Forestry Commission
England

Certificate of Approval
for
Tree Felling

This is to certify that tree felling under

Forest Design Plan ref. GL1/5/3.85
Oakamoor

has been approved by the Forestry Commission as being in accordance with Government policy for the sound management of a renewable resource.

This certificate is valid only for the period of the felling approval.

Ewan Calcott
Grants and Regulations Manager
West Midlands Region

Signed ....
Forestry Commission Officer

Date ....02 August 2011....

fellcert.dot - December 1998

Summary

The Oakamoor Forest Design Plan outlines the felling and restocking areas for Oakamoor, Bradley, Carr, Dimmingsdale, Heathy Gore, Jackson's Wood, Key Wood and Ruelow that lie in North Staffordshire. The design plan area consists of a total area of 369ha of woodland and lies 4 km North-East of Cheadle, Staffordshire Moorlands. The plan details management operations including felling and restocking for the next 10 years with outline proposals for the next 50 years.

The main objectives for the Forest Design Plan are the continued production of commercial conifers on the secondary woodland, restoration of Plantations on Ancient Woodland Sites (PAWS), conserving Ancient Woodland Sites, and the creation of new open habitats within the forest which will enhance the woodlands' biodiversity and landscape value. The existing commercial conifer stands will be managed using a clearfell and restocking programme, with stands being felled at around their economic felling age. On PAWS sites regeneration thinnings will be used on most stands to open the canopy and encourage natural regeneration prior to the overstory being removed. Red Band Needle Blight (RBNB) is now in Churnet Valley and affecting the Corsican pine stands. The speed of infection on some of the pine stands has involved premature felling. Spruce will be the primary species in the next rotation on secondary woodland sites, and broadleaves (favouring indigenous species) in the PAWS and AWS stands.

The Forest Design Plan will incorporate any features of cultural significance, veteran trees and open woodland habitats into its design to ensure these can be maintained and conserved while forestry operations are carried out.

Forestry Operations 2011 to 2021

Woodland Name	Grid Reference	Total Area (ha)	Felling (ha)	Natural Regeneration (ha)	Restocking (ha)	Open Space (ha)
Oakamoor	SK040445	94	20	15	5	
Dimmingsdale	SK054432	143	33.1	29		4
Bradley	SK049423	7	4.1		4.1	
Heathy Gore	SK056460	29	0			
Jackson's Wood	SK035455	1.7	0			
Key Wood	SK042451	16	7.4			
Moseymoor	SK024482	25	16	16		
Ruelow	SK017480	33	10	10		
Carr	SK051452	18	9.3	9.3		

Forestry Commission England - **West Midlands Forest District**

- **Oakamoor Forest Design Plan**

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Application for Forest Design Plan Approval

1.0 Plan Area Identification:

Forest District:	West Midlands Forest District	
Beat:	Cannock	
Name:	Oakamoor FDP	
Nearest Town:	Cheadle	
OS Grid Reference:	Bradley	SK049423
	Carr	SK051452
	Dimmingsdale	SK054432
	Heathy Gore	SK056460
	Jackson's Wood	SK035455
	Key Wood	SK042451
	Moseymoor	SK024482
	Oakamoor	SK040445
	Ruelow	SK017480
Local Planning Authority	Staffordshire	

2.0 Designations:

- Ancient Woodland Sites (AWS), Plantations on Ancient Woodland Sites (PAWS), Secondary Woodlands, lies within the Potteries and Churnet Valley Natural Area (English Nature), two Sites of Special Scientific Interest (SSSI), and a number of national and local Habitat Action Plan (HAP) and Biodiversity Action Plan (BAP) species are found within the woodlands (semi-natural broadleaf woodland, two nationally scarce species of liverworts, Alder carr and veteran trees.)

3.0 Date of Commencement of Plan

As soon as possible after approval date.

Area (ha)	Conifers	Broadleaves	Open Space
Felling	99		4
Restocking	9		
Natural Regeneration		86	

- Total Plan area 369ha
- Forest Design Plan maps are attached

I apply for Forest Design Plan approval for the area described above and in the enclosed Forest Design Plan.

I undertake to obtain any permission necessary for the implementation of the approved plan.

Signed ..... Approved .....

FDM

District WEST MIDLANDS Conservancy West Midlands

Date 19/8/11 Date 02 August 2011

Introduction

The Forestry Commission England has four planning levels: the England Forest Strategy, the Forest District Strategic Plan, the Forest Design Plan and Coupe Plans. The Forest Design Plan (FDP) is a key planning document, taking a holistic view of management at the landscape scale, outlining the objectives for each woodland and presenting a balanced approach to future management of the forest.

Each felling and restocking operation outlined in the Forest Design Plan also has its own Coupe or Operational Site Plan (ops1) created prior to operations being undertaken. At this stage a visit is made by local staff and site specific interests are identified, and their protection and management are outlined at a level of detail not appropriate in a Forest Design Plan. Once the forester has prepared a coupe plan it will be submitted to the Forest Management Director for approval prior to operations being carried out. For the Croft FDP the protocol and operation of this coupe level planning will focus on the restoration of PAWS, the production of commercial timber crops, conserving AWS and veteran trees, diversifying the woodland canopy structure, creating new open broadleaf woodland habitat, conserving landscape value and creating open habitats for the conservation of flora and fauna.

The first stage in the planning process is to write the 'brief' for the Forest Design Plan that is shown in Appendix I. This outlines the main objectives and perceived issues prior to the development of the FDP. This is written before the main consultation period and both objectives and emphasis may change during the plan production.

The Oakamoor FDP is comprised of 9 separate woodlands the cover 369ha and lies along the Churnet Valley in the Staffordshire Moorlands on steep valley sides. The woodlands form an important feature within the landscape and for the local economy, attraction large numbers of visitors into the area. The design plan area comprises 20% AWS, 55% PAWS and 25% secondary. The objective for this plan is to gradually convert 200ha of conifer woodland back to broadleaves over the next 60 years. The woodlands are currently dominated by Scots pine and Corsican pine with small areas of larch and broadleaves.

All planning and operations aim to satisfy the UK Woodland Assurance Scheme (UKWAS) and the UK Forest Standard (UKFS).

1. Key Characteristics

1.1 Location

- See Location map.
- The woodlands lie approximately 4 km North-East of Cheadle, Staffordshire Moorlands.

Grid Ref:	Bradley	SK049423
	Carr	SK051453
	Dimmingsdale	SK054432
	Heathy Gore	SK056460
	Jackson's Wood	SK035455
	Key Wood	SK042451
	Moseymoor	SK024482
	Oakamoor	SK040445
	Ruelow	SK017480

The Oakamoor FDP is comprised of 9 separate woodlands that cover 369ha. Bradley Wood (7.29ha), Dimmingsdale Wood (142.78ha), and Jackson's Wood (1.76ha) are freehold, while Carr Wood (17.91ha), Heathy Gore (28.81ha), Ruelow (33.32ha) and Moseymoor (25.57ha) are leasehold and managed by the Forestry Commission under long-term lease agreement. Under the lease agreements Carr, Heath Gore, Ruelow and Moseymoor have restricted public access, while the remaining freehold woodlands have been designated as Open Access Land, where the public have unrestricted access. Oakamoor (94.7ha) and Key Wood (16.86ha) are part freehold, part leasehold.

Despite the woodlands' rural location the freehold woodlands are popular with locals and visitors to the area. The extensive network of forest trails, site interpretation and parking facilities has meant that the woodlands have grown in popularity over the years, and are now enjoyed on a daily basis by a wide variety of user groups.

1.2 Designations

- Ancient Woodland Sites (AWS)
- Plantations on Ancient Woodland Sites (PAWS)
- Secondary Woodlands
- Lies within Potteries and Churnett Valley Natural Area.
- 2 sites of Special Scientific Interest (SSSI): the Churnet Valley and Dimmingsdale and The Ranger.
- A number of national and local Habitat Action Plan (HAP) and Biodiversity Action Plan (BAP) species are found within the woodlands (Freshwater White-clawed Crayfish, Marsh Tit, Pipistrelle bats, veteran trees).
- Rural Priority Area.

1.3 Geology and Soils

- Ruelow and Moseymoor woods are entirely Lower Westphalin (mainly productive coal measures) with some till at the western tip of Ruelow Wood. The geology generally results in sandy, light acidic soils with possible base enrichment. The overlaying drift may mask these soils characteristics and result in more fertile soils and/or impede drainage.
- Oakamoor, Dimmingsdale, Heathy Gore, Bradley, Carr Wood and Jackson's Wood. The north-eastern area lies Namurian (Millstone grit series), the north-west and central areas are Lower Westphalin (mainly productive coal measures) and the south is Permian & Triassic Sandstone (undifferentiated and including Bunter & Keuper). Hawksmoor and the eastern edge of the central blocks of woodlands are overlaid with alluvium.
- Namurian geology generally forms thin, acidic soils. The other geologies generally result in free draining, podsolised, natural-acidic soils with possible base enrichment. The overlaying drift may mask these soils characteristics and result in more fertile soils and/or impede drainage.

1.4 Aspect

- The woodlands lie in rolling mixed agricultural landscape divided by small woodland blocks and steep river valleys. The woodlands' topography ranges between 210m and 120m above sea level across the FDP area.

- As the woodlands lie predominantly on valley sides they have a limited impact on the wider landscape but create strong patterns and features in the local landscape.
- The topography of the woodlands within the design plan area is diverse and each woodland has no dominant aspect. This will create varied light levels and woodland micro climates which will support a wide variety of species.

