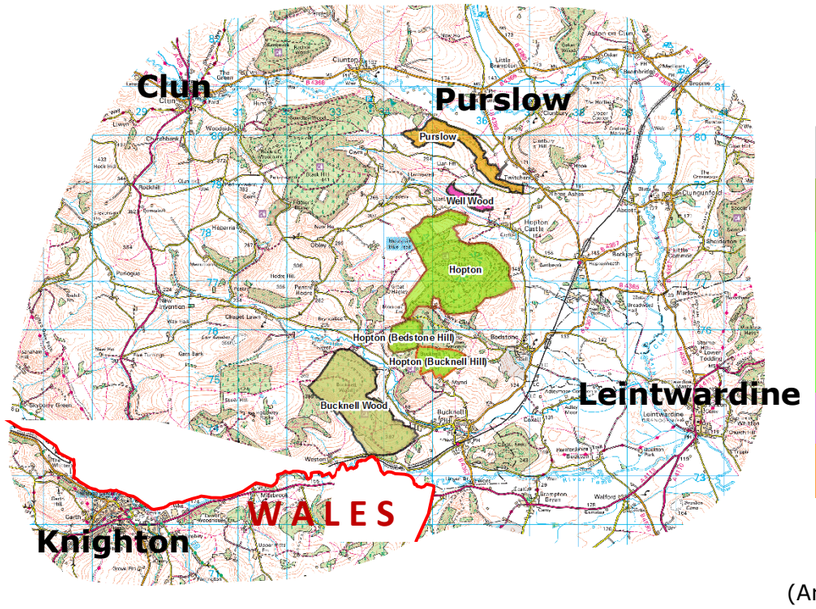
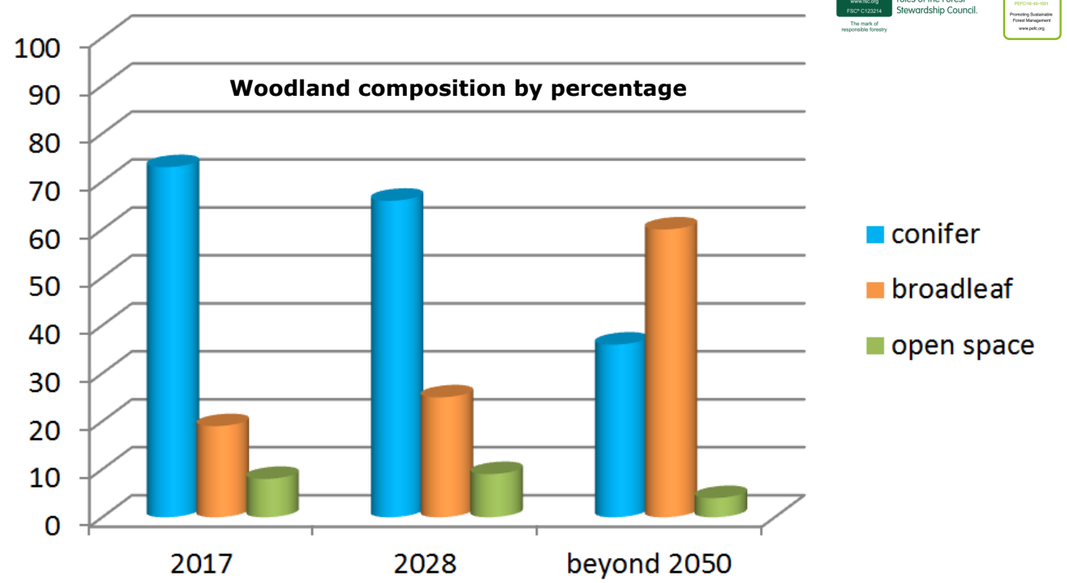
Forest Plan Summary



Forest name	Area	% of plan area
Kinsley	102Ha	13
Bucknell Wood	225Ha	28
Hopton (Bedstone Hill)	36Ha	4
Hopton (Bucknell Hill)	44Ha	5
Hopton	299Ha	37
Well Wood	19Ha	3
Purslow	79Ha	10
	804 Ha	**100 %**

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



About

The Forest Plan nestles along the southern boundaries of the Shropshire Hills AONB, alongside the Welsh border and is situated in the south-west corner of Shropshire county.

The Forest Plan covers 804Ha[1] of mixed coniferous and broadleaved woodland within the Public Forest Estate and is primarily freehold with 3.1Ha being leasehold.

The plan area commands a prominent place within the surrounding landscape with fine views overlooking the Shropshire countryside.

Whilst the plan area is highly productive[2] restoration of native woodland is an important objective with 375Ha registered on the Ancient Woodland register as PAW[3]

There are no Scheduled Ancient Monuments within the plan area although the area is rich in heritage features such as holloways, wood banks and other boundary features.

With the picturesque and scenic landscapes of Shropshire and Offa's Dyke trail on its doorstep, the plan area enjoys open access across all freehold sites as determined under the Countryside rights of Way Act 2000, being well supported by PRoW and permissive access that cater for horse riders, walkers and mountain bikers.[4]

[1] Accounting for less than 1% of the AONB.

[2] Producing around twenty thousand cubic meters of timber over the last 10years at an average value of £25-28 per cubic meter.

[3] 47% of the plan area is classed as Plantation on Ancient Woodland site.

[4] Mountain bike trails in Hopton & Bucknell include the Pearce XC.

Aims and Objectives

The plan aims to protect and enhance existing habitats through sustainable management that is in context with the wider landscape and character whilst providing a sustainable flow of wood products to market throughout the plan duration. The objectives of the plan are:

- Deliver well-designed forests in keeping with the local landscape character.
- To protect, enhance and restore areas of ancient woodland in line with the 2005 'Keepers of Time' policy.
- Protect and enhance woodland and open habitats and their associated species.
- The protection and enhancement of veteran trees/trees of special interest (TSI) and recruitment of future generations of veteran trees/TSI.
- The continued production of sustainable and marketable woodland products.
- To conserve, maintain and enhance cultural and heritage assets.

What We'll do

The current plan outlines management proposals including felling and restocking over several decades, with felling licence approval for operations up until 2028. The planned areas of clearfelling, restocking and permanent/ transient open space creation during the ten years to 2028 are summarised in the chart below.

HECTARES	Conifers	Broadleaves	Open Space
Clearfelling	73	1	----
Restocking/ Regeneration	23	36	15

Crops will be managed for a mixture of objectives including timber production. Some areas will be managed using continuous cover forestry prescriptions so as to create a diverse and resilient forest structure for the future. It is through the use of clearfelling and thinning that invasive species such as Western Hemlock will be targeted for removal to promote, safeguard and enhance the establishment of native woodland, supported by utilising natural regeneration of native species and by planting. Areas of younger conifer that have not yet reached felling age will be managed to economic rotation before felling or further management through the use of continuous cover systems.

The plan looks to improve provision of open space habitats, especially in Hopton. Implementation and maintenance of environmental corridors will continue to increase the diversity of habitat and the quality of internal landscaping.

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

The proportions of conifer and broadleaved woodland and open space at the beginning of the plan period are shown in the bar chart at the top of the page. The indicative woodland composition expected within the plan period and over time is illustrated in the middle and right hand columns of the chart.

Forestry Commission England

Kinsley, Bucknell, Purslow and Hopton Forest Plan
2018 - 2028

West England Forest District

FINAL DRAFT for Citizen Space consultation

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

FSC www.fsc.org FSC® C123214 The mark of responsible forestry

PEFC PEFC/16-40-1001 Promoting Sustainable Forest Management www.pefc.org

Francis Raymond-Barker

FCE Ref: OP10/15

FS File Ref: GL1/5/3.22, 3.25 & 3.69

(following approval FS will adopt the FCE file ref)

Declaration by FC as an Operator.

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

Forestry Commission England

Application for Forest Plan Approval

Forest District:	West England FD	
Woodland or property name	Kinsley, Bucknell, Bedstone Hill, Bucknell Hill, Hopton, Well Wood and Purslow	
Nearest town, village or locality:	Clun (North West) Knighton (South West) Bucknell (South) Leintwardine (South East) Craven Arms (North East)	
OS Grid reference:	Kinsley Bucknell Bedstone Hill Bucknell Hill Hopton Well Wood Purslow	SO29007292 SO33467451 SO34467590 SO35157536 SO35477731 SO3581786 SO35298002
Local Authority District/Unitary Authority:	Shropshire Council	

Plan Area:	804 Ha
Conifer Felling:	73Ha
Broadleaved Felling:	1.0Ha

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

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

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

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

Signed .....

Forest Management Director

Date .....

Signed .....

Area Director

Date of approval.....

Date approval ends.....

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The mark of responsible forestry

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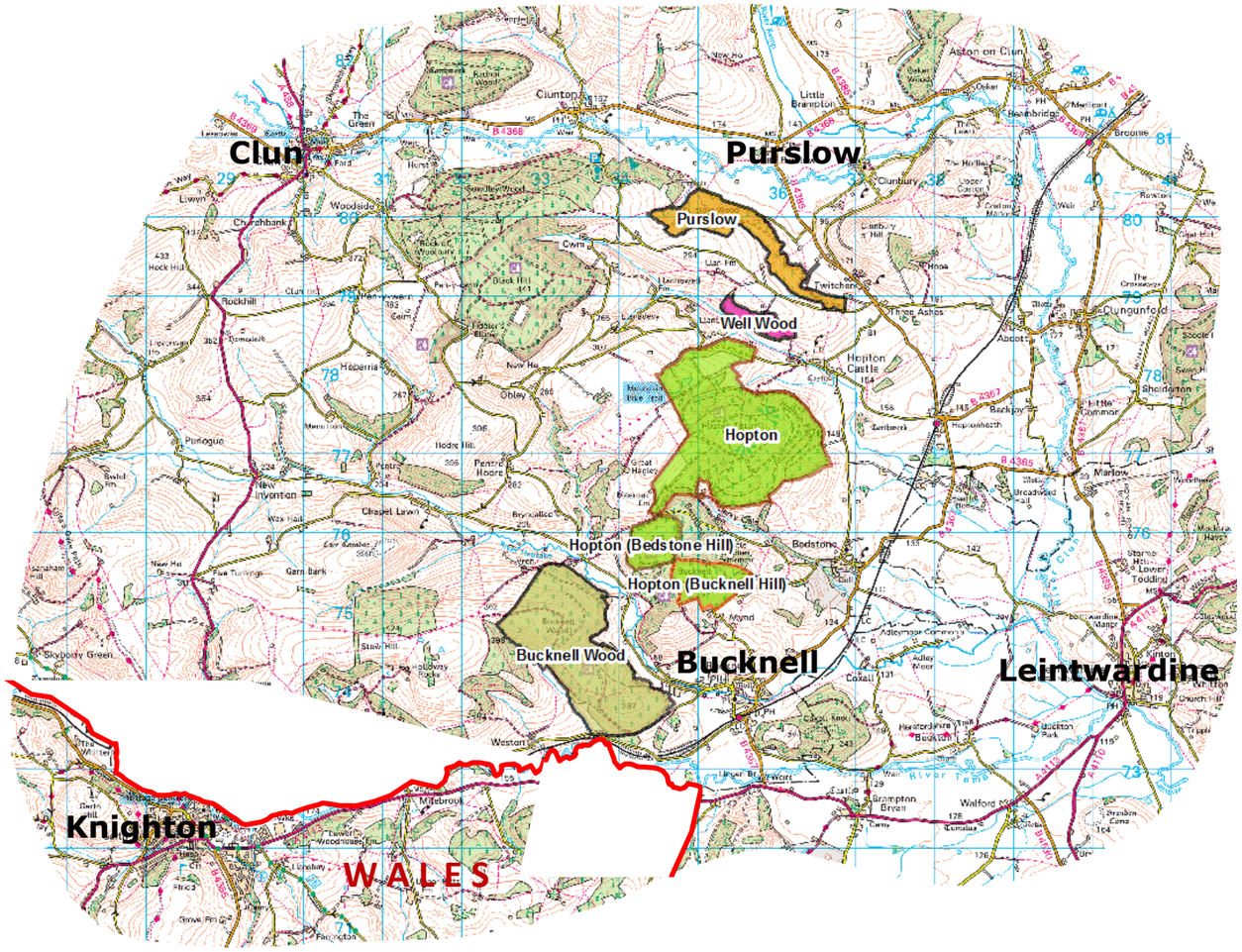
PEFC PEFC/16-40-1001

Promoting Sustainable Forest Management

www.pefc.org

Forestry Commission England

List of Contents



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

Location and Description

The Hopton plan comprises of 7 blocks of woodland that were previously split over three plans. The plan comprises of mixed conifer and broadleaf woodland totalling just over 804Ha. Sitting just on the English-Welsh border in the County of Shropshire and 10 miles west of Ludlow the plan area is fairly compact, lying north of the A4113 between Knighton and Leintwardine and just south of Little Brampton and Purslow on the B4368 Clun to Craven's Arms road, covering 15 square miles.

The Plan is 9 miles south of The Long Mynd. Dominating the higher ground the forests within the plan retain a very prominent role within a wider landscape, being well linked through networks of well established mature hedgerows, to the surrounding patchwork quilt of fields and smaller privately owned woodlands that all lie within an agricultural landscape. For example Kinsley rises steeply to 325m asl, 150m above the town of Knighton; whilst to the west, Bucknell Wood provides the scenic backdrop to Bucknell village sitting on a saddle starting at 150m in Bucknell village rising to 287m before climbing further reaching a height of 394m asl. Bedstone Hill and Bucknell Hill, to the north, are slightly lower than this topping out at 360m asl, whilst Hopton climbs further to just under 400m asl and to the north of Hopton, Well Wood and Purslow both sit on steep ground either side of a ridge running in a north-westerly direction.

The area comprises of Silurian shale geology that give rise to rich soils that are predominantly brown earths. With these soil types and an average of around 800mm rainfall a year the woodlands are capable of achieving good growth rates that for conifer are in the range of Yield Class (YC)10 to YC 24 and for Broadleaves one may expect YC of between 4-8.

The whole of the plan area rests on the southern boundaries of the Shropshire Hills AONB, the Clun Environmental Sensitive Area (ESA) and lies within the water catchment area for the River Clun that flows east along the northern boundary of the plan area before heading south; whilst the River Teme runs along the southern boundary of the plan area to its confluence with the River Clun in Leintwardine to the east of the plan area. Both rivers feed into the River Severn with the River Teme being the second largest tributary of the River Severn. Between Bucknell and Bedstone Hill/Bucknell Hill, the River Redlake also flows eastward to join the River Clun. The steep slopes of Purslow face north and are adjacent to the floodplains of the River Clun.

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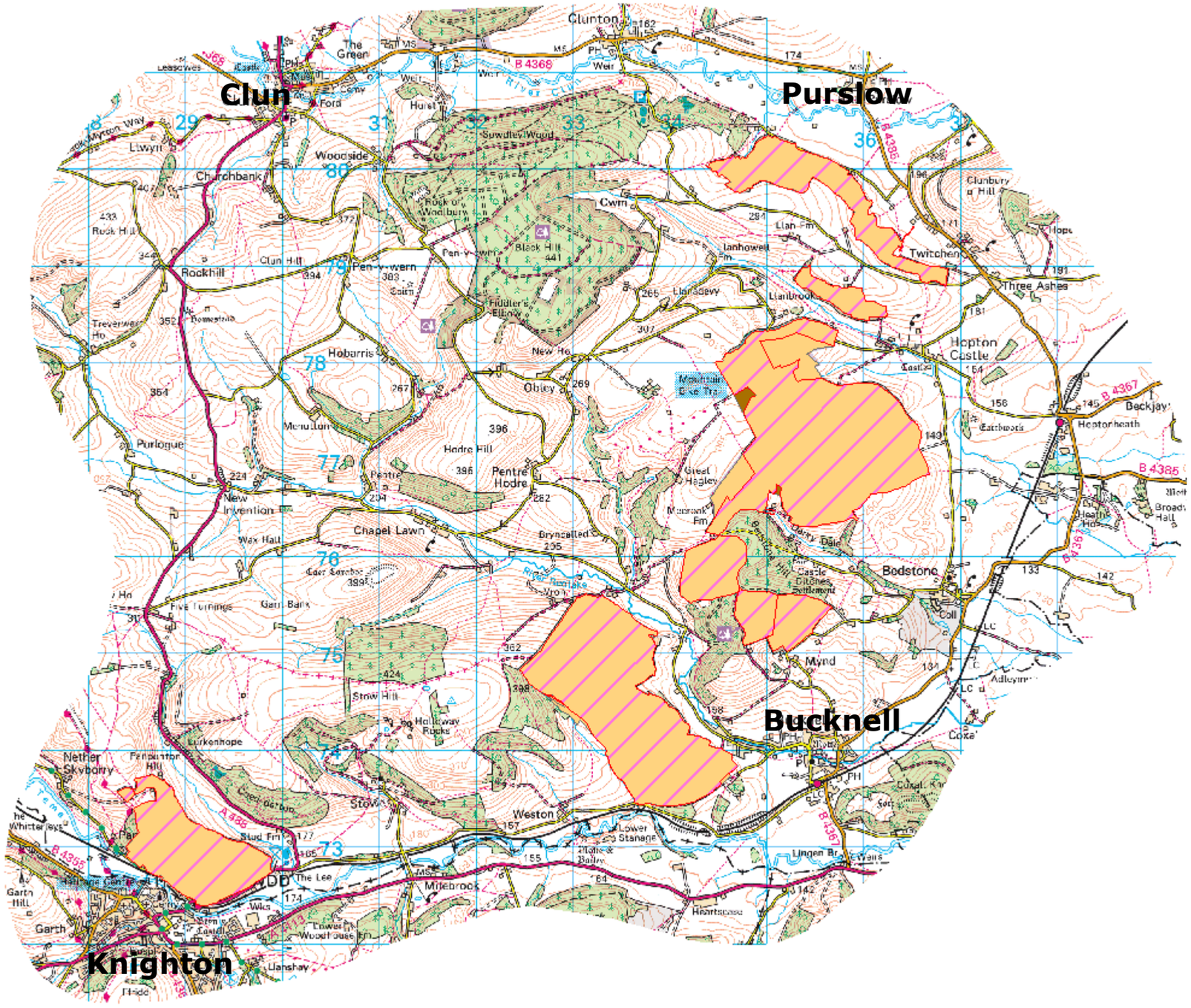
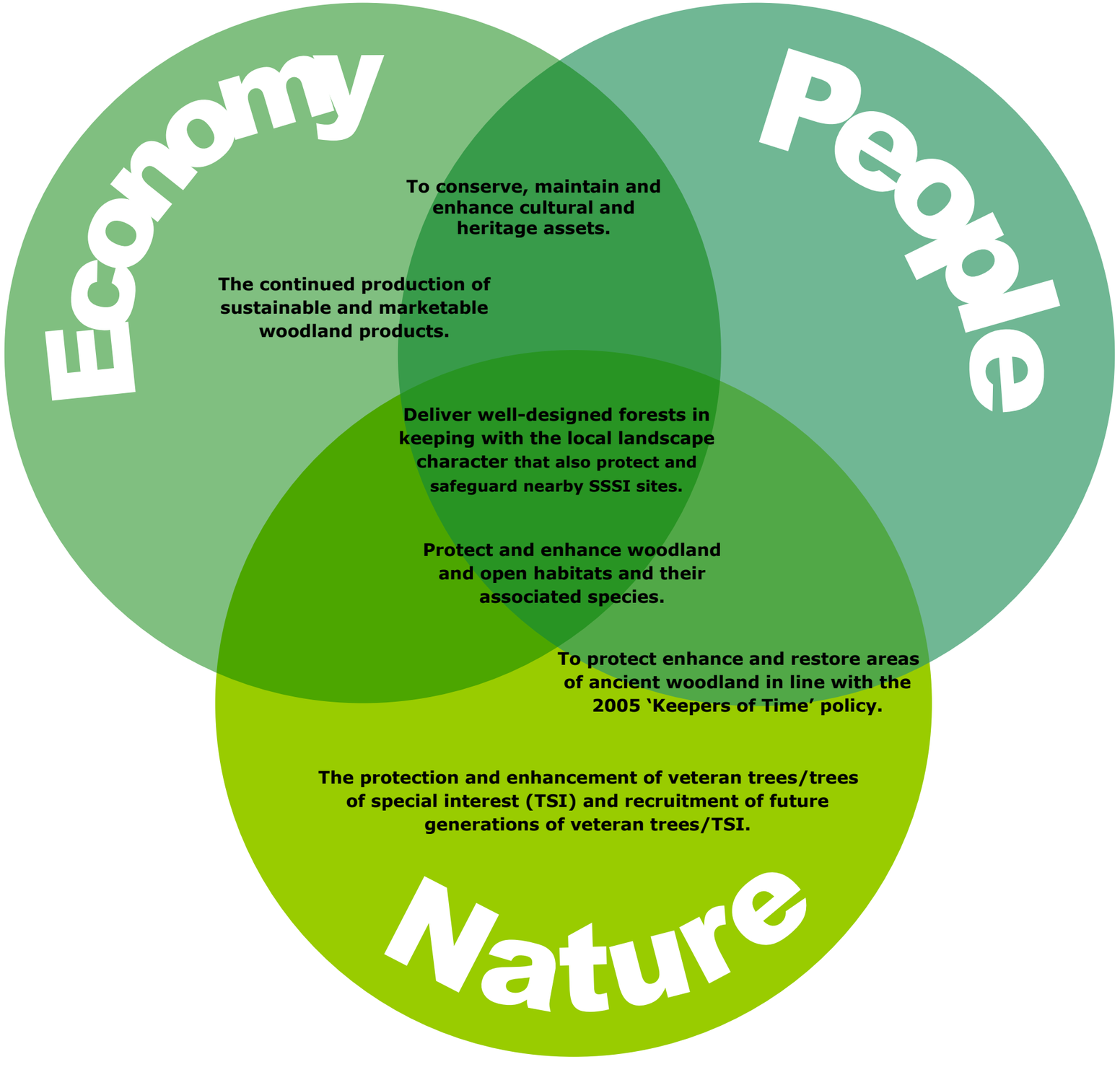


Tenure & Management Agreements

Over ninety percent of the Plan area is Freehold with only two small areas along the western boundaries of Hopton Wood amounting to 3.1Ha being Leasehold. A further 68Ha within Hopton Wood is leased to 3rd parties under agricultural arrangements.

Legend

- Management area
- CROW dedicated land
- FC Freehold
- Leasehold



Management Objectives

WEST ENGLAND FOREST DISTRICT

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

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

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

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

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PEFC PEFC/16-40-1001 Promoting Sustainable Forest Management www.pefc.org

Forestry Commission England

National Vision and Overall Goal:

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

Meeting Objectives

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

Economy

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

Improve the economic resilience of our woods and forests.

Encourage and support business activity on the Estate

People

Maintain existing established consultation panels in the West England District and engage with other consultative bodies such as National Park Authorities and AONBs.

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

Nature

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

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

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

District Strategy	Forest Plan Objective	Meeting Objective	Monitoring
Economy	**The continued production of sustainable and 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 total production forecast with actual production at the Forest Plan (FP) five and ten-year review: 2017-2022 = 26340m3 (5268 annually) 2022-2026 = 43440m3 (8688 annually) Operational Site Planning (OSP) and contract supervision.
Economy	**To protect enhance and restore areas of ancient woodland in line with the 2005 'Keepers of Time' policy.**	Restoration of PAW sites will be a gradual process targeting removal of conifer crops and non-native regeneration through clearfelling & thinning to aid establishment of native species through regeneration and planting.	Analysis and comparison of naturalness scores derived from the Sub-Compartment Database (SCDB) through the FP review process.
People	**Deliver well-designed forests in keeping with the local landscape character that also protect and safeguard nearby SSSI sites.**	Through a mixture of thinning & clearfelling the approach will be dependant upon steepness & awkwardness of terrain and prominence within the landscape. Operational site planning (OSP) will help integrate the FP intentions minimising risk of adverse impact on the landscape and adjacent SSSI.	Fixed point photography will be used during the FP review process to help in the analysis of how the implementation of the plan is effecting external landscape and character. OSP will help identify opportunity for enhancement to character and identify safeguards for adjacent SSSI.
People	**The protection and enhancement of veteran trees (VT)/trees of special interest (TSI) and recruitment of future generations of VT/ TSI.**	These woodlands contain numerous scattered TSI & VT of varying description, including old lime coppice stools. 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 FP 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.
Nature	**Protect and enhance woodland, open habitats and their associated species.**	Through a mixture of clearfelling, thinning and coppicing 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 concluded.	Monitored through review process, looking at local records for updated sightings. Analysis and comparison of SCDB open space through the Forest Plan review process.
Nature	**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 (and management) for harvesting and restock sites that identifies features of interest and outlines appropriate measures to avoid damage and sometimes enhance such features.	Monitoring will be achieved through the OSP and contract supervision and the Forest Plan review process.

National Character Profile: 98 CLUN AND NORTH WEST HEREFORDSHIRE HILLS

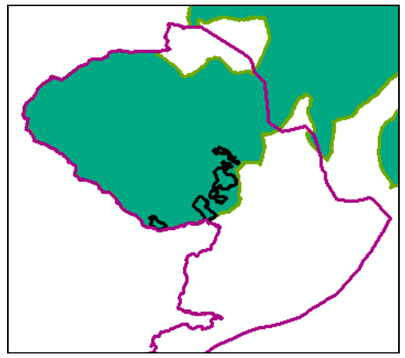
source: Natural England (April 2014)

An undulating, tranquil, rural and sparsely populated area, divided by the narrow river valleys of the Clun and Teme. Many watercourses are 'unimproved', retaining a great deal of physical and biological diversity, many are noted for their high water quality and associated riparian habitat. They provide important habitats for species such as Atlantic salmon, freshwater pearl mussel and dipper.
Deep water sediment deposits of the Silurian Period give rise to glacially deepened valleys running eastwards out of Wales. The shallow water deposits to the southeast, are characterised by a continuation of the dip-and-scarp topography of the adjacent Shropshire Hills NCA. The landscape expression of these geological differences epitomises the transition eastwards from upland to lowland Britain.

The heads of the valleys are narrow and deeply incised with woodland on the steepest slopes, frequently deciduous in nature. From Clun eastwards, there are substantial conifer plantations, often extending over the hilltops. The plantations are sometimes on ancient woodland sites (7% of NCA is PAWS). In other cases they are recent with conspicuous straight edges, at odds with the predominantly rounded landforms. The higher land is typically wind-swept heath and grassland, typically with plantation and native woodland on the hill tops and upper valley slopes. The NCA contains 10,808 ha of woodland (17% of the total area), of which 5,245 ha is ancient woodland (2% of NCA)

The NCA has a long history as a frontier landscape, with Offa's Dyke forming the boundary of Saxon Kingdom of Mercia to the west. Also a National Trail, Offa's Dyke, covers 20 miles within the NCA.*

*passes along the western edge of Kinsley Wood



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 importance of the landscape of the Shropshire Hills has long been appreciated and is formally recognised through its designation as an Area of Outstanding Natural Beauty (AONB) that includes the Herefordshire Hills and Clun. The area has one of the largest geological variations in the UK. This 'geodiversity' has in turn given rise to a complex array of soils and a range of different landforms. The county's ecology is correspondingly varied, and includes a broad assortment of nationally important habitats.

2.6 - Pasture Hills are prominent sloping landscapes that occur around the fringes of higher ground. Relict ancient Woodland is found throughout these landscapes particularly along watercourses and on the steeper slopes. Woodlands are often linked to this landscape type by further tree cover provided by scattered hedgerow trees, mainly Ash and Oak that are set within species rich hedgerow networks that define ancient, irregular field systems.

2.7 - Principal Wooded Hills enjoy prominent sloping topography that links woodland into the surrounding landscape including Pasture Hills and includes the likes of Hopton, Purslow and Well Wood. Character of theses wooded landscapes is heavily influenced by landform and in many places the steepness of the slopes makes them unsuitable for agriculture. The landscapes vary in scale from small and intimate with framed views inside the woodlands to medium scale with filtered views in the more open areas.

2.9 - Wooded Hills and Farmlands are broadly similar to Principal Wooded Hills having the same sloping topography giving rise to medium to large scale landscapes often framed with sometimes filtered views. The landscapes tend to have complex and diverse histories often shaped through successive phases of enclosure and later with the establishment of coniferous woodland in the 19th and 20th Centuries.

Below are a few examples of the forest Plans landscape in context with these categories.

1 Hopton

2 Kinsley

3 Hopton

4 Purslow

5 Bedstone Hill & Bucknell Hill

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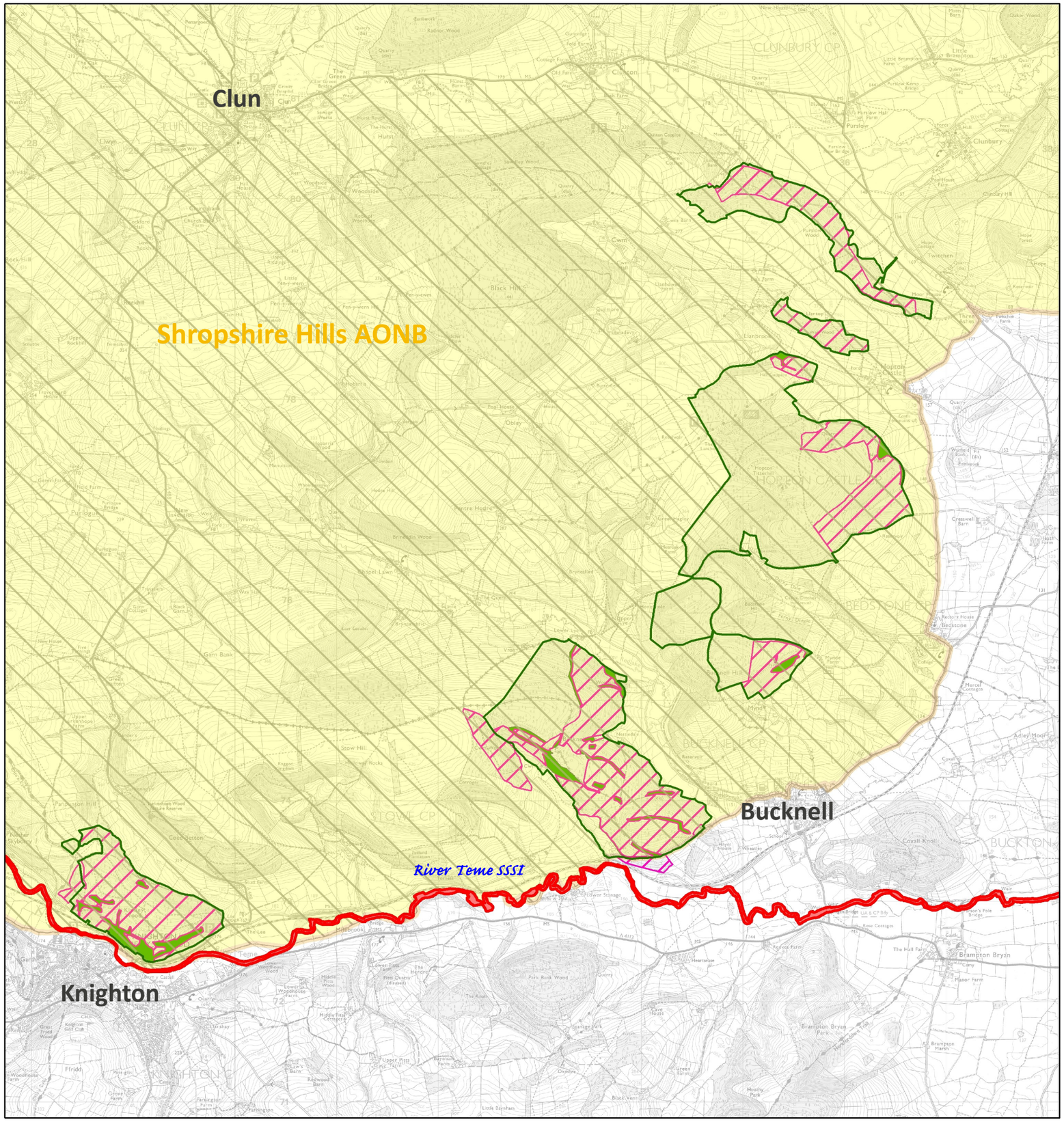

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Approximate scale 1:40,000

Designations

The Forest Plan area sits completely within the Shropshire Hills Area of Outstanding Natural Beauty (AONB) as well as the Shropshire Hills Environmentally Sensitive Area (ESA).

