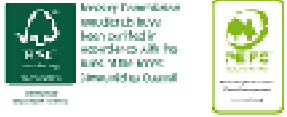


PART 4 – Composition and future management



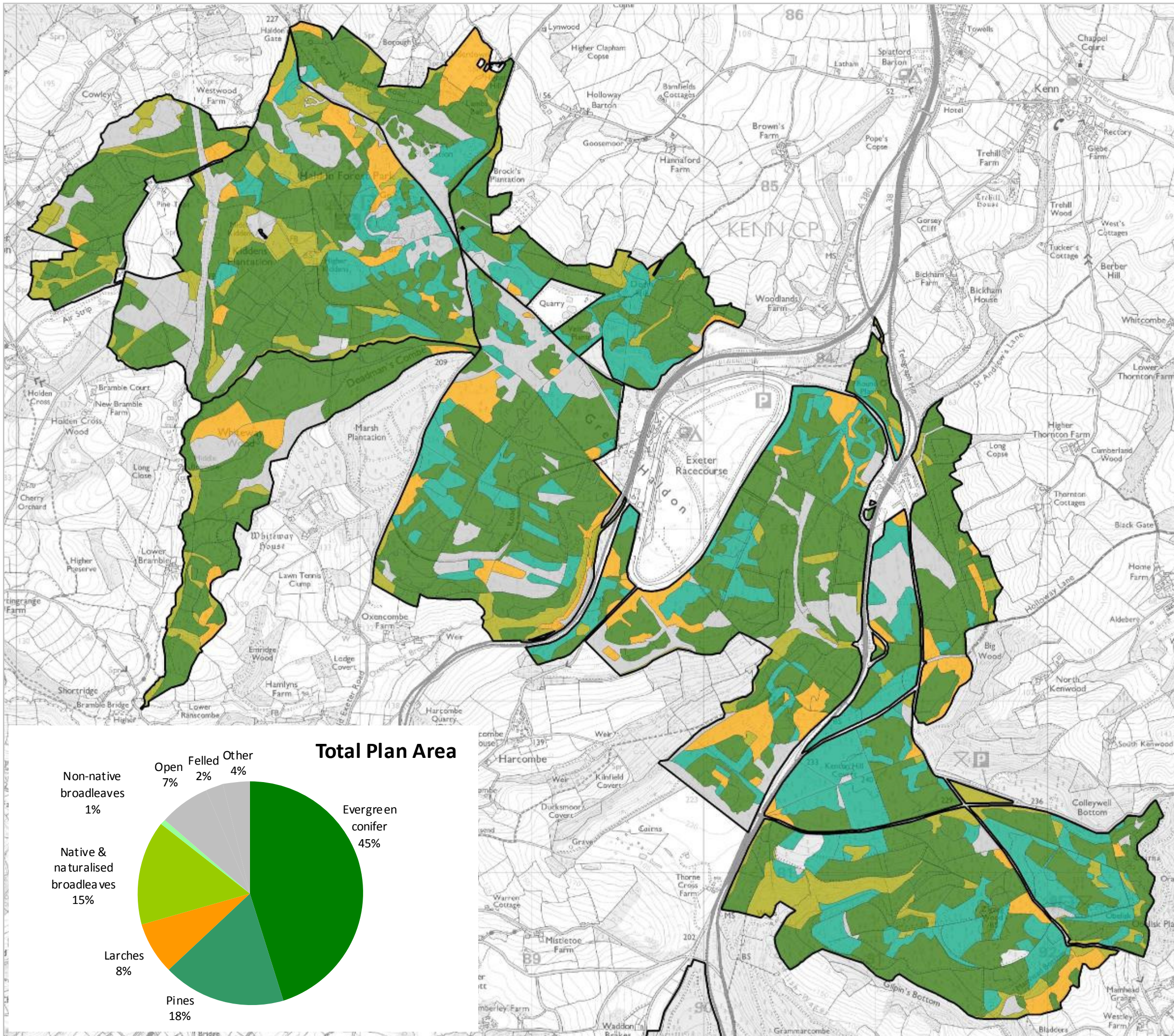


Current Species

The current major conifer components are Douglas fir (389ha) and Sitka spruce (285ha). The Plan area has a considerable amount of pine species growing on site (Scots pine – 195ha and Corsican pine – 105ha).

Birch (54ha) and beech (40ha) make up a significant part of the broadleaf element.

245ha (14%) of the Plan area is made up of open habitat (including permanent open habitat, agricultural, unplanted, felled, mineral workings as well as buildings).



Legend

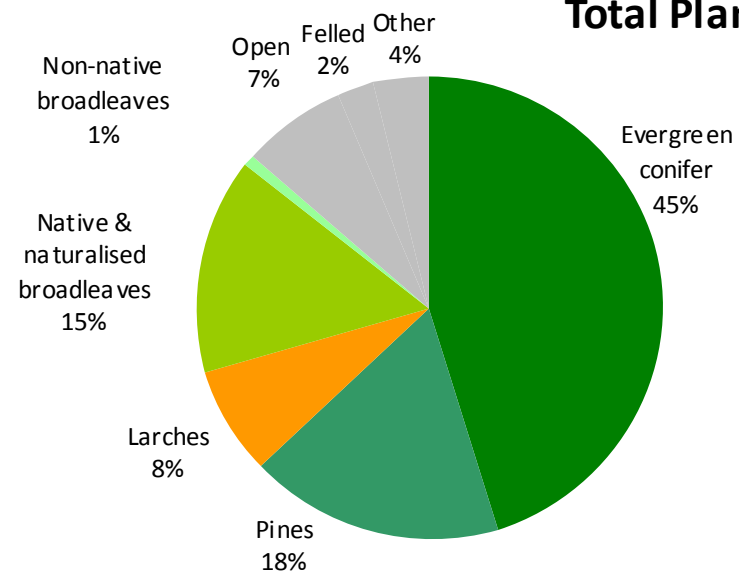
- Evergreen Conifer
- Pines
- Larches
- Native & naturalised broadleaves
- Non-native broadleaves
- Open/other

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

0 0.1250.25 0.5 0.75 1 Miles

© Crown copyright and database right [2018]
Ordnance Survey [100021242]