1.5 Hydrology

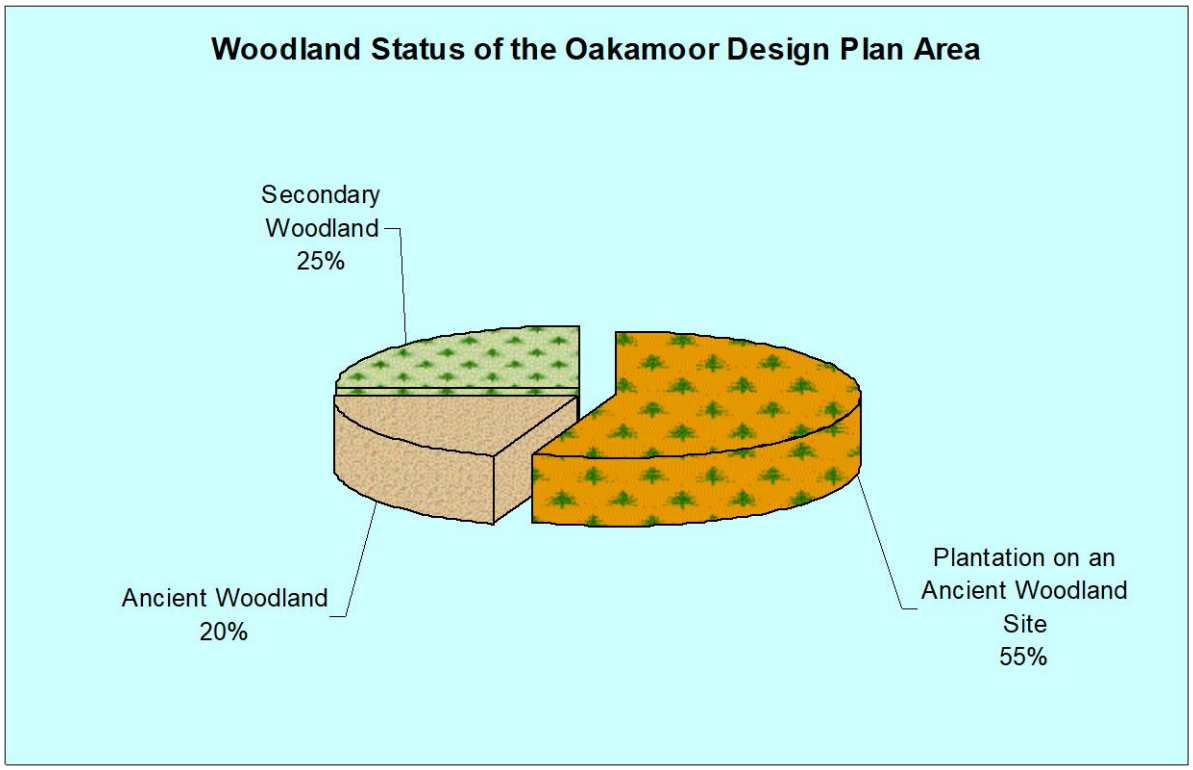
- The FDP area receives low to moderate rainfall levels throughout the year with an average of 750mm annually. Each of the woodlands has a number of streams running through down the valley sides, draining water off onto the surrounding flatter agricultural fields in the valley bottoms and into the Churnet River. The small canal that runs through Dimmingsdale has been blocked by several weirs, creating large areas of standing water, and the Churnet river dissects Key and runs along the boundary of Ruelow Wood. Each of the water bodies lie outside the FDP area and are not owned by the Forestry Commission. The southern half of Key Wood is waterlogged woodland, which has been planted with Norway spruce. Where the spruce has started to blow over in the waterlogged conditions, and in other small clearings, native broadleaves have started to regenerate freely.

2.0 Woodland Status and National Vegetation Classification (NVC)

- The FDP comprises 205ha of PAWS, 92 ha of Secondary Woodland and 72ha of ASNW. See Figure 1.
- Ruelow, Moseymoor and Carr Wood are predominantly Plantation on an Ancient Woodland Site (PAWS) currently stocked with conifers with isolated pockets of broadleaves (AWS). Bradley Wood is secondary woodland and Heathy Gore is 90% secondary with a small area of PAWS. Key, Dimmingsdale and Oakamoor are dominated by PAWS (55%) which is broken up by a patchwork of small blocks of secondary woodland (29%) and Broadleaves AWS 16%).

- The woodlands NVC comprises 88% lowland oak-birch woodland (W16) with 8% lowland mixed broadleaf woodland (W10) and 4% wet woodland (W8).
- See Woodland Status and National Vegetation map.

Fig.1 Woodland Status of the Oakamoor Design Plan Area



Management Objectives

- **Woodland –** The woodlands will be managed using a variety of silvicultural systems to allow for the production of commercial conifer and broadleaf trees and reversion of the PAWS areas back to broadleaf woodland whilst favouring retention of native species.
- **Biodiversity –** The woodlands' biodiversity will be conserved and enhanced through the retention and creation of deadwood habitats, management of riparian and wet woodland habitats and diversifying the woodland canopy structure through the timing and variety of future forestry operations. The length and variety of woodland edge habitats will be increased through the creation of open space adjacent to and along the forest roads, and the shape of future cutting patterns.
- **Recreation –** Dimmingsdale, Oakamoor, Ruelow and Moseymoor are all used on a daily basis by local residents and visitors to the area. Dimmingsdale, having a managed car park, interpretation and waymarked trails, sees the largest number of daily visitors, although the demand for access into all of these woodlands is increasing. The aesthetic value of the woodlands, both internally and externally, will be conserved and enhanced wherever possible through the planned forestry operations being used to meet the other management objectives.
- **Heritage –** The woodlands contain a wide variety of cultural features that form a time line to the wide variety of uses the woodlands have been put to over the centuries. These features will be conserved and managed in accordance with any agreed management plans between the Forestry Commission and English Heritage and the Forestry Commission's District Heritage Plan.
- **Forest Standards –** The design plan will incorporate and use a variety of management objectives outlined in the UK Woodland Assurance Scheme (UKWAS), Programme for the Endorsement of Stewardship Scheme (PEFC), UK Forest Standard (UKFS), Regional Forestry Framework and Forest District Strategic Plan to ensure that the woodlands are managed

sustainably. All forestry operations will be carried out in accordance with the above legislation.

4.0 Design Plan Objectives

4.1 Woodland

4.1.1 Current Species, Age Structure and Yield Class

- The woodlands within the Oakamoor FDP are predominantly conifer woodlands with 31% covered by broadleaves and 4% currently open ground.
- The woodlands are comprised of predominantly Pines (54%) planted between 1920 and 1973 of which 80% was planted between 1950 and 1965. The average yield class for pine is 14 across the design plan area.
- The Scots and Corsican pine has an economic rotation of 52 years.
- See Existing Species map.
- Fig 2 and Table 1 below shows the current area of each species and Fig 3 shows the current age structure.

Fig.2 Current Species by Area within the Oakamoor Forest Design Pan

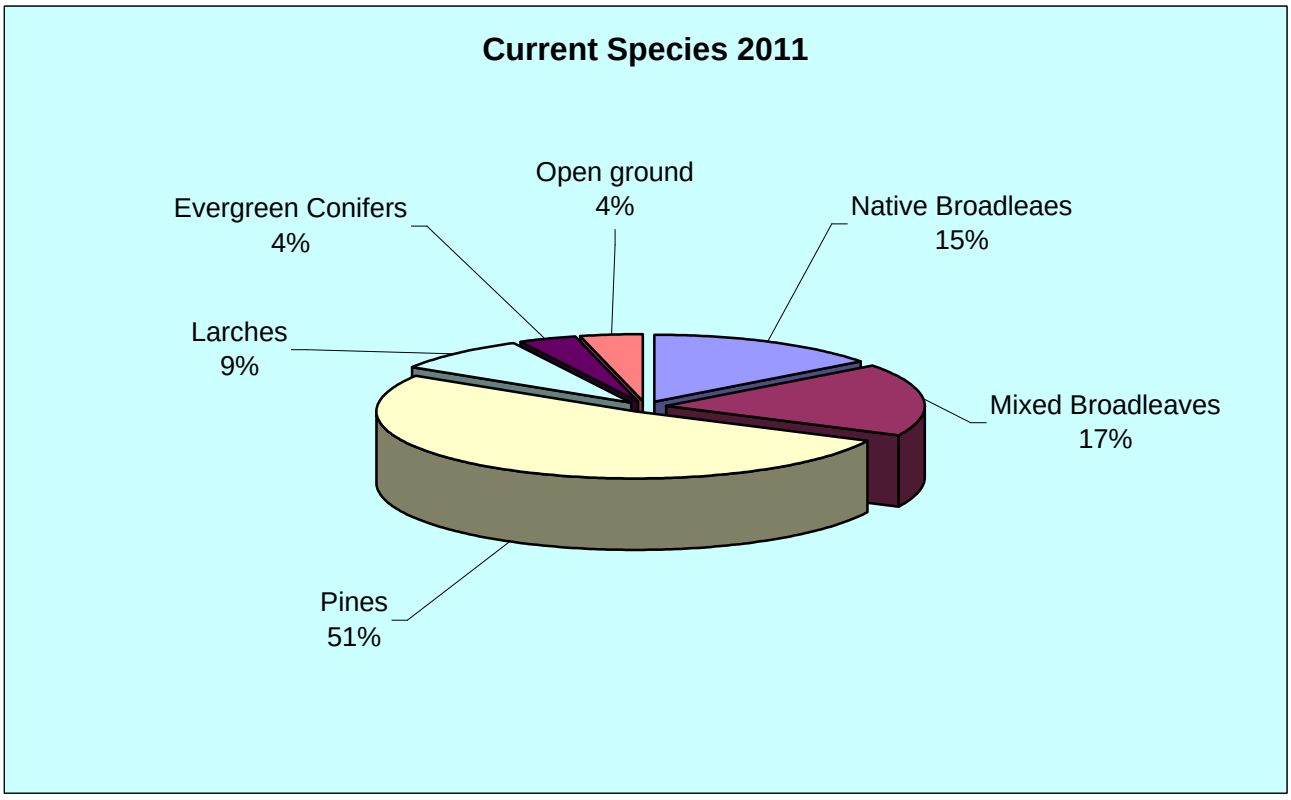
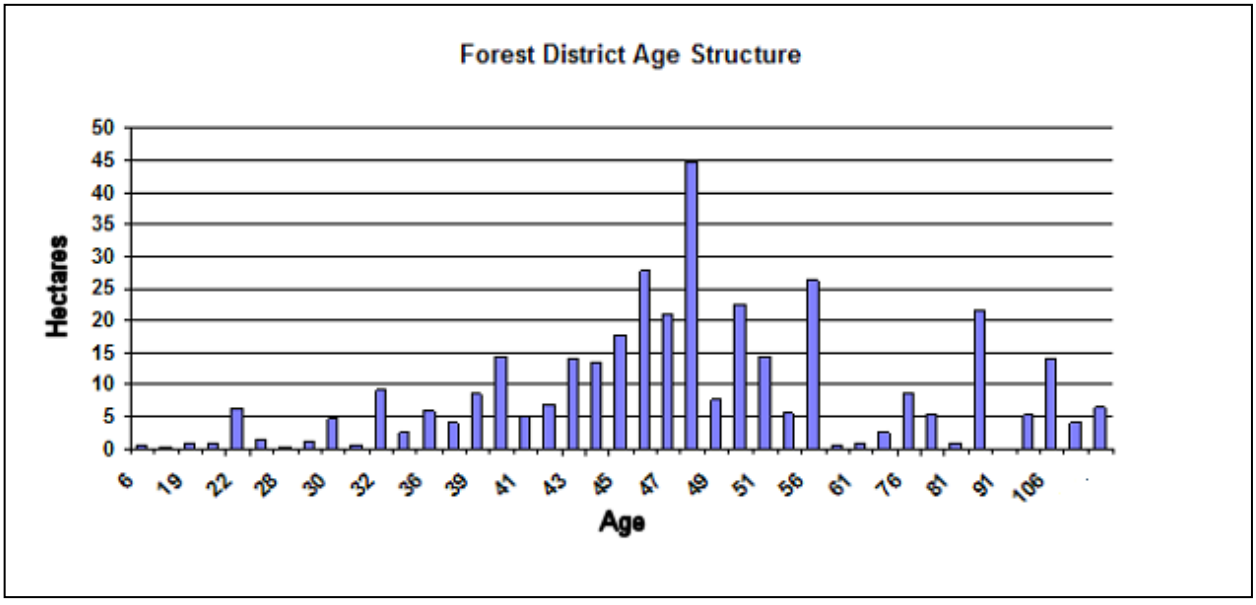


Table 1.

