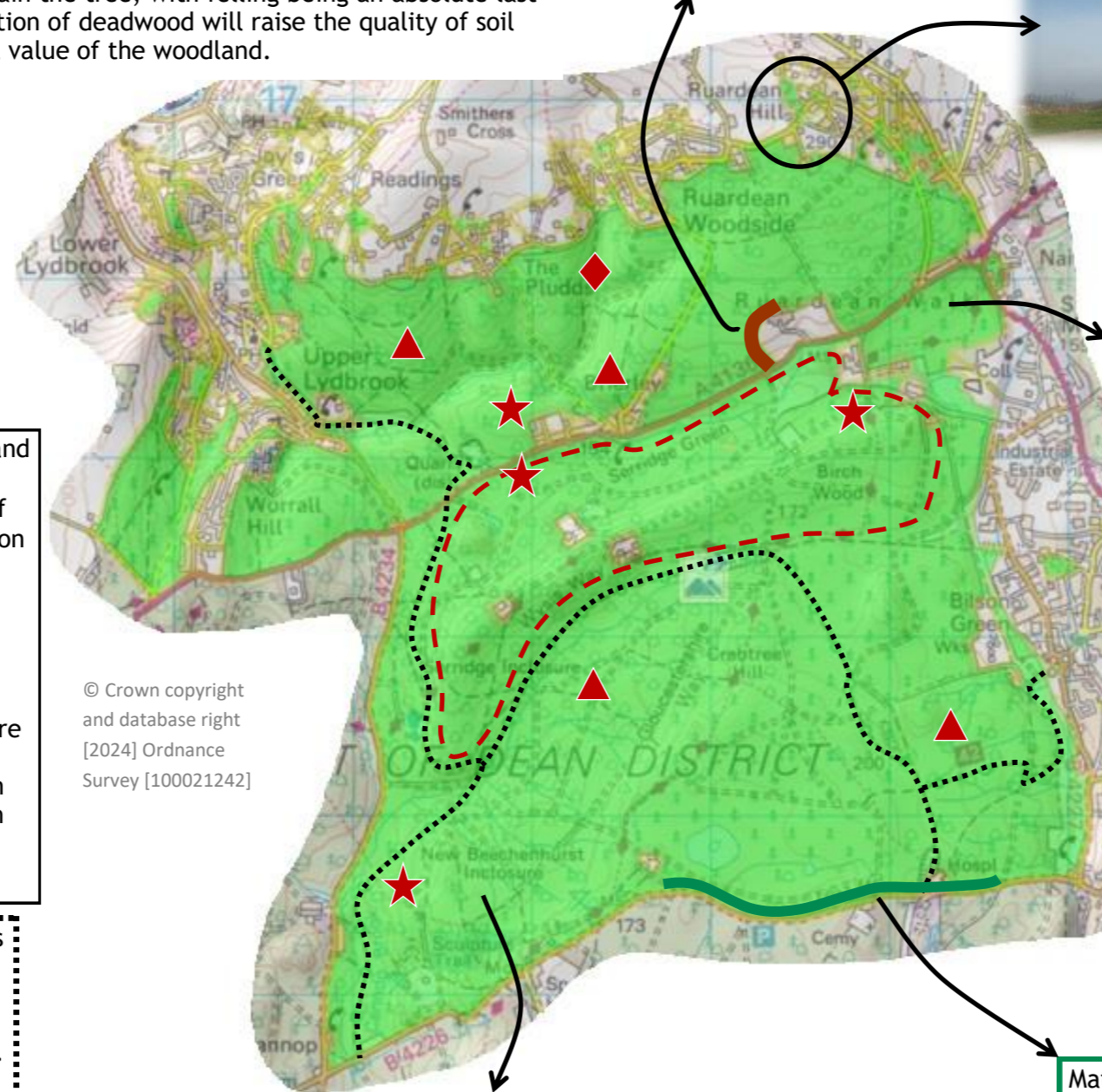
Concept

In the future, across the plan area, Oak stands will be more diverse by nature by way of species and age structure, although some areas may remain pure, Oak will remain an important species within most mixtures; achieved through an appropriate mix of thinning, natural regeneration and proper choice of provenance for any enrichment planting.

The Plan area has a large disused network of railway lines and tramways, some of which have been reformed into cycle trails. Much of the Cycle trail network is hemmed with trees, some sections being long and straight in nature, and others set in steep sided valleys and cuttings.

Concept

Woodland edge and structure along the cycle trail should be diversified in species and varied in stocking density, in order to expand the depth of view into the woodland, giving a more inviting and appealing landscape to engage the user experience. This could be achieved through the use of short to mid length rotation coppice, or in other areas, thinning can create open glades, with feathered edges used to highlight specimen trees.



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Pan Tod is the highest point in the Forest of Dean and much valued by local people. It is situated within extensive areas of Forest Waste that extend and nestle along the north and northeastern edge of The Forest. Management of Pan Tod is aided with the help of the friends of group.

Concept

Forest Waste plays an important part in generating structure to the forest edge, creating a rich diverse mosaic of different habitats that are all managed to different degrees, with Pan Tod being in the higher degree.

The mature Corsican Pine at Steam Mills planted in 1924, was identified in the 1990s as a “gateway to The Forest”. A few years later it was under planted with native broadleaves and Larch, and within features the old Hawkwell Mine coal tip. Poorer ground to the west consists heavily of old coal scree, creating a very skeletal soil.

Concept

Site will be retained and managed under Low Impact Silviculture (LIS), with the coal scree ground to the west being left as open habitat with targeted planting on the better ground.

The main landscape feature across the centre of the plan area is the ridge in Serridge. It runs east west, with maturing Beech dominating the skyline. The north side of the ridge primarily consists of Scots Pine and Douglas Fir planted in the 1960s and 1980s; the southern slopes being warmer, are primarily broadleaf from the 1940s, with some Larch and Pine mixed in.

Concept

Larch to the south will gradually be replaced with alternative conifer species. Recently felled areas on the northern side, will be restocked sympathetically, creating a more cohesive complex of open habitats and planted ground, using a mix of conifer and broadleaf. The large areas of Douglas Fir will be restructured using LIS, with ridesides being widened from Great God Meadow, along to Waterloo Screens pond. Areas of Hornbeam at Brierley will be bolstered by further plantings. Thinning the Beech along the main ridge should look to develop a more irregular structure, with opportunity for enrichment planting.

The Sculpture Trail utilises the woodlands within Kensley and Beechenhurst Enclosures. Artists will often link the rich cultural, social and economic tapestry of The Forest together through construction of their sculptures, supported by a location of their choice. As sculptures are decommissioned, some remain resolutely poignant to this day, e.g. Bois Mort.

Concept

Woodland will be sympathetically managed around the sculpture locations and this should include those that are decommissioned.

Mature conifer and Scots Pine line the road from Kensley Lodge to the Dilke, and thanks to being well thinned, is beginning to develop good structure, allowing natural regeneration of Douglas Fir, Western Hemlock and Scots Pine to be fostered. Below the Dilke, Napoleonic Oak take over and are reminiscent of the rich cultural heritage the Forest has to offer, and should be retained.

Concept

Thin to favour Douglas Fir, removing over mature Western Hemlock that suffers from butt rot, with younger cohorts of regen also being thinned to develop an open grown feel to the stand enhancing the Sense of Place.

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The plan area enjoys both large and small areas of Beech and Hornbeam that is particularly good for Hawfinch e.g. Great God Meadow and North Lodge.

Concept
Planting should be mindful to enhance habitat for Hawfinch, e.g. at the Delves, or through recruitment of regeneration e.g. Kensley

Hornbeam regen and coppice - Kensley



Photo showing an isolated 1 hectare area of rich and diverse open habitat at Foxes Bridge tip

Laymore Quag is a rich wet habitat supporting numerous species of Dragonfly and Damselfly along with Adder and Great Crested Newts.

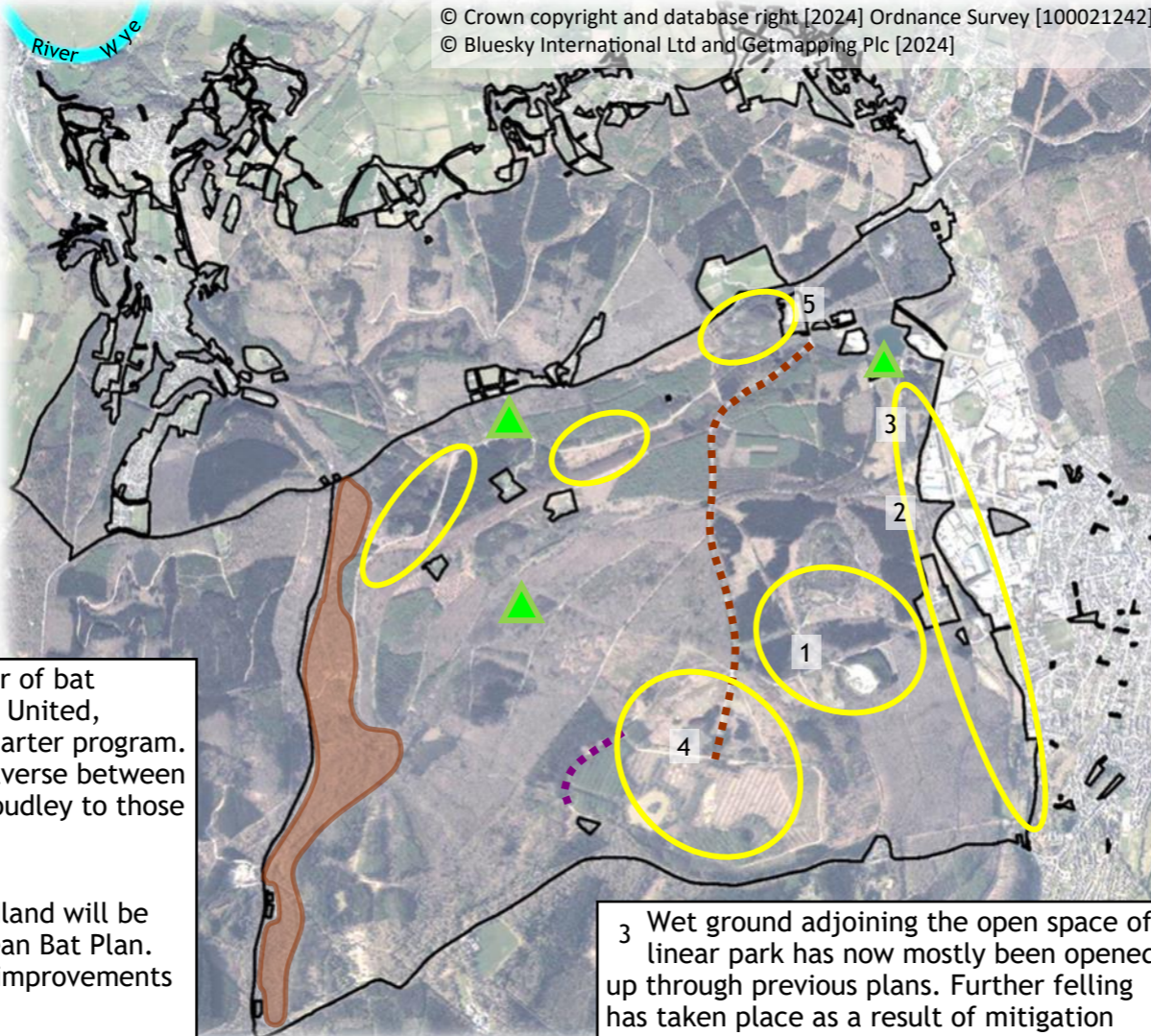
Concept
Site will be maintained with a view to improving the wetness of the site by decanalising or breaching the incoming and straight watercourse at the northern end of the site.

2

Cannop Valley runs along the Western edge of the plan area. The east side of the valley is within the plan area and is home to Cannop Brook, fed from streams and tributaries within Kensley and Beechenhurst inclosures. This area is not well frequented by people and is wet in places with mixed wet woodland species like Alder and Willow, with Oak, Hazel and Birch mixtures occurring on the drier ground. Some areas of Oak to the north of the valley around the Speculation area have already been heavily thinned, virtually to a Wood Pasture type setting, although a dense understory of birch has now become established.

Concept
Majority of the Oak will be managed through Minimum Intervention or Single Tree Selection. Understories of Birch within Wood Pasture at Speculation, and areas of Hazel further south along Cannop Brook can be coppiced in rotation, subject to protection measures. This will bring about a more varied habitat structure and diverse range species using the site.

Tributary of Cannop Brook in Kensley



The plan offers crucial habitat and refugia, with a number of bat hibernacula throughout the plan area, including Northern United, provided through mitigation work for Cinderford Northern Quarter program. The plan area provides vital links for bats to navigate and traverse between sites to the south at Oakenhill, Buckshaft, Bradley Hill and Soudley to those in the North at Wigpool Ironstone Mine.

Concept
Prescriptions will be sensitively selected to ensure that woodland will be carefully managed in line with EPS guidance and Forest of Dean Bat Plan. This ensures habitats are safeguarded including the planned improvements to the forest edge along ride sides.



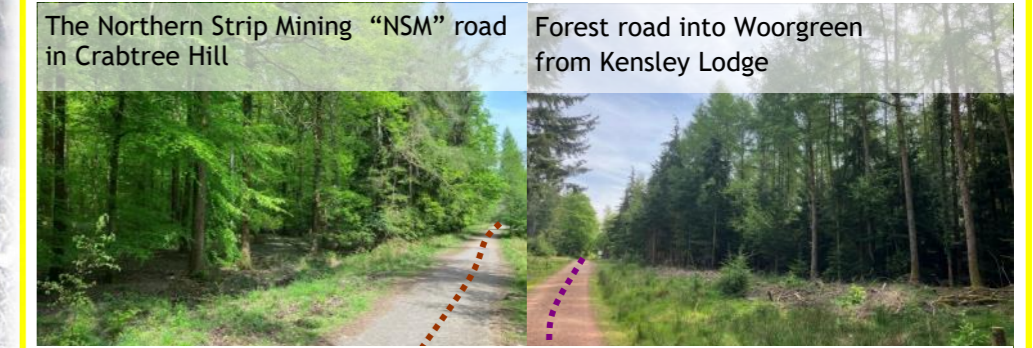
4 The consistency of open habitats varies from Lowland Heath at Woorgreen that contains heather, gorse, rough grasses, bracken and birch, to areas whose composition is of an acid grass and wetland, like at Linear Park or at the Delves which has a mix of these.

Concept
Management will sympathetically soften the hard edges of these habitats by additional conifer removal and thinning to further refine and develop feathered edges. Sites will be managed through grazing, mechanical methods, and the efforts of contractors and volunteers.

3 Wet ground adjoining the open space of linear park has now mostly been opened up through previous plans. Further felling has taken place as a result of mitigation work for Cinderford Northern Quarter Regeneration programme.

Concept
Mitigation felling of Norway Spruce at North Lodge has extended the open space at the northern end of the Linear Park upto the Brickworks. Now fenced and partially planted it is being grazed by a private grazier, complimenting the grazing at Woorgreen. The site will continue as mixed open habitat. Mature Scots Pine in the surrounding woodland will be retained.

Woodland composition of the plan area currently sits with a fairly even split of conifer and broadleaf, with just over 20% of open space, although open habitats are contained within 2 or 3 primary areas at Woorgreen, Linear Park and The Delves. Open habitats remain somewhat distinct and separated from each other. This could be explained by the monocultured nature of surrounding woodland, linked with an increased use of Low Impact management prescriptions. The effect on these habitats of being isolated is amplified, as the transitory nature of the woodland cycle, provided through clearfelling and restocking (that wildlife would otherwise enjoy), is reduced in quantity. However, due to the monoculture plantings of the C20th, many of the forest roads and rides such as the NSM road, lack diversity in their structure, both spatially and in species, with the gradation of woodland edge greatly reduced and often missing.




Photos above show the very mundane and monocultured nature of ride edges, often typical within this plan, stifling potential diversity, flow of species and therefore connectivity. - The Oak edge to the left will be heavily thinned and under planted with Hazel and other coppicable native species and on the right Western Hemlock and Larch felled and replaced with the same.

Concept
The connectivity of open habitats and spaces should be enhanced and linked with surrounding areas, with corridors reflecting the scale of adjacent woodland. Stronger, more robust corridors can be created by adopting the principles of a transient, graded woodland edge. By implementing this approach, we can create stronger, more robust corridors. This will improve permeability and flow between different habitat types, thereby linking and reducing the isolation and the disparate nature of primary open sites. This improved quality of woodland edge will be achieved through varying the intensity of thinning, adoption of coppicing, using felling, planting and/or recruitment of natural regeneration. Work can be done through forest operations or, realised through volunteer groups like the Dean Green Team, Gloucestershire Wildlife Trust or Butterfly Conservation. Secondly, phased clearfelling will still be programmed for other areas within the plan, at a pace that will try to account for the increase statutory fellings due to disease, both of which will provide further transitory habitat to compliment the improved quality of woodland edge.

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 Despite the high proportion of broadleaf woodland, Dormice have not been observed within the plan area. Equally, we can not assume their absence, and can only presume absence due to poor structure and less suitable habitat.

Concept
The planned creation of enhanced woodland edges and adoption of coppice will see an improvement in structure and diversity of tree species. This will increase availability of suitable habitat within the plan area.

6 The Beavers at Greathough Brook were released in 2018, with the first kits born in 2023. They are already having a dramatic effect on the landscape and the capacity for the site to holdback water during periods of wet weather.

Concept
7 Other areas such as the stream from Newham Bottom to Piano Corner, could have potential as possible future beaver habitat, once plan proposals have been implemented.

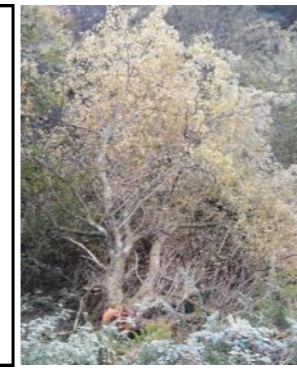


Photo left shows a mature willow felled by the Beavers at Greathough. Note how the crown of the tree has been left in tact. Eventually, all of this will be reduced into manageable sized pieces to be used in dam construction, Lodge construction and for food.

8 Adjacent woodland to the Speech House Oaks SSSI show similarities to those of the SSSI site itself.

Concept
The area will be managed sympathetically to stimulate the spread of Holly, promoting development of the oak woodland, and hopefully provide additional favourable habitat for some of the lichen population within the SSSI to spread and stabilise.



Some of the area already has had the conifer cleared and although some oak have died, this is an opportunity for the lichen to colonise and thrive.

 Goshawk are an iconic species for the Forest of Dean and have been very successful due to the diverse mix of mature conifer habitat.

Concept
Mature conifer habitats will be managed to ensure suitable habitat remains available for nesting and breeding.



The Plan area provides functionally linked habitat for the Wye Valley and Forest of Dean Bat Sites Special Area of Conservation, and the whole plan area is noted as crucial for the success of this species.

Concept
Changes to forest structure will be gradual and known flightline and foraging areas will be preserved. The intended operations will increase connectivity across the plan area and increase opportunities for foraging.

Areas of Forest Waste are an important feature and component of the wooded landscape, enhancing the distinctive character of the area mainly around peripheral edges of the woodlands and can provide habitat for the likes of adders, Glow-worms, other reptiles and invertebrates. Some areas are being lost to successional infill by gorse, bracken and pioneer tree species due to the lack of grazing since foot and mouth in 2001.

Concept
Some areas of Forest Waste should continue to be managed both through mechanical means and volunteer groups. There maybe opportunities to incorporate Forest Waste into larger open areas for grazing animals to manage.

The plan area is capable of producing high quality timber from both conifer and broadleaves, with both the Oak in Kensley, Douglas Fir from Astonbridge commanding high prices, although squirrels, boar and deer are a challenge.

Concept
The quality of the timber needs to be safeguarded from natural predation by the likes of squirrels. It is hoped that the successful reintroduction of Pine Martens in 2019 and 2021 will start to reduce the number of squirrels and their associated damage, however it will take time to reverse their impact, and could take 15-20 years or more. Fencing, tree shelters and lethal means will be used for other predators such as boar and deer.

Fallen trees, branches and crowns left intact on site provide a rich habitat for a wide variety of species that will change over time as the wood rots down.



Unlike standing deadwood that has longevity, fallen deadwood decomposes much more quickly meaning that different species groups are catered for, making the forest ecology system even richer.

Concept
Management will continue to accrue different varieties of deadwood to ensure the range of habitats is continually refreshed and remain topped up.

A wide variety of bird species has been recorded within the plan area and these include: Longeared Owl /Kingfisher /White throated dipper /Willow Tit /Haw Finch /Woodlark /Woodwarbler. Whilst butterfly and moth species including Dingy skipper, Grizzled Skipper, Pearl Bordered Fritillary, Wood White, White Admiral have been recorded in the past, it is thought numbers are dwindling and rare if not gone from the area altogether.

Concept
It is hoped that the proposed improvements to Forest edge, linking together and providing a more robust connection between open habitats, will provide enough favourable habitat for some of these lepidoptera to reappear, or stabilise and will certainly help with linking habitats suitable for Adder.

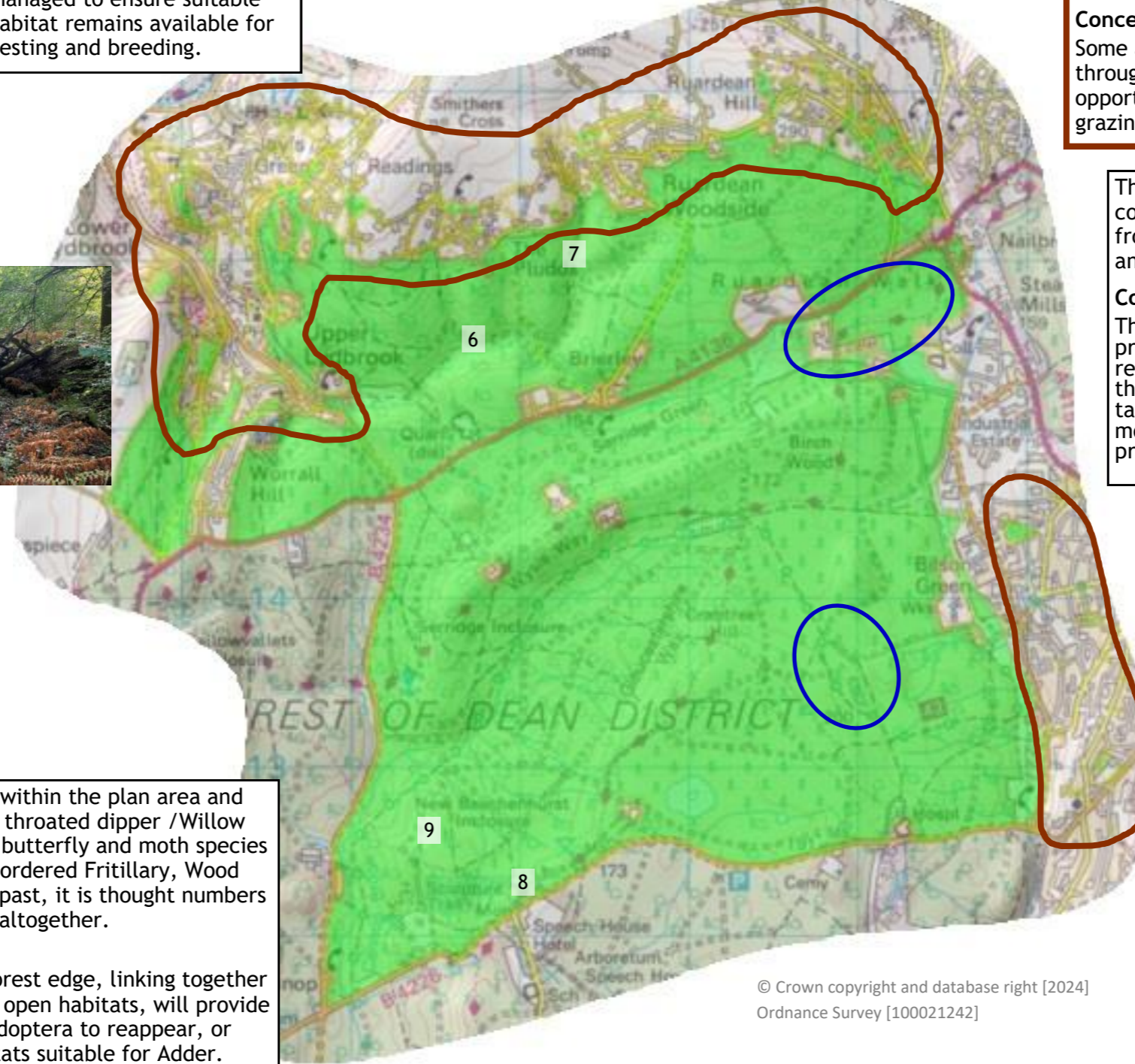


Photo left shows a Sweet Chestnut Coppice at Beechenhurst severely damaged by Squirrel. These tops will die off and eventually snap out. The end result is that timber value is severely impacted upon.

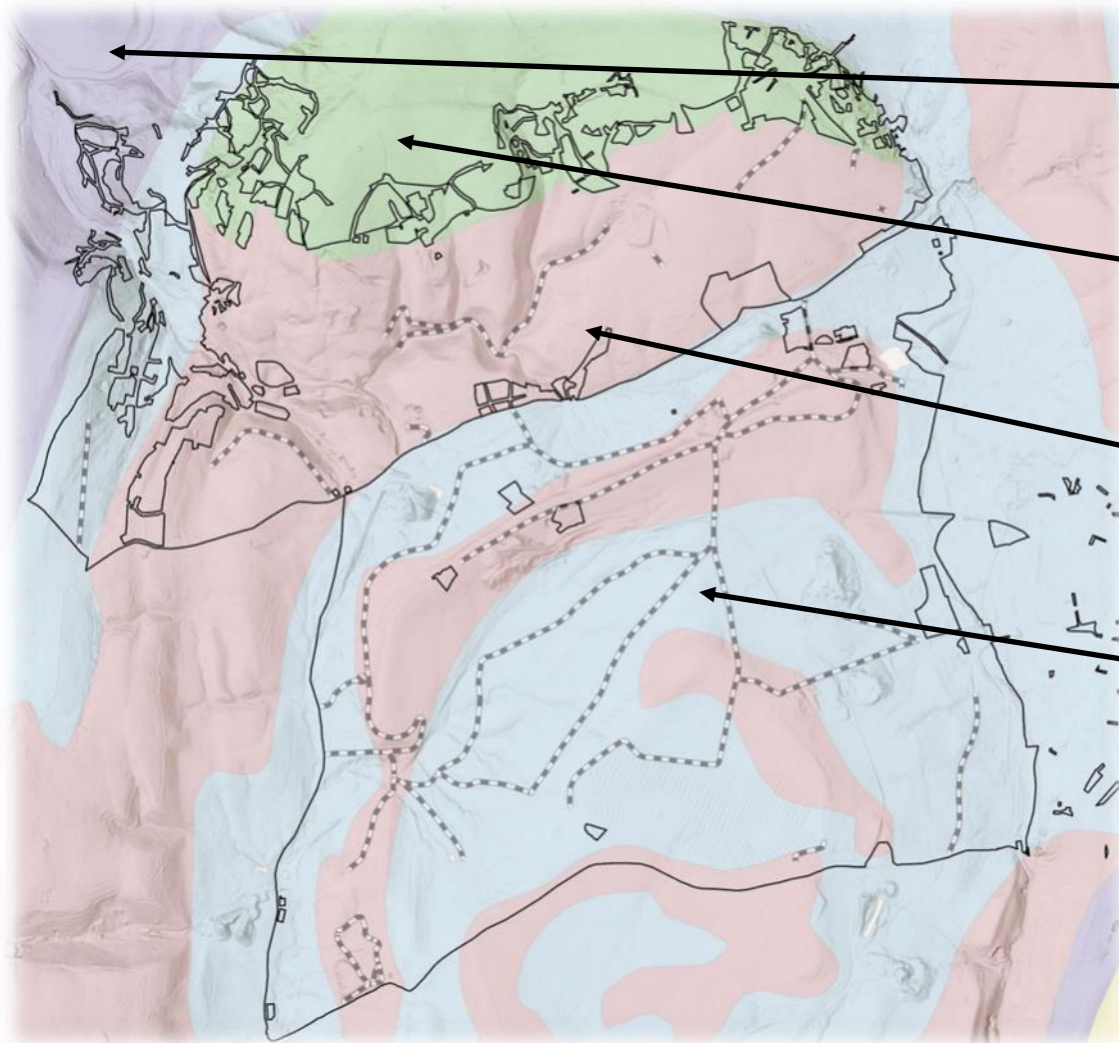
The adoption of broadleaf regeneration and some planting will continue, as any damage can be “stumped back” in the future and regrown, once the squirrel issue is redressed sufficiently through a mixture of methods.

Hawkwell and Foxes Bridge collieries. These old spoil heaps provide rich open habitats suitable for butterfly, moth and adder populations. However, these areas are generally isolated, fragmented and too small, with habitats being transitional in nature, so putting pressure on remaining populations of priority species.

Concept
Prescriptions will be tailored to enhance existing linkages and create new ones in order to provide better connectivity, functionality, diversity of habitat and woodland edge.

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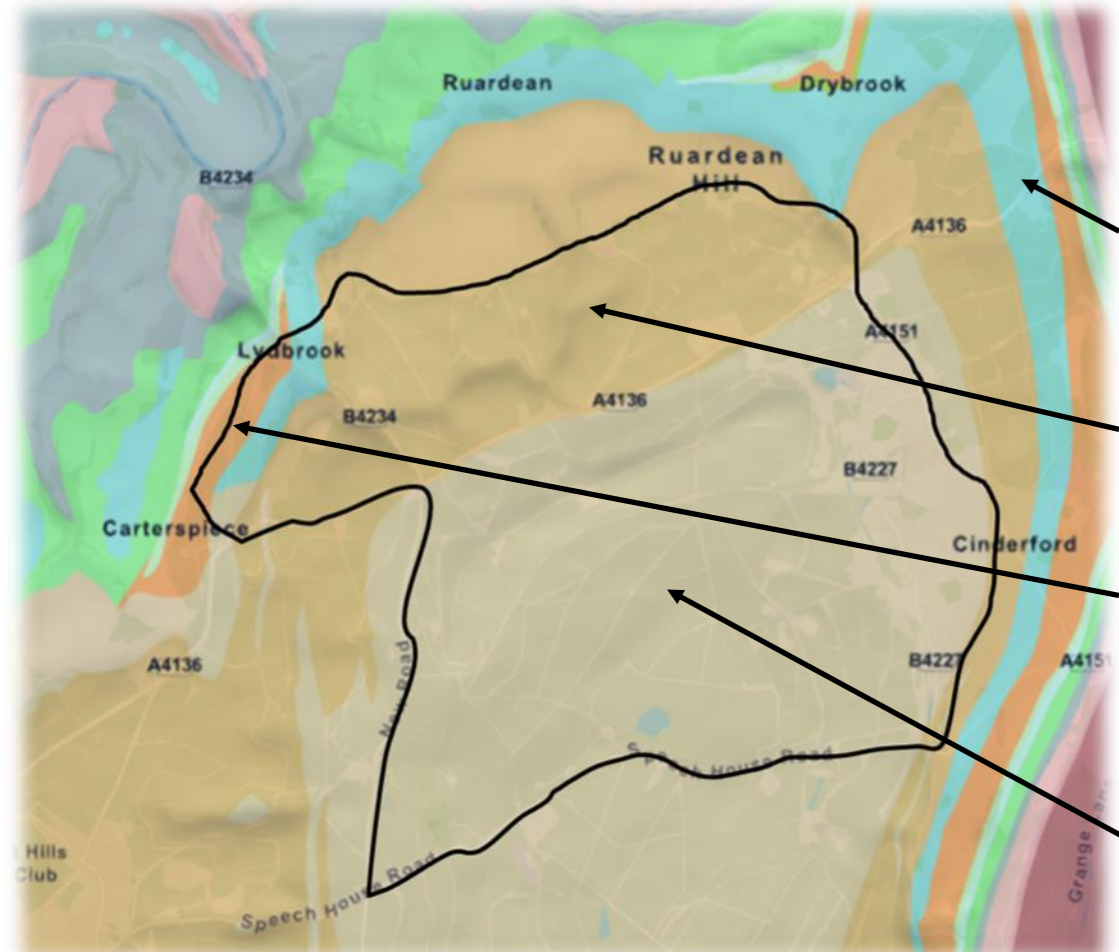
Shallow
Rendzina/Ranker

Agillic Brown (Gleyed) Earth

Podzolic Brown Earth
with some areas of Gley

Surface-Water Gleys

Bedrock Geology



Trenchard Formation - Mudstone and Sandstone. Sedimentary bedrock formed between 309.5 and 308 million years ago during the Carboniferous period

Coleford Member - Sandstone. Sedimentary bedrock formed between 309.5 and 308 million years ago during the Carboniferous period.

Cromhall Sandstone Formation - Sandstone. Sedimentary bedrock formed between 344.5 and 329 million years ago during the Carboniferous period.

Cinderford Member - Mudstone, Siltstone and Sandstone. Sedimentary bedrock formed between 309.5 and 302 million years ago during the Carboniferous period.

Average rainfall 870-1060mm, with Conifer upto Yield Class (YC) 24 on better sites but as low as YC10 on poorer sites, and expect YC 8 to YC 4 for Broadleaves across the plan area.

Crabtree Hill - A shallow domed plateau lying between the upper part of the Cannop Valley in the West and Cinderford Brook in the East. Predominantly moderately fertile clay loams that are capable of supporting production of quality broadleaves. In areas around previous coal mining sites at Beechenhurst, Foxes Bridge and Crump Meadow, the spoil areas consist of heavy clays. Acidic brown earths and podzols are found around Crabtree Hill and Beechenhurst, associated with underlying sandstone geology. Heavier gleys can be found to the south of Crabtree Hill around Woorgreen.

Bedrock is Carboniferous Mudstones/Siltstones and Sandstones.

Serridge - As the name suggests, is a ridge peaking at 205m asl, that runs east-west denoting the “strike” of the coal measures of the Dean mineral basin. Gley soils prevail across much of the site with areas of acidic brown earth found on the upper parts of the ridge. And in areas where mineral exploitation has taken place, soils are often low nutrient heavy clays, restricting species choice.

Bedrock is Carboniferous Mudstones/Siltstones and Sandstones.

Astonbridge - Overall aspect is a southern one. Soils generally derived from sandstone, with limestone just coming within the north western corner of the area. Acid Brown earth dominate northern slopes and the higher ground within Astonbridge. On the lower valley slopes soil gives way to heavy clay loams. Well drained nature of soils make sites relatively dry with wetter sites on the lower slopes and valley bottoms.

Bedrock Carboniferous Sandstones.

Concept

With the use of local knowledge in conjunction with Ecological Site Classification (ESC) tools and where appropriate soil pits, the future woodland structure will move away from monocultures, continuing to diversify what is already a diverse woodland. Composition will include those species classed as “Alternative” or “Emerging” that will give the woodland a more robust composition suitable to face a changing climate, threats of pests and disease and increased fire risk.

The Industrial past of the Forest has led to some areas of poorer, more impoverished and sometimes skeletal soils. Eg the strip mining in Woorgreen, and mining at Hawkwell and Northern United.

Concept

Following completion of quarrying, sites are restored but are often left open due to being acidic in nature or having a low nutrient value, although species such as alder, birch and pine are good pioneering species for these types of sites.

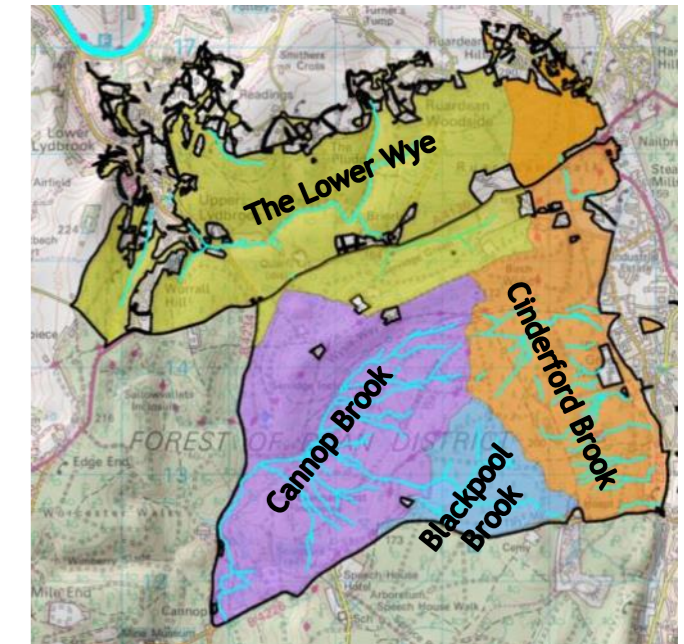
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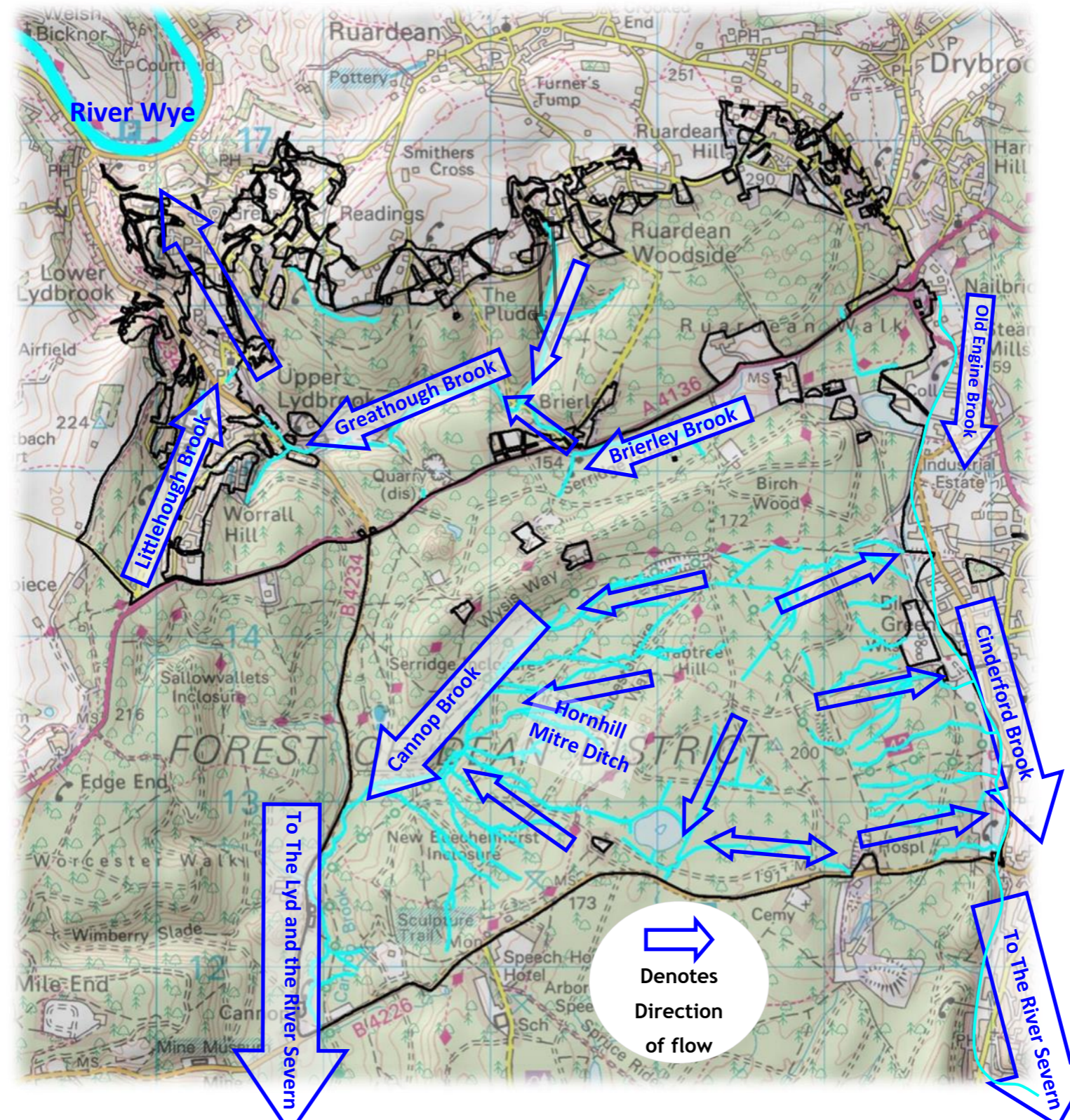
Water catchments within the Forest Plan

The map below denotes the four water catchments covering the Forest Plan area as identified in the Environment Agency’s Water Framework Directive. The main watercourses involved can be seen in more detail on the map to the left.



Catchment	Catchment area (square miles)	
	Total area	In plan
Cannop Brook	22.5	1.90
Cinderford Brook	10.6	1.72
Blackpool Brook	6.5	0.45
The lower Wye	42.8	2.65

Concept
The Forest Plan coupled with Our Shared Forest and the Forest Waters Project, will look for ways in which to harmonise forest management prescriptions with the character of freshwater ecology within the plan area. This will ensure natural features, processes and habitats are delivered that will provide protection from natural hazards such as flooding, soil erosion and help in protecting the needs of aquatic species. To achieve this the plan will embrace the principles laid out in UK Forest Standard Guidelines for Water.



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The image below is taken from the Dasgupta Review of 2019 (HM Treasury) and calls for changes in how we think, act and measure economic success to protect and enhance our prosperity and the natural world.

Forestry England has embraced the [natural capital approach](#) and increasing Natural Capital is one of Forestry England’s core objectives.



Concept

This Forest Plan will seek to identify those watercourses in need of priority treatment in order that their biological and ecological values are greatly enhanced, achieved by following key guidance for riparian buffers laid out in the Catchment Management Plans prepared by the Forest Waters Manager and the District Ecologist.

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The areas of Douglas Fir and Western Hemlock that run from Newham Bottom to Piano Corner are densely stocked, and their proximity to the brook is not in keeping with water guidelines. Originally, the broadleaf either side of the brook was to be felled, but this has not happened yet. The brook eventually flows into Greathough Brook.