Total Plan Area

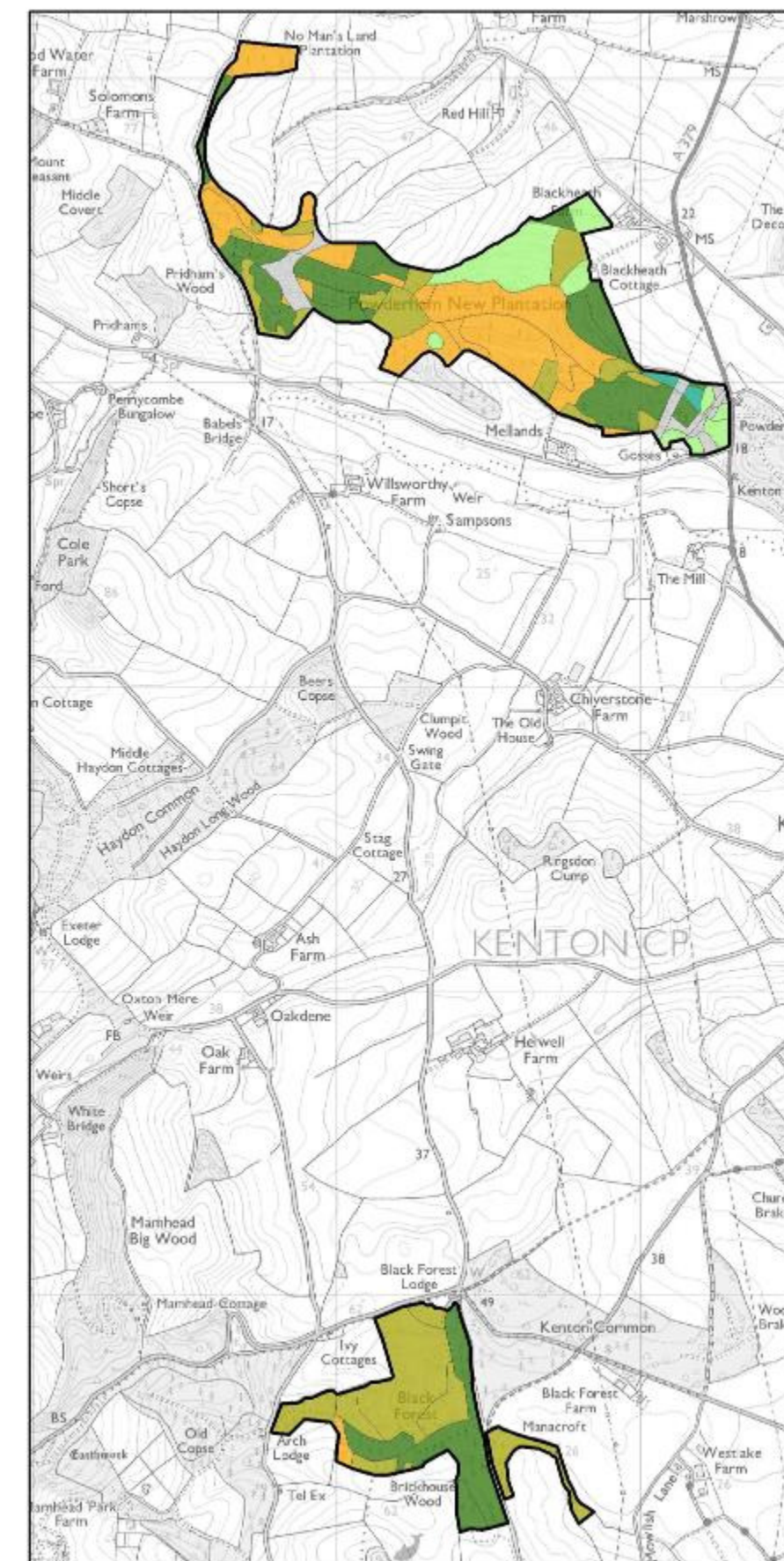
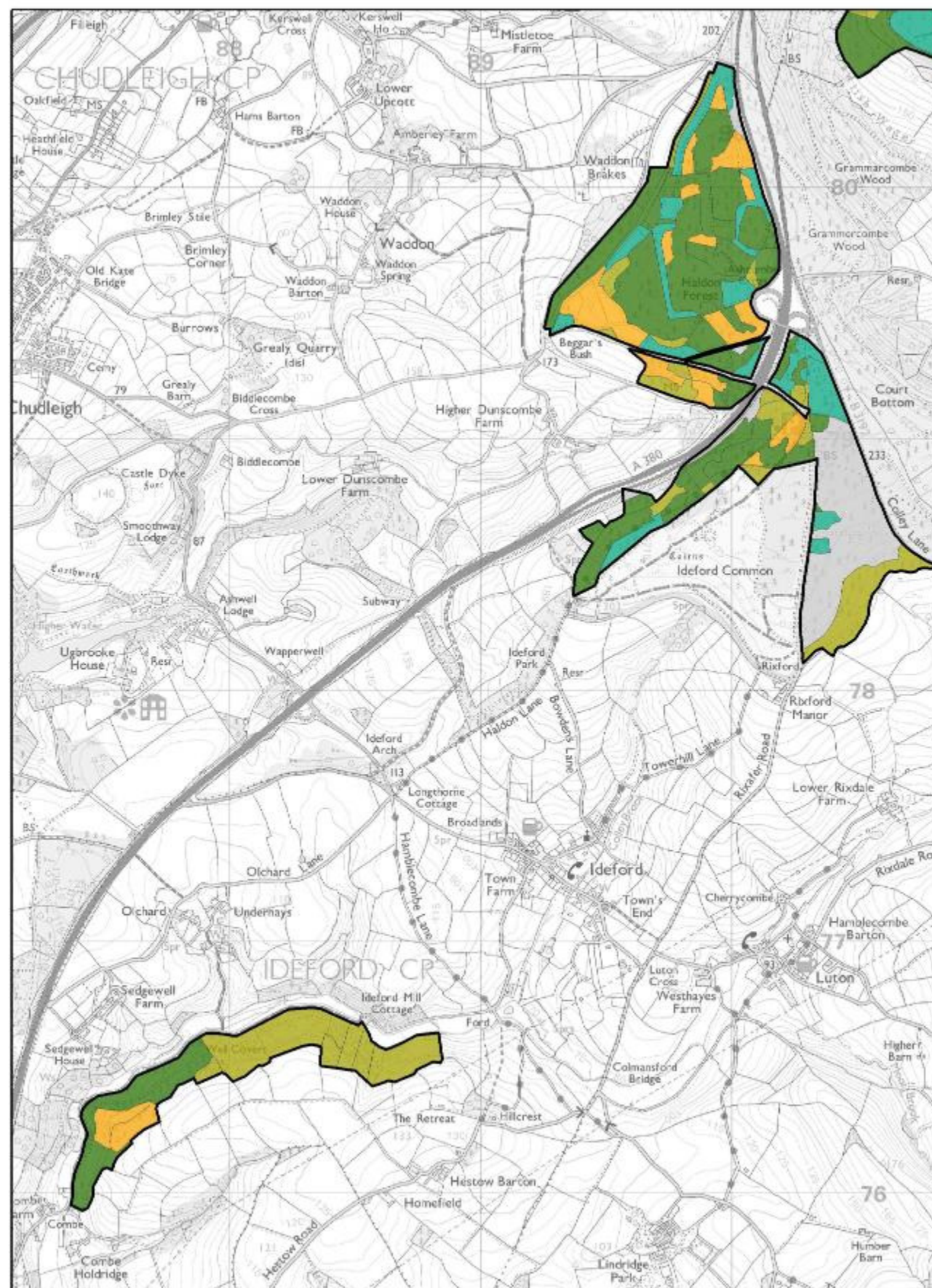
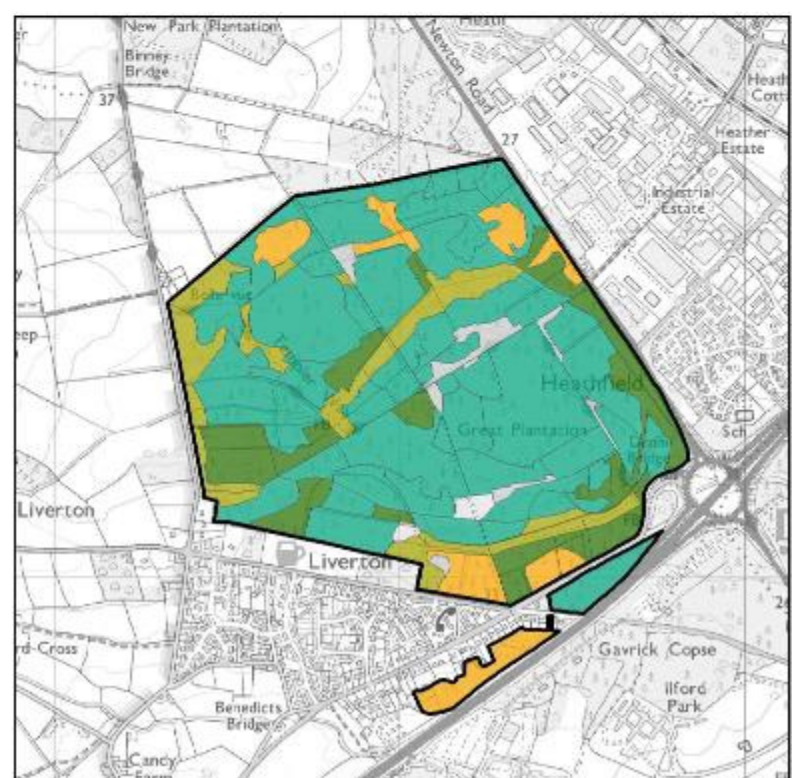
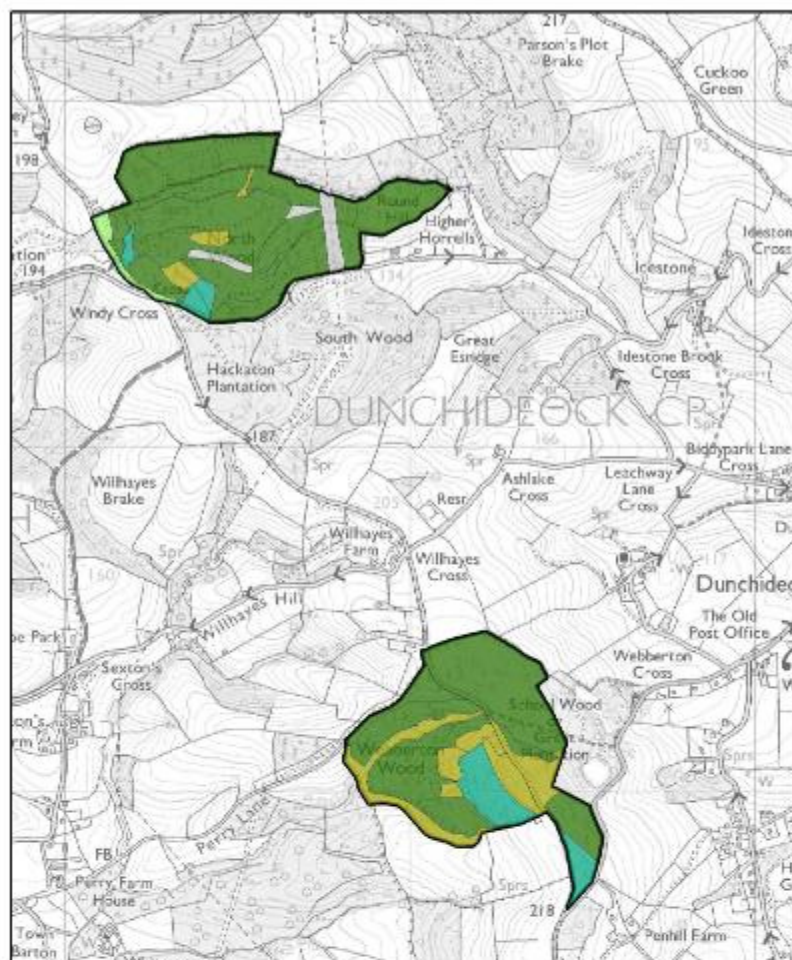


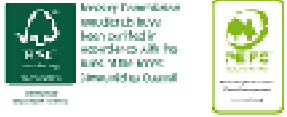


Legend

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

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





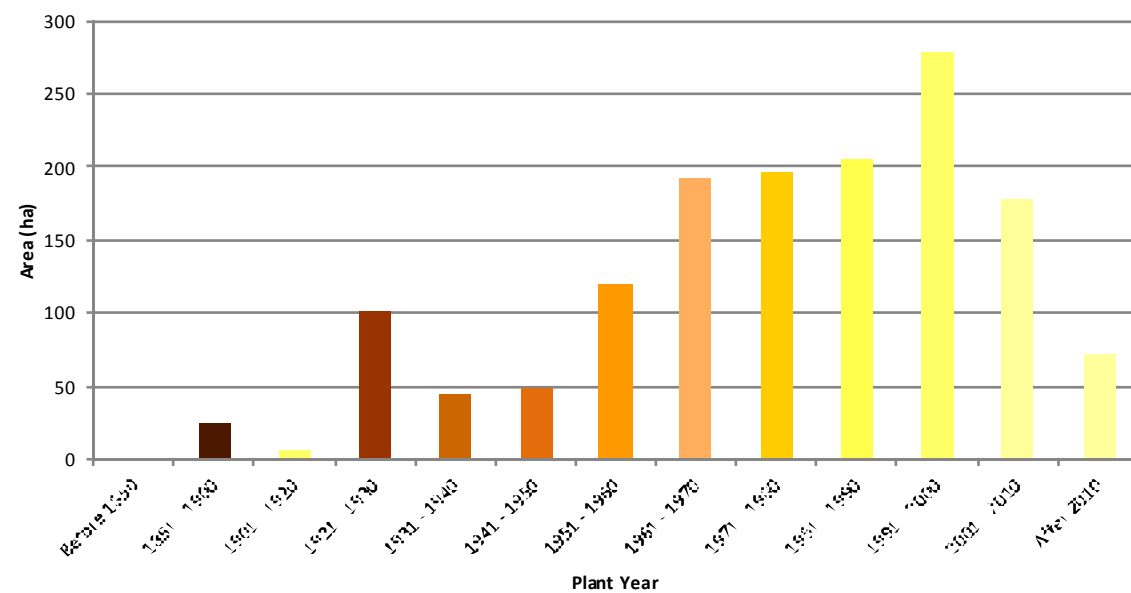
Current Structure

With the original planting commencing in the 1920s but with consistent planting occurring through the century, most crops are either coming to the end of their first rotation or beginning their second.

Legend

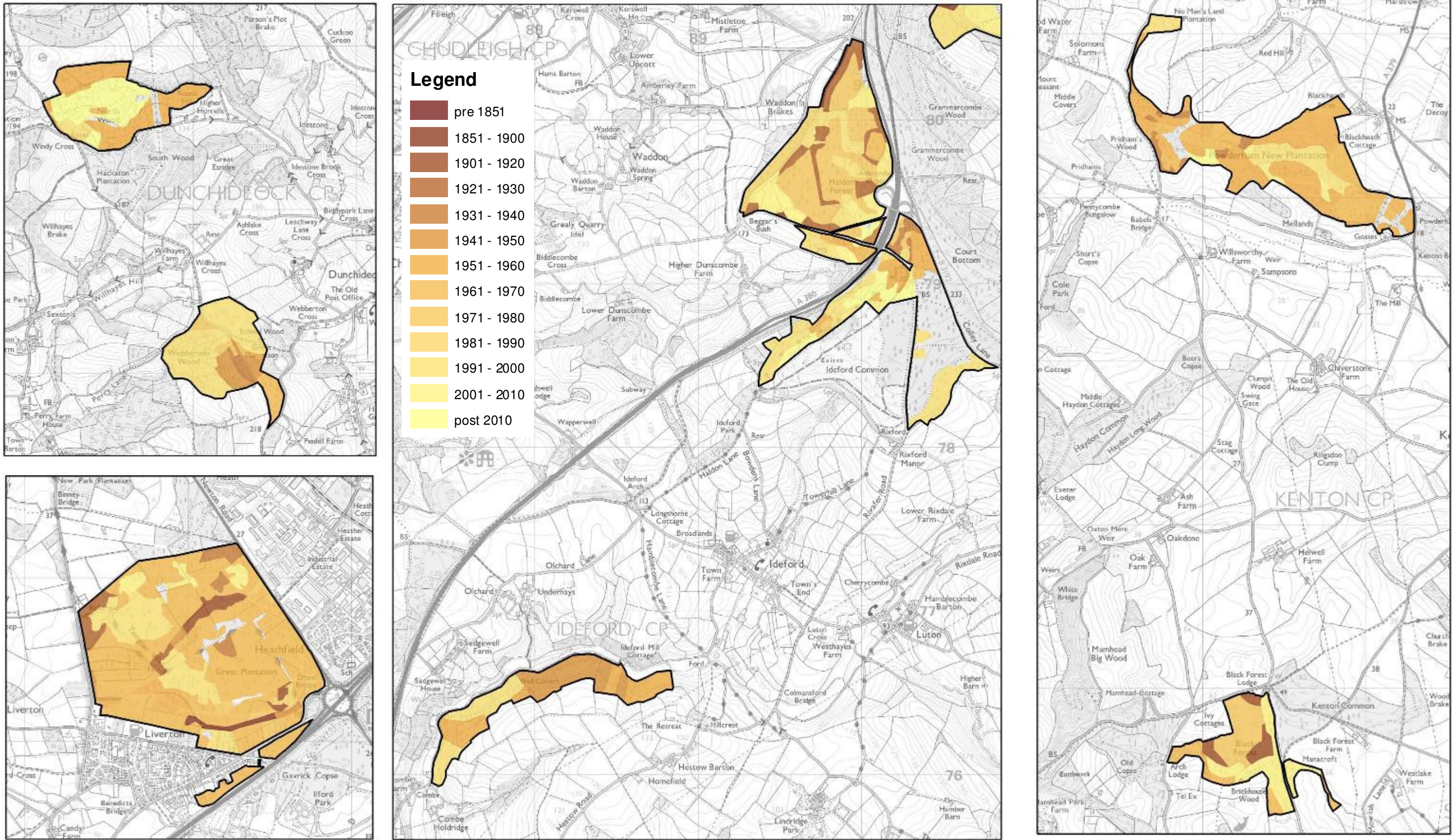
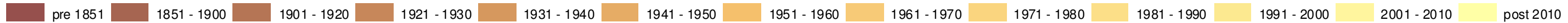
- pre 1851
- 1851 - 1900
- 1901 - 1920
- 1921 - 1930
- 1931 - 1940
- 1941 - 1950
- 1951 - 1960
- 1961 - 1970
- 1971 - 1980
- 1981 - 1990
- 1991 - 2000
- 2001 - 2010
- post 2010

Total Plan Area



0 0.125 0.25 0.5 0.75 1 Miles

Legend



Biological Information

Haldon Forest SSSI is an extensive area of protected land totalling 1007 hectares straddling the ridge from Lawrence Tower in the west to Telegraph Hill in the east with the A380 forming the eastern most boundary of the SSSI.