Broadleaves	AWS	PAWS	Secondary	Ha	Percentage
Native Broadleaves	42	4	12	58	15.7
Mixed broadleaves	22	28	15	65	17.6
Conifers					
Corsican pine	7	51	12	70	19.0
Scots pine	2	80	37	119	32.2
Larch	1	26		27	7.3
Evergreen conifers		14		14	3.8
Open Ground			11	11	3.0
Rides (3m wide)			2	2	0.5
Roads (6m wide)			3	3	0.8
Totals	**74**	**203**	**92**	**369**	**100**

Fig.3 Current Age Structure



4.1.2 Ancient Semi Natural Woodlands (ASNW) – Current Situation

- There are 58ha of ASNW fragmented across FDP area (15%) and this is stocked with oak, birch and alder.
- There are a number of important wet woodland habitats alongside the streams, and a 2.4ha stand of Alder Carr at the eastern tip of Dimmingsdale Wood. The south-eastern end of the Dimmingsdale valley is dominated by mature oak woodland (33ha) with 23ha being designated AWS and 13ha having SSSI status. Throughout the rest of the design plan area there are small blocks of AWS with the main concentration in the centre of Oakamoor, Ruelow and Moseymoor.
- Isolated specimen / veteran oaks, beech and Scots pine can be found throughout the woodlands but primarily along woodland boundaries. There are only a limited amount of deadwood habitats.
- Rhododendron forms a dense understory within some of the oak stands.

4.1.3 Ancient Semi Natural Woodlands (ASNW) – Objectives/Planning Targets

- ASNW will be managed through selective felling to create a complex woodland structure which will provide varied light levels for the ground flora, encourage natural regeneration, release established trees, ensure that the stands remain stable and any exotic species are removed.
- Small groups of broadleaves and individual native broadleaf trees that remain within the FDP area will be retained wherever possible to provide a seed source to restock adjacent areas.
- ASNW areas will be restocked through natural regeneration of indigenous species typical of the natural woodland characteristic.
- Retain small groups and individual broadleaves in perpetuity to provide long-term retention's and deadwood habitats.
- The programme of cutting and treating Rhododendron to prevent regeneration will continue given its link to Phytopthora and will be extended across all woodland types.

4.1.4 Plantations on Ancient Woodland Sites (PAWS) – Current Situation

- 203ha of the FDP (55%) is currently PAWS woodland and has been stocked with uniform stands of Scots pine, Corsican pine, larch and evergreen conifers. Most of these stands are now reaching economic maturity being planted between 1950 and 1965.
- The restoration of AWS is a key objective within this FDP, the West Midlands District Plan and the Regional Forestry Framework (RFF).
- The Corsican pine in the Dimmingsdale and Ruelow woods are now becoming badly affected by a fungal disease (Red Band Needle Blight (RBNB)) with 3 stands being so badly affected they have had to be clearfelled.
- Most of the PAWS areas have a uniform stand structure and are fully stocked with conifers.
- There are good levels of broadleaf regeneration where openings have appeared in the stands and long ride sides.

4.1.5 Plantations on Ancient Woodland Sites (PAWS) – Objectives/Planning Targets

- RBNB is likely to have a major effect on the woodlands within the next 10 years, judging by the current speed and demise of the infected Corsican pine. Corsican pine covers 20% of the design plan area. The future felling proposals will focus on the gradual removal of the Corsican pine prior to the Scots, pine although the forest management team will have to be reactive to any sudden rise in infection within specific stands.
- The remaining areas of PAWS will be managed largely through a selective felling programme where the exotic species are removed to allow the established broadleaves to dominate the canopy and encourage further natural regeneration.
- The speed of reversion in the PAWS area will reflect the current stand structure, the percentage of broadleaves and its age with the stand. In the short term there are a number of stands that are ready for the complete

removal of conifers which will leave an open semi-mature broadleaf woodland, whereas in some areas there is currently no regeneration and limited seed source, and the reversion here will be over a long period of time.

- PAWS sites will be restocked in the main through natural regeneration favouring indigenous species that are typical of the woodland characteristic. Some areas may require a degree of planting where natural regeneration is likely to be less successful. Exotic species will gradually be removed when thinning and felling operations take place.
- Areas adjacent to the fragmented ASNW areas and individual native trees will be targeted when management operations are carried out, opening them up to create adequate light and shelter to facilitate natural regeneration of indigenous species.
- The structural diversity within each woodland will be increased through the timing and intensity of management systems, and move towards a more complex structure, with varying canopy levels and developing understory within each stand.
- Small groups and individual conifer and broadleaves will be retained in perpetuity to provide long-term retentions and deadwood habitats.

4.1.6 Secondary Woodland – Current Situation

- Bradley Wood and 85% of Heathy Gore (32ha) have been classified as Secondary Woodland, 30% of the total area. The remaining 60ha area comprises 10 separate blocks in Key Wood, Oakamoor and Dimmingsdale Wood.
- The secondary woodland is currently stocked with 68% conifers, 32% broadleaves and less than 0.2% open ground (primarily The Ranger SSSI).
- The existing commercial conifer stands within the secondary woodland, which do not become infected by pest or disease, will be managed to their economic rotation to maximise timber resources and produce sustainable yields.

- The timing, size, shape and scale of future management coupes will be designed to minimise the impact operations have on the woodlands' ecology and landscape whilst optimising the economic return from the stands.
- Some groups and individual conifers and broadleaves will be maintained as long-term retention and create additional deadwood habitat.

4.1.7 Secondary Woodland – Objectives/Planning Targets

- The current conifer stands within Bradley and Heathy Gore will continue to be managed under a clearfell and restock programme with evergreen conifers being the preferred species.
- The small stands and belts of mature broadleaves, found in most of the secondary woodland areas, will be managed under a selective felling programme to ensure that the stand remains stable, the timber can be utilised and will regenerate freely.
- Felling patterns within the conifers will be designed to maximise the crop's economic return whilst diversifying the long-term structure of this forest area.
- A stand of Norway spruce will be left as a natural reserve in the southern section of Key Wood. Any future management operations will be limited to those necessary on Health and Safety grounds, and the stand will be retained in perpetuity to provide long-term retentions and deadwood habitats.
- The size and scale of felling operations will be in keeping with the other management objectives, creating a varied canopy structure between stands, creating a suitable matrix of temporary open space and minimise the impact on conservation and landscape interests.
- Groups and individual conifer and broadleaves will be retained in perpetuity to provide long-term retentions and deadwood habitats.

4.2 Retentions – Current Situation

- All of the Oakamoor FDP is being formally managed and the only variation is within the Dimmingsdale and Churnet Valley SSSI, where the timing and

scale of felling operations are guided by the formal management agreement for the SSSI.

4.2.1 Retentions – Objectives/Planning Targets

- Within the new Forest Design plan 4%, 14.7ha of the forest area will be managed as a natural reserve. Any forestry operation to be carried out within these areas will be to meet the specific conservation/management objectives associated to each specific habitat. Any timber resources removed from these areas will be a secondary benefit of operations necessary to conserve, create and stabilise the areas managed as a biological reserve.
- Each natural reserve although having specific management objectives will also create a wildlife oasis within these commercially managed forests.
- Veteran and old deadwood will be retained wherever possible to create long-term retentions. Individual and small groups of trees will be identified during management operations and these will be retained in perpetuity to create future veteran trees, increase deadwood habitat and diversify the available woodland ecosystems.

4.3 Social and Recreation Interests – Current Situation

- Dimmingsdale, Key and the Southern end of Oakamoor are freehold and have been dedicated under the Countryside and Rights Of Way Act 2000 as Open Access Land. The leasehold woodland owners place no restriction on the public gaining access to their woodlands and there are a number of small car parks that are used regularly by visitors as well as local residents from the surrounding villages. Due to the lack of parking and distance from the public highway Jacksons, Heathy Gore and Key wood receive very few visitors. See Recreation Map.
- The level of access into the freehold woodlands is continuing to increase steadily and leisure and tourism are important parts of the local economy, with many small business now providing accommodation and refreshments to visitors.

- Each of the woodlands forms an important part of the local landscape character.
- The public enjoy access to the freehold woodlands on foot, bicycles and horseback. The only limitations on access would be on Health and Safety grounds when forestry operations or special events are carried out.

4.3.1 Social and Recreation Interests – Objectives/Planning Targets

- The main recreation zone in Dimmingsdale and Oakamoor Woodlands follows the network of forest roads and old carriageways. When forestry operations are carried out in these areas some small distinct groups of trees and shrubs may be retained and patterns of open space created to diversify the woodland edge.
- When forestry operations are carried out adjacent to the main public access points and routes through the forest, opportunities to conserve key features and diversify the woodland edge will be utilised. By widening access routes to increase the light levels, retaining key trees to provide permanent cover and creating new open spaces, the woodland edge will become more structured and diverse. This will help to increase the public's enjoyment and appreciation of the forest and the flora and fauna found there.
- View points from the Ranger SSSI of Alton Castle will be opened up slightly by selectively felling trees at the eastern end of the Ranger SSSI to frame the view of the castle. Internal views of the Sandstone outcrops will be created as stands are felled and when replanted or regeneration occurs, these views will be retained by keeping areas at the foot of the rock outcrops clear.
- Future felling patterns will maintain the woodlands' landscape importance and the size and scale of operations will be designed in such a way as to minimise their landscape impact and maintain their aesthetic value to the rural community and the forest's value to the local economy.
- The network of forest roads and major rides that runs through the forest will be maintained to provide access to walkers, cyclists and horse riders.

4.4. Biodiversity – Current Situation

- There are a number of veteran trees of varying species found within most of the woodlands. The best examples are Scots pine and oak in Heathy Gore, Dimmingsdale and Oakamoor but there is only a limited amount of deadwood in each of the woodlands.
- The only managed open space is the Ranger SSSI which is a mosaic of wet and lowland heath, valley mire and acidic grassland. In the rest of the forests the only open space is that associated with the network of roads and rides and some transitional open space following felling operations.
- The Dimmingsdale and Ranger SSSI support a wide variety of flora and fauna including bog moss, 2 nationally scarce species of liverworts (Calypogeia integristipula & Lophozia longiflora), round leaved sundew, bog asphodel, beetle (Altica ericeti), millipede (Crasedosoma rawlinsi, Dixella filicornis), over sixty two species of true flies including the rare picture-winged fly (lusiodes geomyzina).
- There are a number of streams running through the woodlands. These are not currently being formally managed.
- Small pockets and belts of Ancient Woodland remain (55ha). The presence of rhododendron in some of these stands will inhibit any natural regeneration as well as ground flora.

4.4.1 Biodiversity – Objectives/Planning Targets

- Veteran trees, as well as a few small stands of conifers throughout the design plan area, will be retained in perpetuity to provide long-term retentions for high nesting birds and increase the volume of deadwood habitat.
- Forest roads and rides will be opened up to increase light levels and woodland edge habitat. Four new areas of open space will be created in Dimmingsdale and Oakamoor, and these will be cut and managed to create a diverse pattern of short woody and soft vegetation. The open space

adjacent to the Ranger SSSI will create view points across the Dimmingsdale Valley.