Concept

Retain the broadleaf on either side of the brook, and instead restructure the valley so that, following removal of conifer, the brook enjoys a robust corridor of native broadleaves, that will marry with the broadleaves towards the bottom of the valley.

Water drains from Wareslade and Astonbridgehill Inclosure in a westerly direction down to Lydbrook.

Concept

Beavers were released in Greathough Brook in 2018 to help natural processes re-establish themselves within the riparian area of Greathough, and in doing so helping to increase the water retention capacity within the woodland, slowing and smoothing the flow of water downstream. In the future there could be potential for more releases to be planned elsewhere within the plan area.



The headwaters of Cannop Brook emanate from the central part of the plan area, from within Kensley Inclosure, flowing to the westerly boundary, before heading southerly to Cannop Cross Roads and on into Cannop Ponds. Some streams are seasonal and some disappear before reappearing further downstream.

Concept

Introduction of woody debris will be employed to help stabilise, smooth and slow water flows, meaning woodland soils should not dry out so quickly during prolonged periods of dry weather.

Cannop Brook flows much faster here, being broader and more firmly established, the landscape has been heavily influenced and modified both through natural process, as well as through built infrastructure that has canalised parts in an attempt to prevent water from draining into underground workings.

Concept

It is hoped that in time, through various measures, Cannop Brook can become more naturalised through natural processes.

Watercourse with modified sections that used to feed the Old Mill above the Old Vicarage. Has wet woodland and a dry waterfall that has been bypassed.

Concept

Consider rewetting and reinstating waterfall.

Steam Mills Lake, site of Wights opencast and settling ponds, closed in 1969.

Concept

Site will continue to be enjoyed for fishing and surrounding area for amenity use.

Area of valuable wet woodland including deadwood habitat on the edge of Linear Park and adjacent to the old Hawkwell mine.

Concept

Retain feature as it is, and encourage site potential for water holding.

Brierley Brook, an entrenched watercourse capable of heavy water flow. Surrounding woodland has just been felled due to disease.

Concept

Open habitat will increase when site is replanted with introduction of woody debris employed in the brook to slow the flow and improve habitat.

Woogreens is a Key Wildlife Area that was opencast for coal in the late 1970s to early 80s. The lake was then created and together with its margins, were designated a local nature reserve and is managed by Gloucestershire Wildlife Trust (GWT). The remainder of the opencast was restored to woodland, and the site heavily drained as the ground was greatly disturbed and compacted, with the area adjacent to the lake prepared through “rig and furrow”. The ground is acidic and the Corsican Pine and Norway Spruce was performing poorly. In the late 1990s, it was decided to fell the site, returning the area to lowland heathland, with ponds and scrapes installed within the furrows as part of the Million Ponds project, that was funded by Biffaward and run by the Fresh Water Habitat Trust. Mallards Pike was also created thanks to the Woogreen opencast project.

Concept

The area will continue to be managed by GWT, with coppicing being introduced, further diversifying the variety of habitat, within areas of mature Alder. The area of Larch to the west will gradually be felled and replanted with native broadleaves that will then be managed as coppice using wet woodland species such as Alder and Willow.

An old canal system that brought coke and fed water to the old Cinderford Iron Works, closed in 1894, now known as Linear Park. The site currently features a cycling trail that runs along a former tramway, either side of which there is open habitat, including a series of ponds, and this is all that is left of the old canal.

Concept

The site managed for its conservation potential, enhancing the natural capital of the site and whilst heavily developed/modified, extensive areas of diverse semi-natural habitat, particularly grasslands and ponds remain, and is one of the most important areas for biodiversity in the Forest of Dean, with improvements being made in partnership with Severn Rivers Trust.

A Complex area, with heavily modified sections. Old Engine Brook is a straight leat carrying water quickly downstream, bypassing Steam Mills Lake, meaning this stretch and further downstream are very “flashy” in their nature following periods of heavy or prolonged rain.

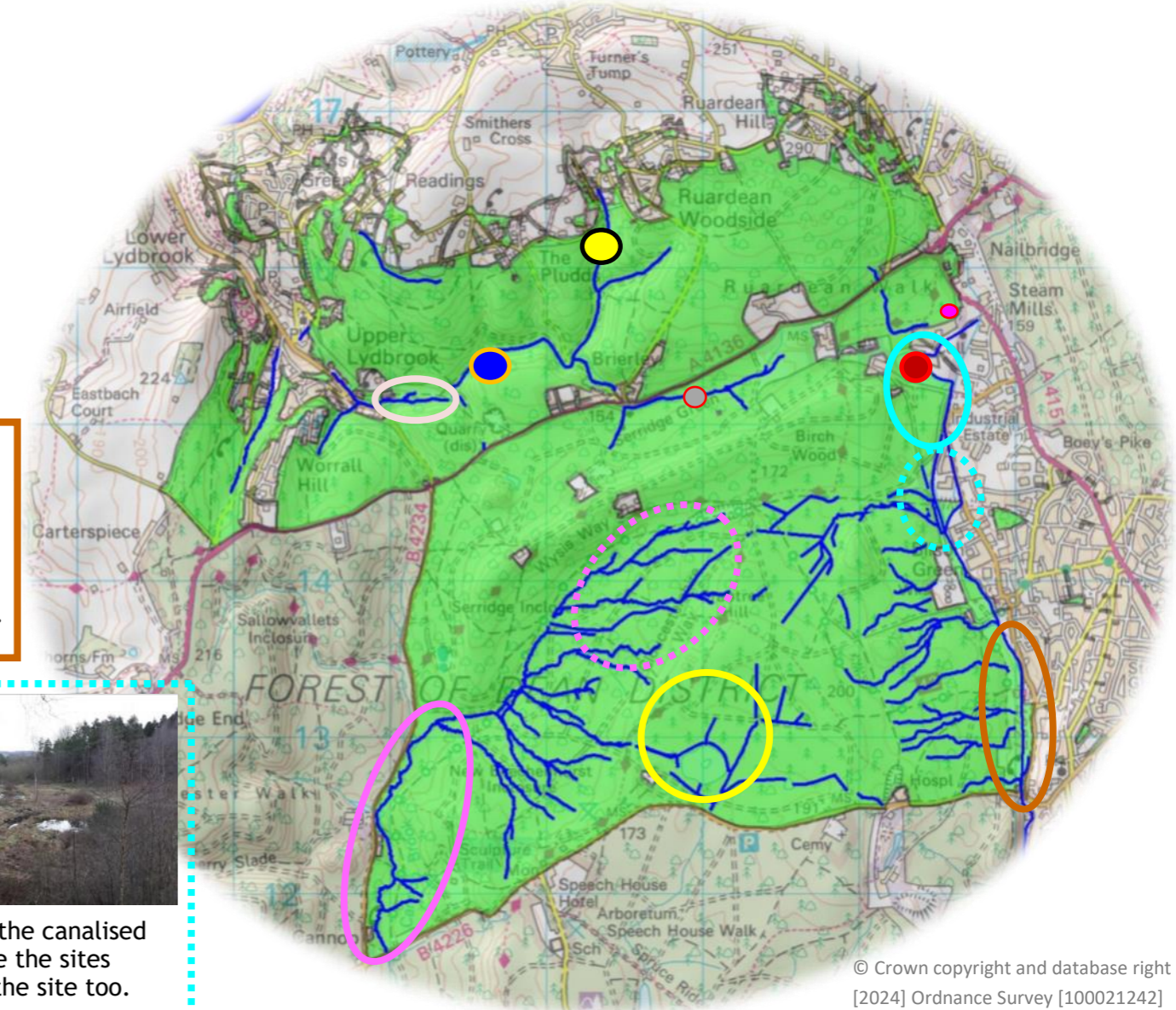
Concept

Various techniques and methods are being looked at to alleviate flooding potential. In partnership with Severn Rivers Trust and Severn Trent, Forestry England have carried out several ecological enhancement projects along Old Engine Brook and Cinderford Brook.

Laymore Quag is an area of open wetland, with a series of ponds and a canalised watercourse along its western edge. The site has potential to increase its capacity as a wetland, sitting in a key location for slowing the flow and holding water back following periods of heavy or prolonged rain.

Concept

Further fieldwork is required to ascertain the extent of which the canalised watercourse can be re-naturalised, that would further increase the sites holding capacity for water, increasing the ecological value of the site too.



The industrial past of the Dean has left a legacy of features that provide opportunities for local recreation and education as well as recording cultural identity. Examples include:

- Opencast sites such as those at Woorgreen, hint at their past - are now a haven for wildlife and enjoyed by many visitors.
- Extensive networks of dismantled railways - now used as informal footpaths and also more formally converted for cycling.
- Colliery tips such as those at Northern United and Crump Meadow - have now been planted, usually with Scots Pine that become features of the Forest.

Concept

Each of these features in turn requires their own specific prescriptions, often relating to ensuring the quality of the landscape is maintained through sensitive management. This can take the shape of maintaining the mature Scots Pine that grow alongside the Colliers Trail (was Family Cycle Trail), running through Crabtree Hill and Serridge - it means creating an interesting and diverse woodland edge with varying tree species and density, mixed with areas of open space giving vistas into the forest within.

“Coal measure giants” sculpture in Kensley looks at the relationship of the geological [rocks trees, and iron] matched to the technical expertise of bringing minerals to the surface.



Sculpture Trail - “Coal Measure Giants”

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Many of the ponds that the plan area enjoys were created following quarrying activity. Ponds provide numerous benefits for education, recreation, habitat and species diversity.

Concept

Management will reflect the high aesthetic value given to the ponds, the expectation that mature trees will be present, as well as the needs of the associated habitats and their surroundings.



Woorgreen



Crabtree Hill

The photo shows what remains of part of the old Great Kensley enclosure demarcated by an earthbank. Once a stone wall that used to enclose the area for purposes of growing trees and keeping sheep out, it was dismantled in the mid 1800s as a result of the Warren James riots of 1832. The stone used in the walls was dressed and sold per linear meter for building houses.

Iron markers, like this boundary marker were used to mark the “boundary of administration” for the Forester in Charge of a certain area, whilst Forest Lodges had a stone marked “ARP” built into the wall. This is an old English measurement of land [acres, rod and perches] and the ARP stone identified the area of the enclosure for that boundary using this measurement.

Concept

These remnant enclosure walls and iron boundary markers will be retained and protected from damage during forest operations.



Crabtree Hill

Gale Stone no 85 marks the corner of the Rose in Hand Gale in Kensley Enclosure, worked by Great Western Collieries co.

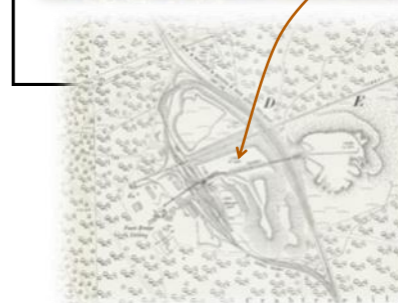


Kensley

Physical remains of historic industry are readily visible in the landscape, from old colliery tips, to old railway embankments and the disused railway and tramway network. These features now are being reappropriated whether its planting trees, waymarked trails or for open habitats and better connecting the ecology of the area.

Concept

These kinds of features will continue to be better integrated into the management of the Forest, helping to adapt the landscape and woodland to future demands and challenges, from climate change and the biodiversity crisis, to supporting the physical and mental wellbeing of local communities and woodland users.



Old Beam engine rediscovered in 2010 at Foxes Bridge Colliery before the site was levelled, now open habitat.



Disused Railway embankment at Laymore Quag, part of Great Western Line, now a good vantage point of the wetland habitats.

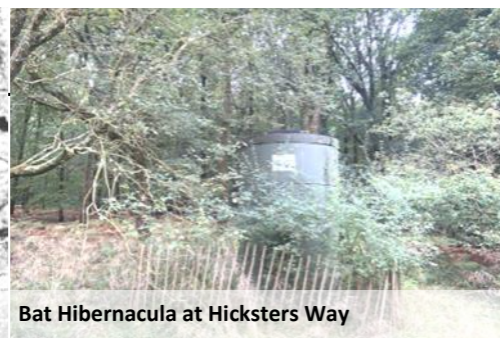
The majority of this plan area has historically been an area of intense industrial activity, especially for coal and stone. Leaving a rich legacy of industrial archaeology, with some industrial activity continuing today. Wildlife has taken advantage, with the area now known for Horseshoe Bats, with a number of bat hibernacula being present in the old mining buildings and more recently artificial ones.

Concept

Management will be sensitive, ensuring bat habitats are maintained through the site planning process, and mining features that are of benefit to bats safeguarded, complementing the Wye Valley and Forest of Dean Bat Sites Special Area of conservation.



Horseshoe Bats



Bat Hibernacula at Hicksters Way

Mining and quarrying in the Forest remains an important part of The Forest economy and continuity with its past. Features include: Northern United, Trafalgar colliery, Foxes Bridge colliery, and Crump Meadow colliery, The Delves, Woorgreen, Strip and at it, and Beechenhurst (formerly part of Speech House colliery). Old sites are now often an important part of the landscape with mature mixed woodland covering them e.g. Waterloo Screens, that also impart a valuable variety of habitat from wet woodlands at Woorgreen and Laymore Quag - for birds, reptiles, lepidoptera and odonata - to Foxes Bridge and Northern United that provides valuable acidic grassland and heath habitat.

Concept

Sites will be managed in accordance to their needs, to retain/enhance their beneficial character to society, nature and economy.



Hawkwell tip

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● Showing four examples of stone and concrete lined structures in the plan area, (x2 at each location on the map), where leats and culverts historically played important roles in managing and controlling water flow during the Forests industrial past. This may have been simply to pass water under a road, track or in more complex ways, such as trying to prevent entry of water into underground mines. Some features still provide functionality, while some now lie dilapidated, falling partially or completely out of use.



Concept

These heritage features serve as a marker of the skilful engineering and quality of workmanship during the industrial era of The Forest. Features will be protected and preferably avoided during forest operations; whilst in order to enhance the ecological potential of the land, others may be altered or removed to facilitate or reinstate natural processes. - This is part of the Water Catchment Project, headed up by the Water Projects Manager.



Mireystock Tunnel & bridge built in 1882, connected the Severn and Wye line with Great Westerns network at Lydbrook. Closed in 1960.



Concept

The tunnel and bridge will continue to bring visitors by foot and bike. In the past it was proposed to open the tunnel for the cycle trail, bypassing the main A4136 road crossing.

A Spring on the side of the main A4136 Coleford to Cinderford road is locally known as Stay and Drink, with the concrete structure marked with a date of 1936.



Concept

The site is adjacent to The Delves and being surrounded by native woodland, management will retain its native character.

Trafalgar Arch spans the Severn and Wye Railway, built in 1878, reputedly for the purpose of tipping spoil on the other side of the line, and helps brace the retaining wall for the spoil heap of Trafalgar Colliery. The arch was renovated in 2001.



Concept

The arch will remain a key structural and landscape feature, continuing to help retain the spoil heaps of the old colliery.

Iron inclosure marker from 1896 at Whitegate, marks the re establishment of much larger enclosures for growing of oak, with conifer first planted in 1896 within the Dean, but within this plan area not till 1900, when roughly 2 hectares of European Larch at Speech House was planted.



Concept

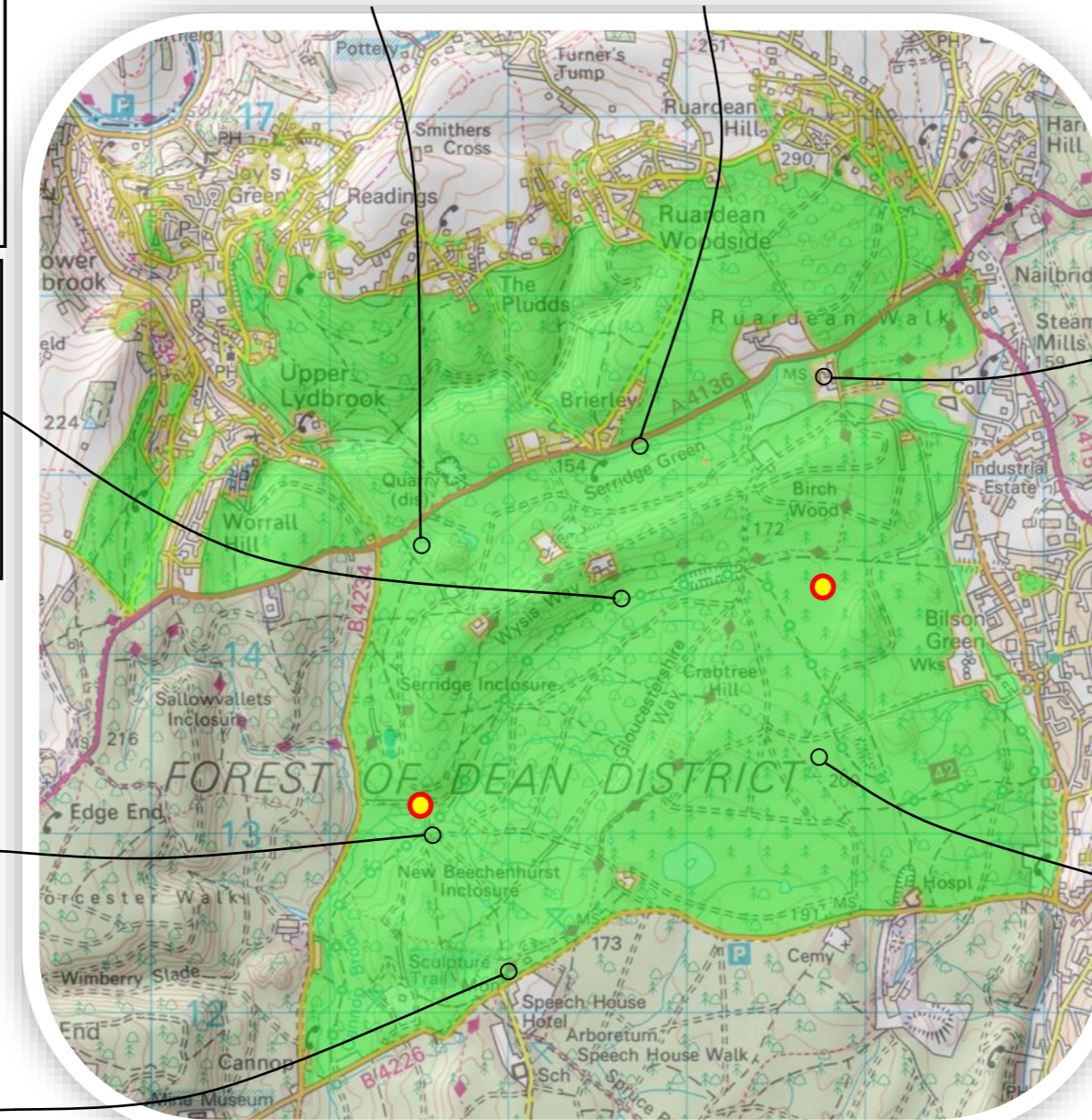
Any markers will be kept in situ. Fencing will remain an important tool for establishment of crops approved through the enclosure commissioners.

The Bledisloe Obelisk is circa 18th Century. It is a listed building, marking the centre of The Forest and can be found opposite the Speech House hotel. In the background one can see an Oak tree planted by HRH Earl & Countess of Wessex in 2014, and was formatively pruned in 2023.



Concept

Will be managed through the Conservation statement prepared in December 2023.



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Northern United colliery, site of the last deep mine in The Forest, mined the Coleford High Delf seam and was opened in May 1933, closing on Christmas day 1965. The old pit bath buildings still survive, and a memorial was built on the site of one of the main shafts. The old colliery tip was planted with Corsican Pine in 1969. The site was part of the Cinderford Northern Quarter (NQ) regeneration plan.



Concept

While some of the objectives and aims of the NQ project have yet to be met, use of the site was one of the keys to the success of building the new Gloucestershire College, meanwhile the old pit buildings continue to provide good refuge for populations of Horseshoe bat that use the site.

Foxes Bridge Colliery opened 1869, is one of the biggest collieries of the Dean. It joined with Lightmoor and Trafalgar in 1919 for purposes of flood prevention, before closure in 1930 due to pumps being turned off.



Concept

The site will extend and enhance the open habitat found at the Woorgreen lowland heathland site.

There are numerous non-scheduled features that are important to the heritage of the Dean, including charcoal hearths, scowles, wood/earth banks, and sunken tracks known as holloways.

Concept

The planning of Forest Operations will refer to and consider features captured on GIS, with any new features recorded appropriately for future knowledge.

The plan area contains numerous Forest Lodges that would have once belonged to The Crown, although all are now in private ownership. Most sit nestled within a woodland context. (For their location see Trees and Woodlands and Community & Recreation Concept and Analysis pages)

Concept

Forest management and operations should be sensitive to the context of the Lodges.

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Recreational use of the area is high, with the most frequented car parks at Beechenhurst, Speech House Woodlands, Linear Park and Speculation, as well as numerous informal car parks. The woods are used by walkers, horse riders, cyclists and mountain bikers, with an ever increasing appetite for downhill & cross country routes, with pressure to also increase horse riding facilities. These users are supported by a network of Public Rights of Way, permissive routes and formal Forest Trails.

Concept

Whether the person is a local or a visitor, the woodlands, trees, associated habitats and species provide the foundation for Recreational enjoyment of The Forest. The Forest Plan prescriptions should be sympathetic to enhance user experience, aiming to enrich the aesthetic appearances of the woodlands within a local and wider landscape context.

Visitors per year

Beechenhurst	350-400k
Speech House Hotel	c 30-50k

- * Other facilities**
- Speculation/ Waterloo Screens/ Delves/ Hangerberry/ Hawsley/ Piano Corner/ Baptists Way/ Hawkwell/ Northern United/ Woorgreen Cottages/ Woorgreen

- Beechenhurst
- Speech House Hotel
- Most frequented carparking
- Secondary & minor carparking

The plan area enjoys a multitude of recreational activities and events, mostly based at Beechenhurst that include Go-Ape and outdoor pursuits. Elsewhere others may include: fishing, horse and carriage rides, husky training, orienteering, running and motor sports.

Concept

Whilst there are currently no major recreational developments planned, some sites may require forethought in the provision of additional car parking that may influence management prescriptions.

From various vantage points throughout the plan area, one can appreciate the fantastic views of the surrounding Gloucestershire and wider countryside, especially those from the beacon at Pan Tod. Internally within the woodlands there are also a diverse range of landscapes one can enjoy, especially from top of Crabtree Hill, from along the ridge at Serridge and above Beechenhurst, that command views over the plan area and surrounding forest. Along with the open habitats at Crabtree Hill and Linear Park where the internal landscape is more intimate, and areas of Forest Waste like those at Hawsley and Lydbrook are more complex.

Concept

The plan will look to maintain and improve these landscapes and view points through plan prescriptions. Thinning operations should also identify and consider opportunities for enhancing both the existing internal and external views, or even possibilities of creating new vistas.

180° view

The Dilke Hospital has a special and important place in the heart of local people that enjoys the woodland setting, bringing a “Sense of Place” to the site that The Crematorium also enjoys.

Concept

The Forest Plan will recognise the “Sense of Place” that makes both sites so special. The plan will look to preserve/enhance the features that make it so. Carefully planned operations, use of appropriate Silvicultural techniques and consideration of under-planting, will provide future species/structural diversity along with resilience, helping safeguard the “Sense of Place”.

Dilke Hospital

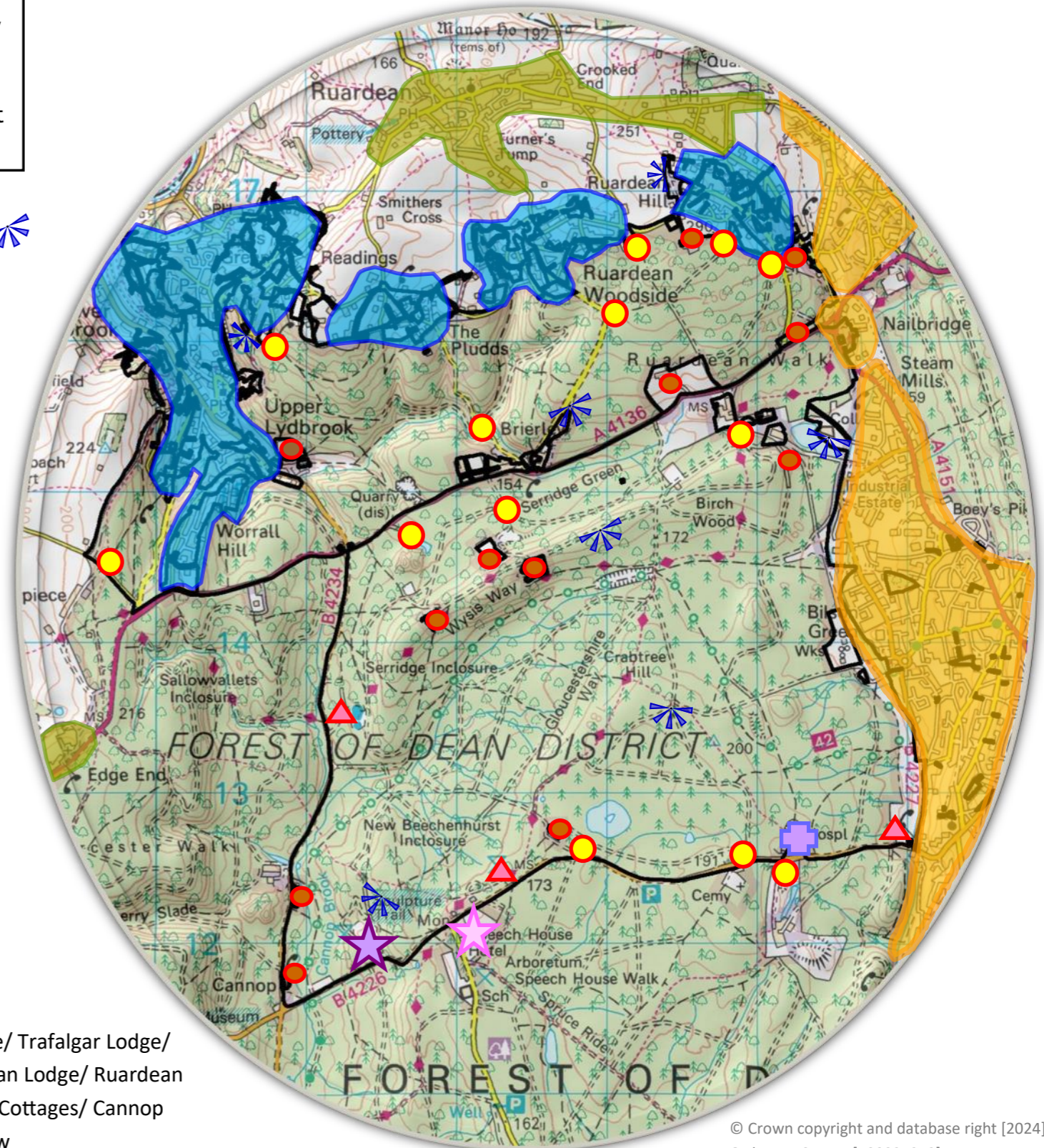
The woodlands within this plan area have a high degree of interconnectivity with the villages and towns of The Forest. These include the “Forest Lodges” and clusters of homes set within the woods themselves.

Concept

The plan will recognise special features of the woodlands that make the interconnectivity to the integrated villages and communities of The Forest so special. In doing so prescriptions will be sensitive to these features, and operations to implement the plan will look to safeguard and enhance them. Eg veteran/ancient oaks around Speech House, the Native broadleaf dominated characteristics of New Road at Speculation, various stands of Scots pine, the developing well thinned medium Douglas Fir and Red Cedar in Kensley and Beechenhurst or the Copper Beech at Brierley.

- Main Towns
- Main Villages
- Near by Villages

- Kensley Lodge/ Serridge Lodge/ Trafalgar Lodge/ North Lodge/ Herberts Lodge/ Arran Lodge/ Ruardean Hill Lodge/ Puzzle House/ Cannop Cottages/ Cannop Villas/ Old Vicarage/ Hawkwell Row



Woodland Composition

The forests structural diversity is modest, benefiting from the varied landform that adds complexity to the structural texture of the forest (Especially the case in Astonbridge). Meanwhile, the range of species is relatively limited. Broadleaves total 772Ha, and notably, Oak constitutes a third of all broadleaf species and is dominant in the landscape, with a quarter of the Oak planted prior to 1850, and a further quarter planted over the period of WW1 and 2. Yet from 1960 onwards planting of Oak slowed to almost nothing. The proportion of Oak is also surprisingly within 1% of matching that of the total evergreen conifer content, which spans 298Ha. However, the majority of broadleaf planting took place between the decades of 1940 through to 2000, peaking in the 1950s.

Total conifer accounts for 543Ha, occurring typically north to south along the west and eastern sides of the plan area. Planting started as early as 1900 with a few hectares of Larch, in mixture with Oak, in the vicinity of the Bledisloe Obelisk area of Speech House. Figures climb rapidly to around 60-70Ha in the 1950s when Norway Spruce accounted for a quarter of conifer planted. Conifer peaked at 140Ha in 1960s with Western Hemlock, Norway Spruce and Douglas Fir accounting for two thirds. Since then, planting of conifer has reduced to around 10Ha, with diversity of newer planting including species such as Coastal Redwood, Wellingtonia and Japanese Red cedar.

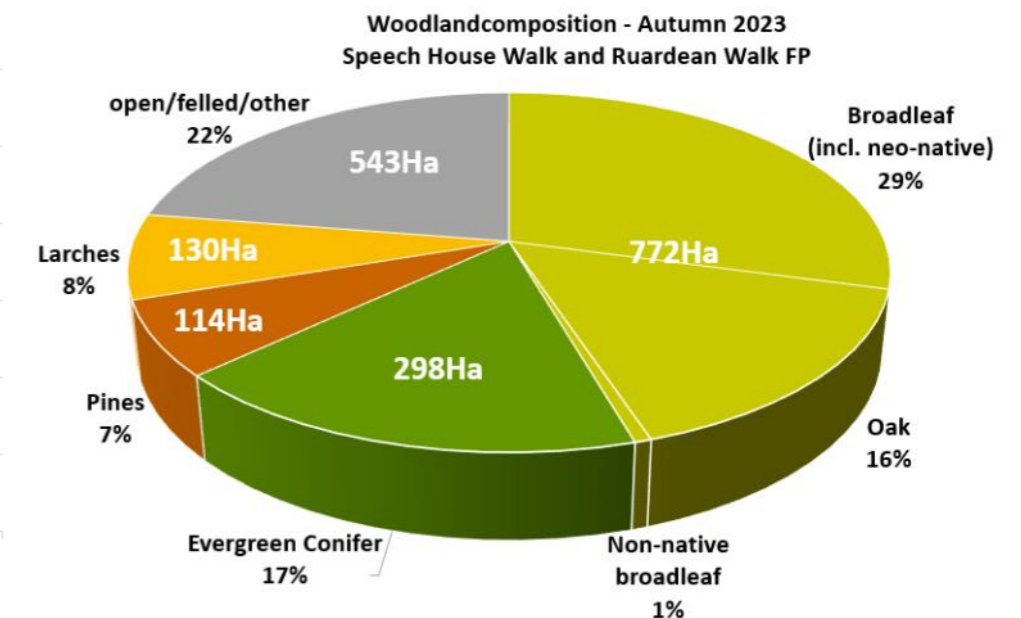
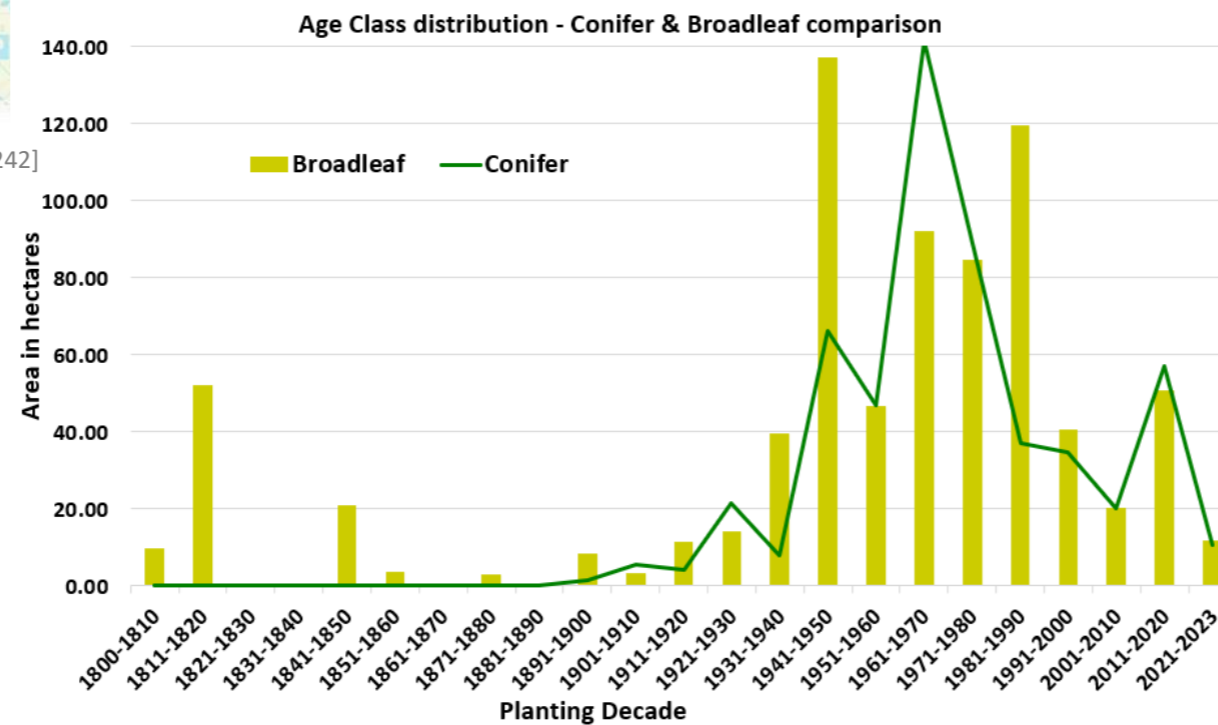
Restructuring of conifer crops began in the early 1990s with the planting of Douglas fir, Larches and Corsican Pine. It was the start of breaking up the monocultures, adding structure and evening out timber streams from the murer crops, although there still remains a prevalence of stands planted in the 1960s and 1980s. Old coal tips were planted with Corsican and Scots Pine, that remain features of the landscape to this day. Indeed, a lot of the Larch, Corsican Pine and Norway Spruce was established at Woorgreens, reinstating the open cast that finished in 1983. Now felled, the site is managed for open habitats, including Lowland Heath and Wet Woodland. Open habitats also occur along the eastern edge of the plan area, including an old canal system that fed old Cinderford iron works. Closing in 1894, the old canal system, now known as Linear Park, has both a huge conservation value and is also enjoyed and well frequented for recreational purposes.



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Legend

- Evergreen Conifer
- Other conifer
- Pines
- Other Pines
- Larches
- Oak
- Native and naturalised broadleaves
- Non-native broadleaves
- Open/other



Woodland Naturalness

Naturalness is a measure to show native canopy cover of a woodland or forest. It is given as the percentage of site native tree species in a given area, and can be used to record and monitor the condition and restoration of Ancient Woodland Sites previously planted with non-native species.

The Forest of Dean is one of England's oldest forests having a rich industrial history. In past times this saw The Forest's timber and mineral resources utilised and exploited to the extreme, with clearfelling and open space¹ being common place. It is the subsequent replanting and habitat management undertaken, coupled with the interplay of the Forests hugely diverse topography and soils, that has given the Forest of Dean the rich diversity of tree species and habitats we enjoy today.

The Ancient character of the Dean is recognised as an important aspect of the Forest. Past Forest Planning has sought to increase the ratio of broadleaf to conifer within the Forest of Dean as a whole. This Plan will continue to honour that commitment², working towards an initial aspiration of 60:40 broadleaf to conifer. This would include an increase from 22% open space to around 25%. Linked with Our Shared Forest, plan proposals will work to improve and enhance other features associated with semi natural woodland, such as wet woodland, priority riparian areas and areas of heathland/open forest, creating better connectivity of habitats and native species. In doing so, this will offer a much more holistic consideration to the restoration of semi natural woodland, rather than just considering native tree species, i.e. naturalness condition or scoring.

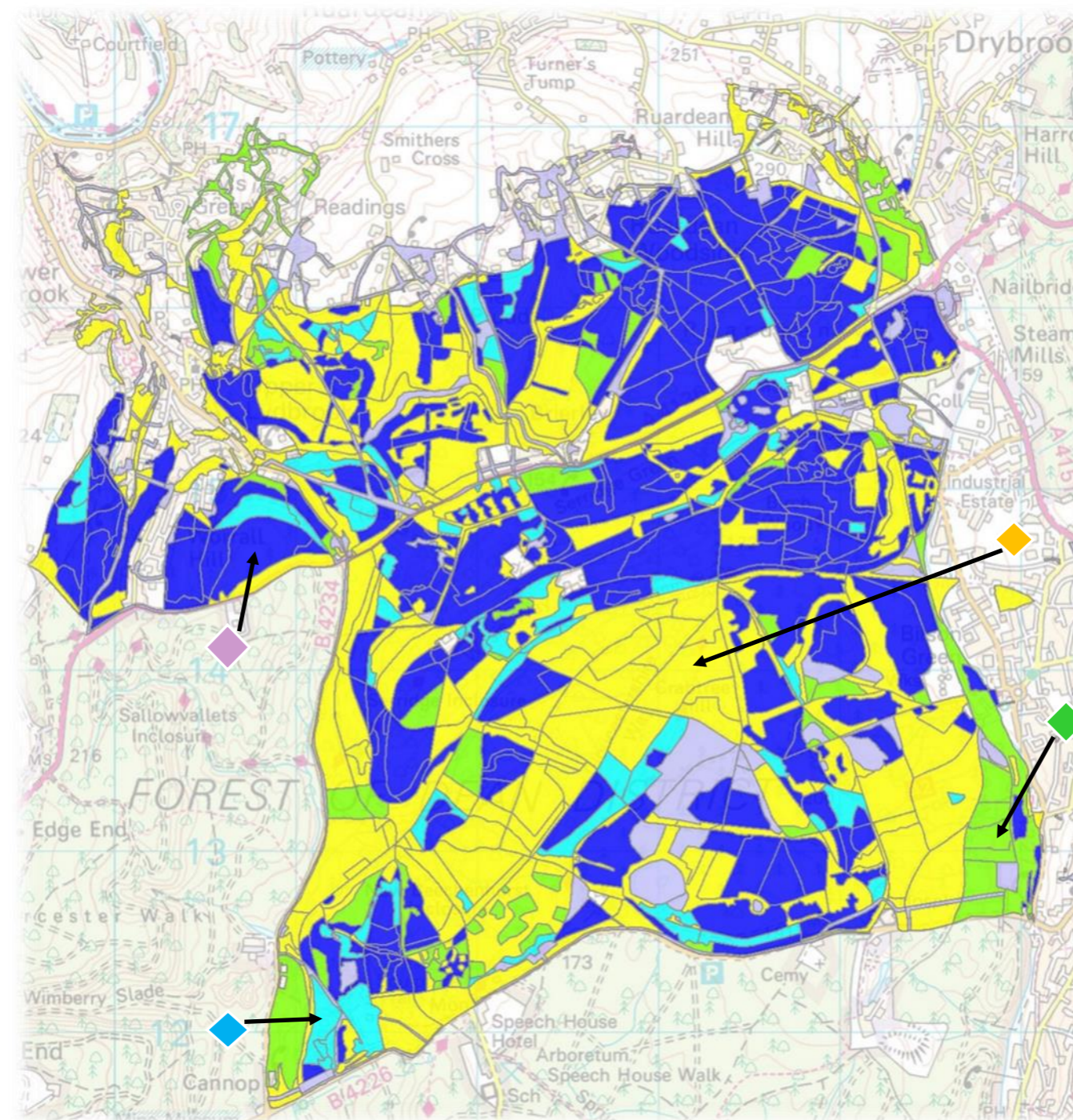
It is recognised that, in the current climbs of climate change, the rise and increasing threats to tree health, this is a challenge, and therefore a long term objective. The balance to a more native and natural forest will therefore be a gradual one, achieved through targeted thinning, under planting, group felling with group planting, and the clearfell with restocking approach still playing its part. Natural regeneration will be encouraged, but planting may still be utilised to ensure that future species composition is diverse and resilient³.

Left is a breakdown of the current naturalness for this Forest Plan.

¹E.g. Forest Waste/Quarrying & mining/Heathland/Wood Pasture and extensive felling and restocking programmes especially post war time.

² within the bounds of other management considerations e.g. pest and disease management and the management and enhancement of forest resilience to future biotic and abiotic threats.