The Forestry Commission manages 916 ha of the SSSI which is designated for its mosaic of lowland dry heathland and mixed coniferous and broadleaf forest and associated assemblages of birds and butterflies that depend on networks of well-connected and favourably managed habitat.

Before the Haldon ridge was coniferised in the 1920's, the free-draining, relatively acidic soils supported large areas of lowland heath. Upon coniferisation, much of the open heathland was lost and when the Haldon Forest SSSI was designated in 1992, only a few small remnants of lowland heathland remained in isolated pockets along the Haldon ridge.

However, by the time of designation, the conifer forests supported an interesting breeding assemblage of raptors including honey buzzard and goshawk and 80 pairs of nightjar were breeding not only within the open lowland heathland but also within the early rotation forestry plantations.

Open grassland habitat and rides provided habitat for butterfly species such as the high-brown fritillary (*Fabriciana adippe*), marsh fritillary (*Euphydryas aurinia*) and wood white (*Leptidea sinapis*).

24 years later, 77 hectares of previously afforested land is now managed as permanent open habitat, much of which is grazed through Higher Level Stewardship. Heathland has been created not only along the Haldon ridge but in pockets throughout the wider coniferous and mixed woodland providing a structurally and spatially diverse habitat mosaic throughout the Haldon Forest SSSI and favourable habitat for breeding raptors and nightjar.

Pearl-bordered fritillary (*Boloria euphrosyne*) and small pearl-bordered fritillary (*Boloria selene*) butterflies still thrive along the Kidden's powerline where regular and specific habitat management takes place.

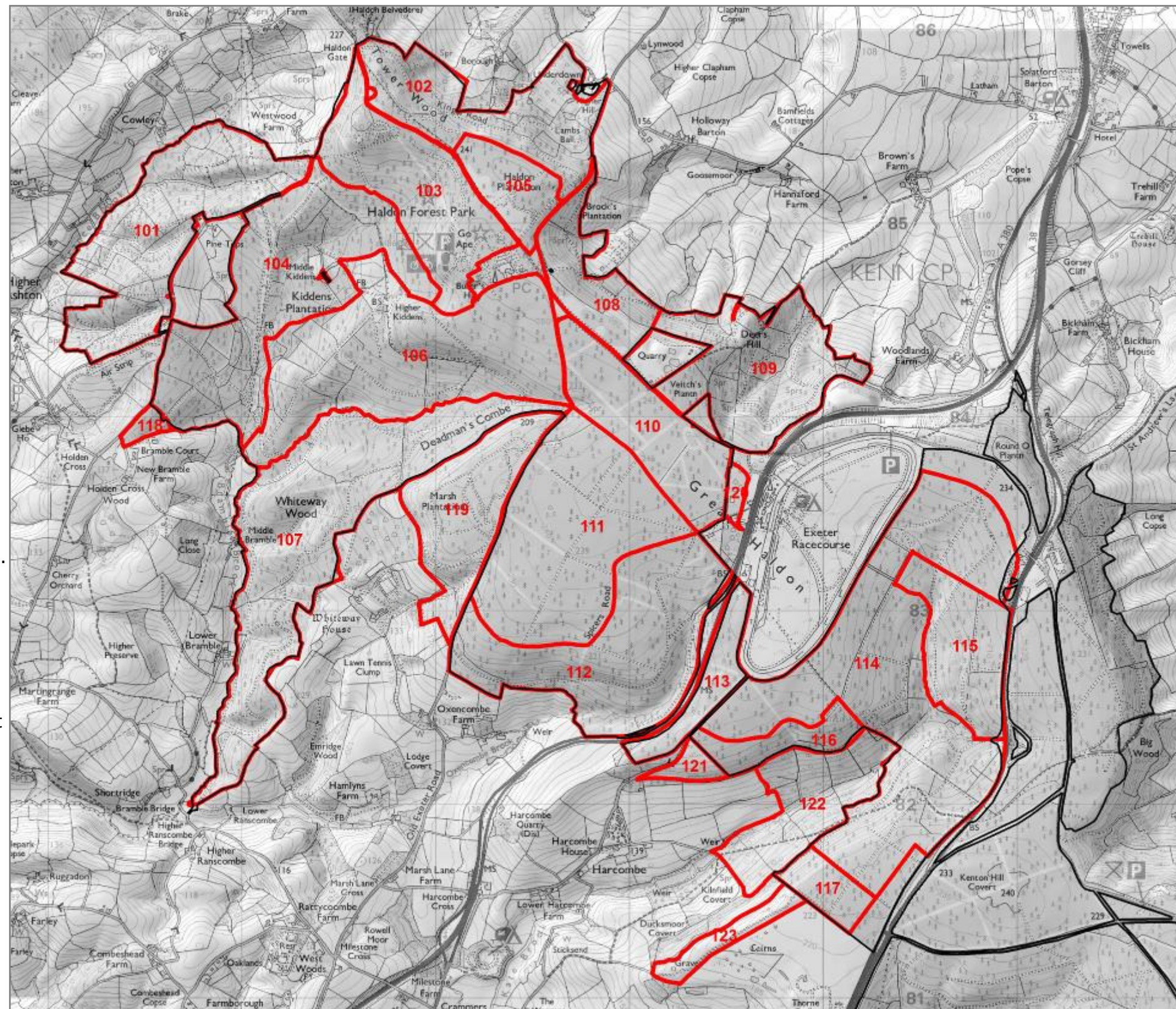
However in general, long-term monitoring has demonstrated a decline in species diversity, abundance and distribution of butterfly species throughout the Haldon Forest SSSI since it was designated in 1992 with the last wood white recorded in 2004. A decline which is in line with national trends.

A key aim of this management plan is to ensure that butterfly species present in isolated pockets of suitable habitat can once again thrive throughout the wider woodland network of rides and suitable open habitat.

Interesting pockets of habitat including old quarries, ponds and riparian habitats provide important habitat for a range of species including grizzled and dingy skippers (*Pyrgus malvae* and *Erynnis tages*), amphibians and reptiles.

Legend

Haldon Forest SSSI Units



SSSI - Conservation Objectives and Management Aims

Conservation Objective

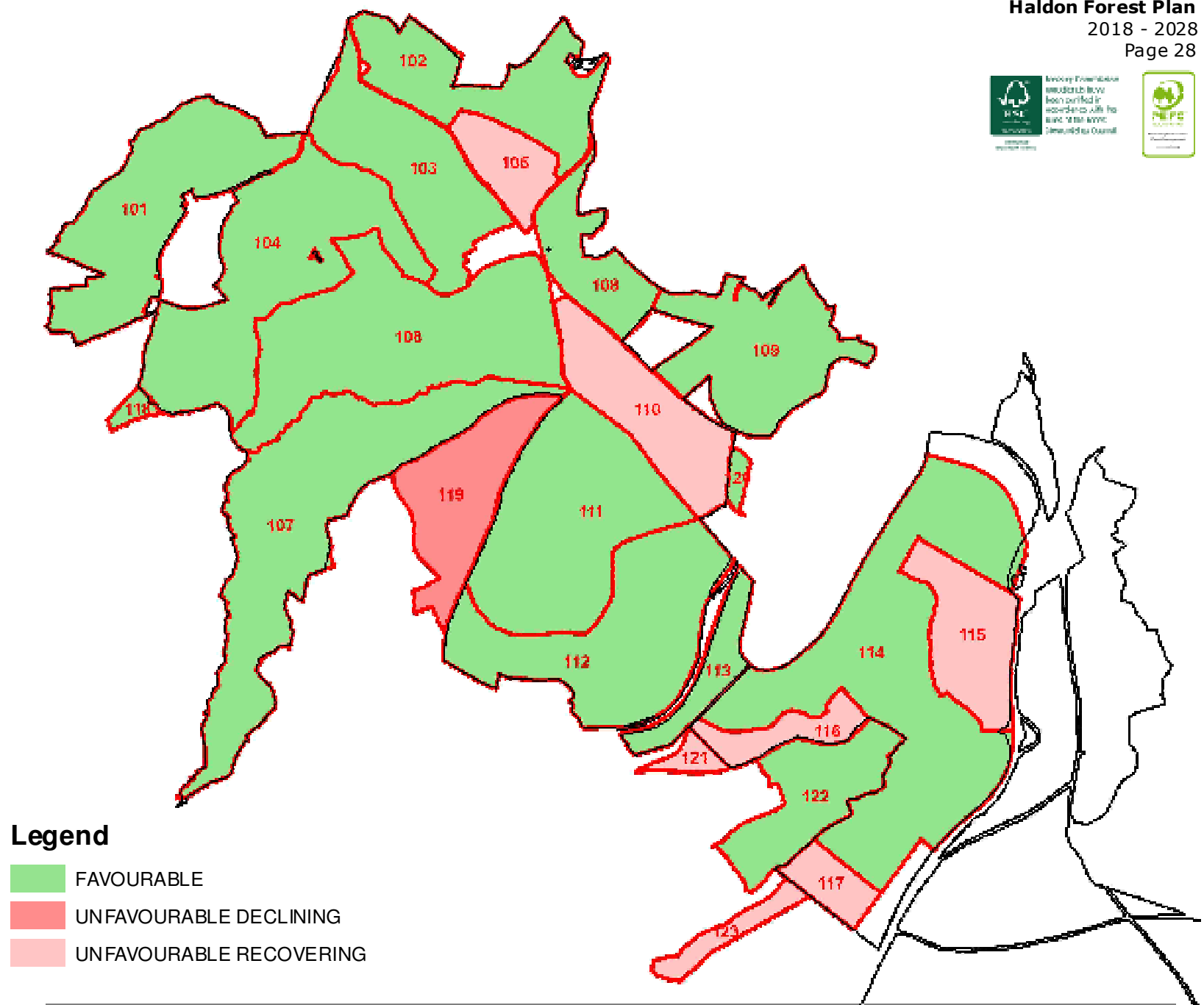
Maintain the designated favourable units in their current condition and carry out any necessary management practices as required by Natural England to move the unfavourable SSSI units into favourable condition.

Management Aims

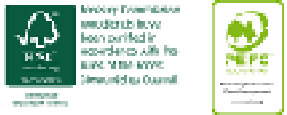
- Maintain the extent of lowland heathland/grassland (77ha) with an understanding that fluctuations in levels of scrub up to 20% cover are acceptable.
- Enhance the condition of the lowland heathland by putting the appropriate management in place to provide:
 - diverse and patchy mosaic of dwarf shrubs and areas of bare ground,
 - native scrub (maintained within acceptable limits as agreed by Natural England)
 - minimal cover %, preferably absence, of non-native scrub cover including regenerating conifers, rhododendron and laurel
 - low % cover of bracken (within acceptable limits as agreed by Natural England)
 - features of interest such as ponds, edge habitat and perching posts
- Maintain the extent of mixed coniferous and broadleaved woodland ensuring a continuous supply of clearfell, early rotational and long-term retention conifer habitat is available for notified species¹.
- Maintain and enhance the condition of mixed coniferous and broadleaved woodland for the notified species¹ regardless of their presence by providing:
 - significant areas of mature well-spaced crops maintained through regular thinning
 - structurally and spatially diverse forest with an abundance of well-connected and distributed clearfells /open habitat.
 - characterful trees with nesting potential including forks and holes
- Maintain and increase the abundance and presence of the current notified species¹ within the SSSI as well as the designated raptor assemblage².
- Monitor the abundance and presence of notified species¹

¹ The designated species are raptor assemblage, goshawk, honey buzzard (no longer present), nightjar, pearl-bordered fritillary, small pearl-bordered fritillary and wood white (no longer present).

