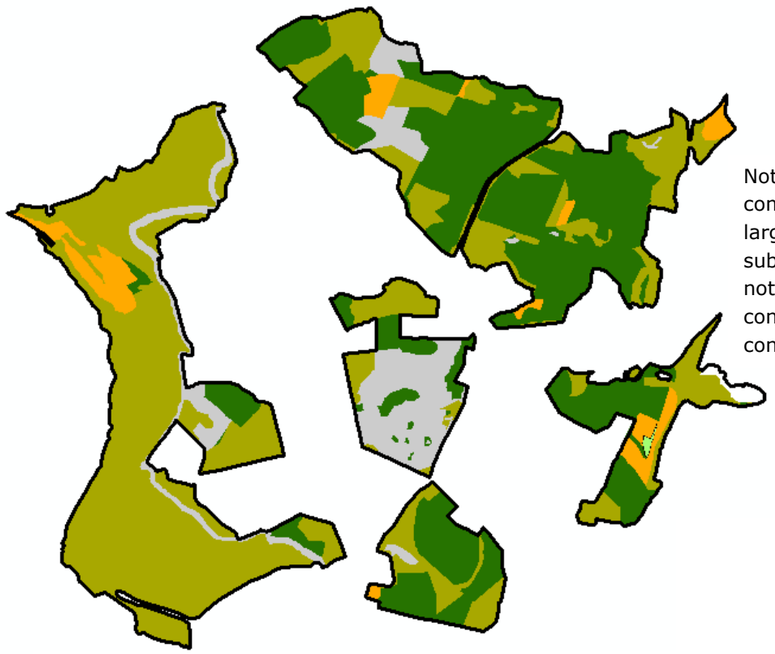
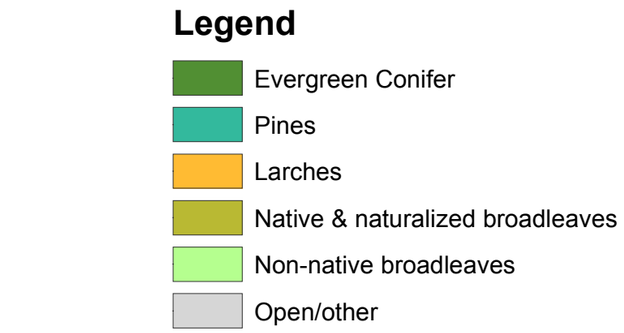
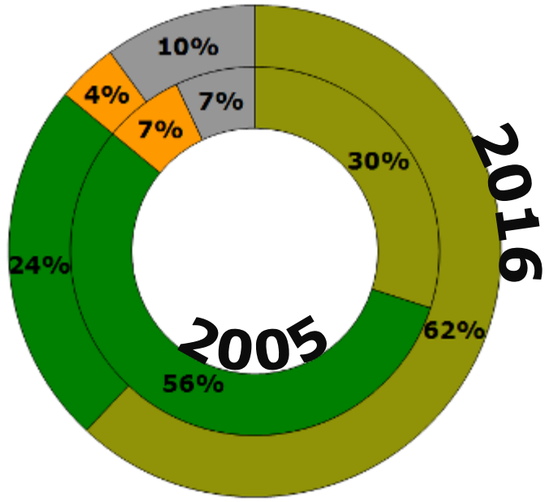


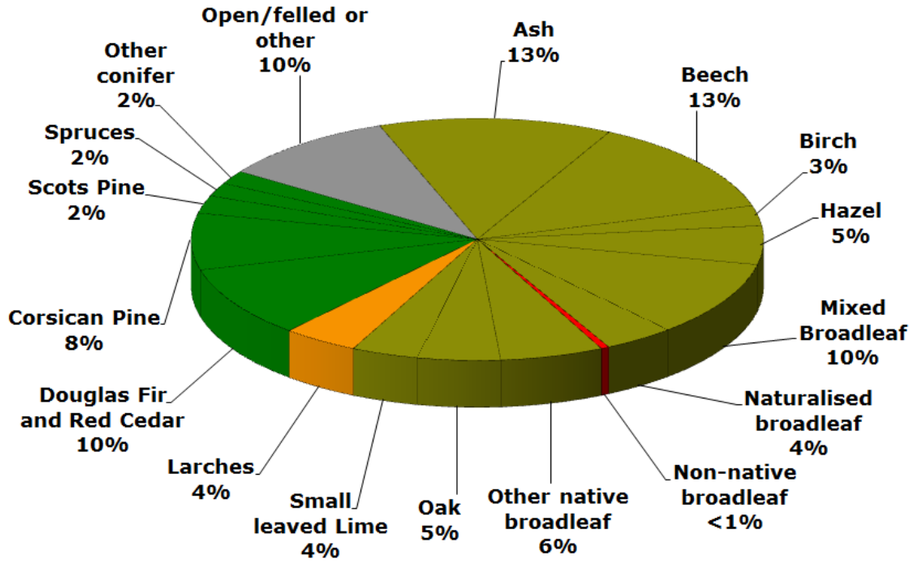
Note: Beech and sweet chestnut are considered 'naturalised'



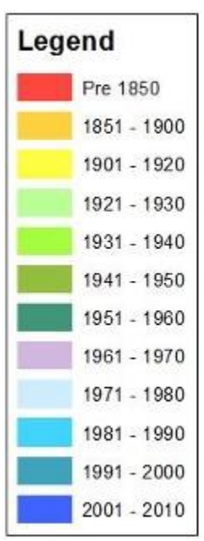
Note that woodland composition is based on the largest component of the subcpt and therefore will not fully reflect the actual content or distribution of conifer or broadleaf.