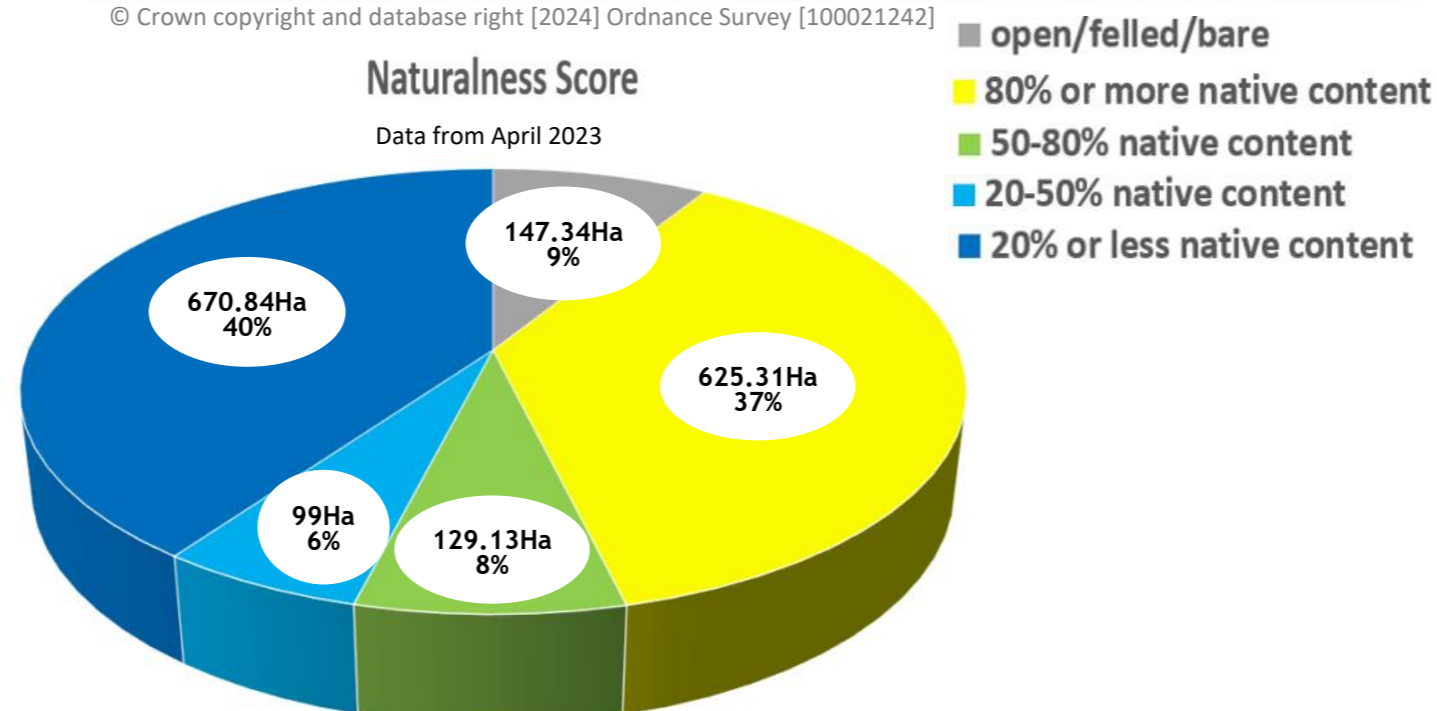
³to pests, disease, prolonged periods of wet or drought and to fire.



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Naturalness Score

Data from April 2023



Class 4 – Plantation Woodland



p1965 Norway Spruce - Great Bourts

Class 3 – Plantation Woodland



4360b p63 NS/SP & p1872 Oak - Beechenhurst

Class 2 – Plantation Woodland



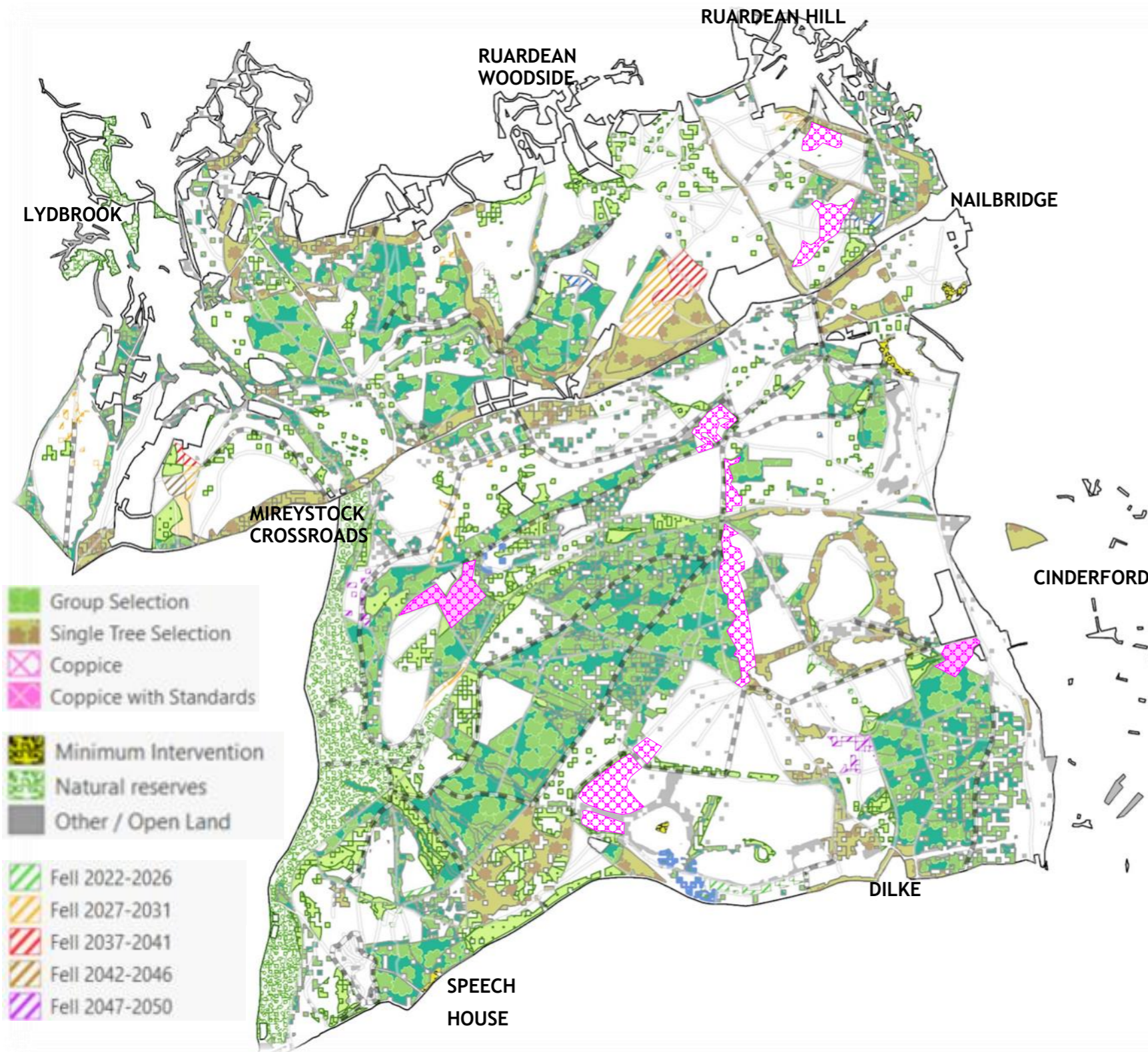
4344a p1953 OK & SP - Sammies Wood

Class 1 – Semi-Natural Woodland



4335a p1910 Oak - Hicksters Way

Broadleaf Management



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Below is a fairly typical list of operations one may expect in managing broadleaf crops.

Broadleaves upto 50 years old Predominantly establishment operations such as planting, beating up, weeding, cleaning. Potential first thinning, respacing, enrichment planting and pruning etc will all ensure correct stocking density is achieved and quality promoted. Early identification of potential final crop trees.

Broadleaves from 50 to 100 years old Identification of final crop trees. Thinning of main crop. Respacing of natural regeneration with enrichment planting for future diversity, along with pruning and thinning to help raise the quality of timber.

Broadleaves over 100 years old Identification of final crop trees. Thinning of main crop and possibly some prep work for regeneration, enrichment planting, along with thinning.

Mature Habitat Some areas might be thinned and others not. Thinning will be light, considered, and sensitive to site conditions, unless work is needed for public safety reasons e.g. in Chalara infected crops. Recruitment of Deadwood is likely to be high in these areas and most managed with Single Tree Selection system.

Regeneration of broadleaf woodland has historically been achieved mainly through the use of natural regeneration, that will continue to be encouraged, except for where semi-natural woodland is so fragmented and or where windthrow has been a threat, making clearfelling with restock the preferred option.

Most Broadleaf areas are to be managed through some form of Low Impact Silviculture (LIS), usually this will be a Selection System, Longterm Retention, or Minimum Intervention, which will help ensure that stands remain as robust and resilient as possible towards future threats from climate, pests and disease. With this in mind, rather than planting or recruiting just a single species, the use of mixtures will be more prevalent and, where regeneration is recruited, underplanting to enrich species composition will be considered. This will ensure a diverse and robust crop is established for the future. Should enrichment or group planting be considered, then selection of species origin/provenance will follow current guidance on climate change and disease resistance, meaning future stands will contain a varying mix of site native species, species from four degrees south of latitude, improved growing stock and non-native species maybe considered too.

Where Broadleaf will replace conifer using LIS, it is difficult to quantify the speed of reversion, since most conifer crops identified for LIS have historically been managed utilising the clearfell and restock regime. Therefore, thinning interventions are likely not to have been optimised for natural regeneration of native species, so will likely attract a higher probability that underplanting, group planting or enrichment planting will be needed to ensure the desired future species composition is achievable. This objective is therefore very much for the long-term and so beyond the duration of this plan.

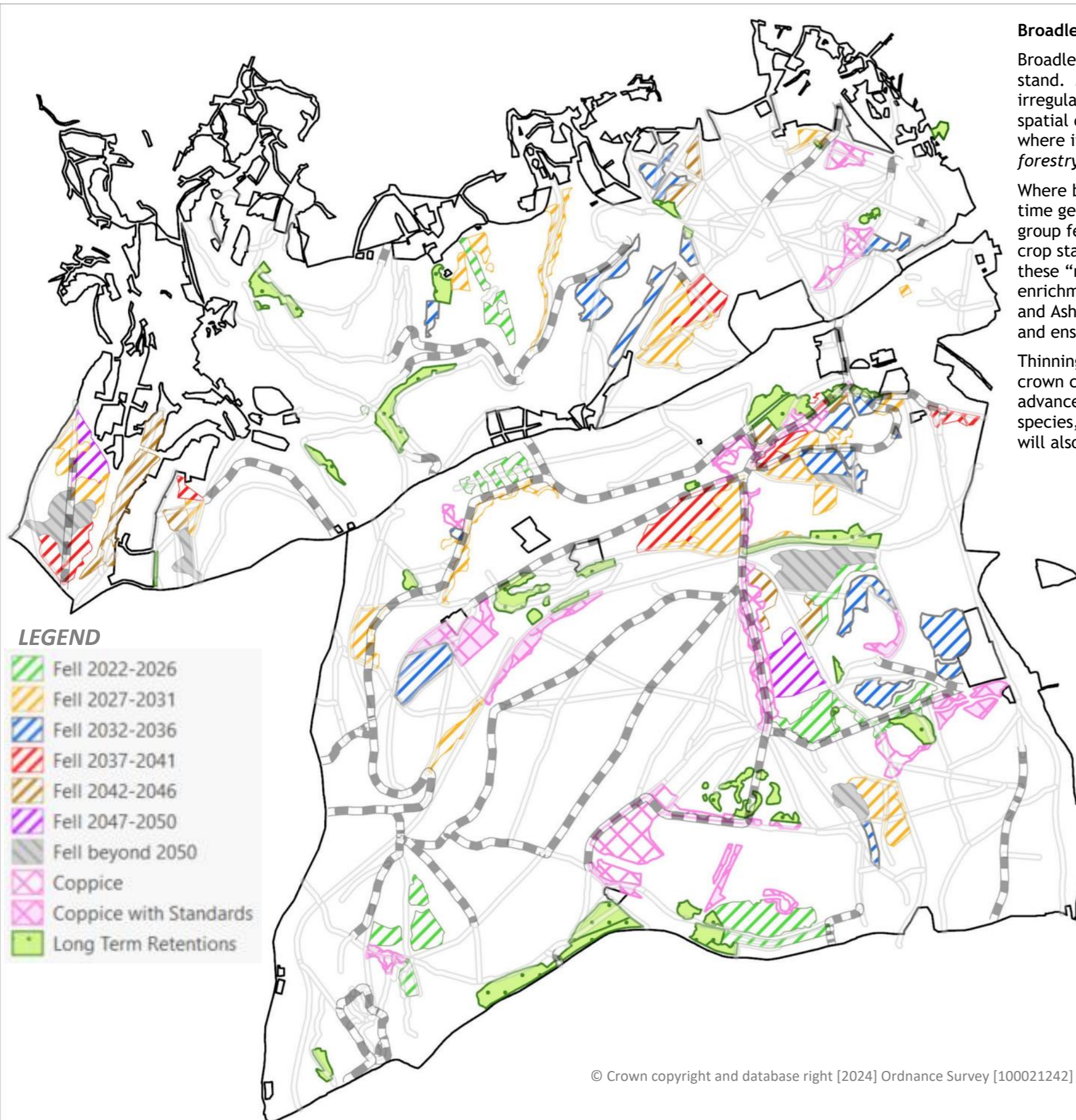
Light levels and grazing pressure will be managed through thinning intensity, fencing and culling, helping minimise weed encroachment and predation on both regeneration and planted stock. Whilst the reintroduction of Pine Marten is one step in helping to reestablish control over the grey squirrel, there is hope that it will ultimately safeguard the production of quality timber, along with other control measures, within younger generations of broadleaf woodland.

Thinning will look to develop final crop trees across all age classes, and Irregular Thinning will target the breakup of even-aged crops, whilst the matrix should remain well thinned to promote canopy development. This approach will help in developing a permanent Irregular structure. Thinning and partial harvesting of final crop trees (developed in cohorts over time), will help in the delivery of quality timber to market that is sustainable, offering opportunity for underplanting, group planting or recruitment of natural regeneration.

Generally speaking, south facing slopes traditionally fair better for broadleaf growth, however, might it be suggested that, with a warming climate, those sites with less favourable topology, e.g. northerly or easterly facing slopes, may in fact, become better in terms of productivity and growth rates. Species such as Oak that may currently struggle on such sites, or are on more impoverished soils, could well fair better, meaning the choice of provenance should be carefully considered, rather than just have Oak written off as being unsuitable. This approach will help Oak remain one of the prime broadleaf species for future generations to enjoy. On some Oak sites enrichment planting with other native species maybe considered to bolster stand resilience.

Deadwood Habitat will be managed to enhance the quality of both standing and fallen deadwood, maintaining the amount in line with UKWAS recommendations. The percentage of crowns left in situ following harvesting operations will depend on the quality and condition of existing deadwood. Consider retaining wind damaged broadleaves, fallen limbs, or fully windblown trees to add diversity to the types of deadwood present. Care must be taken to ensure that benefits of retention are not outweighed by increasing the risks to plant health, e.g. species of Ips that can affect Spruces and Larch.

Silviculture



LEGEND

	Fell 2022-2026
	Fell 2027-2031
	Fell 2032-2036
	Fell 2037-2041
	Fell 2042-2046
	Fell 2047-2050
	Fell beyond 2050
	Coppice
	Coppice with Standards
	Long Term Retentions

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Broadleaf Thinning

Broadleaf High Forest will be assessed for thinning every 10 years with a visual inspection of the stand. Most broadleaves are uniform in age, so thinning should encourage development of an irregular stand structure, retaining any existing stand variability in dbh range, species, height and spatial distribution to aid in achieving irregularity; “a tree should never be removed because of where it is, because clumpiness is a good thing in this respect.” (quote: Andy Poore from *Prosilva forestry*)

Where broadleaves consist primarily of single species, utilisation of irregular thinning will, over time generate “natural” gaps, rather than specific creation of new ones, or enlargement through group felling. However, size of gap will be dependent on slope, aspect and site fertility, and crop stability will be a consideration. In any case, through irregular thinning and as crops age, these “naturally” occurring gaps will then be utilised for recruitment of natural regeneration, or enrichment planting using a mix of native species other than, those occurring in the overstorey and Ash (due to Chalara) - rather than just a reliance on natural regeneration to achieve diversity and ensure full stocking.

Thinning will allow sub-dominant broadleaves sufficient light and space to mature, will develop crown condition of primary, secondary and tertiary final crop trees, and will release existing advanced regeneration. Younger patches of regeneration can be thinned to favour site native species, with trees of good form and vigour being retained. Matrices between final crop trees will also be thinned with the above points in mind.

Conifer Thinning

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

The accrued monocultured nature of the forest is less prominent within this Forest Plan than the plan for Blakeney Hill and Parkend, however, this approach of Irregular Thinning will still play an important part in redressing issues of restructuring, at both Compartment and Block level, especially in those areas being managed through LIS.

Clearfell

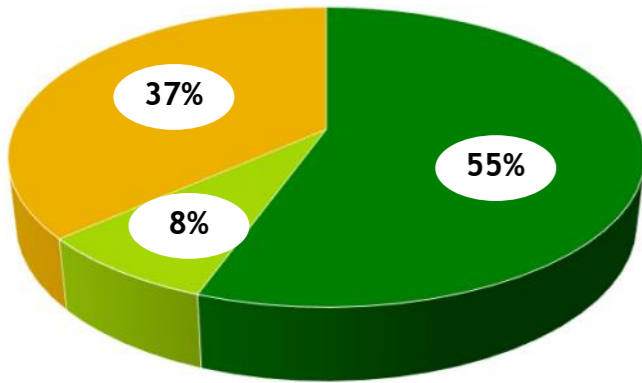
The map looks at the clearfelling programme from 2024 until beyond 2051. Conifer areas are likely to be restocked in order to achieve the correct species composition for the next rotation, and achieve the Forest Plans objectives on diversity and resilience. Some sites may be restocked in combination with natural regeneration, especially those sites identified for broadleaf.

Also shown are areas to be managed as Long Term Retention, whose areas mainly comprise of Douglas Fir, Red Cedar or older mature stands of Scots Pine, with perhaps some areas of Spruce too, e.g. Stands of Scots pine at Trafalgar/The Delves and Spruce at The Delves. These coupes are likely to be managed through selection rather than shelterwood.

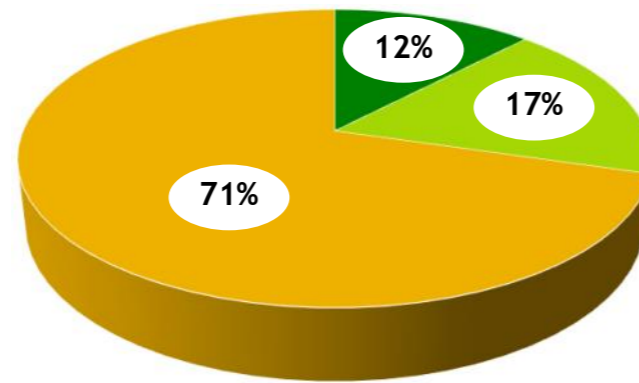
[See following pages for more information on Low Impact Silviculture](#)

Indicative Future Species Composition of LIS Coupes previously identified for Clearfelling

Current species composition of suitable sites shifting from Clearfell to LISS: from the Clearfell areas (2023-2033) dataset of the previous Forest Plan



Indicative Future Species Composition for sites identified for LIS that were previously clearfell: from the Future Restock Area dataset (2024) : (Clearfell areas (2023-2033) dataset of the previous Forest Plan)



■ Conifer ■ Broadleaf ■ Mixed stands of Conifer & Broadleaf

Silviculture (cont)

Low Impact Silviculture (LIS)

The increase in the use of Shelterwood systems, Selection systems, Coppice and of Minimum Intervention, along with some selected areas of Long Term Retention (e.g. areas of Scots Pine or Douglas Fir), will help deliver the Forest Plan objectives in a number of ways:

- By improving the distribution of Age Classes
- Diversify the variety of tree species
- Increase the variety of woodland edge
- Improve connectivity of habitats
- Improve opportunity for deadwood retention
- Enhance and improve riparian management
- Reduce the amount of clearfelling
- In the longer term increase the Sense of Place
- Provide micro climate for natural regeneration and the under planting or group planting of both conifer & broadleaf, (especially for alternative or emerging species of conifer)
- Provide an increase in the amount of woodland that has a permanent irregular structure

Clearfell and restocking has traditionally been the method of management for a large majority of sub-compartments that are now proposed for regeneration via LIS. These stands will therefore generally need careful intervention, undergoing between 1 to 3 or even 4 or more thinning interventions. This ensures that light levels and vegetation remain suitably controlled¹ to attain favourable conditions for natural regeneration to occur successfully. However, in future years underplanting, group planting, or enrichment planting will probably be required to attain the desired species composition², to further meet the objectives of species diversity, and forest resilience toward future threats of pests, disease, fire and a changing climate.

¹One of the key principles of management to attain a permanent irregular structure

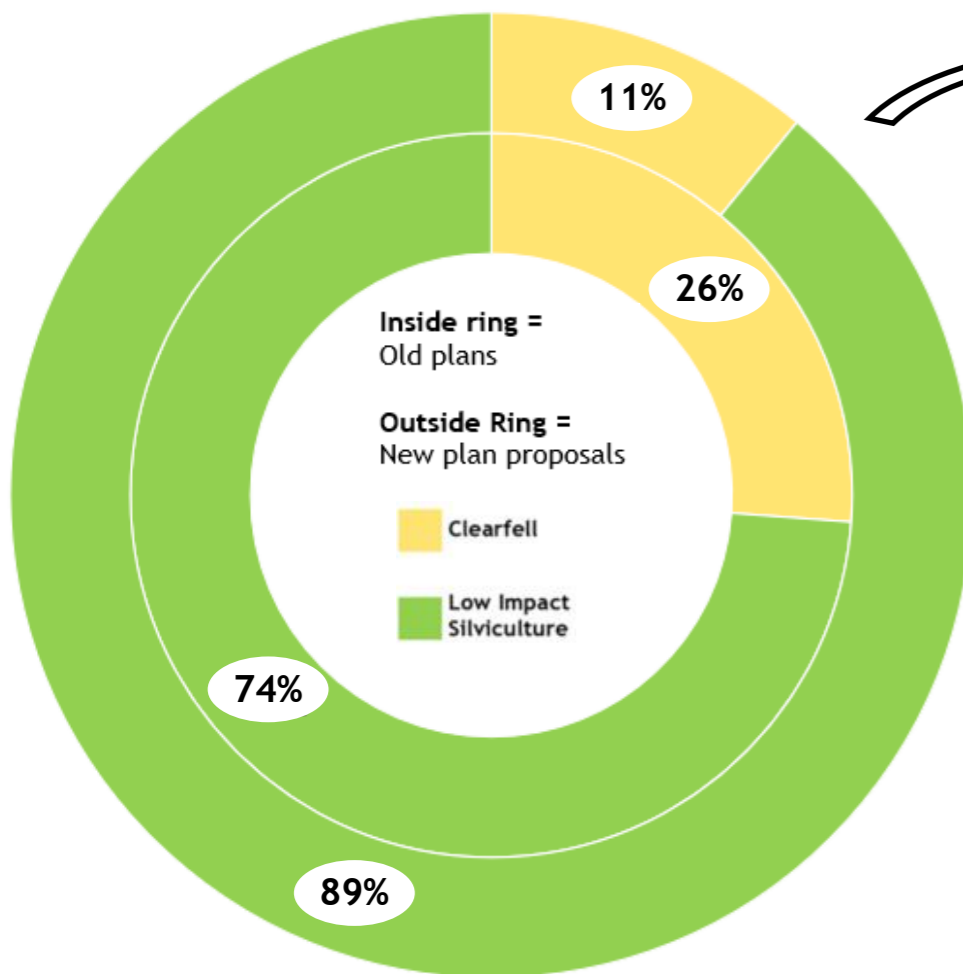
²Can be due to several reasons including: lack of suitable parent material, poor seed productivity and vegetation competition on more fertile sites.

With the above points in mind, charts on this page clearly show both support and ambition for an increased use of mixed woodland and forest containing both broadleaf and conifer components. Thinning should, therefore, favour retention of any broadleaf components of merit, that will help in reaching the above goals and objectives. This approach combined with targeted removal of Larch and Western Hemlock during thinning will also help:

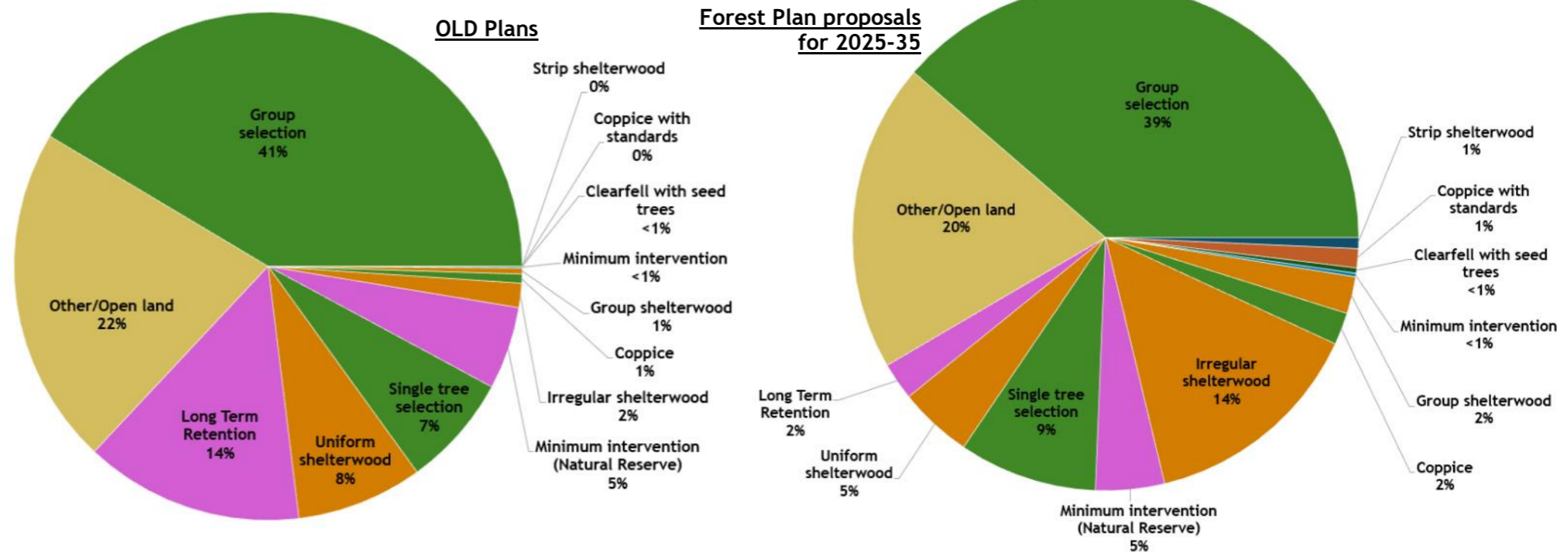
- protect the integrity of Forest Plan design
- aid in achieving sustainable timber production
- help safe guard native natural regeneration and
- contribute to higher degrees of naturalness and greater levels of native cover (species and spacing)
- Investigating this objective through the use of Forest Development Types (FDT) to ensure use of mixtures are successful. Knowledge in the use of FDT will take use beyond the plan period³

³Due to most crops requiring 2 or more thinnings i.e. 10 years.

Shift in the use of Low Impact Silviculture between the previous Forest Plans and the new Forest Plan

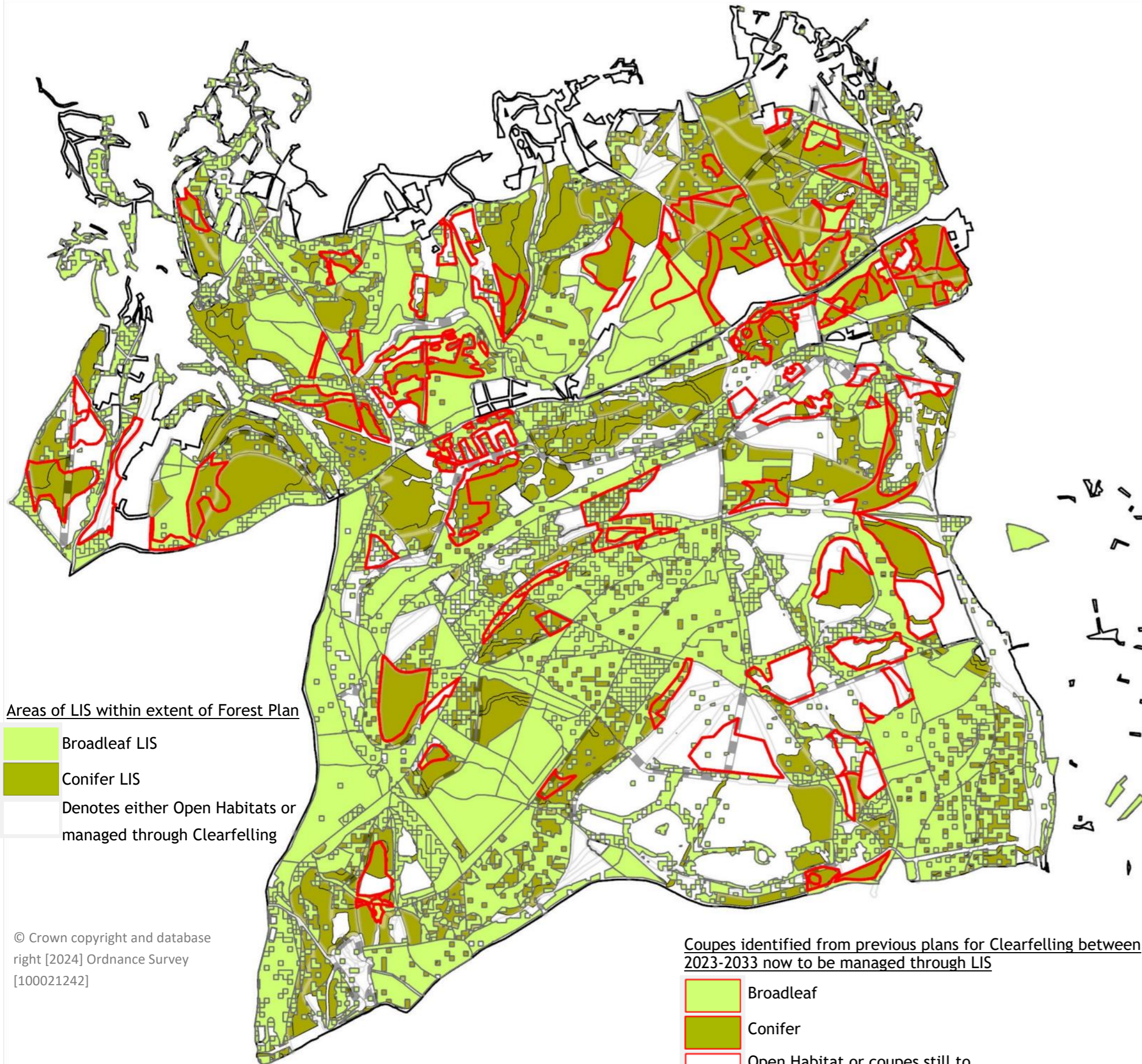


Breakdown showing the type of Low Impact Silviculture Systems used



Silviculture (cont) Map showing areas to be managed through Low Impact Silviculture (LIS)

Silviculture (cont)



Areas of LIS within extent of Forest Plan

- Broadleaf LIS
- Conifer LIS
- Denotes either Open Habitats or managed through Clearfelling

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Coupes identified from previous plans for Clearfelling between 2023-2033 now to be managed through LIS

- Broadleaf
- Conifer
- Open Habitat or coupes still to be managed through Clearfelling

Coupe prescriptions for areas of LIS previously identified for Clearfelling can be found in Appendix 2 for Management Considerations

For clarity, the map to the left shows areas of LIS by current species composition. The Future Composition can be found in the section on Indicative Future Species.

Under the old suite of Forest Plan prescriptions, the coupes outlined in red were proposed for clearfell and restock between 2023 and 2033.

For this Forest Plan, these identified coupes were assessed for their potential to be managed by alternative prescriptions, i.e. LIS, and the map on this page clearly shows that moving forward there is a significant reduction in clearfelling.

Thinning will favour broadleaf components. This, together with the targeted removal of invasives such as Western Hemlock, will increase the potential for employing natural regeneration or enrichment planting, and move sites towards having greater native broadleaf content.

Broadleaf stands will generally be managed through thinning. Thinning will look to create permanent irregular structure, and develop native broadleaved components, with targeted removal of conifer components where required. Although, through necessity of managing disease and resilience to changes in climate, mixed stands containing both conifer and broadleaf elements will increase in prevalence.

Selection systems can be used on windfirm (although windthrow can be advantageous in creating structure) accessible crops, proactively diversifying the woodland structure and composition, by recruiting natural regeneration of appropriate species. Enrichment replanting with conifer or native broadleaves can be used where required, e.g. where natural regeneration has proven unsuccessful in the past or diversification is needed.

- Areas of Long Term Retention predominantly contain Douglas Fir, Red Cedar, Scots Pine, and some stands of Spruce that will be managed as Irregular Selection or Shelterwood with the aim of producing future woodland with complex stand structure and mixed woodland composition. Stands with existing complex structure or those managed for an amenity purpose will be maintained through single tree selections. E.g. areas of pre-1900 Oak, or mature areas of Scots Pine such as those around the Greathough Brook area, Birch Wood and Laymore Quag areas.

Uniform shelterwoods are predominately sites managed using seeding fellings, with possibilities for under planting of site suitable species and developing good timber quality.

Irregular shelterwoods will look to develop a complex stand structure. For broadleaves this means: identification of final crop trees and seed trees and the use of irregular thinning. In some cases a proportion of overstorey maybe retained.

Strip shelterwoods It is most likely that uniform or irregular shelterwoods will be used, but often on wind vulnerable sites or steep areas that are awkward to work, Strip Shelterwoods can provide a better solution, with Strip Shelterwood regenerated through natural regeneration or in combination with planting.

All of the above methods of LIS can be employed in conifer or broadleaf. They can utilise natural regeneration and or where required enrichment planting, to ensure a diverse species composition of desired nature is achieved for the following rotation. To aid in achieving this, as a rule of thumb Irregular thinning should be encouraged.

Silviculture (cont)

Map showing Long Term Retentions, areas of Minimum Intervention, Natural Reserves, Open Habitats and stands of pre1900 Oak



Minimum Interventions are predominantly inaccessible or ecologically valuable areas. Intervention will only occur to protect and ensure the future succession of key habitats and species. They will often also have a distinct Sense of Place.

Long Term Retentions are in places where the landscape value of the woodland is key, or where the retention is advantageous to development of stand/ woodland structure, and the accrual of biological maturity. Examples include areas such as those in Cannop Valley or Greathough.

Retention can be at stand level or applied to components of a stand. In some situations, for example, where biological maturity has been achieved, consideration could be given to moving the stand into Minimum Intervention, if deemed appropriate. It is possible that other areas may reach a stage suitable for retention, having previously been managed through the use of Selection Systems and can be considered at the time of Forest Plan review or rewrite.

Open Habitats are generally managed to ensure forest cover does not exceed 2m in height, and will have varying degrees of tree cover depending on the objective for that site, but in general should not exceed 20% tree cover. In some coupes spatial distribution of Open Habitat over time may vary, e.g. in Woorgreen and Crump Meadow.

Areas of Pre1900 Oak

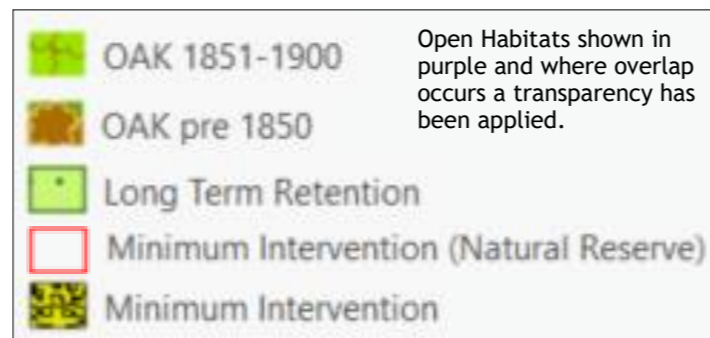
Parts of the forest containing such Oak, by their very nature, are finite and considered extremely valuable assets both ecologically and socially. They are areas often situated in peripheral locales such as along roadsides or close to communities, and may fall within a conservation or amenity & recreation working circle or both; but does not preclude them from producing quality timber if appropriate, and intervention meets other Forest Plan objectives.

These areas of pre1900 Oak are often spatially distributed in a fragmented or lineal nature. Prescriptions will work to remediate this, either through adjacent planting to create connectivity and larger more consolidated areas of Oak, or through recognition of their value in a wider ecosystem context, such as the Oak at Speech House and Lennets Hill.

Given the issues with predation by rabbits, squirrels, boar and deer, thinning for the regeneration (naturally or planted) of the crop should not be harsh and expect immediate results; but instead a more gentle, irregular, sensitive longer term approach should be taken. Working with existing variability will increase structural and ecological diversity.

The above paragraph is even more important given it has been observed that dieback of Oak is not only affecting older generations of Oak, but also younger plantings, even as young as those planted in the 1970s. Recognising the cause of health issues and type of dieback is beyond the Forest Plan remit. Therefore, it is felt that a survey is crucial to look at this concern, together with growth rates and other stand characteristics, that will inform future silvicultural management of both older and younger stands of Oak. This will hopefully ensure Oak is here for future generations of children to enjoy.

Tree health issues associated with individual pre1900 Oak will, if necessary, employ tree surgery. Felling will be an absolute last resort and in this situation, retention of standing deadwood needs consideration. Fallen or felled material, being retained in length, will encourage the development of the widest assemblage of biological, ecological habitat and diversity possible. Tomography is also being used to minimise unnecessary interventions.



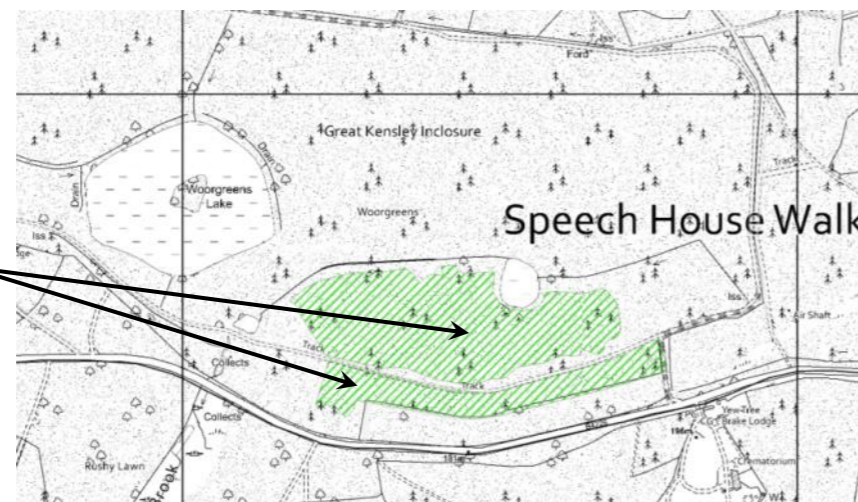
Felling and Restocking



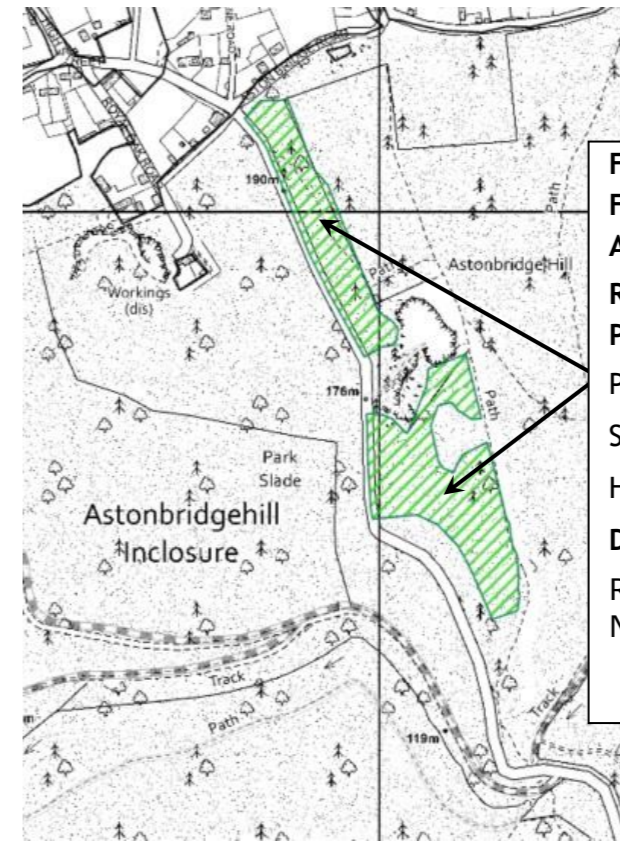
Felling Coupe: 43085 (part 1 of 2)
Fell period: 2022-2026
Area: 6.59 Ha
Restock Coupe: 43085A (5.33ha)
Propagation: planted
 Japanese Cedar 40%
 Douglas Fir 30%
 Other Broadleaf 30%
Description:
 Diversifying conifer away from Larch and planting emergent species.

Felling Coupe: 43085 (part 2 of 2)
Fell period: 2022-2026
Area: 6.59 Ha
Restock Coupe: 43150A (1.26 Ha)
Propagation: planted
 Other Conifer 70%
 Douglas Fir 30%
Description:
 This site should contain alternative conifer species with high longevity and potential to develop a Sense of Place for the future.

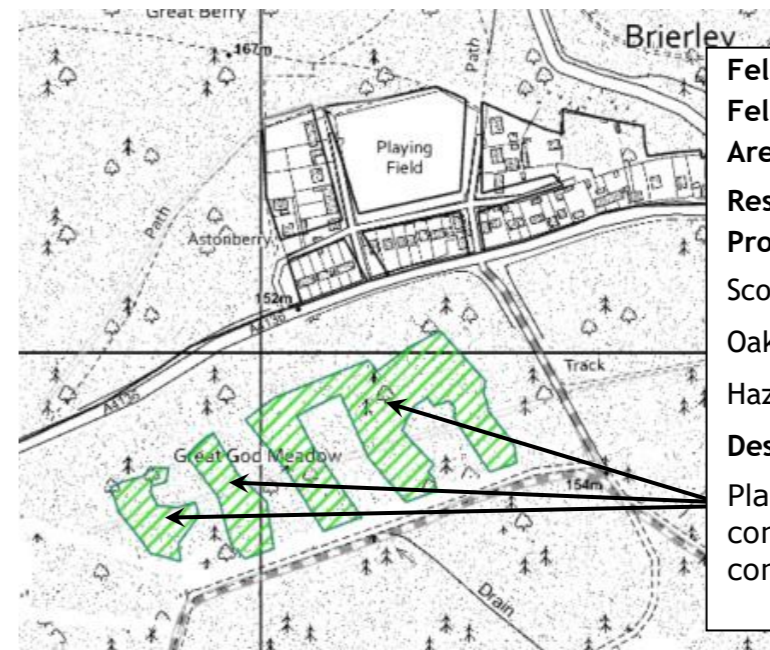
Felling Coupe: 43096
Fell period: 2022-2026
Area: 9.48 Ha
Restock Coupe: 43096 A and B
Propagation: planted
 A - North of ride Norway Spruce 40% (7.13 Ha)
 Other Conifer 30%
 Common Alder 20%
 Mixed Broadleaf 10%
 B - South of ride Oak 50% (2.35Ha)
 Mixed Broadleaf 30%
 Scots Pine 20%
Description:
 Creating a more diverse species mix.