² Raptor assemblage comprises goshawk, hobby, kestrel, sparrowhawk and buzzard



Unit	Managed by FC	Condition	Unit	Managed by FC	Condition
101	✓	Favourable	113	✓	Favourable
102	✓	Favourable	114	✓	Favourable
103	✓	Favourable	115	✓	Unfavourable Recovering
104	✓	Favourable	116	✓	Unfavourable Recovering
105	✓	Unfavourable Recovering	117	✓	Unfavourable Recovering
106	✓	Favourable	118	✓	Favourable
107	✓	Favourable	119	✗	Unfavourable Declining
108	✓	Favourable	120	✗	Favourable
109	✓	Favourable	121	✗	Unfavourable Recovering
110	✓	Favourable	122	✗	Favourable
111	✓	Favourable	123	✗	Unfavourable Recovering
112	✓	Favourable			



Unit 105 Total Area = 17ha

Analysis: 12ha of open habitat already provided with an additional 2ha being implemented imminently. This Unit is grazed and has a good assemblage of heathland species. Currently most dwarf shrubs are at pioneer stage and there is a lack of building/mature growth, and graminoides and forbs are more scarce than ultimately desired. Soils are noticeably thin with timber yield and wind stability an issue.

Concept: Look to consolidate management and improve species assemblage though targeted cutting, scraping and grazing. Mature stable pine and fir crops will be retained for perpetuity to create heathland ecotones and potential raptor habitat. No further heathland restoration is planned

Unit 110 Total Area = 39ha

Analysis: 16ha of heathland created since 2004. This is grazed and has a good assemblage of heathland species. Currently most dwarf shrubs are at pioneer stage and there is a lack of building/mature growth, and there are fewer graminoides and forbs than ultimately desired. Further Bracken control is required as is dominant in one area. Soft rush is also very common in several areas and is close to unacceptable levels. Soils are noticeably thin with timber yield and wind stability an issue, underthinned and seeding conifer crops are in need of treatment.

Concept: Windprone and seeding spruce and western hemlock, totalling 4.1ha will be restored to lowland heathland over the next decade. Proposals are for mature stable pine and fir crops totalling an additional 16.8ha will be retained to create heathland ecotones and potential raptor habitat before being felled and restored lowland heathland. Scraping, grazing and cutting will remain the main tool for managing the rest of the heathland, controlled burning may also be considered.

Unit 116 Total Area = 13ha

Analysis: 7ha of priority lowland heathland already in place. Created and scraped in the early 200s and therefore at early stage but making good progress although small seedlings of undesirable species are very common (mainly Rhododendron but also bracken and some emergent pine and birch trees) and control of these will be required. Due to the early stage of restoration bare ground cover and pioneer growth dwarf shrub cover is very high. Currently there are fewer graminoides and forbs than ultimately desired.

Concept: Look to consolidate management and improve species assemblage though targeted cutting, scraping and possibly burning. Seeding western hemlock (1ha) will be restored to lowland heathland over the next decade to with an additional 1.2ha of lowland heathland restoration proposed for the future.

Unit 117 Total Area = 10ha

Analysis: 7ha of lowland heathland currently provided of the edge of the forest. Overall dwarf shrub establishment not as good as in other restoration units, being only well established in the central area resulting in low cover overall. Currently most dwarf shrubs are at pioneer stage and there is a lack of building/mature growth, and graminoides and forbs are more scarce than ultimately desired. Bare ground cover currently still high. Bracken encroaches from edges of restored area, particularly at the western edge.

Concept: Look to consolidate management and improve species assemblage though targeted cutting, scraping and possibly burning. Mature stable pine crops will be retained for perpetuity to create heathland ecotones and potential raptor habitat. Seeding western hemlock and mature Japanese larch (2.4ha), will be restored to lowland heathland over the next decade to improve condition and aid with management. An additional 6.2ha of lowland heathland restoration is proposed for the future.

SSSI – Analysis and Concept

Units 101, 102, 103, 104, 106, 107, 108, 109, 110, 111, 112, 113, 114 Total Area = 804ha

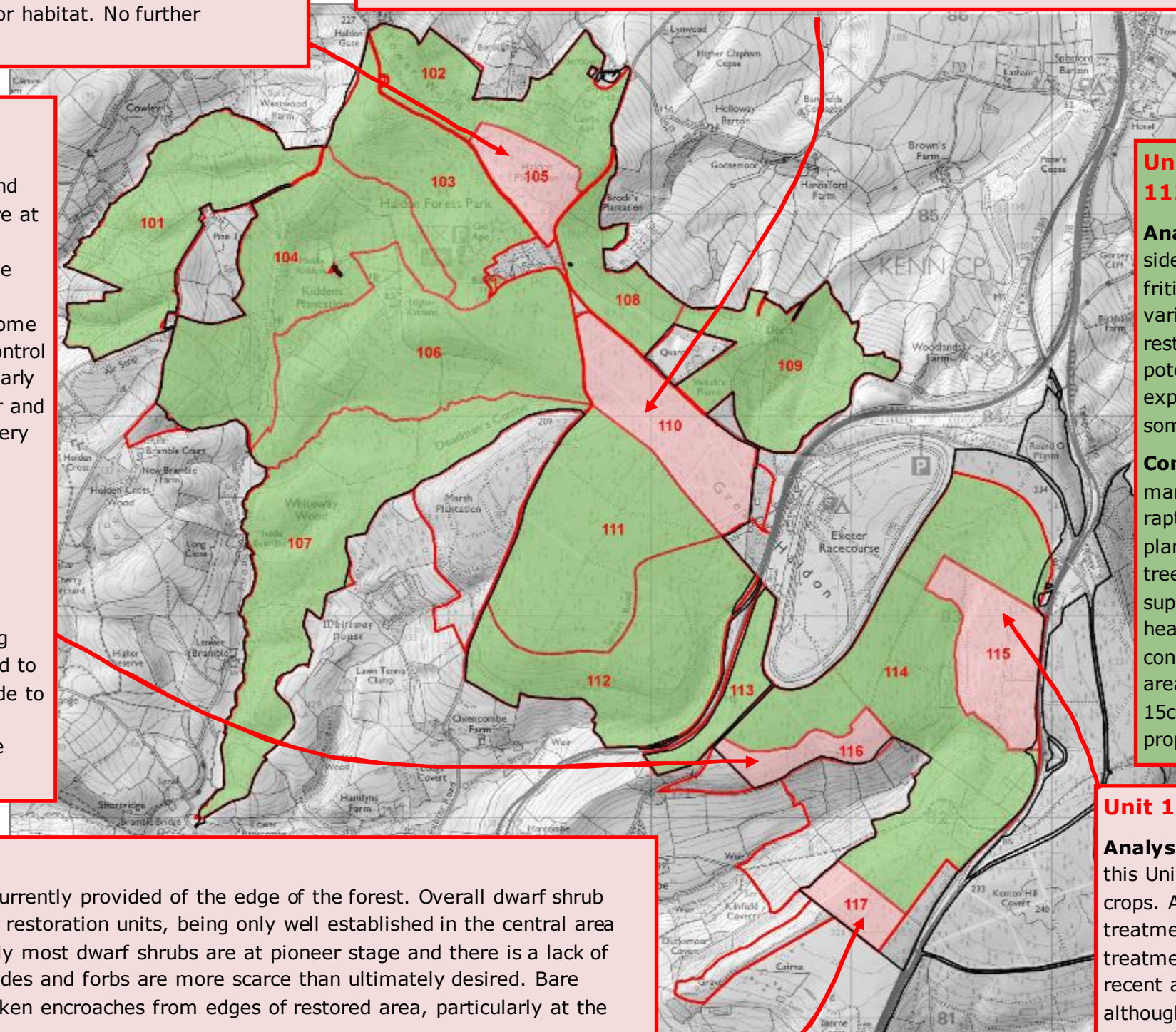
Analysis: A mixture of woodland, open habitat and road and ride sides providing habitat for raptors, nightjar and a number of fritillaries. The woodland is predominantly high conifer forest in various stages of growth most of which is managed on a dearfell/ restock rotation. Some areas have thin soils will low productivity potential or wind throw concern, with some considerable wind throw experienced recently. Remnant heathland assemblages are found in some of these areas despite being under high forest.

Concept: The majority of the areas within these Units will be managed to perpetuate further conifer forest, suitable to support raptors, nightjar and lepidoptera. This will be achieved through planting, thinning and in some places extended retention of mature trees. Clearfelling will remain a key component of management to support the nightjar population. Where soils are particularly thin or heathland assemblages evident, plans may be to remove some of the conifer at rotation end to improve condition and not restocked. These areas will be allowed to regenerate with mixed broadleaves upto 15cm dbh before removing again to create heathland. These areas proposed total 38ha

Unit 115 Total Area = 32ha

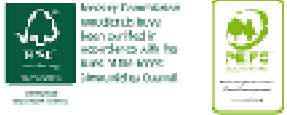
Analysis: 8ha of open habitat currently provided and the remainder of this Unit has a high proportion of mid rotation (i.e. 20-30 year old) crops. A mix of dwarf shrub growth stages present and control and treatment of rhododendron largely successful although some follow up treatment will be needed. At the southern end of unit scraping is more recent and is currently mainly bare with dwarf shrubs germinating although otherwise this section of the unit is bracken dominated. Currently there are fewer graminoides and forbs than ultimately desired.

Concept: Look to consolidate management and improve species assemblage though targeted cutting, scraping and possibly burning. Stable firs, spruces and pine will be thinned to be retained for perpetuity to create heathland ecotones and potential raptor habitat. No further heathland restoration is planned.



0 0.1250.25 0.5 0.75 1 Miles

© Crown copyright and database right [2018]
Ordnance Survey [100021242]