- The forest design plan will, through a programme of restoration thinnings and felling operations, revert the conifer stands on the areas of PAWS back to broadleaves over the next 80 years. In the main, natural regeneration will be used to restock these areas and native broadleaves typical of the area will be favoured when forestry operations are carried out.
- The wet woodland habitat adjacent to the streams running through the forests and along their boundaries will be managed through a selective felling programme that will open up the canopy, gradually remove exotic species and allow native broadleaves to regenerate. The dappled shade that will be created by maintaining an open canopy will encourage diverse aquatic vegetation to develop and maintain a wet woodland ecosystem.
- The Alder Carr woodland at the Eastern end of Oakamoor will be heavily thinned, removing 65% of the trees, opening up the stand by removing invasive species, and then left as an area of minimum intervention.
- The shape, size and frequency of felling patterns will be designed to create a more diverse canopy structure, and, through the retention of key features within stands and along the edge of stands being managed, the available woodland habitats will increase and diversify. Due the increased effect of RBNB on the Corsican pine stands, future felling patterns may have to be revised and stands felled prematurely to try and reduce the speed of infection to adjacent stands.
- The woodlands contain a number of woodland birds who will all benefit from the gradual reversion of the PAWS back to AWS.

4.5 Archaeology – Current Situation

- There are no Scheduled Ancient Monuments within the FDP woodland. The heavy industry associated with the Churnet Valley that lay nearby were supplied via rail and canals and the steep wooded valley side have no distinct features associated to past land use.

4.5.1 Archaeology – Objectives/Planning Targets

- Significant features of cultural significance, that may in the future be identified, will be conserved wherever possible and managed in accordance with the West Midlands District Heritage Plan and, where appropriate, in consultation with the English Heritage and Staffordshire County Council Archaeology team.

5. Restocking and Future Management

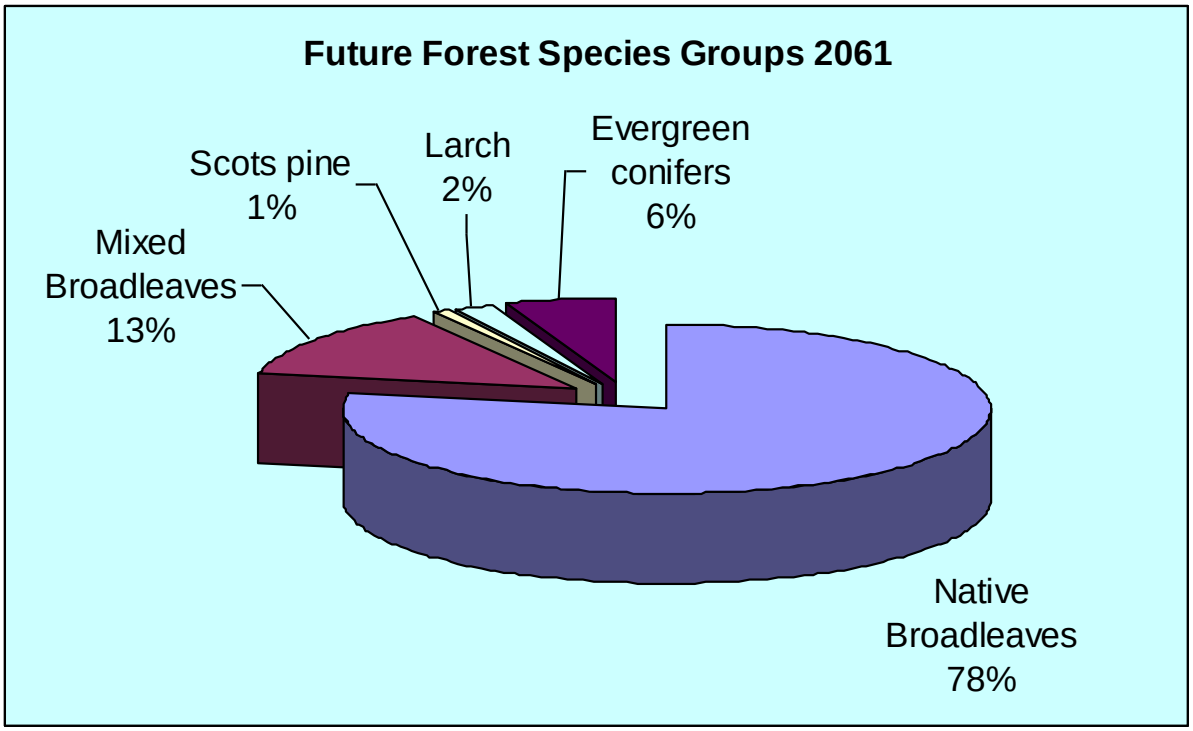
- Over 80% of the FDP area will be reverted to mixed broadleaved woodland, predominantly native species, to be managed to produce a mature native crop. These stands will comprise oak, birches and rowan as the primary species.
- 82% of the design plan area will be restocked through the natural regeneration of mixed broadleaves. When stands are cleaned and thinned, indigenous species typical of the woodland's native woodland characteristics will be favoured. This will allow the forest area to develop over the next, and subsequent rotations, into a native broadleaved woodland which is well structured and linked throughout by diverse patterns of woodland habitats (open spaces, woodland edge, wet woodland, deer glades) see Table 2 and Fig.4.
- The conifer will continue to be managed through a clearfell and restock programme with each stand being thinned and then felled at the end of its economic rotation, unless early intervention because of pests, diseases, windblow etc is required.
- Mammals will need to be controlled to allow the recruitment of mixed broadleaves and conifer restock to establish successfully.

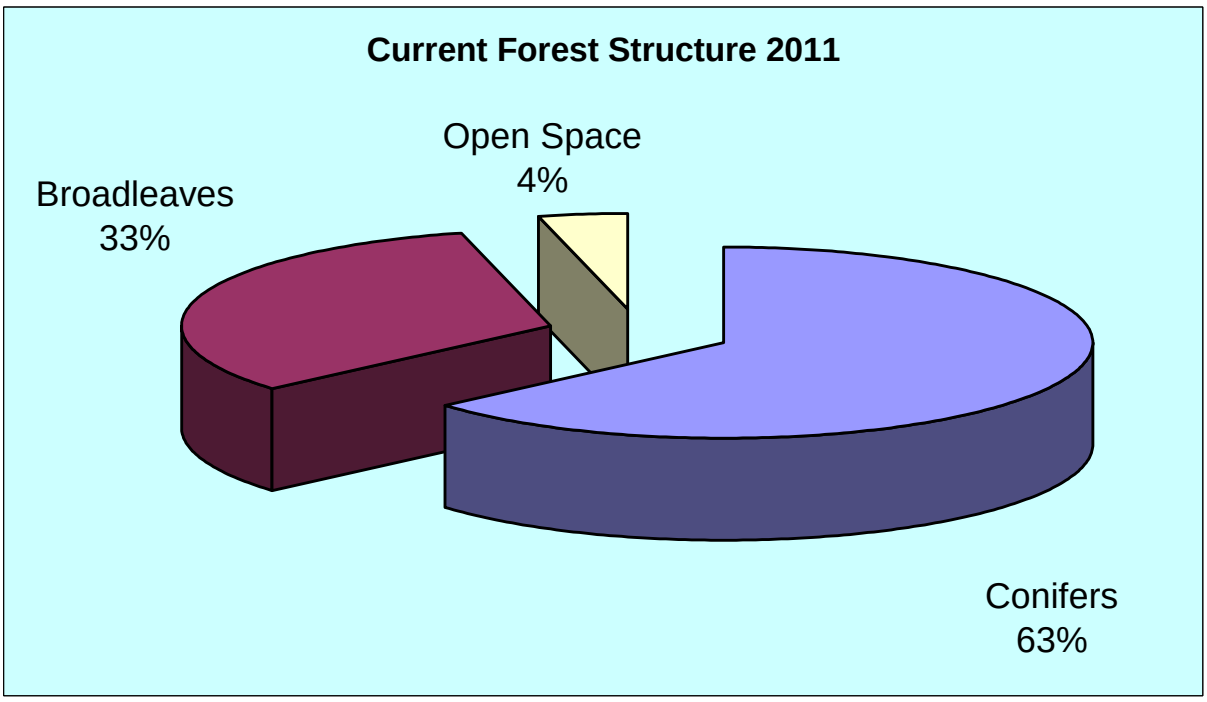
Table 2 Future Species Composition - 2058

Broadleaves	AWS	Secondary	Ha	Percentage
Mixed broadleaves	19	24	43	11.8
Native Broadleaves	226	35	261	70.7

Scots pine		3	3	0.8
Larch		6	6	1.6
Evergreen conifers		19	19	5.1
Open Ground	23	4	27	7.3
Rides (6m wide)	6	1	7	1.9
Roads (12m wide)	3	0	3	0.8
Totals	**277**	**92**	**369**	**100**