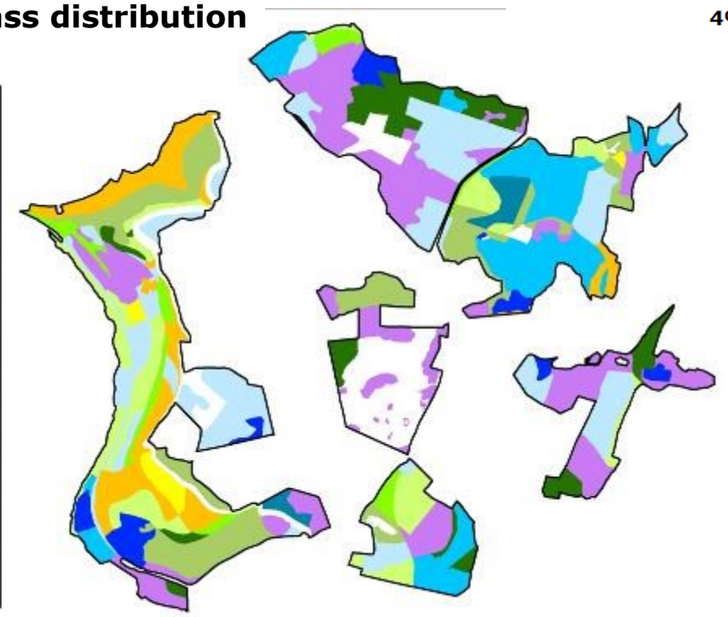


Overall woodland composition



Age Class distribution





Woodland Composition

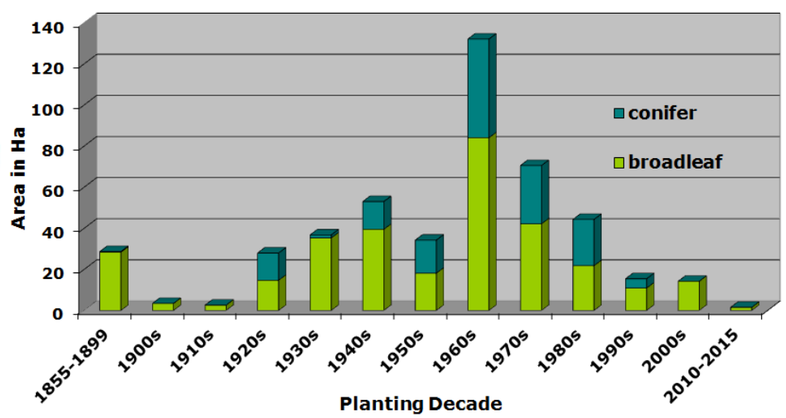
Broadleaf cover already accounts for two thirds (62% or 329ha) of the overall Forest Plan area with the majority of broadleaves being focussed within Wyeside, where broadleaves equate to just over a third of the plan area (173Ha). Historically, with Tintern on the doorstep of Wyeside and the River Wye for transport, Wyeside would have been a great resource for fuelwood, charcoal as well as furniture making and buildings, especially for Tintern Abbey and the local villagers evidenced by large parts of high forest being been derived from coppice and numerous charcoal hearths; with Ash, Beech, Hazel, lime and Oak being prevalent with many of the younger stands being cut more recently during the last 30 years. Among the minor species of broadleaf are: Field Maple, Elm Yew, Whitebeam, Holly and Hawthorn. Within each of the remaining Woodlands conifer and broadleaf splits pretty much evenly at 45:55% in favour of broadleaf.

At the peak of planting in the 1960's, across the whole plan area, over 120Ha was planted at 36:64% in favour of broadleaf, this tailed off in the 1990's and 2000's where under 20 Ha of predominantly broadleaf were planted.

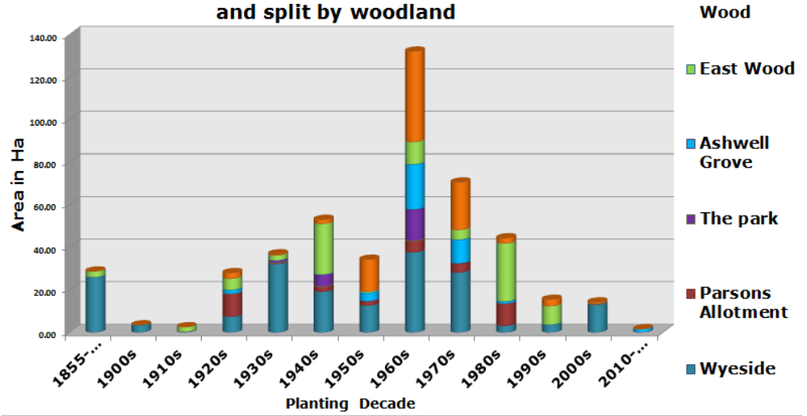
There has also been an increase in open space over the last ten years from 36 Ha to over 50Ha in 2015. Most of the open space occurs in The Park. Here almost 28Ha is managed as lowland heath priority habitat, in partnership with Gloucestershire Wildlife Trust.