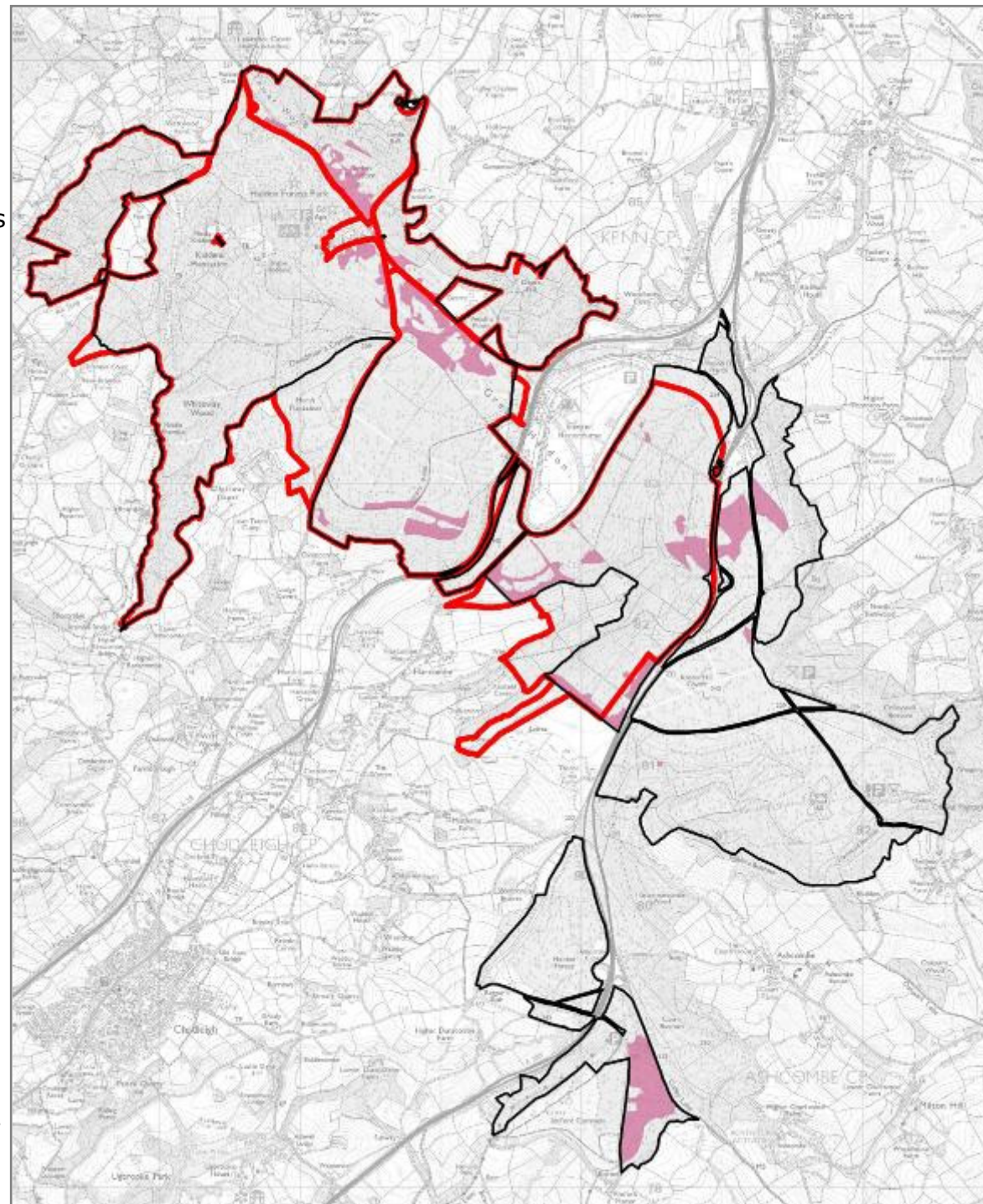
SSSI - Lowland Heathland

Haldon Forests SSSI is designated for its dwarf shrub heath. Within Haldon Forest two variations of dry heath occur. National vegetation Classification (NVC) H8 *Calluna vulgaris*-*Ulex gallii* heath typically occurs at low to moderate altitudes in warm oceanic parts of southern Britain. This heathland type is characterised by abundant ling (*Calluna vulgaris*), western gorse (*Ulex gallii*) and bell heather (*Erica cinerea*).

NVC H4 *Ulex gallii* – *Agrostis curtisii* heath occurs on slightly damp soils in the mild, oceanic climate of south-west England and south Wales. It is characterised by the frequency of bristle bent (*Agrostis curtisii*) and western gorse (*Ulex gallii*), alongside ling (*Calluna vulgaris*), bell heather (*Erica cinerea*) and cross-leaved heath (*Erica tetralix*). Rarer than H8, H4 exists in isolated pockets along the Haldon ridge.

In addition to these heathland communities, European gorse (*Ulex europaeus*), broom (*Cytisus scoparius*), bilberry (*Vaccinium myrtillus*) purple moor grass (*Molinia caerulea*) and tormentil (*Potentilla erecta*) can be found in mosaic with the dwarf shrubs.

Species such as bracken (*Pteridium aquilinum*), rhododendron (*Rhododendron ponticum*) and naturally regenerating conifer species can readily become invasive on heathlands quickly out-competing dwarf shrub communities and reducing the availability of valuable bare ground habitat for a range of species including nightjar, woodlark and invertebrates. In addition birch spp. (*Betula pubescens* and *Betula pendula*) readily seed into heathlands. A valuable component of lowland heaths, providing shelter, diversity and nesting habitat, birch can quickly form dense stands if left unmanaged.



Current Condition and Management (Area — 77ha)

The Forestry Commission currently manages 77ha of lowland heathland as permanent open habitat within the SSSI alongside significant areas of transitional open habitat resulting from the clearfelling of forestry plantations. During this plan period efforts will be focused on working with Natural England, local graziers and contractors to achieve favourable condition status across the current lowland heathland resource.

Hardy cattle currently graze 59 hectares of heathland through a Higher Level Stewardship scheme and as such are responsible for controlling bracken and diversity the dwarf shrub age structure. Although useful for managing young and palatable scrub species and purple-moor grass, conservation grazing cannot be relied upon for achieving favourable conservation status across the lowland heathland units. The Forestry Commission are reliant on mechanical vegetation management (cutting, spraying and burning) to keep species such as rhododendron, bracken and conifer at levels acceptable with Natural England across both the grazed and ungrazed units.

Legend

- Haldon Forest SSSI
- Lowland heathland

0 0.1 250.25 0.5 0.75 1 Miles

SSSI – Coniferous and Broadleaf Forest

Haldon Forests SSSI although not designated for its coniferous and broadleaf habitat is designated for the range of species (raptors and nightjar) that depend on it. Coniferous and mixed woodland makes up the largest component of the SSSI (869ha) and supports an important assemblage of breeding raptors and nightjar.

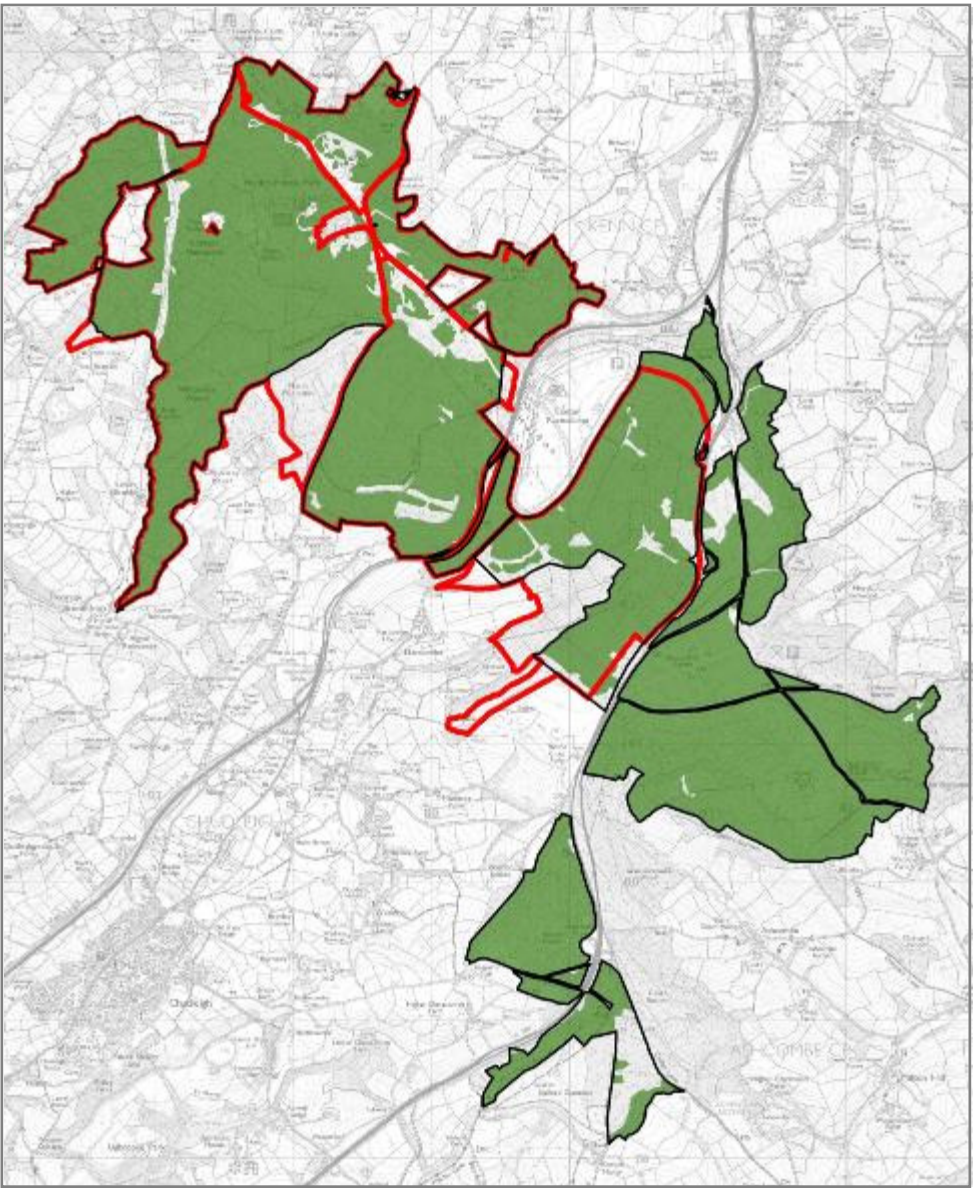
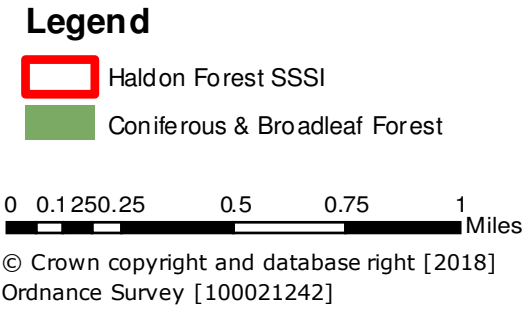
The importance of the mixed coniferous and broadleaf forest cover in terms of the SSSI designation is its provision of habitat for a unique raptor assemblage. Goshawk (*Accipiter gentilis*), sparrowhawk (*Accipiter nisus*), hobby (*Falco subbuteo*), buzzard (*Buteo buteo*) and kestrel (*Falco tinnunculus*) all nest within or in close proximity to the SSSI primarily within the conifer stands. Therefore productive forests will continue as the core habitat within appropriate sites in the SSSI as defined on Page 11 and outlined below.

Planted in the 1920s and silviculturally managed through a programme of planting, clearfell, restock and more recently continuous cover forestry, Haldon Forest SSSI has a varied age and structural diversity ranging from 100 year old conifers to early rotational plantation and significant areas of clearfell some of which has been bought about through recent large-scale windblow and *Phytophthora ramorum* infection of larch.

Large-scale forestry creates structurally and spatially diverse semi-natural habitat that creates such favourable conditions for the breeding and foraging of a range of species for which the SSSI is notified. Such extensive areas of semi-natural habitat are rare in the wider South Devon landscape.

Priority butterfly species although reduced in diversity and abundance from when the SSSI was first designated in 1992 still provide a stronghold for the small-pearl bordered (*Boloria selene*) and pearl-bordered fritillary (*Boloria euphrosyne*) which thrive along the Kidden’s powerline. A key objective is to utilise forest management to create suitable habitats for lepidoptera primarily through, broadleaf coppicing and leaving ridesides unstocked.

Identification of current and future suitable habitat has been completed with the retention of 71ha areas of well thinned mature Douglas fir and Scots pine and the delayed felling of other coupes to make up the shortfall identified. This will create more habitat in the future as shown in the chart.