Felling Coupe: 42020
Fell period: 2022-2026
Area: 0.16 Ha
Restock Coupe: 42020A
Propagation: planted
 Norway Spruce 20% (existing)
 Scots Pine 10%
 OPEN 70%
Description:
 When felling, retain 20% of NS
 And plant 10% Scots Pine.



Felling Coupe: 42098
Fell period: 2022-2026
Area: 3.20 Ha
Restock Coupe: 42098A
Propagation: planted
 Pedunculate Oak 40%
 Scots Pine 40%
 Hazel 20%
Description:
 Removing Larch and replacing with Native species.



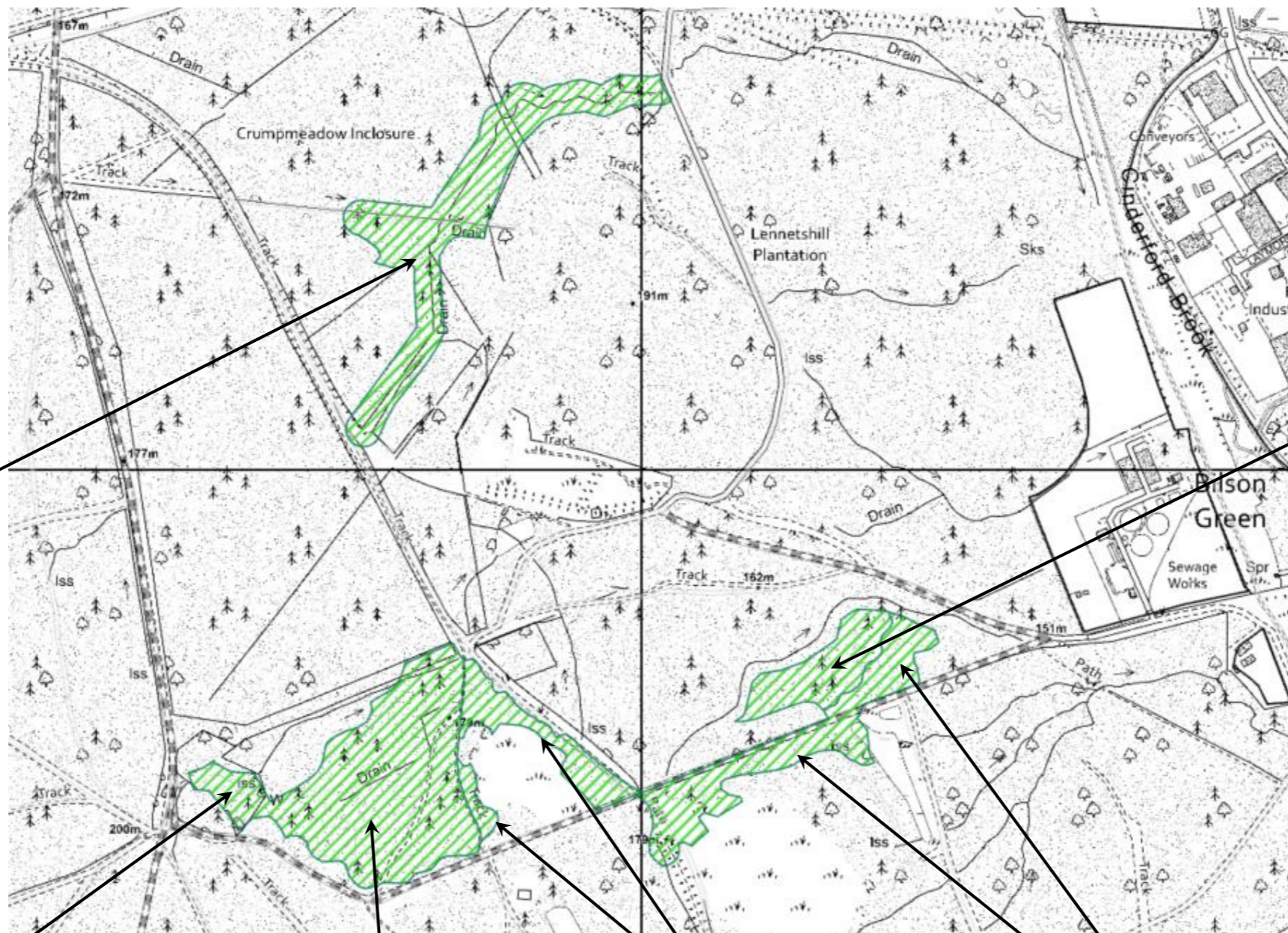
Felling Coupe: 43051
Fell period: 2022-2026
Area: 2.64 Ha
Restock Coupe: 43051A
Propagation: planted
 Scots Pine 60%
 Oak 20%
 Hazel 20%
Description:
 Planting to enhance the conservation value of the site and complement existing hornbeam.

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The next half dozen pages show coupes that are to be managed through clearfelling and restocking over the next ten years - till 2035. The species listed are aspirational and indicative in order to ensure a woodland that will meet future challenges that include, climate change, pests and disease and fire resilience. Although planting is stated as means of propagation to restock these areas, on broadleaf sites, the use of natural regeneration will be encouraged, and as such establishment may take longer. Enrichment planting maybe considered in future years to redress species composition, and meet other management objectives.

However, if Statutory Plant Health Notices are issued for the felling of diseased stands, ensuring that timber production remains within sustainable limits becomes paramount, meaning that felling of other areas may be delayed in order to achieve this. Areas that will take priority for felling in this instance, will be ones that help with delivery of multiple benefits e.g. those areas required for riparian improvement/water flow management, or those for habitat creation and habitat connectivity, or alongside cycle trails and rides to enhance internal landscaping, along with habitats suitable for lepidoptera and adders.

Felling and Restocking 2024- 2034



Felling Coupe: 43058
Fell period: 2022-2026
Area: 2.93Ha
Restock Coupe: 43058A
Propagation: planted
 Aspen 30%
 Alder 10%
 Willow 10%
 OPEN 50%
Description:
 10m water buffer with 50% Native Broadleaf cover

Felling Coupe: 43156
Fell period: 2022-2026
Area: 0.94 Ha
Restock Coupe: 43156A
Propagation: planted
 Mixed Broadleaves 100%
Description:
 Extending open habitat, create complex of Oak and open habitat to complement wider habitat assemblages and enhance mature Oak habitat.

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Restock Coupe: 43103B (0.5ha)
Propagation: planted
 Alder 40%
 Hazel 20%
 Wych Elm 20%
 Hawthorn species 20%
Description:
 Coppicable species to bolster coppice corridor upto The Delves.

Felling Coupe: 43103
Fell period: 2022-2026
Area: 4.18 Ha
Restock Coupe: 43103A (3.68ha)
Propagation: planted
 Other Conifer 40%
 Mixed Conifer 30%
 Scots Pine 20%
 Mixed Broadleaf 10%
Description:
 Diversifying species.

Felling Coupe: 43060
Fell period: 2022-2026
Area: 0.92Ha
Restock Coupe: 43060A
Propagation: planted
 OPEN 100%
Description:
 Clearfell, but leave selected groups of Blve areas—creating more linkage for open habitats. - see Ecologist

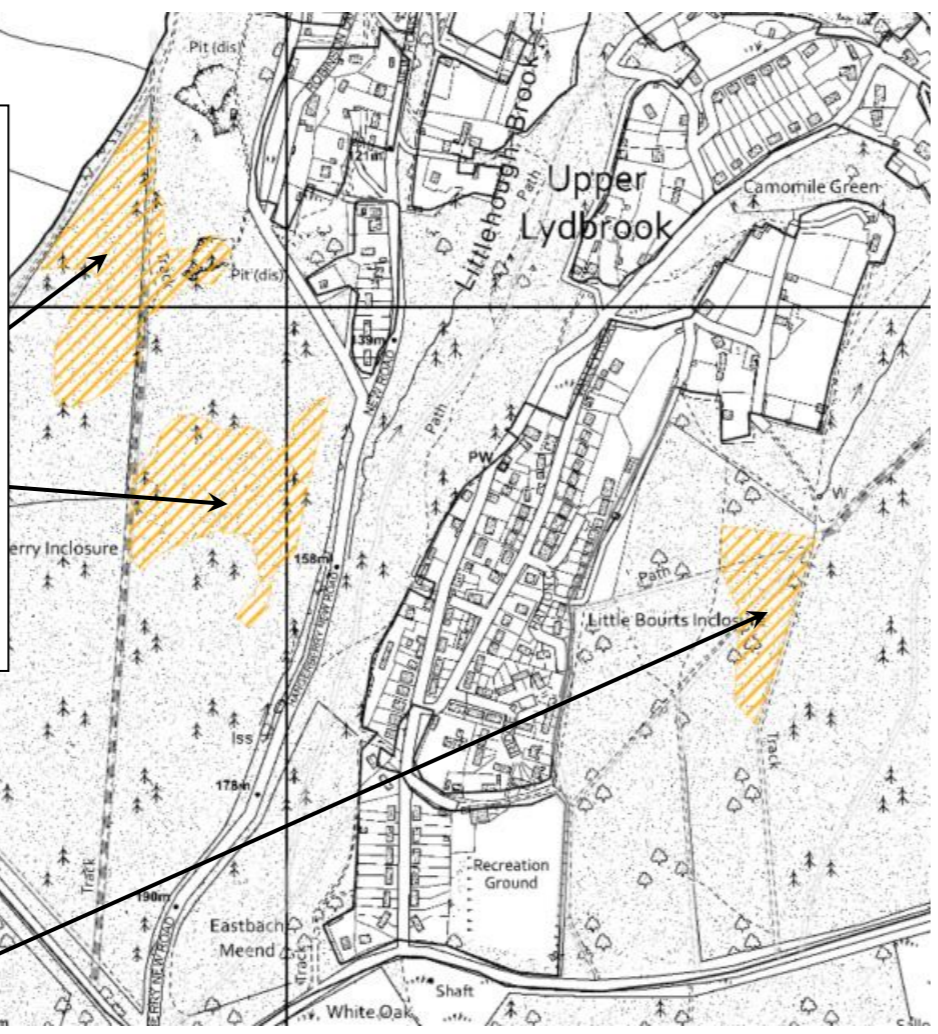
Felling Coupe: 43182
Fell period: 2022-2026
Area: 1.85 Ha
Restock Coupe: 43182A
Propagation: planted
 OPEN 100%
Description:
 Creating open habitat connectivity for lepidoptera and Adder. There is potential for management to be taken on by an appropriate conservation partner.

Felling and Restocking

Felling Coupe: 42050
Fell period: 2027-2031
Area: 4.63 Ha
Restock Coupe: 42050A (2.37ha) and B (2.26ha)

Propagation: planted

42050 A (north)		42050 B (south)	
Scots Pine	60%	Douglas Fir	50%
Hornbeam	20%	Other conifer	40%
Oak	10%	Coast Redwood	10%
Mixed Broadleaf	10%		

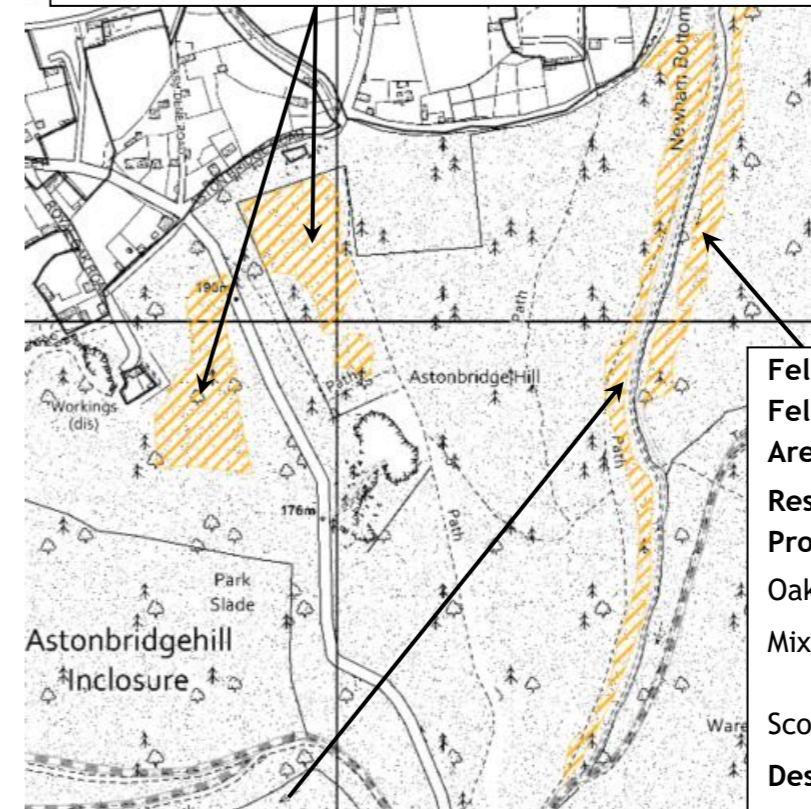


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Felling Coupe: 42095
Fell period: 2027-2031
Area: 2.28 Ha
Restock Coupe: 42095 A (1.17ha) / B (1.11ha)
Propagation: planted

42095A (west)		42095B (east)	
Oak	40%	Douglas Fir	30%
Scots Pine	40%	Japanese Cedar	30%
Hazel	20%	Other Conifer	20%
		Coast Redwood	20%

Description:
 Removing invasive species increasing species diversity



Felling Coupe: 42115
Fell period: 2027-2031
Area: 1.06 Ha
Restock Coupe: 42115A
Propagation: planted

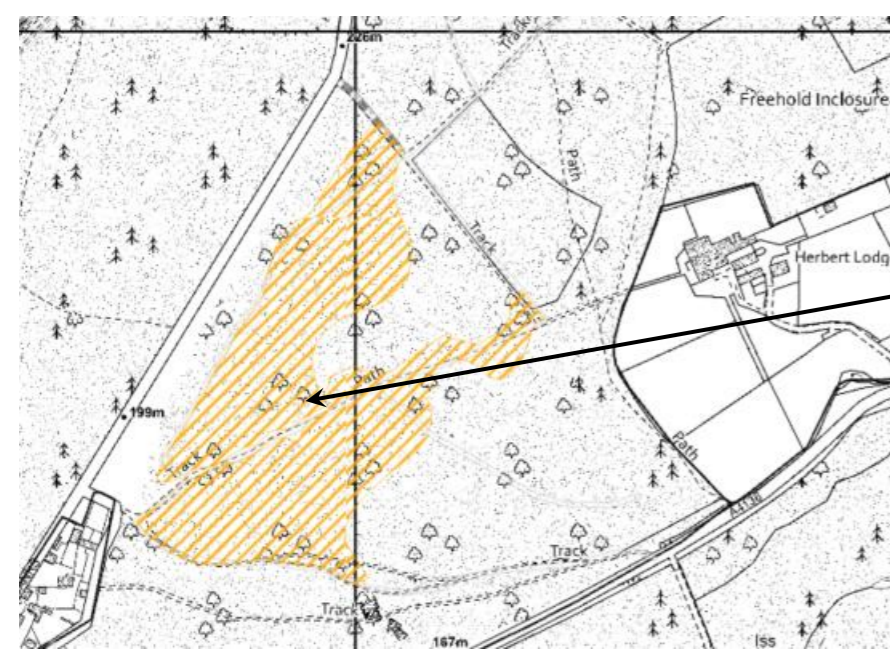
Oak	40%
Hazel	30%
Mixed Broadleaf	30%

Description:
 Regenerate to coppicable native Broadleaf other than Sweet Chestnut

Felling Coupe: 42063
Fell period: 2027-2031
Area: 6.97 Ha
Restock Coupe: 42063A
Propagation: planted

Oak	40%
Hornbeam	20%
Other Broadleaf	20%
Wild Cherry	20%
OPEN	<10%

Description:
 Regenerate to Broadleaf other than sweet chestnut, that will be replaced over time with a suggested Forest Development Type of 8.1.1 moving towards 8.1.2



Felling Coupe: 42031
Fell period: 2027-2031
Area: 1.45 Ha
Restock Coupe: 42031A
Propagation: planted/ nat regen

Oak	40%
Mixed Broadleaf	40% (10-20% nat regen)
Scots Pine	20%

Description:
 Riparian management removing conifer from riparian zone and restoring broadleaf.

Felling Coupe: 42150
Fell period: 2027-2031
Area: 0.90 Ha
Restock Coupe: 42150A
Propagation: planted/ nat regen

Oak	40%
Mixed Broadleaf	40% (10-20% nat regen)
Scots Pine	20%

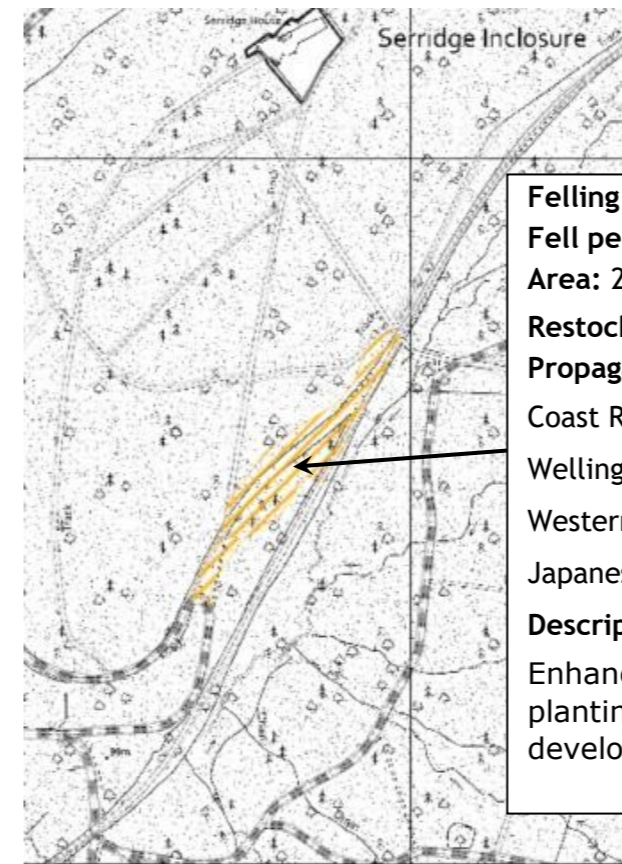
Description:
 Riparian management removing conifer from riparian zone and restoring broadleaf.

In order to diversify the species mix the Mixed Broadleaf in Restock coupes 42031A and 42150A a mixture of natural regen and planted material will be used. This will provide a proportion of transitory open area that will eventually become native woodland. The Scots Pine component will need to be planted in both restock coupes.

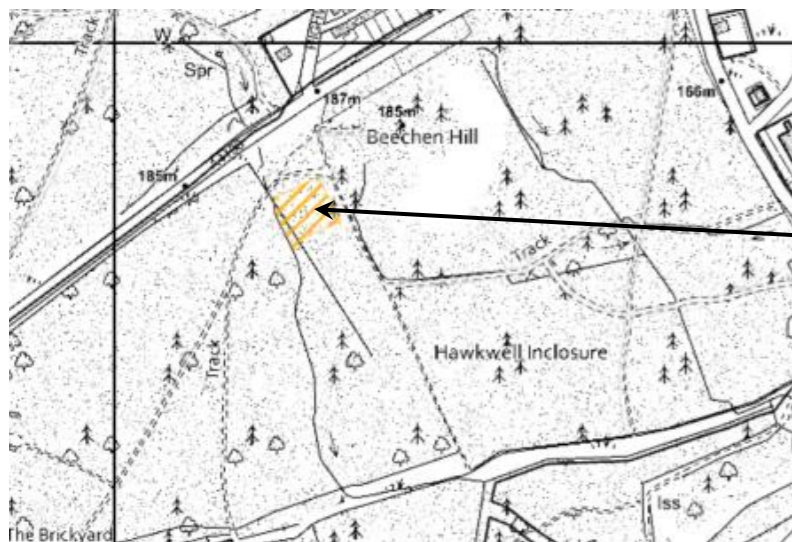
Felling and Restocking



Felling Coupe: 42105
Fell period: 2027-2031
Area: 1.14 Ha
Restock Coupe: 42105A
Propagation: planted
 Douglas Fir 30%
 Japanese Cedar 30%
 Coast Redwood 20%
 Other conifer 20%
Description:
 Retain hedgerow boundary trees as a shelterbelt. Spray off SC stumps.



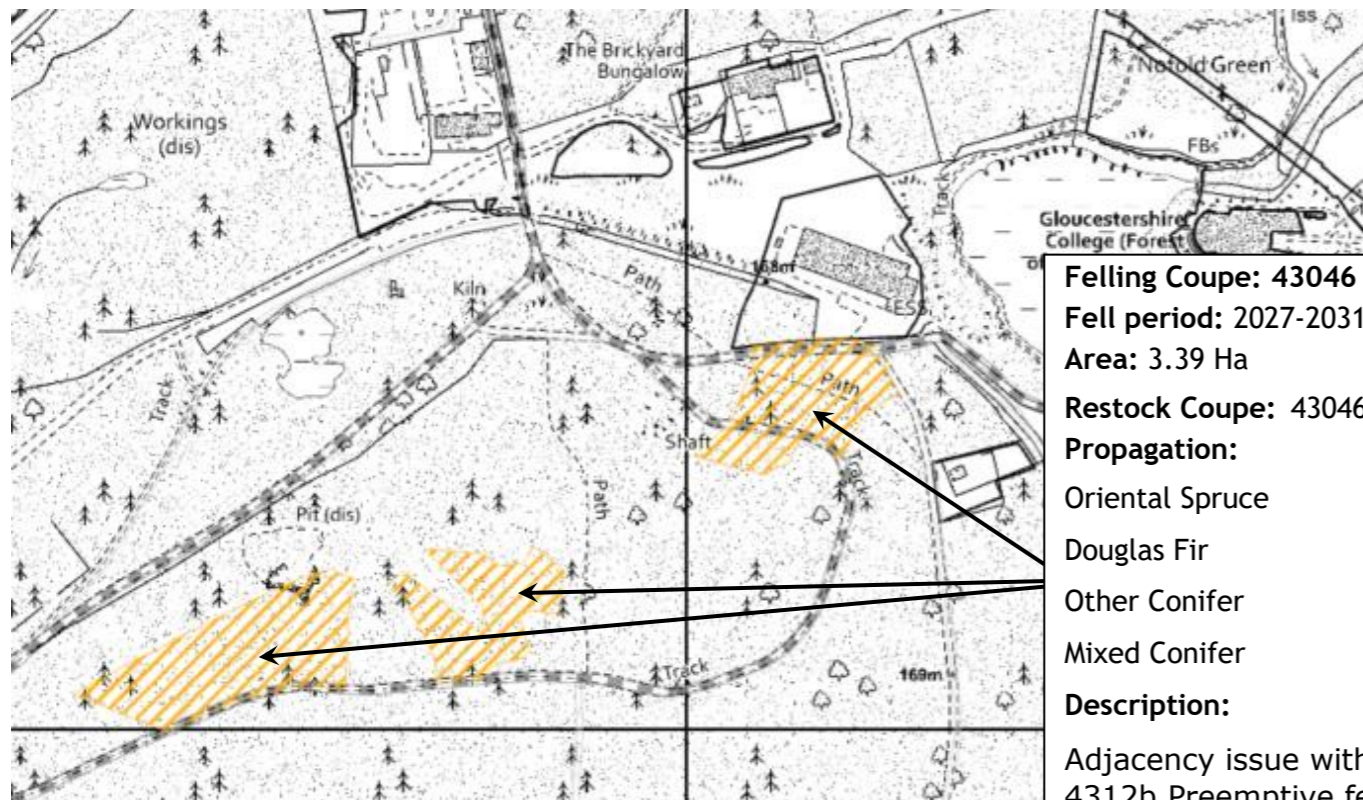
Felling Coupe: 43022
Fell period: 2027-2031
Area: 2.11Ha
Restock Coupe: 43022A
Propagation: planted
 Coast Redwood 40%
 Wellingtonia 20%
 Western Red Cedar 20%
 Japanese Cedar 20%
Description:
 Enhancing the family cycle trail through planting long lived conifer species to develop a Sense of Place.



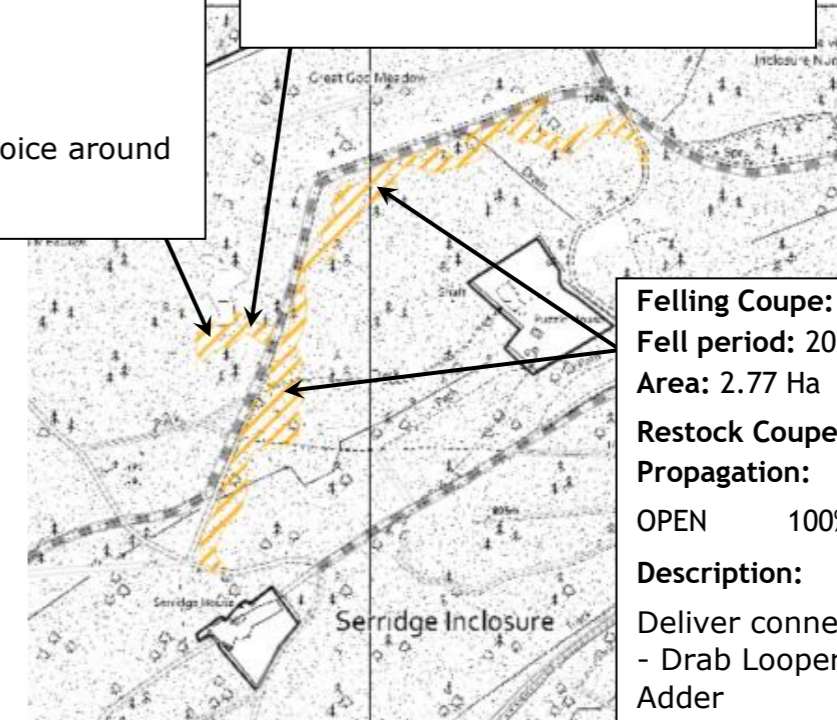
Felling Coupe: 43246
Fell period: 2027-2031
Area: 0.22 Ha
Restock Coupe: 43246A
Propagation: planted
 Oak 40%
 Hazel 30%
 Scots Pine 30%
Description:
 Small group felling

Felling Coupe: 43272
Fell period: 2027-2031
Area: 0.32 Ha
Restock Coupe: 43272A (0.17ha)
Propagation: planted
 Goat Willow 40%
 Alder 20%
 Mixed Broadleaf 20%
 OPEN 20%
Description:
 Rationalising species choice around pond.

Restock Coupe: 43272B (0.15ha)
Propagation: N/A
OPEN 100%
Description:
 Riparian area adjacent to pond

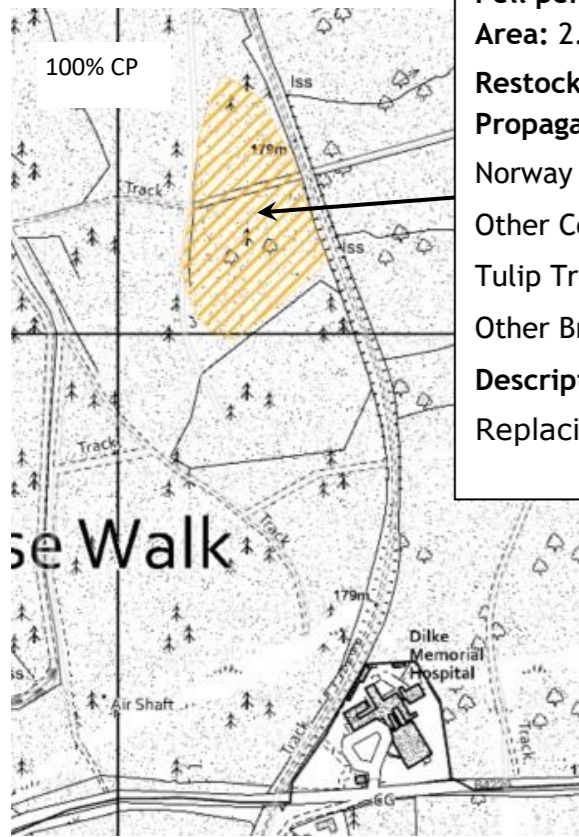


Felling Coupe: 43046
Fell period: 2027-2031
Area: 3.39 Ha
Restock Coupe: 43046A
Propagation: planted
 Oriental Spruce 40%
 Douglas Fir 20%
 Other Conifer 20%
 Mixed Conifer 20%
Description:
 Adjacency issue with larch in subcpt 4312b. Preemptive fell due to proximity to The Delves.

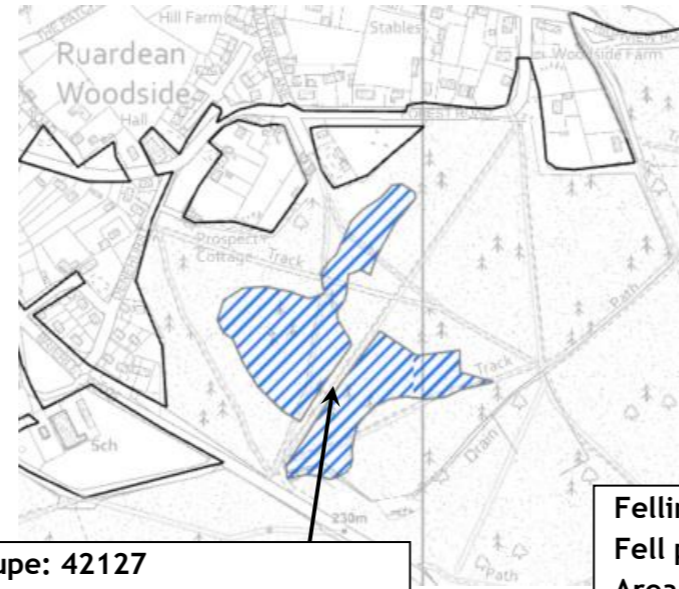


Felling Coupe: 43256
Fell period: 2027-2031
Area: 2.77 Ha
Restock Coupe: 43256A
Propagation: N/A
OPEN 100%
Description:
 Deliver connectivity of open habitat - Drab Looper, Grizzled Skipper and Adder

Felling and Restocking 2024- 2034



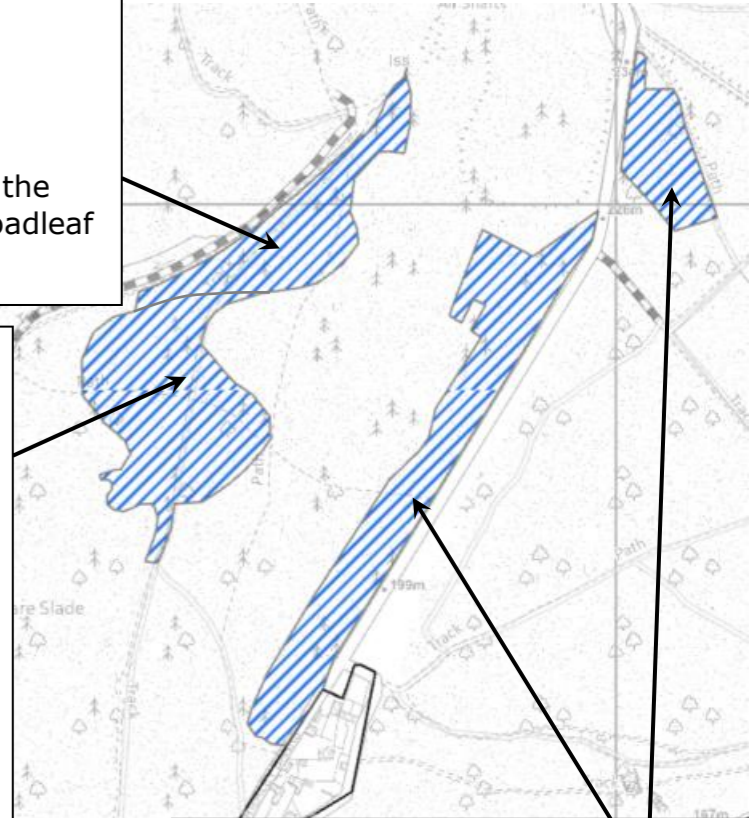
Felling Coupe: 43197
Fell period: 2027-2031
Area: 2.27 Ha
Restock Coupe: 43197A
Propagation: planted
 Norway Spruce 40%
 Other Conifer 40%
 Tulip Tree 10%
 Other Broadleaf 10%
Description:
 Replacing diseased Corsican Pine



Felling Coupe: 42127
Fell period: 2022-2026
Area: 2.57 Ha
Restock Coupe: 42127A
Propagation: planted
 Norway Spruce 40%
 Scots Pine 20%
 Italian Alder 20%
 Rowan 20%
Description:
 Reduction in Phytophthora risk

Restock Coupe: 42125B (1.62ha)
Propagation: planted
 Scots Pine 40%
 Sessile Oak 30%
 Rowan 20%
 Italian Alder 10%
Description:
 More natural mix to compliment the valley bottom. A higher % of broadleaf will soften the road edge.

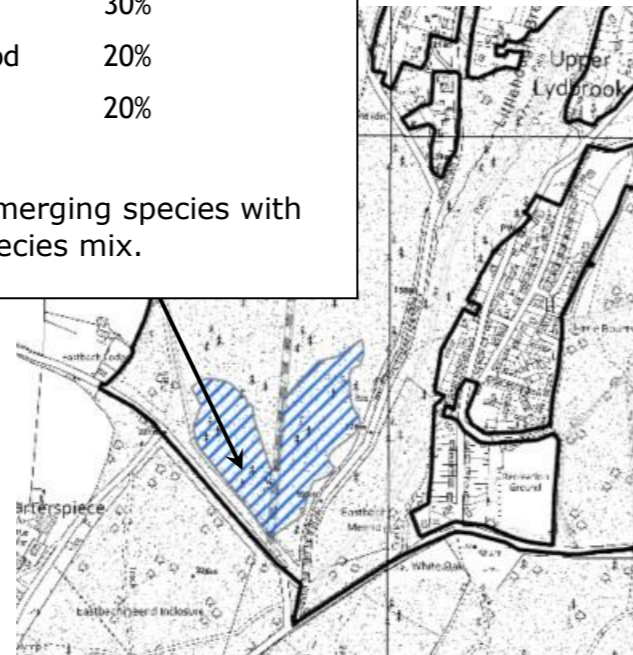
Felling Coupe: 42125
Fell period: 2032-2036
Area: 4.47 Ha
Restock Coupe: 42125A (2.85ha)
Propagation: planted
 Scots Pine 60%
 Sessile Oak 20%
 Wild Service 10%
 Rowan 10%
Description:
 More natural mix to compliment the valley bottom. Higher % of SP to feather into the adjacent denser stands of conifer.



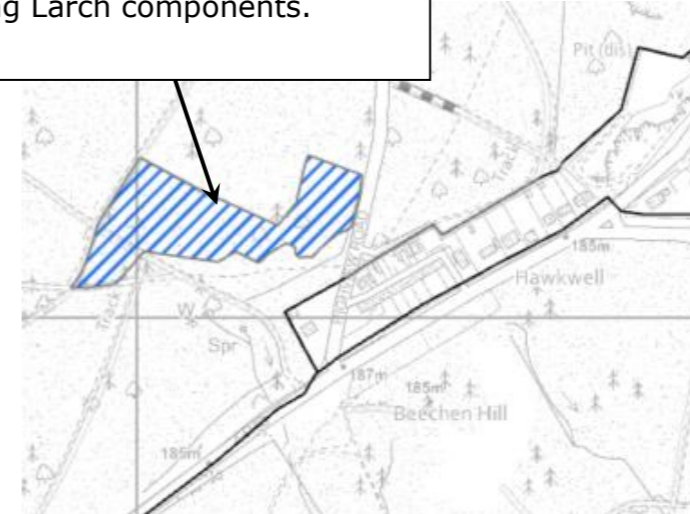
Felling Coupe: 42091
Fell period: 2032-2036
Area: 4.36Ha
Restock Coupe: 42091A
Propagation: planted
 Scots Pine 50%
 Mixed Broadleaf 20%
 Hazel 20%
 Beech 10%
Description:
 Replacing bony Norway Spruce



Felling Coupe: 42060
Fell period: 2032-2036
Area: 4.36 Ha
Restock Coupe: 42060A
Propagation: planted
 Sitka Spruce 30%
 Norway Spruce 30%
 Coastal redwood 20%
 Other conifer 20%
Description:
 Alternative Emerging species with traditional species mix.



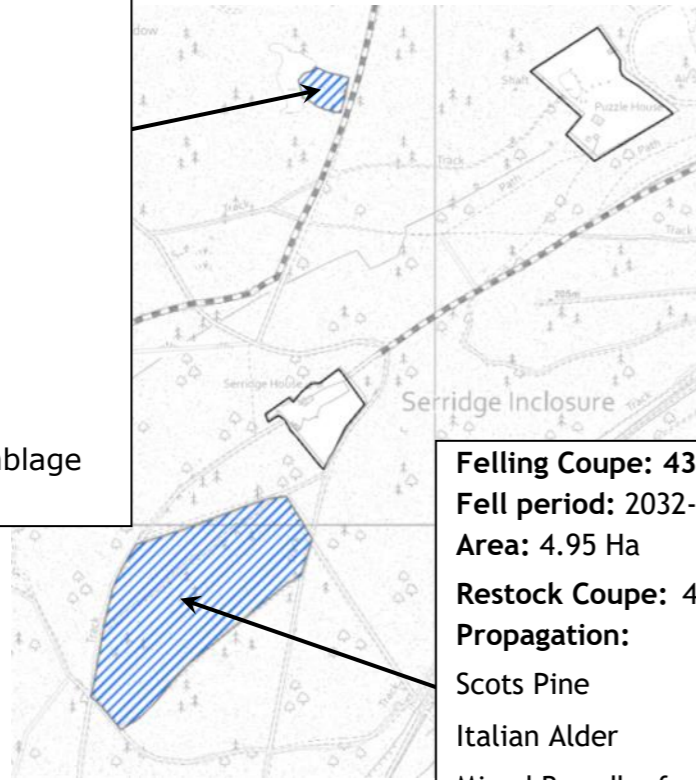
Felling Coupe: 42144
Fell period: 2032-2036
Area: 1.46 Ha
Restock Coupe: 42144A
Propagation: planted
 Other Broadleaf 70%
 Mixed Broadleaf 30%
Description:
 Removing Larch components.



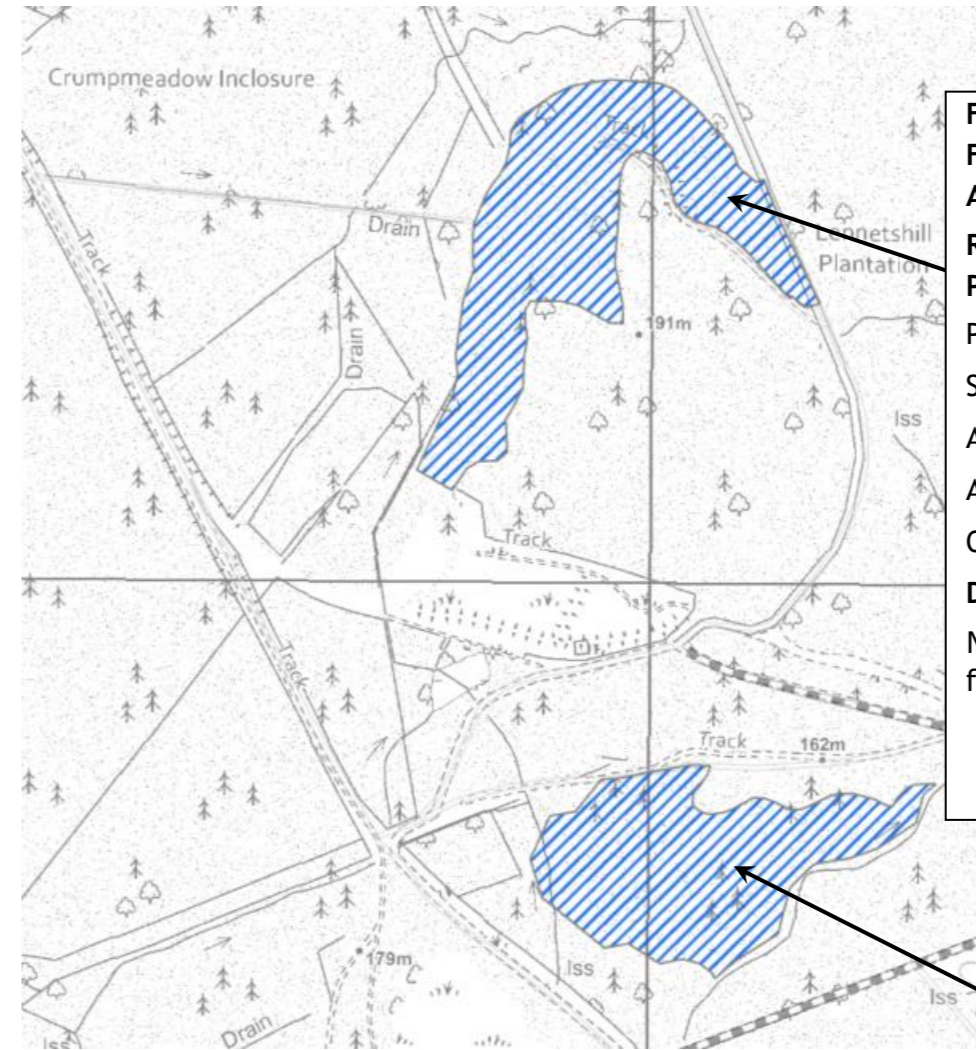
Felling Coupe: 42059
Fell period: 2032-2036
Area: 4.06 Ha
Restock Coupe: 42059A
Propagation: planted
 Sessile Oak 40%
 Scots Pine 30%
 Rowan 30%
Description:
 Felling to reduce Phytophthora ramorum risk.