Fig. 4 Future Species





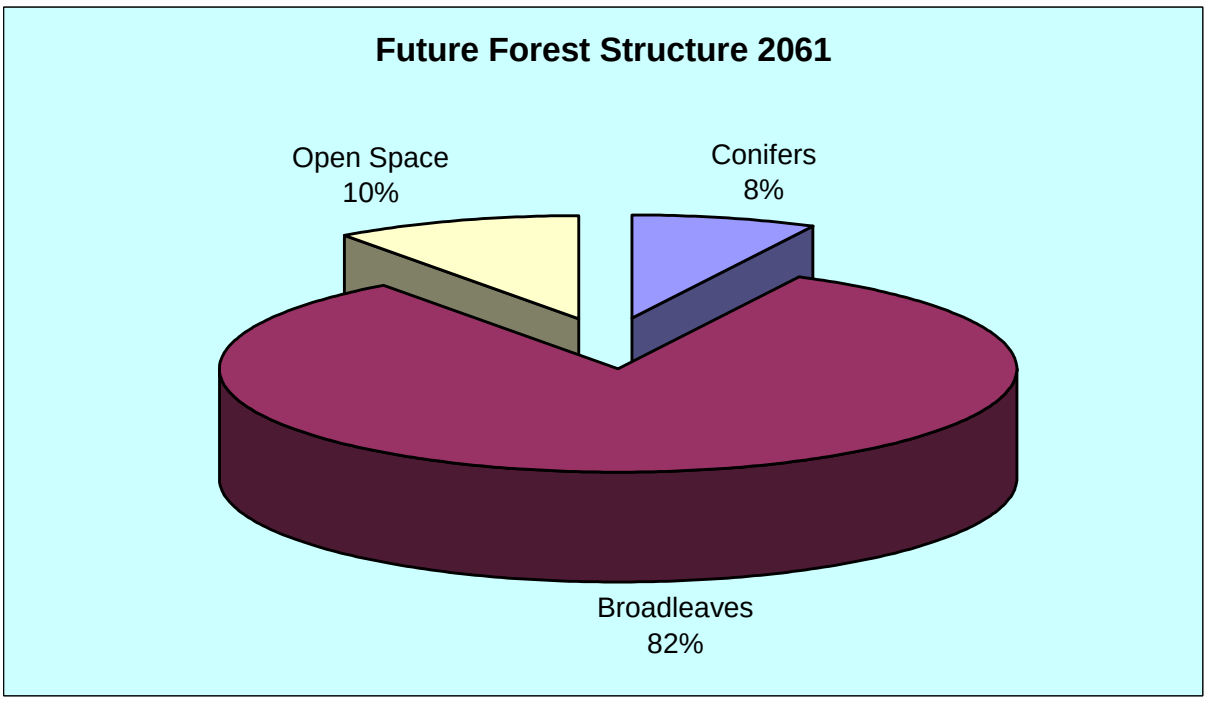


Fig.5 Future Forest Structure

Fig.5 Change in Woodland Structure

6. Meeting and Monitoring Management Objectives

- **Meeting Objectives**

Objective	Description	Proposals	Methods of Monitoring
Woodland	The woodlands will be managed to produce commercial conifer and broadleaf logs using a variety of silvicultural systems which will be chosen to meet the other landscape and environmental management objectives.	The timing, scale and shape of future felling operations will be designed to create a diverse woodland structure. Clearfells will be used predominantly in the secondary woodlands. In PAWS areas, a selection system will open up the canopy of the uniform conifer stands and encourage the development of a broadleaf understory before the conifer overstory is removed. Young conifer stands will be managed to their full rotation but the retention of native broadleaves will be favoured when thinning operations are carried out, allowing a mixed woodland to develop.	Monitored through Sub-compartment database.
	Red Band Needle Blight (RBNB) is now in Churnet Valley and affecting the Corsican pine stands.	The speed of infection on some of the pine stands has involved premature felling to reduce the risk of infection in adjacent stands, and to recover saleable timber before the stand dies. Planned fell years may have to	Monitor annually by beat team and at FDP review

		be reviewed to respond and be reactive to future outbreak of RBNB.	
	The Oakamoor FDP woodlands are an important component within the local landscape and an integral part of the local leisure and tourist industry.	The proposed felling patterns will ensure that the woodland structure is diversified, and future felling operations are sympathetic to the surrounding landscape.	Fixed point photography at FDP review
	Small areas of Ancient Woodland remain but these are fragmented across the FDP area.	Areas of Ancient Woodland and mature native broadleaves will be conserved to provide seed trees. Adjacent stands of exotic species will be cleared to create adequate light levels for these seed trees to regenerate in.	Monitored through Sub-compartment database
Biodiversity.	A Dimmingsdale and Ranger SSSI will be managed in accordance with the approved SSI plan.	Within Dimmingsdale SSSI the oak stands will be selectively felled to create the appropriate light levels need for the fauna found there. While the Ranger SSSI will be lightly grazed and invasive trees removed.	Monitor annually by beat team and at FDP review.
	There is a scattering of mature/veteran trees found throughout the design plan area. These comprise predominately oak, beech and Scots pine.	The mature/veteran trees will be retained in perpetuity wherever possible to provide future veteran trees and increase the available dead wood habitat.	Monitored by wildlife ranger and at FDP review.
	Open space is limited at the present time and only covers 3.8% of the design	Through the widening of the road and ride side networks, as well as the creation of several areas	Monitored by wildlife ranger and at FDP review

	plan area.	of clearings in the forest which will remain open, the overall area of open space will be increased to 10% of the FDP area. These areas will be cut on a rolling programme.	
	Important area of Alder Carr and wet woodland habitats adjacent to streams.	The Alder Carr opposite the public car park will have 60% of the standing volume removed along with any exotic species to create an open woodland structure. The stream that runs through the Dimmingsdale SSSI and Bradley Wood will be selectively felled removing exotic species and creating a minimum of 50% open canopy along the length of each of the water courses. Trees with full, well developed crowns will be retained, and ground vegetation will be retained down to the water edge in some places to prove cover to the site fauna.	Monitoring at FDP review and through Sub-compartment database.
	Limited areas of deadwood	Standing snags will be left on clearfell sites, and individual and small groups of trees will be retained beyond their economic rotation, to become veteran trees and provide additional deadwood.	No monitoring required.
	Areas of minimal intervention have been identified in each forest to conserve the	Low levels of change within the designated areas will allow the ecological development of a more natural woodland ecosystem	No monitoring required Monitoring at FDP review

	remaining AWS and mature conifers	that will be beneficial for biodiversity (high nesting birds, deadwood, indigenous flora and fauna).	

Objective	**Description**	**Proposals**	**Methods of Monitoring**
Social & Recreation	The forests play an important role in the local economy.	Management objectives, and the way these will be delivered, will ensure that the current value of the forest on the local economy is maintained, and the secondary benefits of these forests on the local economy are further enhanced.	Monitoring at FDP review
	The demand for access into the FDP woodlands has increased over recent years.	Informal access will continue within each of the woodlands and future forestry operations will create a more diverse woodland structure with open woodland habitats and internal viewpoints, which will increase the aesthetic value of the forests to visitors and local residents.	No monitoring required Monitoring at FDP review
Heritage	There are no scheduled ancient monument (SAM) within the FDP	Any archaeological features found will be avoided wherever possible during forest operations.	Monitoring at FDP review

7. Option Testing & Selection

Non-Market Benefits	Sensitivity	Option 1	Option 2	Option 3
Description of silvicultural system by area		New coupe shapes using a mixture of clearfells but predominantly continuous cover management systems across most of the FDP.	Clearfell using original large scale coupe shapes with limited areas of low impact felling	New coupe shapes using clear fells and selective felling based on economic rotations.
Landscape	4	The use of low impact felling systems and small-scale clearfells will diversify the landscape value of the woods.	Will increase the landscape value through large scale clearfells. .	Will have a major impact on internal and external landscape value due to the short times scale of felling.
People	3	The aesthetic vale of the woodland will be increased through the increased areas of open space and creation of new internal landscape views.	Large scale felling patterns will create a dramatic impact as areas are felled.	Will reduce the aesthetic value of the forest for visitors and local residents.
Conservation	3	The size, scale and frequency of felling patterns long term retention's and areas of biological management will conserve the current woodland ecosystems	The original large scale felling will have a negative impact on the available woodland habitat, and does not take into account the requirements of the sites	The time scale over which the felling would take place would reduce the available woodland habitat and reduce the area of high forest.

		and diversify further habitat niches.	flora and fauna and BAP species.	
Economic Forecast		99,309m³ of timber will be harvested over the next 50 year period	107,038m³ of timber will be harvested over the next 50 year period	121,011m³ of timber will be harvested over the next 50 year period
Option Selection and Justification Option 1 will be adopted as this will maintain the high conservation value of the woodlands, restore the areas of PAWS, create new open ground and woodland edge habitats.				

8. Glossary

Ancient Semi-Natural Woodland (ASNW)
A classification for a woodland that has been in continuous existence since before 1600AD.

Biodiversity
The variety of ecosystems and living species, including variations within species groups.

Biodiversity Action Plan (BAP)
Describes the UK's biological resources and details the protection of these resources, including 391 Species Action Plans, 45 Habitat Action Plans and 162 Local Biodiversity Action Plans.

Biological Retention
A habitat or woodland ecosystem that will be conserved and actively managed i.e. deadwood, coppice, wet woodland, grassland.

Clearfell System
The removal of all trees in one operation > 0.5ha.

Continuous Cover Forestry (CCF)
Silvicultural systems where the forest canopy is maintained at one or more level, e.g. Shelterwood, Group Regeneration, Selective Felling, Regeneration Thinnings.

Forest Design Plan (FDP)
An approved plan that outlines felling operation over a 10 year period, outlining proposals over the next 50 years. The FDP's are

reviewed every 5 years and redrawn and approved every 10 years.

Forest Stewardship Council (FSC)
An internationally recognised body made up of non-government organisations promoting sustainable forest management to the forest industry and consumers.

Habitat Action Plan (HAP) Habitat recognised as Internationally important, for example those designated under the EU Habitats Directive; Nationally or locally important.

Limited Intervention An area of stable clumps or stands of trees where forestry operations are limited to those necessary to meet biodiversity objectives, on health and safety grounds and the need to protect the surrounding forest >1% of the woodland area.

Long Term Retention Trees that are being retained beyond their economic rotation.

Native Broadleaves and A species of tree or shrub which arrived inhabited an area naturally, without the deliberate assistance of man and was present after post-glacial recolonisation and before historic times.

Natural Regeneration Plants growing on a site as a result of natural seed fall or suckering.

Natural Vegetation Classification (NVC)
A comprehensive classification of vegetation in the UK which is used to describe and assist in the evaluation of habitats.

Plantation of Ancient Woodland Site - PAWS
Classifies an AWS that has been cleared of trees at some point in its history and then replanted. The woodland may also contain natural regeneration.

Public Rights of Way (PROW)
Access routes open to the public through legal designation.

Regeneration Thinnings When the volume of timber removed in a

thinning operation is increased to open up the canopy thereby increasing light levels onto the forest floor and assist the natural regeneration of the next stand of trees, allowing it to become well established prior to the mature stand being removed.

Secondary Woodland land — Woodlands that have been established on that was formally used as pasture, meadows, arable, quarries etc and has not continually been wooded.

Selective Felling — Where individual trees of varying sizes are selected and removed from a stand. The whole stand is worked and its aims is to maintain full stocking of all tree sizes and ages, from seedlings to mature trees, in any one area.

Silvicultural Systems — Techniques of managing a forest through a variety of cutting / felling patterns and time scale.

Staffordshire Biodiversity Action Plan (SBAP) — This is the local biodiversity action plan that outline the Species Action Plans and Habitat Actions Plans associated to the county.

Thinning — The removal of a proportion of the trees in a sub-compartment to improve the quality of the remaining trees, accelerate individual tree growth and provide income.

UK Woodland Assurance Scheme (UKWAS) — A certification standard recognised internationally that is awarded to woodland owners who are managing their forests using sustainable management systems.

UK Forest Standard (UKFS) — The governments approach to sustainable forest management which was developed following international agreements on sustainable forest.

Veteran Trees — A tree that is of interest biologically, culturally or aesthetically because of its age, size or condition.

Appendix I

The Oakamoor Design Plan Brief

Written by Alastair Semple, November 2008

Oakamoor Forest Design plan comprises 9 separate woodlands which lie along the Churnet Valley between the villages of Alton, Oakamoor and Froghall, North Staffordshire. The design plan area covers 369ha of woodland (Dimmingsdale 142.78ha, Oakamoor 94.7ha, Ruelow 33.32ha, Heathy Gore 28.81ha, Key Wood 16.86ha, Moseymoor 25.57ha, Carr Wood 17.91ha, Bradley Wood 7.29ha and Jackson's Wood 1.76ha) which is currently stocked with 57% conifers, 39% broadleaves and 4% open ground. The woodland structure is quiet uniform, with most of the stands being planted in the 1950s and 1960s. The design plan area is historically woodland with 19% designated as an ancient woodland site (AWS), 53% plantation on an ancient woodland site (PAWS) and 28% secondary woodland. The main influences on the future management will be the restoration of the PAWS back to AWS and the conservation of the existing AWS. The production of commercial timber, creation of new open spaces and woodland edge habitats whilst maintaining the woodlands landscape are also of importance in this plan.