SSSI – Raptor Assemblage

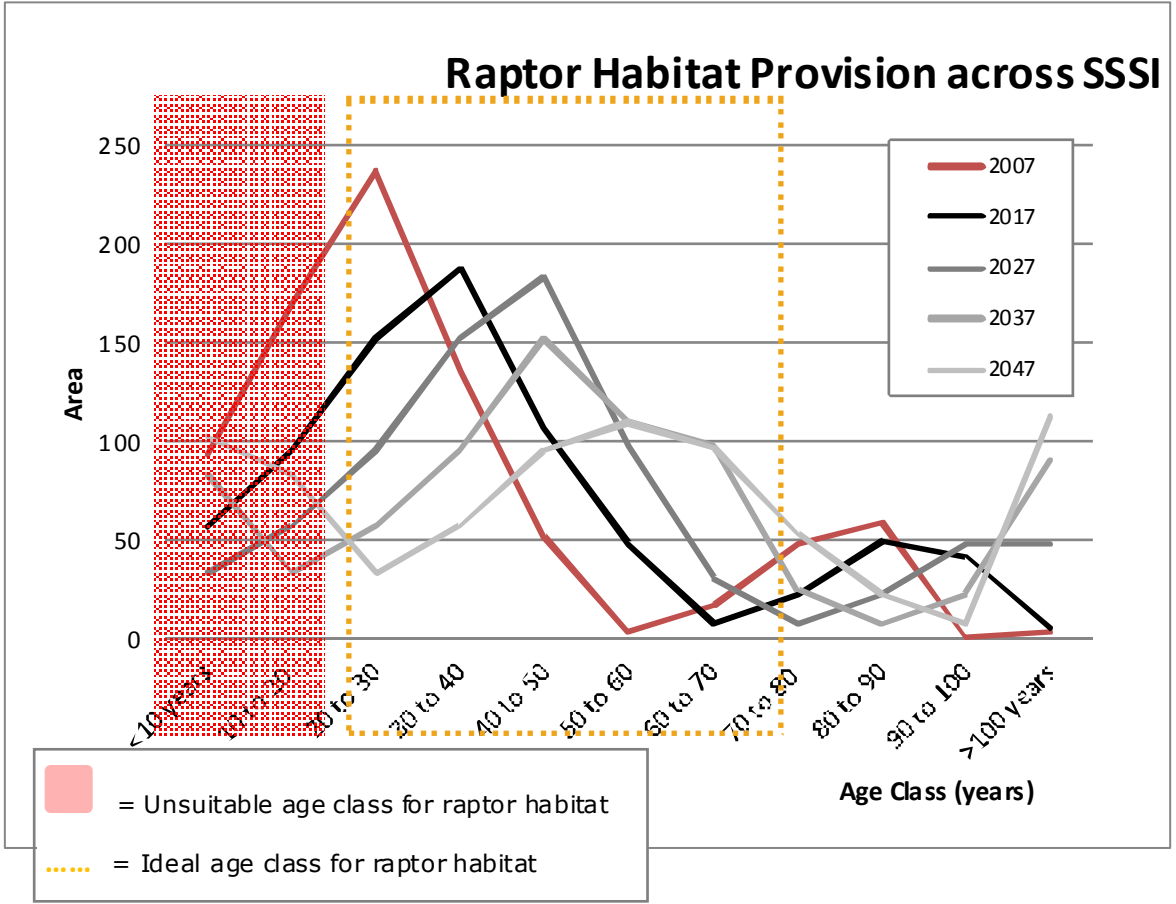
Haldon Forests SSSI is designated for it’s exceptional assemblage of breeding raptor species: goshawk (*Accipiter gentilis*), sparrowhawk (*Accipiter nisus*), hobby (*Falco subbuteo*), buzzard (*Buteo buteo*) and kestrel (*Falco tinnunculus*). Forestry management will take the requirements of these species into account through the retention of extensive stands of tall, well thinned conifer and broadleaf and the provision of trees with features such as forks and holes for nesting.

Clearfells are carefully planned throughout the duration of the plan to provide a continuous network of transitional open habitat which together with the lowland heathland and network of associated rides and glades provides abundant open and edge habitat for a range of prey items including bank and field voles, rabbits and woodland birds.

To minimise disturbance to raptors through forestry operations, there will be a trial presumption against harvesting in the bird breeding season (February to mid August) within the SSSI and any other woodland management operations will be carefully planned to ensure disturbance will be minimised as far as possible. Also the SSSI has been divided into six operational blocks worked these on rotation to reduce overall disturbance

All new official walking and cycling trails will be planned in liaison with wildlife rangers to ensure important raptor areas are avoided. Recreational events will be assessed on a case by case basis to ensure they do not cause disturbance to breeding raptors by maintaining disturbance zones around known nest sites.

Raptors will be regularly monitored by Forestry Commission wildlife rangers as part of the Operational Site Assessments process which take place before any operations commence. Research and practice shows that the majority of raptors and nightjar prefer inhabiting quiet, undisturbed areas.



SSSI - Nightjar



The European nightjar (*Caprimulgus europaeus*) is a nationally rare bird that from the 1950s until the 1980s showed a steep decline in breeding range and population throughout the UK. This was due to the loss, fragmentation and degradation of suitable nesting habitat combined with a decline in invertebrate prey. However, by the early 1990’s the species was showing a partial recovery in response to more suitable areas within forestry plantations and a step change in re-creation and restoration of lowland heathland. According to Birds of Conservation Concern 4 the nightjar has moved from the red list to amber listed status despite a 45% breeding range decline over 25 years.

Across Haldon Forest SSSI nightjars are breeding in a variety of suitable habitat including permanent lowland heathland with scattered birch and pine, woodland edges and clearings, newly clearfelled conifer plantations and glades and openings in young conifer crops (<10 years old).

The availability of dry bare ground with some plant debris for nesting and perches including trees and shrubs for territorial activity is important. In addition plentiful semi-natural habitats to forage for a range of invertebrate prey is crucial.

From surveys conducted in 2016, the Haldon Forest Plan area supports at least 69 territories making the area of national importance. This survey shows an increase in numbers since 2004 and the Haldon Forest SSSI exceeds the Special Protection Area (SPA) qualifying threshold of >1% of the UK breeding population. The recent surveys confirmed that the bird nests in freshly cleared areas, most notably clearfell sites as well as permanently open areas, recently restocked areas (planted in the last 21 years) and on the edge of high mature forest.

The proposals in this Plan to continue to manage permanent areas of lowland heathland through grazing and vegetation management and the provision of carefully planned transient open habitat through clearfelling and restock (68ha in Plan period — 41ha within the SSSI) will continue to support this important species into the future (see chart).

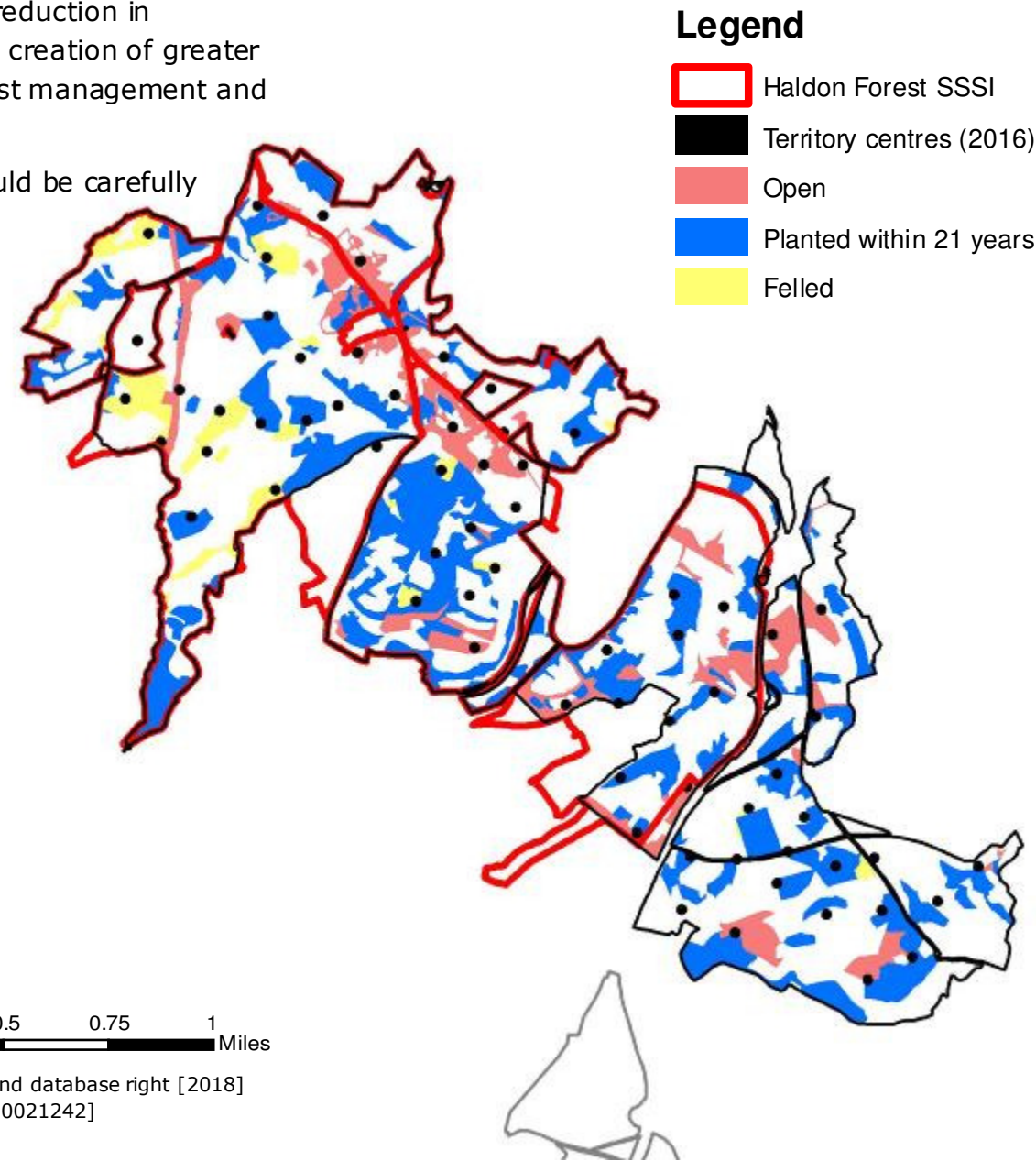
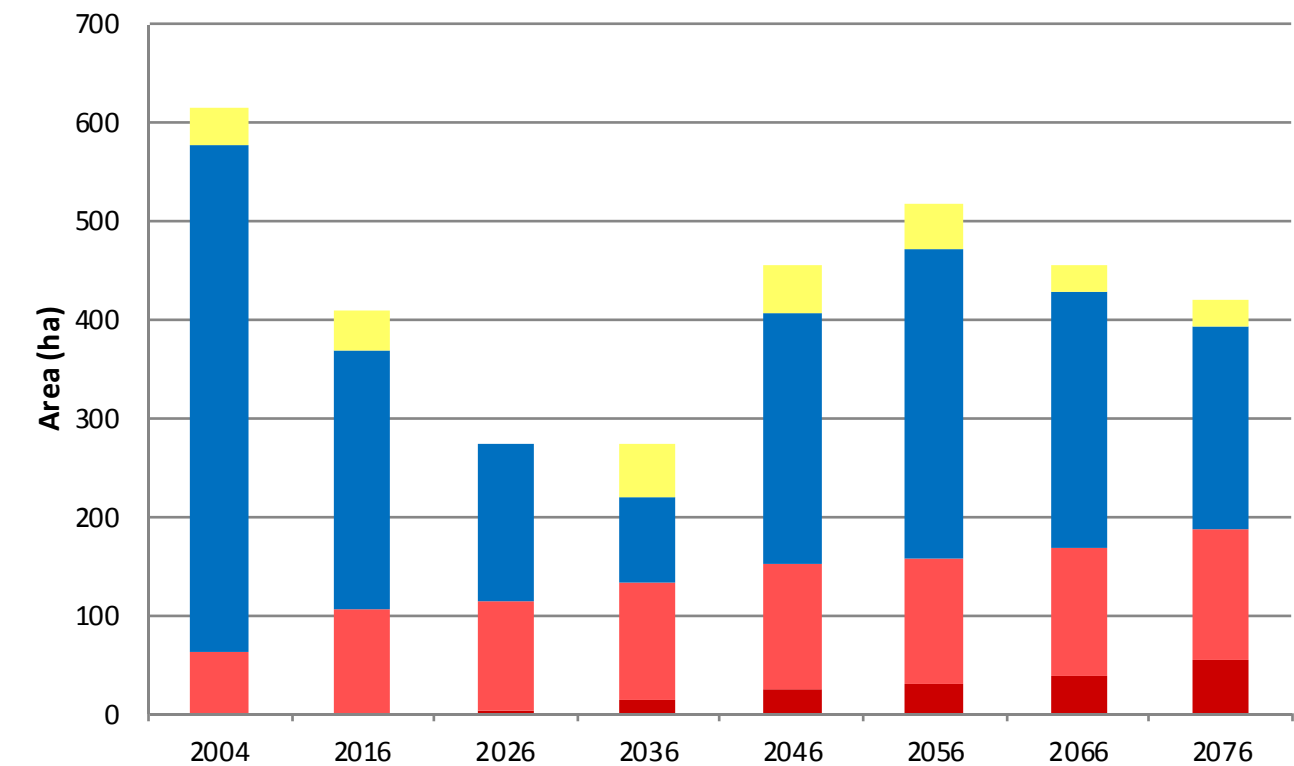
Overtime there will be fluctuations in habitat provision, a result of the nature of rotational clearfell/restock forestry and therefore nightjar numbers may also fluctuate. This is most evident in 2026-36 where there is an anticipated substantial drop in habitat provision due to a reduction in clearfelling caused by the considerable felling due to windthrow in recent years. To offset this, the new Forest Plan proposes the creation of greater amount of open habitat in the next ten years and there is a commitment to maintain a minimum of 494ha within rotational forest management and no net increase in continuous cover forest management within the Haldon Forest SSSI.