Felling and Restocking 2024- 2034

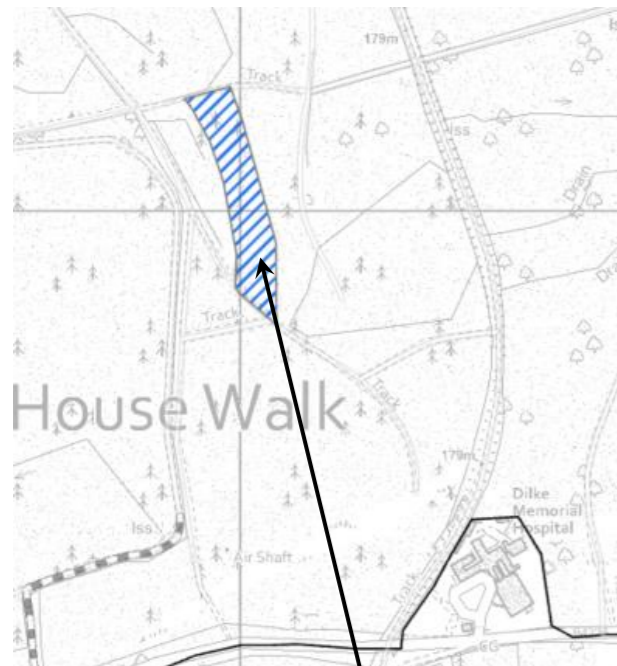
Felling Coupe: 43271
Fell period: 2032-2036
Area: 0.30Ha
Restock Coupe: 43271A
Propagation: planted
 Alder 40%
 Goat Willow 20%
 Mixed Broadleaves 20%
 OPEN 20%
Description:
 Wet woodland habitat assemblage



Felling Coupe: 43030
Fell period: 2032-2036
Area: 4.95 Ha
Restock Coupe: 43030A
Propagation: planted
 Scots Pine 60%
 Italian Alder 20%
 Mixed Broadleaf 20%
Description:
 Replacing stand of larch to increase resilience.



Felling Coupe: 43162
Fell period: 2032-2036
Area: 3.26Ha
Restock Coupe: 43162A
Propagation: planted
 Pedunculate Oak 30%
 Scots Pine 20%
 Aspen 10%
 Alder 10%
 OPEN 30%
Description:
 Mixed conifer and broadleaf high forest some open habitat



Felling Coupe: 43049
Fell period: 2032-2036
Area: 3.90 Ha
Restock Coupe: 4309A
Propagation: planted
 Douglas Fir 40%
 Japanese Cedar 30%
 Other Conifer 30%
Description:
 Adjacency issue with Larch in subcpt 4313b

Felling Coupe: 43155
Fell period: 2032-2036
Area: 2.67 Ha
Restock Coupe: 43155A
Propagation: planted
 Oak 60%
 Mixed Broadleaves 20%
 Hazel 10%
 Hornbeam 10%
Description:
 Bolstering broadleaf and open habitat assemblages.

Felling Coupe: 43196
Fell period: 2032-2036
Area: 0.93 Ha
Restock Coupe: 43196A
Propagation: planted
 Other Conifer 60%
 Douglas Fir 40%
Description:
 Replacing diseased stand of Corsican Pine.



Felling Coupe: 43047
Fell period: 2032-2036
Area: 3.02 Ha
Restock Coupe: 43047A
Propagation: planted
 Douglas Fir 60%
 Japanese Cedar 20%
 Other Conifer 10%
 Mixed Conifer 10%
Description:
 Triangle to southeast is Restock coupe 43047B and will be Scots Pine 60% with 40% Oak.

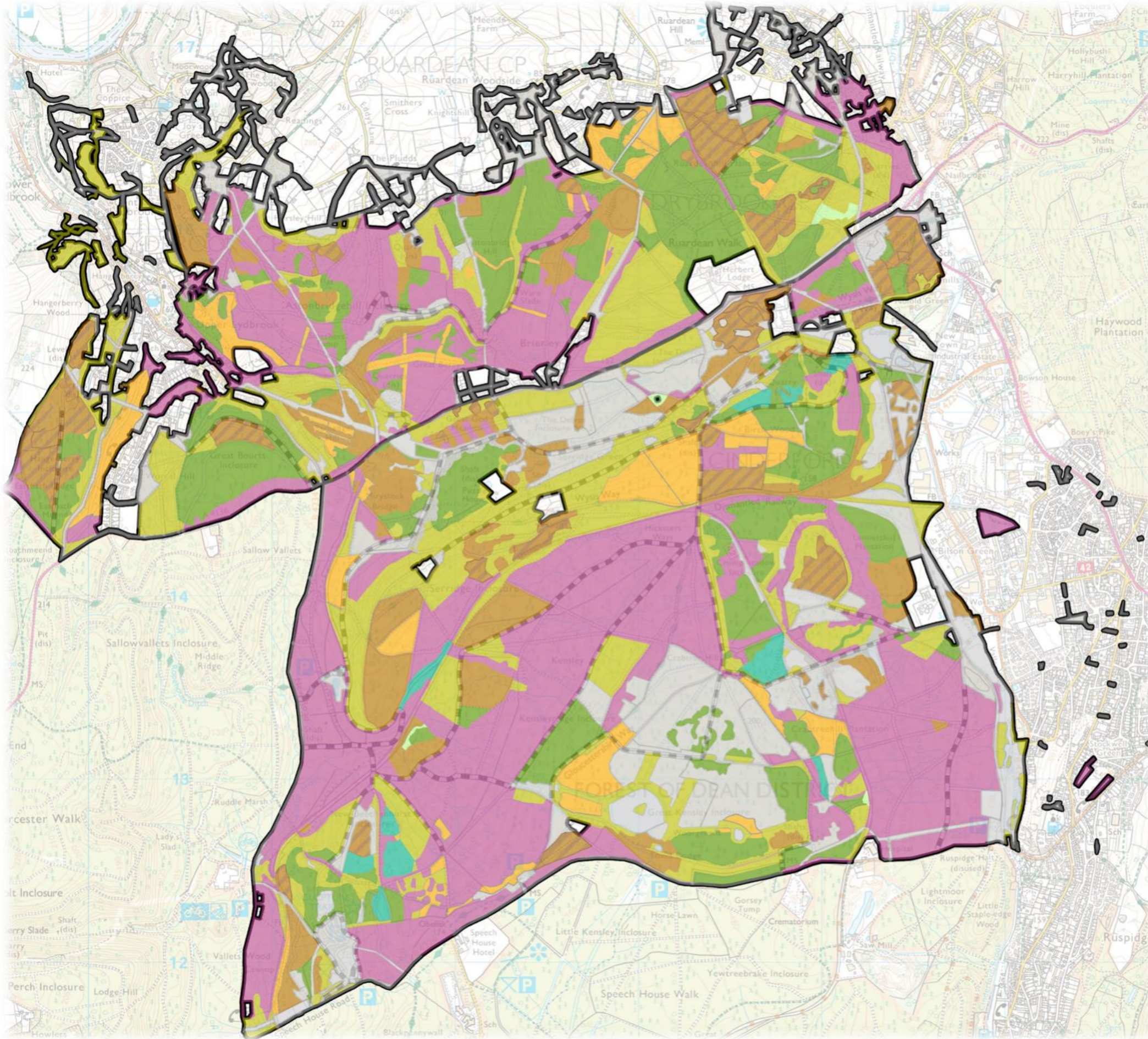
Indicative Future Species 2035

The projections made are an indication of species composition in ten years time. They do not constitute a guarantee, merely acting as an indicator of how the vision for the Speech House Walk and Ruardean Walk Forest Plan area will be delivered over time. Some areas may change more quickly than anticipated, due to clearfelling of diseased areas. In these cases coupe design and species will be honoured according to Forest Plan¹ prescription to ensure restructuring goals are achieved.

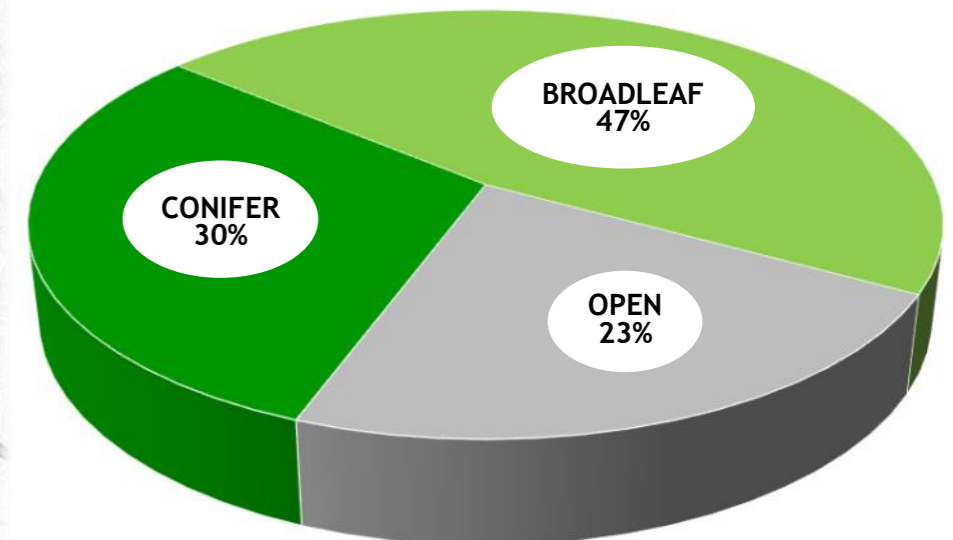
The maps for Indicative species at year 10 and beyond 2051 are derived from largest component. Mixtures² will become more prevalent in future years, so where this is the case, these areas are likely to contain between 2-4 species, through planting, natural regeneration or both.

¹Since the area to be felled may not correspond with the design of coupe shape as per Forest Plan:- being larger, smaller or crossing multiple sub-cpts and/or coupes.

² Mixtures are aspirational and maybe purely conifer, purely broadleaf or a mix of both.



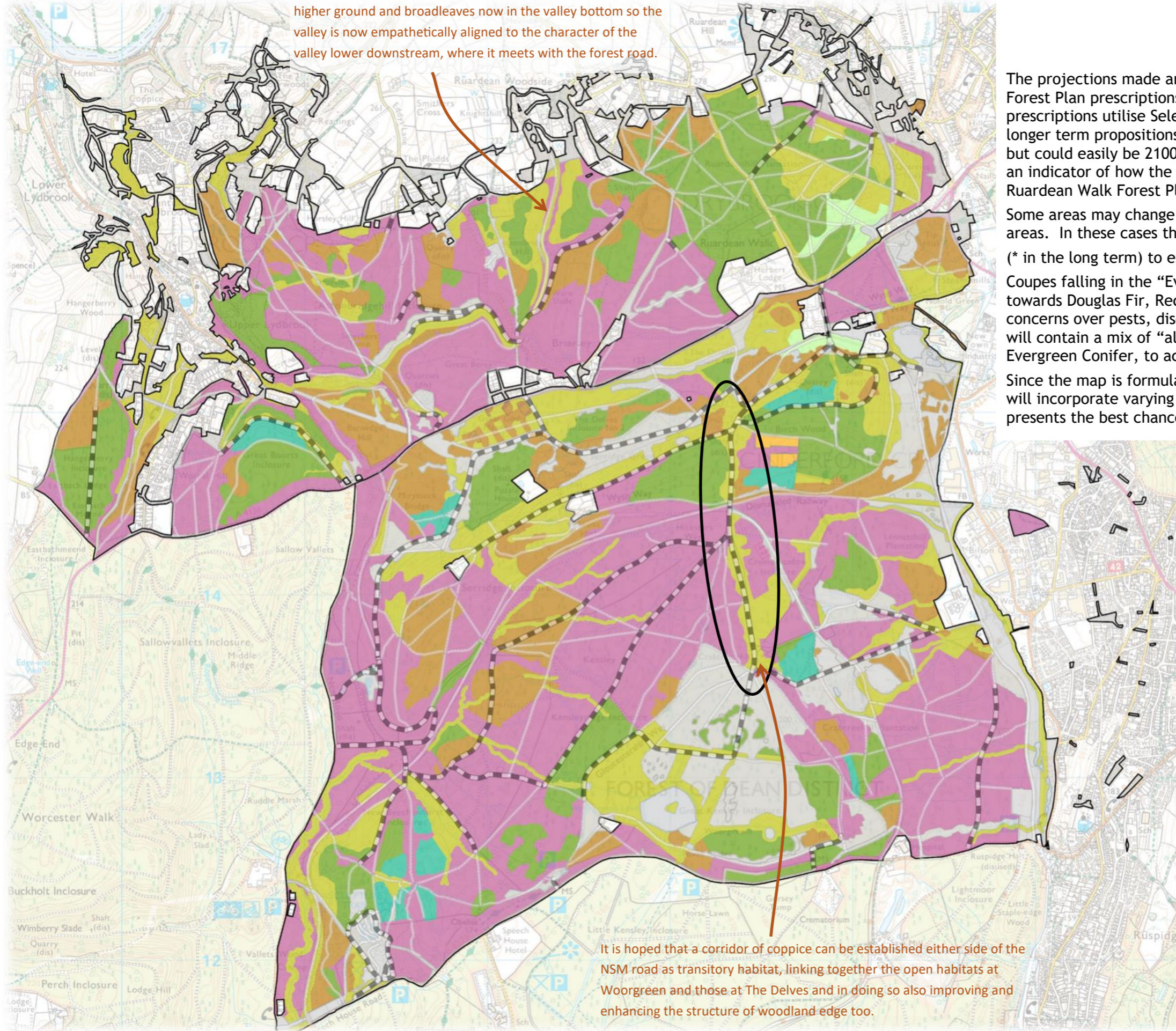
Year 10 Indicative Species Composition in 2035



Legend

- Evergreen Conifer
- Other conifer
- Pines
- Other Pines
- Larches
- Oak
- Native and naturalised broadleaves
- Non-native broadleaves
- Open/other

Note that the orientation of conifer and broadleaves within the valley at Newham Bottom has been revised with conifer on the higher ground and broadleaves now in the valley bottom so the valley is now empathetically aligned to the character of the valley lower downstream, where it meets with the forest road.



It is hoped that a corridor of coppice can be established either side of the NSM road as transitory habitat, linking together the open habitats at Woorgreen and those at The Delves and in doing so also improving and enhancing the structure of woodland edge too.

Long Term Indicative Future Species Beyond 2051

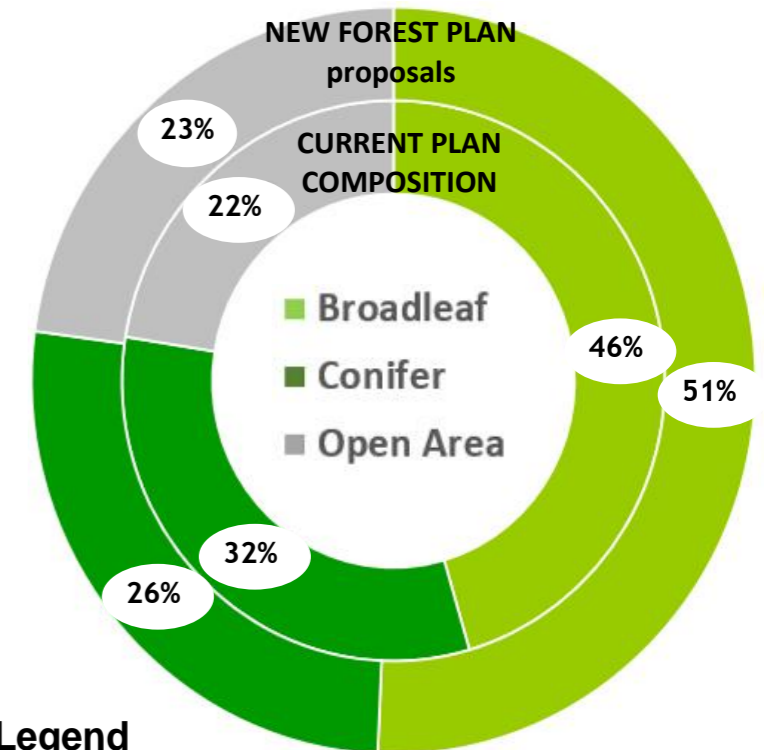
The projections made are an aspiration, and species composition is only indicative once Forest Plan prescriptions have run their course. Therefore it must be noted, that some prescriptions utilise Selection Systems that do not have an end felling date, and so are longer term propositions. This means the aspirational projection is somewhat subjective but could easily be 2100 or beyond. They do not constitute a guarantee, merely act as an indicator of how the vision for species composition in Speech House Walk and Ruardean Walk Forest Plan will unfold, and be delivered over time.

Some areas may change more quickly than anticipated due to clearfelling of diseased areas. In these cases the design of coupe shape and future species* will be honoured (* in the long term) to ensure restructuring goals are achieved.

Coupes falling in the “Evergreen Conifer” category will usually have, for example, a bias towards Douglas Fir, Red Cedar, Western Hemlock, or Norway/Sitka Spruce. With rising concerns over pests, disease and changes in climate, coupes classed as “Other Conifer” will contain a mix of “alternative” and or “emerging” species, with elements of other Evergreen Conifer, to achieve the highest degree of species diversity possible.

Since the map is formulated from the largest component, in reality both these classes will incorporate varying proportions of Evergreen and Other Conifer. This approach presents the best chance of a more resilient forest for the future.

Indicative Species Composition for the future



Legend

- Evergreen Conifer
- Other conifer
- Pines
- Other Pines
- Larches
- Oak
- Native and naturalised broadleaves
- Non-native broadleaves
- Open/other

Conservation - Habitats and Features

Habitat connectivity

There is plentiful existing and proposed open habitat available, with connectivity between these habitats being much improved, provided by proposed areas of new coppice and open habitat. The transient nature of woodland edge habitat will also be vastly improved by the increase in the amount of coppicing. Greater connectivity of these habitats and quality of woodland edge will play a vital role to support greater permeability¹ of species groups like lepidoptera, odonata and reptilia as well as supplying utilisable timber for fencing, firewood, pitprops and timber framing etc.

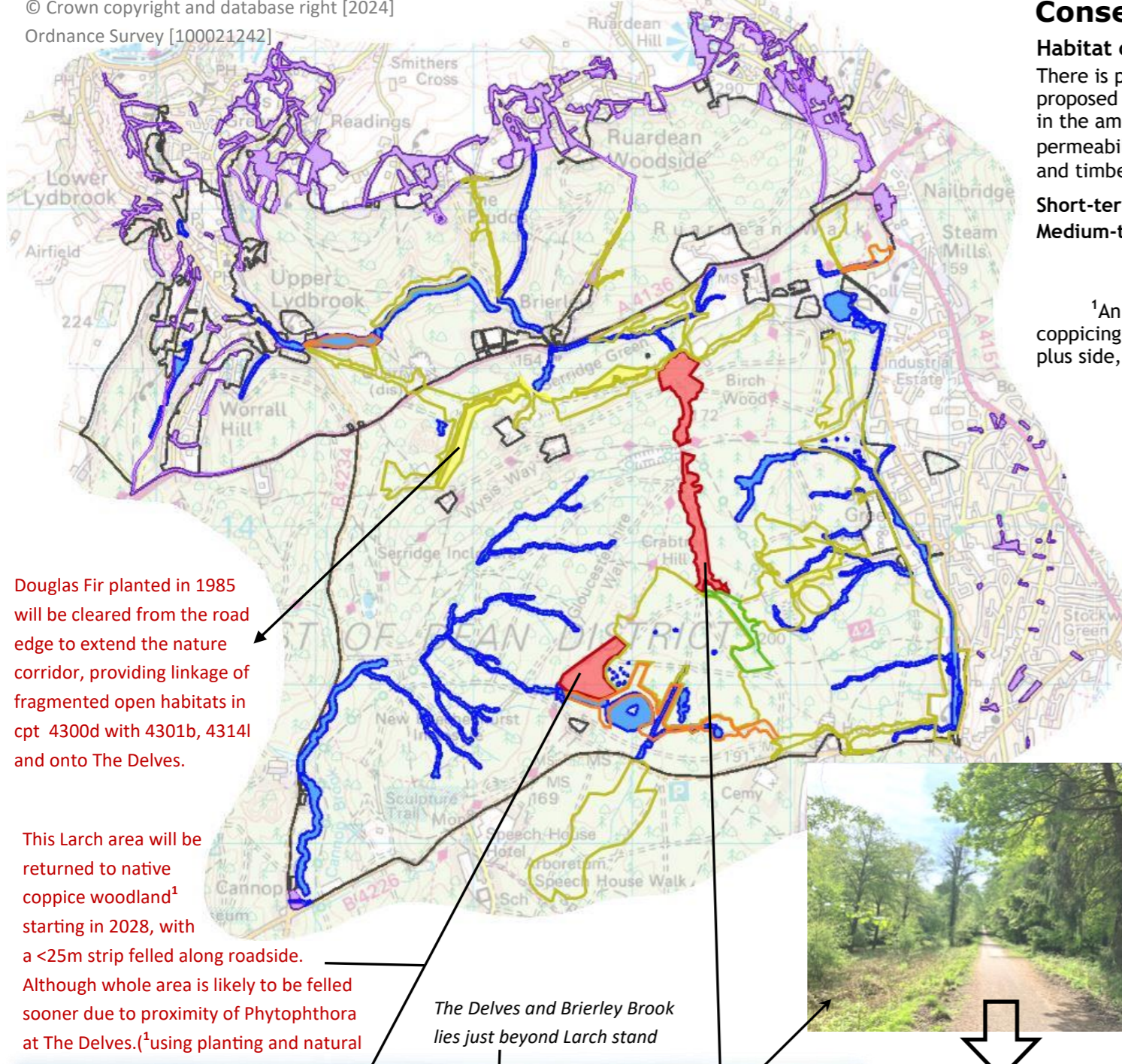
Short-term aim (10-15 years)

Develop the new proposed areas of open habitat and coppice within plan period.

Medium-term aim (40 years)

Establish functional rotations for coppice areas. This will take longer, given some areas need planting following thinning or felling and rotation lengths for coppice will vary from 3 years to 25 years to further enhance habitat diversity.

¹An Our Shared Forest objective is reduction of clearfelling - achieved by increasing use of Low Impact Silviculture Systems such as, coppicing and coppice with standards. This will help offset the loss in transient open habitat, usually provided through clearfelling. On the plus side, coppicing will provide a permanent network of transient habitat and in the future more coppice can be delivered if needed.



Douglas Fir planted in 1985 will be cleared from the road edge to extend the nature corridor, providing linkage of fragmented open habitats in cpt 4300d with 4301b, 4314l and onto The Delves.

This Larch area will be returned to native coppice woodland¹ starting in 2028, with a <25m strip felled along roadside. Although whole area is likely to be felled sooner due to proximity of Phytophthora at The Delves. (¹using planting and natural regeneration)

The Delves and Brierley Brook lies just beyond Larch stand



The NSM road lacks structural diversity and poor permeability, so woodland edge will be greatly improved by heavy thinning, use of natural regeneration and enrichment planting, to produce a graded woodland edge. This can then be coppiced, to provide a corridor of transient habitat between areas of permanent open habitat at Woorgreen and The Delves, via Drybrook Road Station and Mini Winns.

Map Legend			
	Existing open habitat		Wet woodland
	Areas of new open habitat, widening ride edges and bolstering existing open habitat		10m and 20m Watercourse buffering plus showing open water
	Areas of new coppice and new coppice habitat corridor to link habitats to north and south		Areas of Forest Waste
	Mature, veteran Oak - manage to wide spacing to link Woorgreens with open habitats in Crump Meadow		



Wood Lark

Ground nesting species, favouring wooded heaths, typically associated with Devon and East Anglia. With a pair recorded in 2023, observed in the Foxes Bridge Colliery area, presence of the species is locally important. Planned delivery of open, dynamic habitat will increase suitable habitat for this previously rare species within the Forest of Dean.



Wood Warbler

Population has increased in the plan area over last few years. They are a migratory red list species breeding in mature woodland. Kensley and Serridge are key locations for the species within the Forest of Dean.



Pine Marten

Released in the adjacent plan area of Middleridge in the last 5 years, they have spread and now, with a viable breeding population there is hope we will see a reduction in numbers of grey squirrel, and therefore an improvement in timber quality. This being the case, Pine Marten will support the endeavour of promoting connectivity of habitats through the proposed coppicing programme, as damaged broadleaved crops are stumped back, to regrow and in some areas, being singled to return to a quality High Forest.



Adder

Linkage of open areas provided by proposed coppicing and bolstering of open habitat should offer the Adder populations at Woorgreens and Laymore Quag space to expand and move around more easily and hopefully may even reach The Delves at some point in the future.



Lepidoptera

Grizzled Skipper, Dingy Skipper, Wood White, Large White, Small Pearl-bordered Fritillary. These are all species that have tenuous populations in need of support. Ride-side habitat will be managed and developed throughout the plan area to help strengthen the fragility of these species in the Forest.



Beaver Habitat

Removing primarily conifer from within the water buffers and planting of them with wet woodland species such as Alder, Willow and Aspen, may create habitat potential for future Beaver habitat, helping to slow the flow of water following periods of heavy rainfall and create habitats to support a more diverse range of species.

Speech House Oaks SSSI

The SSSI is only a fraction of the Oak within this area, it is known for the holly understory and the assemblages of lichen that occur both on the Oak and Holly. This habitat will be safeguarded by adjacent sub-cpts of Oak being identified and assigned for similar management. Some areas will have conifer removed to release remnant 1800 Oak.

Semi-natural wet woodland

The headlands of Cannop Brook are fed from streams within the plan area and Woorgreens. Prescriptions will see adjacent woodland to Woorgreens lake managed sympathetically, through coppice and coppice with standards and native buffers being established along priority reaches.

Lowland Heath and Acid Grassland



Areas of Heathland will be managed through grazing and motor manual methods, areas of surrounding woodland will be thinned heavily along edges to improve gradation and habitat diversity.

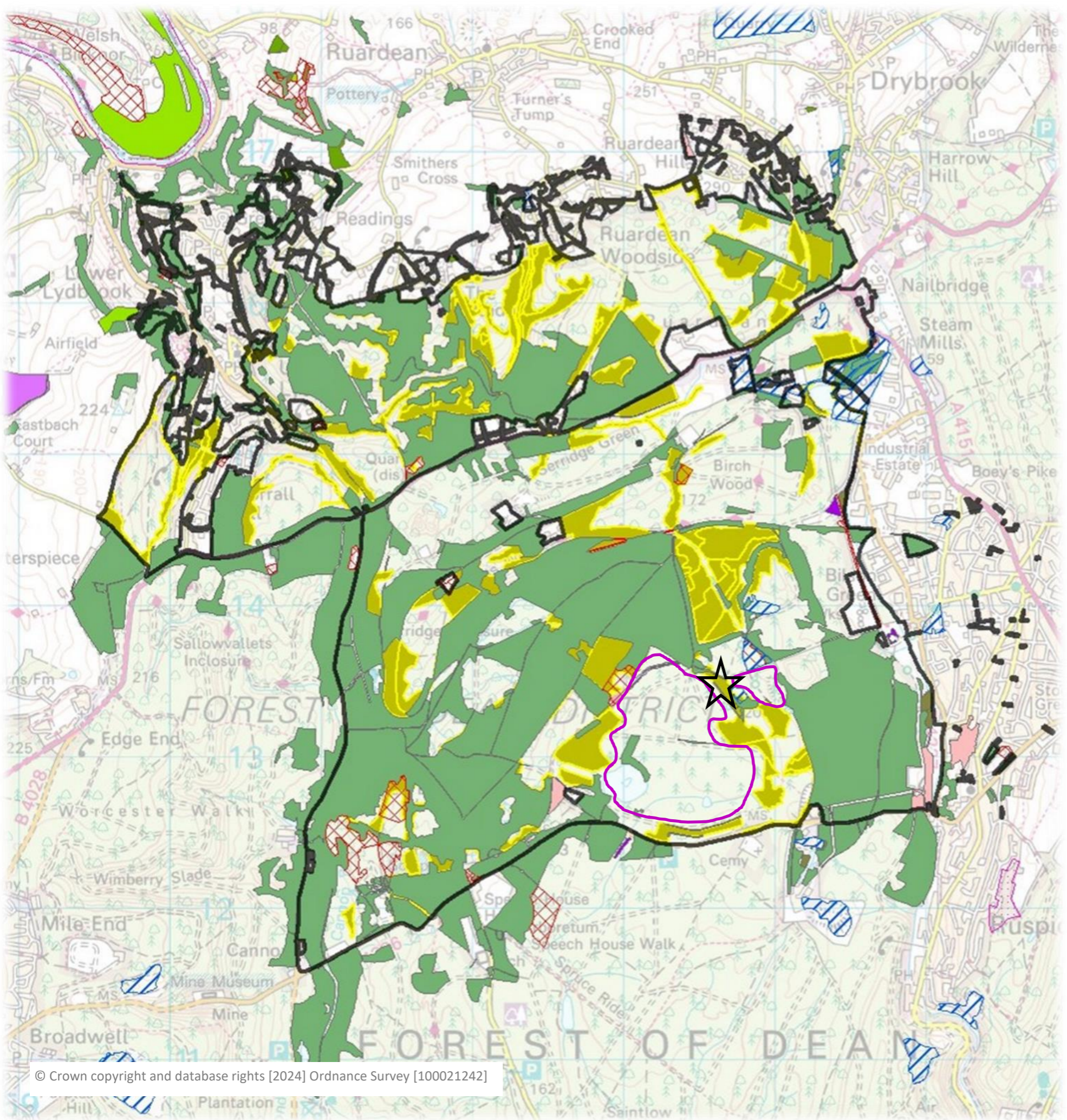
Conservation - Habitats and Features (continued)

NE Priority Habitats

This map shows the Natural England priority Habitats with an overlay that indicates areas going back to broadleaf cover in the future and these areas can be seen in context by referring to the Long Term Indicative Future Species mapping on page 36

LEGEND

-  Outline of Forest Plan area
-  Forest Plan - indicative broadleaf restock working to support and enhance existing deciduous woodland
-  Deciduous woodland
-  Traditional Orchard
-  Lowland calcareous grassland
-  Lowland dry acid grassland
-  Lowland meadows
-  Lowland heathland
-  Good quality semi-improved grassland
-  Open Mosaic Habitat
-  No main habitat but additional habitats present



NE Priority Habitats

These areas are being managed in a complex of open habitat that includes the priority habitats of Lowland Heathland and Acid Grassland. Between the two (★) mature oak woodland dating to 1860 can be classed as wood pasture, and once the adjacent roadside coupes are felled (43060/43182/43156) the open nature of this oak and the newly felled coupes will create linkage of habitat in a easterly direction to Laymore Quag nature reserve and those around the old Crumpmeadow Colliery site.

Conservation - Habitats and Features (continued) Watercourse and riparian management

Buffers of 10 or 20 meters either side of identified watercourses will be established, with the aim of improving the ecological value of the buffer itself, and the buffer, in the context of the woodland. This process may be achieved in one operation or, may need to be realised over 2 or 3 interventions, depending on the work required and to ensure crop stability is maintained. In all cases, the Catchment Management Plans should be consulted on during operational planning, with further advice sought from the Forest Waters Manager and District Ecologist. Work will be undertaken when the opportunity arises, either through routine thinning, specific contracts, through use of volunteer groups or partnership working.

Most tree species other than Willow and Alder species will be removed - with the exception of some native species (including Oak and Scots Pine) in certain locations - and where appropriate Willow, Alder and Aspen will be planted to cultivate and diversify ecological value. This will create buffers whose combination of retained and planted species achieves a diversity of light conditions, with canopy cover ranging between 50 - 70 %. In some locations across the plan area, it is hoped this approach will generate suitable beaver habitat, with potential for future beaver releases.

Levels of woody debris in watercourses have diminished through historic woodland management practices. Restoring and replicating naturally occurring levels of woody debris is therefore a priority; with some felled trees within buffers being left in length, whilst others will be purposefully placed into watercourses.

Over time this reintroduction will help reestablish and restore natural processes associated with woody debris, that promote natural watercourse behaviours such as, erosion and deposition processes, shaping the form of the watercourse, and helping to develop natural watercourse characteristics such as braiding, meandering, exposed gravels and sediment banks, riffles, pools and wood in varying states of decay.

This process of replicating natural levels of woody debris will enhance the diversity of, and create valuable wildlife habitats increasing feeding, spawning and resting places for waterlife. Work will encourage water to be held back within wooded and open areas of woodland during periods of prolonged rainfall and in doing so will delay and regulate the flow at which higher than normal volumes of water, reach downstream locations and is a means of 'natural flood management'.

Area of Alder/ Wet Woodland behind the Old Mill House. The watercourse has been diverted. Work will investigate feasibility of reinstating original route of watercourse that includes a 20 foot waterfall.

Area of Wet Woodland at Hawkwell enclosure at Steam Mills has potential to be encouraged to expand increasing opportunity for the woodland to slow the flow.

The headwaters of Cannop Brook are found in the Kensley and Beechenhurst areas. There is much potential both in tributaries and, in the main channel, for creating greater capacity for slowing the flow, by adding woody debris and reconnecting the brook in places with its natural flood plain.

The majority of water buffers within Serridge and Crabtree Hill are predominantly comprised of Oak from the early 1900s through to 1940 and 1960s. - The Forest Plan seeks to work towards water buffers that have a greater diversity of species and more affinity with wet woodland broadleaved species such as, Willow, Alder with some Aspen.

Please refer to Water Catchment Plans for more detail on watercourse and riparian management and further advice or clarification consult with District Ecologist / Forest Water Manager.

- 10m and 20m Water Buffer areas
- Forest Plan area

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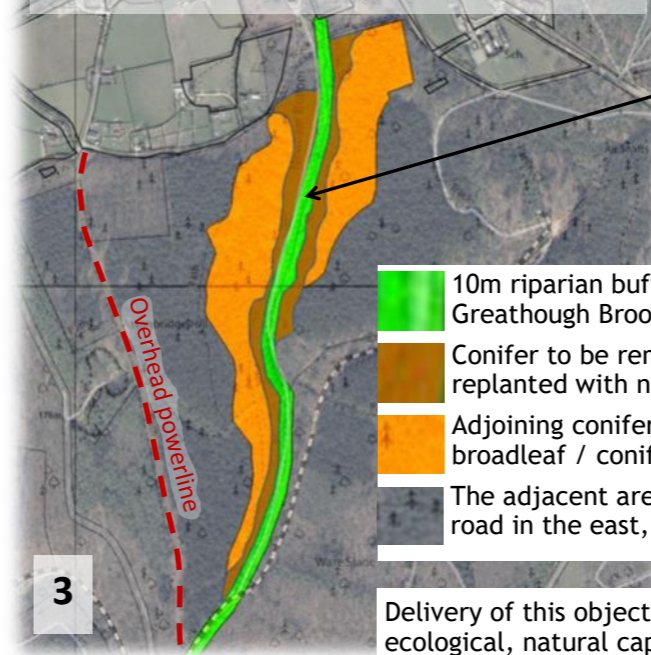


Left: showing Cannop Brook and potential for natural Capital enhancements.

Right: One of the early dams created by the beavers in Greathough Brook .



This photo shows intention of how the valley will look in the future.



Left: Conifer overcrowding and shadowing riparian area of Ware Slade

- 10m riparian buffer for Newham Bottom Brook that runs southward joining up with Greathough Brook west of Piano Corner.
- Conifer to be removed from stream edge up to internal extraction ride and replanted with native broadleaves.
- Adjoining conifer crops will be managed under LIS towards one of mixed broadleaf / conifer and transition to:
- The adjacent area of pure conifer that runs to OHP in the west, and the forest road in the east, will comprise of alternate conifer species.

Delivery of this objective will correct the harsh woodland profile, enhancing the ecological, natural capital and character of the valley and give a true gradation and tempering from a native riparian zone to broadleaf, feathering into evergreen conifer species instilling a more softer integrated and natural character and feel to the valley.

Heritage Features

Archaeology and Heritage of the area is heavily influenced by mans exploitation of the Forest of Dean's natural resources of stone and minerals that has left physical features behind such as scowle holes, stone lined culverts, bridges and tunnels. From the woodland, timber was widely harvested and processed on site for charcoal leaving numerous platforms and charcoal hearths behind.



All the materials being produced needed to be transported and over the years the means of transport progressed from sunken trackways, holloways, dram roads, tram ways and stoned roads, to more modern times, where railway lines were prevalent and used for public transport too, although the majority are now defunct and derelict. Photo above shows an embankment once part of the Great Western and Midland Joint railway at Laymore Quag.

Use of the land for Agricultural and Forestry purposes has also left behind frequent and interesting earthwork features such as the lineal woodbanks, enclosures, stone walls and ditches with some like the Great Kensley Enclosure bank that runs around the perimeter of Woorgreen, being further demarcated in strategic places by boundary stones.

Scheduled monuments and Listed Buildings in the plan area are:

- ◊ Bledisloe Obelisk
- ◊ Speech House Hotel
- ◊ Various boundary stones, enclosure markers and milestones
- ◊ Railway Bridge at Dilke Hospital

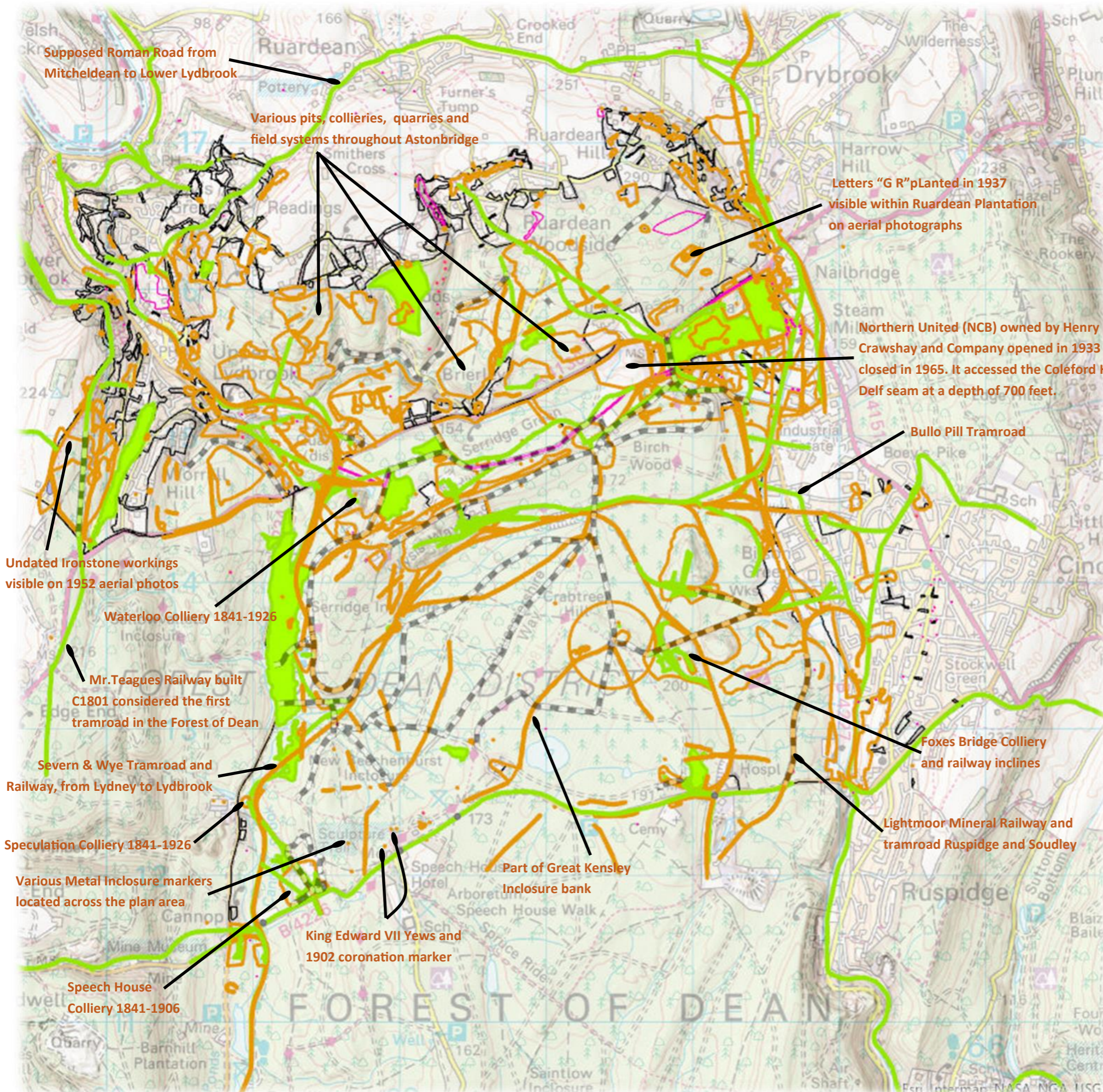
The use of Lidar in recent years has helped identify other previously unknown features or helped pinpoint others whose whereabouts have previously been sketchy at best. Complementing the use of Lidar, further Archaeological digs e.g. at Ruardean have turned up a wealth of other archaeological artifacts that all help paint a picture of the areas rich built and cultural heritage.

Heritage and archaeological features will be managed to avoid damage during any forest operation and where required will follow advice from the County Archaeologist.

Further information on archaeology and heritage can be found in the Concept and Analysis pages for heritage at the beginning of this plan.

Range of Importance

- National Importance
- Regional Importance
- Local Importance
- Other Sites - platforms/charcoal hearths
- Uncategorized



Recreation and Public Access

Whilst producing around 2000 cubic meters of timber¹ per year, and providing a wealth of habitat for a variety of wildlife; the woodland in Speech House Walk and Ruardean Walk Forest Plan is also a valuable asset to local communities and the public, for recreational, amenity and wellbeing² purposes, making the plan area a true exemplar of multi-purpose forestry in action.