The plan area contains around 4% of Ancient Woodland equating to 35Ha with a further 52.5Ha of native woodland lying within Plantation Ancient Woodland (PAWs) making native woodland account for 11% of the total Forest Plan area. The map at the bottom of the page shows the distribution of Ancient Semi-Natural Woodland (ASNW) and PAWs. See the sections on Woodland Naturalness, Broadleaf management and Silviculture for further information.

The Plan area is situated close to the River Teme. This river is designated SSSI for being a near natural and biologically rich river type associated with sandstone and mudstones that provide both rapid flowing and slower more sluggish flowing water. It is due to these attributes and the high water quality[1] that the river is also designated for Shad, Sea lamprey, Salmon, Native White-clawed Crayfish, Otter, Freshwater pearl mussel and Grayling.

The SSSI extends to the lower reaches of River Clun that is also a SAC.

[1] Under threat for various reasons, as investigated in reports undertaken by Shropshire Hills AoNB that include: "A survey of the River Redlake sub-catchment highway drainage network" whilst safeguarding quality would include measures such as woodland creation in strategic places (identified in AoNB report "Upper Teme catchment Woodland Opportunity mapping"), slowing the flow measures and improved hedgerow management.

Legend

- Forest Plan management area
- Shropshire Hills AONB
- Environmentally Sensitive Area (ESA)
- River Teme SSSI
- ASNW
- PAWS

Analysis & Concept

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

Recreational use of the area is high with car parking available at Kinsley, Bucknell and Hopton. The woods are used by walkers, horse riders and mountain bikers, with Bucknell and Hopton being known for their downhill routes.

Concept: Recreation is not the direct concern of a Forest Plan, however proposals should be sympathetic to users needs and will aim to enhance aesthetic appearance within a local and wider landscape context for improved user enjoyment. The Plan area is supported by a network of public rights of way too.

The whole Forest Plan lies within the Shropshire Hills AoNB.

Concept: Proposals will look to improve landscape value, safeguard and enhance ecological values such as habitats for dormice, Pearl Bordered Fritillary and Great Crested Newts. Through implementation of the plan, veteran trees and Trees of Significant Interest (TSI) will be safeguarded and deadwood habitat will be promoted, enhancing biological values too. Water quality will be protected through sympathetic management prescriptions.

The previous plan made headway in the beginning to address the monocultured nature of conifer crops throughout the plan area through clearfelling, stripfelling, planting and thinning.

Concept: The new plan will continue to increase diversity of structure using similar techniques.

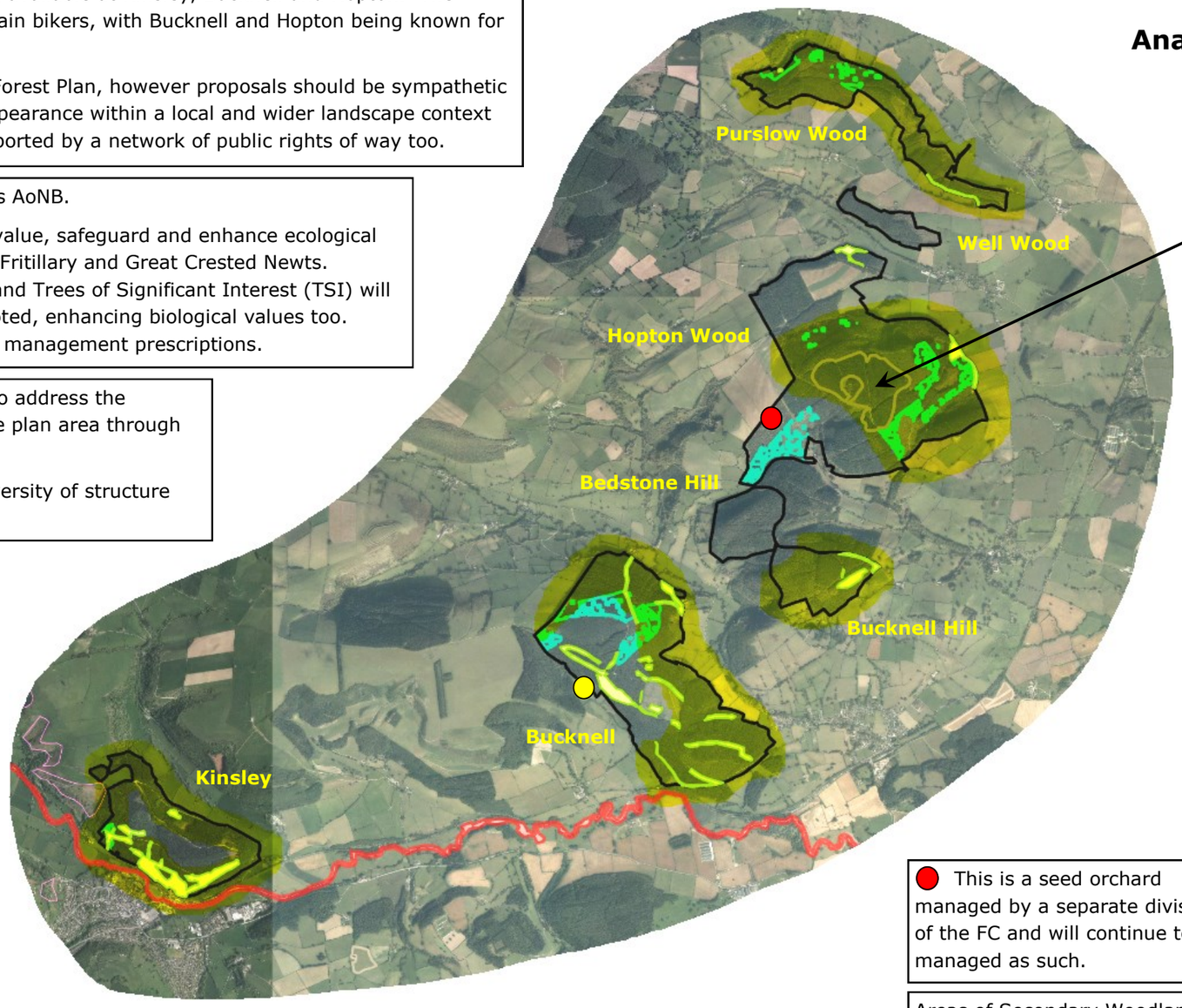
Recorded Ancient Woodland is fragmented and recent plantings have begun a process of consolidating and linking these areas. Woodland components characteristic of Ancient Woodland can be found in most of the woods within this plan.
Concept: The plan will continue the consolidation process through natural regeneration and planting**.**

Small areas and narrow belts of broadleaves are scattered through the woodlands and remain vulnerable to nearby conifer impacting on crown development.

Concept: Thinning work will continue to open up and safeguard the crowns of broadleaves in such areas, offering development of improved seed potential for these native areas.

These areas adjacent to the plan area at Kinsley have been identified by the AoNB to be suitable for the creation of Ffridd woodland (in areas of minor native species, lowland bordering upland) that would safeguard water quality.

Concept: There is an opportunity here to work in partnership with the AoNB potentially to purchase and create such woodland.



Within Kinsley, Scots Pine crowns the top of the hill and forms a prominent feature when the woodland is viewed from the surrounding landscape or when walking in the wood. The Scots Pine is developing a good native broadleaf understorey that will continue to develop.

Concept: Future management will promote crown development of Scots Pine and broadleaf understorey, creating a diverse mixed pine/broadleaved woodland, that will enhance public enjoyment, ecological value and be more robust to future threats of pests/disease and climate change.

Cwm-cottage is a derelict farm house and houses a maternity roost of Lesser Horseshoe Bats (LHB).

Concept: Management of the surrounding woodland must comply with European Protected Species guidance with prescriptions reflecting the need for gradual change in order to maintain favourable habitat for LHB.

The River Teme is a SSSI designated for being a near natural and biologically rich river that supports a wide range of species such as: Shad, Sea lamprey, Salmon, White-clawed Crayfish, Otter and Freshwater pearl mussel.

Concept: Coupe design and management prescriptions will reflect the necessity to ensure water quality is not compromised, through the use of smaller coupe sizes and methods alternate to those of clearfelling.

The cap of Hopton was originally due for felling in one large 33Ha coupe. Whilst this would have created fantastic views over the surrounding landscape, felling such a large area, would have had a huge impact on landscape and programme management.

Concept: Redesign the coupes that cover the cap of Hopton to be more realistic and sensitive to landscape placement.

Yellow highlighted areas are highly visible within the wider landscape. The quality of the surrounding landscape has huge potential to be influenced by the management of these woodlands. - The backdrop to Knighton is dominated by Kinsley, just as the village of Bucknell is overlooked by Bucknell Wood and Bucknell Hill. Whilst Purslow and Hopton are both prominent features when viewed from the North and East.

Concept: Analysis of coupe shape, and timescale of future felling will be designed to enhance landscape value. This means some crops maybe felled early, whilst others are retained beyond the age for economic rotation. This will create a more structurally diverse suite of woodlands, create new habitats and enhance biodiversity. Coupe design will work with naturalistic shapes to be sympathetic to landform. Aesthetic value of the woodlands within the local landscape that are of high importance to local communities will increase and internal views out into the surrounding countryside should be conserved.

This is a seed orchard managed by a separate division of the FC and will continue to be managed as such.

Areas of Secondary Woodland primarily contain younger conifer crops, mostly planted either in mid 1980s or 2000s.

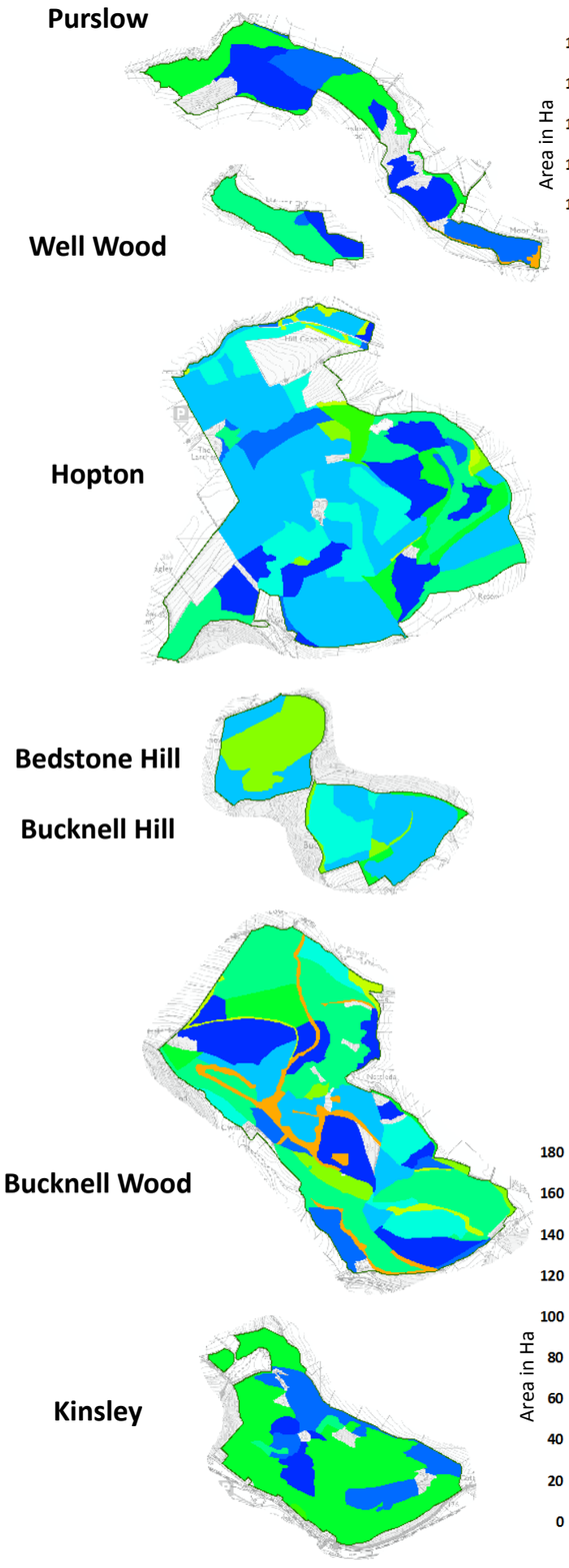
Concept: Most areas will be managed to their economic maturity before felling, and in some cases left to biological maturity as long term retentions that will create diversity and structure, enhancing ecological value as well as visually enhance the wider landscape. Restocking will improve woodland resilience against climatic change and threat from pests and disease.

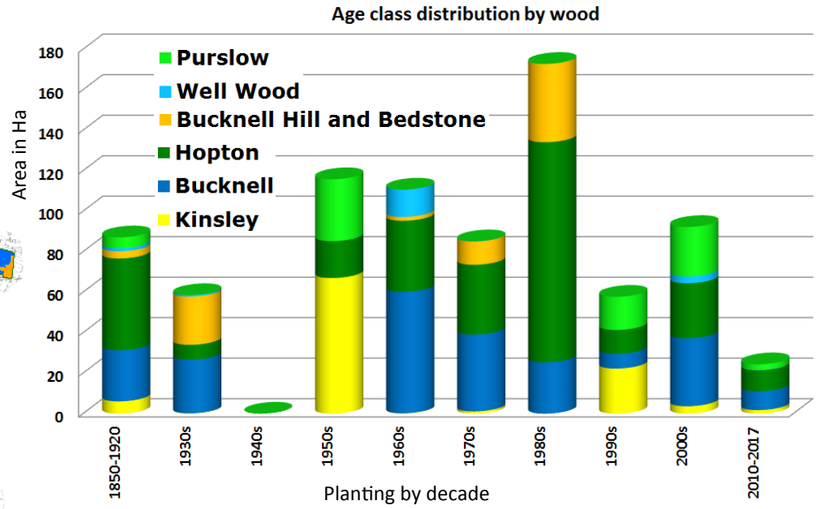
The Plan area contains around 35-40Ha of mature Western Hemlock (WH). Much of this WH is regenerating and in a lot of cases threatens Ancient Woodland or areas of PAW already felled and planted with native broadleaf.

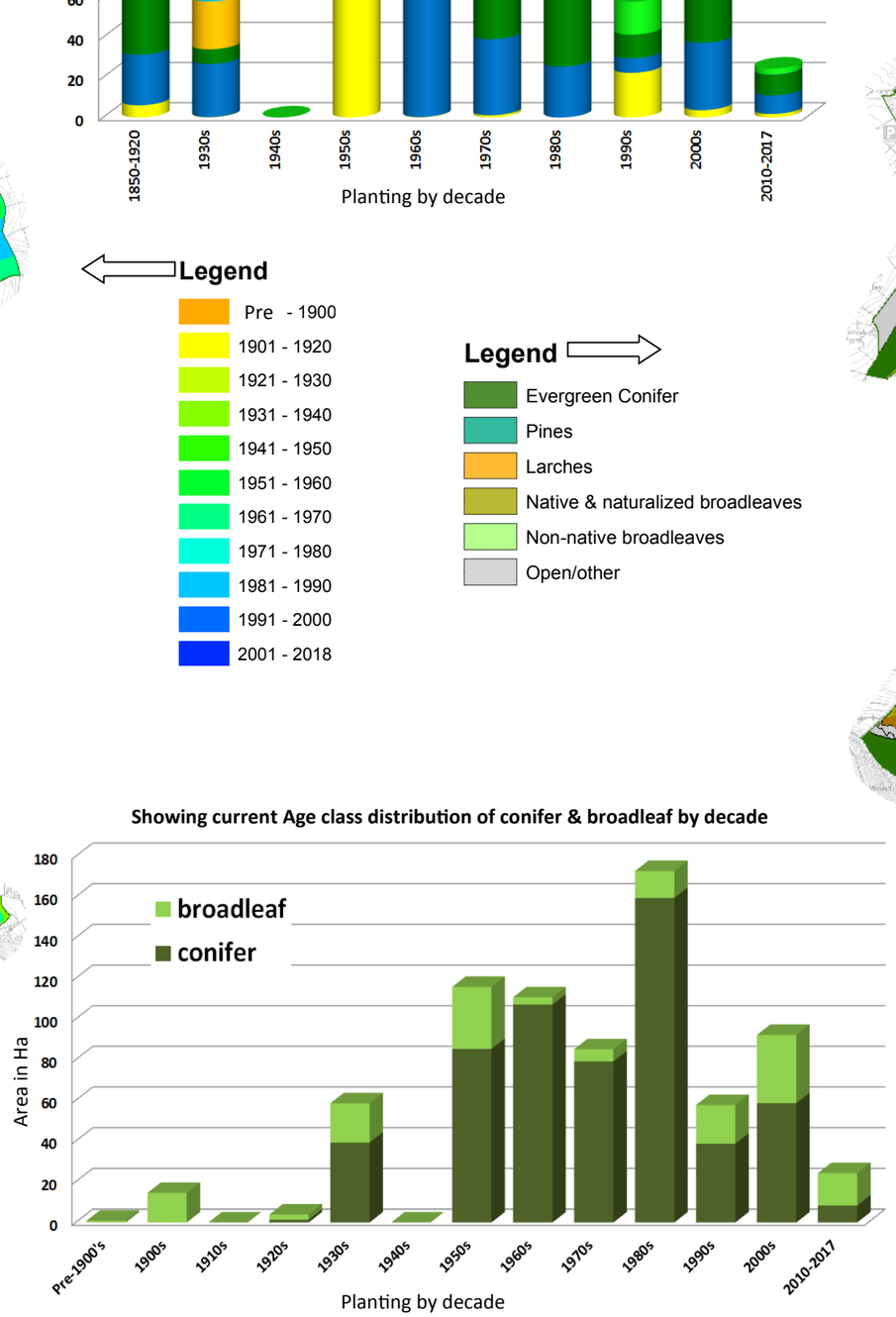
Concept: The plan will prioritise the removal of WH where it is threatening restock areas stocked with native broadleaf or is seeding into Ancient Woodland sites.

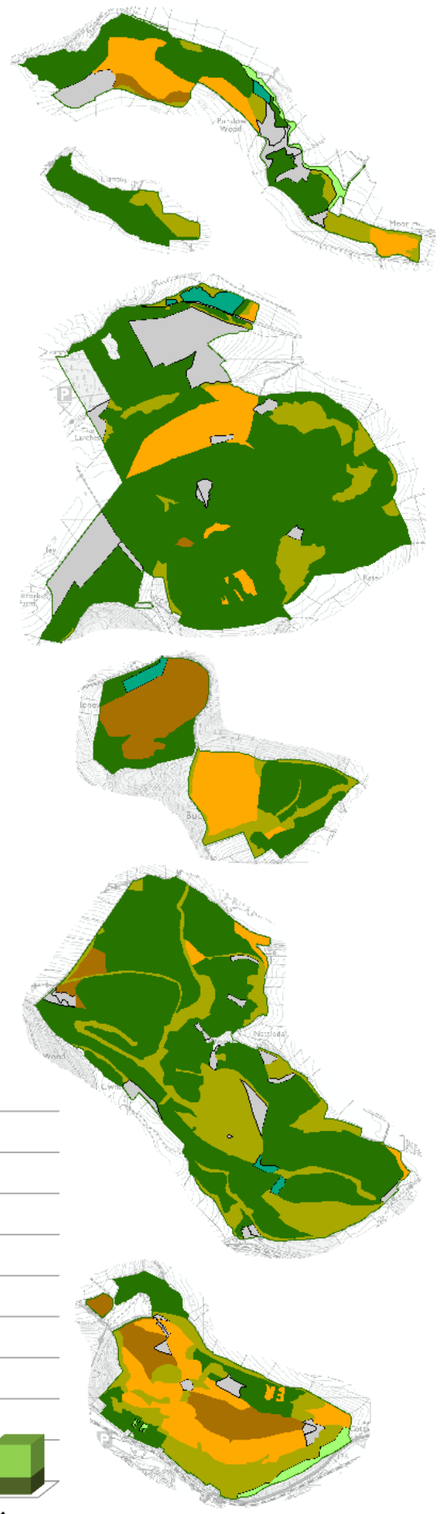
Current Age Class Distribution

Map shows age class distribution by decade









Current Species Distribution

Woodland Composition

The plan area is dominated by highly productive conifer, of which Douglas Fir, Larches, Sitka/Norway Spruce, and Scots Pine account for 66% or 530Ha of the plan area.

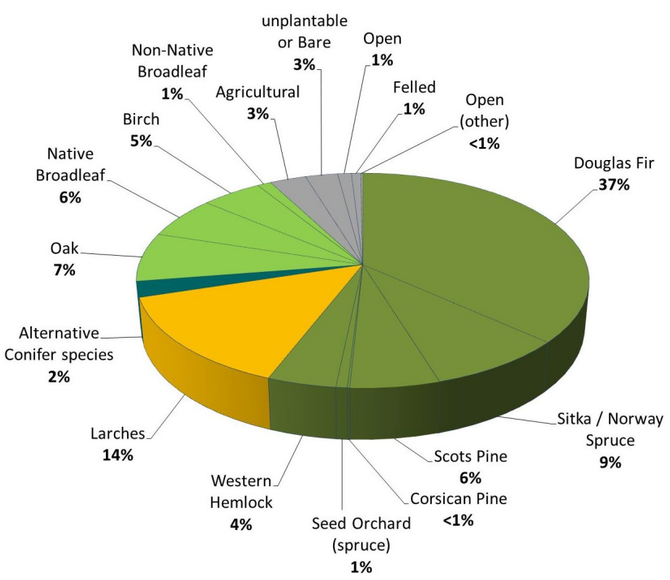
Broadleaf cover accounts for just shy of a quarter (19% or 152Ha) of the overall Forest Plan area being fairly evenly split across all 7 woods. Minor broadleaf species include Rowan, Cherry and Willow.

Within the plan area conifer was first planted in 1930's and with prevalence just after World War II in the 1950's, peaking in the 1980's with over 150 Ha being planted, whilst broadleaves have been continually planted in smaller more modest amounts since the 1900's they have never outpaced that of conifer.

A high proportion of the plan area will be reverted back to a native condition through the implementation of the Keepers of Time policy. Despite current high proportions of conifer cover, the plan area does support reasonable quantities of broadleaf regeneration encouraged through silvicultural management[1] and the effects of this are now beginning to affect woodland composition.

[1]Including regeneration fellings, thinning and planting

Woodland Composition 2017



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

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

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

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

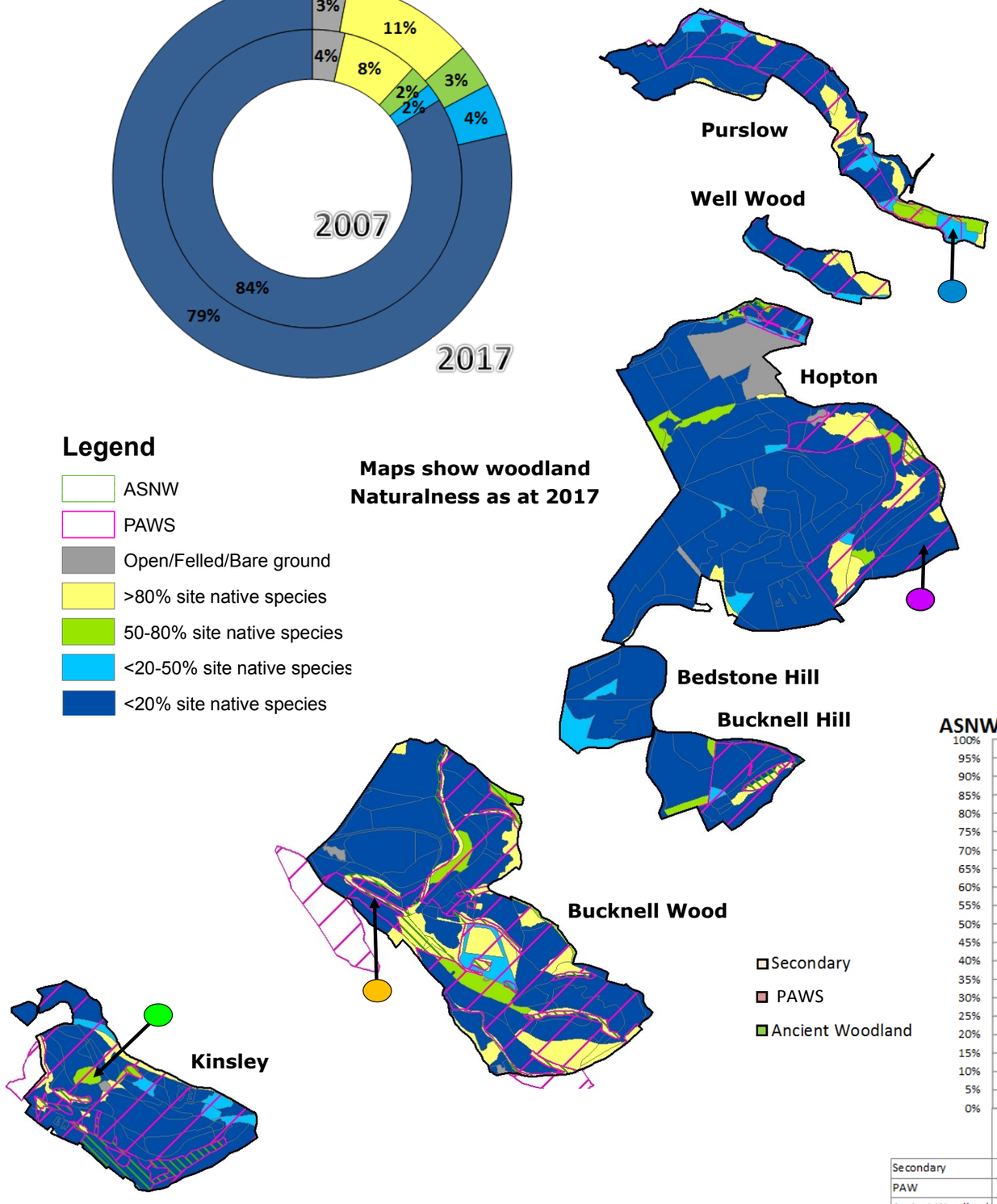
Class 4 – Plantation Woodland
(< 20% site native species)

Comparitive Naturalness 2007 to 2017

Legend

- ASNW
- PAWS
- Open/Felled/Bare ground
- >80% site native species
- 50-80% site native species
- <20-50% site native species
- <20% site native species

Maps show woodland Naturalness as at 2017



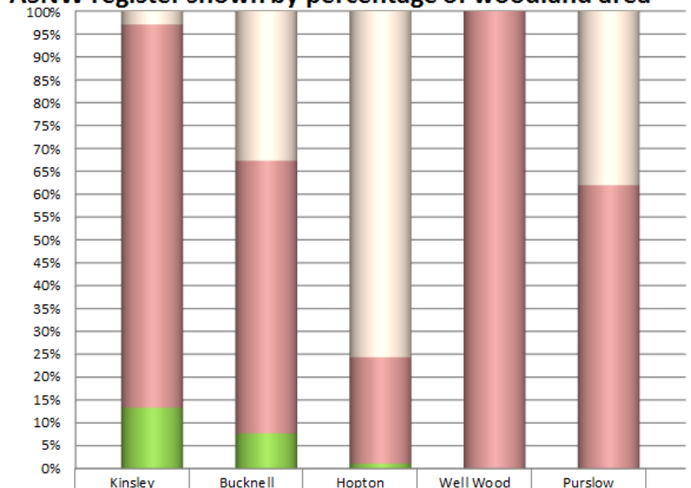
Naturalness on Plantation Ancient Woodland Sites (PAWS)

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

Where Classes 2, 3 & 4 concur with the Ancient Woodland register then sites are classified as Plantations on Ancient Woodland Sites (PAWS). The majority of classes 2,3 & 4 are located in Kinsley, Bucknell and Purslow. Areas of Semi-Natural Woodland (Class 1 - > 80% site native species) are to be found scattered across the whole plan area and tend to be fragmented in nature.

Transformation of Classes 2, 3 and 4 PAWS towards Class 1 is an important objective of this Plan. Restoration will take place through targeted thinning and clearfelling, achieving a steady and gradual transition over a number of years that will safeguard remnant Ancient Woodland features and important habitats.

ASNW register shown by percentage of woodland area



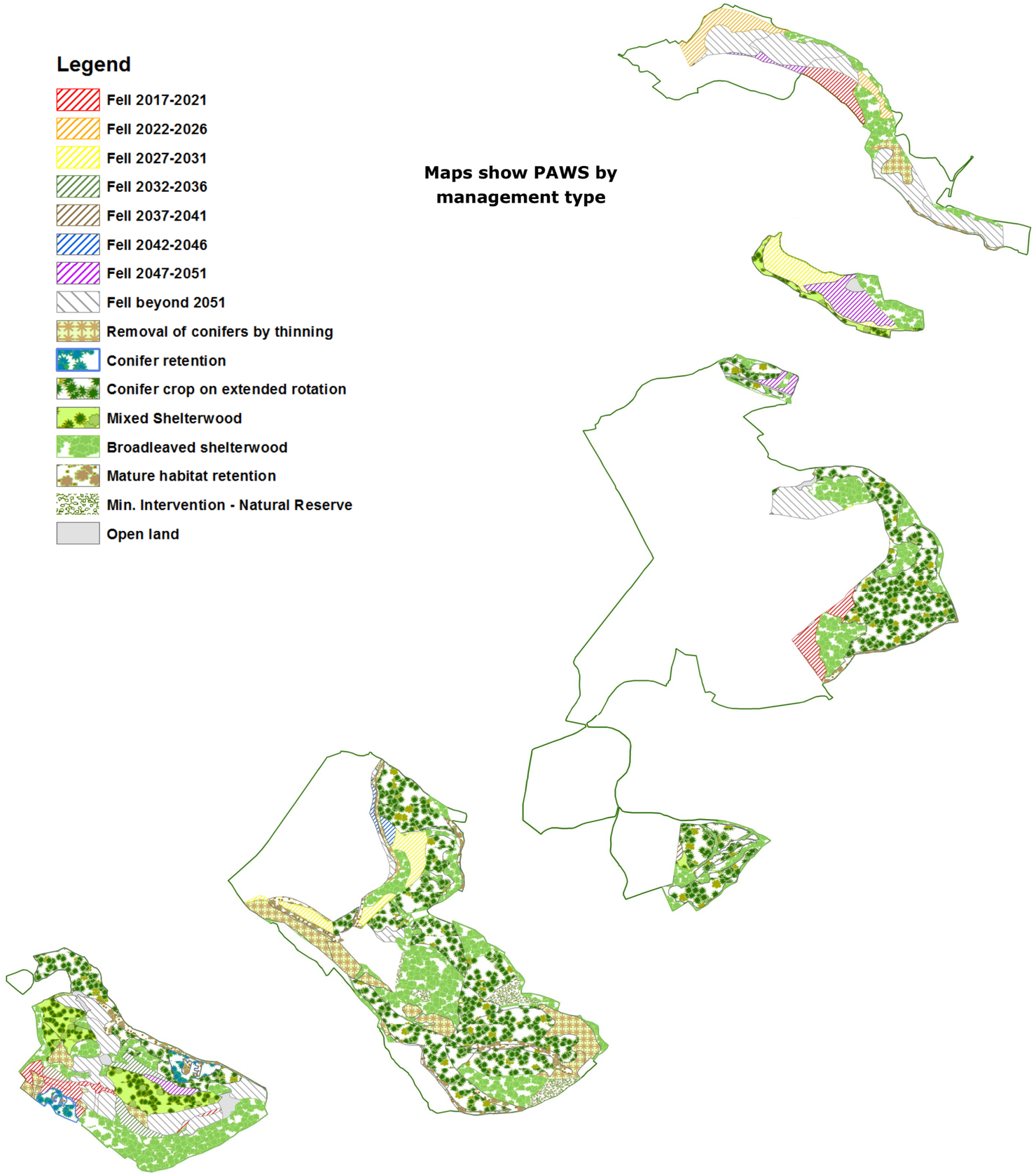
	Kinsley	Bucknell	Hopton Bedstone & Bucknell Hill	Well Wood	Purslow
Secondary	2.90	32.71	75.68	0.00	38.09
PAW	83.79	59.64	23.24	100.00	61.91
Ancient Woodland	13.30	7.65	1.08	0.00	0.00

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

Legend

- Fell 2017-2021
- Fell 2022-2026
- Fell 2027-2031
- Fell 2032-2036
- Fell 2037-2041
- Fell 2042-2046
- Fell 2047-2051
- Fell beyond 2051
- Removal of conifers by thinning
- Conifer retention
- Conifer crop on extended rotation
- Mixed Shelterwood
- Broadleaved shelterwood
- Mature habitat retention
- Min. Intervention - Natural Reserve
- Open land

Maps show PAWS by management type



PAWS Management

Restoration of PAWS has already begun through thinning and felling during the previous plan period (as illustrated on the previous page). Over time, restoration of PAWS areas will continue towards a native condition through the use of thinning and targeted clearfelling. This will enable development of understory that may take a considerable amount of time/resource due to native remnants being fragmented and limited in places. The terrain also makes work extremely difficult, awkward and in some places prohibitive. The key is flexibility as to the speed of restoration; with well established understories being recruited during thinning to form part of the future crop; giving opportunity for the development of an irregular structure that is both diverse in age class and species.