Environmental Issues

- 53% of the forest area is PAWS and 95% (approx. 190ha) of this will be reverted back to native broadleaves over the next 60 years using a variety of silvicultural systems.
- Remnant AWS areas will be managed through low impact felling systems where practicable to minimise the impact future felling operations have on the woodland ecosystem and provide a valuable seed source.
- Some areas of ancient woodland will be managed as biological retentions and all commercial forestry operations will cease. Future management will be carried out to try and maintain the woodland ecosystem required by some of the rare lichen and mosses found there.
- Wet woodland habitats and riparian areas will be managed to increase the indigenous species and reduce the risk of siltation into the local watercourses.
- The limited area of open space available will be increased and managed sympathetically to increase the current woodland edge and biodiversity.
- Veteran trees are scattered throughout many of the woodlands and these will be mapped and conserved as part of the design plan process and ongoing management. Additional notable trees and small groups of both conifers and broadleaves will be identified and retained as long-term retention's to provide future veterans.
- Deadwood habitats are limited within the PAWS and secondary woodland areas and future forest management will retain wherever possible snags or laid deadwood habitats.
- Due to the spread of Red Band Needle Blight and its probable impact on Corsican pine, Corsican pine stands will be clearfelled and removed from within Scots pine stands.
- Rhododendron needs removing and bracken and non-natives broadleaves will need to be controlled to allow the indigenous species to re-establish.
- 63ha of the design plan area has been designated as a Site of Special Scientific Interest (SSSI) for the bryophytes, unimproved grassland and rock outcrops found there.

Social Issues

- The Churnet Valley area receives thousands of visitors each week travelling to the local theme park as well as an increasing numbers of people who come to enjoy the woodlands and network of paths and bridleways in the area.
- Tourism is of increased value to the local economy and the woodlands are key component to the aesthetic value of the Churnet Valley Landscape that attracts people into the area.
- There are a number of key features within the woodlands such at veteran trees, open water and outcrops of rocks and these will be incorporated into the forest design.
- There are a number of key viewpoints in the local landscape and this will influence the scale and timing of felling operations in these areas. Internal viewpoints will be maintained and wherever possible new internal and external views will be created.
- Increase pressure from public access is likely to occur in the future and management operation will try to facilitate this wherever possible and minimise its impact on the woodland ecology.

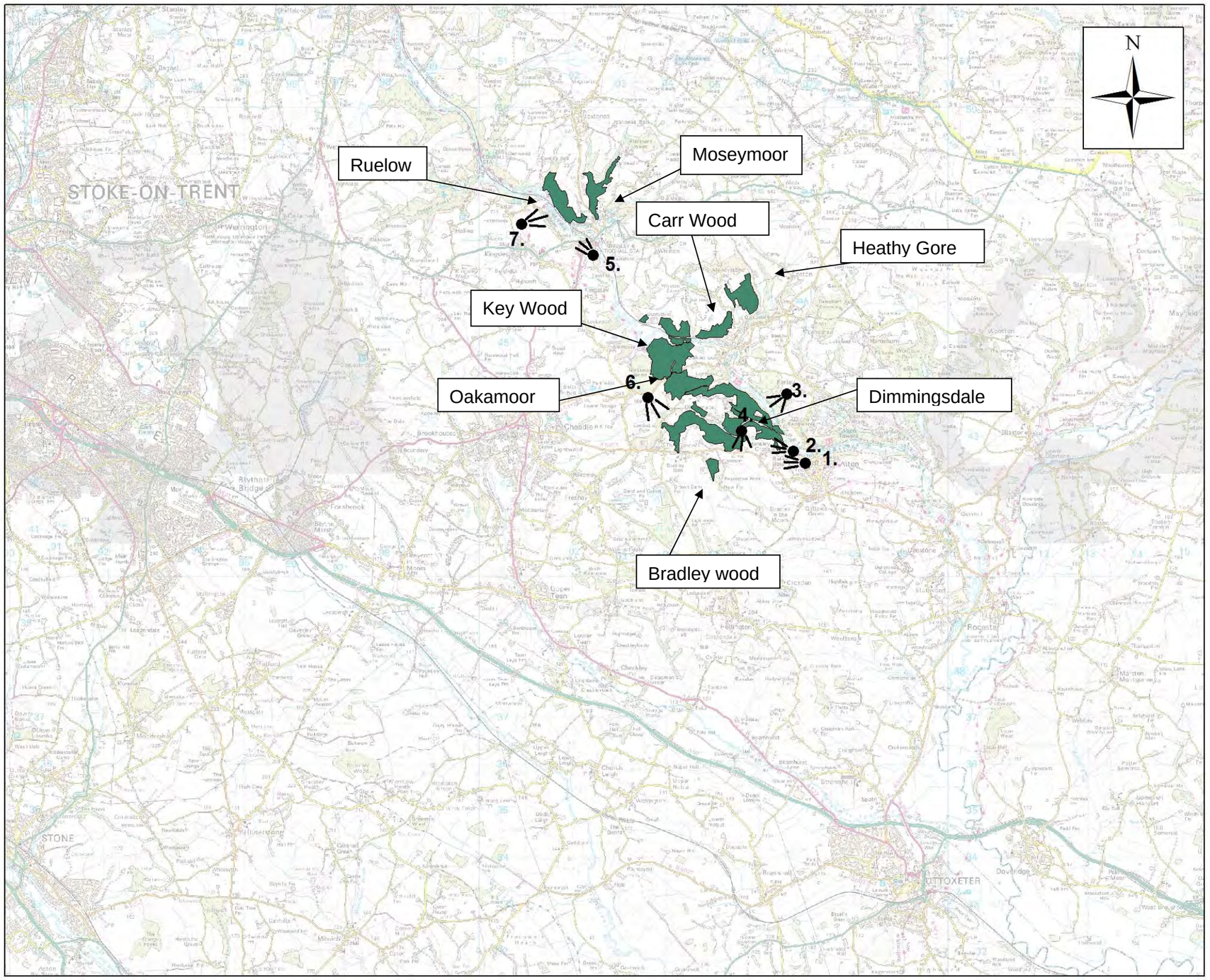
Economic Issues

- Corsican Pine and Scots Pine are the primary commercial conifer species grown covering 48% of the design plan area and comprising of 80% of the conifers grown within these woodlands.
- The conifer stands produce yields of between 8 and 22 with a mean yield class of 13 and 5 amongst the broadleaves.
- Broadleaf stand currently cover 38% of the design plan area (134ha) of which approximately 25% is managed for conservation rather than commercial timber production.
- Red Band Needle Blight is a disease effecting pine trees in the United Kingdom which involves a significant loss in yield and increasing levels of mortality. 4 stands of Corsican pine are badly infected and will need clearfelling straight away. The remaining areas of Corsican pine (38ha) will its believed, also become infected and will need to be removed in the short to medium term. This disease will have a measured impact in the Oakamoor design plan area with 14% of the tree stock (Corsican pine) being susceptible.
- In future rotations, sustainable timber will remain a principal objective for 75% of the design plan area whilst meeting all the above environmental, social and economic objectives.
- Restocking of AWS and PAWS will be encouraged through natural regeneration of mixed broadleaves favouring native broadleaves that are characteristic of the woodland type. Where resources are available, and if there is a need, some enrichment planting will take place using native broadleaves.
- Restoration of PAWS (205ha) will have a measurable effect on future timber production due to the reduction in clearfelling stands at their economic felling age and increased rotation length of the future broadleaf stands although this will be offset by the early removal of Corsican pine in the short-term. In addition the need to increase the areas of open space to a minimum of 10% of the forest area will again reduce the available areas for timber production.

Consultation Issues

- Due to the large numbers of visitors to the woodlands and surrounding area and the close proximity of the local villages a Public 'Drop in Meeting' will be held in Oakamoor Village Hall on Wednesday 21st January 2009 from 3.30pm to 7.30pm. Notices will be posted on site to inform users of the forest about the meeting and where they can comment on the plan.
- Landowners, neighbours, County Council, English Heritage, local authorities and other relevant public bodies will be contacted by letter to allow them to comment on the plan, inform them of the meeting or make the Forestry Commission aware of any data sets they may have for the woodlands.
- The Forestry Commission's Woodland Officer will be closely involved in the plan development.
- The consultation period will run until 9 February 2009.

Oakamoor FDP



WEST MIDLANDS FOREST DISTRICT

Oakamoor Forest Design Plan Area

Location Plan

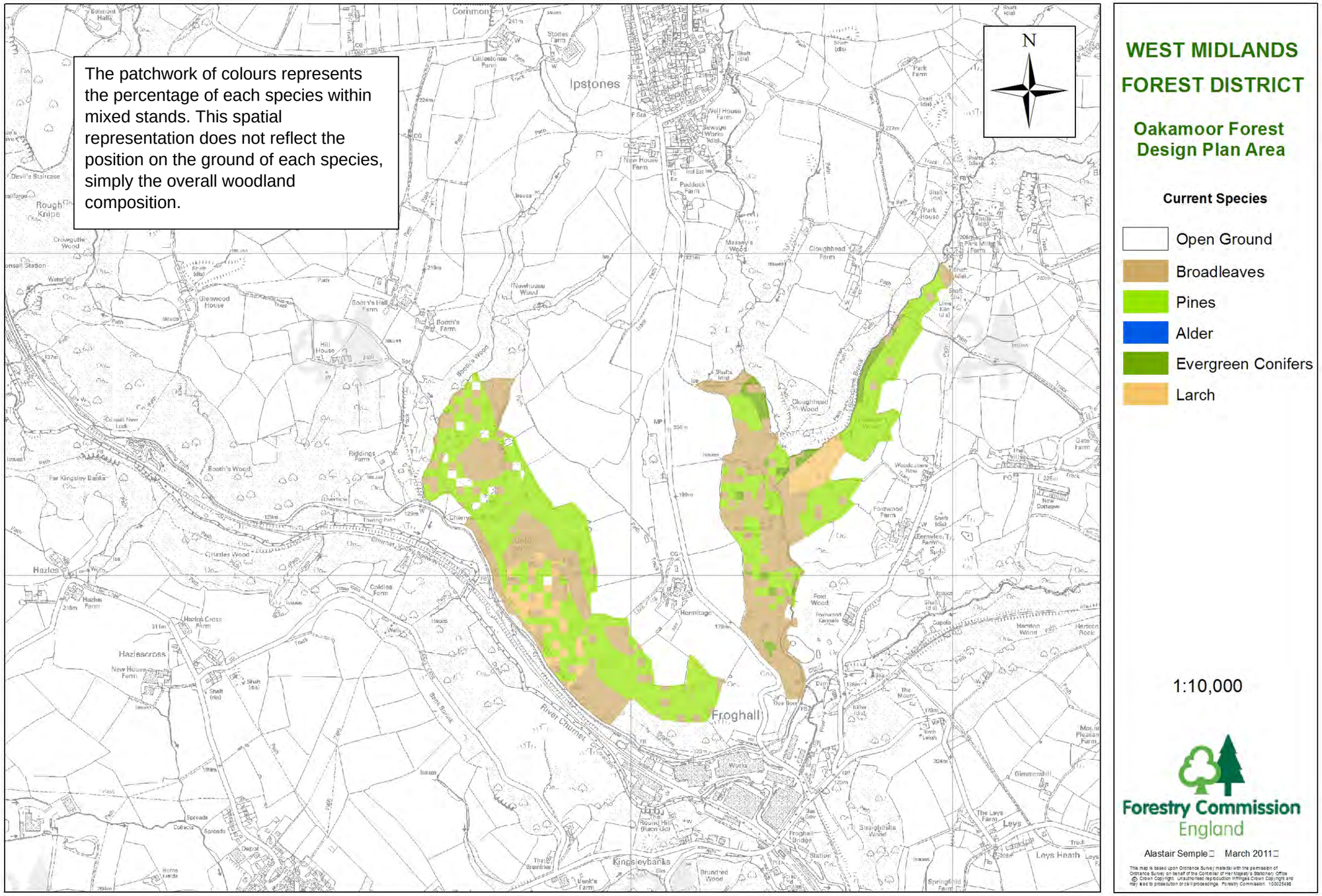
The Oakamoor Forest design plan (FDP) lies along the Churnet Valley in the Staffordshire Moorlands on the south -ern edge of the Peak District National Park. The FDP covers 369ha of woodland comprising of a mixture of both secondary and ancient woodlands now largely planted with conifers. The woodlands provide a diverse structure which contains 2 Sites of Special Scientific Interest (SSSI), mature oak woodland, large rock outcrops, diverse range of fauna and flora, productive conifer stands, wetlands, streams and promoted recreational routes.