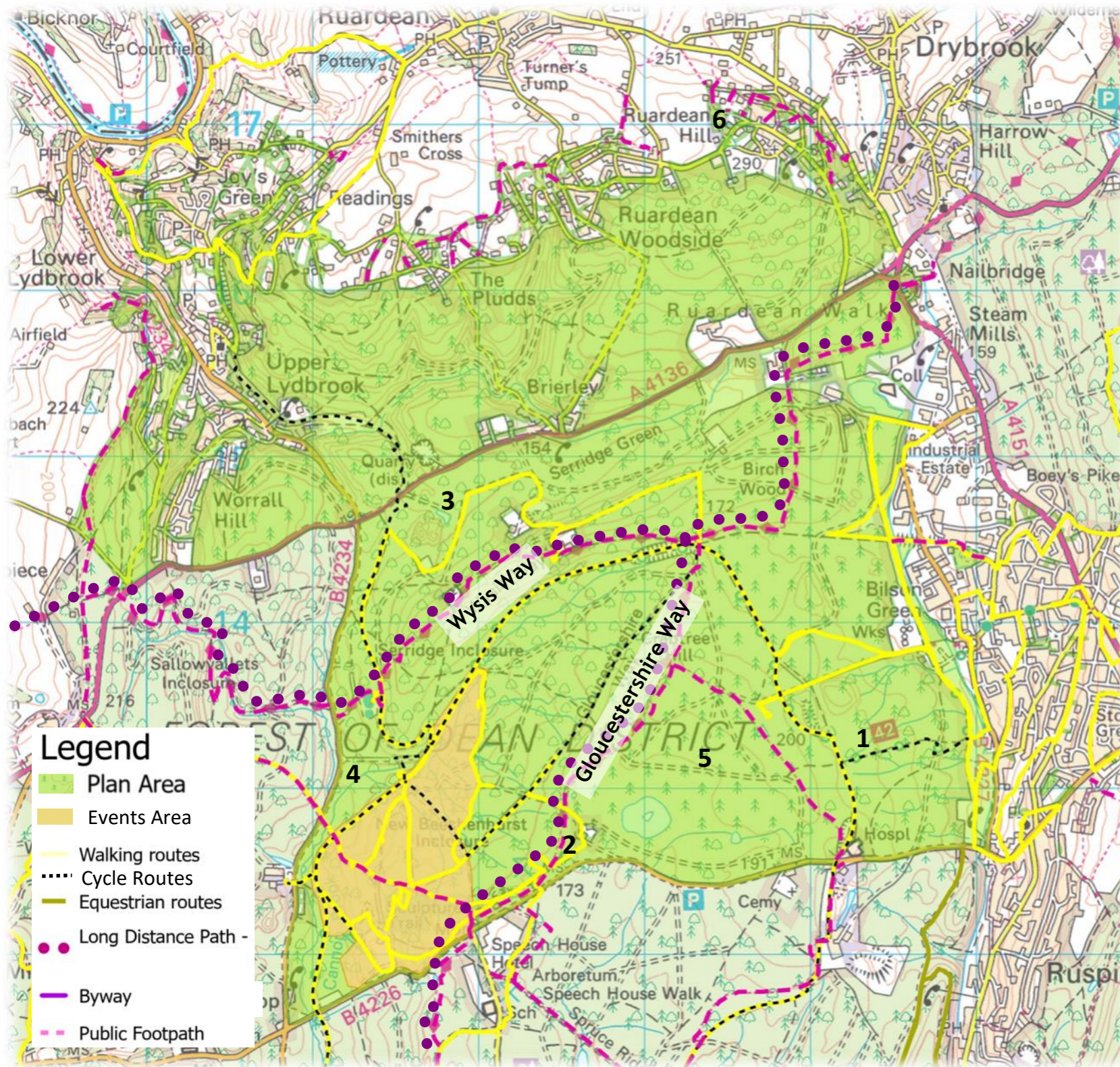
Below are a few of the woodland features & characteristics providing recreational benefit, that are photographically illustrated at the bottom of the page and numerically cross referenced on the map:

1. The woodland composition in a large proportion of this plan area is being managed through Low Impact Silviculture. This enables the continuity of tree cover & provision of a variety of tree species. The result is woodland that stimulates an immersive experience for users of the forest, due to its visual diversity.
2. The woodland enjoys several main areas that are managed for public relaxation and as trailheads. Beechenhurst is the main area, providing a variety of experiences e.g. Go-Ape and the well known and celebrated Sculpture Trail. Others include Speculation and Speech House Woodlands, from which many of the trails can be joined.
3. The woodland has rich cultural heritage and a strong sense of community that ensures connections to the past are celebrated and remain as features, for future generations to enjoy. In this example links are created through a sculpture at Waterloo Screens pond to commemorate Waterloo Colliery, and remember the colliery disaster of 1949.
4. Napoleonic Oak often coincide with the Woodland fringe, offering a glimpse and hint to visitors as to the rich, distinct, unique Heritage and Sense of Place the Forest has to offer.
5. Landscape is designed and managed, enhancing the visual aesthetics of areas, such as those at Woorgreens, and at the same time, this provides a greater depth of habitat for wildlife providing a more vivid immersive user experience.
6. The woodland offers fantastic views of the surrounding landscape, such as those from Pan Tod. At 290m asl it is the highest point in the Forest of Dean, that gives far reaching views towards the Black Mountains and into Herefordshire. Appendix 1 gives detail on how landscapes are managed to achieve a better aesthetic to the forest user.

Horse riders too can enjoy access to stoned roads and rides, including from the permissive equestrian trail, that brings riders from Staple Edge across to the Linear Park at Cinderford Bridge. For cyclists there is the Colliers Trail (used to be called the Family Cycle trail), that utilises the defunct mineral loop railway. Cyclists, horse riders and pedestrians can also enjoy the numerous provision of public access that is supported through a substantial network of Public Rights of Way and the CRoW Act.

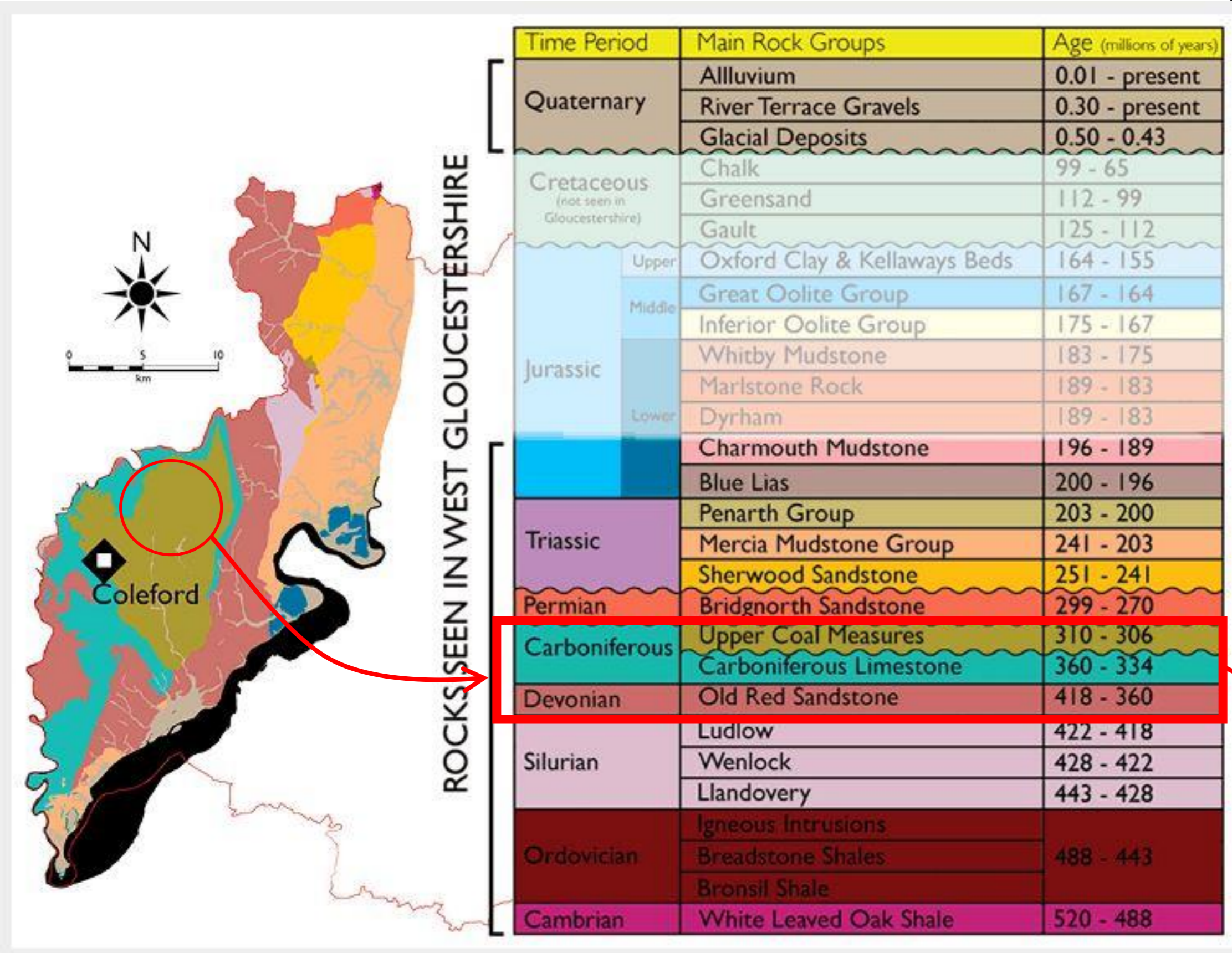
¹ Includes clearfelling and thinning volume and worth around £100,000 and £110,000

² Physical, Mental and Spiritual wellbeing



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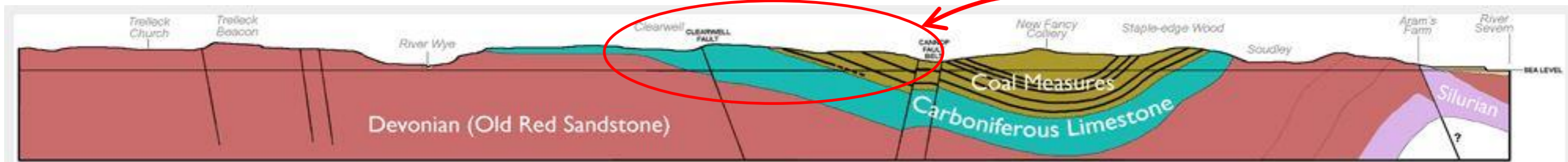


Geology

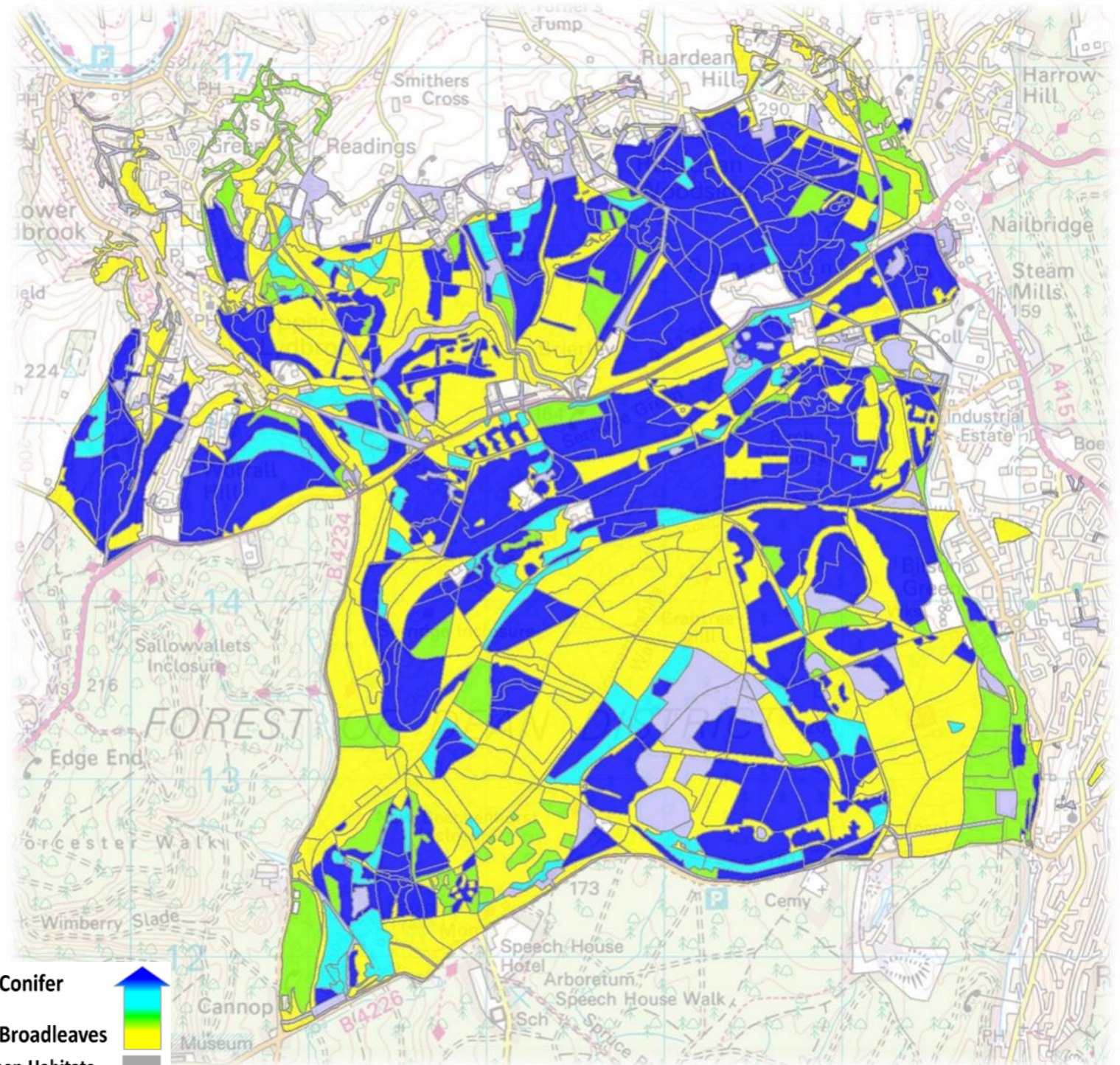
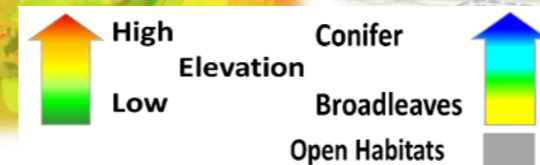
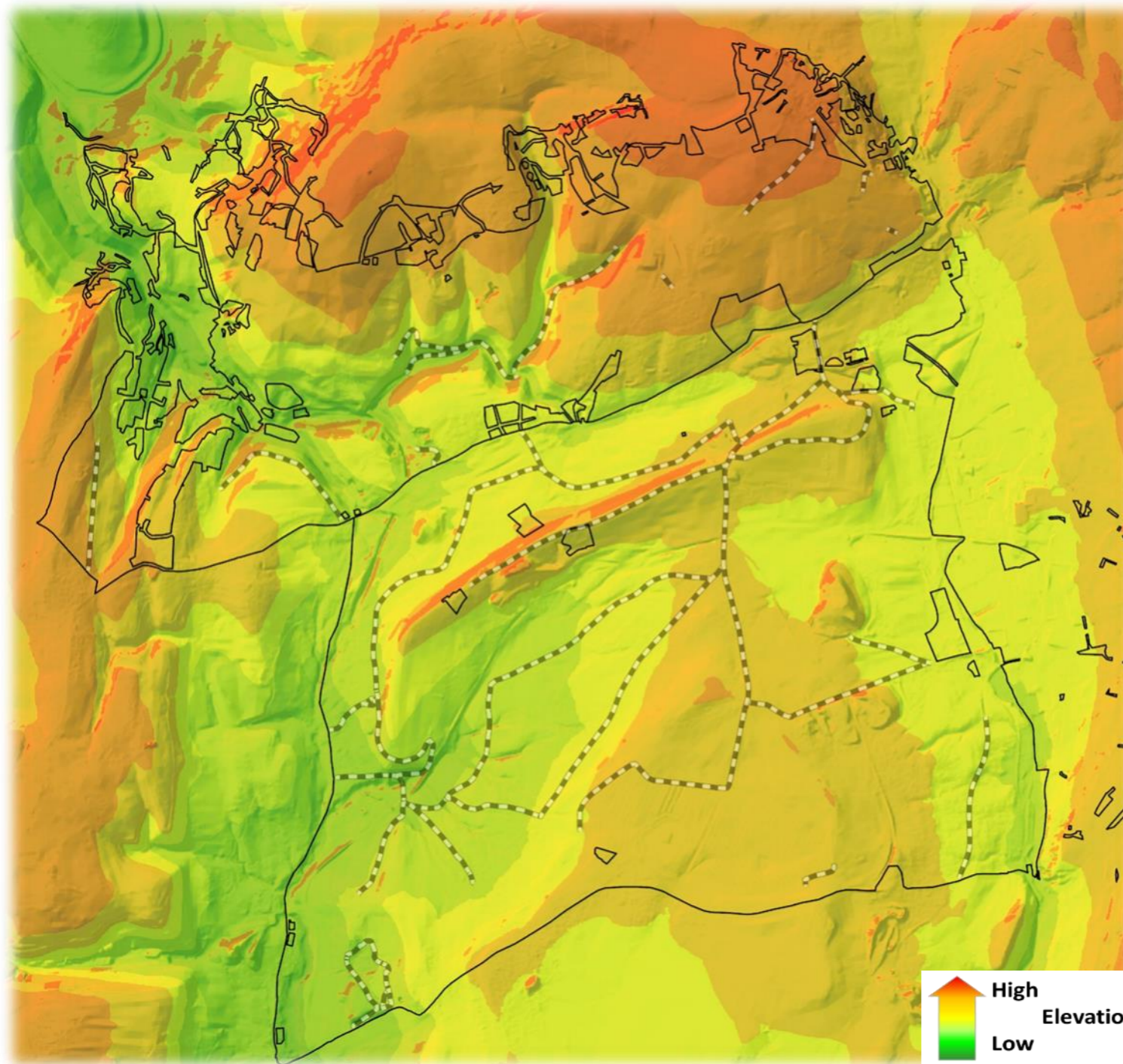
This map shows the geology of the Forest Plan area with the plan ringed in red.

For Soils please see Concept and Analysis on soils and geology.

Cross section of the Geology in Forest of Dean showing the extent of the Forest Plan area.



Landform Analysis



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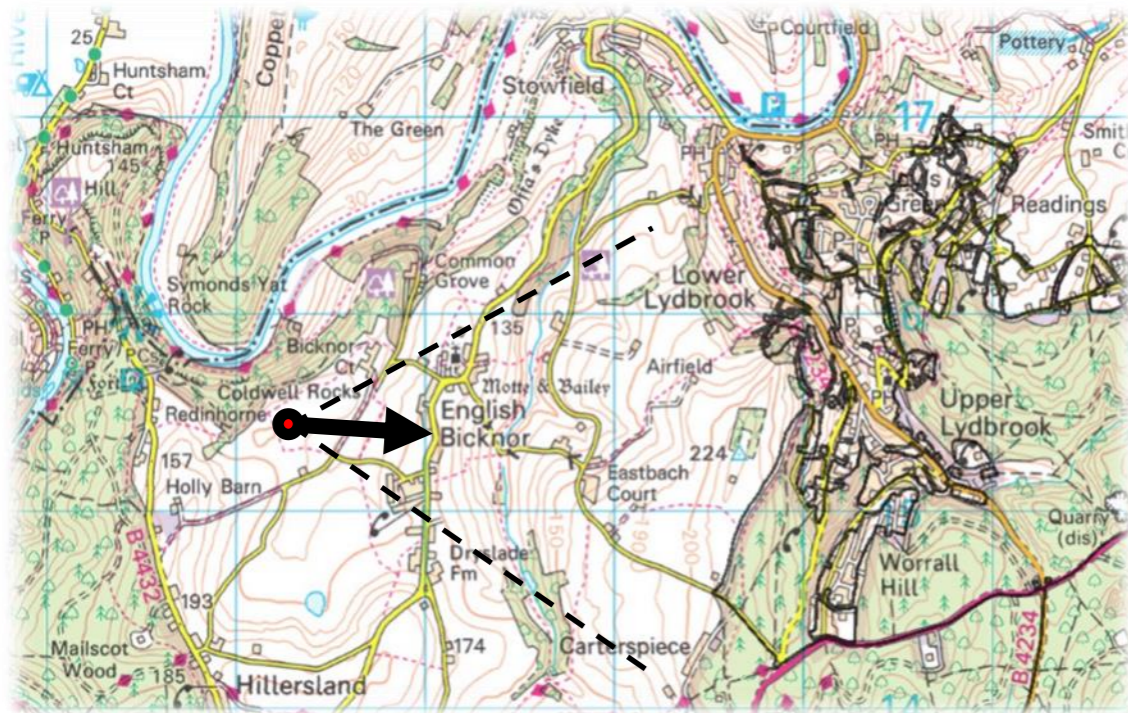
Landform analysis is used to assess landform patterns, demonstrating how the landform is in keeping with the surrounding landscape character.

One's eye is naturally drawn up valleys and gullies, and down the ridges. Elevations in the map (above left) are scaled from green to red, with red indicating ridgelines and then scaling through orange and yellow to green that indicates valleys, valley bottoms and gullies.

These principles can be used to design the coupe shapes of the future, ensuring the size and shape of felling and restocking coupes do not detract from the natural appearance of the forest, and its contribution to the landscape character and context.

As a rule of thumb, and in most contexts, landscaping aims to place broadleaves in valley bottoms and conifer on the higher elevations and ridges. The map on the right of the page shows the current spatial distribution of conifer and broadleaf. In comparing the two maps, one can see there is a close correlation to this principle. There are a few anomalies, some can easily be resolved through clearfelling¹, whilst others will take more time through the use of LIS. In some cases though, conifer in valley bottoms adds to the drama and Sense of Place, and in these cases conifer is likely to be retained. E.g. Northern United and Dances Corner where large diameter conifer adds a sense of grandeur, awe and wonderment.

¹ either clearfelling that has been programmed can solve and achieve the ideal coupe shape for the landform in which the coupe is located OR additional longer term complications arise because clearfelling takes place to eradicate pests and disease, in which case, remedying such an issue may take a couple of decades and has to be achieved in phases.



Viewpoint 1 (above)

Grid reference:- SO5717 1551

As viewed from just off the Public Footpath between Blicknor Court and Redinhorne looking towards the western edges of the Forest Plan area.



Viewpoint 2 (above)

Grid reference:- SO 6061 1604

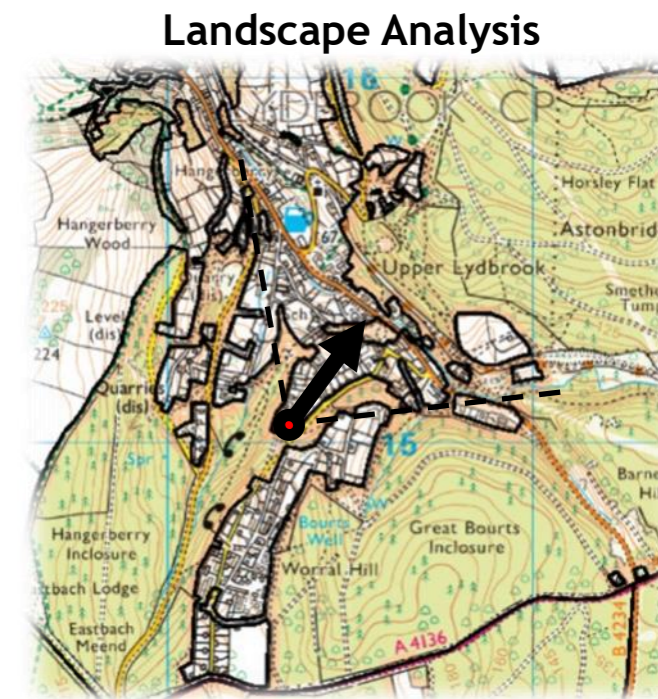
As viewed from Horslea from northern edge of cpt 4201b looking southwest over Hangerberry Inclosure and Worrall Hill.



Viewpoint 2.1 (above)

Grid reference:- SO 6061 1604

As viewed from Horslea from northern edge of cpt 4230a looking southwest over northern end of Hangerberry Inclosure

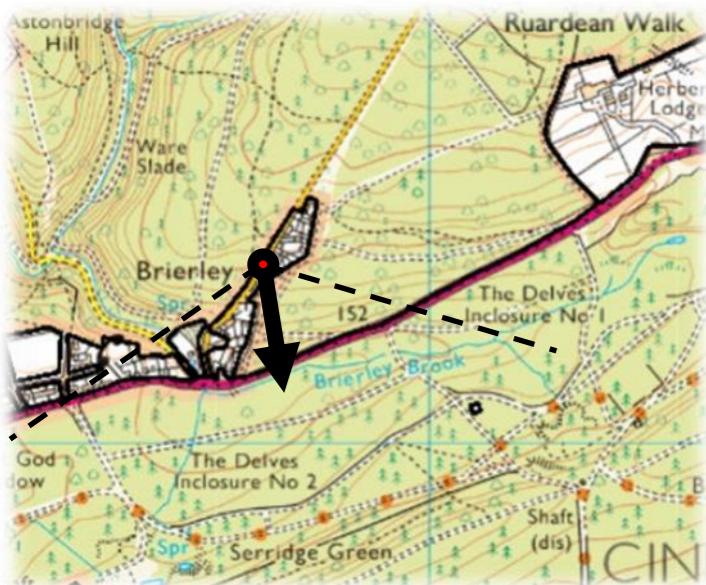


Viewpoint 3 (above)

Grid reference:- SO 6033 1500

As viewed from Camomile Green looking north towards the Horslea and Dances Corner and Scotts Quarry area.

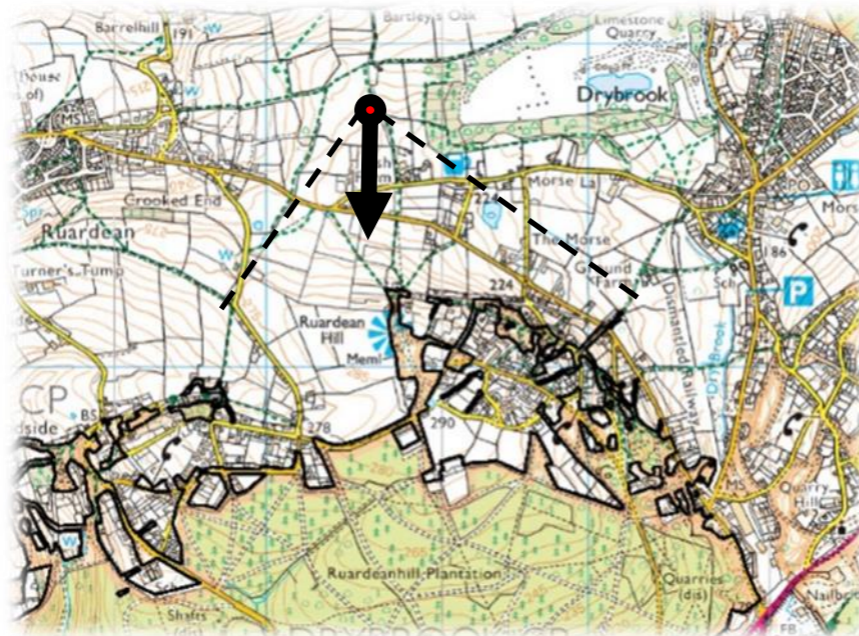
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Viewpoint 4 (above)

Grid reference:- SO 6256 1529

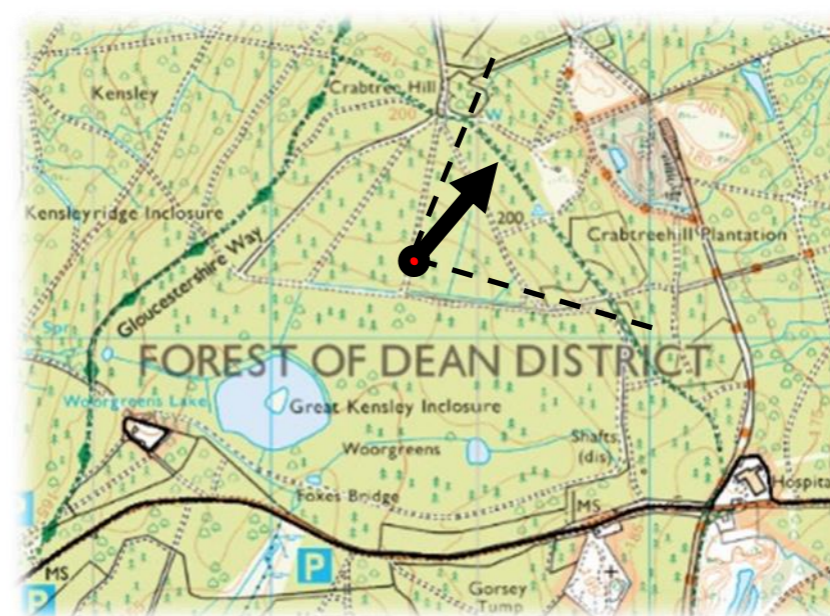
As viewed from the bottom of Brierley Banks looking south over the A4136 into The Delves and upto the ridge on Serridge.



Viewpoint 5 (above)

Grid reference:- SO 6332 1784

As viewed from just west of Drybrook quarry on Public Right of Way north of Ash Farm.

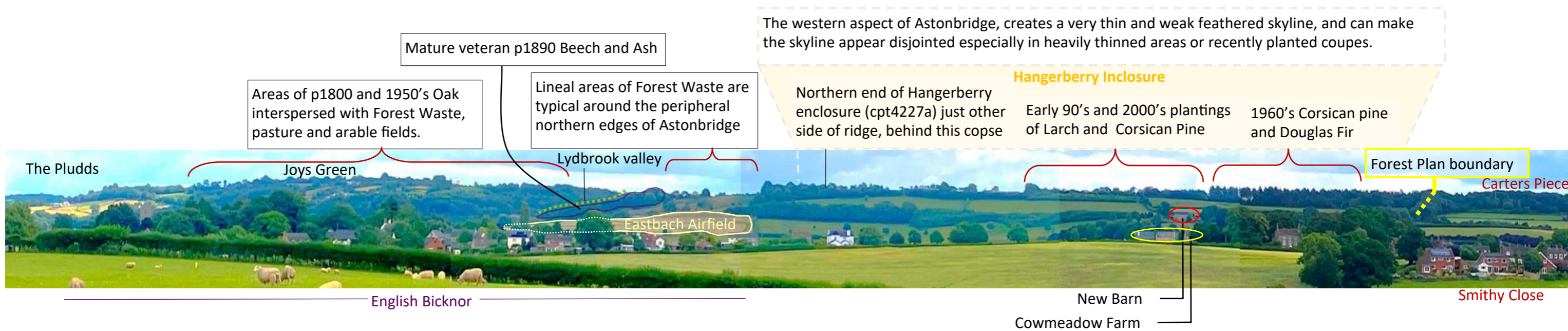


Viewpoint 6 (above)

Grid reference:- SO 6337 1319

As viewed from NSM road at Woorgreens looking northeast

Viewpoint 1 - From Redinhorne looking east



Mature veteran p1890 Beech and Ash

Areas of p1800 and 1950's Oak interspersed with Forest Waste, pasture and arable fields.

Lineal areas of Forest Waste are typical around the peripheral northern edges of Astonbridge

The western aspect of Astonbridge, creates a very thin and weak feathered skyline, and can make the skyline appear disjointed especially in heavily thinned areas or recently planted coupes.

Hangerberry Inclosure

Northern end of Hangerberry enclosure (cpt4227a) just other side of ridge, behind this copse

Early 90's and 2000's plantings of Larch and Corsican Pine

1960's Corsican pine and Douglas Fir

Forest Plan boundary

Carters Piece

The Pludds

Joys Green

Lydbrook valley

Eastbach Airfield

English Bicknor

New Barn

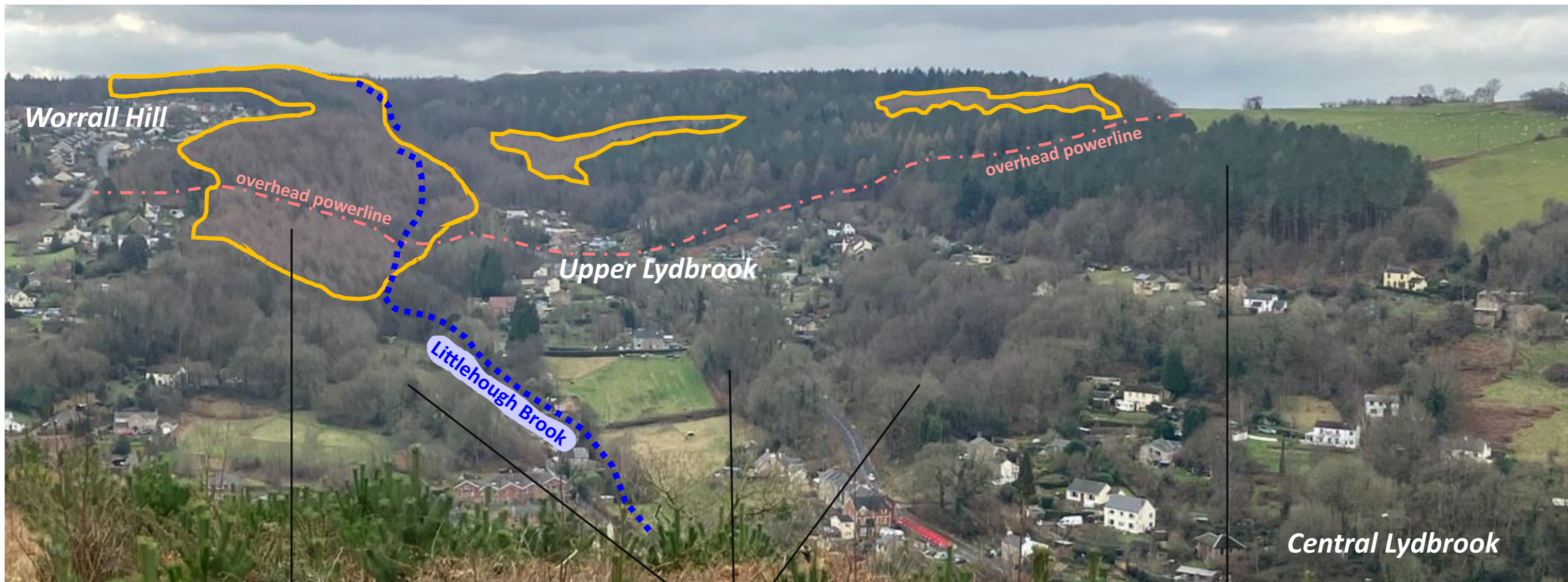
Cowmeadow Farm

Smithy Close

Woodland between The Pludds, Joys Green and Lydbrook Valley will be managed under LISS so there will be little impact on landscape quality.

Within Hangerberry Inclosure, impact on the skyline should be minimal. Only coupes containing larch are prioritised for clearfelling within plan period. The Douglas Fir and Corsican Pine coupes along the skyline will be managed through LISS and underplanted.

Viewpoint 2 Horslea looking south



The dominant feature of the valley must be the vast area of even aged Larch that separates Lydbrook from Worrall Hill. Due to *Phytophthora ramorum*, this area will likely be felled in one go and will afford the opportunity to diversify species composition including broadleaves along Littlehough Brook.

The smaller areas of larch to the west on the right of the photo are programmed for routine clearfell in first 5 years of the plan period.

The village of Lydbrook merges quietly into the valley of LittleHough Brook softened by the interwoven composition of the small areas of peripheral native broadleaf and buildings.

Area of mature Corsican Pine planted in the late 60s north of the powerline will be underplanted with evergreen conifer species of longevity providing a more interesting backdrop and ambience for Lydbrook. Areas of Corsican Pine at the top of the photo, south of the powerline, are programmed for felling in the 2040-50s, with most of the skyline being managed under LISS, so impact on landscape will be minimal, and in all likelihood most areas by the time of felling may well have been underplanted, or thinned to accept natural regeneration with any components of Larch being removed through thinning.

Viewpoint 2.1 - From Horslea looking southwest

Northern End of Hangerberry Inclosure will be underplanted with evergreen conifer species of longevity, for example, Coastal Redwood, Japanese Red Cedar and Douglas Fir and will provide a more interesting backdrop and ambience for Lydbrook.

Woodland gives way to graded scrubby woodland transitioning to pasture land providing a varied woodland edge habitat.

Broadleaf woodland on the end of the ridge has a northern aspect and will experience a cold micro climate, being open to north and northeasterly winds. The area is steep has extremely poor access and has been designated as an area of minimum intervention. Felling work could be done to improve crown condition, but trees would be left in situ with whole crowns to further enhance ecological value.



Viewpoint 3 - From Camomile Green looking north

From Worrall Hill looking north towards the Horslea and Dances Corner and Scotts Quarry area. Once at thicket stage, the young restock¹ on the left of the photo, planted in 2020, will soon extend the evergreen colour of the 1960s Douglas/Grand Fir, blocking the majority of the thin broadleaf crest along the horizon.

¹Scots Pine, Douglas Fir, Western Hemlock and Mixed



The Douglas Fir, Grand Fir and Japanese Larch planted in 1959 in the center of the photo will be managed under LISS and diversified with other Firs and Cedars, so is unlikely to influence the view from here too much.

Viewpoint 4 - From Brierley Banks looking south

The stand of Beech runs along the skyline of the ridge. Any thinning will need to be careful not to leave the stand looking wispy, straggly and disjointed.

Site of the Gale "Strip and At it"

The old Trafalgar Colliery Tips can just be seen on the horizon, but with the stand being retained on a Long Term Retention, the view will remain undisturbed.

Waterloo Screens Tip planted in 1961 was with Scots Pine, and will be managed through Selection systems meaning the site will be thinned to develop selected crowns, meaning again that there should be minimal impact to this view.



This view looks over to The Delves and Serridge from Brierley Banks. In the middle distance one can see the recently felled area at The Delves. During the winter of 2023 the site was carefully replanted with a mixture of conifer, pine and broadleaves so that it will soon blend in with existing Scots Pine behind.

Douglas Fir that surrounds Puzzle House and will be managed by Shelterwood systems so will have a minimal impact on the landscape.

Viewpoint 5 - from Drybrook looking south

Skyline of Ruardean Hill consists of a substantial strip of native broadleaves [p1812 Oak and mid C19th Beech/Sweet Chestnut] that soften the skyline. Work will not greatly impact the visual nature here.

Local viewpoint known as Pan Tod with extensive views to the north and west



Edgehills plantation

Haywood plantation

Ruardean Hill

The wooded landscape is very interwoven with the residential areas of Ruardean Hill and across the northern peripheral edges of the plan area; blending well with surrounding arable and pasture land and since most of the peripheral woodland here is classed as Forest Waste the landscape will not be greatly impacted on through the implementation of this plan.

Garden allotments adjacent to Morse Road

Viewpoint 6 - Woorgreens looking northeast from NSM



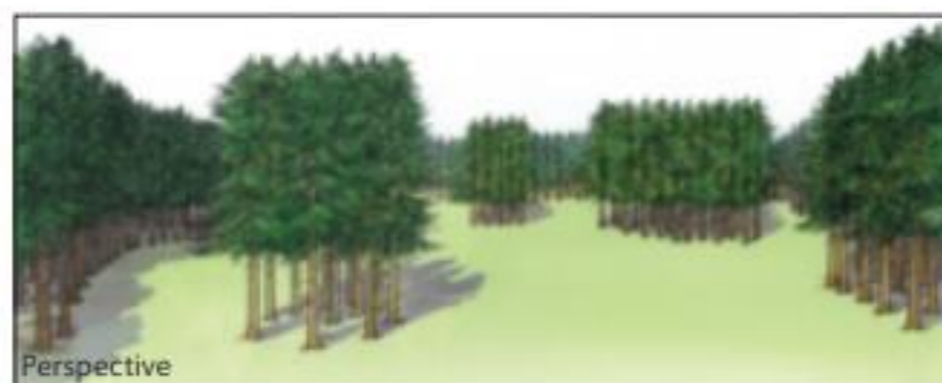
This view of open heathland and acid grass habitats, where one can see the Napoleonic Oak in the distance a top of Crabree Hill would look too bland, expansive and homogenous, without the retained groups of Norway Spruce. The landscape here considers the visual proportion of thirds in a 2:1 ratio where two main elements - the retentions “enclose” the larger expanse of habitat. Their interaction causes “coalescence” creating a smaller scale with a more intimate secure feel to the landscape with a focus of the Oak in the distance.

The Illustration to the right is taken from the UK Forest Standard and shows how the retentions at Woorgreens (above) add diversity to what would be an otherwise bland and insipid landscape.

Figure 24 Designing felling coupes in flatter areas where internal views are important.