Around 26% of the plan area is Ancient Woodland with a further 49% being PAWs. One of the aims of the Forest Plan is to continue restoration of PAWs areas back to a native condition. PAWs areas outside of SSSI sites are considered restored once the native content reaches 80% and within SSSI the restoration is achieved at 95%. One must note that this is a long term aspiration, so it is unlikely that all PAW sites will be restored within the time frame of this plan.

Conifer and broadleaf age class distribution



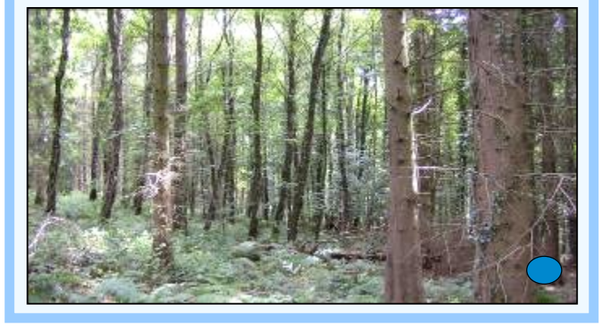
Age Class shown by planting decade and split by woodland



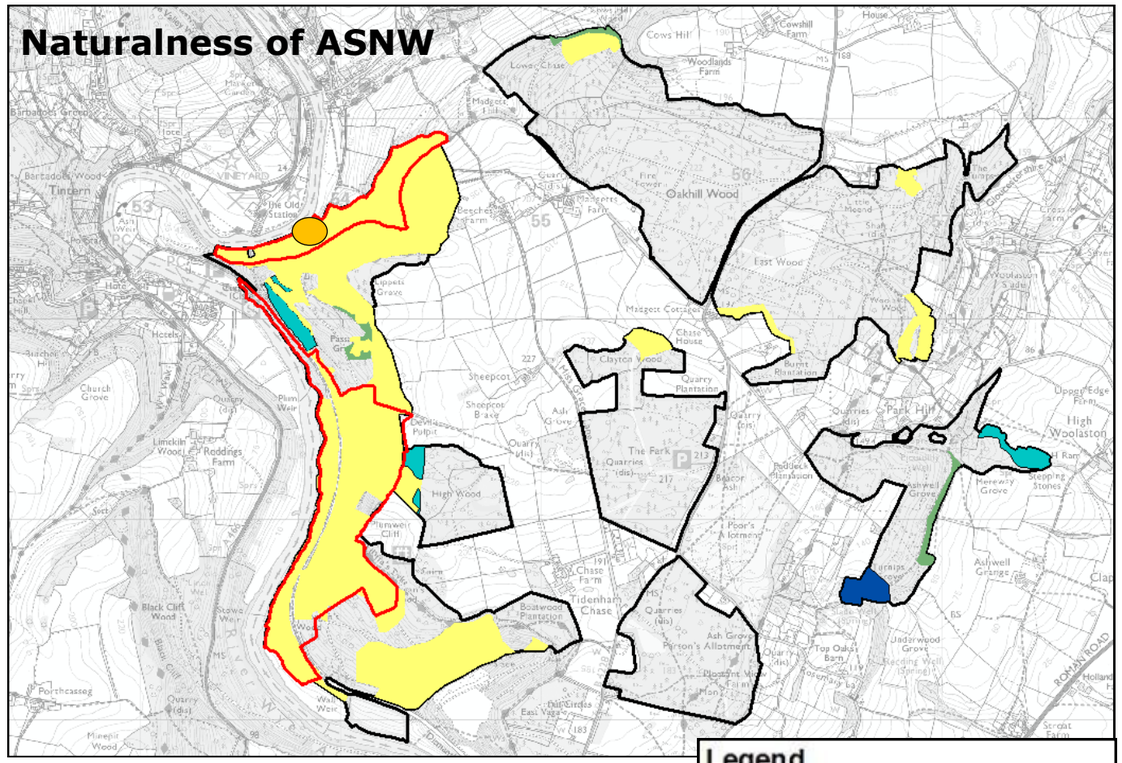
Class 1 – Semi-Natural Woodland
(> 80% site native species)