As a ground nesting bird nightjar are vulnerable to disturbance and all operations potentially impacting on breeding habitat should be carefully planned to ensure disturbance is not caused.

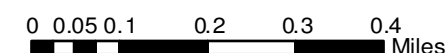
Nightjar populations across Haldon Forest will continue to be monitored regularly using standard methodologies.



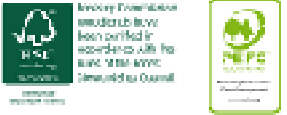
Haldon Nightjar Habitat Provision



Haldon Forest SSSI will be managed according to the Natural England assented management prescriptions outlined in Appendix 5 and the Environmental Corridors Policy in conjunction with close liaison with Butterfly Conservation to ensure a flexible and well planned habitat management continues over the duration of the Forest Plan period.



Tower Wood Quarry SSSI and Buller's Hill Quarry SSSI



Geological Information

The Haldon Hills are capped by gravels of predominantly Palaeogene age. Two small disused quarries, Tower Wood Quarry SSSI and Buller's Hill Quarry are two of the few localities where the Haldon Gravels can be seen and as such have been of considerable interest to geologists and geographers over the last century.

Tower Wood Quarry

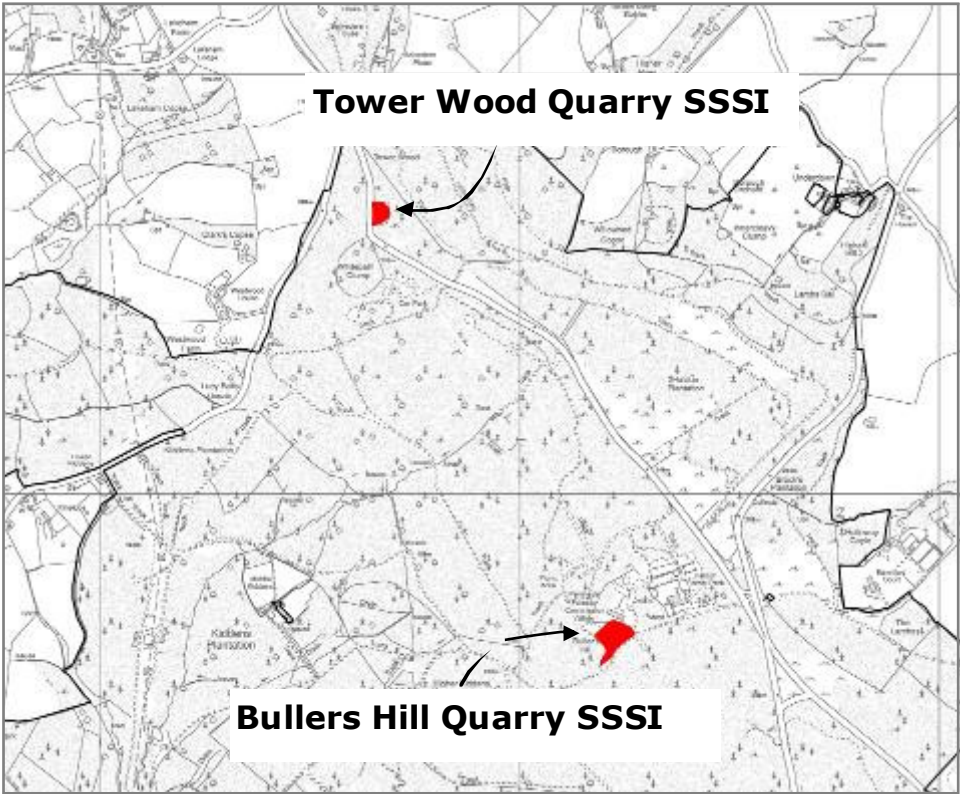
Tower Wood Hill quarry is a small disused quarry and one of the very few localities where the Tower Wood Gravels formation is exposed. Here a 6m thickness of predominantly flint gravel is exposed. The flint clasts are <30cm in diameter and are unbraided. They have however been peripherally shattered by Pleistocene frost action. Most now comprise horizontally aligned cores surrounded by small flint chips.

The deposit represents the in-situ weathering residue of the chalk which formerly extended further west than it does now. The Kaolinitic intraclastic matrix of the gravel appears to have been derived from the west from altered granite. The section at Tower Wood represents the denudation of a land mass which lay to the west of the shallow tropical seas that covered the Hampshire and London basins. Climatically, it has been interpreted as representing savannah conditions in the region during early Palaeogene times.

Buller's Hill Quarry

Buller's Hill Quarry SSSI is the best exposure of the Haldon gravels in the area—mainly flint-bearing gravels of early Palaeogene age. Reference has been made to large unbraided flints standing vertically in the Bullers Hill Grave which had migrated upwards from the underlying Tower Wood Gravel which in turn lies unconformably on the Upper Greensand. As at Tower Wood Quarry the pebbles have been shattered by frost.

The quarries will continue to be managed with the aim of maintaining the exposures clear of all trees and shrubs likely to damage the structure of the face and ensuring the exposures can be easily observed by visiting interest groups.



Legend
Quarry SSSIs

Conservation Objectives and Management Aims

Conservation Objective

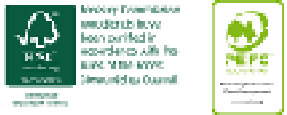
To maintain the Palaeogene interest in favourable condition with particular reference to the geological interest features.

Management Aims

1. Ensure that vegetation is not obscuring or damaging the features of interest and that they can be re-exposed by 1 or 2 people using hand tools in less than 3 hours approximately
2. Ensure that build up of scree or sediment from weathering and collapse of faces is not obscuring the features of interest
3. Ensure there is no unconsented tree planting obscuring or damaging the features of interest
4. Ensure no planting of trees within 10m of the faces is permitted and that a 8-10m tree-free buffer zone is retained above and behind the face.
5. Ensure no unconsented engineering works, including inappropriate restoration works, obscuring or damaging the features of interest takes place.
6. Ensure there is no tipping of waste and /or storage of materials within the SSSI.
7. Monitor the condition of the quarries at the 5 year Forest/SSSI Plan review.



Tower Wood Quarry SSSI, 2016



Ancient Woodland

The Plan area contains two areas of designated ancient woodland. Whiteway (87ha designated) is part of the main block and is predominantly second rotation Douglas fir. As a result this area is a Plantation on Ancient Woodland Sites (PAWS).

Well Covert is a discreet woodland which is entirely designated as ancient woodland (25 ha). A large proportion of this area (14ha) is remnant oak, ash and beech ancient semi-natural woodland. The remainder is dominated by first and second rotation conifer crops, namely Douglas fir and Japanese larch and is therefore PAWS.

Naturalness on Ancient Woodland

Naturalness is the measure to show the percentage of site native tree species in a given area. This measure is used to record and monitor the condition and restoration of Ancient Woodland Sites previously planted with non-native species. For note, beech, sycamore, sweet chestnut and felled areas contribute to a higher non-native score.

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

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

Legend

- Class 1 - > 80% Site Native Species
- Class 2 - 50-80% Site Native Species
- Class 3 - 20-50% Site Native Species
- Class 4 - <20% Site Native Species

0 0.125 0.25 0.5 0.75 1 Miles

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



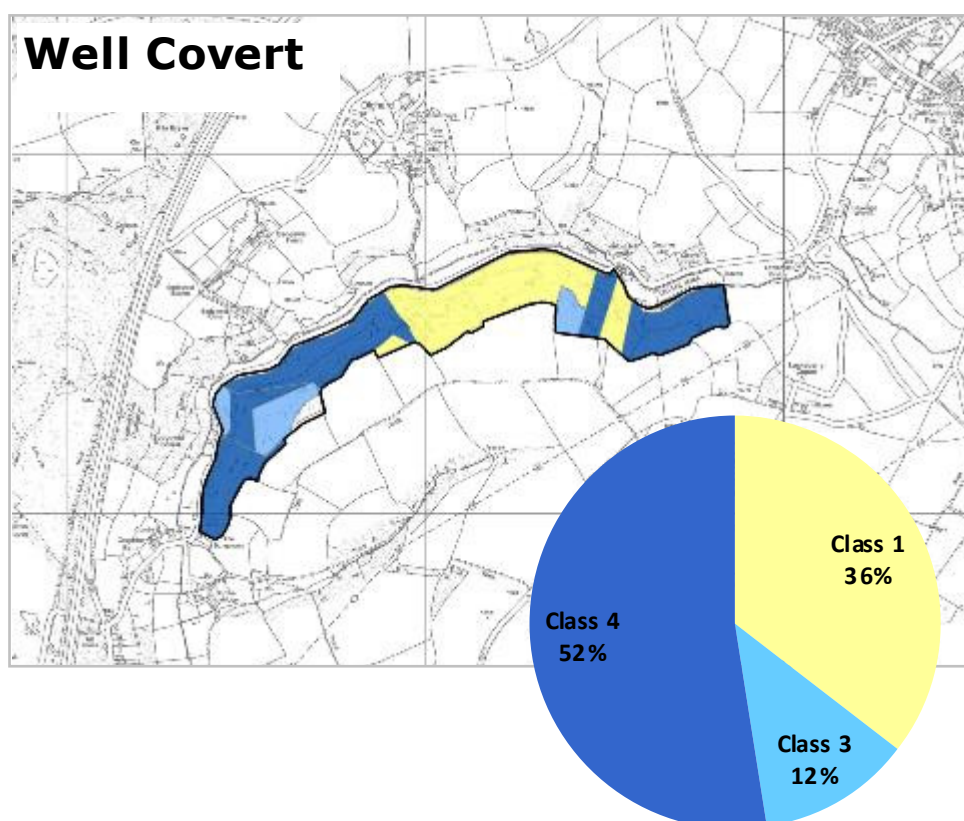
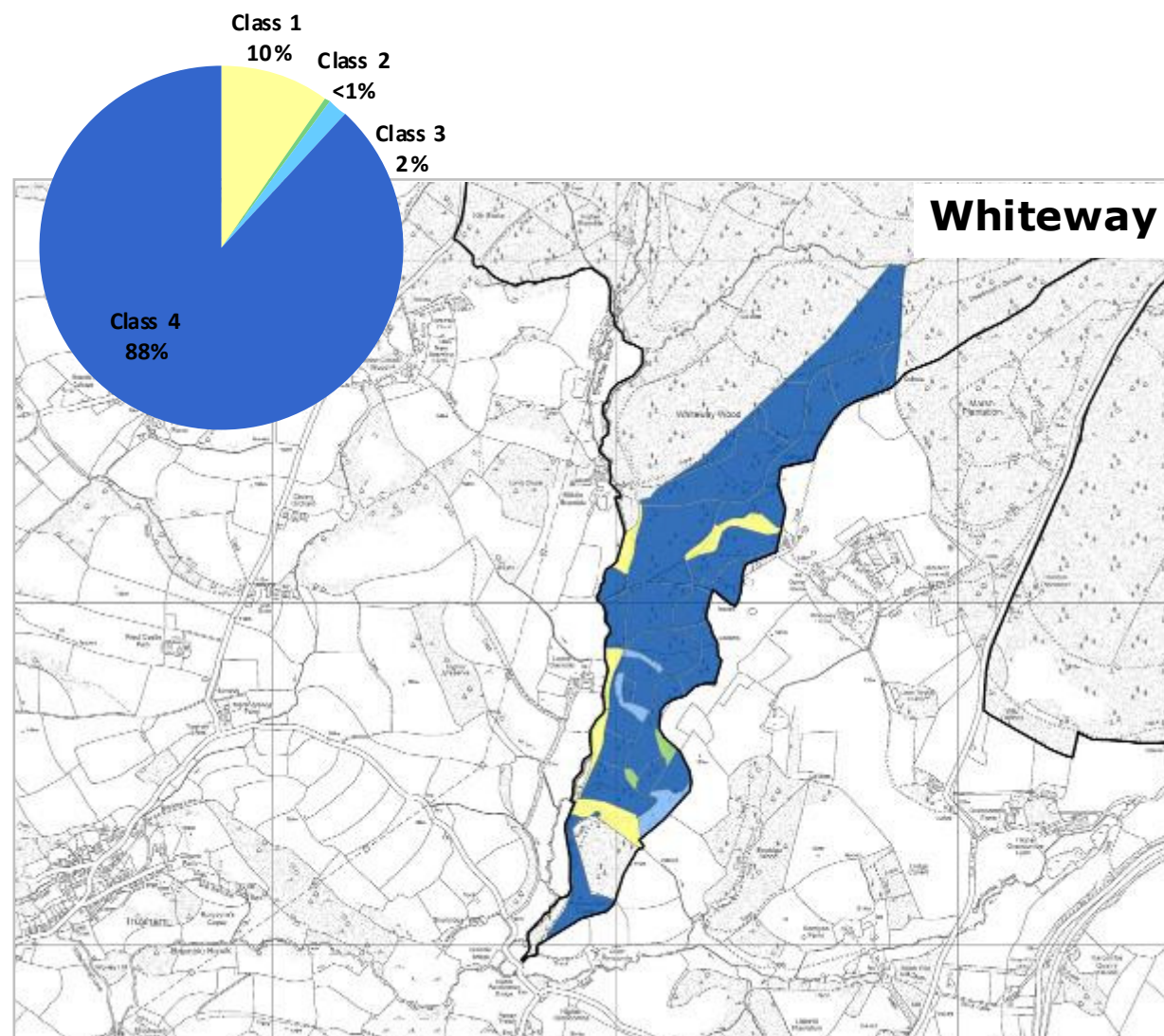
Class 3 – Plantation Woodland (20 - 50% site native species)