The Oakamoor FDP provides an important back drop and setting for the small communities and local businesses now based around sustainable tourism and small scale farming.

1:75,000

Forestry Commission England

Alastair Semple□ March 2011□


The patchwork of colours represents the percentage of each species within mixed stands. This spatial representation does not reflect the position on the ground of each species, simply the overall woodland composition.
N
Ipstones
Froghall
Kingsleybanks
Hazlesgross
Hazles
Leys
Leys Heath
WEST MIDLANDS
FOREST DISTRICT
Oakamoor Forest
Design Plan Area
Current Species
Open Ground
Broadleaves
Pines
Alder
Evergreen Conifers
Larch
1:10,000
Forestry Commission
England
Alastair Semple□ March 2011□
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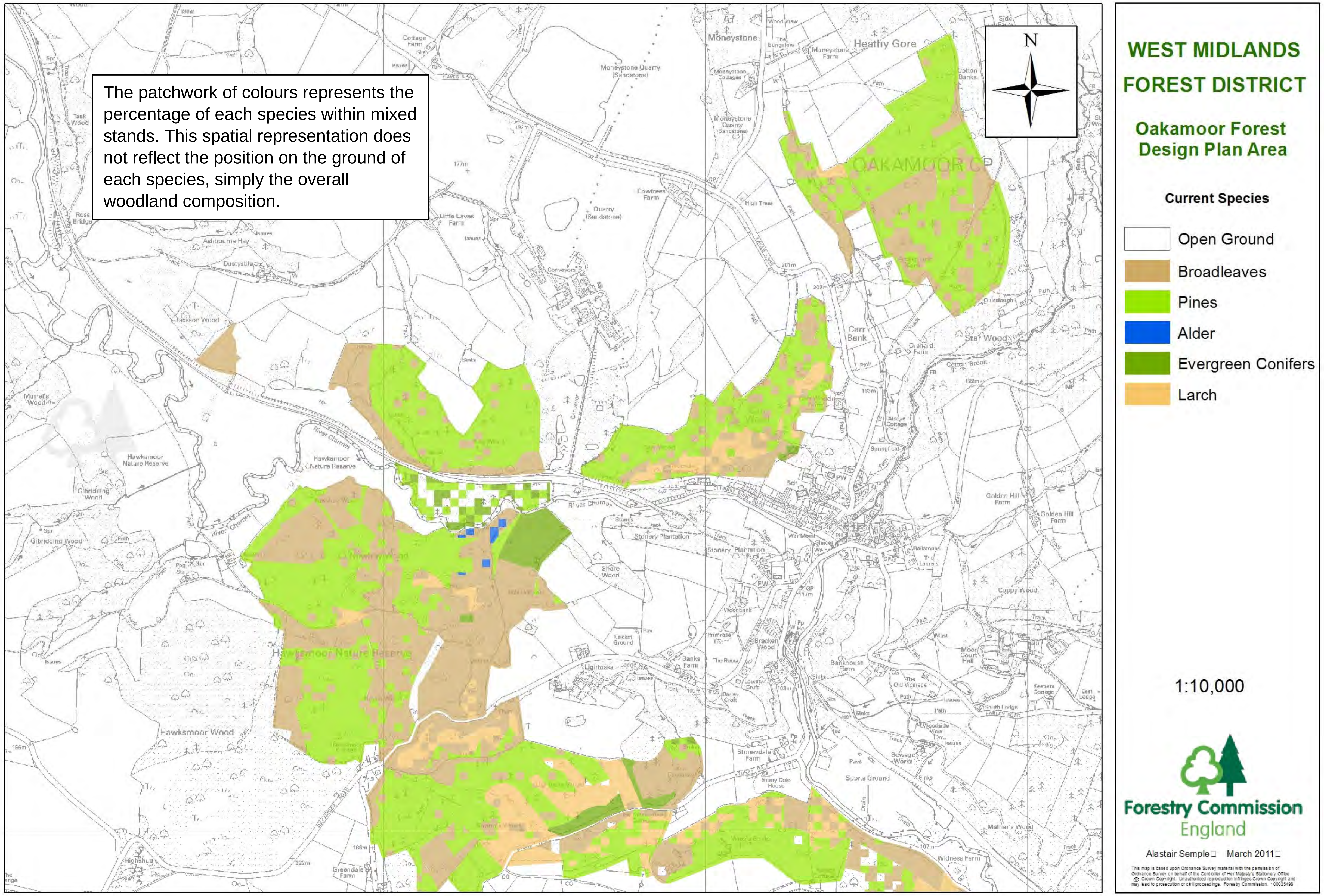
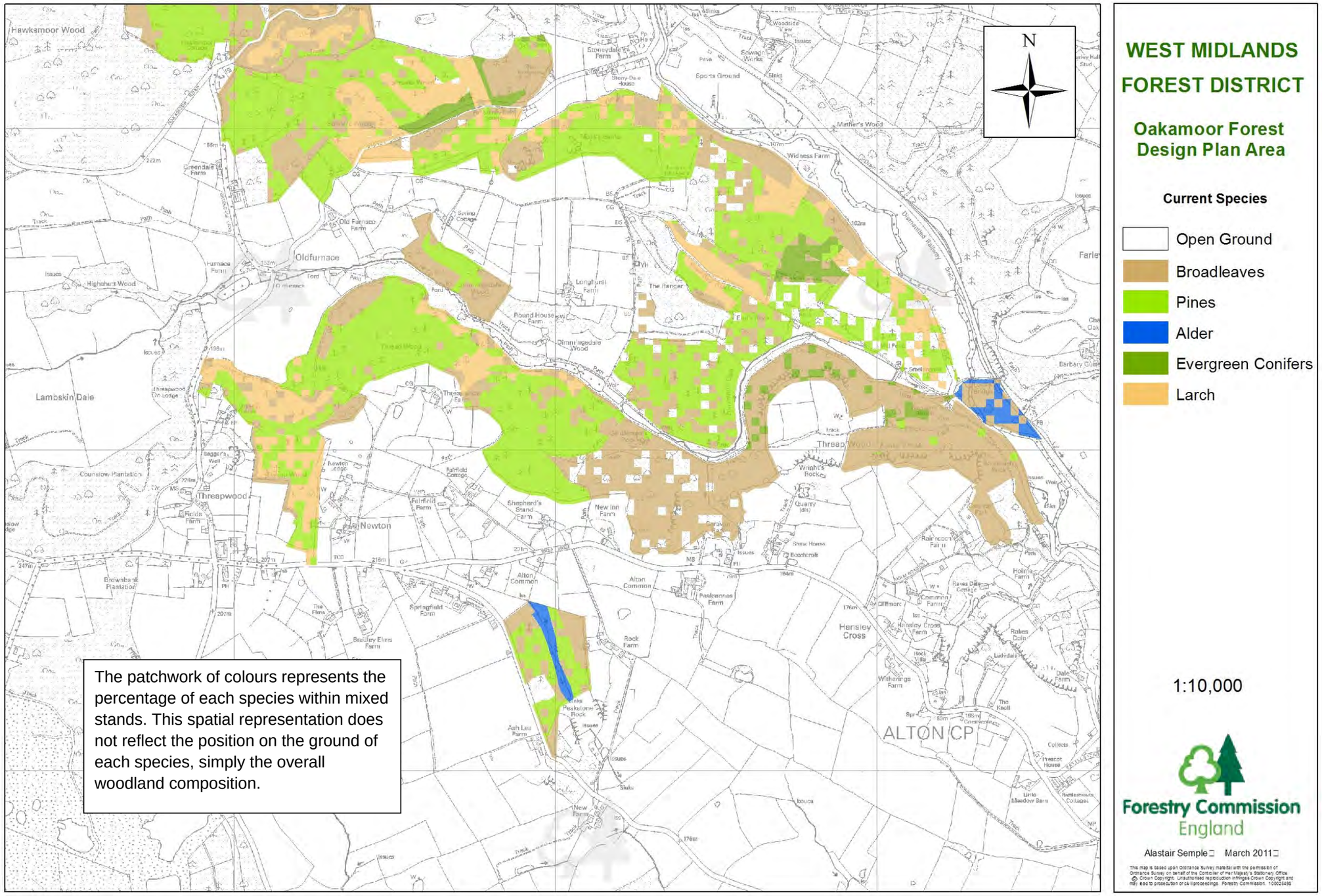

The patchwork of colours represents the percentage of each species within mixed stands. This spatial representation does not reflect the position on the ground of each species, simply the overall woodland composition.
N
Moneystone
Heathy Gore
OAKAMOOR CP
Star Wood
Hawksmoor Nature Reserve
Hawksmoor Wood
WEST MIDLANDS FOREST DISTRICT
Oakamoor Forest Design Plan Area
Current Species
Open Ground
Broadleaves
Pines
Alder
Evergreen Conifers
Larch
1:10,000
Forestry Commission England
Alastair Semple
March 2011



The patchwork of colours represents the percentage of each species within mixed stands. This spatial representation does not reflect the position on the ground of each species, simply the overall woodland composition.