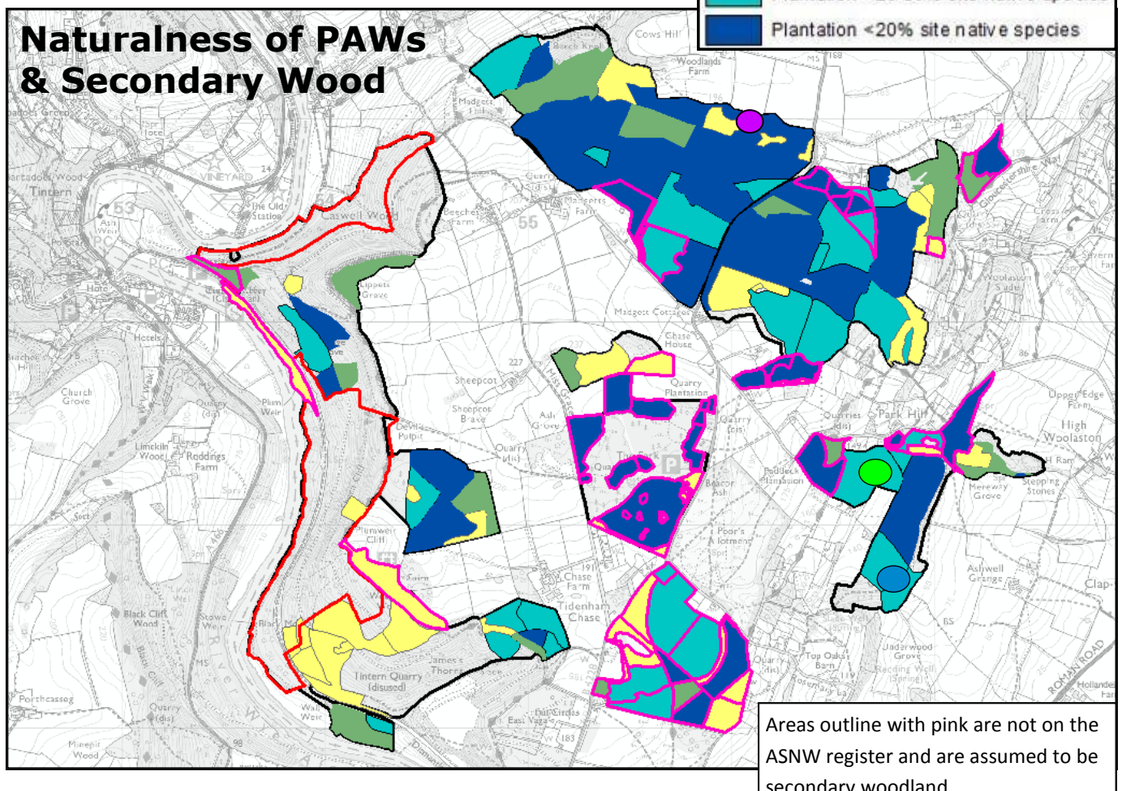
Class 2 – Plantation Woodland
(50 - 80% site native species)

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



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





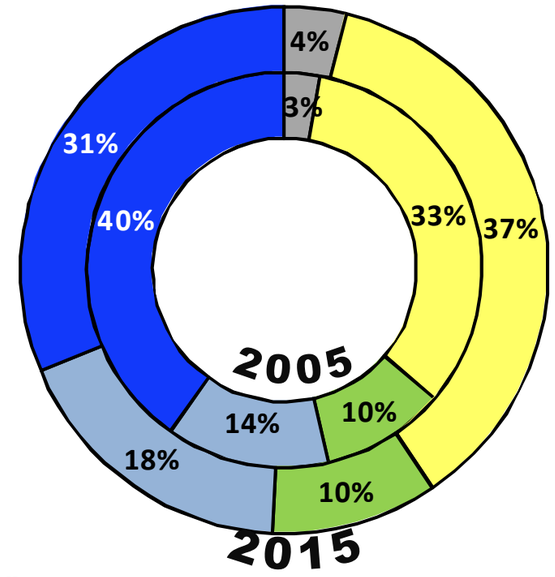
Areas outline with pink are not on the ASNW register and are assumed to be secondary woodland.

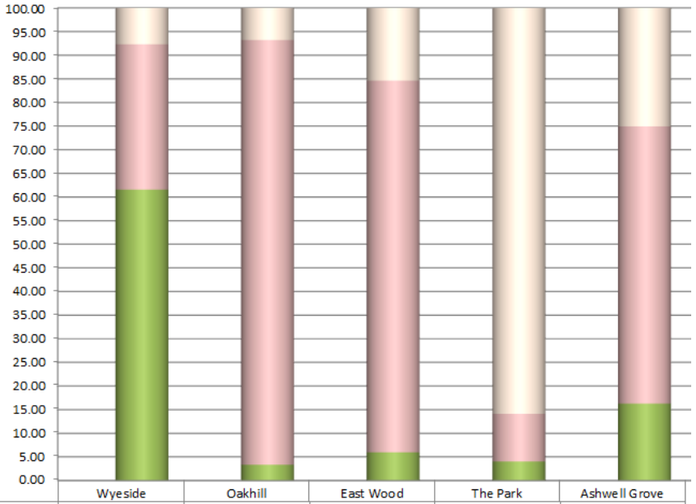
Woodland naturalness

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.

Classes 2, 3 and 4 are classified as Plantations on Ancient Woodland Sites (PAWs) the majority of which can be found in Oakhill wood, East Wood and Ashwell Grove. Areas of Semi-Natural Woodland (Class 1 - > 80% site native species) are mostly found in Wyeside.