A proactive yet realistic approach will be used to transform PAWS sites over a period of time with an eventual aim of transitioning them to one that contains 80% or more of native species. This will be a gradual process that will help achieve:

- a varied age structure with varying ratios of high canopy, secondary canopy and understory through out.
- transition that ensures a minimum future content of 3 native species, with 4 to 5 species being the preferable target.
- Minimal reliance on broadleaf monocultures to be encouraged especially of Birch, Ash, Oak or Willow. Where conditions are favourable and risk from wind damage is low, this objective may mean considering under-planting or during thinning carrying out group felling followed by group planting.

Some areas may take longer to restore than others due to their composition and recent clearfelling activity but thinning practice will reflect the condition of the crops and how individual sites are responding to previous interventions.

On PAW sites Western Hemlock will be prioritised for clearfelling or earliest removal through thinning for reversion to native woodland. By 2027 areas clearfelled and reverted back to a native condition will amount to around 35Ha with thinning restoring a further 5-10Ha.

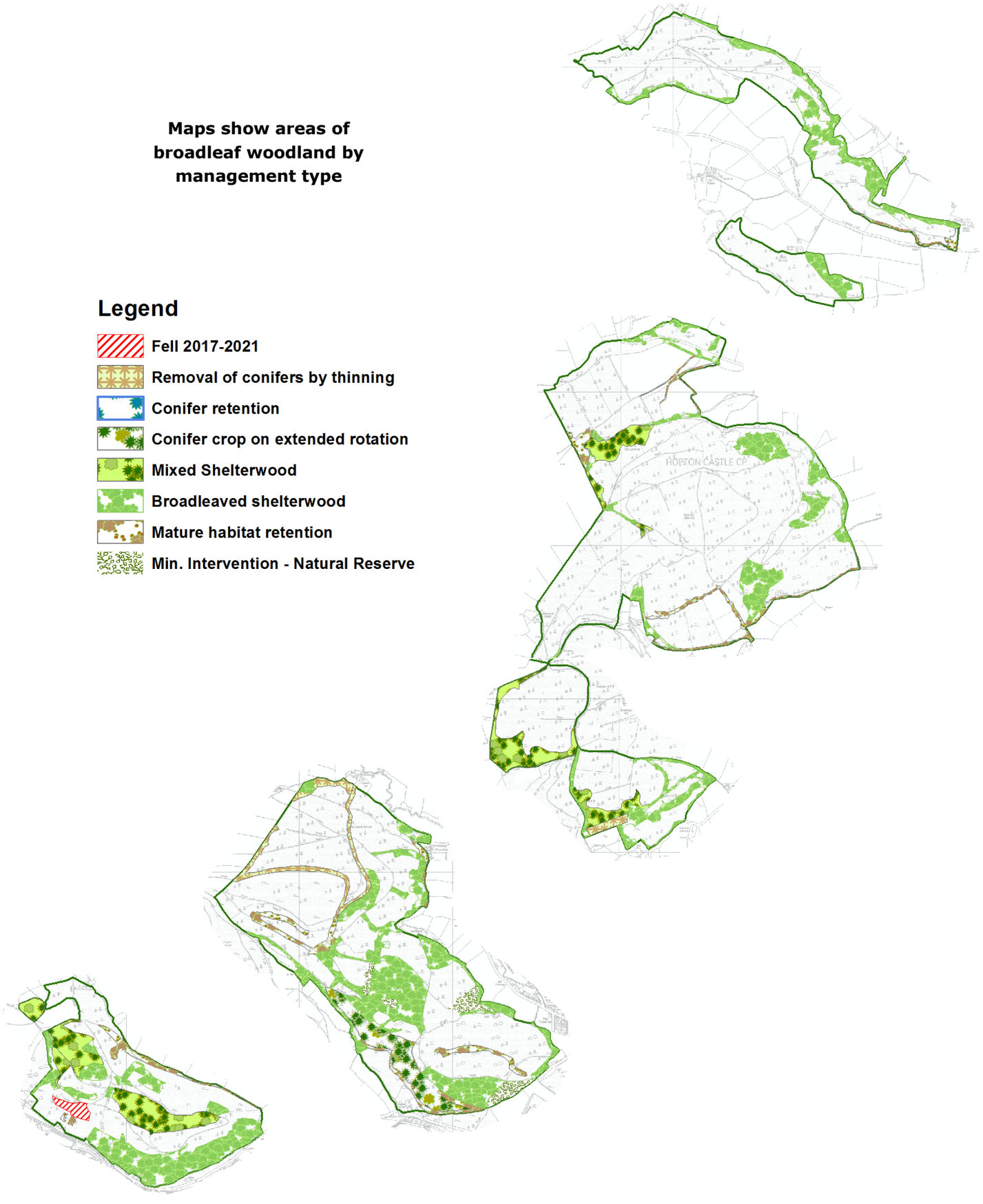
The majority of remaining PAWS areas that support predominantly younger conifer crops will also be managed through thinning until economic age for clear felling is reached, although the rotation age on some of these sites maybe longer. Some mid-rotation conifer areas such as those in Bucknell will be reverted to a native state through the use of strip felling due to the steepness of terrain.

Some sites, like those in the south of Bucknell Wood overlook the village of Bucknell and may contain up 10-15% mature Douglas Fir that would go on to be classed as long-term retention in the future. In the mean time thinning will focus on areas of existing mature broadleaves as seed sources as well as opening up any natural regeneration for recruitment into the future crop.

Maps show areas of broadleaf woodland by management type

Legend

- Fell 2017-2021
- Removal of conifers by thinning
- Conifer retention
- Conifer crop on extended rotation
- Mixed Shelterwood
- Broadleaved shelterwood
- Mature habitat retention
- Min. Intervention - Natural Reserve



Broadleaf Management

Broadleaves will be managed using shelterwood/selection systems or potentially, coppicing. New rotations will be instigated and recruited through thinning operations that will favour the best seed trees in order to promote natural regeneration. In the case of coppice a mix of simple coppice and coppice with standards will be used.

Thinning operations may be used to provide opportunities for enrichment planting in order to diversify both species composition and structure within broadleaf woodland and surrounding areas. Light levels and grazing pressure from deer will be managed to minimise weed encroachment and regeneration predation following thinning operations. In some instances fencing may need consideration. Under-planting and enrichment planting with species such as Oak, Lime, Hornbeam and Cherry may also be considered to provide resilience to climate change and on Ash dominated sites to ensure greater resilience to ***Hymenoscyphus fraxineus,*** the new name for *Chalara fraxinea*.

Where natural regeneration is struggling to become established, (in shelterwood/ selection sites or on clear/stripfell areas), it maybe that further intervention is required through thinning to develop the broadleaf components before regeneration is successful. On some sites there maybe limited seed sources available in which case group felling or strip felling together with planting might be beneficial in some instances. In either case enrichment planting should be considered. Each site should be assessed on its own merits before deciding if under-planting, enrichment planting or further thinning and monitoring is appropriate.

Pre-thinning assessment should inform how the crop is thinned; Broadleaf thinning will develop crowns and seeding potential providing a more robust and viable seed source for surrounding conifer crops that are on PAWs, helping encourage the spread of broadleaf regeneration into the surrounding conifer crops. This maybe a slow process and at some point in the future one may have to consider enrichment planting to ensure a diverse broadleaf composition is achieved.

On most PAW clearfell sites within the plan area Birch regenerates freely and prolifically and consideration for enrichment planting could be considered. This would impart breadth to species diversity within the wood and meet the provision of a minimum of 3 species. This will continue to consolidate and provide good habitat for the likes of Dormice, Reptiles, Invertebrates, Lepidoptera and in future will offer good assemblages of Veteran trees and Deadwood, further improving habitat value.

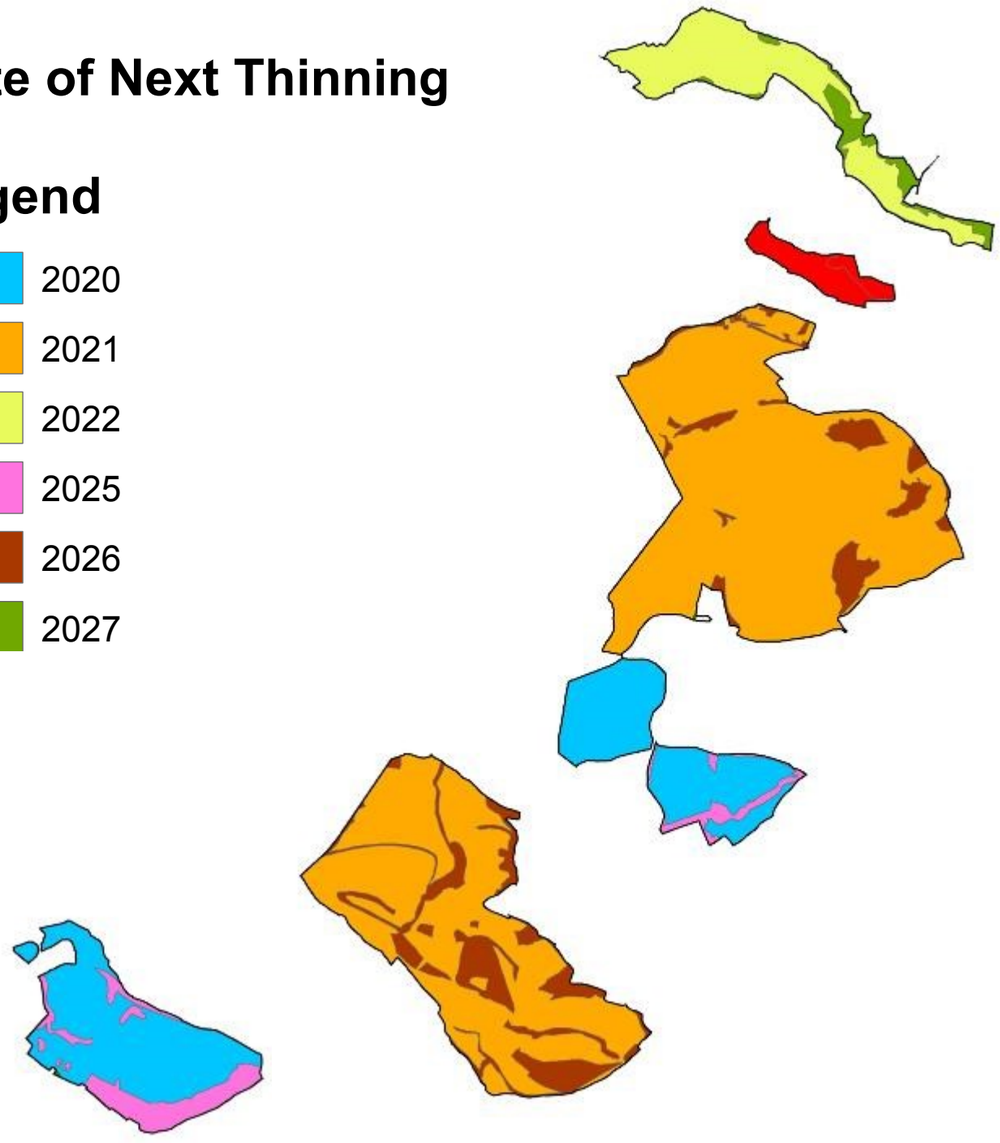
Some of the plan area, for example Bucknell, is beginning to offer good future opportunities to develop transitional habitats through coppicing using short to medium length coppicing cycles suitable for the production of firewood.

The plan recognises that the woodlands contain a proportion of broadleaf belts. In Bedstone Hill, Bucknell Hill, Kinsley and Hopton some areas will be managed as mixed shelterwood/selection systems promoting diverse range of species and structure. These mixed stands of conifer and broadleaf offer good connectivity between areas of broadleaf and the wider plan area that otherwise would remain scattered and fragmented.

Date of Next Thinning

Legend

- 2020
- 2021
- 2022
- 2025
- 2026
- 2027



Silviculture

Broadleaf Thinning
Broadleaf high forest will be assessed for thinning every 10 years with a visual inspection of the stand. Thinning will allow sub-dominant broadleaves sufficient light and space to mature or will release existing advanced regeneration. Younger patches of regeneration can be thinned to favour site native species with trees of good form and vigour being retained. Where broadleaves consist primarily of a single species, it may be possible to enlarge natural gaps through irregular thinning rather than create new gaps through group felling, however, in all cases the size of gap will be dependent on slope, aspect and site fertility and must not be detrimental to crop stability. Gaps will vary in size between 0.25-0.5Ha and offer opportunity for natural regeneration to develop or for enrichment planting to take place that will use a mix of native species other than those occurring in the overstorey to give both additional structure and diversity to the woodland, rather than total reliance on natural regeneration to achieve this objective.

Conifer Thinning
Areas of conifer are assessed for thinning every 5 years with the targeted removal of Western Hemlock and larch species a key objective for this plan period. 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. Gaps can be created here too following the above guidance.

See page 15, Alternatives to Clearfell for more information

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

Minimum Interventions are predominantly inaccessible or ecological valuable areas where intervention will only occur to protect and ensure the future succession of key habitats and species. E.g. Habberley Brook in Gittinshay that has a variety of valuable habitats for: Lepidoptera, Invertebrates, Reptiles, Newts as well as providing good deadwood and protecting water quality as Habberley Brook feeds north into Pontesbury SSSI.

Long term retentions are in place where the landscape value of the woodland is of value.

Single-tree selections are used on existing complex structured stands or sensitive sites often important for amenity value.

Open space is managed to ensure forest cover does not exceed 2m in height, with 20% forest cover being acceptable.

Silviculture (cont)

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

Kinsley

Bucknell

Legend

Fell Year/ Management Type

- Fell 2017-2021
- Fell 2022-2026
- Fell 2027-2031
- Fell 2032-2036
- Fell 2037-2041
- Fell 2042-2046
- Fell 2047-2051
- Fell beyond 2051
- Removal of conifers by thinning
- Conifer retention
- Conifer crop on extended rotation
- Mixed Shelterwood
- Broadleaved shelterwood
- Mature habitat retention
- Wood pasture
- Amenity Woodlands
- Minimum Intervention
- Min. Intervention - Natural Reserve
- Open land

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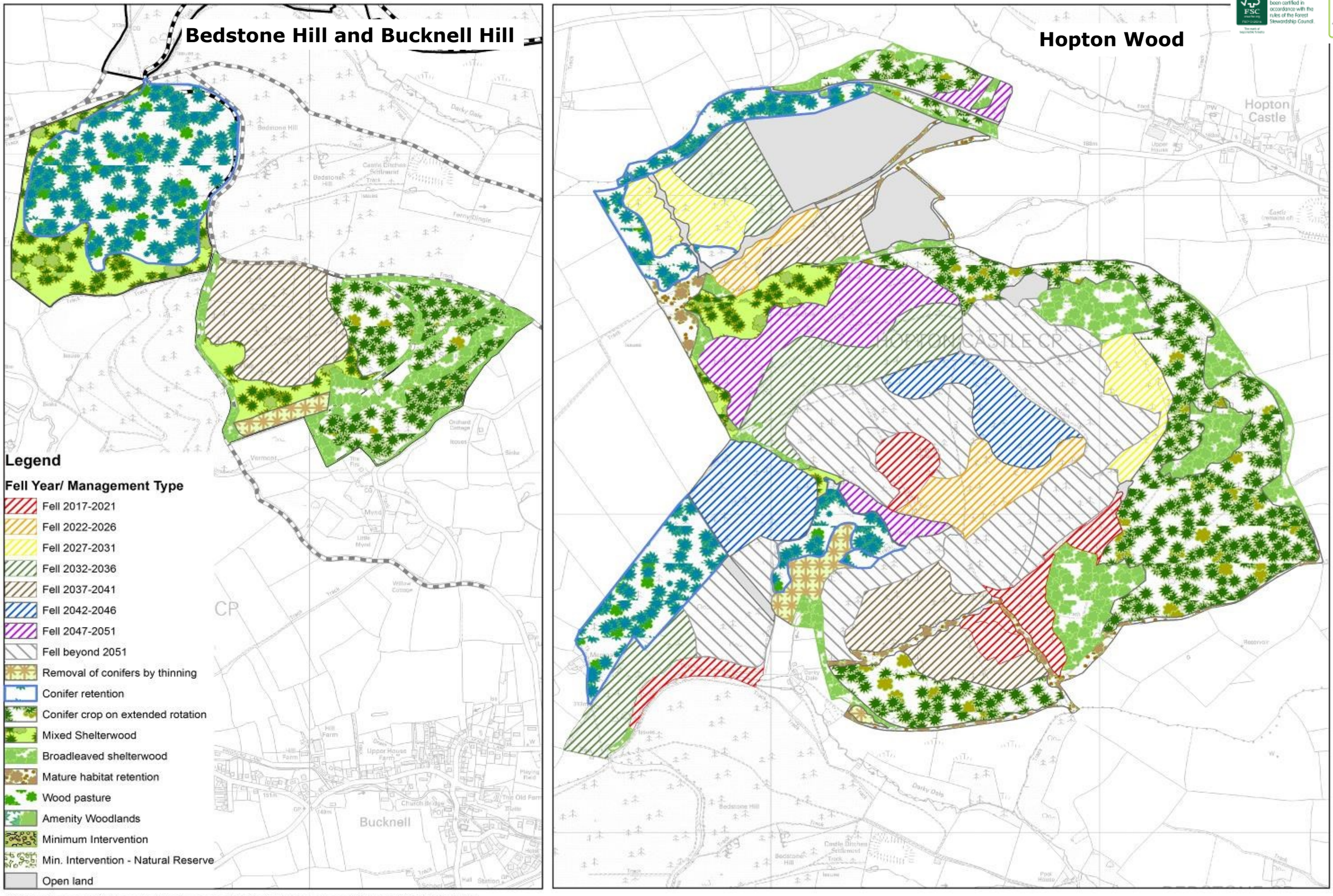
Approximate scale 1:10,000

Silviculture (cont)

Bedstone Hill and Bucknell Hill

Hopton Wood



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Approximate scale 1:10,000

Silviculture (cont)

Purslow and Well Wood

Legend

Fell Year/ Management Type

- Fell 2017-2021
- Fell 2022-2026
- Fell 2027-2031
- Fell 2032-2036
- Fell 2037-2041
- Fell 2042-2046
- Fell 2047-2051
- Fell beyond 2051
- Removal of conifers by thinning
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- Mixed Shelterwood
- Broadleaved shelterwood
- Mature habitat retention
- Wood pasture
- Amenity Woodlands
- Minimum Intervention
- Min. Intervention - Natural Reserve
- Open land

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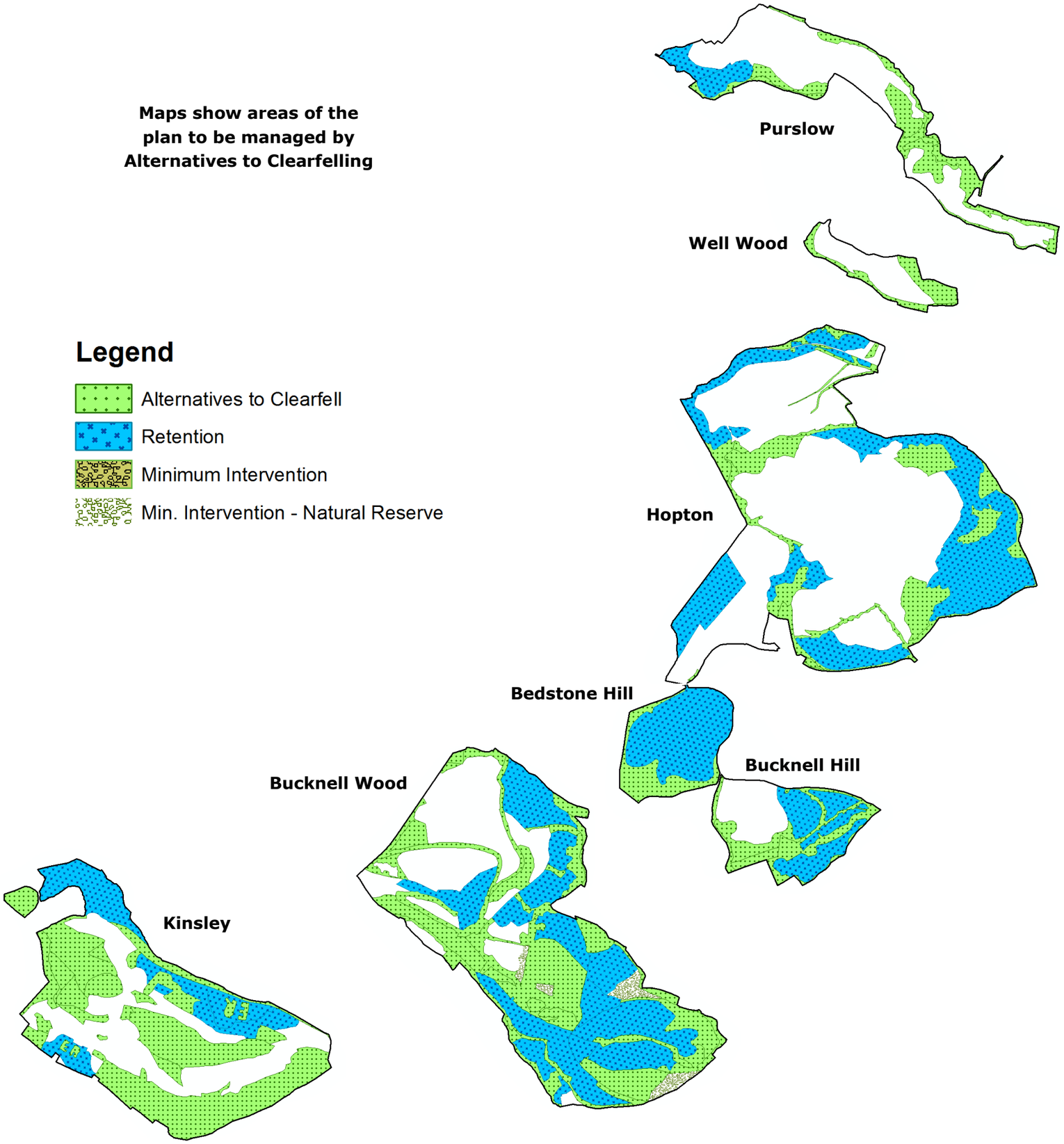
Approximate scale 1:10,000

Maps show areas of the plan to be managed by Alternatives to Clearfelling

Legend

- Alternatives to Clearfell
- Retention
- Minimum Intervention
- Min. Intervention - Natural Reserve



Silviculture (cont)

Alternatives to Clearfell (ATC)

PAWs managed under ATC systems will be thinned to favour broadleaf components. This, together with the targeted removal of Western Hemlock will increase the potential for employing natural regeneration or enrichment planting and will move sites towards having greater native broadleaf cover.

Broadleaf stands will generally be managed irregularly through thinning. Irregular shelterwoods on PAWs which will look to favour the development of native broadleaves and target the removal of conifer components. Group selections can be used on windfirm, accessible crops to proactively diversify the woodland structure and composition, possibly through the use of enrichment replanting with conifer or native broadleaves.

Areas of predominantly Douglas Fir and some stands of Scots Pine in Hopton, Bedstone Hill, Bucknell and Kinsley will be managed on long-term retention as irregular shelterwoods with the aim of producing complex CCF with a mixed woodland structure. For PAWs sites this means a mix of 80% native broadleaf and 20% Douglas Fir and on non PAWs sites upto 20% native broadleaf would be acceptable with the remaining 80% being conifer such as Pine, Spruce or Fir. Both likely to be achieved beyond 2047. Older complex structured stands or those managed for an amenity purpose will be maintained through single tree selections.

Single-tree selections are used on existing complex structured stands or sensitive sites often important for conservation or amenity value.

Group selections are used on windfirm, accessible crops and will proactively diversify the woodland structure and composition.

Uniform shelterwoods are predominately sites which will be managed using seeding fellings with possibilities for under planting of site suitable species to control light levels and develop good timber quality.

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

Strip shelterwoods It is most likely that uniform or irregular shelterwoods will be used but on wind vulnerable sites strip shelterwood may be used and can be regenerated through a combination of natural regeneration and planting.

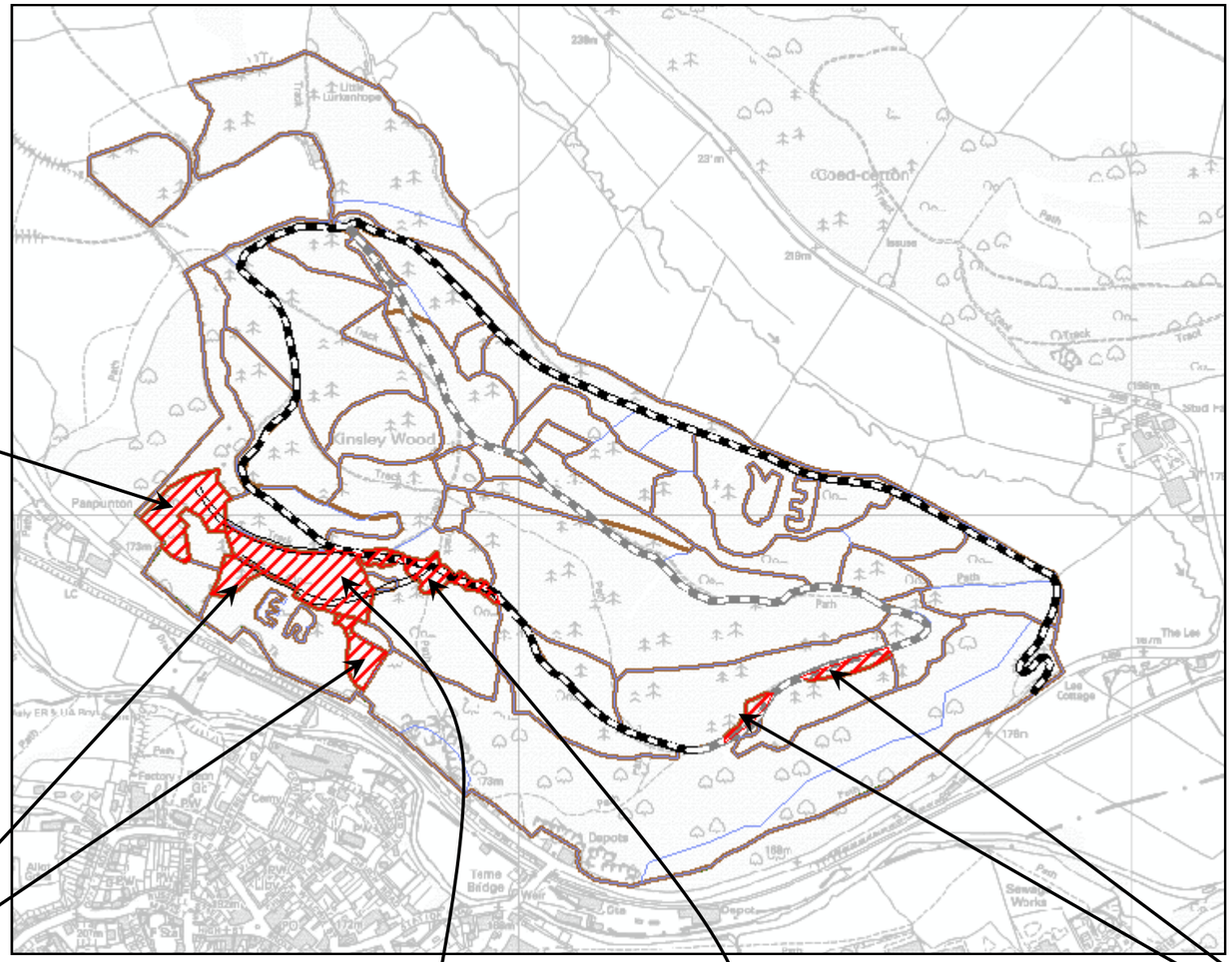
All of the above methods of ATC can be employed in conifer or broadleaf and can utilise natural regeneration and or where required enrichment planting can be used ensuring a diverse species composition of desired nature is achieved for the following rotation.

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

Felling and Restocking 2018 - 2028

Kinsley

NOTE:- The felling and restocking for **all** woods within this plan given on the following 4 pages only indicates indicative primary species for restocking as Douglas Fir and Oak. Both these species are expected to do well in the projected warmer climate for 2080 (high). Within the same species group (i.e. Evergreen conifer and Native/naturalised broadleaf) many other suitable species have been identified through basic Ecological Site Classification (ESC) modelling using ESC v4, (but only run using default parameters with fresh brash - see Appendices). Species choice may therefore be subject to change following felling, with any variance on restock species (from same species group) being based on local site conditions, local knowledge and used alongside ESC data will ensure a variety and diversity of conifer and broadleaf species are planted that will minimise reliance on any one species. This will increase forest resilience and robustness in light of future threats from pests and disease and changes in climatic conditions.



Felling Coupe: 1529052
Fell period: 2017-2021
Area: 1.1Ha

Restock Coupe: 1529052a
Propagation: planted

Oak (robur/petraea)	50%
Mixed Broadleaf	20%
Mixed Broadleaf	20%
OPEN	10%

Description: Removal of invasive Western Hemlock threatening Ancient Woodland. Young natural regen should be removed too.

Felling Coupe: 1546492
Fell period: 2017-2021
Area: 0.7Ha

Restock Coupe: 1546492a
Propagation: planted

Oak (robur/petraea)	50%
Beech	50%

Description: Objective is to soften the impact of the Douglas Fir (DF) over looking Knighton. - This DF contains the initials "ER" and wind stability of remaining DF may need consideration.

Declaration by FC as an Operator.

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

Felling Coupe: 1578983
Fell period: 2017-2021
Area: 1.7Ha

Restock Coupe: 1578983a
Propagation: planted

Oak (robur/petraea)	50%
Mixed Broadleaf	40%
OPEN	10%

Description: Removal of invasive Western Hemlock threatening Ancient Woodland. Young natural regen should be removed too.

Felling Coupe: 1521430
Fell period: 2017-2021
Area: 0.6Ha

Restock Coupe: 1521430a
Propagation: ------

OPEN	100%

Description: Opening up viewpoint and ride-sides to improve ride edge structure and views over Knighton and into surrounding landscape.

Felling Coupe: 157652
Fell period: 2017-2021
Area: 0.6Ha

Restock Coupe: 157652a
Propagation: ------

OPEN	100%

Description: Opening up ride-sides to improve ride edge structure and habitat.

NOTE:- Future species given on this page are only indicative and operational site assessment nearer the time of planting may dictate more suitable species are available.