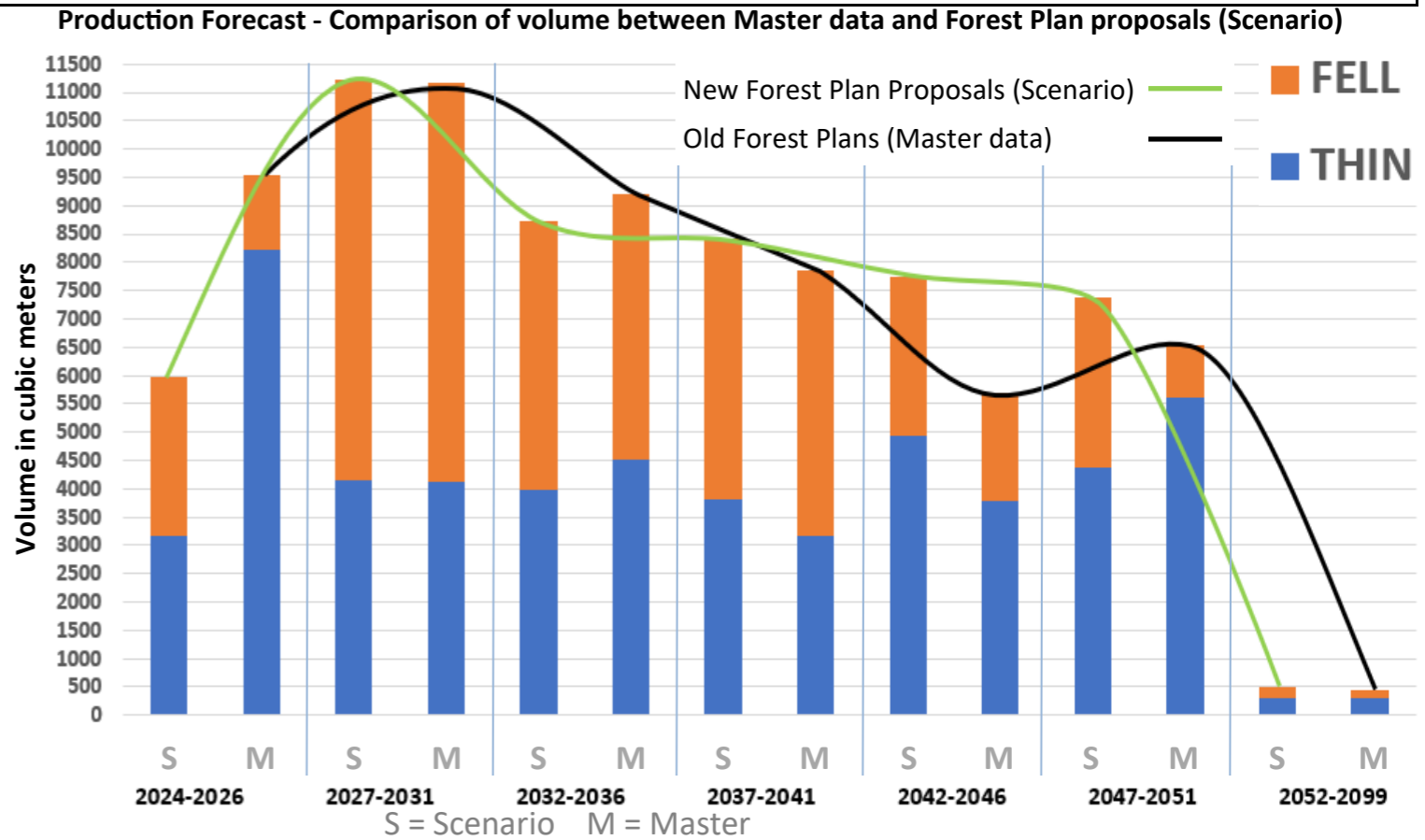
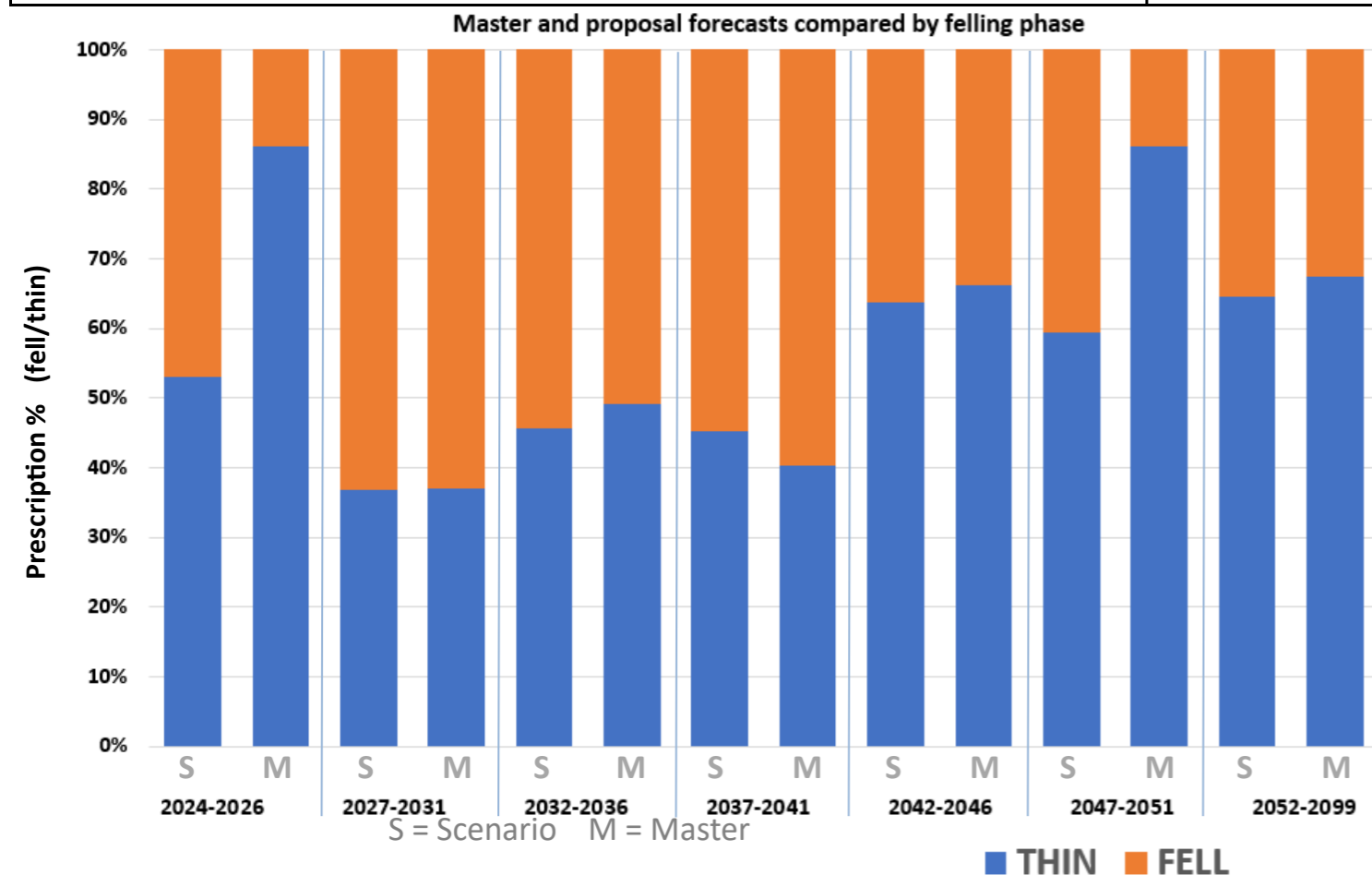
There is little diversity or visual interest in this simple, geometric coupe shape when viewed from the adjacent path.



In contrast, this coupe has a more organic shape with foreground retentions, which provide diversity and give a sense of depth to the view.

APPENDIX 2: Management considerations - Option Testing

Option 1 – The Current seven Forest Plans (Master)	Option 2 – Proposed Forest Plan (Scenario)
Deliver well-designed forests that protect and enhance the internal and external landscape in keeping with the local landscape character.	
Old plans for the main adequately addressed landscape issues in most cases, whilst external landscapes are nominal the internal landscaping has room for improvement with some obvious anomalies e.g. the valley from Piano corner up to Newham Bottom.	Couping detail in the new plan concentrates on putting into place a longer term coupe design based on the well thought out designs from the mid -1990s, but this will take time to achieve given the prescribed increased use of Low Impact Silviculture. (LISS)
Conservation and Ecology objectives (various)	
For the majority the suite of conservation objectives in the old plans were fairly broad in their statements, but in some instances specifics were mentioned e.g. open habitats, protected species, old oak woodlands and individual species such as Small Pearl-bordered Fritillary.	This new plan covers an area between 5-6 times larger and recognises that in their entirety the conservation and ecology objectives from the old plans address issues that are still current. However, specific examples concurrent to Our Shared Forest have been highlighted in this new landscape scale amalgamation, e.g. Ancient Semi Natural Woodland (ASNW), Open Habitats and their associated species, connectivity of open habitat and water management
The continued production of sustainable and marketable woodland products.	
Timber production was sustained primarily through thinning and clearfelling being the prime mode for managing structure and species change. LISS and Minimum Intervention being in their infancy for the delivery of other objectives.	Timber production delivered in a sustainable way remains an important objective. To this end the plan looks to implement a higher proportion of LISS (+123Ha) as a means to deliver sustainable production and as an alternative means of increasing structural diversity within stands and the wider landscape. Reliance on clearfelling will therefore be reduced and value of natural capital will be balanced through more coppicing.
The diversification of woodland species and structure for greater ecological and economic resilience.	
Clearfelling and restocking have been used for the past 30 years to implement a strategy for diversifying species and age class. For various reasons including pest and disease and needing to maintain a sustainable delivery of timber the restructuring programme has fallen behind schedule. Not that there is a rush, but does mean the realising of resource potential may suffer.	LISS will be used as a means of managing the burden of Statutory Plant Health Notices that either have been or have potential to be served. So 51% of Clearfell sites (70% by area) surveyed to be felled over the next ten years (2034) have been found to be suitable candidates for managing through LISS. Retaining 49% of sites for clearfell (30% by area) means that other objectives such as providing transitory open habitats for ground nesting birds can be achieved. Proportion of coppicing will increase to compensate for reduction of clearfelling (transitory habitat).
To conserve, maintain and enhance cultural and heritage assets.	
Management proposals were in line with management intentions laid out within the Forest Plan.	Management proposals will continue these intentions supported by the site planning process that will look to identify and record any heritage features that may be impacted by forest operations as well as those previously unidentified. The Heritage Layer will be used to record those previously unidentified features for future reference.
The management and maintenance of Sites of Scientific Interest/ SAC/ SAM and key wildlife species habitat	
Management proposals were in line with management intentions laid out within the Forest Plan.	The Forest Plan looks to increase ecological and biological value by linking up fragmented habitat that will lead to an overall increase in the Natural Capital of the plan area, e.g. enhancing and creating more riparian habitat or the consolidation of small pockets of semi-natural woodland.
The provision and maintenance of low-key recreation that will benefit peoples physical, emotional and mental health	
Management proposals were in line with management intentions laid out within the FP.	Management proposals are in line with management intentions. With the ever increasing pressure on the Public Estate to provide better connection to nature and to help people’s physical, emotional and mental health, all previous objectives look to help meet this one.



Option 2 is the preferred option and will be instigated

	Coupes that were Clearfell that are now Low Impact Silviculture
	Coupes that were Clearfell that are now a mixture of Low Impact Silviculture and Clearfelling
	Coupes that were Clearfell assessed as not being suitable for LISS that will remain as Clearfell

Coupe prescription for areas of LIS previously identified for Clearfelling

SR = Short Rotation

BC = Butterfly Conservation

CF = Clearfell

comment	management type applied	Felling date applied	MAI for largest component	+/- MAI date	Quick glance LISS / CF or both	Map	Block	OLD coupe number	New Forest Plan Proposals Main coupe number 1	New Forest Plan Proposals Part coupe number 2	New Forest Plan Proposals Part coupe number 3
Leave open space along Cycle trail and vary stocking intensity to improve aesthetics, on steeper slopes visible from cycle trail. Could we plant some sequoia perhaps? - adding to Sense of Place and longevity.	Irregular Shelterwood	2095/96	not available	not available	okay 06/03/24	2	Astonbridge	42102	42003		
It would be possible therefore, given the secluded nature of the site and the difficulties in working the site to ringbark and fell some of the BE to create both standing and fallen deadwood. - Will be managing this in sympathy and complimentary to the watercourse. 20m water buffer extended to cover old flood plain and 'holding' area that fed the Mill down stream	Group Selection	N/A			okay 06/03/24	3	Astonbridge	42098	42040		
Oak and SP to be planted (tubes) and in high density in order to stop UAT use.	Group Selection	N/A			okay 06/03/24	4	Astonbridge	42063	42009		
Retain eastern strip running N-S but remove as much CP and WH from western section as possible without damaging the understory and surrounding broadleaves. Underplant or group plant in resulting gaps within crop to enrich future species composition.	Single tree and group selection	N/A			okay 06/03/24	5	Astonbridge	42074	42092	42079	
Alternative and emerging species to be planted	Uniform Shelterwood	2094/95	2068 2041 2050	+26 +53 -44	Changed from CF to ShWd okay 06/03/24	7	Astonbridge	42151	42136		
Split restock into two. (east and west) whole site will be SP/OK/MB/XB but west side = 40/60 bias to broadleaves and east side 60/40 bias toward conifer	Irregular Shelterwood	2084/85	2058	+26	okay 06/03/24	10	Astonbridge	42038	42107		
Beaver/watercourse buffer. Scots Pine within Beaver enclosure will remain operationally thinnable. Develop crown of SP for future potential veteran/ character trees	Long Term Retention and Group Selection	2124	2051	+73	okay 06/03/24	11	Astonbridge	42091	42082	42027	
	Goup Selection	N/A			okay 06/03/24	13	Astonbridge	42118	42012		

Coupe prescription for areas of LIS previously identified for Clearfelling (cont...)

comment	management type applied	Felling date applied	MAI for largest component	+/- MAI date	Quick glance LISS / CF or both	Map	Block	OLD coupe number	New Forest Plan Proposals Main coupe number 1	New Forest Plan Proposals Part coupe number 2	New Forest Plan Proposals Part coupe number 3
Create irregular structure to help with shelter to farmers field.	Irregular Shelterwood	2080/81	2056 2060	+24 +20	okay 06/03/24	16	Astonbridge	42168	42066		
Remove larch and WH through thinning and potentially u/p to enrich alternate species (not WH) e.g. JRC/RSQ/ESF - Retain mature DF	Group selection	N/A			okay 06/03/24	18	Astonbridge	42156	42030		
Fairly sheltered south facing bank	Uniform Shelterwood	2100/01	2057 2043	+43 +57		21	Astonbridge	42083	42077		
Thin to remove larch and RC and underplant. RC not suitable under ESC 2080 high NOTE change from red cedar to ESF due to climate ESC constraints.	Irregular Shelterwood	2124/25	2048 2055	+76 +69		22	Astonbridge	42095	42039		
Seed stand retain on selection system, but may need felling due to PR. feasible fell date 2059	Single Tree Selection	N/A				24	Astonbridge	42164	42064	42063	
Thin out Larch to help create plantable areas	Uniform and Group Shelterwood	2084/85 2090/91	2059 2053	+25 +37		25	Astonbridge	42170	42131	42132	
well thinned and good potential for underplanting Conifer restock	Irregular shelterwood	2101/02	2052	+49		26	Astonbridge	42202	42133		
Diversify understorey plantings further with JRC/RSQ	Uniform shelterwood	2065/66 2101/02	2067 2053	-2 +48		27	Astonbridge	42191	42134	42133	42045
Retain as Conifer but diversify species in the future possibly following first thinning (circa 2042) - <u>should this be moved to broadleaves in future years???</u>	Irregular shelterwood	2104/05	2057	+47	okay 04-03-24	1	Crabtree Hill	43254	43078		
visually improves the aesthetics of what would otherwise be a very boring large open space in a prominent location. - Reain as Long-term retention, which will continue to add aesthetic value and also continue providing shelter for wildlife and the grazing animals. Realistically NS will be retained impertuity which will also add value through retaining past biological maturity.	LTR (Non-Forecastable)	2079/80	2044	+35	okay 04-03-24	2	Crabtree Hill	43302	43187	43186	
Felled and restocked with SP TUL NS IAR in 2023 - potential frost pocket. Wood spurge present but scarce. SP OK BE HAZ BI woodland surrounds this site and runs along this valley. - Nice feature with variable ground conditions. - a good mix of species for site conditions.	Group selection	N/A			okay 04-03-24	3	Crabtree Hill	43264	43083		
Deer and Boar will be the initial issue if recoppiced. Coppicing and enrichment with other coppicable native broadleaves. Perhaps some Red Oak ?? or similar for autumnal colour, given the location of the site and would enhance visitor experience.	Coppice	2036/37	2088	-52	okay 04-03-24	5	Crabtree Hill	43232	43063	43153	
Only continue removing conifer that will not cause damage to remaining Oak trees, consider enrichment palnting with complementary native species to the adjacent open habitat.	Group Selection	N/A			okay 04-03-24	10	Crabtree Hill	43280	43134	43135	

comment	management type applied	Felling date applied	MAI for largest component	+/- MAI date	Quick glance LISS / CF or both	Map	Block	OLD coupe number	New Forest Plan Proposals Main coupe number 1	New Forest Plan Proposals Part coupe number 2	New Forest Plan Proposals Part coupe number 3
Coppicing to be undertaken by DGT Create habitat piles	SR Coppice	coppice date not set	2031		coppice possible area	14	Crabtree Hill	43357	43178		
Continue thinning to encourage regeneration. Consider enrichment planting to further diversify species composition	Irregular Shelterwd	2083/84	2036	+47	okay 04/03/24	17	Crabtree Hill	43275	43140		
enhance the adjacent Napolionic Oak with the 40% MB	Irregular Shelterwood	2121/22	2048	+73	okay 04/03/24	21	Crabtree Hill	43341	43104		
once subcpt 4316 L is converted to other broadleave species through shelterwood, combine with coupe 43060 (4316 B) and manage as a selection system.	Group selection	N/A			okay 04/03/24	1	Serridge	43113	43275	43040	
One year old broadleaf restock. Will eventually be managed through Group Selection	Group selection	N/A			okay 04/03/24	2	Serridge	43102	43276		
Open with scattering of broadleaves and scrub species - Potential for future wood pasture habitat	Open	N/A			okay 04/03/24	3	Serridge	43020	43043		
	Strip Shelterwood Group Selection	2065/66	2054	+11	okay 04/03/24	4	Serridge	43405	43247	43245	
Skeletal shallow soils due to old mineral extraction activity	Group Selection	N/A			okay 04/03/24	5	Serridge	43421	43221	43240	
maintain cover for Bats Remove NS only, retaining SP	Strip Shelterwood Group Selection	2065/66	2054	+9	due to bats and stability issues	11	Serridge	43163	43245	43247	
Clearfell northern block adjacent to OHP Strip fell the southern block adjacent to OHP Was subject to Northern Quarter mitigation	clearfell and Strip shelterwood	2050/51	2054	-4	CF 2065/66 due to bats and stability	12	Serridge	43652	43243	43246	
Remove any larch through thinning Future thinning will give a more open structure to the stand and possibility for futher enrichment planting of other species. Consider planting groups of redwood for longevity. SP sould	Group Selection and Irregular shelterwood	2049/50	2024 2062	+25 -13	okay 04/03/24	13	Serridge	43528 and 43687	43248	43240	43251
No signs of windblow. Reduce stocking level to suit the safety margins of OHP corridors. Not to be restocked	single tree selection	N/A			okay 04/03/24	15	Serridge	43641	43258		
On restocking increase level of minor species such as HAW/HAZ/CAP/WEM/ABR	Clearfell and Group Selection	2025/26 2031/32	2051 2070	-26 -39	CF 25/26 okay	6	Astonbridge	42077	42098	42095	42012
Soils look to be dry and shallow with some skeletal elements. - steep slope of around 30 deg that's south facing. NS is very boney. The site has remnant veteran napoleonic OK scattered throughout with components of mature WH. Very few broadleaf options. FDT would tend to suggest SOK/SP as being one of the better options and this would tie in with the stand of BE/SP just to the north in 4204f	Half clearfell half Group Selection	2032/33	2055 2053	-23 -21	CF 32/33 okay 06/03/24	12	Astonbridge	42085	42091	42090	
	Clearfell and Single Tree Selection	2025/26 2030/31	2050 2072	-25 -42	okay 06/03/24	14	Astonbridge	42868	42095	42098	

Coupe prescription for areas of LIS previously identified for Clearfelling (cont...)

comment	management type applied	Felling date applied	MAI for largest component	+/- MAI date	Quick glance LISS / CF or both	Map	Block	OLD coupe number	New Forest Plan Proposals Main coupe number 1	New Forest Plan Proposals Part coupe number 2	New Forest Plan Proposals Part coupe number 3
WH marginal in ESC (only just) consider underplanting with alternative species perhaps ESF (also marginal) add in SOK & SP	Uniform Shelterwood	2065/66 2032/33	2061 2055	-4 -23	CF larch 2032/33 okay	15	Astonbridge	42130	42017	42059	42125
reduce PR risk by felling	Group selection & clearfell	2032/33	2026 2055	+8 -23	okay 06/03/24	17	Astonbridge	42159	42059	42029	
mixed conifer and broadleaf PHF. NOTE change from red cedar to ESF due to climate ESC	Irregular Shelterwood	2124/25	2038 2055	+86 +69		23	Astonbridge	42090	42039	42088	
Remove larch within CP through thinning and then underplant CP with alternate conifer species suggest something long term that will add to the sense of place given sites proximity to Beechenhurst and the Sculpture trail that runs through it. Perhaps establish a redwood grove around the decommissioned sculpture ("Bois Mort") to both retain and enhance the sculptures ambiance	Clearfell & Irregular Shelterwood	2025/6 (HL) 2083/84 (CP)	2027 2054	-2 +29	CF 2025/26 okay 04-03-2024	4	Crabtree Hill	43230	43085	43084	
Improve landscaping along cycle trail - Remove 40-50% and leave standards, leading to an improvement for butterflies. - due to original coupe size merge with adjacent coupe 43269 Diversify with coppiceable species other than SC.	Coppice with standards	2055-56	2060 2097	-5 +42	20yr cut okay 04-03-24	6	Crabtree Hill	43269	43191		
At risk from PR due to larch on other side of cycle trail. Remove redundant feneline. Replant with coppiceable alternate broadleave species in mosaic with open space. Stagger cutting frequency with adjacent coppice coupes - spray off stumps and replant with other species - Due to awkwardness of working, coupes 43262 and 43261 may end up getting felled together.	Coppice with standards	coppice date not set	2097		30yr cut okay	7	Crabtree Hill	43268	43159		
	Coppice with standards	2044/45	2060	-16	20yr cut okay	8	Crabtree Hill	43262	43181		
	Coppice with standards	2044/45	2060	-16	20yr cut okay	9	Crabtree Hill	43261	43185	43181	
Remove larch component through thinning plant felled gaps to diversify species (CAR/SP??) clearfell northern boundary as part of open habitat linkage corridor (coupe 43182)	LTR / clearfell	2079/80	2034	+45	Remove Larch okay 04-03-24	13	Crabtree Hill	43360	43177	43182	
Split into 2 coupes northern one strip fell creating dormouse favourable habitat. Southern Coupe Irregular shelterwood or Singel tree selection Planting mixture of SP HAZ HAW and NS in varying ratios, split	Strip Shelterwood Single Tree Selection	2053/54	2058	-5	okay 04/03/24	6	Serridge	43787	43208	43244	
Retain eastern DF and remove EL thorough thinning Replant with alternate/emerging species	clearfell and Ireggular	2026/27 2114/15	2024 2024	+2 +90	CF 25/26 okay	10	Serridge	43133	43046	43206	
develop open habitat connectivity by felling roadside strip connecting open habitats to the SW and NE	Clearfell and Irregular shelterwood	2027/28 2110/11	2045	-18 +65	CF 27/28 okay 04/03/24	14	Serridge	43048	43255	43256	
ground prep will be required for underplanting consider fencing. Slopes to east and exposed from west.	Clearfell	2075	2024	51	moved back to CF re: larch management CF 2055/56 okay	1	Astonbridge	42018	42061	42051	
Coupe 42105 - clearfell everything except hedgerow trees Spray off SC stumps and regrowth Restock whole site using alternate species: DF JCR RSQ XC	Coppice	2043/44 2030/31	2068	-25 -38	30/31 & 43/44 okay 06/03/24	8	Astonbridge	42176	42105	42104	42106

Coupe prescription for areas of LIS previously identified for Clearfelling (cont...)

comment	management type applied	Felling date applied	MAI for largest component	+/- MAI date	Quick glance LISS / CF or both	Map	Block	OLD coupe number	New Forest Plan Proposals Main coupe number 1	New Forest Plan Proposals Part coupe number 2	New Forest Plan Proposals Part coupe number 3
Clearfell and restock - suggest OK / SP mix 60:40 with perhaps some hazle and hornbeam. Very awkward terrain	Clearfell	2042/43	2056 2071	-14 -29	CF 27/28 okay 06/03/24	9	Astonbridge	42021	42028	42149	
Mature CP/DF planted in 68 exists 200m to south. With this in mind clearfelling whole of coupe would not remove all favourable habitat and potential nesting options. There are also records of nightjar from adjacent restock clearfell would provide further	Clearfell	2046/47	2059	-13		19	Astonbridge	42013	42052		
	Group Selection	N/A				20	Astonbridge	42037	42114	42121	
Restocking to be changed to remove larch and replace with SP.	clearfell and group selection	2025/26	2024 2043	+1 -18	okay 04/03/24	16	Serridge	43041 and 43038	43051	43259	43043
Partial LTR of windblown NS - retain to achieve biological maturity and deadwood habitat.	Clear Fell and LTR	2025/26	2055	-30	CF 2025/26 okay 04-03-2024	11	Crabtree Hill	43336	43103	43174	43061
split in half Eastern side of water buffer fell 25/6 and West of buffer fell in 32/33 - Retain mature character SP Leave eastern end of coupe open to enhance and create open habitat linkages. (coupe 43182)	Clearfell	2034/35 2025/26	2036	-2 -11	CF 2025/26 CF 32/33 okay 04-03-2024	12	Crabtree Hill	43348	43155	43156	43182 43025
Retain Character SP along boundary expand broadleaf habitat on western boundary to expand mature Oak habitat	Clearfell	2047/48	2038 2042 2056	+9 +5 -9	CF 31/32 CF 2121/22 okay	15	Crabtree Hill	43343	43195	43026	
Reduce reliance on SC by enrichment planting with broadleaf	Coppice	coupe 43192 date not set coupe 43152 =	2088	-55	Coppice okay 04/03/24	16	Crabtree Hill	43233	43192	43152	43084
Alternative and emerging conifer planting	clearfell	2035/36	2045	-10	CF 35/36 okay 04/03/24	18	Crabtree Hill	43314	43196		
Alternative and emerging conifer and broadleaf planting	clearfell	2029/30	2049	-20	CF 29/30 okay 04/03/2024	19	Crabtree Hill	43329	43197		
Preemptive removal of larch component only. Restocking/underplanting with a mixture of OK MB and XB	selctive preemptive clearfell	2046/47	2024	-22	CF 28/29 okay 04/03/24	20	Crabtree Hill	43352	43198		
disturbed soils from adjacent mineral tip	clearfell	2033/34	2024	+9	CF 33/34 okay 04/03/24	22	Crabtree Hill	43339	43162		
Subject to Northern Quarter Mitigation proposals	clearfell	2037/38	2033	+4	CF 37/38 okay 04/03/24	7	Serridge	43128	43211		
Gradual thinning due to windthrow potential and develop openstructure through the thinning to benefit drab looper moth.	clearfell	2044/45	2044	0	CF 44/45 okay 04/03/24	8	Serridge	43078	43214		
Thinning should target the removal of NS for the retention & development of SP crowns	Clearfell	2038/39	2024	+14	CF 38/39 okay 04/03/24	9	Serridge	43079	43222		

Name: *Phytophthora ramorum* (known as PR)

First appearance: 2009

Attacks: Larches and Sweet Chestnut

Impact on plan area: **HIGH**

P. ramorum was first found in the UK in 2002 and until 2009 in the woodland environment had largely been associated with rhododendron species acting as a host from which spores are produced. In August 2009 *P. ramorum* was found on a small number of dead and dying Japanese Larch in South West England, causing particular concern since some affected trees were not close to infected rhododendron and showing a significant change in the dynamics of the disease than experienced previously. Following this, testing in Devon and west Somerset confirmed the presence of PR in mature Japanese larch as well as species in its under-storey, including sweet chestnut, beech, birch, oak, Douglas fir and Western hemlock. On some sites there is little or no rhododendron present. It is now known that Japanese larch and Sweet Chestnut 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.

Components of larch will be removed through thinning and larger areas will require clearfelling. Some areas may have a significant influence in the landscape.

Areas of Sweet Chestnut are outlined in black and may also



contain components of Larch shaded brown.

Name: *Phytophthora pluvialis*

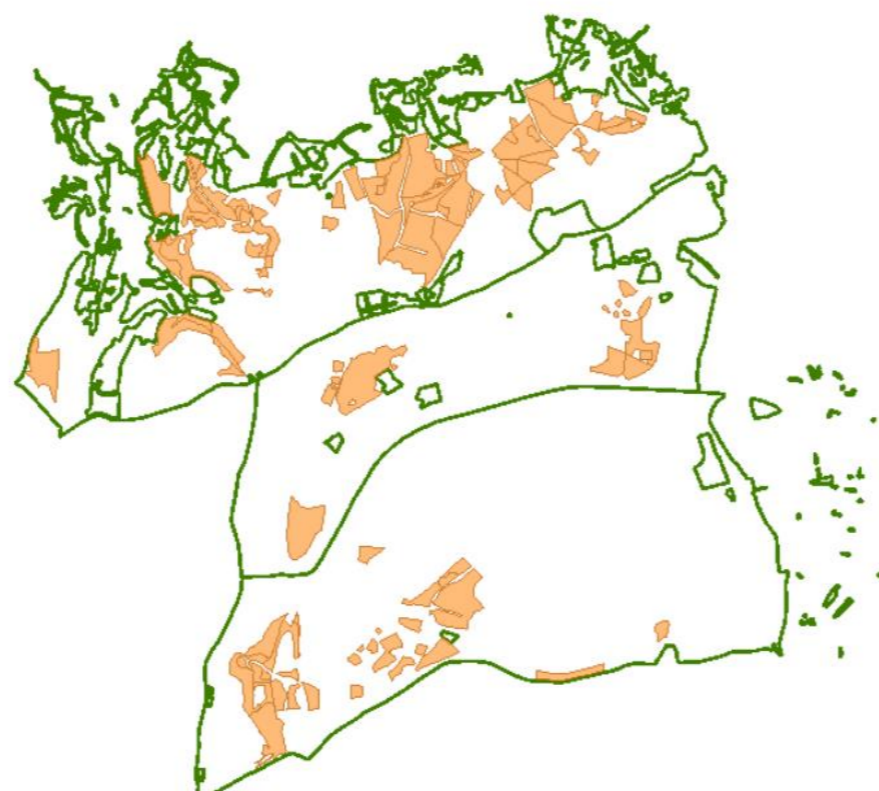
First appearance: 2021

Attacks: Douglas Fir and Western Hemlock

Impact on plan area: **MEDIUM** but potentially **HIGH**

Newly discovered in Cornwall in summer 2021 following surveillance for *Phytophthora ramorum*. This variant of *Phytophthora* originally reported in USA in 2013 and New Zealand in 2014 can cause symptoms such as needle cast, shoot dieback, and lesions on the stem, branches, and roots. It is a notifiable disease which results in mandatory felling through the issuing of SPHN from FERA.

Being a main conifer species within the plan area and mostly monoculture in nature. The plan will seek to continue the process of breaking up the age structure as well as begin to diversify these crops with other conifer species through underplanting or group planting.



APPENDIX 2: Management considerations -

Pests & Diseases affecting the Plan

Note - Maps in each column show species distribution for that species which could be affected by that particular disease

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Name: *Dothistroma Needle Blight* (DBN)

First appearance: mid 1990s

Attacks: Pine species

Impact on plan area: **MEDIUM**

Often referred to as Red Band Needle Blight (RBN) and can reduce growth rates by between 70 and 90%. Effects of RBN are managed through thinning the wood more heavily than you would normally to introduce higher levels of air flow through the remaining crop.

Most areas of Corsican Pine are well thinned in line with current best practice. Within the plan these areas are being taken as an opportunity to diversify species through underplanting or group planting after the appropriate stocking density has been reached.



Name: Oak 'dieback' or 'decline'

First appearance: unknown

Affects: OAK

Impact on plan area: **HIGH**

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

Within the Dean Main block the type of dieback is going to be assessed through a program of survey work that will look to gather field data and observations to try and help assess the extent of the issue along with mensuration data that will help determine management prescriptions.



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**APPENDIX 2: Management considerations -
Pests & Diseases affecting the Plan
(continued)**

Name: *Hymenoscyphus fraxineus* (formerly *Chalara fraxinea*)

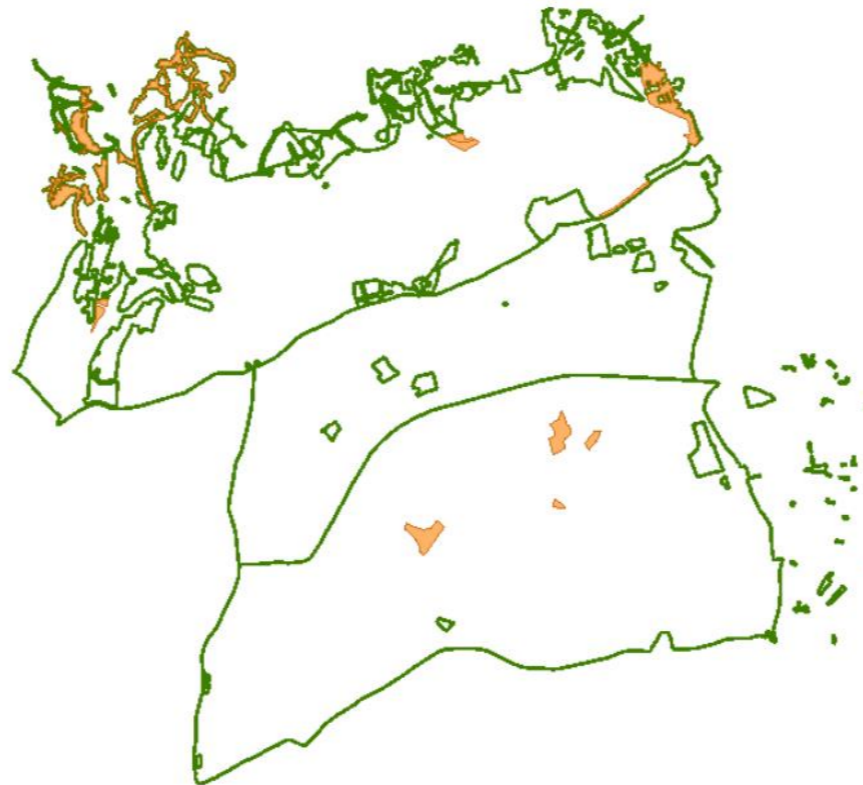
First appearance: circa 2016

Attacks: Ash

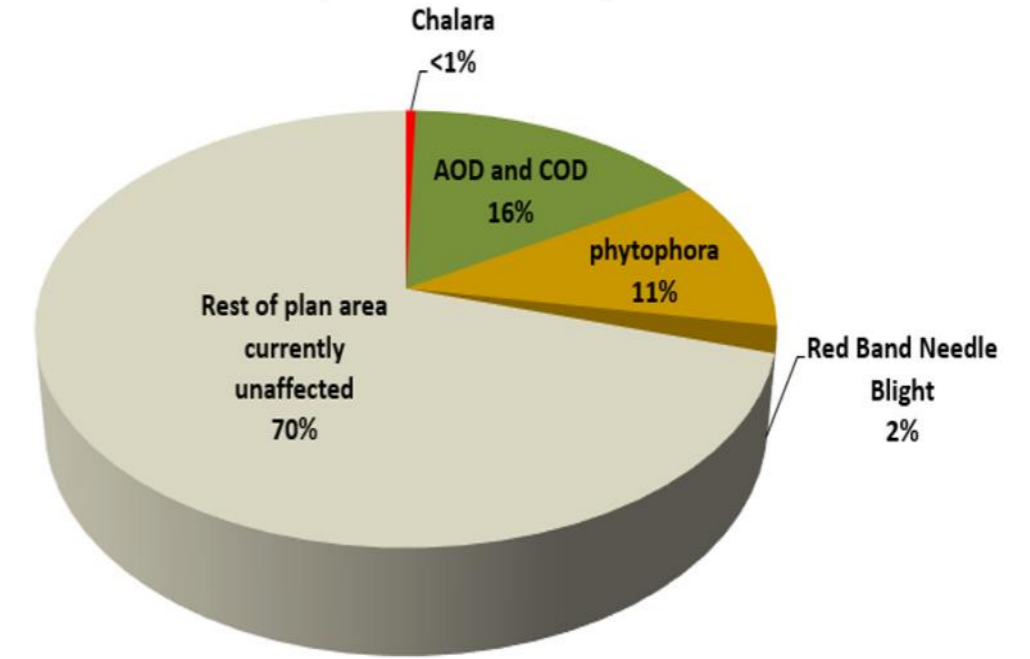
Impact on plan area: **LOW**

First reported in Poland in 1992 and now pretty rampant in Europe, showing up in 2012 mainly along the East Anglian coastline. Now a major disease within most Ash woodland across England. The disease causes dieback from the top of the tree, with branches or stem girdled before foliage wilts and gradually turns black. Eradication of the disease has been deemed not to be a feasible option and so felling is generally only along council roads, Public Rights of Way. Ash is often retained in the hope that natural resilience will be found that can be used to breed future Ash trees resistant to the disease.

The plan has few areas of Ash but where it does appear it tends occur in areas that are residential or along council roads, so from this perspective Ash is more of a concern rather than the wider Forest Plan area.



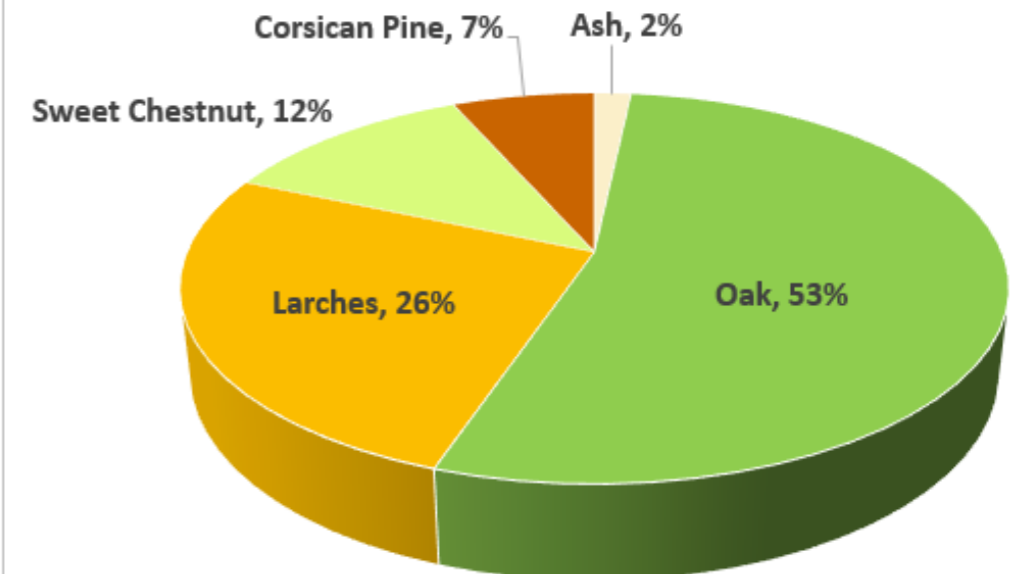
Potential area of plan at risk from pest & disease



Acute and Chronic Oak Decline	266 Ha
Phytophthora ramorum ¹	189 Ha
Dothistroma (Red Band Needle Blight)	33 Ha
Chalara	8 Ha
<u>Unaffected area of plan</u>	1175 Ha

¹ Larches	130 Ha	(26%)
Sweet Chestnut	59 Ha	(12%)

**At risk species
breakdown of species at risk**



Of the overall plan area 30% is at risk
(Phytophthora/ AOD & COD/ Chalara/ Red band needle blight)

Speech House Walk and Ruardean Walk Forest Plan

Fire Prevention, adaptation and creating resilience

Hazards

1. Open habitats:
 - Lowland heath sites and other open habitats/sites
 - Forest Road and Ride edges managed for open habitat
 - Clearfell sites prior to planting with high fuel loading of fine, medium and course material
2. Planted clearfell sites upto thicket stage
3. Young restock sites at thicket stage to pole stage
- 3b. CCF sites with a thicket understorey
4. Conifer sites with high ground coverage of dead needles and cones.
5. Sites infected with RBNB that are unthinned or heavily stocked, due to presence of high density of fine fuel loading i.e. dead pine needles throughout the tree canopy and the stand.
6. Oak plantations suffering dieback, increases to fine, medium and course fuel loading as the canopy dies back and quantity of dead wood rises.
7. Other broadleaf crops with high deadwood content & Squirrel damaged crops
8. Pure conifer crops especially un-brashed or poorly thinned stands, contribute to medium and course fuel load.
9. Areas where surface coal and coal seams are present.
10. Intimate nature of the topology (gullies and valleys being of a higher risk, exacerbate the speed at which fire can spread)

Risk


1. The plan area is one large contiguous wooded area surrounded by other woodland.
2. Higher percentage of CCF is proposed.
3. Increase in woodland edge could lead to higher fuel loads as the scrub layer develops.
4. Increased public usage.
5. Reduced proportions of clearfells (changes the risk rather than increases risk??)
6. Structure of woodland still being reasonably even aged.
7. High fuel loadings accruing:- deadwood, decades worth of layered dead bracken and having more sites managed for heathland and grazing that may decrease drying times of fuel loads as:-
8. Drier and hotter summers are on the increase.

Controls

- ⇒ Within the plan area rides will be widened as per the coupe prescriptions. This will include specific felling work to achieve this but should also be a consideration when carrying out routine thinning.
- ⇒ The plan area is bounded and divided into smaller wooded areas by the public road network that will act as natural fire breaks.
- ⇒ A revival of coppice management, both simple systems and sites with retained standards.
- ⇒ Overall increase in broadleaf cover, partly as a result of more SPHN felling work.
- ⇒ Prescribing the planting of a much wider species pallet for both conifer and broadleaf, with an increase in the use of mixtures.
- ⇒ Careful implementation of LISS - i.e. use of a wider range of Silvicultural Systems.
- ⇒ Remodelling of valley bottoms e.g. from Piano Corner upto Newham Bottom where conifer is present replacing with broadleaved species.
- ⇒ Leaving 10 meter unplanted traces where coupe boundaries are changing and are in need of identification to achieve landscaping objectives, these boundaries may well infill with broadleaf nat-regen which will add resilience.
- ⇒ Introduction of watercourse buffering to 10 and 20 meters on prioritised stretches, where all conifer will be removed and only broadleaves will remain or be planted at different densities, in matrix with open space.
- ⇒ Areas of wet woodland habitat types will increase creating higher potential for water retention.
- ⇒ In areas affected by RBN ensure thinning follows District protocol to give wider spacing that will minimise fuel loading and likely hood of crown fire.
- ⇒ Increase in Broadleaves in general, that includes bolstering existing weak lineal components that follow rides or cut through conifer crops and a decrease in broadleaf fragmentation.