Whilst transformation of Classes 2, 3 and 4 PAWs towards Class 1 is an objective of this Plan restoration will predominantly take place through thinning



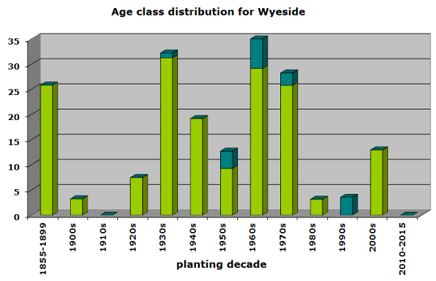


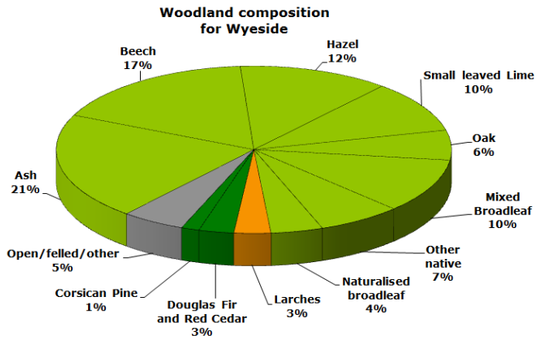
	Wyeside	Oakhill	East Wood	The Park	Ashwell Grove
Secondary	7.67	6.78	15.39	85.90	25.05
PAW	30.77	89.90	78.62	10.06	58.67
Ancient Woodland	61.57	3.32	5.99	4.04	16.28