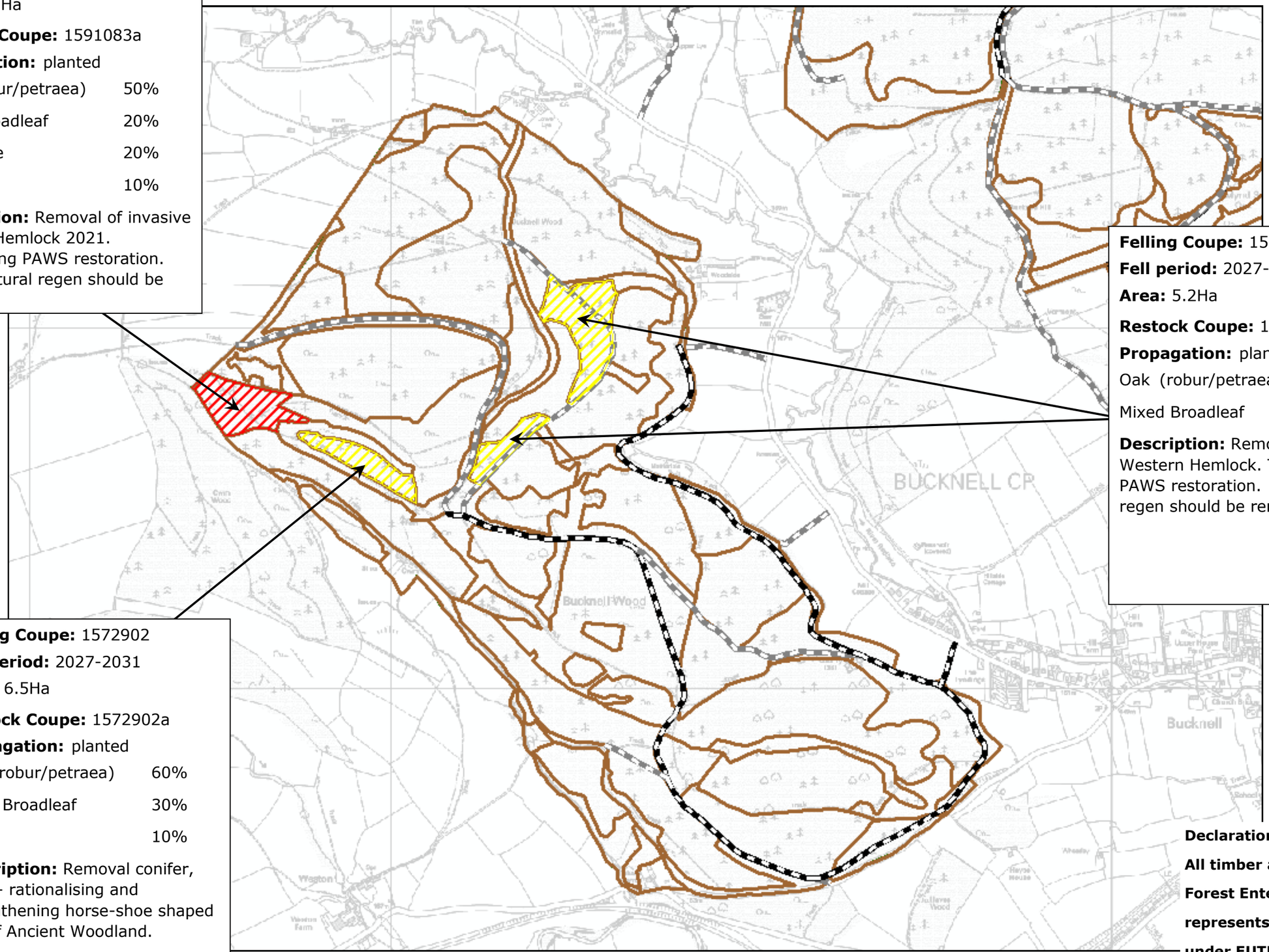
Felling and Restocking 2018 - 2028

Bucknell

Felling Coupe: 1591083
Fell period: 2017-2021
Area: 3.0Ha
Restock Coupe: 1591083a
Propagation: planted

Oak (robur/petraea)	50%
Mixed Broadleaf	20%
Scots Pine	20%
OPEN	10%

Description: Removal of invasive Western Hemlock 2021. Threatening PAWS restoration. Young natural regen should be



Felling Coupe: 1583230
Fell period: 2027-2031
Area: 5.2Ha
Restock Coupe: 1583230a
Propagation: planted

Oak (robur/petraea)	60%
Mixed Broadleaf	40%

Description: Removal of invasive Western Hemlock. Threatening PAWS restoration. Young natural regen should be removed too.

Felling Coupe: 1572902
Fell period: 2027-2031
Area: 6.5Ha
Restock Coupe: 1572902a
Propagation: planted

Oak (robur/petraea)	60%
Mixed Broadleaf	30%
OPEN	10%

Description: Removal conifer, 2031 - rationalising and strengthening horse-shoe shaped belt of Ancient Woodland.

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

Hopton

Felling and Restocking 2018 - 2028

Felling Coupe: 1521497
Fell period: 2027-2031
Area: 6.1Ha
Restock Coupe: 1521497a
Propagation: planted

Douglas Fir	60%
Mixed conifer	30%
OPEN	10%

Description: Mixed Conifer will be a mix of alternative species improving diversity & robustness against future threats of pest, disease and climate change.

Felling Coupe: 1562984
Fell period: 2017-2021
Area: 3.0Ha
Restock Coupe: 1562984a
Propagation: planted

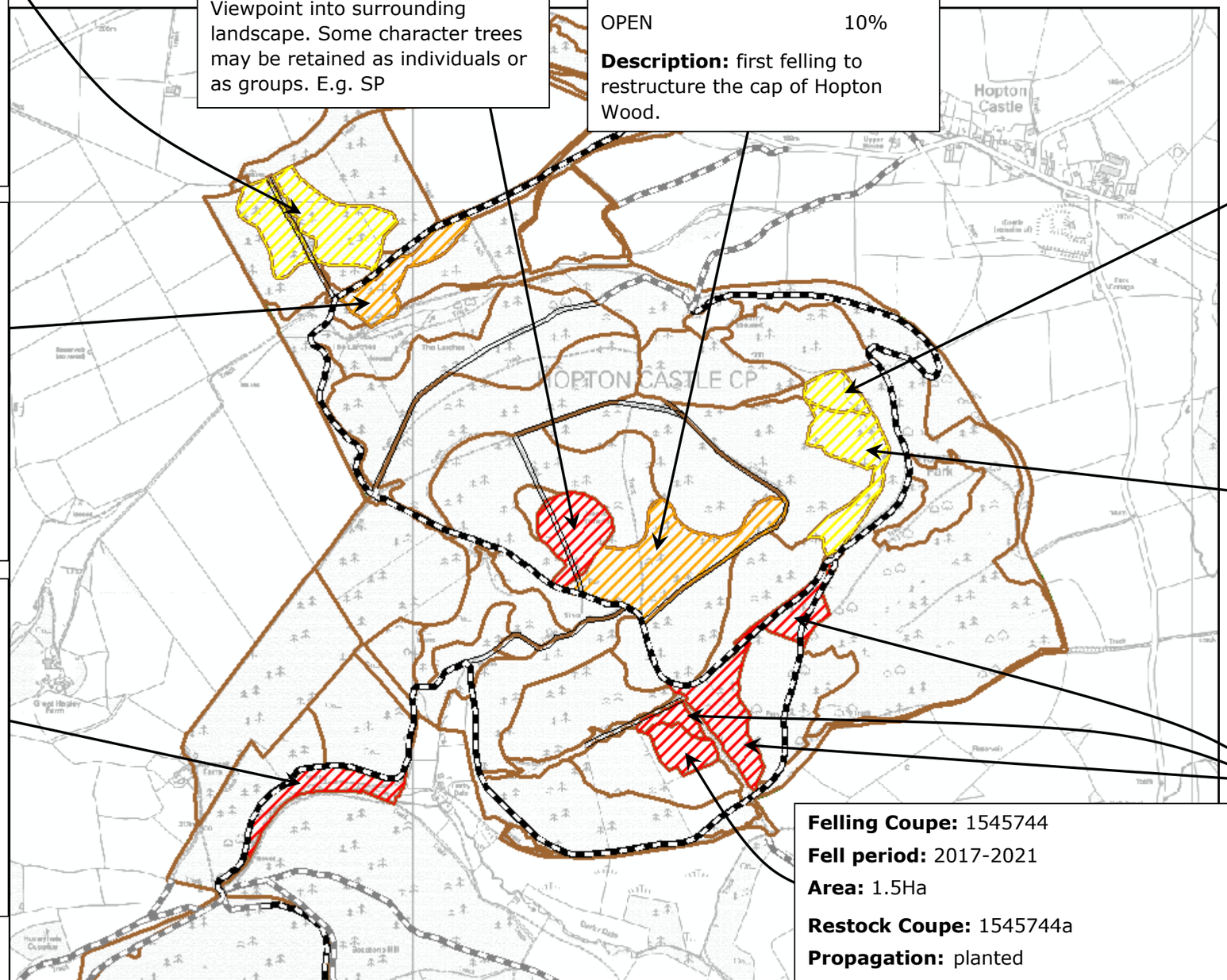
OPEN	100%

Description: felling to create Viewpoint into surrounding landscape. Some character trees may be retained as individuals or as groups. E.g. SP

Felling Coupe: 1513747
Fell period: 2022-2026
Area: 7.0Ha
Restock Coupe: 1513747a
Propagation: planted

Sitka Spruce	60%
Mixed conifer	30%
OPEN	10%

Description: first felling to restructure the cap of Hopton Wood.



Felling Coupe: 159108
Fell period: 2027-2031
Area: 1.2Ha
Restock Coupe: 159108a
Propagation: planted

Mixed Broadleaf	100%

Description: Removal of Western hemlock and replace with native broadleaf.

Felling Coupe: 1576486
Fell period: 2027-2031
Area: 3.7Ha
Restock Coupe: 1576486a
Propagation: planted

Douglas Fir	60%
European Silver Fir	20%
Mixed conifer	10%
OPEN	10%

Description: Removal of invasive Western Hemlock. Threatening PAWS restoration. Young natural regen should be removed too.

Felling Coupe: 1577386
Fell period: 2022-2026
Area: 2.3Ha
Restock Coupe: 1577386a
Propagation: planted

Western Red Cedar	50%
Mixed Broadleaf	30%
OPEN	20%

Description: Open element to be left along forest road.

Felling Coupe: 152931
Fell period: 2017-2021
Area: 2.3Ha
Restock Coupe: 152931a
Propagation: planted

Mixed Broadleaf	20%
OPEN	80%

Description: Removal of invasive Western Hemlock along valley bottom / watercourse.

Felling Coupe: 1545744
Fell period: 2017-2021
Area: 1.5Ha
Restock Coupe: 1545744a
Propagation: planted

Douglas Fir	60%
Mixed conifer	30%
OPEN	10%

Description: Conifer on economic

Felling Coupe: 1540911
Fell period: 2017-2021
Area: 5.4Ha
Restock Coupe: 1540911a
Propagation: planted

Oak (robur/petraea)	60%
Mixed Broadleaf	30%
OPEN	10%

Description: Removal of invasive Western Hemlock. Threatening PAWS restoration. Young natural regen should be removed too.

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

NOTE:- Future species given on this page are only indicative and operational site assessment nearer the time of planting may dictate more suitable species are available.

NOTE:- Future species given on this page are only indicative and operational site assessment nearer the time of planting may dictate more suitable species are available.

Felling and Restocking 2018 - 2028

Purslow and Well Wood

Felling Coupe: 1538787
Fell period: 2022-2026
Area: 9.9Ha
Restock Coupe: 1538787a
Propagation: planted

Oak (robur/petraea)	50%
Mixed Broadleaf	30%
OPEN	20%

Description: removal of Western Hemlock including any natural regen

Felling Coupe: 1595719
Fell period: 2017-2021
Area: 4.6Ha
Restock Coupe: 1595719a
Propagation: planted

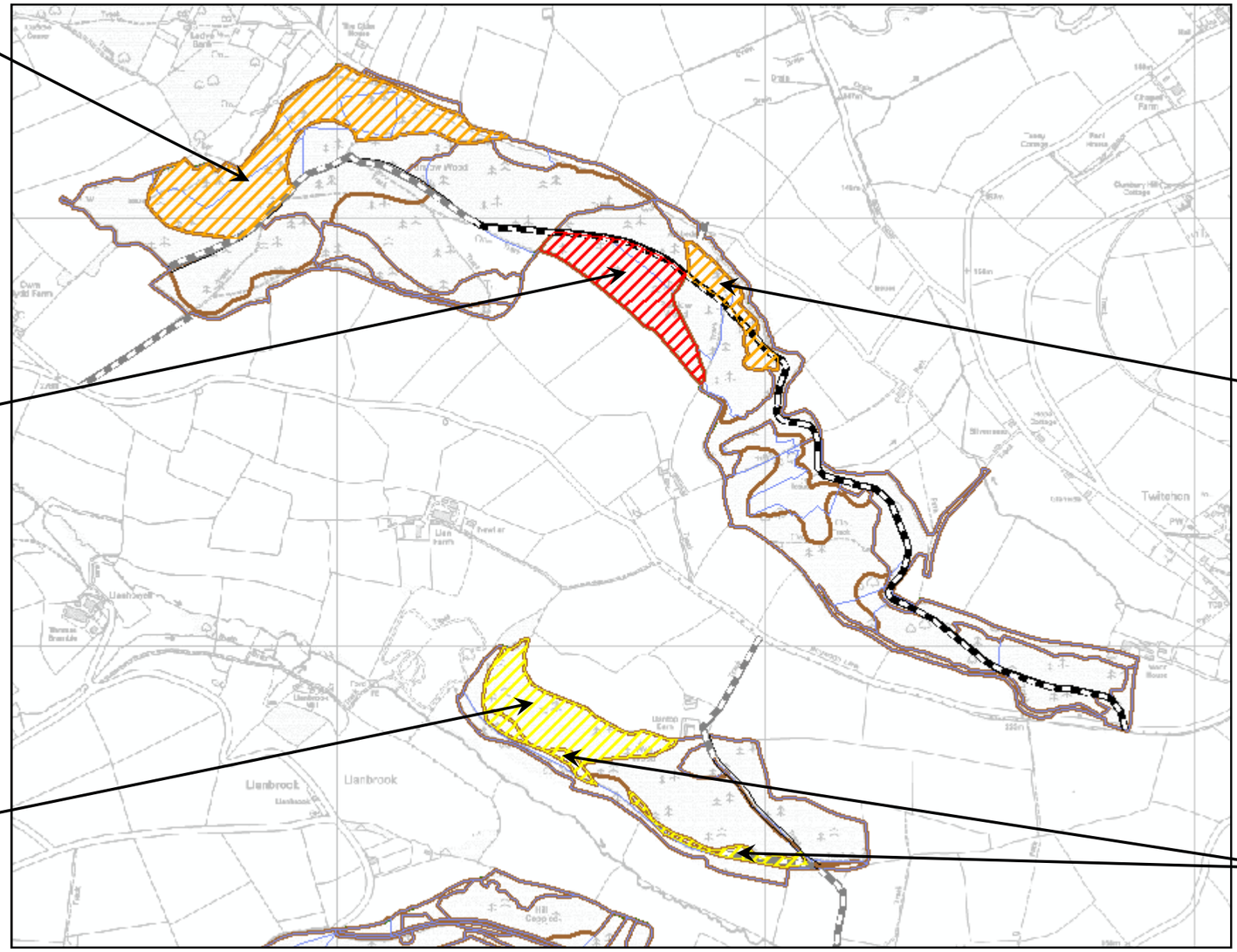
Oak (robur/petraea)	50%
Mixed Broadleaf	30%
Beech	10%
OPEN	10%

Description: felling last of larch to return to native wood

Felling Coupe: 15011
Fell period: 2027-2031
Area: 4.7Ha
Restock Coupe: 15011a
Propagation: planted

Mixed Broadleaf	80%
OPEN	20%

Description: restructuring from this end will provide shelter for the eastern end at time of restocking.



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

Felling Coupe: 1528118
Fell period: 2022-2026
Area: 1.6Ha
Restock Coupe: 1528118a
Propagation: planted

Oak (robur/petraea)	50%
Mixed Broadleaf	30%
Beech	10%
OPEN	10%

Description: retain windblown trees and fell remaining Grand Fir and Douglas Fir.

Felling Coupe: 1519880
Fell period: 2027-2031
Area: 1.3Ha
Restock Coupe: 1519880a
Propagation: planted

Mixed Broadleaf	10%
OPEN	90%

Description: Improving ride edge structure and habitat.

Fell 2017-2021 Fell 2022-2026

Coupe Prescriptions

Wood	coupe	area	existing crop	Rationale/Prescription	Restock	Area	Composition	rationale/Prescription
Kinsley	1529052	1.1	WH	Felling mature WH that is regenerating into adjacent to PAW area and threatening area of Ancient woodland.	1529052a	1.1	90% Native Broadleaf 10% OPEN	Planting native broadleaves will consolidate adjacent Ancient Woodland and broadleaves.
	1546492	0.7	DF	Objective is to soften the impact of the Douglas Fir (DF) over looking Knighton. - This DF contains the initials "ER" and wind stability of remaining DF may need consideration, so felling is at discretion of Beat Forester.	1546492a	0.7	100% Native Broadleaf	This area will be planted to soften the impact of the Douglas Fir over looking Knighton.
	1578983	1.7	OK/WH	Removal of Western Hemlock (WH) regen from Mature Oak stand.	1578983a	1.7	90% Native Broadleaf 10% OPEN	No restocking should be needed.
	1521430	0.6	Larch	Opening up view point and creating rideside structure.	1521430a	0.6	100% OPEN	Maintaining and enhancing viewpoint.
	157652	0.6	Larch	Creating rideside structure	157652a	0.6	100% OPEN	Improving rideside structure.
Bucknell	1591083	3.0	WH	Felling mature WH that is regenerating into adjacent PAW area and threatening area of Ancient woodland Young WH to be removed too.	1591083a	3.0	70% Native Broadleaf 20% Conifer (SP) 10% OPEN	This site will be planted with a mixture of native broadleaf and some Scots Pine to complement the existing adjacent stand of Scots Pine.
Hopton	152931	2.3	WH	Felling mature WH that is regenerating into valley and is not in keeping with landscape context .	152931a	2.3	20% Native Broadleaf 80% OPEN	Aspire to maintain as open space, in keeping with landscape.
	1540911	5.4	WH	Felling WH that is regenerating into adjacent PAW area and threatening area of Ancient woodland Young WH to be removed too.	1540911a	5.4	90% Native Broadleaf 10% OPEN	To be planted with native broadleaf open space to be concentrated on rideside.
	1545744	1.5	Larch/DF	Pre-emptive removal of larch. The northern corner of this stand being included in the coupe above will soften the hard boundary of PAWs that would otherwise leave straight edge perpendicular to contours.	1545744a	1.5	90% Conifer 10% OPEN	Secondary Woodland plant with conifer.
	1562984	3.0	SS/SP/Larch	Felling to re-establish 360 degree viewpoint overlooking the surrounding countryside of Shropshire.	1562984a	3.0	100% OPEN	Maintain as open space, consider retaining potential future character trees e.g. some of the SP regen.
Purslow	1595719	4.6	Larch	Pre-emptive removal of larch.	1595719a	4.6	90% Native Broadleaf 10% OPEN	Planting will continue consolidation of native content.
Bucknell	1583230	5.2	WH/Larch	Felling WH that is regenerating into PAWs.	1583230	5.2	100% Native Broadleaf	Planting will continue consolidation of native content.
	1572902	6.5	NS/DF/EL	Removal of conifer anomaly between two belts of Ancient Woodland (veteran Oak).	1572902a	6.5	90% Native Broadleaf 10% OPEN	Planting will consolidate fragmented AW belt making it a much more robust feature.
Hopton	1577386	2.3	DF/BI	Felling will continue the process of restructuring of the northern slopes of Hopton and provide much needed open space along roadside.	1577386a	2.3	50% Conifer 30% Native Broadleaf 20% OPEN	Secondary Woodland plant with alternative species maintaining open space at roadside. Broadleaf to complement & provide future veteran character trees.
	1513747	7.0	SS/Larch	First of a 3 phase approach to restructure the cap of Hopton.	1513747a	7.0	90% Conifer 10% OPEN	Plant with Conifer and alternative species. With open space along road edge.

Fell 2022-2026 Fell 2027-2031

Coupe Prescriptions

Wood	coupe	area	existing crop	Rationale/Prescription	Restock	Area	Composition	rationale/Prescription
Purslow	1538787	9.9	WH/DF	Shape of coupe conforms better to landscape and removes invasive WH regenerating freely into PAW areas.	1538787a	9.9	80% Native Broadleaf 20% OPEN	Site is to be planted with a variety of native broadleaves, with open space concentrated either along the road edge or in the valley bottom.
	1528118	1.6	GF/DF	Tall mature conifer beginning to blow, nice timber, needed to be harvested before it all blows. Potential to retain some already blown trees for deadwood.	1528118a	1.6	90% Native Broadleaf 10% OPEN	Site is to be planted with a variety of native species to increase diversity.
Hopton	1576486	3.7	WH/NF/MB	Felling WH that is threatening nearby PAW area.	1576486a	4.9	90% Conifer 10% OPEN	Secondary Wood plant with mix of alternative species to increase robustness of future stands.
	1521497	6.1	NS/SS/DF/CP	Coupe reshaped for better landscaping and to retain windbreak to west.	1521497a	6.1	90% Conifer 10% OPEN	Secondary Wood plant with a mix of alternative species to increase robustness of future stand.
	159108	1.2	WH/NF/MB	Felling WH that is threatening nearby PAW area.	159108a		100% Native Broadleaf	Planting this area with native broadleaf will soften the change between conifer and broadleaf in the wider environment.
Well Wood	15011	4.7	DF/EL/OK	Retain veteran Oaks. Second coupe of four in the restructuring of Well Wood.	15011a	4.7	80% Native Broadleaf 20% OPEN	Plant a wide variety of broadleaf species, increasing the native species diversity.
	1519880	1.3	DF	Forest roadside felling to open up road edge and create open habitat and structure	1519880a	1.3	10% Native Broadleaf 90% OPEN	maintain as open to enhance open habitat provision.

A note on future species

Although the Felling and Restocking plan indicates indicative primary species for restocking as Douglas Fir and Oak, both these species are expected to do well in the projected warmer climate for 2080 (high). Species choice maybe subject to change, with many other suitable species having been identified through basic Esc modelling using ESC v4, (but only run using default parameters with fresh brash). - Choice of restock species may therefore vary from those stated based on site parameters, local knowledge following felling and used alongside ESC data this will ensure a variety and diversity of conifer and broadleaf species are planted that will minimise reliance on any one species. This will increase forest resilience and robustness in light of future threats from pests and disease and changes in climatic conditions.

Management Prescriptions 2018 - 2028

Kinsley

Bucknell

Underplant mature Scots pine with groups of natives such as hawthorn, blackthorn, crab apple, Rowan and holly. Ensure area is fenced to prevent grazing by sheep.

Legend

Fell Year/ Management Type

- Fell 2017-2021
- Fell 2022-2026
- Fell 2027-2031
- Fell 2032-2036
- Fell 2037-2041
- Fell 2042-2046
- Fell 2047-2051
- Fell beyond 2051
- Removal of conifers by thinning
- Conifer retention
- Conifer crop on extended rotation
- Mixed Shelterwood
- Broadleaved shelterwood
- Mature habitat retention
- Wood pasture
- Amenity Woodlands
- Minimum Intervention
- Min. Intervention - Natural Reserve
- Open land

Due to steep ground conditions and awkward working the eastern banks of Bucknell Wood will continue to be managed through a system of strip felling which will promote a native content within PAW sites. - Other woodlands within this Forest plan (Hopton and Bucknell Hill) may well adopt this approach too and would be at the Foresters discretion.

Area of spruce around the bat maternity roost at Cwm Cottage will be managed through progressive thinning to achieve native woodland, this will take time and be done slowly in sympathy with the roost site.

Prompt removal of mature Western Hemlock that's seeding into adjacent areas of PAWS. Also see ● in Bucknell.

Through thinning, continue crown development of the Scots Pine along with development of mixed broadleaf understorey along Kinsley ridge.

All components of Western Hemlock either in or adjacent to PAW areas will be targeted during thinning operations for removal. Dependant on quantity this may either be in one go or over 2 or 3 interventions.

This area will be managed through thinning to encourage native understorey that may at some point require enrichment planting. Eventually over time stocking of mature Douglas Fir overstorey will be reduced down to around 15-20% promoting large diameter trees, creating an impressive backdrop to the village of Bucknell.

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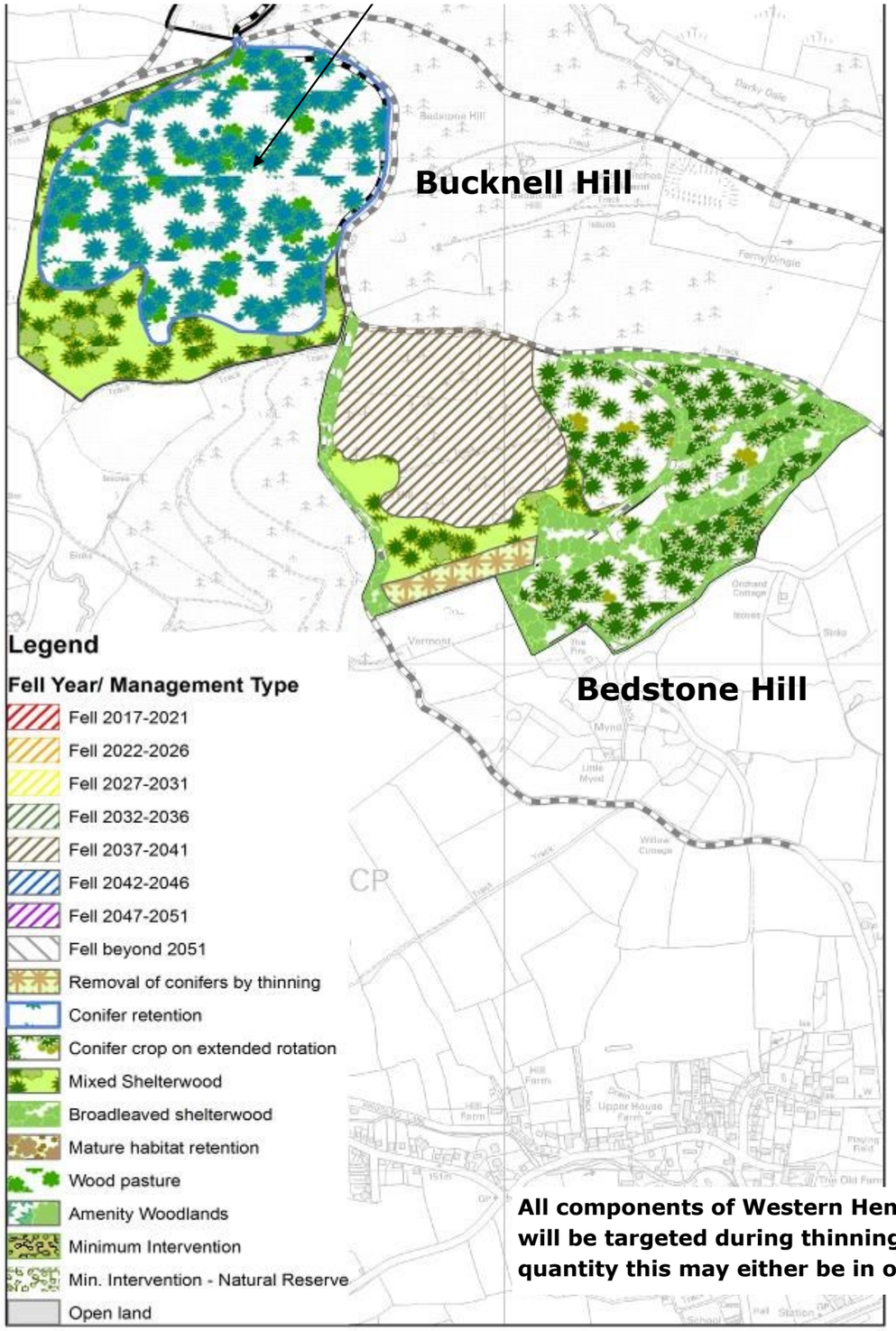
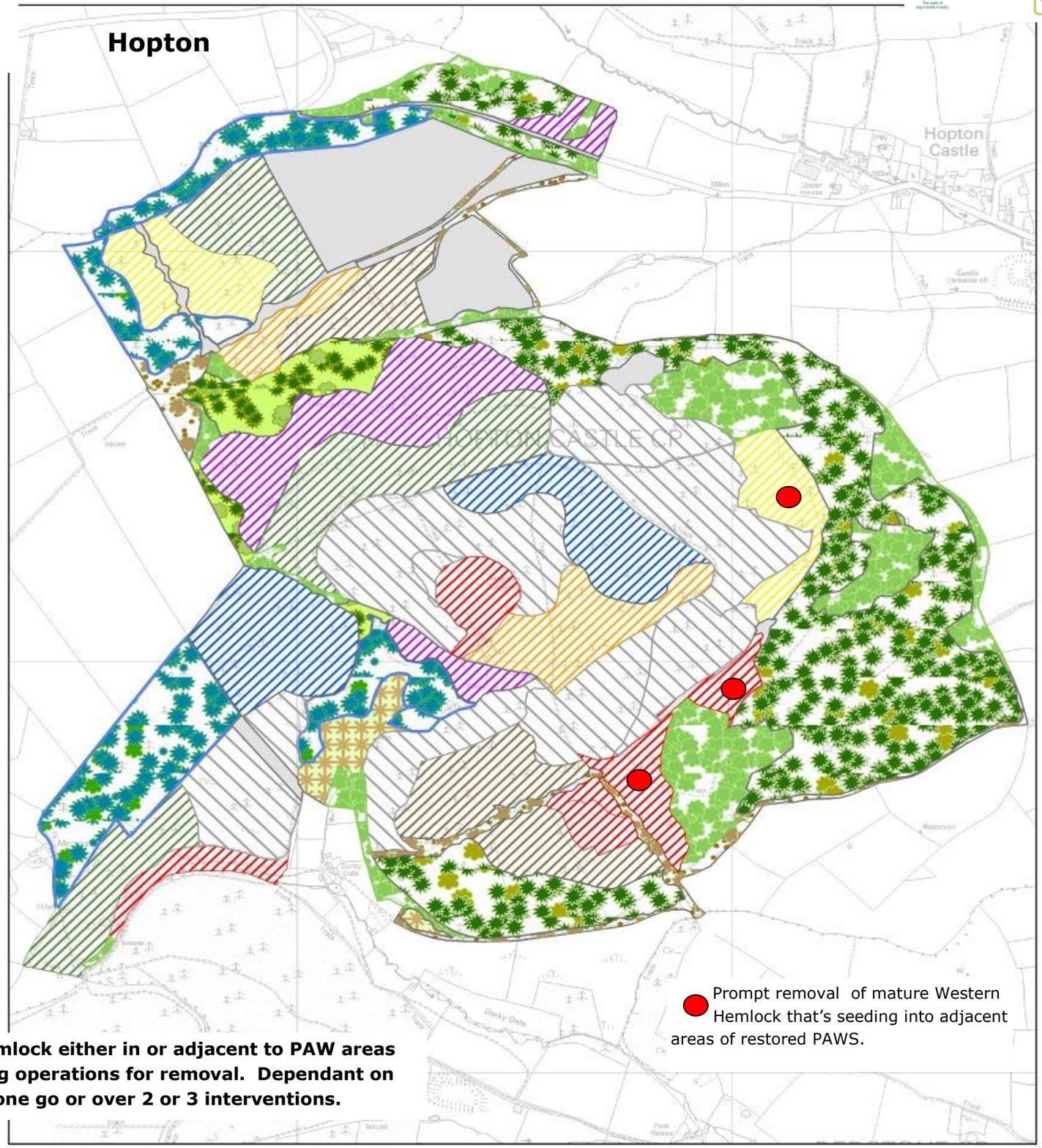
Approximate scale 1:10,000

Management Prescriptions 2018 - 2028

Characteristic Scots Pine will be managed through shelterwood to develop crowns. At some point in the future conifer under-planting may be considered to diversify the conifer content, but the Pine will remain a dominant feature. This will become a mixed conifer wood with minor broadleaf component of upto 10%.





All components of Western Hemlock either in or adjacent to PAW areas will be targeted during thinning operations for removal. Dependant on quantity this may either be in one go or over 2 or 3 interventions.