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



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





PAWS Management

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

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

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

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

Transition Zone

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

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

Preparation Zone

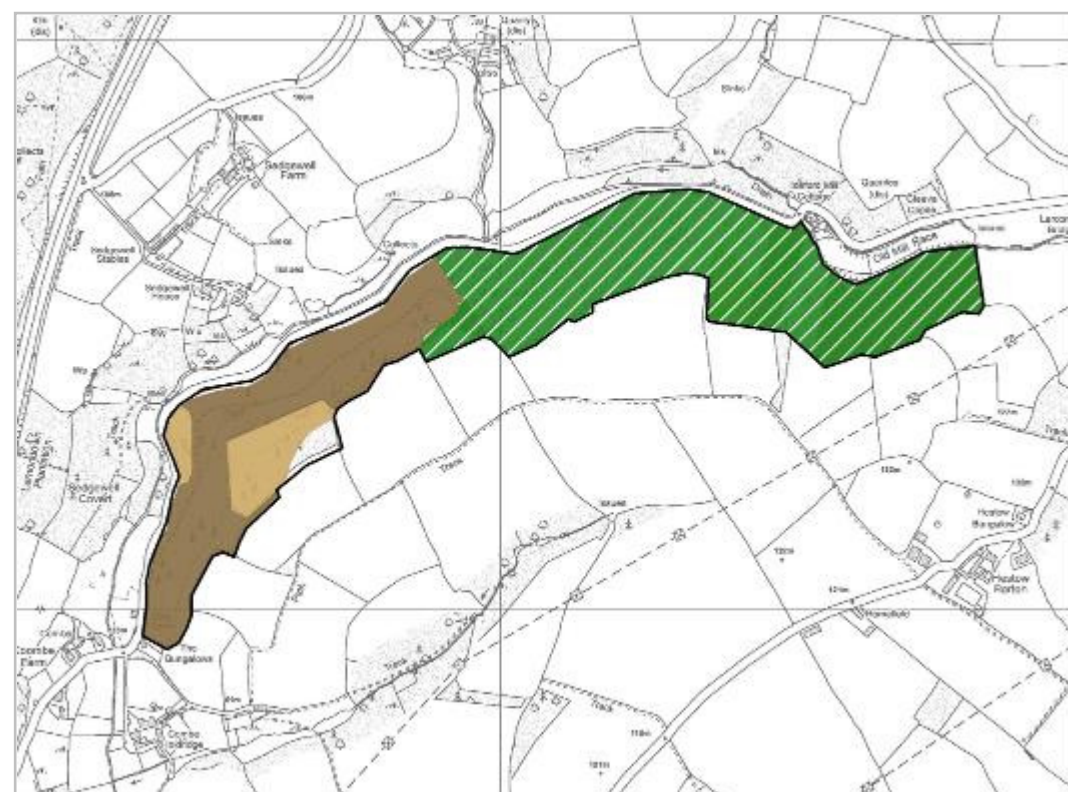
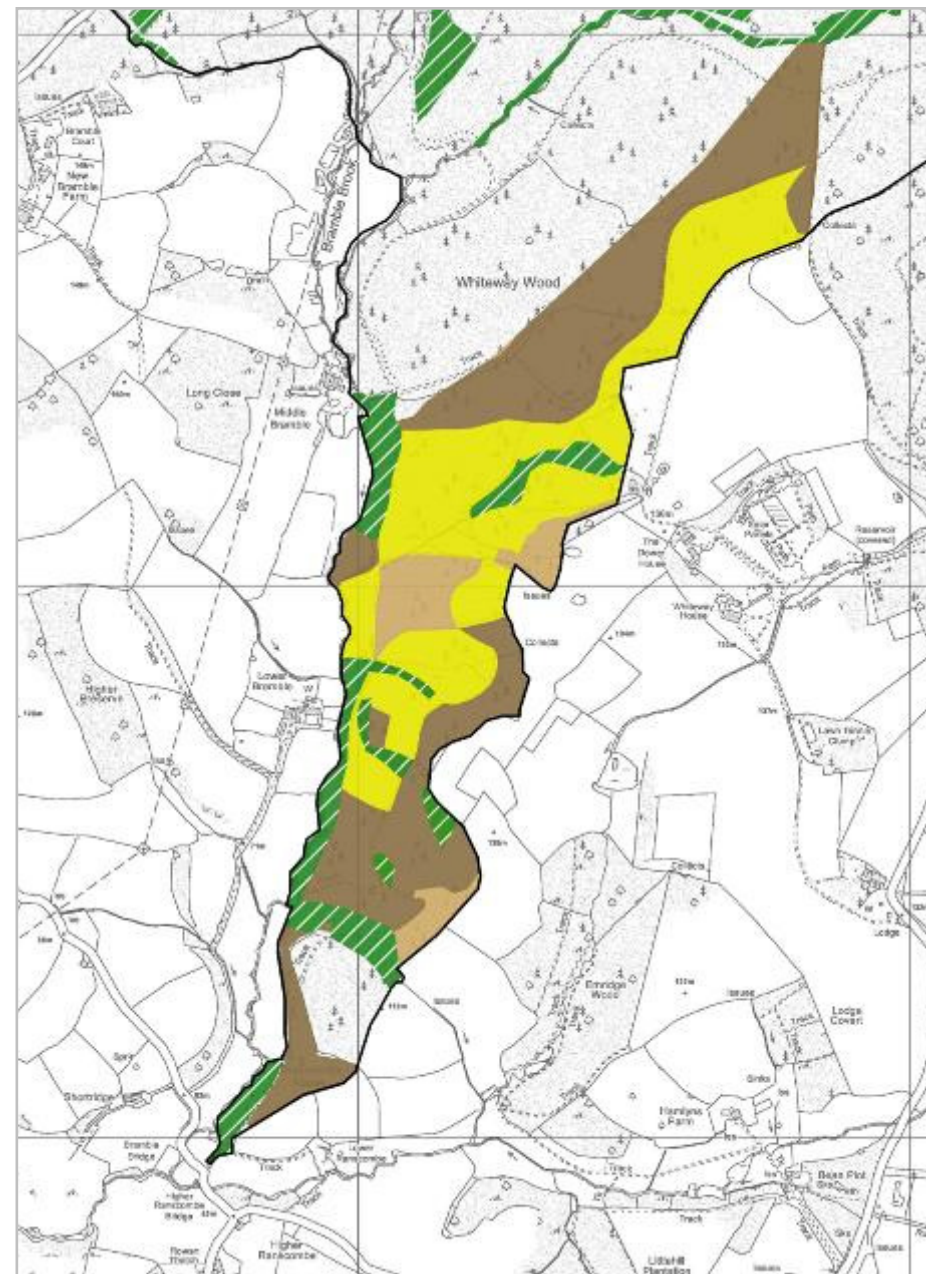
Areas within this category contain less than 50% of native tree species but have a proportion greater than 20% of the crop and the area neighbours an area of significant native species cover which can be utilised as a seed source. Enhancement of native content will continue through thinning of the conifer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

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

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

Non-native Zone

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



Legend

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

0 0.05 0.1 0.2 0.3 0.4 Miles

Future Open Habitat Management

The Plan makes provision for the heathland restoration of 136ha of the Plan area at the time of economic maturity, as defined on Page 11. This is mainly located on the thin, unproductive soils of the Haldon ridge with 76ha within the Haldon SSSI, as shown on the adjacent map.

A number of factors determine the viability, condition and the prioritisation of the future heathland proposed. Some of these are 'critical' to the commencement of work, and need to be satisfied before proceeding, others determine when or how they are completed.

This Plan makes a commitment to deliver that which is proposed in the next 10 years, a review will be completed in 2028 to measure success and consider suitability going forward.

It is an aspiration that all of the heathland restoration of 136ha will be lowland heathland standards. However given the protracted time and extent of full delivery, changing objectives and climates may make this aspiration unachievable. Therefore as a minimum the following will be restored with a commitment to deliver that which is proposed in the next 10 years. A review will be completed in 2028 to measure success and consider suitability going forward.

Lowland Heathland (>40ha) will be created in units which are designated solely for the dwarf shrub heath assemblages, and will be managed to Priority Lowland Heathland parameters as defined by Natural England, through grazing where possible. This will ensure that the Condition status of the Unit is not threatened.

Wooded Heath (<96ha) may be created in all other areas where restocking is not proposed including units within SSSI which are designated because of the raptor assemblages they support. As a minimum these areas will be managed as a transient heathland, creating dynamic habitats of patchy open space and regenerating scrub. This will deliver ecosystem functioning for a wide array of species. This will mean that once felled they will be maintained at the time of programmed operations and then first economic opportunity. This approach will not apply to or affect the areas of existing open habitat.

****If an external party or funding opportunity takes on the responsibility of these sites then more intensive open habitat maintenance can be implemented.**

Key Prioritising Factors

The factors outlined below determine when the implementation of the Vision will occur.

1. Crop maturity

Removal of forest cover will not occur on crops which have not reach economic maturity, this is in line with FC Open Habitats Policy. This means that whilst the majority of restoration will occur within the next 50 years, some younger crops will be allowed to reach maturity before felling. These crops will thinned according to SSSI — Thinning on Page 43.

2. Threats

Profusely seeding species or heavy forest cover which still has heathland assemblages underneath but is likely to soon shade it out threaten the efficiency and effectiveness of the restoration. Therefore these crops will be targeted first once they reach economic maturity.

3. Adjacency to existing heathland habitat

Effective creation may be best focussed, at first, on building on existing areas of heathland. Especially if proposed areas are under viable patch size thresholds.

4. Water regulation

Overtime, if it is deemed by a statutory authority that the proposed creation of open space will cause or exacerbate water regulation issues, i.e. storage and or quality then the prescription will be reconsidered.



Legend

- Current Heathland
- Future Lowland Heathland
- Future Wooded Heath