ASNW register shown by percentage of woodland area

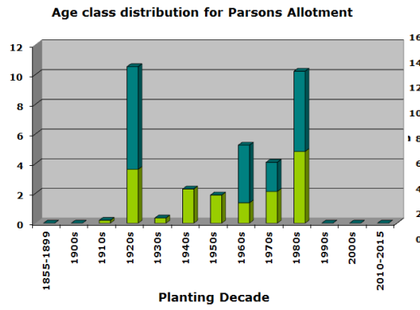
Ancient Woodland PAW Secondary

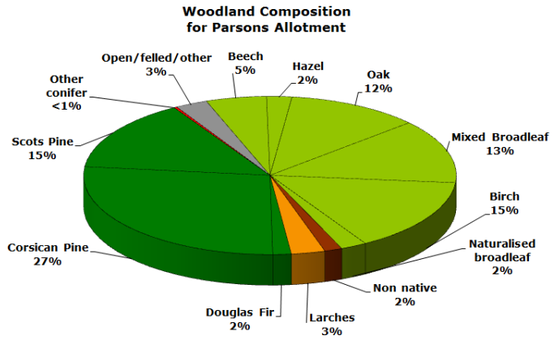
WYESIDE

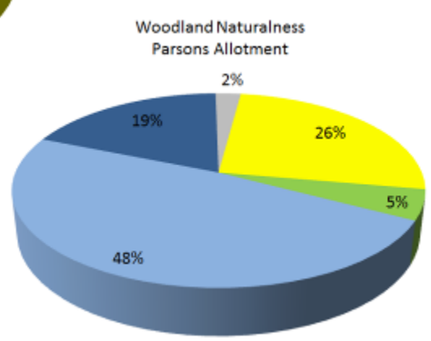




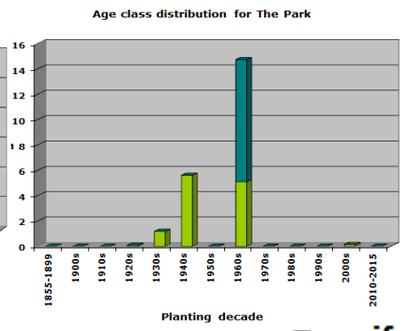
PARSONS ALLOTMENT

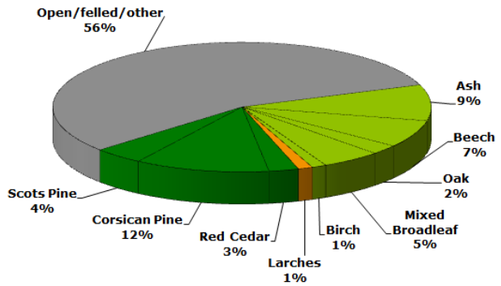


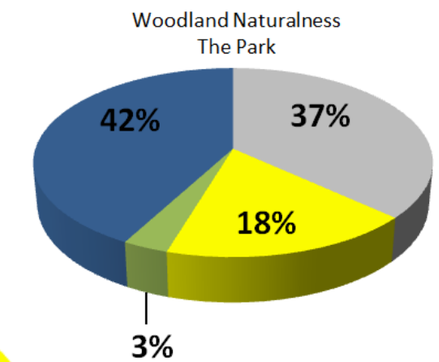




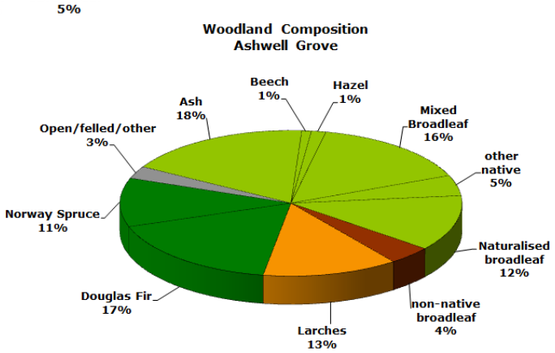
THE PARK

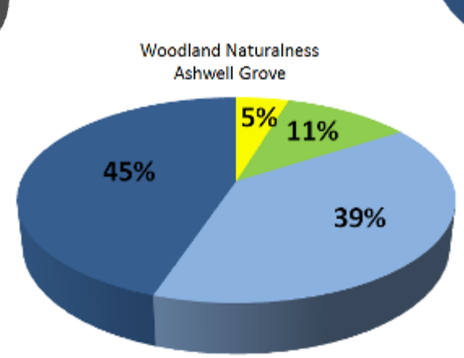




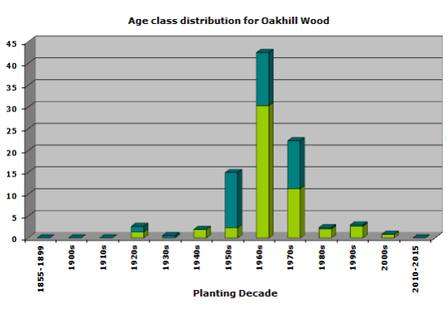


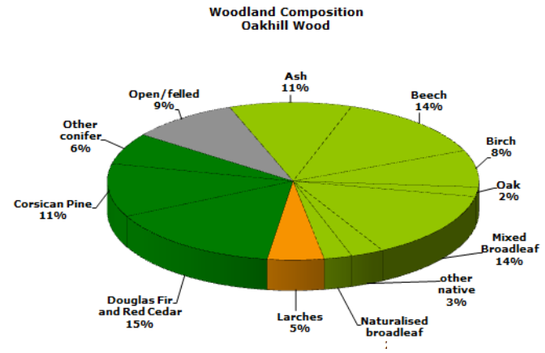
ASHWELL GROVE