Prompt removal of mature Western Hemlock that's seeding into adjacent areas of restored PAWS.

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Approximate scale 1:10,000

Management Prescriptions 2018 - 2028

Young conifer crops within Purslow will be managed through to economic rotation. The timing for fellings will then be staggered to ensure structural diversity. With other areas of conifer being managed through a process of thinning that may require enrichment planting and will become a mosaic of native woodland and open space.

Purslow

Well Wood

Legend

Fell Year/ Management Type

- Fell 2017-2021
- Fell 2022-2026
- Fell 2027-2031
- Fell 2032-2036
- Fell 2037-2041
- Fell 2042-2046
- Fell 2047-2051
- Fell beyond 2051
- Removal of conifers by thinning
- Conifer retention
- Conifer crop on extended rotation
- Mixed Shelterwood
- Broadleaved shelterwood
- Mature habitat retention
- Wood pasture
- Amenity Woodlands
- Minimum Intervention
- Min. Intervention - Natural Reserve
- Open land

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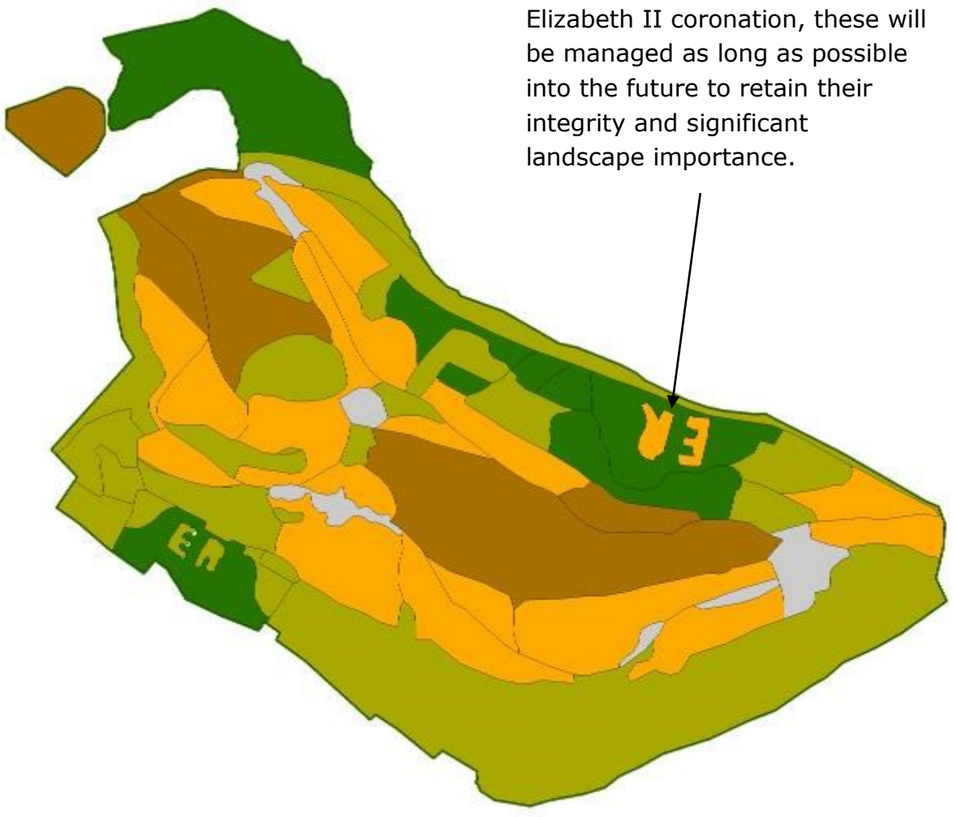
Approximate scale 1:10,000

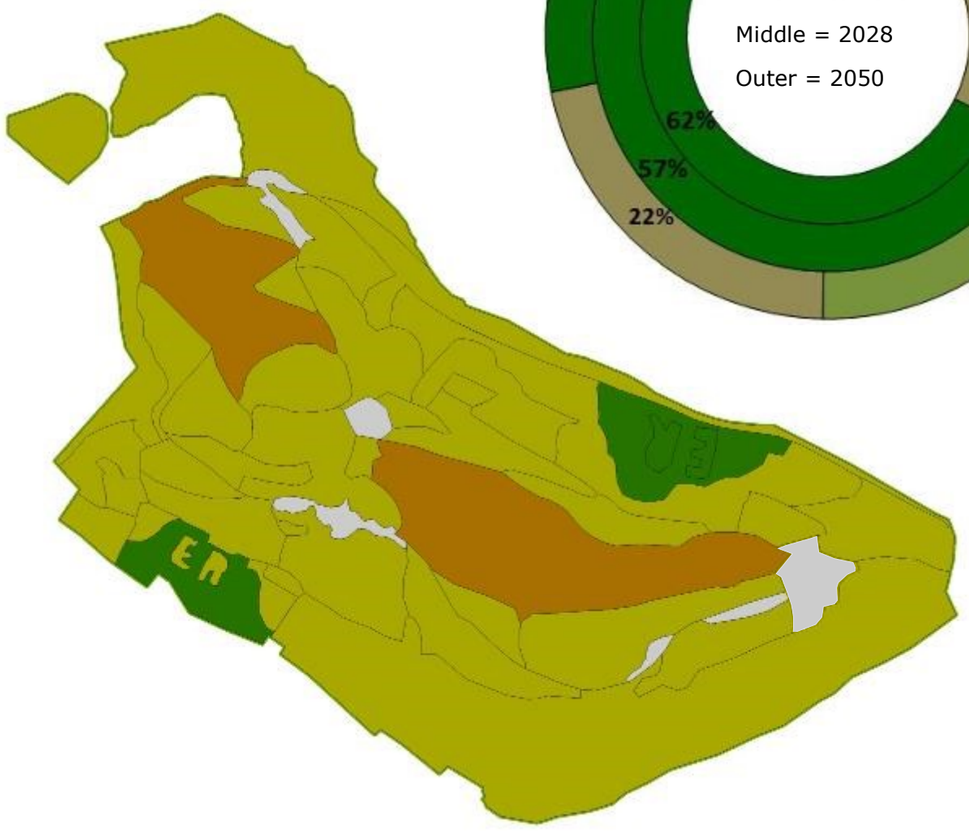
Indicative Future Species
Kinsley

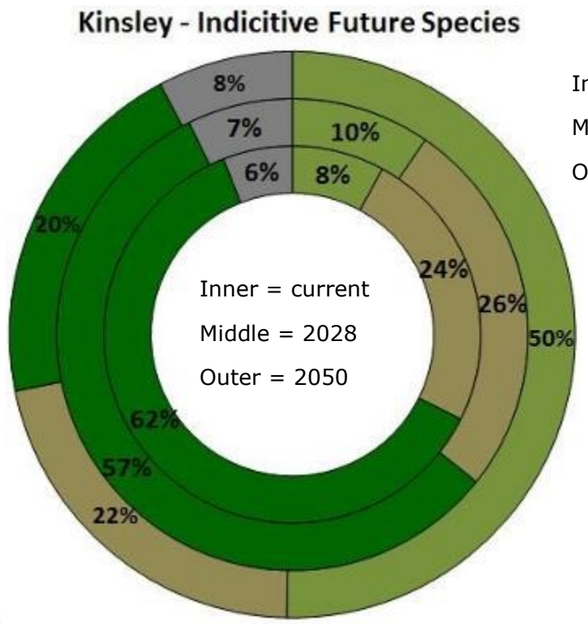
2028

Kinsley features two plantings of the initials "ER", one on the northern facing slopes and the other on the southern slopes. Planted in memory of Queen Elizabeth II coronation, these will be managed as long as possible into the future to retain their integrity and significant landscape importance.



beyond 2050





Inner ring = current composition

Middle ring = composition at 2028

Outer ring = composition at 2050

- Oak
- Other Native / Naturalised Broadleaf
- Conifer
- Open

If an SPHN is issued for ***Phytophthora ramorum*** on any site within the plan area then restocking of the site would be carried out as per the Forest Plan Coupe Prescriptions and Coupe Boundaries laid out within the Forest Plan would be adhered to. Where adjacent coupes require clearfelling then the decision to stagger the timing of restocking by 3-5 years maybe considered. This would enhance availability of temporary open habitat.

Legend

- Evergreen Conifer
- Alternative Conifer species
- Pines
- Larches
- Native and naturalised broadleaves
- Non-native broadleaves
- Open/other

Indicative Future Species

The projections made are indicative of species composition in ten and fifty years time. They do not constitute a guarantee and merely serve to indicate a general vision for direction woodland composition will move towards within the plan area that will be delivered over time in keeping with FC policies.

In reality, greater Western Hemlock removal is anticipated through clearfelling that is equal to around 62% of all Western Hemlock across the plan area, amounting to around 34.5Ha by 2028 along with a mix of Larch, Douglas Fir, and Spruce too. There is a more balanced mix of conifer and broadleaves being suggested for restocking and establishment of following crops due to the potential threat of *Phytophthora ramorum* and other possible future threats from both biotic and climatic factors.

Indicative Future Species
Bucknell Wood

2028

Remaining conifer on PAWS not being clearfelled will be managed through thinning, strip felling and planting. Strip felling will occur during thinning interventions, but may not occur in consecutive thinnings to further diversify age structure.

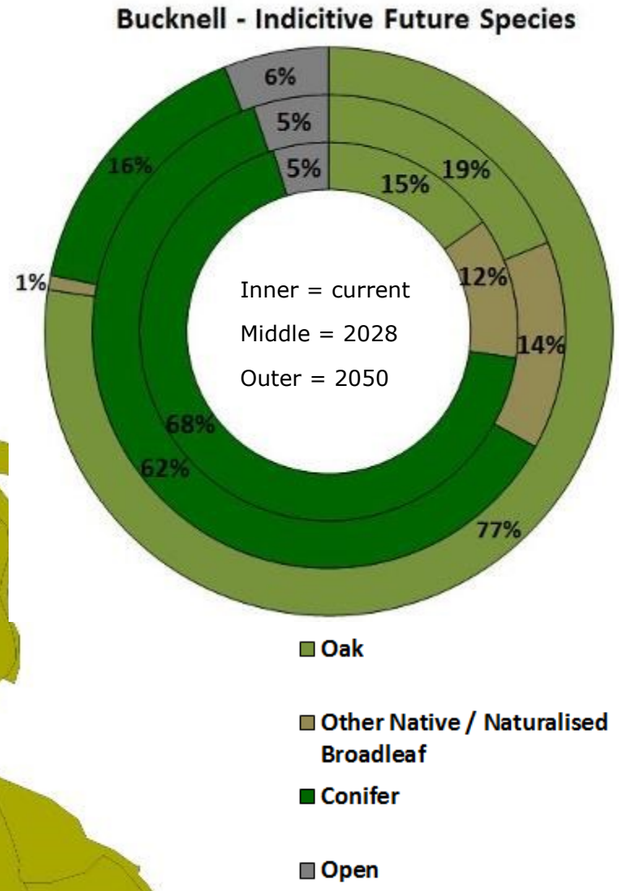
Areas that are not on the AW register will continue to remain as conifer and will include an increased proportion of alternative conifer species safeguarding the plan area against future threats.

beyond 2050

Legend

- Evergreen Conifer
- Alternative Conifer species
- Pines
- Larches
- Native and naturalised broadleaves
- Non-native broadleaves
- Open/other

It is likely that on steeper ground a proportion of conifer may remain. In some situations like here at Bucknell, this will enhance the Landscape that acts as a backdrop to the village of Bucknell.



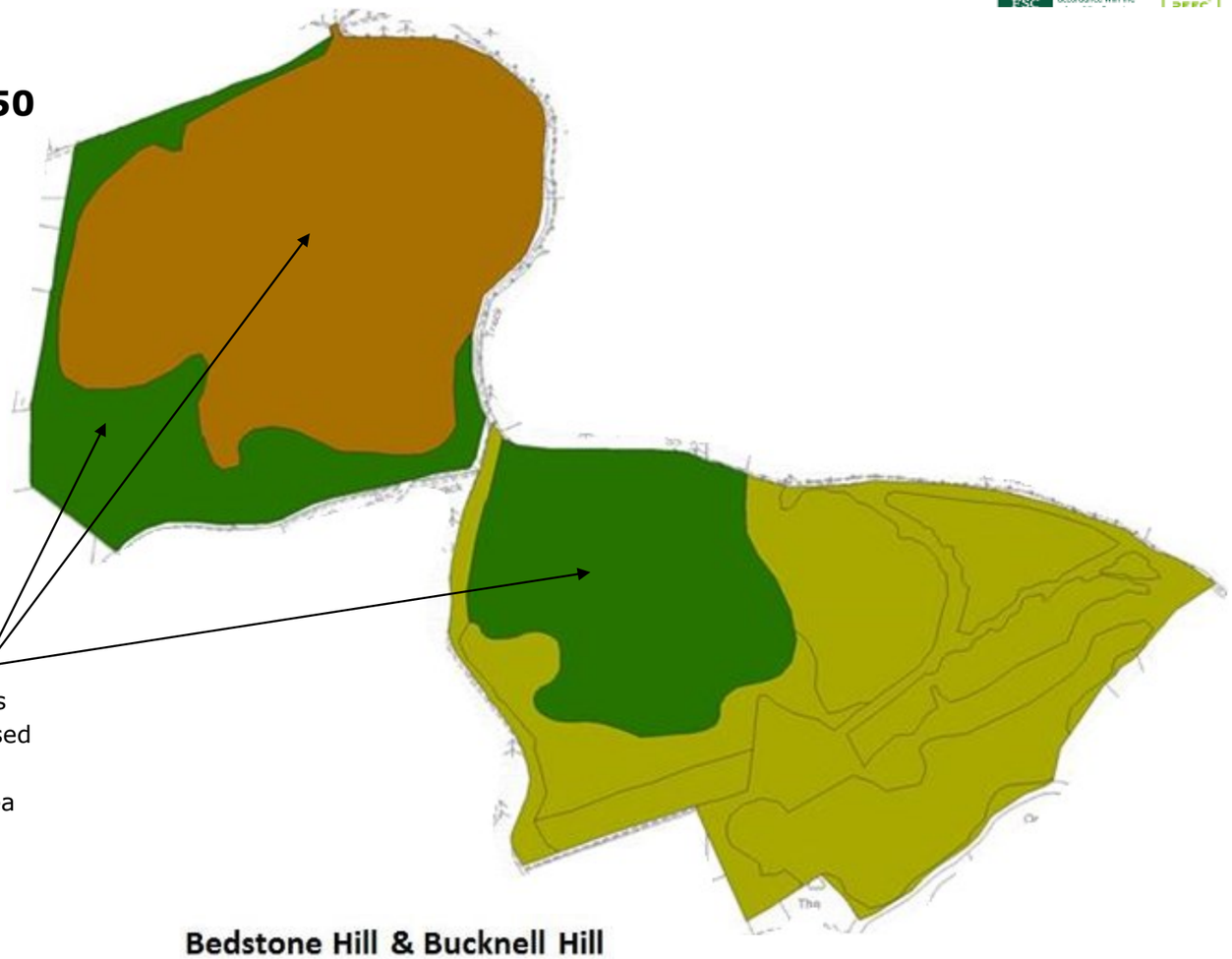
Indicative Future Species
Bucknell Hill and Bedstone Hill

2028

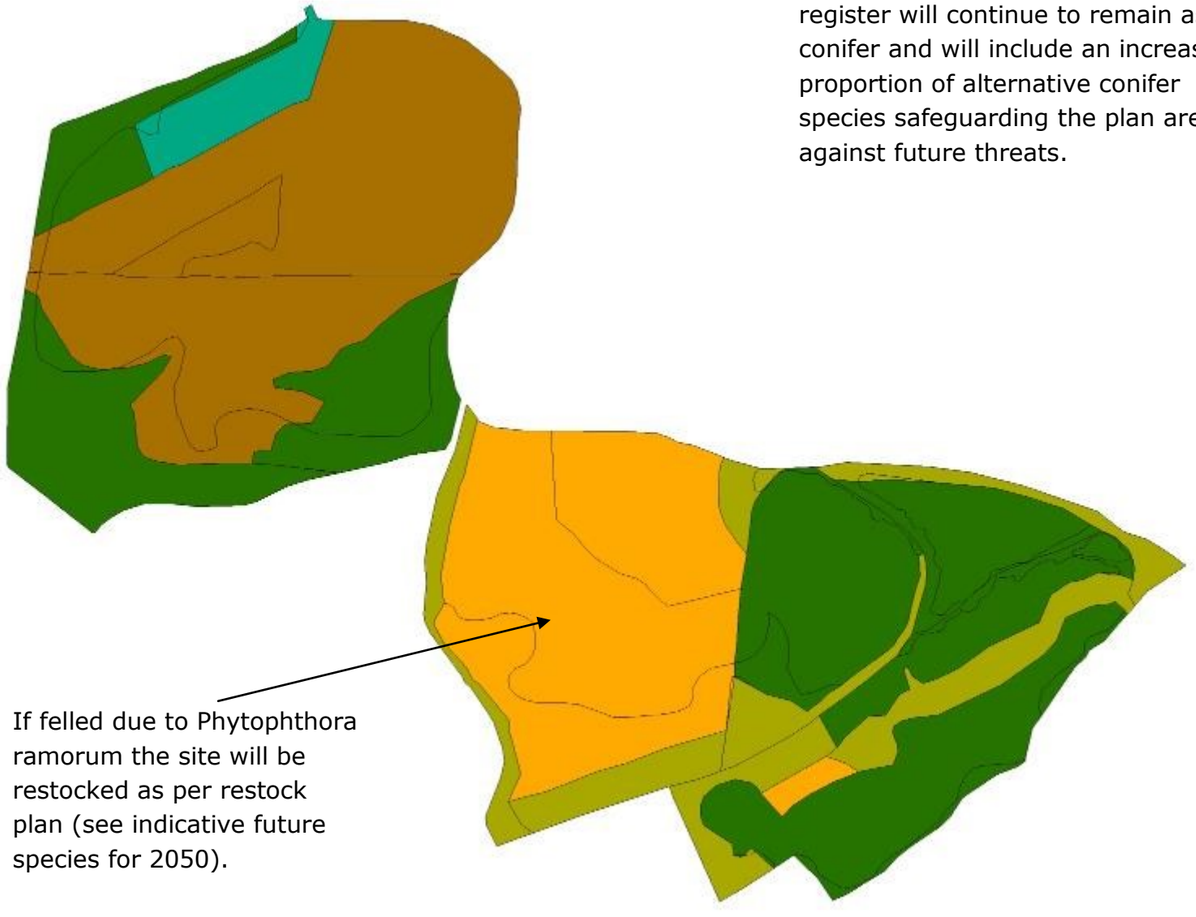
beyond 2050

Legend

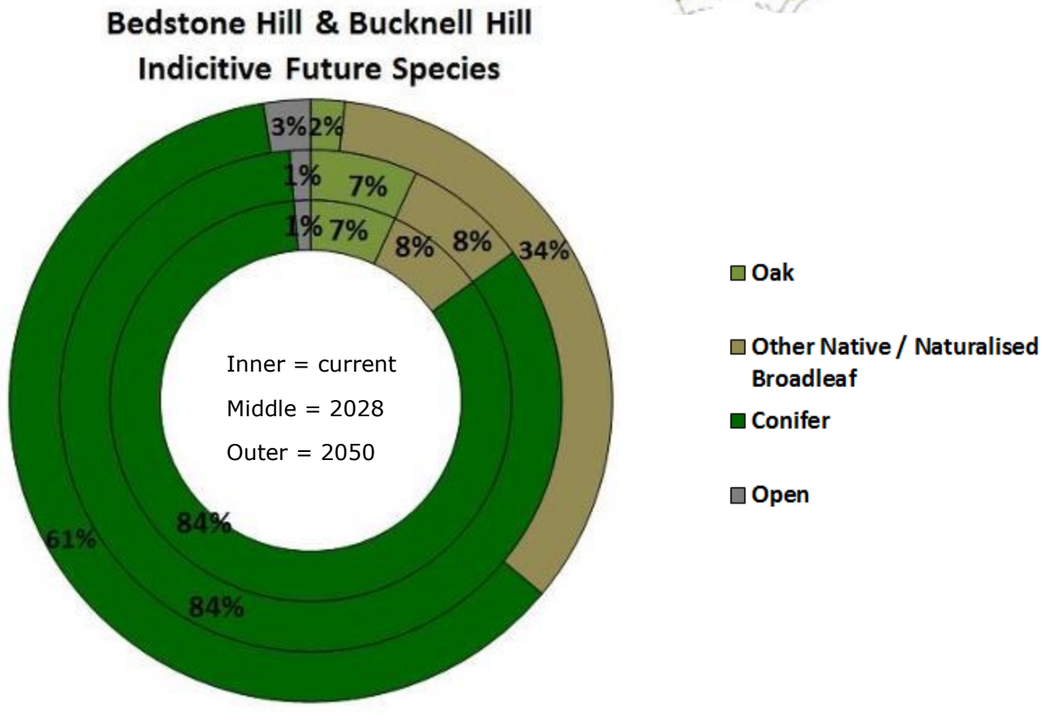
- Evergreen Conifer
- Alternative Conifer species
- Pines
- Larches
- Native and naturalised broadleaves
- Non-native broadleaves
- Open/other



Areas that are not on the AW register will continue to remain as conifer and will include an increased proportion of alternative conifer species safeguarding the plan area against future threats.



If felled due to Phytophthora ramorum the site will be restocked as per restock plan (see indicative future species for 2050).

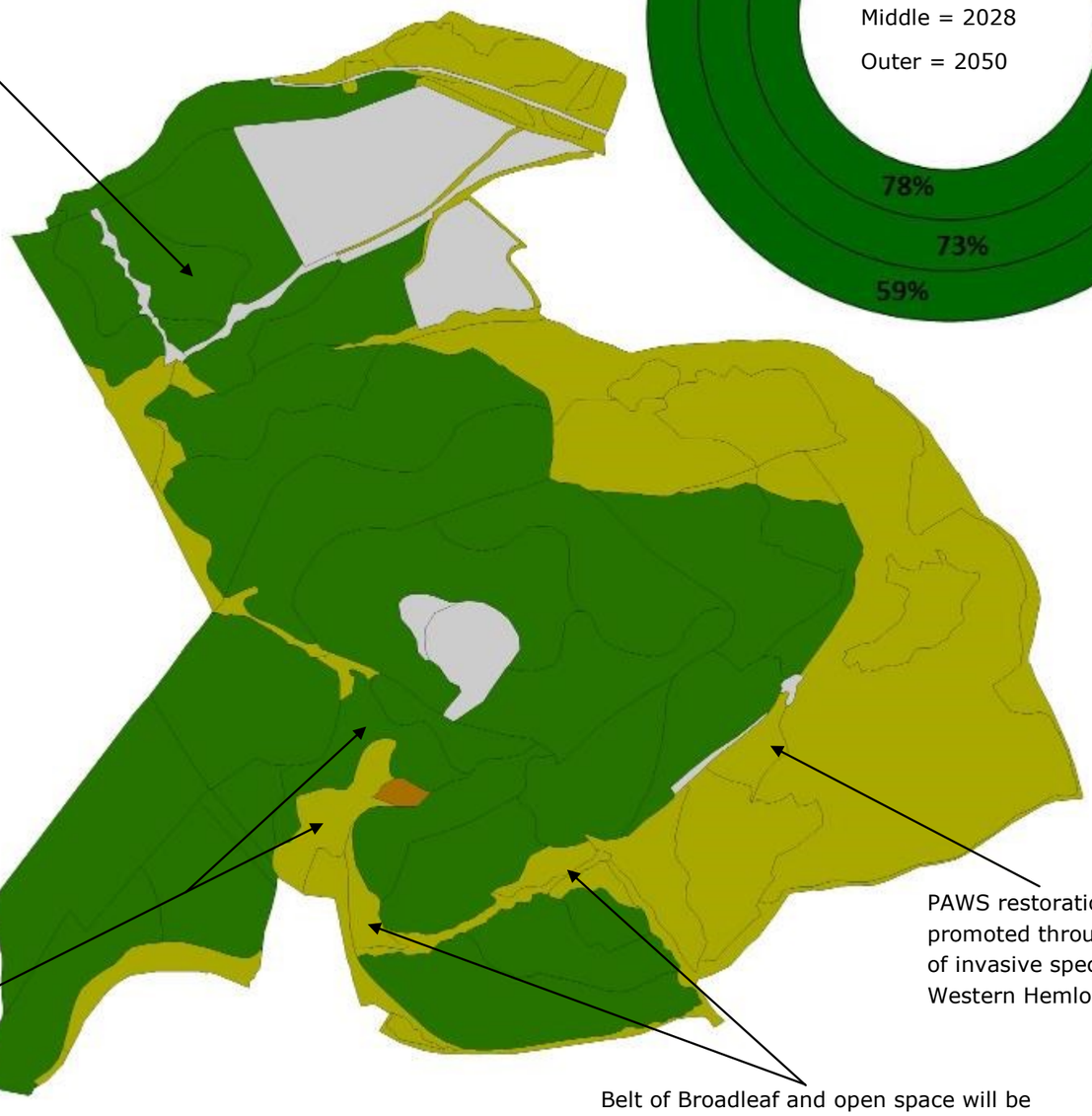


Indicative Future Species
Hopton

2028

beyond 2050

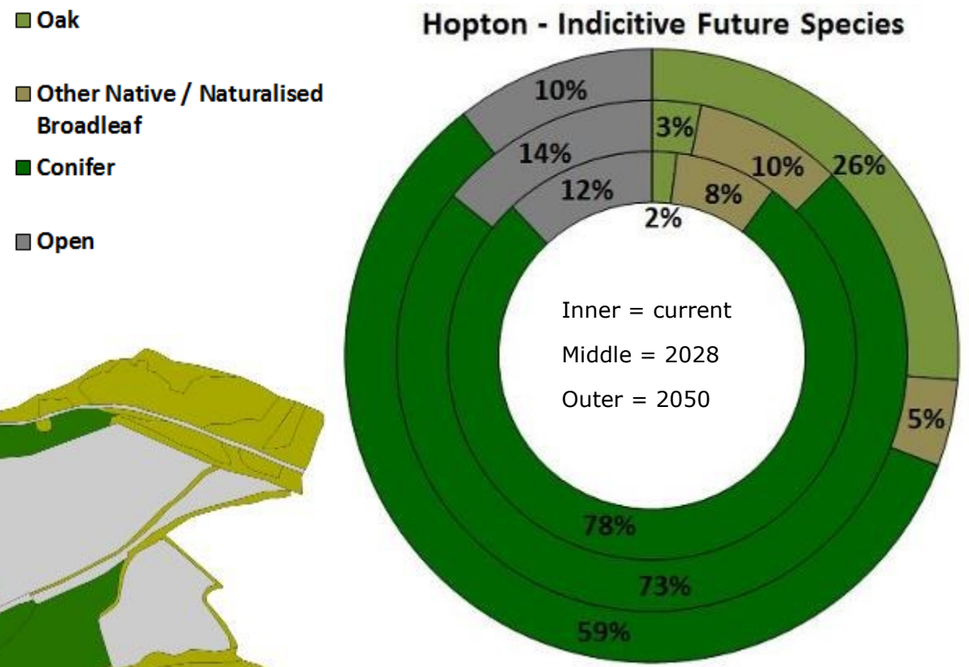
Areas that are not on the AW register will continue to remain as conifer and will include an increased proportion of alternative conifer species safeguarding the plan area against future threats.



Coupe boundaries follow the valley upward, with conifer being removed through thinning on the lower slopes establishing broadleaf wood with DF being promoted on the upper slopes, through thinning to achieve large diameter trees to be kept as long term retention.

PAWS restoration will be promoted through clearfelling of invasive species such as Western Hemlock.

Belt of Broadleaf and open space will be bolstered and enriched through planting that will support and enhance connectivity of associated habitats.

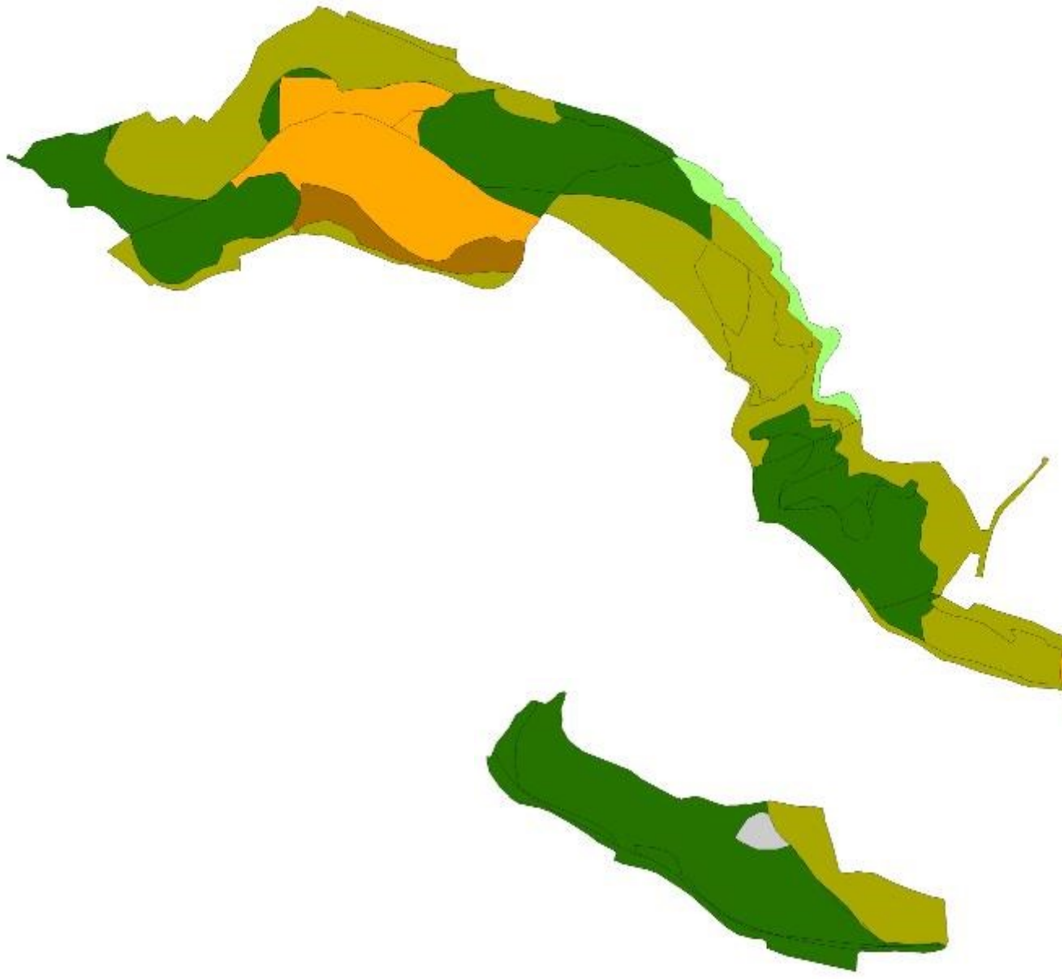


Legend

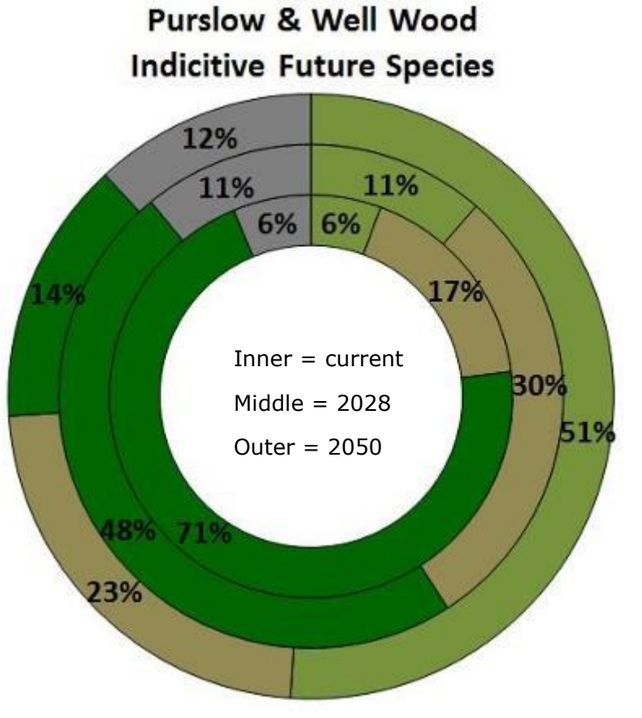
- Evergreen Conifer
- Alternative Conifer species
- Pines
- Larches
- Native and naturalised broadleaves
- Non-native broadleaves
- Open/other

Indicative Future Species
Purslow and Well Wood

2028



beyond 2050



Conservation Features

Longhorn beetle Another reason for promoting deadwood as the plan area is known to provide suitable habitats for Longhorn Beetle, especially in Bucknell. (Photo left shows Speckled Longhorn *Pachytodes cerambyciformis,* also found Tobacco-coloured Longhorn *Alosterna tabacicolor.* The prize Welsh Oak Longhorn Beetle *Pyrrhidium sanguineum has also been known in Bucknell.)*

Diversity and habitat interest is sustained through retaining fallen branch wood (Photo below, second from left in Bedstone Hill) and whole windblown trees. (Photo below, second from right in Well Wood.)