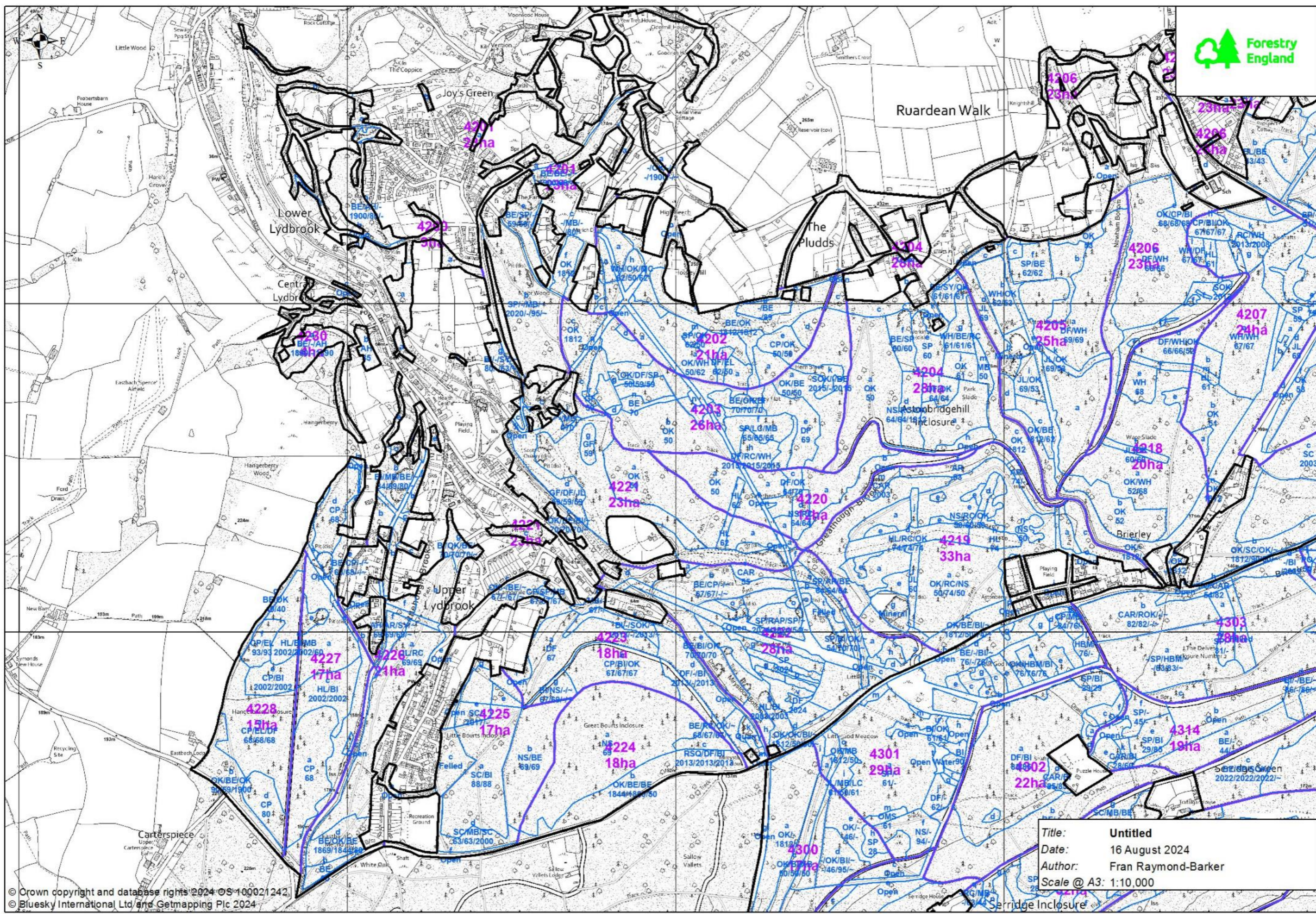
APPENDIX 3: Supporting Information Glossary

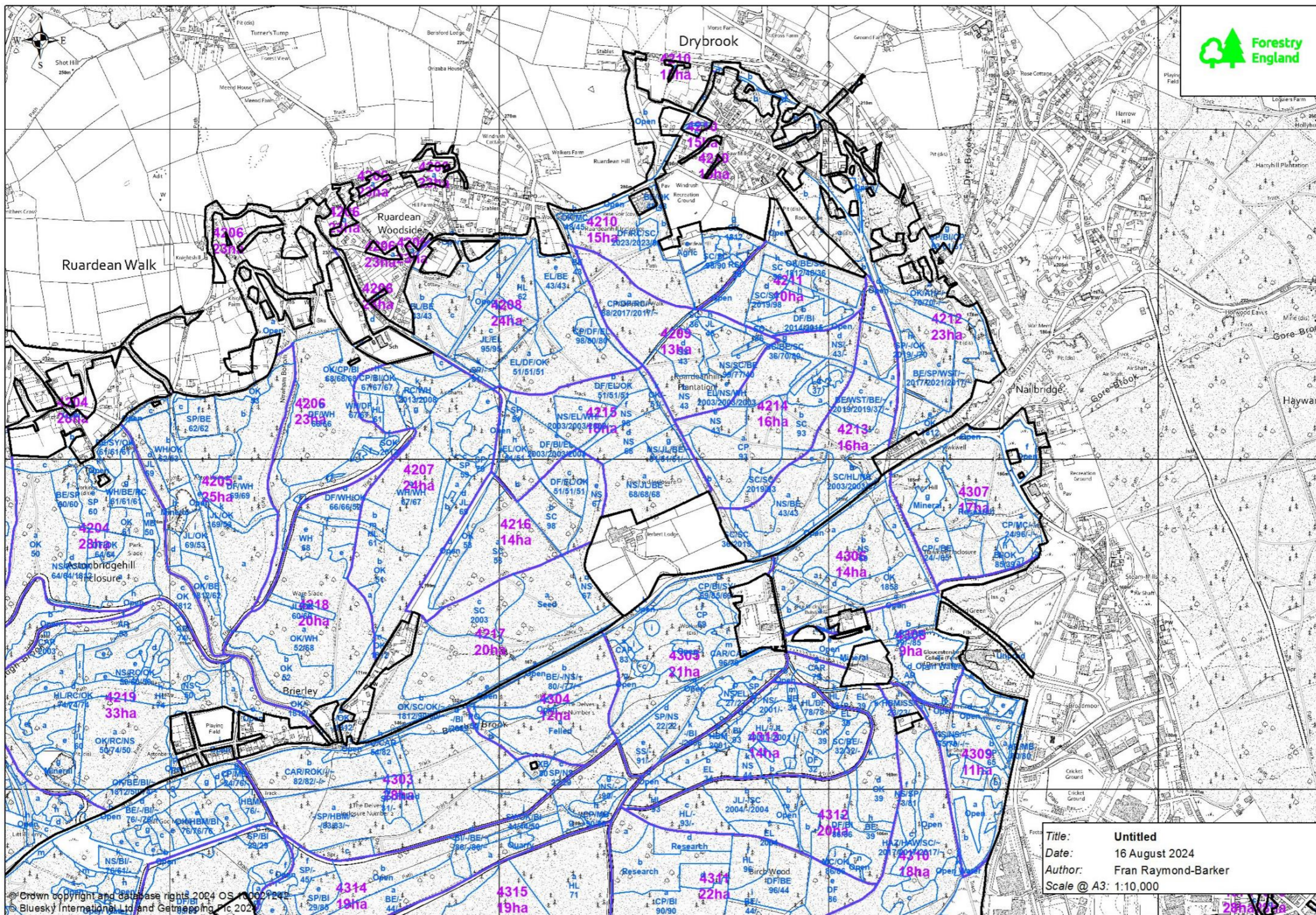
Term	Abbreviation	Description
Ancient Semi-Natural Woodland	ASNW	An ancient woodland site, where trees and other plant species appear to of established naturally rather than having been planted. Predominantly these sites will contain 80% or over of site native species or species native to the surrounding area.
Alternatives to Clearfell	ATC	Alternative to Clearfell is similar to CCF and refers to management systems where stands are regenerated without clearfelling.
Ancient Woodland Site	AWS	A site that has technically been wooded since 1600AD and is unlikely to have been converted to farmland in the last few centuries.
Continuous Cover Forestry	CCF	Continuous Cover Forestry is an approach to forest management that enables an owner of woodland to manage the woodland without the need for clearfelling. This enables tree cover to be maintained, usually with one or more levels and can be applied to both conifer or broadleaf stands. With Conifer it is possible to regenerate the crop a lot faster than in broadleaf crops, where the canopy is generally removed a lot slower and over a much longer time span. A decision to use CCF must be driven by management objectives and will have long-term vision often aimed at creating a more diverse forest, both structurally and in terms of species composition. There are no standard prescriptions meaning CCF is very flexible in ensuring opportunities can be taken advantage of as they arise. This development of a more diverse forest is a sensible way to reduce the risks posed by future changes in the climate and biotic threats.
Compartment ----- Sub-compartment	Cpt	Sub-cpt The second largest management unit within a woodland whose boundaries are defined by fixed features such as roads, rides or watercourses etc and are numbered numerically e.g. 4223. Compartment boundaries are fixed and not usually subject to change. A smaller management unit within a compartment. Usually defined by a change in species, age of tree. Sub-cpts are identified by a letter of the alphabet that appears as a suffix to the compartment number.
Component		The smallest management unit that records a species or land-use within a sub-compartment. Components are usually mapable areas no smaller than half a Hectare, with upto nine components within a sub-cpt.
Coppicing		A traditional method of woodland management where trees are felled at or near to ground level, leaving a stump (or “stool”). New shoots regrow from the stool, creating numerous stems or “poles”. Areas of coppice are usually managed on a rotation system, with each area getting cut on a regular cycle after a certain number of years. Length of the rotation will depend on the markets being supplied and other objectives like . Traditionally woodlands managed this way produced a sustainable source of wood suitable for many uses (such as firewood, fencing and basket-making). Today, coppicing is mostly implemented for its ecological benefits as it provides a variety of habitats, improves structure along ride edges benefiting wildlife and periodically allows light to reach the woodland floor which is important for woodland flora.
Clearfell	C/F or CF	To cut and remove all trees from a certain area of woodland.
Coupe		An area of management that can span both sub-compartment and compartment boundaries. They can be of virtually any size, aligned to the context of the woodland and wider landscape. Size can also be influenced by physical constraints such as wind stability, disease management or restructuring objectives. Coupes can be managed through Clearfelling or through Low Impact Silviculture.
Crop		A stand of trees. Often associated with stands completely or partially managed for its timber. Just as farmers manage crops so does forestry the only difference is a farmers’ rotation is shorter and often realised in 1 year. Trees are a much longer term crop with rotations varying from 6 years to 400 years. (also see definition for rotation)
Ecosystem Service		Ecosystem Services are the direct and indirect contributions ecosystems (known as natural capital) provide for human wellbeing and quality of life. Nature provides us with water, clean air and food, and raw materials for medicines, industry and buildings. Our crops rely on insect pollination and the complex biological processes that create soil. Enjoying parks, landscapes and wildlife improves our health and well-being. All of these benefits, are known as known as ecosystem services, depend on a healthy environment.
Enrichment planting		Planting different species within areas of regen that helps diversify the range of species in a wood and in doing so can make it more resilient to future climate change and future threats from disease. Enrichment may be desirable in areas where success of regeneration is uneven, patchy or where a regen crop is limited by the number of species present.
Forest Development Type	FDT	A “Forest Development Type” is a long-term vision of how the species composition and structure of a forest stand is intended to develop. The concept encourages greater use of mixed-species stands and a wider variety of stand structures. It also promotes better use of site adapted species and natural regeneration. Forest Research have developed some management tools which will help practitioners to use FDTs to diversify their forests and increase resilience. <ul style="list-style-type: none"> • They provide a comprehensive view of the potential species, mixtures and stand structures for a site. • They provide a framework and common language for managers helping them to describe different forest structures. • They challenge current silvicultural practice. • They aid long-term planning and management of resilient forests, helping consecutive managers work towards a long-term goal. • They promote the trend towards mixed stands and diverse forest structures. • They facilitate multi-purpose forest management as economic, environmental and social objectives ensuring all are embedded.
Forestry Stewardship Council	FSC	An international non-profit organisation dedicated to promoting responsible forestry. FSC certifies forests all over the world to ensure they meet the highest environmental and social standards. Products made with wood and paper from FSC forests are marked with the FSC ‘tick tree’ logo. When you see this logo, you can be confident that buying it won’t mean harming the world’s forests.
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.
Habitat Regulations Assessment	HRA	This is an assessment carried out under the Habitats Regulations, known as a Habitats Regulations Assessment (HRA), tests if a plan or project proposal could significantly harm the designated features of a European site (SAC or SPA) - The assessment’s outcome decides whether to approve/adopt a project or plan (‘a proposal’).

Landscape Character Assessment	LCA	Landscape character assessment (LCA) is the process of identifying and describing variation in character of the landscape. LCA documents identity and explain the unique combination of elements and features that make landscapes distinctive by mapping and describing character types and areas. They also show how the landscape is perceived, experienced and valued by people.
Lepidoptera		An order of insects, including moths and butterflies.
Low Impact Silviculture System	LISS or LIS	LISS for Low impact silvicultural System or LIS for Low Impact Silviculture. LISS is a type of woodland management that helps to increase species and structural diversity and promotes environmentally desirable alternative to conventional plantation forestry, delivering improved ecosystem services and a more adaptive silvicultural system (i.e. more climate proof), than more traditional methods of clearfelling and restocking. It normally causes less rapid change to the landscape and to the physical environment than clear felling systems and so can help the landowner meet multi-purpose objectives.
Mixed Wood		Usually a Woodland consisting of both conifer and broadleaf species. Sometimes refers to a mixed species conifer or broadleaf woodland.
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.
National Character area	NCA	National Character Areas (NCAs) divide England into 159 distinct areas. NCA boundaries follow natural lines in the landscape, not county or district boundaries. Each is defined by a unique combination of: <ul style="list-style-type: none"> • landscape • biodiversity • geodiversity • history • cultural and economic activity
Natural Regeneration	NR Regen or nat-regen	Trees growing on a site as a result of natural seed fall, and can be used as a management process and can allow cleared areas of woodland to germinate, grow and develop naturally. This process can happen anywhere and woods can be managed to encourage nat-regen although there is no guarantee of success. In these instances, or if nat-regen is unlikely for a variety of reasons, one can use enrichment planting or group planting to achieve the same affect. The process usually relies on an overstorey of "parent trees" being present or on parent trees being close by to provide the seed. These parent trees will usually of been thinned and managed with natural regeneration in mind. Existing areas of nat-regen are then usually developed through carefully thinning the surrounding woodland over a number of years, to give more light and space to ensure the young trees can establish themselves into larger trees eventually allowing them to be incorporated ('recruited') into the main crop for the next rotation at some point in the future. Usually done in small groups or in strips this system can allow a varied woodland structure to develop over time. Protection from competing plant species and mammal browsing might be required in the early stages by fencing or using tree shelters. Enrichment planting maybe used if regen is patchy or does not provide the diversity one requires. (Also see definition for continuous cover, shelterwood and enrichment planting)
Naturalness Scores		A scoring system from 1 to 4 used by FC to determine the native content of an area of woodland. Where class 0 refers to open, un-planted, felled or bare ground. Class 1 has a content of 80% or more site native species. 2 = Reasserting native wood with 50-80% site native content. Conifer plantations with 20-50% site native species are in class 3 and class 4 contains conifer plantations with less than 20% site native species.
Open Access Land	CROW	Land designated under the Countryside and Rights of Way Act 2000 (CROW Act), which gives the public a right of access on foot to land mapped as "open country", and these areas are known as "open access land". This access can be used to walk, run, climb, sight-see and bird-watch.
Operational guidance 1	Ops1	A site analysis, assessment and methodology statement carried out during the planning of harvesting operations. It outlines management considerations, looks at other influences on proposed work and states how the proposed work will be carried out. It also looks at work to ensure compliance with the Forest Plan. Ops1 can also be carried out for other operations such as Restocking following felling and ensures the potential of the land is prioritised.
Plantation on an Ancient Woodland (Site)	PAW(S)	This is an ancient woodland site that appears to have been planted, usually with a species that is not native to the site and surrounding area and usually conifer.
Pollarding		Pollarding used originally to feed animals or grow wood. The interval between pollarding intervention dictates the end use of product. Shorter intervals promote denser growth with more leaves, helping feed livestock. A more lengthy interval between pollarding produces multiple stems on each "knuckle" of an upright character and larger diameter with wood used for a wider range of uses like construction. Pollarding helps to lengthen a trees life, and is beneficial to wildlife too especially lepidoptera. Usually carried out when the tree is quite young. Similar to coppicing in that it results in multiple stems, although in the case of pollarding the branches of the tree are cut back to the main stem or a branch knuckle, often reducing the height of the tree to around 10 or 20 feet, which keeps the regrowth out of browsing range.
Programme for the Endorsement of Forest Certification	PEFC™  Promoting Sustainable Forest Management www.pefc.org	PEFC™ is an international non-profit, non-governmental organization dedicated to promoting Sustainable Forest Management (SFM) through independent third-party certification. It is an umbrella organization and works by endorsing national forest certification systems developed through multi-stakeholder processes and tailored to local priorities and conditions.

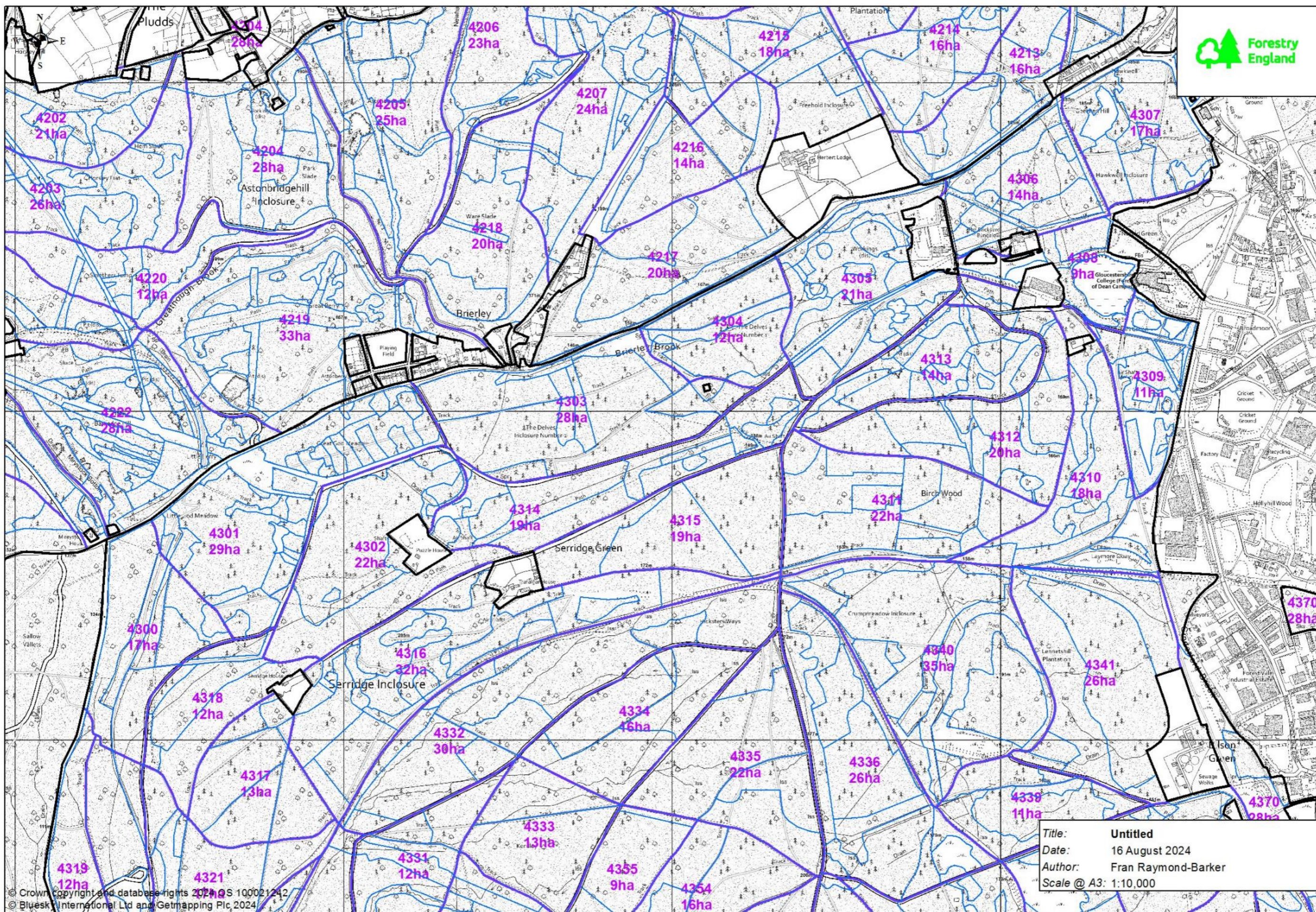
Rotation		Generally a commercial term used to describe the length of time an area of trees is growing for, from the time of planting to the time of felling. For broadleaves a rotation is generally a lot longer than that of conifer species* and can broadly speaking be anywhere between 80 years to 3-400 years, as opposed to conifer crops whose rotation is generally shorter but can vary from 20-25 years to 120 years plus. *The exception being that of coppice where rotation length can vary from 5 or 6 years up to 30 years plus depending on management objectives. “First rotation” would refer to an area of wood planted on open ground not previously wooded. And so “second rotation” is one where woodland has been cleared and replanted.
Special Area of Conservation	SAC	Special Areas of Conservation (SACs) are protected areas designated under: The Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) SACs are designed to establish a network of important high quality conservation sites that will make a significant contribution to conserving the habitats and species identified in Annexes I and II of the European Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora, known as the Habitats Directive. - they are designated by the government of each Country whose territory the site lies.
Scheduled Monument	SM	A nationally important heritage site which has been selected by Historic England for protection.
Secondary Woodland		Woodland located on a site which has <u>not</u> been continuously wooded throughout history (unlike ancient woodland).
Sense of Place		A factor or set of factors that give a specific location special character, making it unique in its own intangible way. Often it is a combination of character, features, quality, space and associations that creates and gives a unique sense of identity to a location.
Selection System		The selection system can be very complex. In the selection system, mature timber (trees) are removed either as single scattered individuals or in small groups at relatively short intervals, repeated indefinitely, where an uneven-aged stand is maintained. Regeneration should occur throughout the life of the stand with pulses following thinning interventions. This system depends on recruitment of trees into successive age classes over time and the predictable yield from merchantable age classes. Yield will be obtained by thinning clumps, harvesting individual trees, or by harvesting whole groups of the most mature age class to create small openings scattered throughout the stand. Also see Shelterwood System (below)
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 <i>silva</i> meaning 'wood' and the French <i>culture</i> meaning 'cultivation' and so Silviculture is the art and science of controlling the establishment, growth, composition, and quality of forest vegetation to achieve a full range of forest resource objectives.
Site of Special Scientific Interest	SSSI	A Site of Special Scientific Interest (SSSI) is the land notified as an SSSI under the Wildlife and Countryside Act (1981). SSSI are the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features.
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: <ul style="list-style-type: none"> • Improve the quality and vigour of remaining trees. • Remove trees interfering with mature or veteran broadleaf trees. • Give space for tops (or “crowns”) of broadleaf trees to develop and potentially act as a future seed source. • Give space for natural regeneration to grow and develop with the intention of recruiting these younger naturally grown trees as a part of the future woodland structure. • Create gaps for group planting or enrichment. • Remove species of tree that may compromise the intended management objective of the woodland eg: non-native or invasive species such as Sycamore, Western Hemlock or birch. • Improve the economic value of a wood. • Help realise opportunities to enhance ecological value. <p>NOTE: This list is not in any order of priority and will vary depending on management objectives.</p>
Tree of Special Interest	TSI	Can be conifer or broadleaf. TSI are trees of particular note and interest for one of many reasons, including its age, size, form, cultural or historic significance.
UK Forestry Standard	UKFS	This guidance sets out the UK governments' approach to sustainable forestry, including standards and requirements, regulations and monitoring, and reporting.
UK Woodland Assurance Scheme	UKWAS	The UK Woodland Assurance Standard (UKWAS) is an independent certification standard for verifying sustainable woodland management in the UK. A new fourth edition of the UKWAS was introduced on 1 April 2018. This revised version was prepared by the UKWAS Steering Group and subsequently adopted for use in the UK by both the Forest Stewardship Council® (FSC®) and the Programme for the Endorsement of Forest Certification (PEFC™).
Yield Class	YC	A method of measuring the growth rate or “increment” of a crop of trees by age and height; measured in m ³ per Ha per annum. E.g. A crop with a YC of 16 is one that has an annual increment of more than 16m ³ but less than 17m ³ , although generally only even numbers are used when stating YC.

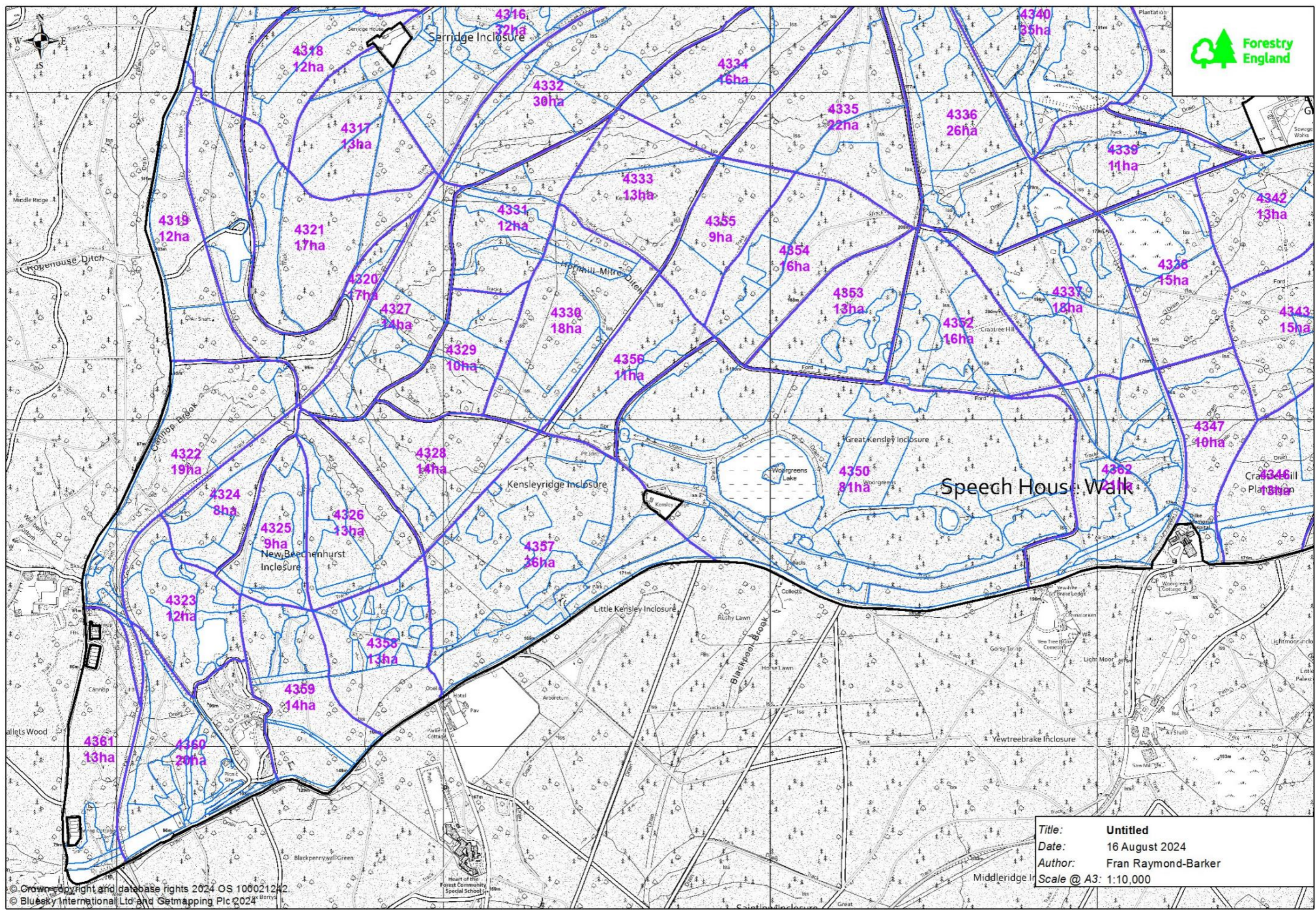
APPENDIX 3 - SUPPORTING INFORMATION - Stock Data - 2024





Title: Untitled
Date: 16 August 2024
Author: Fran Raymond-Barker
Scale @ A3: 1:10,000





Title: Untitled
Date: 16 August 2024
Author: Fran Raymond-Barker
Scale @ A3: 1:10,000

Habitats Regulations Assessment screening form - Speech House Walk & Ruardean Walk Forest Plan 2024 - 2034

European Protected Site type, name, and qualifying features

Project name	Speech House Walk & Ruardean Walk Forest Plan 2024 - 2034
Block name(s)	Serridge and Crabtree Hill, Astonbridge
Site type	Special Area of Conservation (SAC)
Site name	Wye Valley & Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC (UK0014794)
Associated Site of Special Scientific Interest (SSSI) and other site information	<p>England</p> <ul style="list-style-type: none"> • Blaisdon Hall SSSI • Buckshraft Mine and Bradley Hill Railway Tunnel SSSI • Caerwood and Ashberry Goose House SSSI • Dean Hall Coach House and Cellar SSSI • Devil's Chapel Scowles SSSI • Old Bow and Old Ham Mines SSSI • Sylvan House Barn SSSI • Westbury Brook Ironstone Mine SSSI • Wigpool Ironstone Mine SSSI <p>Wales</p> <ul style="list-style-type: none"> • Llangovan Church SSSI • Mwynloddfa Mynydd-Bach SSSI

Proposed Operations

1. What operations are proposed as part of this project?	<p>The Speech House Walk & Ruardean Walk Forest Plan includes the proposed woodland management of approximately 1671ha of the Forest of Dean from 2024 to 2034.</p> <p>Woodland management will include forestry actions such as thinning, clear-felling, restocking and extraction. The forestry operations will include the use of various forestry machinery and will involve the maintenance of forest infrastructure.</p> <p>Additional activities will include (but not be limited to) coppicing, management of riverine corridors and maintenance of open habitats.</p> <p>The Speech House Walk & Ruardean Walk Forest Plan includes 80ha of conifer felling and 16ha of broadleaf felling. The following work is planned:</p> <table border="1"> <thead> <tr> <th>Coupe</th> <th>Fell period</th> <th>ha</th> <th>Coupe</th> <th>Fell period</th> <th>ha</th> </tr> </thead> <tbody> <tr><td>43085</td><td>2022-2026</td><td>6.6</td><td>42127</td><td>2022-2026</td><td>2.6</td></tr> <tr><td>43069</td><td>2022-2026</td><td>9.5</td><td>42060</td><td>2027-2031</td><td>1.5</td></tr> <tr><td>42098</td><td>2022-2026</td><td>3.2</td><td>42125</td><td>2027-2031</td><td>4.5</td></tr> <tr><td>42020</td><td>2022-2026</td><td>0.2</td><td>42144</td><td>2027-2031</td><td>1.5</td></tr> <tr><td>43051</td><td>2022-2026</td><td>2.6</td><td>42059</td><td>2027-2031</td><td>4.1</td></tr> <tr><td>43058</td><td>2022-2026</td><td>2.9</td><td>43271</td><td>2027-2031</td><td>0.3</td></tr> <tr><td>43060</td><td>2022-2026</td><td>0.9</td><td>43030</td><td>2027-2031</td><td>5.0</td></tr> <tr><td>43156</td><td>2022-2026</td><td>0.9</td><td>43049</td><td>2027-2031</td><td>3.9</td></tr> <tr><td>43103</td><td>2022-2026</td><td>4.2</td><td>43196</td><td>2027-2031</td><td>0.9</td></tr> <tr><td>43182</td><td>2022-2026</td><td>1.9</td><td>43047</td><td>2027-2031</td><td>3.0</td></tr> <tr><td>42050</td><td>2027-2031</td><td>4.6</td><td>43155</td><td>2027-2031</td><td>2.7</td></tr> <tr><td>42115</td><td>2027-2031</td><td>1.1</td><td>43162</td><td>2027-2031</td><td>3.3</td></tr> </tbody> </table>	Coupe	Fell period	ha	Coupe	Fell period	ha	43085	2022-2026	6.6	42127	2022-2026	2.6	43069	2022-2026	9.5	42060	2027-2031	1.5	42098	2022-2026	3.2	42125	2027-2031	4.5	42020	2022-2026	0.2	42144	2027-2031	1.5	43051	2022-2026	2.6	42059	2027-2031	4.1	43058	2022-2026	2.9	43271	2027-2031	0.3	43060	2022-2026	0.9	43030	2027-2031	5.0	43156	2022-2026	0.9	43049	2027-2031	3.9	43103	2022-2026	4.2	43196	2027-2031	0.9	43182	2022-2026	1.9	43047	2027-2031	3.0	42050	2027-2031	4.6	43155	2027-2031	2.7	42115	2027-2031	1.1	43162	2027-2031	3.3
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HRA Screening: Speech House Walk & Ruardean Walk Forest Plan

	<ul style="list-style-type: none"> • Newton Court Stable Block SSSI • Wye Valley Lesser Horseshoe Bat Sites SSSI (comprising 4 separate sites): Itton Court Stud; Penallt Old Church; Priory Llandogo; Tregeiriog Farm
Qualifying features	<ul style="list-style-type: none"> • S1303. <i>Rhinolophus hipposideros</i>; Lesser horseshoe bat (LHS) • S1304. <i>Rhinolophus ferrumequinum</i>; Greater horseshoe bat (GHS)

Conservation Objectives

Conservation Objectives for Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of qualifying species • The structure and function of the habitats of qualifying species • The supporting processes on which the habitats of qualifying species rely • The populations of qualifying species, and <p>The distribution of qualifying species within the site.</p>
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	<table border="1"> <tbody> <tr><td>42063</td><td>2027-2031</td><td>7.0</td><td>43246</td><td>2027-2031</td><td>0.2</td></tr> <tr><td>42031</td><td>2027-2031</td><td>1.5</td><td>43046</td><td>2027-2031</td><td>3.4</td></tr> <tr><td>42150</td><td>2027-2031</td><td>0.9</td><td>43272</td><td>2027-2031</td><td>0.3</td></tr> <tr><td>42095</td><td>2027-2031</td><td>2.3</td><td>43022</td><td>2027-2031</td><td>2.1</td></tr> <tr><td>42105</td><td>2027-2031</td><td>1.1</td><td>43256</td><td>2027-2031</td><td>2.8</td></tr> <tr><td>42091</td><td>2027-2031</td><td>4.4</td><td>43197</td><td>2027-2031</td><td>2.3</td></tr> </tbody> </table> <p>Thinning operations will be conducted across the plan area. The broadleaf crops will be assessed for thinning every 10 years and the conifers every 5 years, as is the norm at other Forestry England sites, where forest operations almost always take place somewhere in the wood at least every five years.</p> <p>Full details of the proposed operations are included within the Speech House Walk & Ruardean Walk Forest Plan.</p>	42063	2027-2031	7.0	43246	2027-2031	0.2	42031	2027-2031	1.5	43046	2027-2031	3.4	42150	2027-2031	0.9	43272	2027-2031	0.3	42095	2027-2031	2.3	43022	2027-2031	2.1	42105	2027-2031	1.1	43256	2027-2031	2.8	42091	2027-2031	4.4	43197	2027-2031	2.3
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2. How will these operations be carried out?	All operations will be undertaken under best practice guidelines (UKWAS etc.) and will be preceded by an Operational Site Assessment.																																				

HRA Screening: Speech House Walk & Ruardean Walk Forest Plan

Exempt Works Test

1. Are the operations proposed in this project already covered by a plan agreed with Natural England?	No
<i>If yes, which agreed plans cover the designated area?</i>	N/A
2. If no, are operations directly connected with or necessary for maintaining the site's listed features?	The Speech House Walk & Ruardean Walk Forest Plan area is approximately 2.5km from the closest component SSSI of the Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC. No works within the Speech House Walk & Ruardean Walk Forest Plan are directly connected with (or necessary to the maintenance of) any component of the Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC.

Significant Effect Test

All operations on Forestry England land are carried out to standards defined in the following documents:

- UK Forestry Standard
- UK Woodland Assurance Scheme
- European Protected Species Regulations
- Forest Industry Safety Accord
- Heather and Grass Burning Code 2007

In addition to being UKFS/UKWAS compliant, and with reference to the potential impacts and risk framework listed in the tables below, are these operations likely to have a significant adverse effect on the qualifying features?	Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC	The Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC is designated for populations of greater horseshoe bats (GHS) and lesser horseshoe bats (LHS). The Core Sustenance Zones (CSZ) of GHS and LHS are 3km and 2km respectively ¹ . These CSZ and the maternity buffers described in the interim guidance published by Natural England ² (GHS, 2-4km and LHS 3km) are considered to be functionally linked habitat. The CSZ of GHS and LHS populations using the component SSSI of the Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC includes all of the Speech House Walk & Ruardean Walk Forest Plan area. No direct impacts to the component SSSI of the Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC are predicted due to their distance from the plan area, however all habitat within the Speech House Walk & Ruardean Walk Forest Plan area is deemed to be functionally linked habitat.
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¹ BCT (2020) Core Sustenance Zones and habitats of importance for designing Biodiversity Net Gain for bats. Bat Conservation Trust, London. <https://www.bats.org.uk/resources/guidance-for-professionals/bat-species-core-sustenance-zones-and-habitats-for-biodiversity-net-gain> Access on 07/12/2021

² Natural England, July 2021, Interim Guidance; Wye Valley and Forest of Dean Bat SAC Development Management - Horseshoe Bat activity survey and assessment guidance,

		<p>The Speech House Walk & Ruardean Walk Forest Plan includes proposals for approximately 96ha of clearfell within the 1671ha Forest Plan area (approx. 5% of plan area). The areas planned for clearfell are typically building on existing areas of open space or are adding structural complexity to homogenous woodland. The planned works will be undertaken in discrete operations over the ten-year life of the Forest Plan and the surrounding woodland will not be affected. Following clearfell operations the areas affected will either be restocked with trees or be managed as dynamic open space, generally associated with existing areas of open habitat.</p> <p>Due to the scale of the Forest Plan and surrounding wooded landscape there have been no studies into the flight-lines of GHS and LHS and the relative importance of individual rides or linear features. The Forest Plan area is however between known breeding and hibernation roosts, and therefore is assumed to be important for connectivity and foraging. As such all linear features such as rides, roads and waterbodies are assumed to be part of a network of flightlines crossing the Forest Plan area linking breeding and hibernation sites.</p> <p>The majority of existing potential flight-lines across the plan area will not be affected by the proposed works, and those that are will be improved in the long term through progression to more natural habitats. Short term changes to some existing linear structures (such as forest rides) will occur through the planned widening and clearfell. The widened ridesides will continue to be bordering retained woodland, meaning that any potential flight-lines will be modified rather than lost. Areas of clearfell will also be bordered by significant areas of retained woodland and will only affect a small proportion of the potential flightlines available. As such, it is not anticipated that the planned clearfell and ride widening</p>
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	<p>are likely to significantly alter connectivity through the Speech House Walk & Ruardean Walk Forest Plan area.</p> <p>The planned restocking/natural regeneration or conversion of conifer woodland to dynamic open space should increase the proportion of suitable habitat for prey species for both GHS and LHS. The expansion of open space grazed by animals (both wildlife and stock) in the Forest Plan should also support this.</p> <p>The proposed works also involve the thinning of crop trees surrounding watercourses to promote scrubby and open riparian corridors, as well as installing woody debris structure to 'slow the flow'. This is predicted to increase connectivity and foraging opportunities within the Speech House Walk & Ruardean Walk Forest Plan area, as well as improve water availability for bats.</p> <p>Proposed thinning operations are deemed beneficial to the management of the woodland and likely to increase diversity of structure and species composition. This increase in diversity should in turn increase foraging opportunities for bat species.</p> <p>The proposed management is a continuation of existing Forest Plans that have been in place during an average increase in both GHS and LHS populations within the relevant component SSSI of the Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC since 2010³. It should however be noted that, at the time of writing, the only complete monitoring dataset available to Forestry England between 2012 and 2024 for the relevant SSSI was for Old Bow and Old Ham Mines SSSI.</p>		<p>Populations of both GHS and LHS were observed to decline within Old Bow and Old Ham Mines SSSI during 2017, 2019 and 2021 when compared to recent years, however this was attributed to unseasonal cold weather in late Spring 2022 that caused increased mortality and reduced breeding success across numerous species groups^{4,5}.</p> <p>Population counts in 2023 were higher than 2019 and 2020, with 2024 similar to 2020. Wigpool Ironstone Mine SSSI returned a lower number of bats in 2024 than in 2023, however it has been noted that the 2024 data was limited by a late survey date during warm weather. The survey in sub-optimal conditions for hibernation may have contributed to a lower number of individual bats being present⁶.</p> <p>The Buckshraft Mine component of Buckshraft Mine and Bradley Hill Railway Tunnel SSSI and Westbury Brook Ironstone Mine SSSI both returned higher numbers of LHS in 2024 compared to 2023, with Westbury Brook Ironstone Mine SSSI also returning higher numbers of GHS (numbers of GHS in Buckshraft Mine were comparable in 2024 to 2023).</p> <p>The population counts between 2012 and 2024 still show an average increase on the period 2002-2012.</p> <p>The proposed works detailed within the Speech House Walk & Ruardean Walk Forest Plan are considered unlikely to cause significant effects to GHS or LHS populations in the surrounding area.</p>
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³ Monitoring data provided by The National Bat Monitoring Programme (NBMP), December 2021, Bat Conservation Trust, in partnership with the Joint Nature Conservation Committee, and supported and steered by Natural England, Natural Resources Wales, Northern Ireland Environment Agency, and Scottish Natural Heritage.

⁴ Priddis, D. (11/01/2022), Re: Bats in the Forest of Dean, [email, personal communication]

⁵ Schofield, H. (08/12/2021), Bats and Martens in the FoD, [email, personal communication]

⁶ Phillips, B. (25/03/2024), GBG Underground Section bat hibernation counts - Noxon 16th Mar and Wigpool 17th Mar [email, personal communication]

	<p>No Likely Significant Effects to the Wye Valley and Forest of Dean Bat Sites/Safleoedd Ystlumod Dyffryn Gwy a Fforest y Ddena SAC are therefore predicted as a result of proposed activities within the Speech House Walk & Ruardean Walk Forest Plan.</p>
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END



Speech House Walk and Ruardean Walk Forest Plan
2025-2035
Part of Our Shared Forest project
WEST ENGLAND FOREST DISTRICT