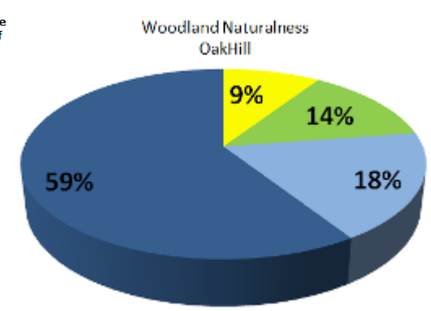




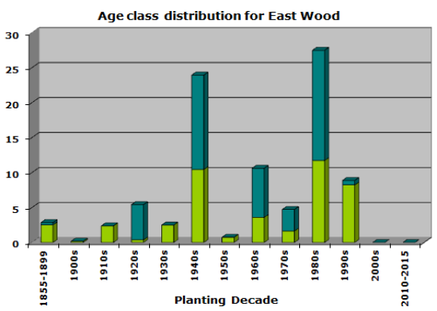
OAKHILL WOOD

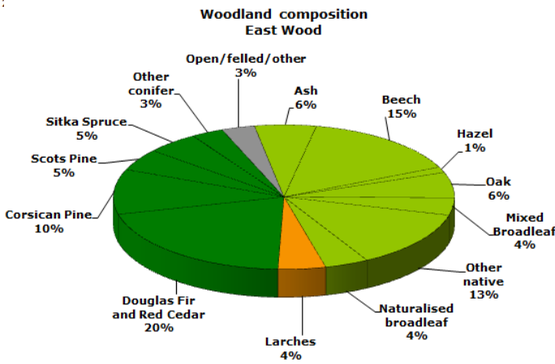


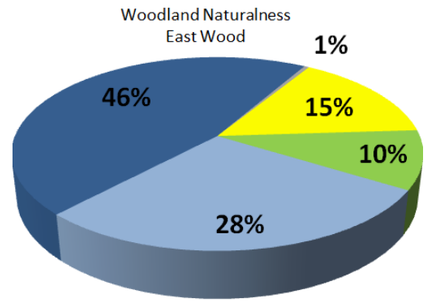




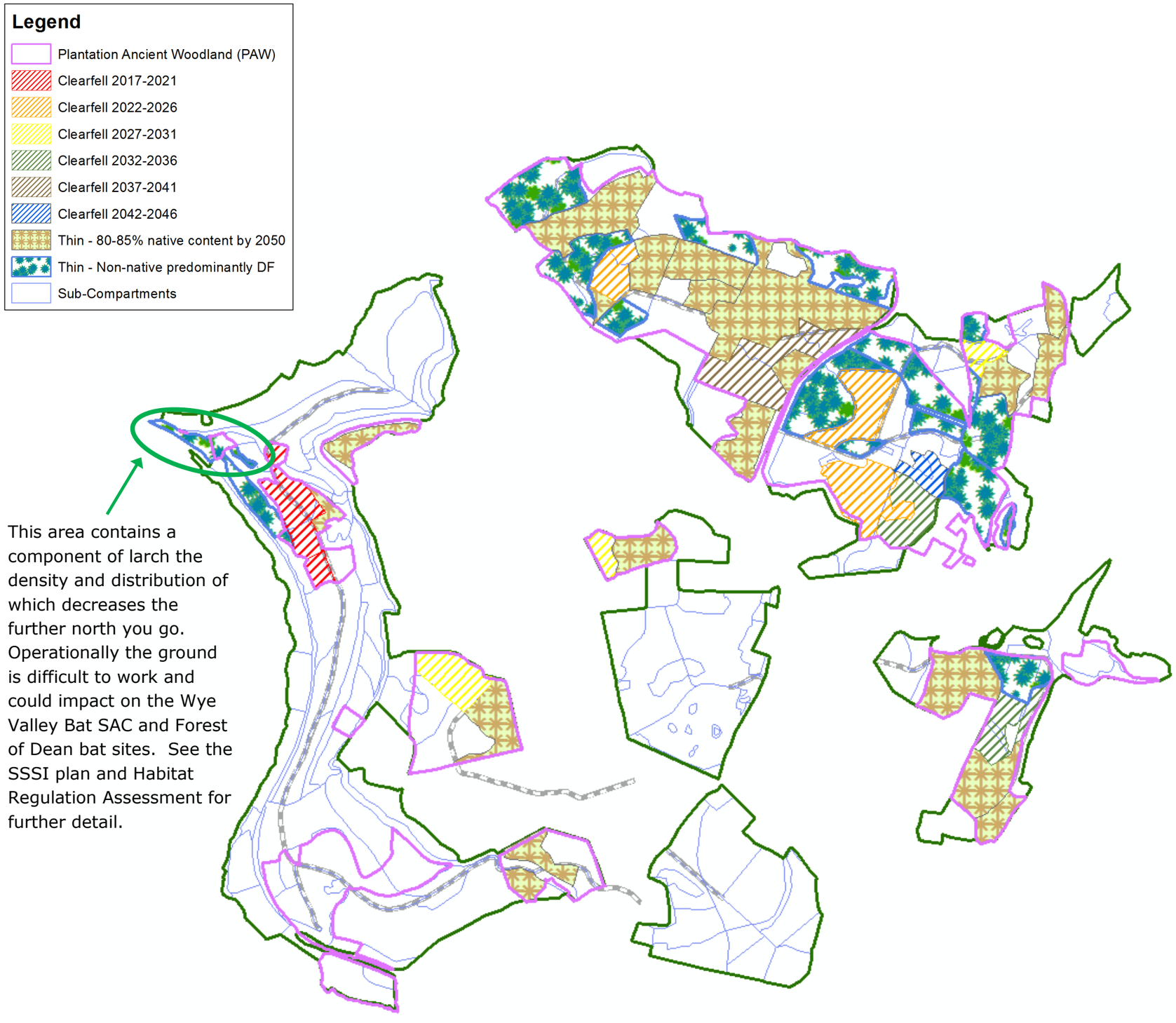
EAST WOOD







conifer broadleaf



This area contains a component of larch the density and distribution of which decreases the further north you go. Operationally the ground is difficult to work and could impact on the Wye Valley Bat SAC and Forest of Dean bat sites. See the SSSI plan and Habitat Regulation Assessment for further detail.