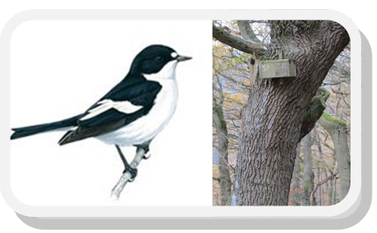
Ancient Woodland The photo to the left shows AW in Bucknell.

There are 22Ha of AW on the AW register within the Forest Plan area has and a further 66Ha of native broadleaf woodland that is somewhat fragmented across the plan area. The plan will target areas for clearfell that threaten security of native wood and AW.

Trees of Significant Interest (TSI) and deadwood There are many veteran trees and TSI within the plan area. Above far left shows an Oak tree in Bucknell. Whilst above far right shows Veteran Oaks in a belt of remnant AW in Bucknell. Any Forest operation and the management of veteran trees/TSI follows guidance laid out in FC Operations Instruction 31.

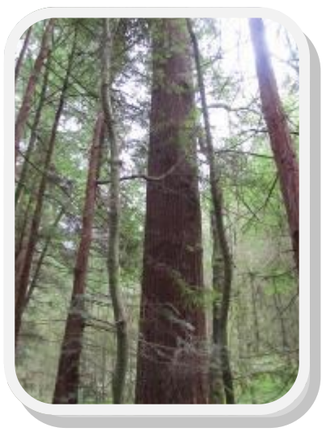
Raptor Notably Goshawk (above left) and Buzzard are known to nest and hunt within the forest areas. Many of the species choose to rest in high well branched conifer trees and then feed over surrounding open ground making the forests ideal raptor habitat in an otherwise varied landscape. Restock sites will provide perches through the retention of standing snags (above right, Bucknell) and the management of appropriate retention will ensure that habitat provision is maintained.

Dormice There are records of Dormice being present in Bucknell Wood , with potential favourable habitat found across the Plan area (see left). Clearfalls programed alongside rides and roads will improve rideside structure too ensuring appropriate habitat provision. Management should regard FC/NE 2018 Protocol.

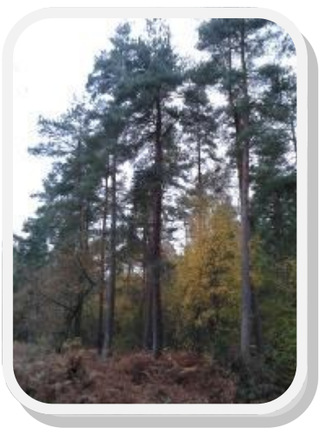


Pied Flycatchers the Plan area has had a nest box trial for Pied Flycatchers in previous years with 100 boxes in Bucknell that are still present. (Photo right)

Bats In the above left photo one can see Cwm Cottage. This is a derelict farm house on the western side of Bucknell Wood, since transformed into a maternity roosting site for Lesser Horseshoe bats. The plan area also contains numerous other suitable bat roosting points (above middle shows a typical Oak suited for bats in Well Wood). Through the wider adoption of Alternative to Clearfell systems, for example strip felling that better suit conifer crops on steeper ground, (above right, Bucknell), forest management is sympathetic and in line with the European Protected Species Best Practice Guidance for bats version 3 laid out by FC & NE in 2013.



Large diameter conifer, like these Sequoia and Douglas Fir (left, Hopton) provide species diversity, visual interest, with some being retained for biological maturity. In Kinsley the Scots Pine has a developing understory of native broadleaf and over time the Scots Pine will be thinned to develop large crowns and managed as mixed woodland.



Conservation Habitats

Open space habitat

Open space habitats throughout the plan area are somewhat limited. One of the main areas of open space is Titterhill in Hopton. This area relates to 1.2Ha with a further 1.8 Ha to be added by end of the plan period. This area will be a mosaic of open space (80%) and minor native broadleaf species (20%)

Open water

There is limited open water within the plan area. This photo shows the pond at Kinsley Wood that is in need of clearing of sediment and vegetation, with Parrots foot being prevalent. Some coppice work of water edge trees would also benefit the pond.

Roads and rides edge structure

There is good opportunity to improve the structure and ecological value of rides and roads within the plan area, as currently structure is somewhat limited. Hopton and Well Wood would especially benefit from the development of ride structure.

The photo far left shows forest edge structure adjoining the main forest road at the entrance to Kinsley Wood beginning to develop and left you can see some nice scree habitat along the east-west facing road edge within Well Wood. If opened up this roadside may encourage and provide suitable habitat for the likes of Grayling and Dingy Skipper and other lepidoptera.

In this wood and on other sites across the plan area future thinning work should develop ride edge structure and by doing so improve habitat for the likes of Wood Whites and Fritillaries. These edges should be accessible by machine for maintenance purposes.

Kinsley - Scots Pine in compartment 1540d

This area of Scots Pine sits above Knighton surrounded by open habitat. One can see from the far left photo the earth bank that adjoins the Scots Pine has remnant hawthorn trees probably from when the area was enclosed for grazing at some point. - Within the landscape context the plan will see the Scots Pine being under-planted with large groups of minor native species such as Hawthorn, Blackthorn Rowan, Holly and Crab Apple creating diversity of habitat. This will see the woodland develop a more complementary character within its landscape context.

The compartment will then become more ecologically valuable too, appealing to a much wider variety of species. Any windblown Scots Pine will be retained too adding further diversity to the site.

Ancient Woodland remnants

The plan contains several examples of AW remnants. These two examples are from Purslow Wood.

Through forestry operations the plan will help safeguard these types of features throughout the plan area. This will be achieved through selective thinning and targeted clearfelling, with restocking targeting native planting adjacent to these types of habitat to further protect these features.

Heritage Features

Most heritage features within the plan area tend to be lineal features such as the ones illustrated here. - they are usually to do with the way in which the surrounding woodland was managed in the past or inform us about the transport routes people used to use.

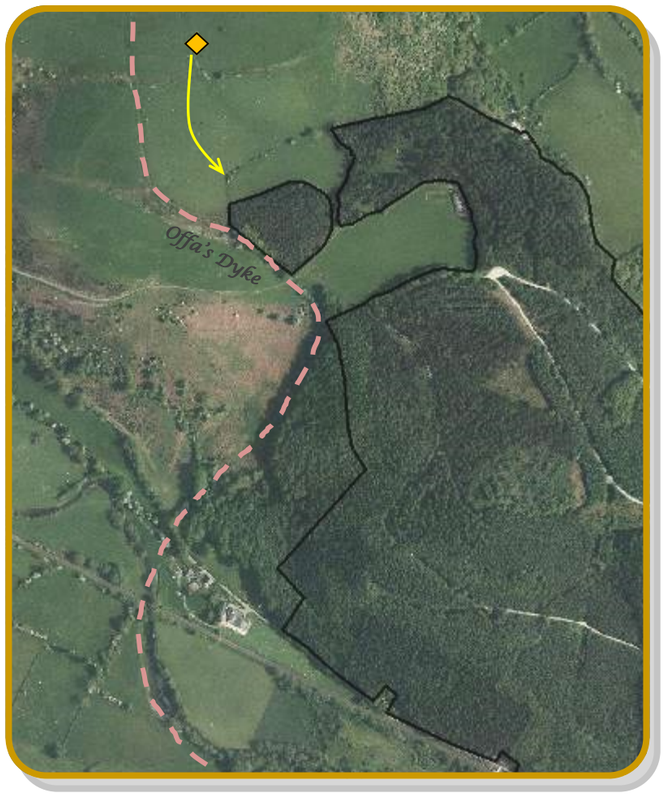
1. At Hopton this feature shows overstood or stored coppice that would have been actively managed forming hedges that also would have demarcated boundaries. One can see this one has a lot of gaps.
2. Sunken track in Purslow Wood.
3. Old boundary bank adjacent to Kinsley, but not on FC land, showing land was once enclosed.
4. A woodbank in Kinsley, probably a boundary although the flat section between the bank and wood may have once been a footpath.
5. Holloway in Hopton.
6. Woodbank in Hopton, that coincides with the boundary for Ancient Woodland on the AW register.

There are no Scheduled Ancient Monuments within the plan area, although the Offa's Dyke passes close to the boundary of Kinsley.

1.

2.

3.



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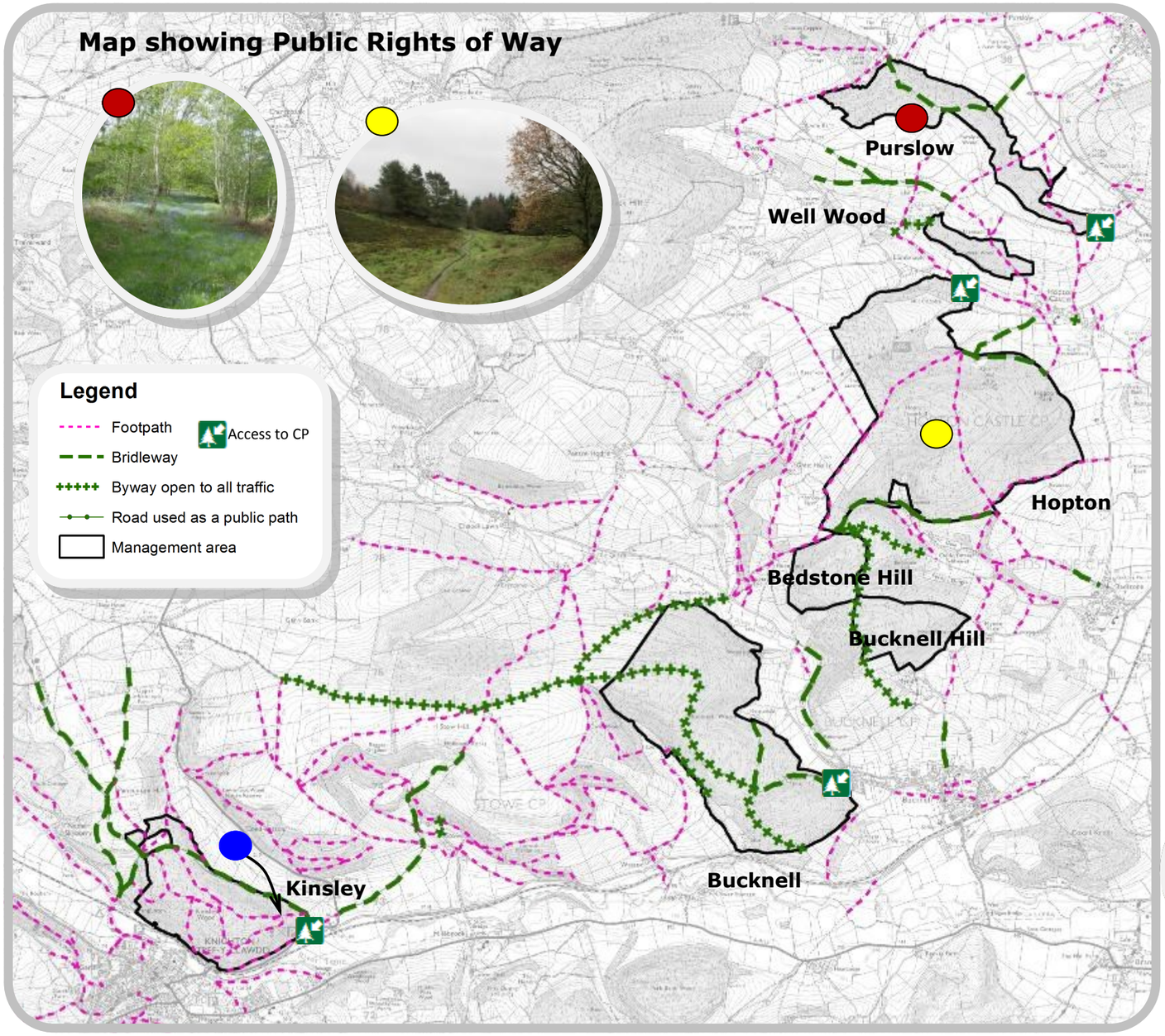
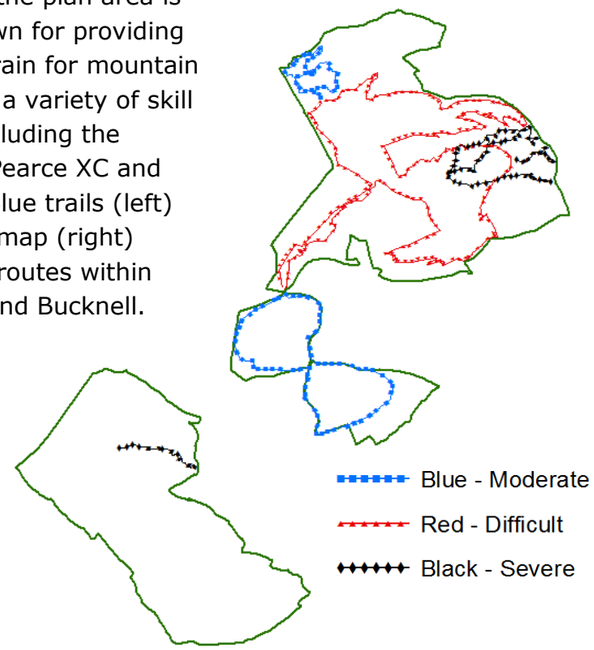
5.

6.

Recreation and Public Access



Cycling the plan area is well known for providing good terrain for mountain biking at a variety of skill levels including the 7.5mile Pearce XC and Hopton Blue trails (left) with the map (right) showing routes within Hopton and Bucknell.



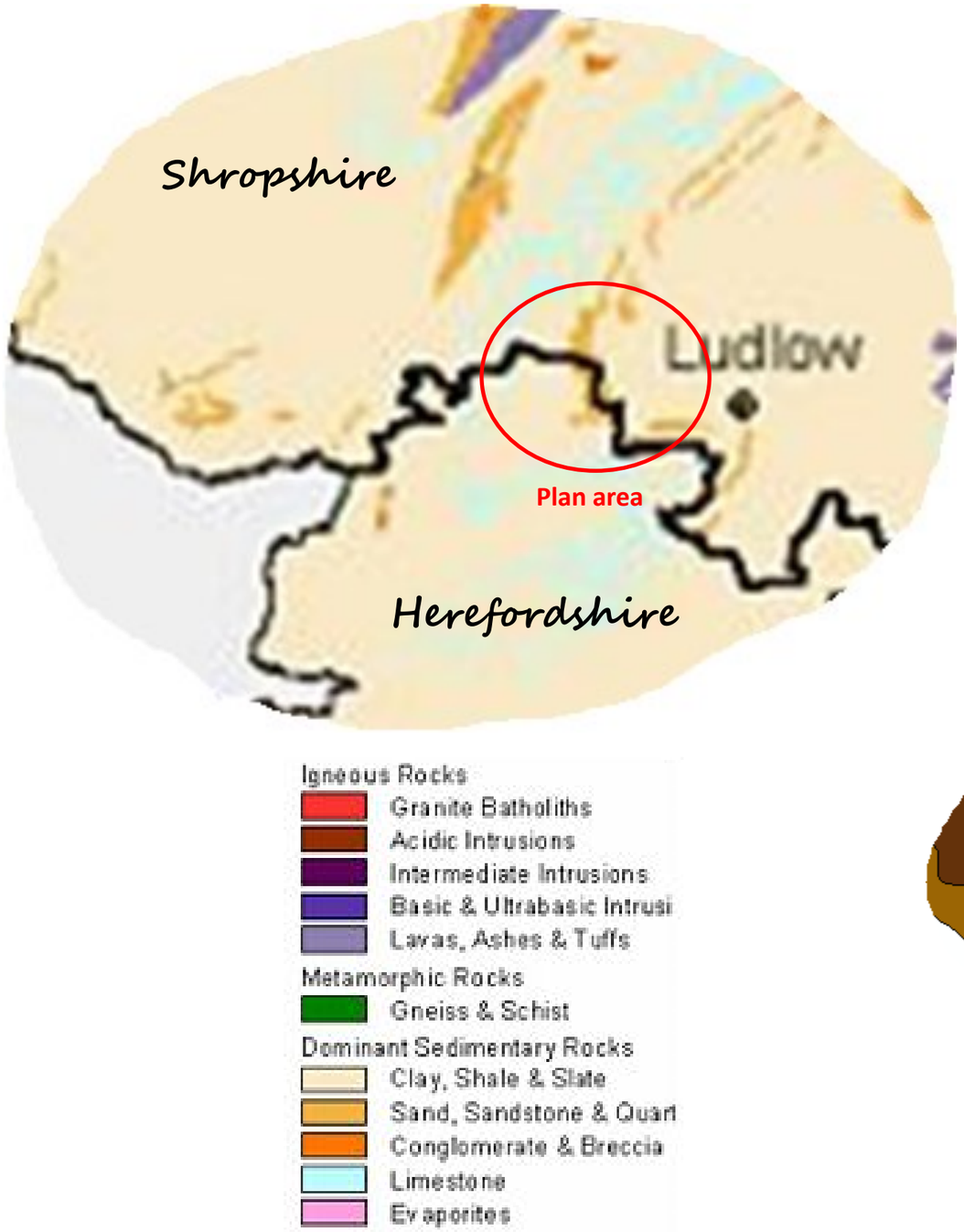
Walking and Horse riding With the Offa's Dyke trail on its doorstep and the beautiful scenic landscapes of Shropshire, the plan area is well supported by public rights of way that also cater for horse riders.

"Walking with Offa 10:Bucknell and Stowe Hill" is a circular 6.5 mile route that passes through Bedstone Hill, Bucknell Hill and Bucknell Wood.

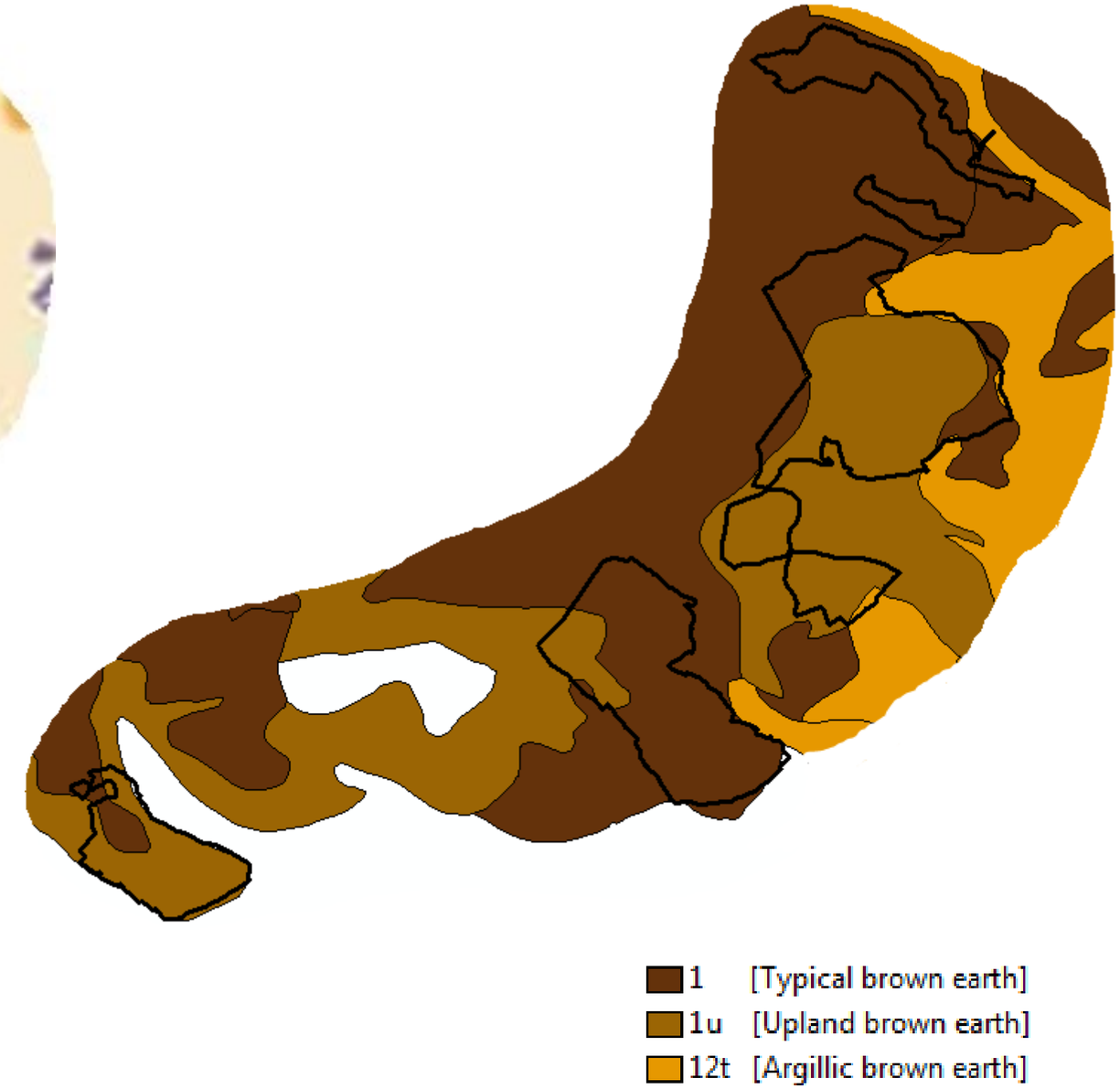
Internal and external landscapes The plan area lies completely within the Shropshire Hills AoNB and throughout the plan area from various vantage points one can appreciate the fantastic views of the surrounding Shropshire countryside. Within the woodlands one can also enjoy a diverse range of landscapes such as the open area at Titterhill and the rides through Purslow. (see map)

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

Geology

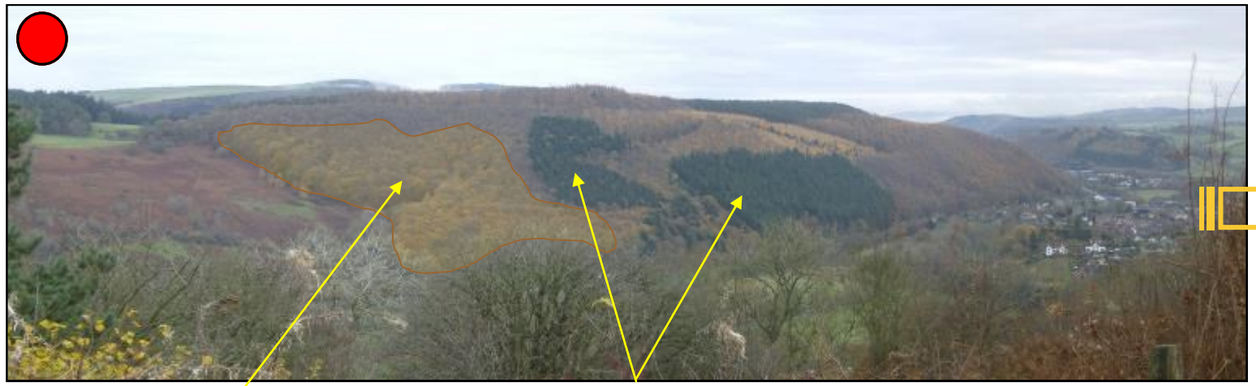


Soils



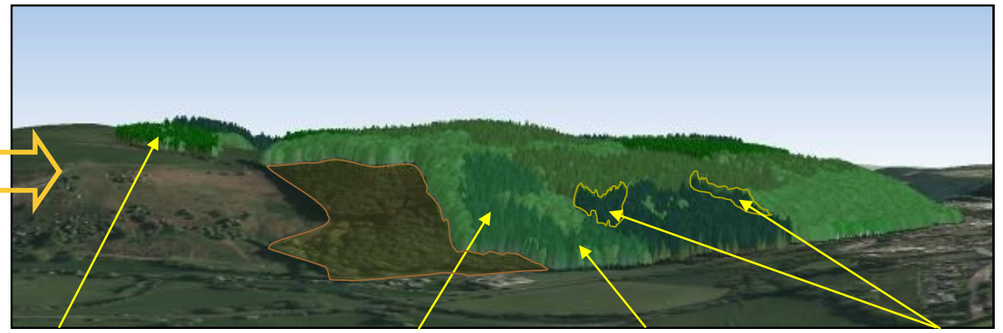
Landscape Analysis

KINSLEY



Private woodland classed as PAWS

Geometric blocky style planting that jars with the landscape and is visually unsympathetic to the eye.

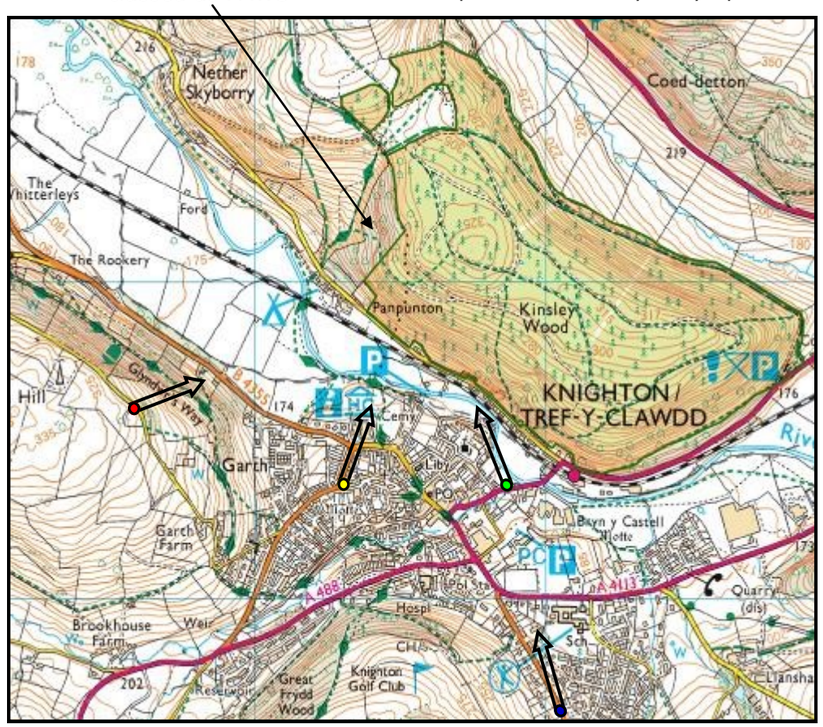


SP will take on a softer aesthetic as underplanted natives establish.

Fell Western Hemlock in 2020. No easy landscape solution, but will integrate & soften quickly as native broadleaves become established.

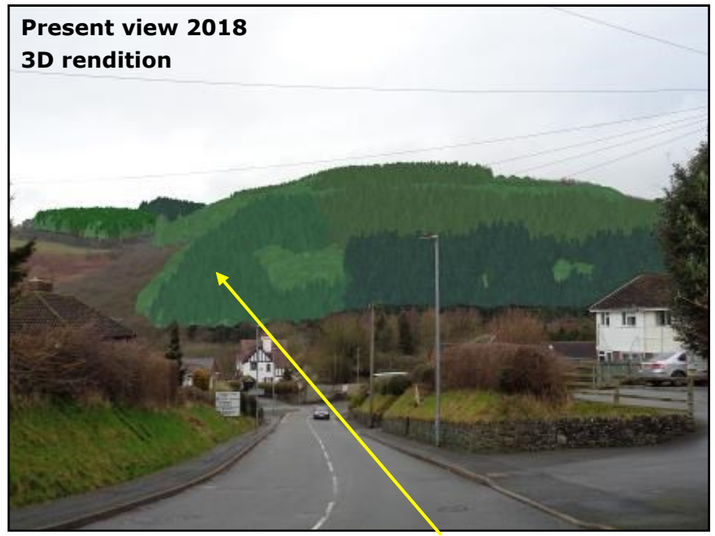
Remaining components of WH to be thinned out at same time.

Geometric block of DF will be "softened" in the landscape by removal of corners.



Present view 2018

Present view 2018
3D rendition



Coupe 1529052
Western Hemlock
Fell in 2020

After felling coupe 1529052 in 2020

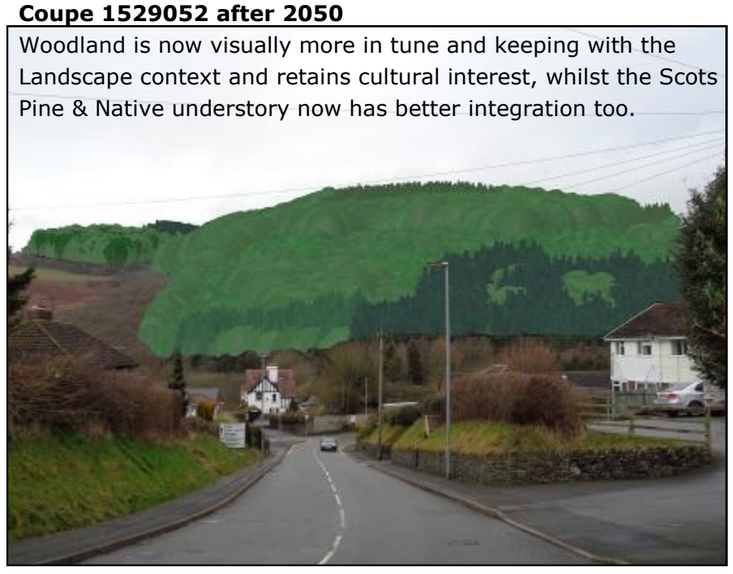
Including "softening" of Douglas Fir in compartment 1542d and removes the threat to restoration of native woodland.

Coupe 1529052 in 2030

Native woodland is beginning to establish, asserting a much more visually amiable landscape that appears softer looking to ones eye.

Coupe 1529052 after 2050

Woodland is now visually more in tune and keeping with the Landscape context and retains cultural interest, whilst the Scots Pine & Native understory now has better integration too.



Landscape Analysis

KINSLEY (cont)

Present view 2018 from Knighton R.F.C. looking Northwest across southern facing slopes of Kinsley.

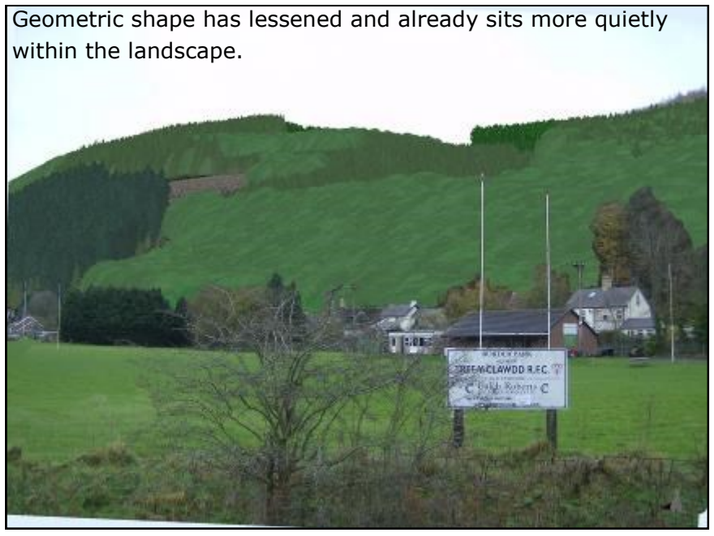
Geometric blocky planting of Douglas Fir jars with the landscape, is currently visually unsympathetic to the eye.

Larch, currently unaffected by Phytophthora ramorum, nestles on the hill side complementing the mature broadleaf.

Present view 2018
3D rendition

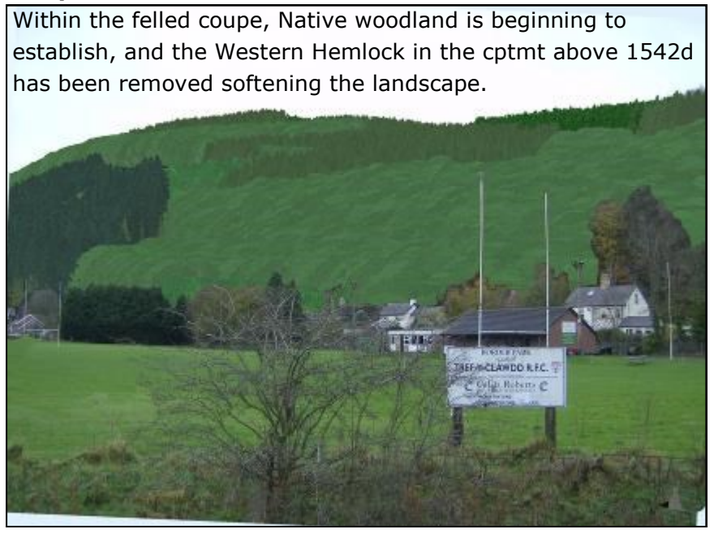
After felling of Coupe 1546492 in 2020 (cpt1542d)

Geometric shape has lessened and already sits more quietly within the landscape.



Coupe 1546492 in 2030

Within the felled coupe, Native woodland is beginning to establish, and the Western Hemlock in the cptmt above 1542d has been removed softening the landscape.



Coupe 1546492 after 2050

Woodland is now visually more in tune and keeping with the Landscape with the larch now replaced with native broadleaf.

Present view 2018, 3D rendition - viewing Kinsley from just below Cemetery on B4355

View of Kinsley 2020 after felling Coupe 1546492

View of Kinsley 2030

View of Kinsley beyond 2050

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

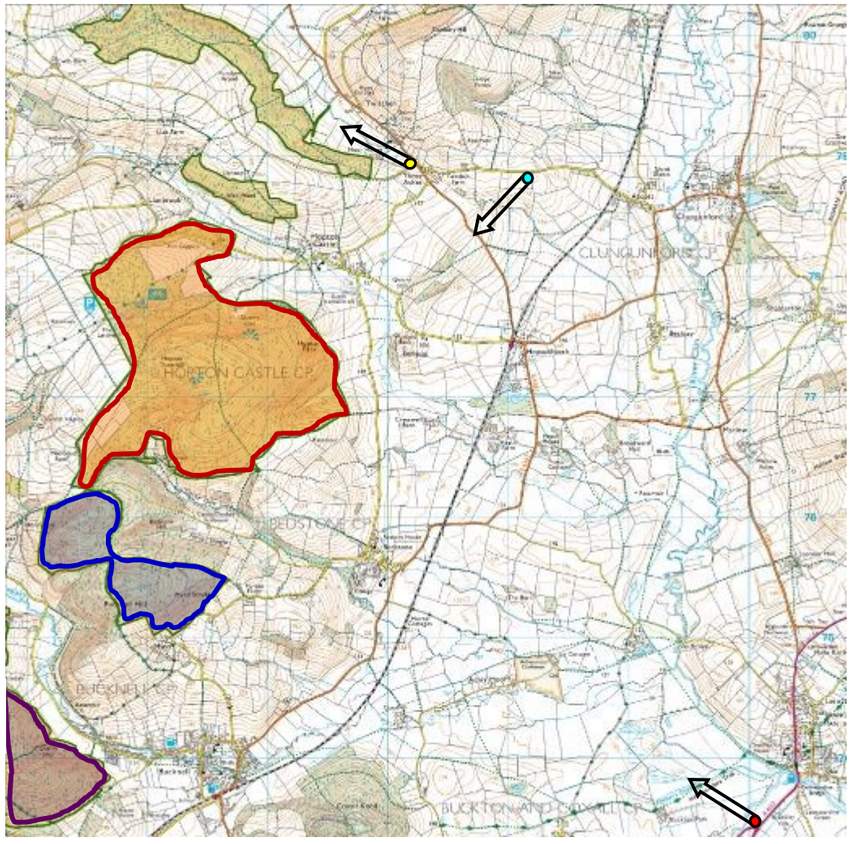
Landscape Analysis

HOPTON

BEDSTONE HILL

BUCKNELL HILL

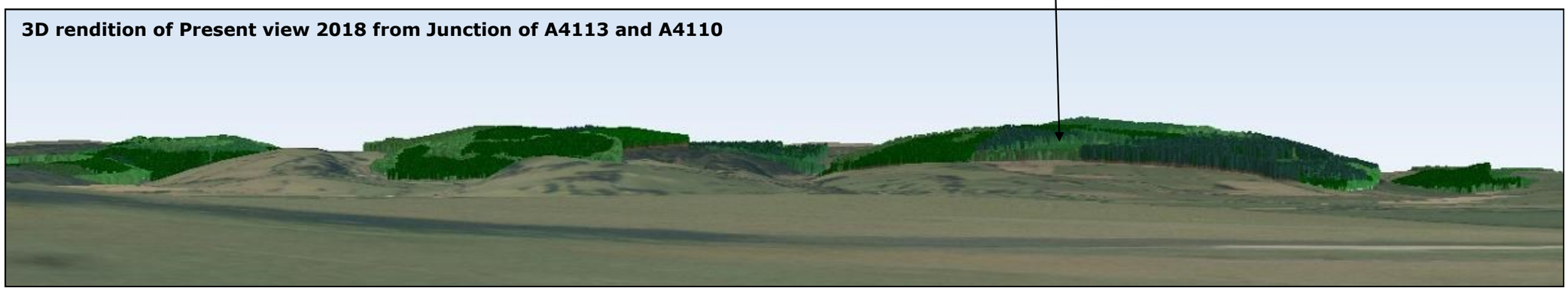
BUCKNELL



Present view 2018 - from Junction of A4113 and A4110 looking Northwest across to eastern side of Hopton Forest Plan.

Young native broadleaf restock cptmts 1521c and 1517h

3D rendition of Present view 2018 from Junction of A4113 and A4110

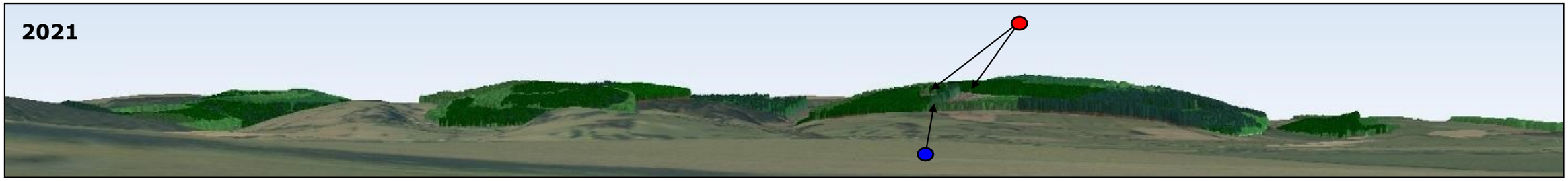


Landscape Analysis

HOPTON (cont)

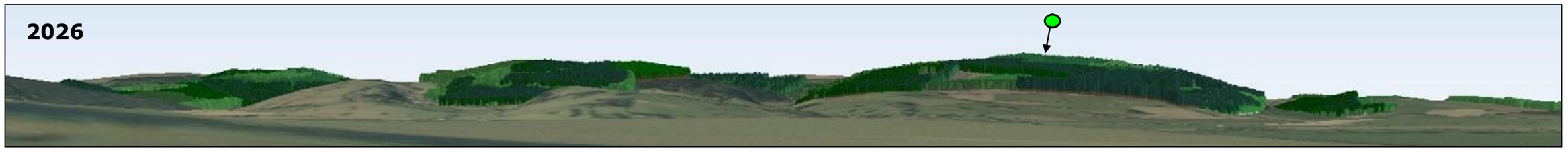
3D view following felling of coupes 1540911 & 154744

Removal of Western Hemlock adjoining ASNW has minimal impact on the landscape viewed from this location. 🔴
Remaining veteran Oaks along ride edge on east side of cpt 1521b narj boundary of Ancient woodland - as recorded on the AW register. 🔵
Restocking of this coupe with broadleaves will strengthen AW remnants and present a softer appearance within the landscape.



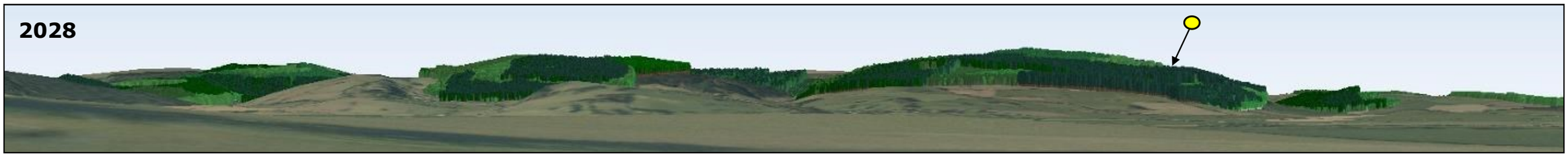
2026 following felling of coupe 1513747

This begins the restructuring of the top of Hopton. 🟢 3D modelling tends to suggest there will be minimal impact on the landscape viewed from this location, with coupes felled in 2021 still visible.



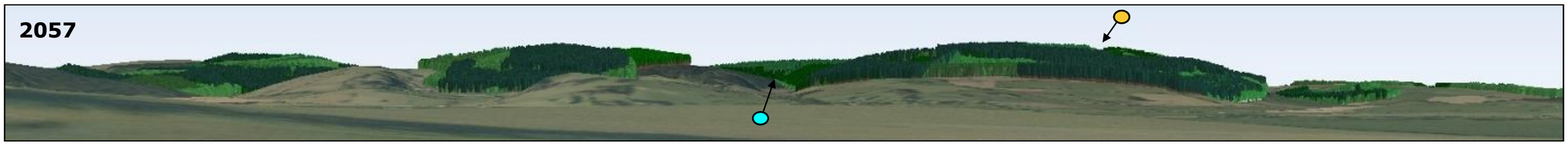
2028 following felling of the first coupe 157486

This removes a further 4.9Ha of mature WH from Hopton and has minimal impact on the landscape when viewed from this location. 🟡
Previous coupes are beginning to merge with surrounding wooded landscape.



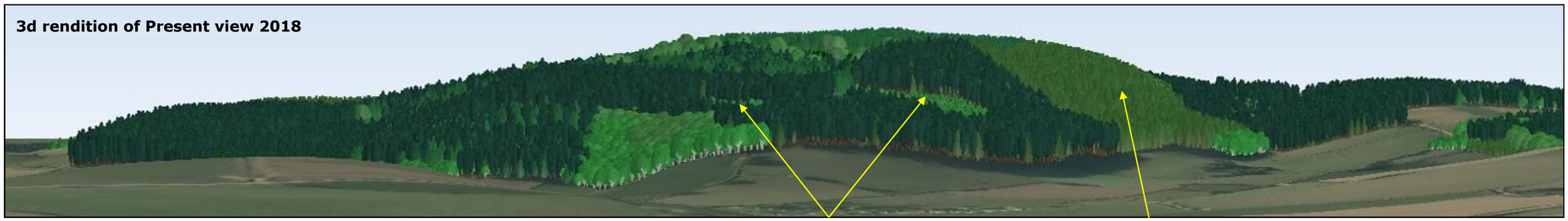
Beyond 2050 - following the felling of coupe 1577075 in 2057

This completes the restructuring of the crest of Hopton with 3D modelling tending to suggest minimal impact on the landscape viewed from this location.
Previous coupes have now merged with the surrounding woodland, whilst other areas have regenerated through fell and restock or by means of CCF methods. 🔵
The large step in the skyline shown in the photograph from 2018 is now dramatically softened and hardly visible. 🟠



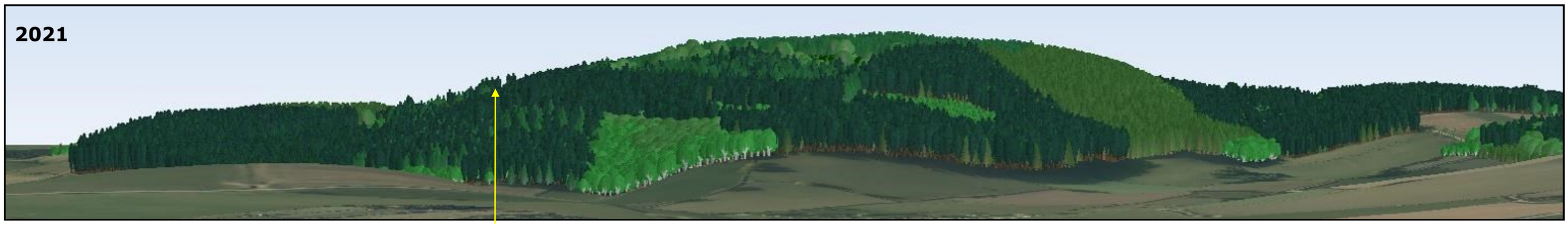
Landscape Analysis

HOPTON (cont)



The Woodland sits well within the landscape. Small areas have already been reverted to broadleaf within the PAWS area.

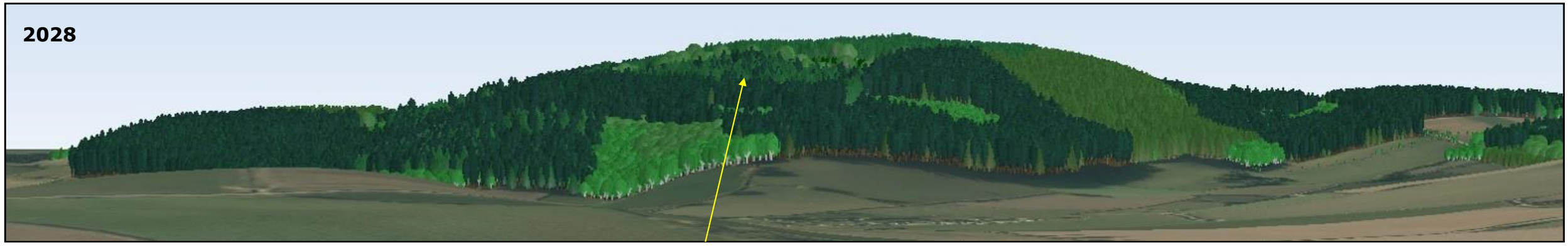
Large area of contiguous Larch needs breaking up to soften hard edge.



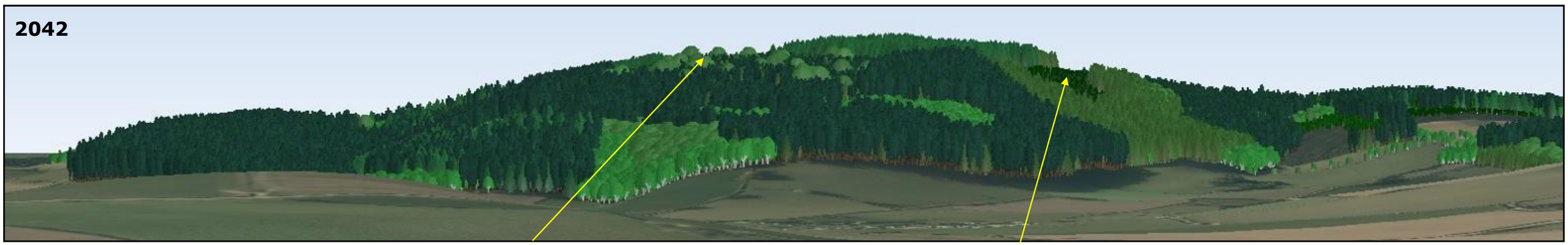
Coupe 1540911 containing Western Hemlock has been felled with minimal impact to the landscape.

Landscape Analysis

HOPTON (cont)

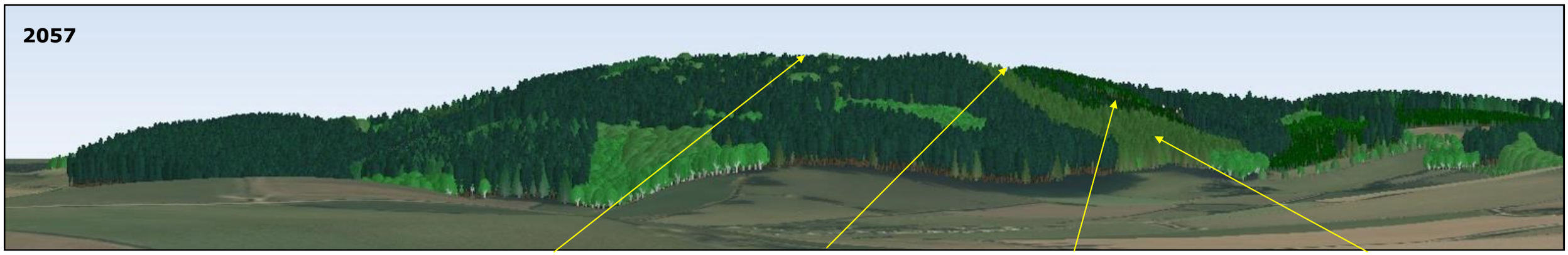


Coupes 1576486 and 159108 have been felled removing more WH, but nestling behind the Douglas Fir in the foreground their felling has had a minimal influence on the landscape.



Coupe1510920 , the second coupe to be felled in the restructuring of the crest of Hopton.

The dominance of Larch is broken by the felling of coupe 1550715 in 2032 whose appearance will soon soften as the future crop becomes established.



Coupe 1577075, completes the restructuring of the crest of Hopton.

The step in the skyline created by the felling of coupe 1550715 has now disappeared following felling of coupe 1577075

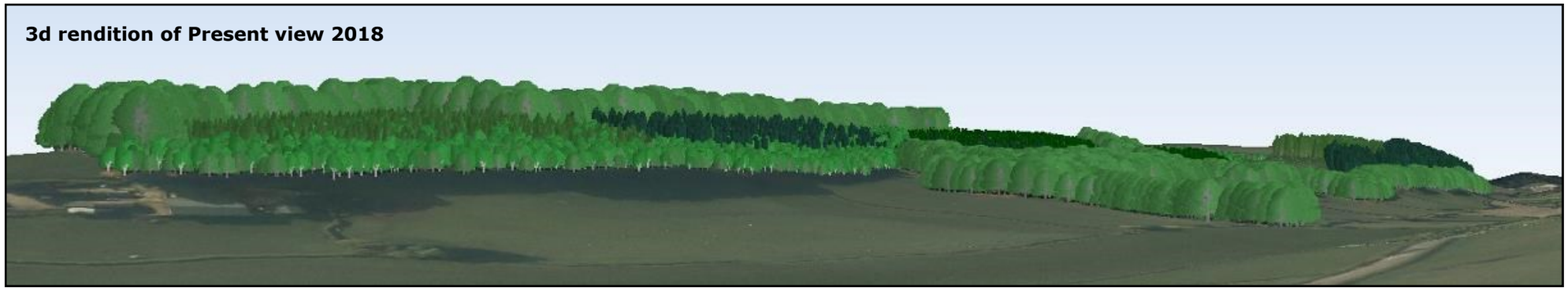
adjacent larch coupe felled in 2047

Thinning the remaining larch on steep ground around the quarry will promote a mixed woodland through natural regeneration and planting.

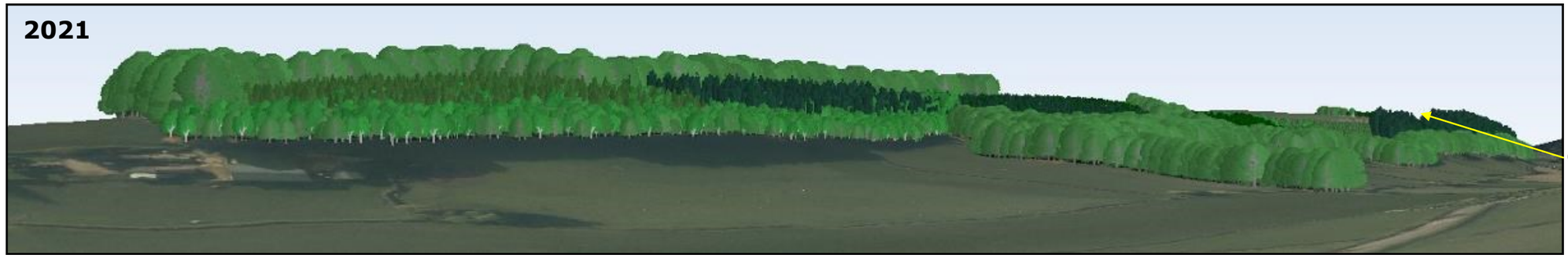
Forestry Commission woodlands have been certified in accordance with the rules of the Forest Stewardship Council.

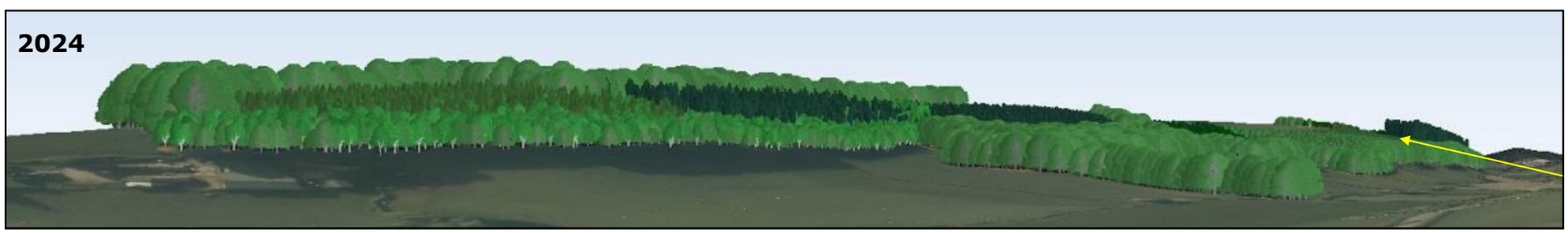
Landscape Analysis

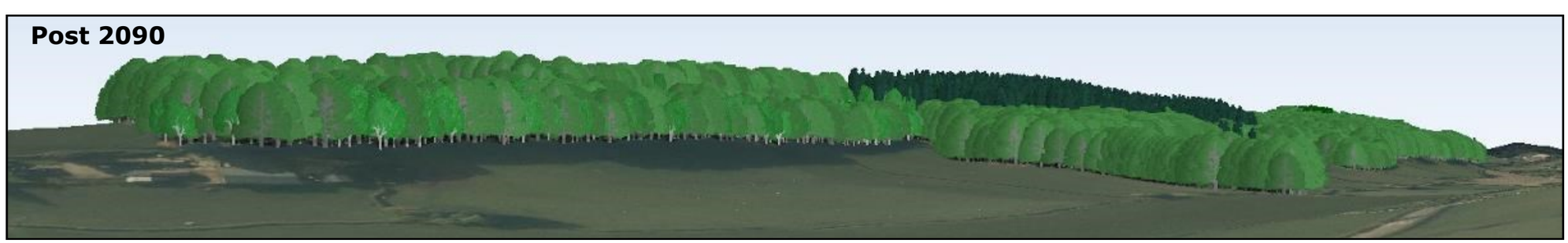
PURSLOW



Purslow will change gradually, with the current conifer crops being managed to economic rotation.







Most of Purslow has now been regenerated back to native broadleaf. The remaining DF being retained for future raptor habitat will be felled at some point in the future.

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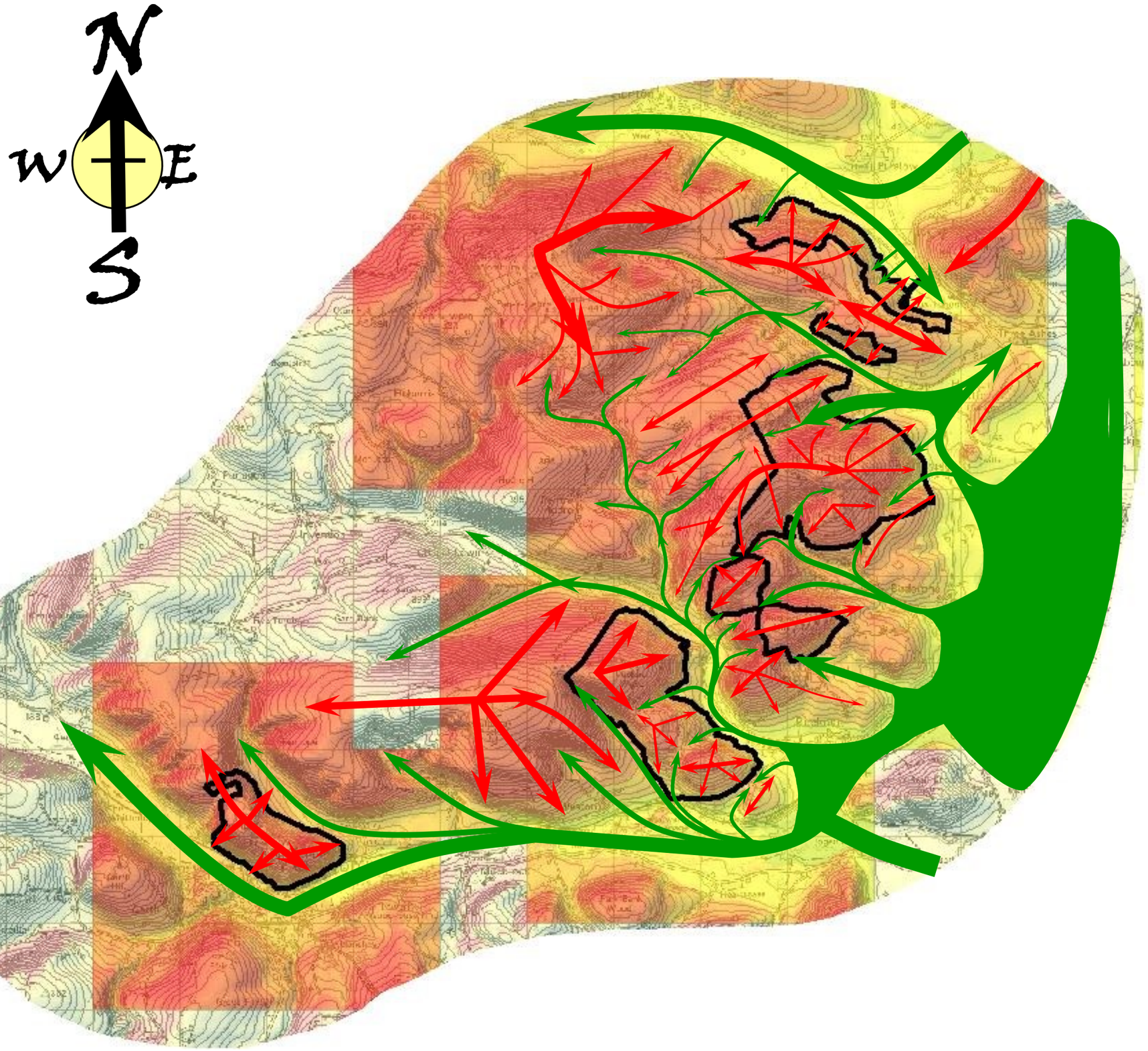
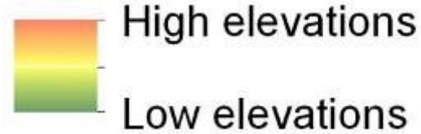
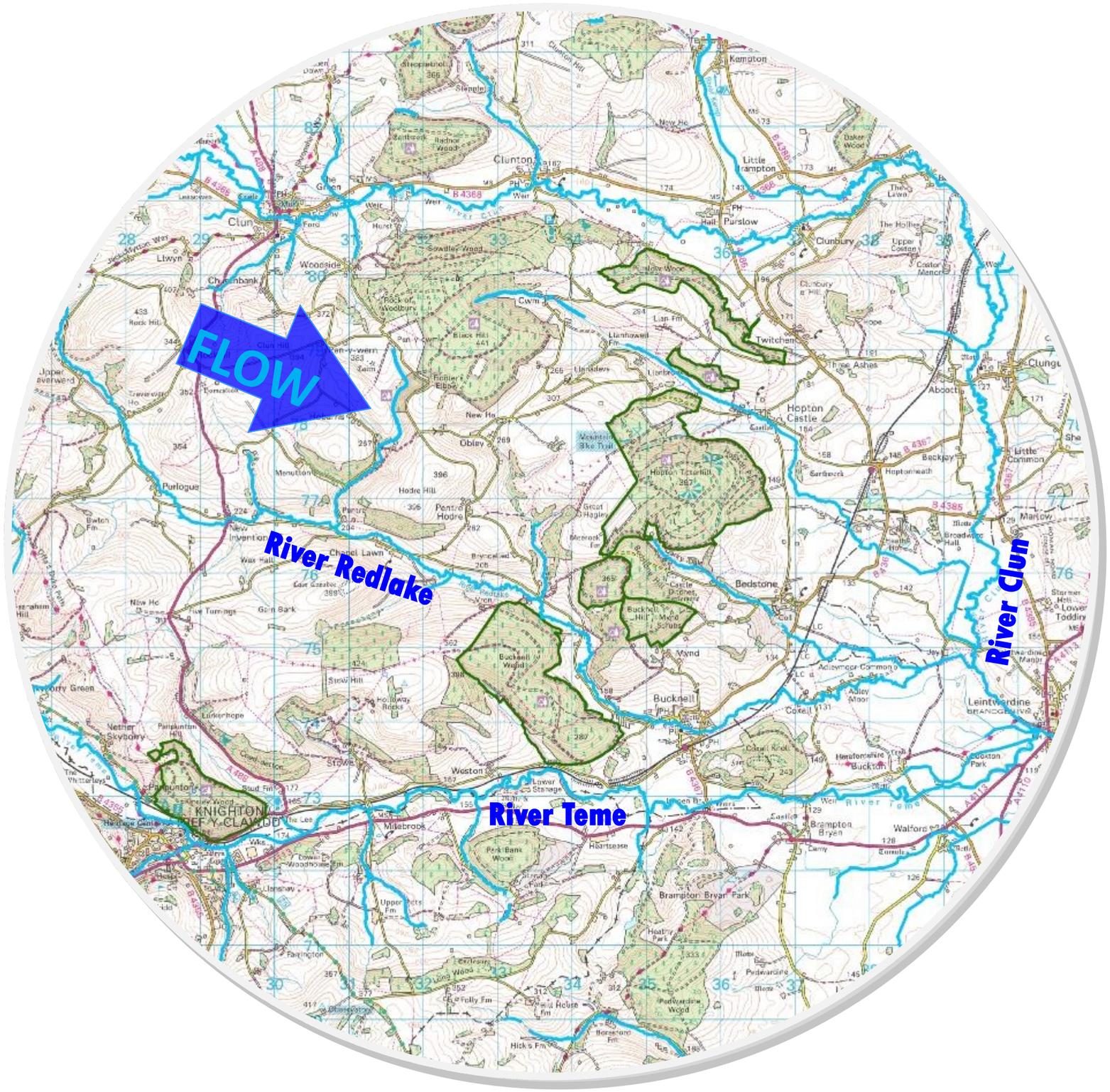


Landform Analysis

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

Ones eye is naturally dawn up the valleys (green arrows) and along/down the ridges (red arrows). These principles will be used to design the shape of future coupes. Ensuring that the shape and size of felling and restocking areas do not detract from the natural appearance of the forest and its contribution to the landscape character.





Approximate Scale 1:50000

Water management

The Hopton Forest Plan sits within the catchment of three rivers:

- Teme
- Clun
- Redlake

The River Teme is designated SSSI and extends to the lower reaches of River Clun that is also a SAC.

These rivers contribute to a healthy ecology of the surrounding landscape and contribute favourable habitat for the likes of Shad, Sea lamprey, Salmon, Native White-clawed Crayfish, Otter and Freshwater pearl mussel.