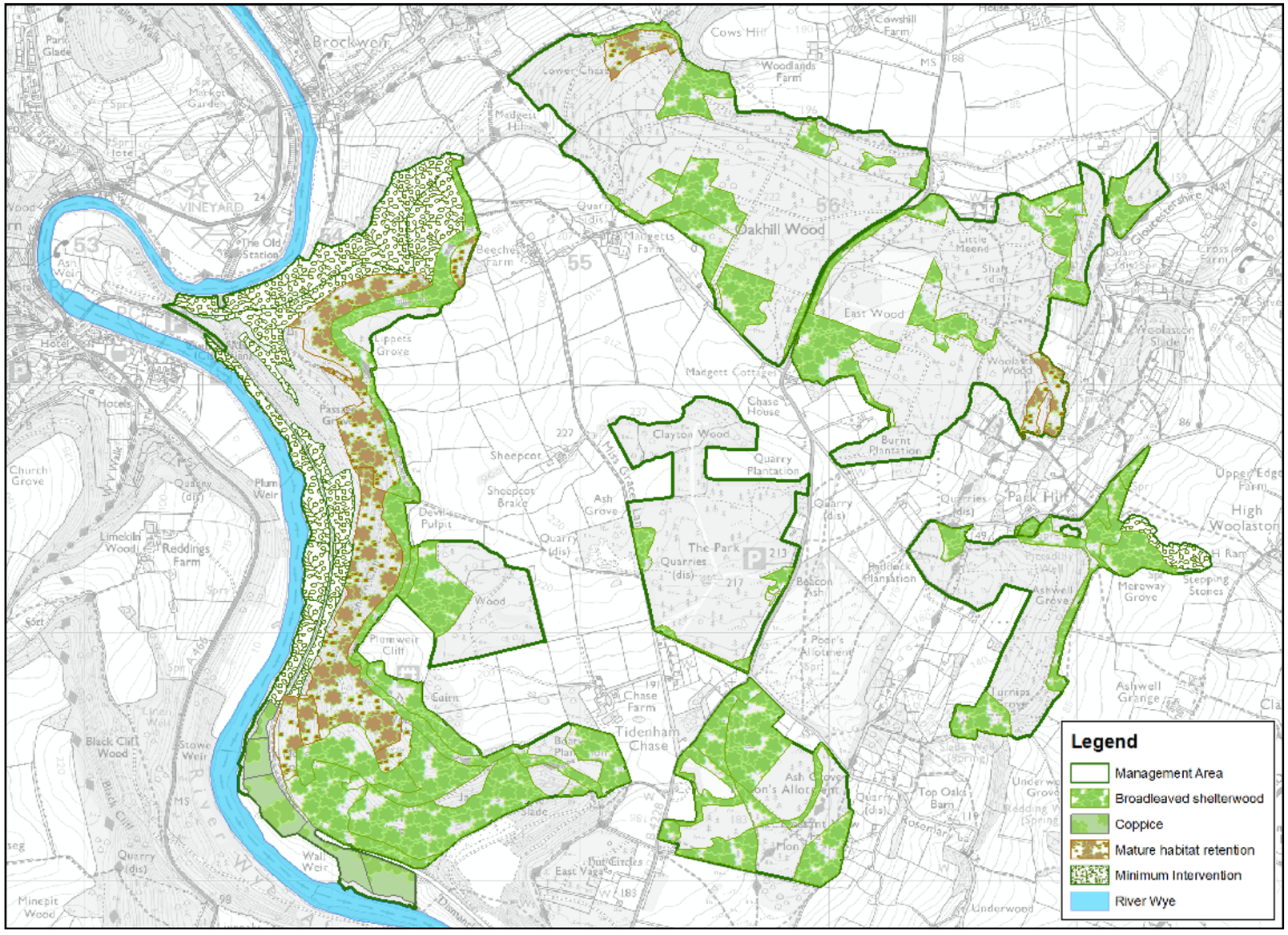
PAWs Management

Restoration of Plantations on Ancient Woodland Sites (PAWs) has already begun through thinning and felling during the previous plan period; over time restoration of PAWs areas will continue towards a native condition through the use of extended thinning cycles and targeted clearfelling, that will enable the development of the understory and may take a considerable amount of time/ resource due to native remnants being limited but also in part to the terrain that in some places makes work extremely difficult and awkward, sometimes prohibitive. Therefore a proactive yet realistic approach will be used to transform these sites over a period of time with an eventual aim of PAWs transitioning to one that contains 80% or more of native species. This process 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 should be encouraged especially of birch, ash, beech or oak. Within existing mid rotation broadleaf crops or in SN class 4 woodland where conditions are favourable, this objective may eventually mean considering either under-planting or group felling and 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. 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.

Areas containing Larch and Corsican Pine have been prioritised for clearfelling and reversion to native woodland. By 2027 clearfell reverted back to native condition will amount to around 26Ha. A further 80Ha will be managed through thinning aiming to achieve a native content of 80%+ by 2050. The remaining conifer PAW areas will take longer; containing predominantly Douglas Fir they too will be managed through thinning and are likely to sit within naturalness class 2 or 3 by 2050 with a longer term aim beyond 2050 of reducing the conifer content down to 20%; these are classed as long-term retention and 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.



Broadleaf Management

These sites will be managed using shelterwood/selection systems or coppice. The new crop will generally be instigated and recruited through thinning operations that will favour the best seed trees in order to promote natural regeneration. Or in the case of coppice clear cutting to leave selected standards.

Thinning operations may also be used to provide opportunities for enrichment planting in order to diversify the species composition within or surrounding broadleaf areas. Light levels and grazing pressure from deer will be managed to minimise weed encroachment and regeneration predation following thinning operations. Under-planting and enrichment planting with species such as Lime and Hornbeam may be considered on Ash dominated sites to ensure greater resilience to *Chalara fraxinea*.

Where natural regeneration is struggling to become established, the site will be monitored and enrichment planting maybe considered. It maybe that further intervention is required through thinning to develop the broadleaf components before regeneration is successful or that there are limited seed sources available. Each site will be assessed on its own merits before deciding if under-planting, enrichment planting or further thinning and monitoring is appropriate.

Some areas of broadleaf like those in Oakhill and Eastwood will be thinned to develop their crowns and seeding potential in order to provide a more robust and viable seed source for surrounding conifer crops that are on PAWs. This will help encourage the spread of broadleaf regeneration into the surrounding conifer crops. This maybe a slow process and will be monitored. At some point in the future one may have to consider enrichment planting to ensure a diverse broadleaf composition is achieved.

Monitoring of these crops for regeneration will be an integral part of routine pre-thinning assessment and should inform how the crop is thinned; in combination with the Forest Plan review process.

National Vegetation Classification (NVC)

The woodland NVC describes and categorises the typical composition of semi-natural native woodlands including their associated flora and soil indicator species.

The majority of the plan area consists of National Vegetation Classification (NVC) types W8 Ash/Dogs Mercury and W12 Beech and Dogs Mercury woodlands with some W16 Oak/birch woodlands to the centre of the plan area within The park. These classifications give a good indication of the target future species for PAWs restoration if sites were left to natural succession.

This information can be used to assist with managing woodlands towards greater naturalness through practices such as thinning and regeneration or planting.

However with the onset of diseases such as *Chalara fraxinea* that affects Ash, no Ash is currently being planted, although natural regeneration is being accepted and recruited into the future woodland cover.

Within the Shorncliff and Caswell Wood SSSI of Wyeside, notified for *Tilio-Acerion Woodland*, a native composition of Ash, Wych Elm and Lime as well as Beech, Oak, Hazel, species of Whitebeam, Holly and Hornbeam.