The River Clun that flows east along the northern boundary of the plan area before heading south; whilst the River Teme runs along the southern boundary of the plan area to its confluence with the River Clun in Leintwardine to the east of the plan area. Both rivers feed into the River Severn with the River Teme being the second largest tributary of the River Severn. Between Bucknell and Bedstone Hill/Bucknell Hill, the River Redlake also flows eastward to join the River Clun. The steep slopes of Purslow face north and are adjacent to the floodplains of the River Clun.

Possible effects of any work on water quality where sedimentation maybe an issue further down stream has been safeguarded during the process of coupe design and drawing up of management prescriptions.

Coupe design throughout the plan area has minimised possible impacts to watercourses through:

- Consideration in reduction of coupe sizes, if appropriate, where clearfelling has been prescribed.
- Maintaining existing broadleaved woodland along woodland edges.
- The use of continuous cover forestry.

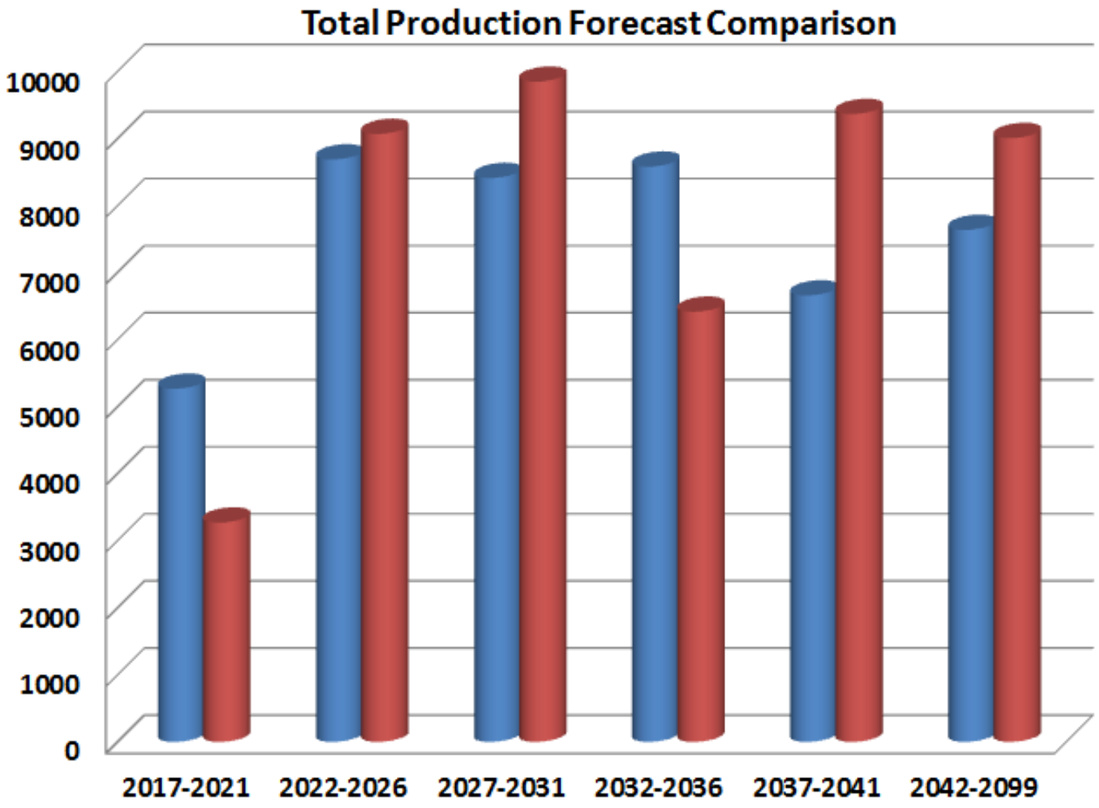
The use of these techniques will help safeguard against sedimentation, protecting both water quality and riparian habitats.

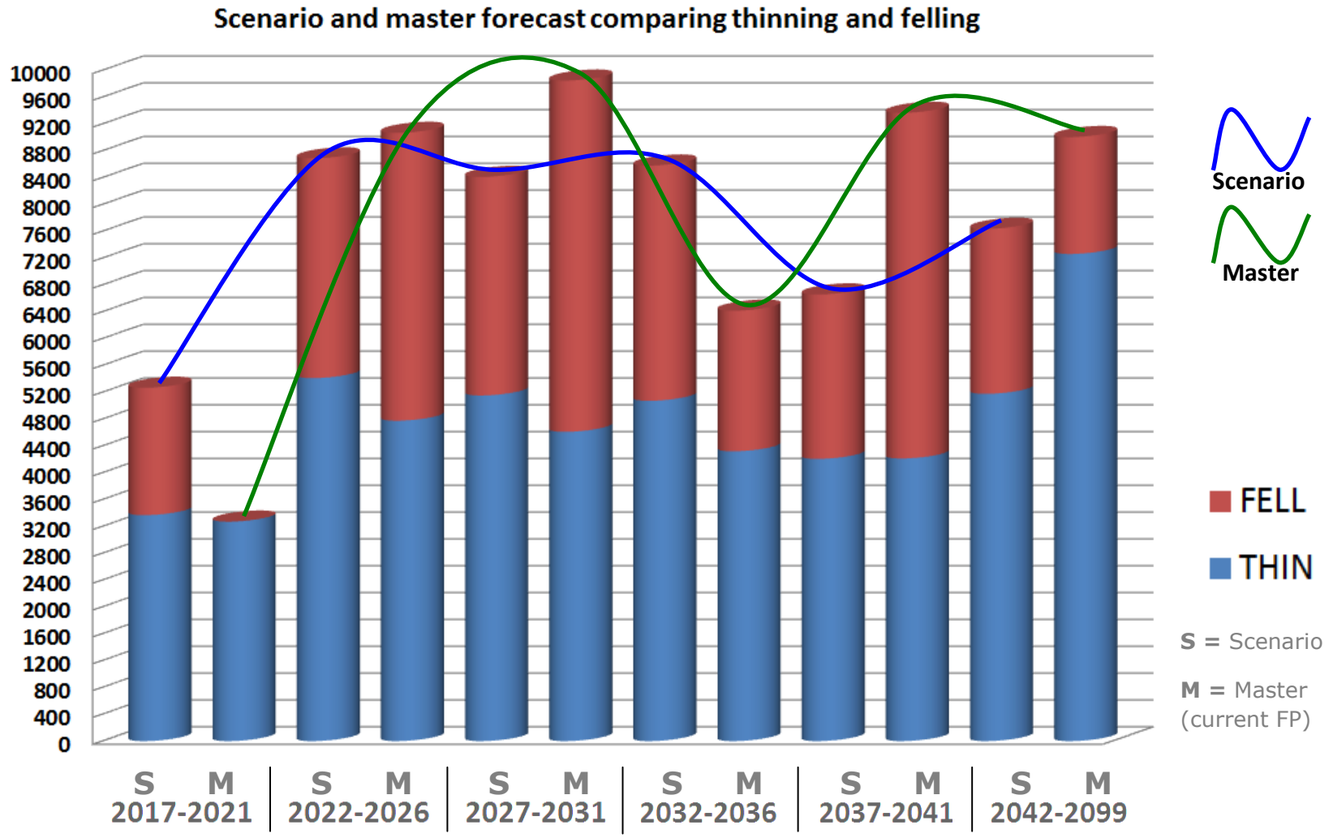
Planning and implementation of any operations near to watercourses will follow the Forest Service UKFS Forests and Water Guidelines.

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

Option Testing

Option 1 – Current Forest Plan (Master)	Option 2 – Proposed Forest Plan (Scenario)
Deliver well-designed forests in keeping with the local landscape character that also protect and safeguard nearby SSSI sites.	
Whilst the old plan carefully considered landscaping, it perhaps didn't fully address the impacts of such proposals on resources for programme management	Less ambitious approach but more manageable in terms of managing resources. Coupe design has been tweaked in places to maintain scale with and better fit the surrounding landscape.
Protect and enhance woodland and open habitats and their associated species.	
Combination of clearfelling and selective felling began to deliver an increase in both forest and open habitats that would see an increase in local biodiversity.	Plan proposals look to build on what has been delivered under the old plan. (60Ha open in 2018) Where appropriate open space has been enhanced where previous opportunities have been missed by incorporating clearfells to continue delivery of local biodiversity. (73ha open in 2028)
The continued production of sustainable and marketable woodland products.	
Timber production was sustained through a mixture of thinning and clearfelling. CCF and minimum intervention were included in prescriptions to deliver PAW restoration.	The new proposals continue slightly increased levels of thinning, but reduced clearfelling with CCF playing a prominent part, although some boundaries have been altered and timings amended to reflect the need to reduce impacts of invasive species such as Western Hemlock on AW and PAW sites.
To protect enhance and restore areas of ancient woodland in line with the 2005 'Keepers of Time' policy.	
Whilst this plan moved the woodlands towards the goal of "Keepers of Time" it failed in part to fully prioritise the prompt removal of invasive species, and appreciate the impacts of this approach.	Prioritises removal of invasive species to protect AW and PAW sites.
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 previously unidentified heritage features within the Heritage Extension for future reference.
The protection and enhancement of veteran trees/trees of special interest (TSI) and recruitment of future generations of veteran trees/TSI.	
For both ASNW and PAW sites management of veteran trees was identified as an objective with thinning work maintaining and enhancing TSI interest.	TSI will continue to be identified and recorded to improve the spatial data set currently held in conservation extension. The planning of harvesting should look to identify and record previously unrecorded TSI and harvesting operations will follow the FC Ops 31 TSI guidance brought out in 2015-2016.





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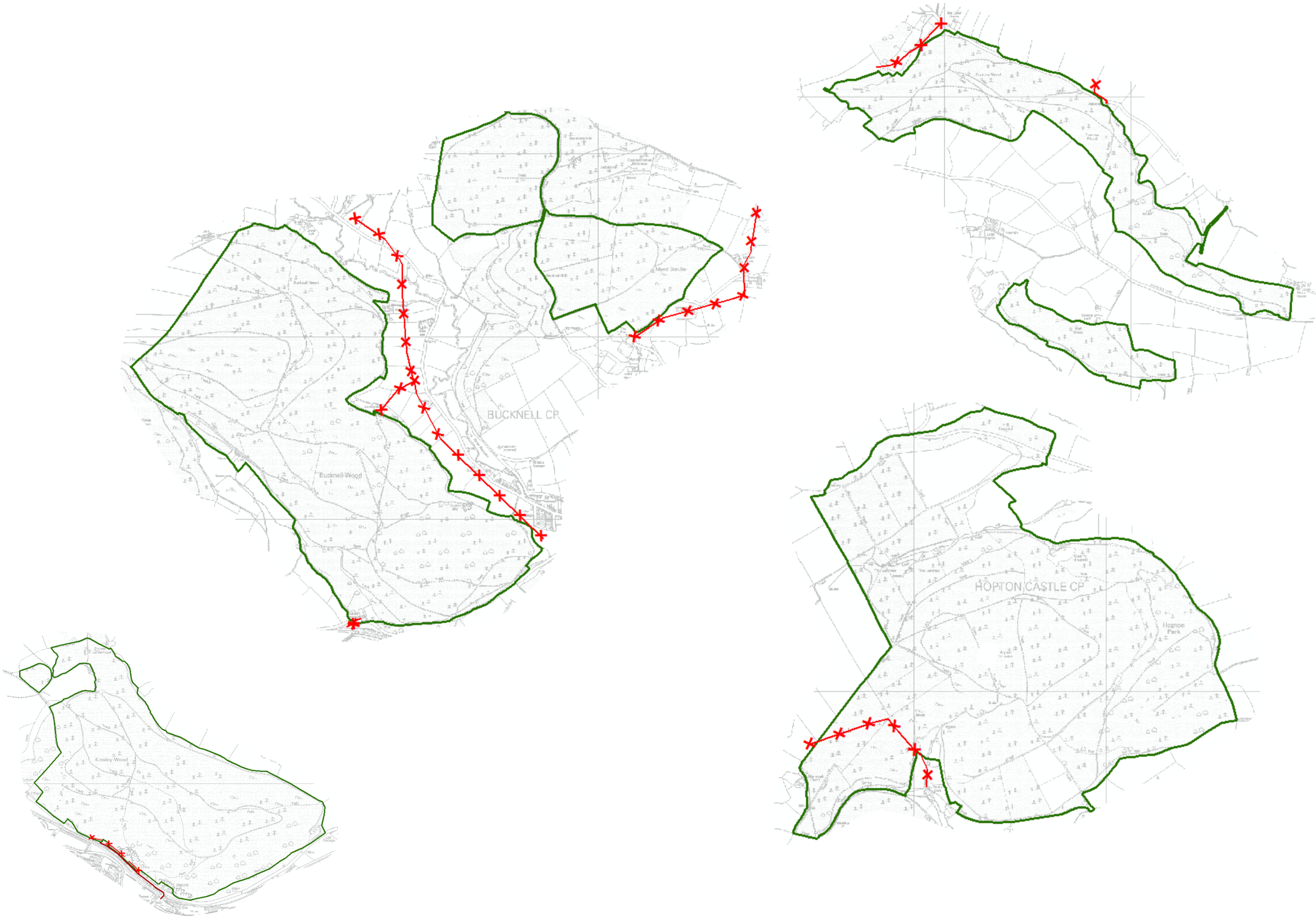
Utilities

Legend

- Powerline Overhead
- Gas Pipeline

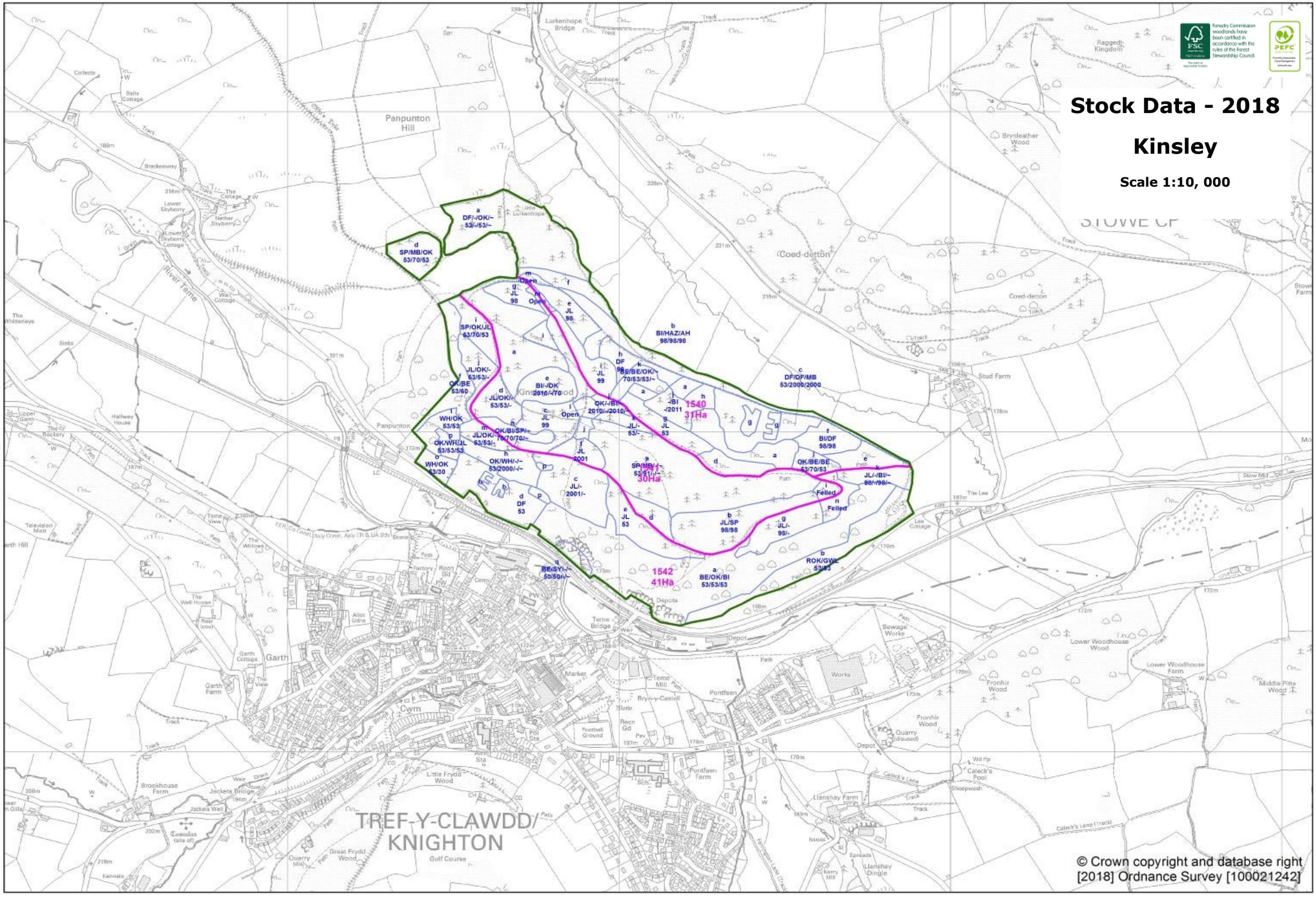


Stock Data - 2018

Kinsley

Scale 1:10, 000

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



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Stock Data - 2018

Bucknell Wood

Scale 1:10, 000

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Stock Data - 2018

Bedstone Hill &

Bucknell Hill

Scale 1:10, 000

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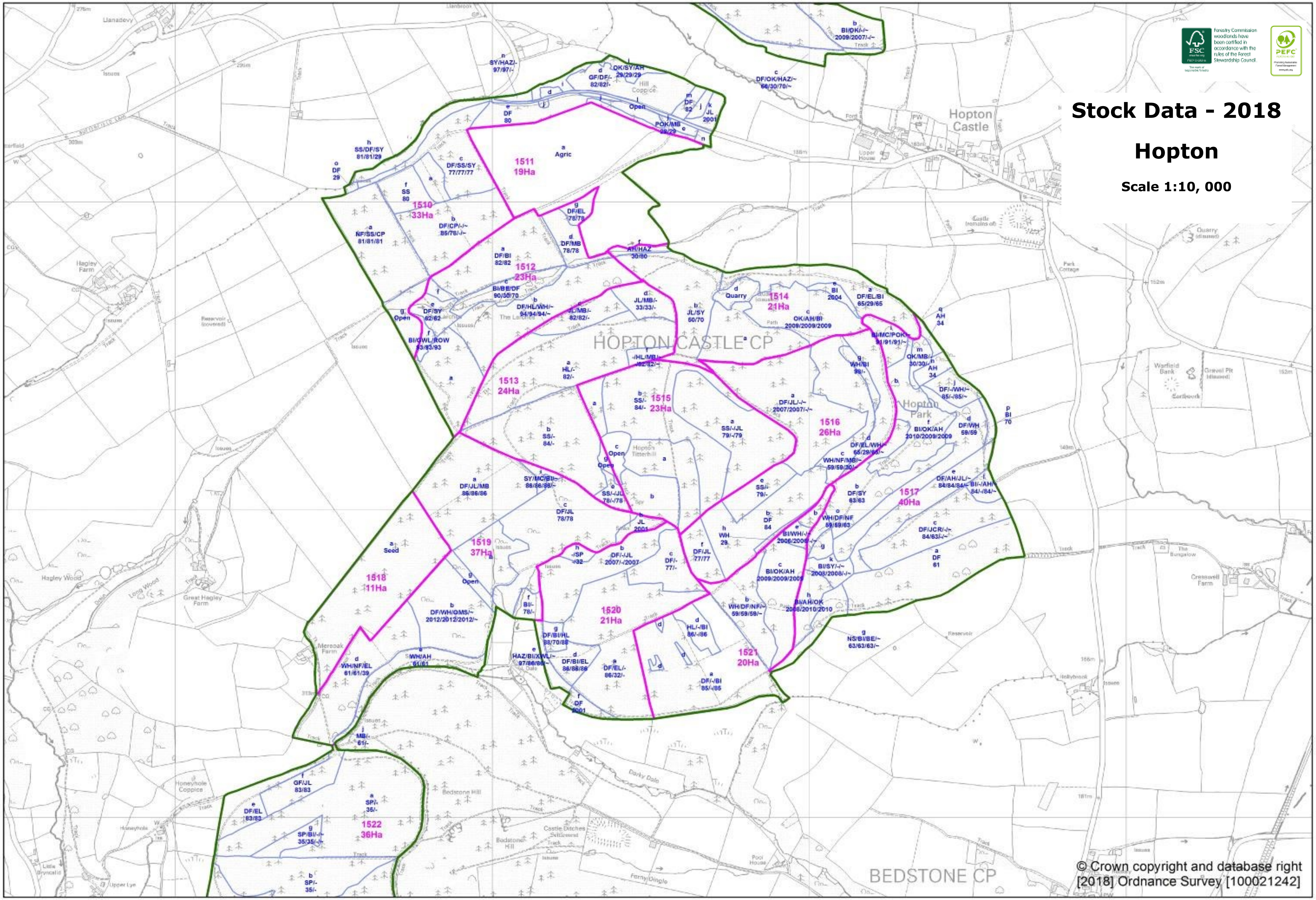
Stock Data - 2018
Hopton
Scale 1:10, 000
1510 33Ha
1511 19Ha
1512 23Ha
1513 24Ha
1514 21Ha
1515 23Ha
1516 26Ha
1517 40Ha
1518 11Ha
1519 37Ha
1520 21Ha
1521 20Ha
1522 36Ha
HOPTON CASTLE CP
BEDSTONE CP
Hopton Castle
Hopton Park
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[2018] Ordnance Survey [100021242]

Stock Data - 2018

Purslow &

Well Wood

Scale 1:10, 000

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

1500 24Ha
a WH/RON/WH 55/55/55
b WH/-/AH/- 66/-/-
c DF/AH/BI 55/55/55
d HL 2002
e WH 2000
f PO 91
g BI/HAZ 98/98
h DF/SB/WH/- 98/98/98/-

1501 18Ha
a HL 2002
b DF/BI/- 55/55/-
c SP/BI 2002/90
d OK/-/BI/- 64/-/2002/-
e Felled

1502 17Ha
a JL 54
b DF/DF 54/54
c ROK/-/HAZ 54/-/2002
d GF/GF/DF 54/54/54
e OK/OK 2015/2015
f -/OK/OK/- -/2015/2015/-
g /MB/HAZ -/2002/2002
h DF 2002
i -/DF/BI/- -/2002/2002/-

1503 21Ha
a DF/-/BI 2002/-/2002
b JL/BI/- 98/98/-
c BI/ROK 98/98
d ROK/-/BI 64/-/2002
e BI 2002
f -/DF/BI -/98/98
g OK/HAZ/-/- 1860/98/-/-

1504 19Ha
a DF/-/EL 66/-/66
b BI/OK/-/- 2009/2007/-/-
c DF/OK/HAZ/- 66/30/70/-
d BI/OK/- 2000/2010/-

1510 33Ha
a NF/SS/CP
b DF/CP/-/- 85/78/-/-
c DF/SS/SY 77/77/77
d OK/SY/AR 29/29/29
e DF 80
f SS 80
g DF/EL 78/78
h SS/DF/SY 81/81/29
i GF/DF/- 82/82/-
j Open
k JL 2001
l POK/MB 99/29
m DF 82
n SY/HAZ/- 97/97/-
o DF 29

1511 19Ha
a Agric

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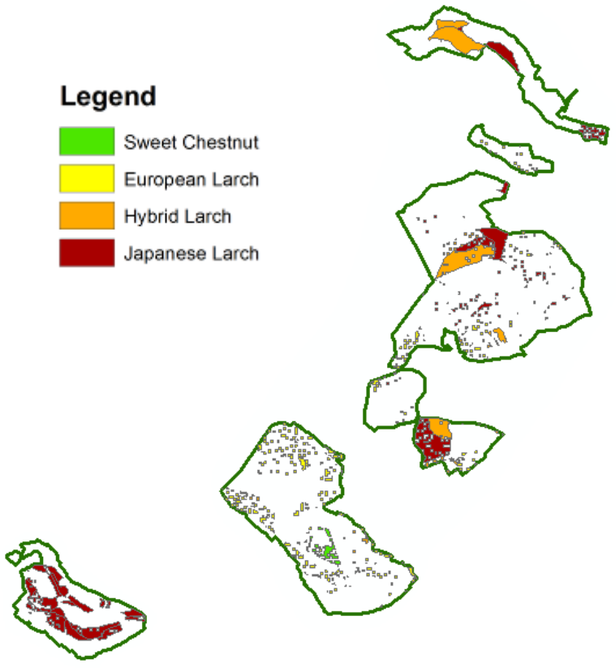
Pests & Diseases

Name: *Phytophthora ramorum* (PR)

First appearance: 2009

Attacks: Larches

P. ramorum was first found in the UK in 2002 and until 2009 in the woodland environment had largely been associated with rhododendron species acting as a host from which spores are produced. In August 2009 P. ramorum was found on a small number of dead and dying Japanese Larch in South West England, causing particular concern were some affected trees that were not in close proximity to infected rhododendron. This showed a significant change in the dynamics of the disease than experienced previously. Where density of sporulation is high, P. ramorum also has also been found to have the ability to infect other species including sweet chestnut, beech, birch, oak, Douglas fir and Western hemlock. On some sites there is little or no rhododendron present. It is now known that Japanese larch can produce very high quantities of disease-carrying spores when actively growing in spring and summer, at much higher levels than those produced by rhododendron. These can be spread significant distances in moist air. PR is a notifiable disease dealt with by felling the infected area under a statutory plant health notice (SPHN) issued through FERA and the Forestry Commission, although it is thought that European Larch may have a higher resistance to infection than other species of larch.



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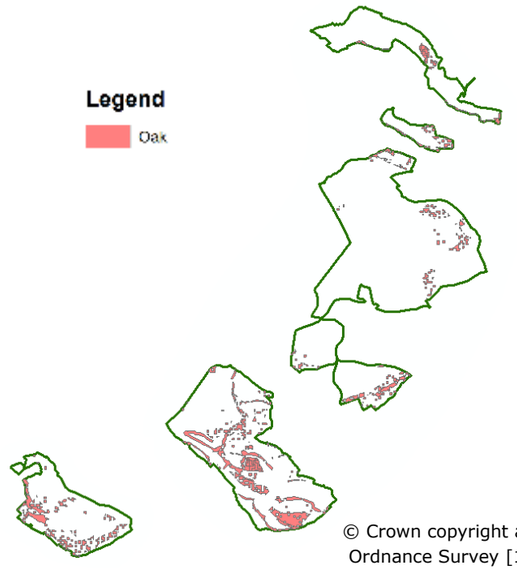

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Name: Oak 'dieback' or 'decline'

First appearance: unknown

Affects: Oak

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

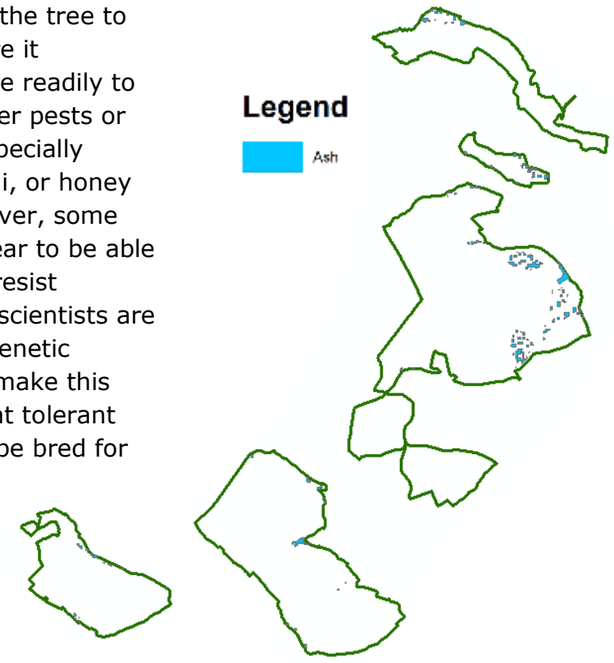
Name: *Hymenoscyphus fraxineus (Chalara fraxinea)*

First appearance: currently N/A

Attacks: Ash

Rampant in Europe, showing up in 2012 mainly in East Anglia and along the East coast of England. H.fraxineus was found in this part of West England Forest District in 2015.

H.fraxineus causes leaf loss, crown dieback and bark lesions in affected trees. Once a tree is infected the disease is usually fatal, either directly, or indirectly by weakening the tree to the point where it succumbs more readily to attacks by other pests or pathogens, especially Armillaria fungi, or honey fungus. However, some ash trees appear to be able to tolerate or resist infection, and scientists are studying the genetic factors which make this possible so that tolerant ash trees can be bred for the future.



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Ordnance Survey [100021242]

Name: Dothistroma Needle Blight (DBN)

First appearance: mid 1990s

Attacks: Pine species

Often referred to as Red Band Needle Blight (RBN) first seen in the 60's and reappeared in the early 1990s. RBN 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. Some pines are more susceptible than others, with some thinned areas are showing evidence of improvement.

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Ordnance Survey [100021242]

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

Ecological Site Classification version 4

Eight sites were run through Esc but only run using default parameters with fresh brash. (see separate PDF files)

These sites were:

1. Bucknell compartment 1531 Grid ref SO335750
2. Bucknell compartment 1533 Grid ref SO325748
3. Bucknell compartment 1533 Grid ref SO329746
4. Hopton compartment 1510 Grid ref SO346779
5. Hopton compartment 1512 Grid ref SO349778
6. Hopton compartment 1515 Grid ref SO356770
7. Hopton compartment 1516 Grid ref SO361774

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Glossary

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

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Rotation		Generally a commercial term used to describe the length of time an area of trees is growing for, from the time of planting to the time of felling. For broadleaves a rotation is generally a lot longer than that of conifer species* and can broadly speaking be anywhere between 80 years to 3-400 years, as opposed to conifer crops whose rotation is generally shorter but can vary from 20-25 years to 120 years plus. *The exception being that of coppice where rotation length can vary from 5 or 6 years up to 30 years plus depending on management objectives. "First rotation" would refer to an area of wood planted on open ground not previously wooded. And so "second rotation" is one where woodland has been cleared and replanted.
Shelterwood		A management system that is applicable to conifer or broadleaf, where tree canopy is maintained at one or more levels without the need to clear-fell the whole site. Felling can occur, but generally in small "groups" whose size shape and spatial distribution will vary depending on site conditions. The "groups" are then either: allowed to develop and establish by the use of natural regeneration, are planted or are established using a mixture of both techniques. This known as a "group shelterwood system" A variation on this is "Single tree selection". This variation removes individual trees of all size classes more or less uniformly throughout the stand to maintain an uneven-aged stand and achieve other stand structural objectives. While it is easier to apply such a system to a stand that is naturally close to the uneven-aged condition, single tree selection systems can be prescribed for even-aged stands, although numerous preparatory thinning interventions must be made to create a stand structure where the system can truly be applied.
Silviculture		A term coined during late 19th century from the Latin *silva meaning* 'wood' and the French *culture* meaning 'cultivation' and so Silviculture is the art and science of controlling the establishment, growth, composition, and quality of forest vegetation to achieve a full range of forest resource objectives.
Stand		A group or area of trees that are more or less homogeneous with regard to species composition, density, size, and sometimes habitat.
Thin	TH	Selective removal of trees from a wooded area, giving remaining trees more space to grow into larger trees. Thinning is done to: Improve the quality and vigour of remaining trees. Remove trees interfering with mature or veteran broadleaf trees. Give space for tops (or "crowns") of broadleaf trees to develop and potentially act as a future seed source. Give space for natural regeneration to grow and develop with the intention of recruiting these younger naturally grown trees as a part of the future woodland structure. Create gaps for group planting or enrichment. Remove species of tree that may compromise the intended management objective of the woodland eg: non-native or invasive species such as Sycamore, Western Hemlock or birch. Improve the economic value of a wood. Help realise opportunities to enhance ecological value. **NOTE:** This list is not in any order of priority and will vary depending on management objectives.
Yield Class	YC	A method of measuring the growth rate or "increment" of a crop of trees by age and height; measured in m3 per Ha per annum. E.g. A crop with a YC of 16 is one that has an annual increment of more than 16m3 but less than 17m3, although generally only even numbers are used when stating YC.