WEST MIDLANDS FOREST DISTRICT

Oakamoor Forest Design Plan Area

Current Species

- Open Ground
- Broadleaves
- Pines
- Alder
- Evergreen Conifers
- Larch

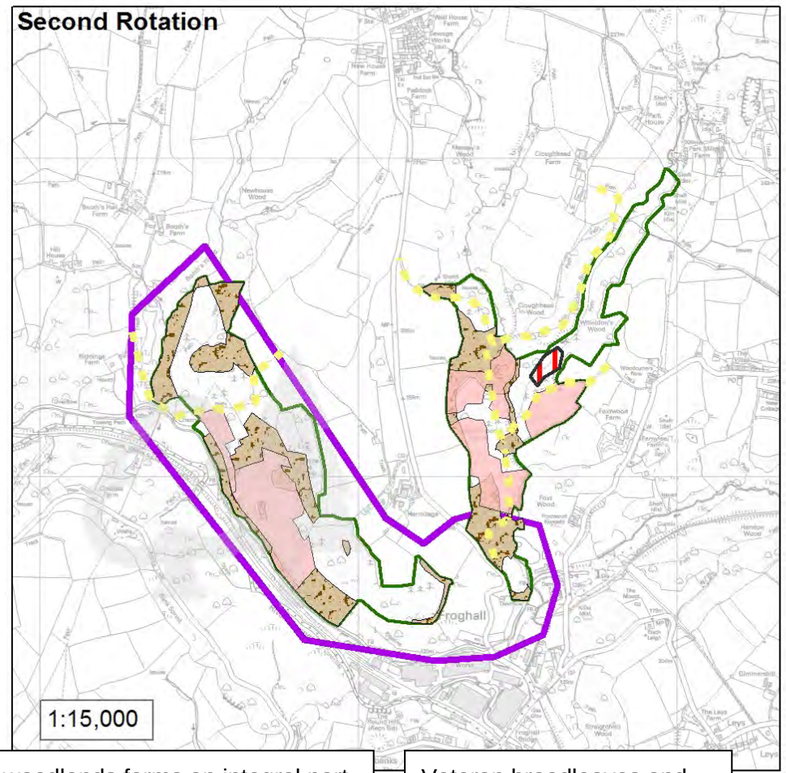
1:10,000

Forestry Commission England

Alastair Semple March 2011

Red Band Needle Blight is a fungal disease which is affecting most of the stands of pine within the forest.

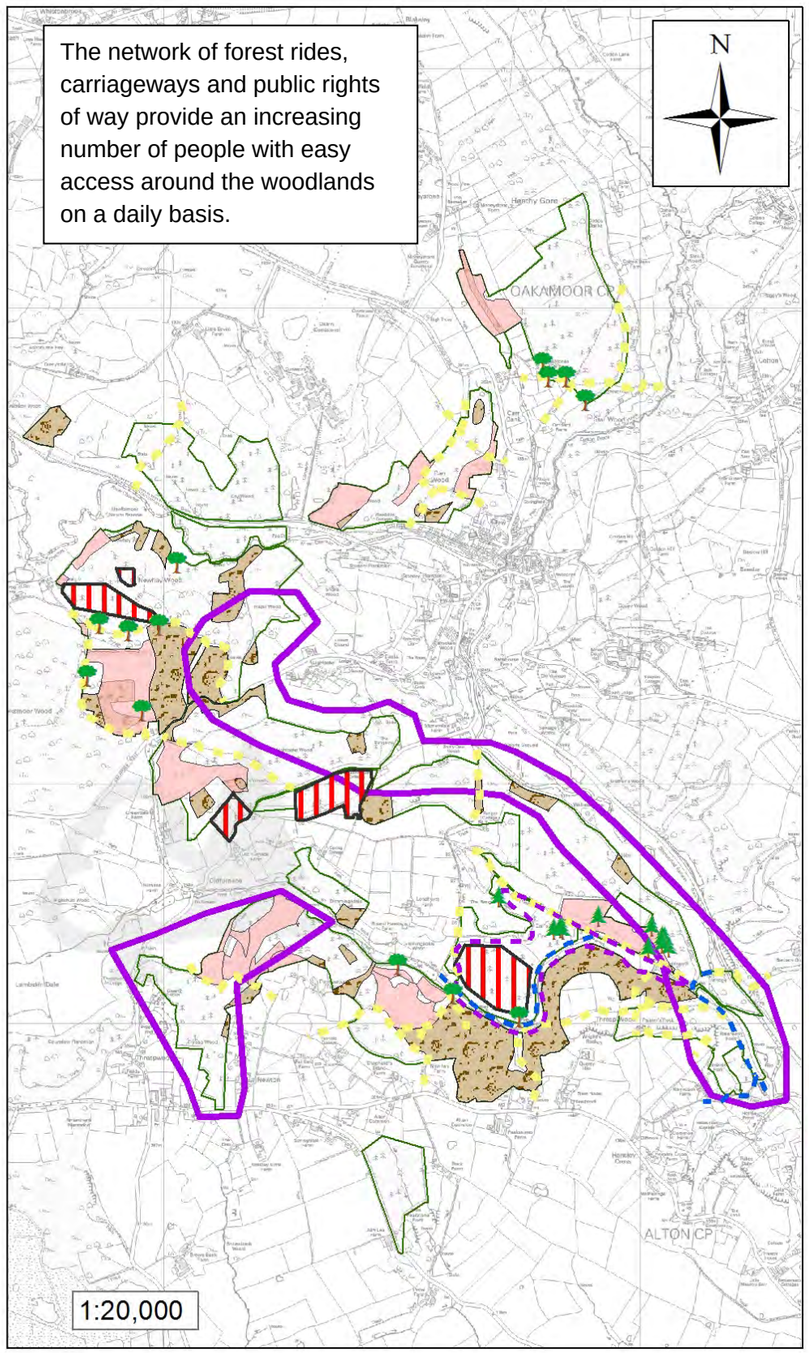
20% of the forest comprises pure Corsican pine stands and these are likely to be fatally affected by RBNB in the next few years following the recent spread of the disease within the valley.

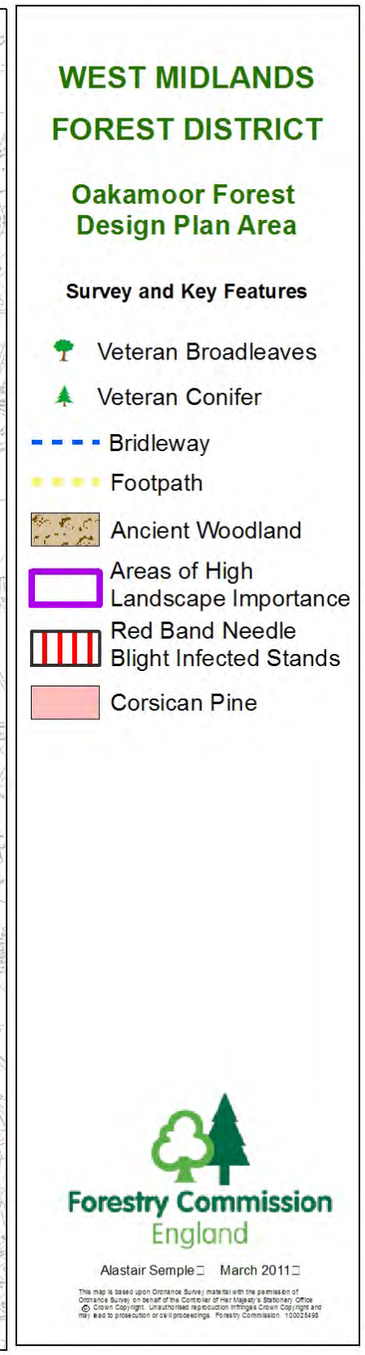


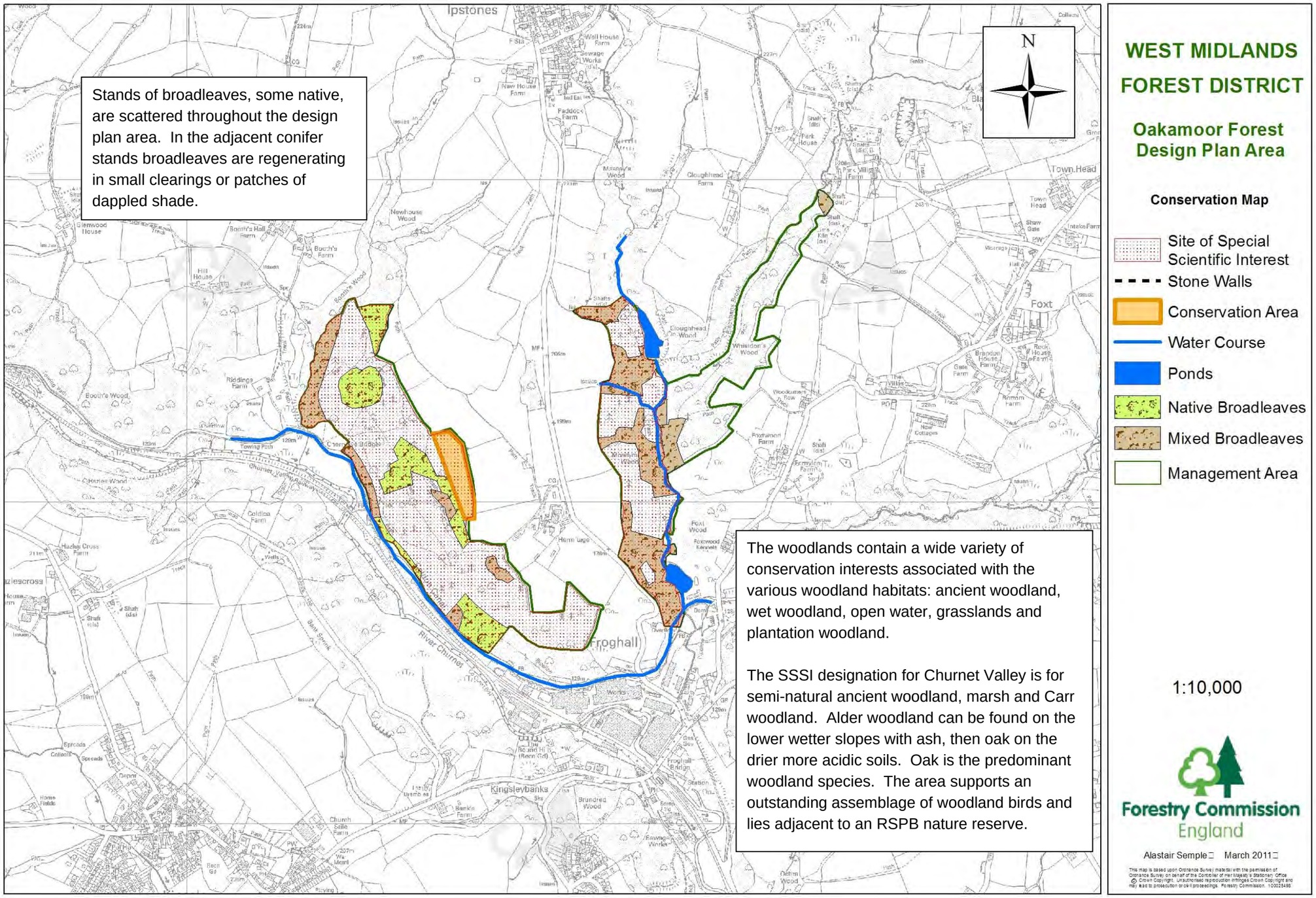
Each of the woodlands forms an integral part of the local landscape creating back drops for the local communities and emphasising the local landform.

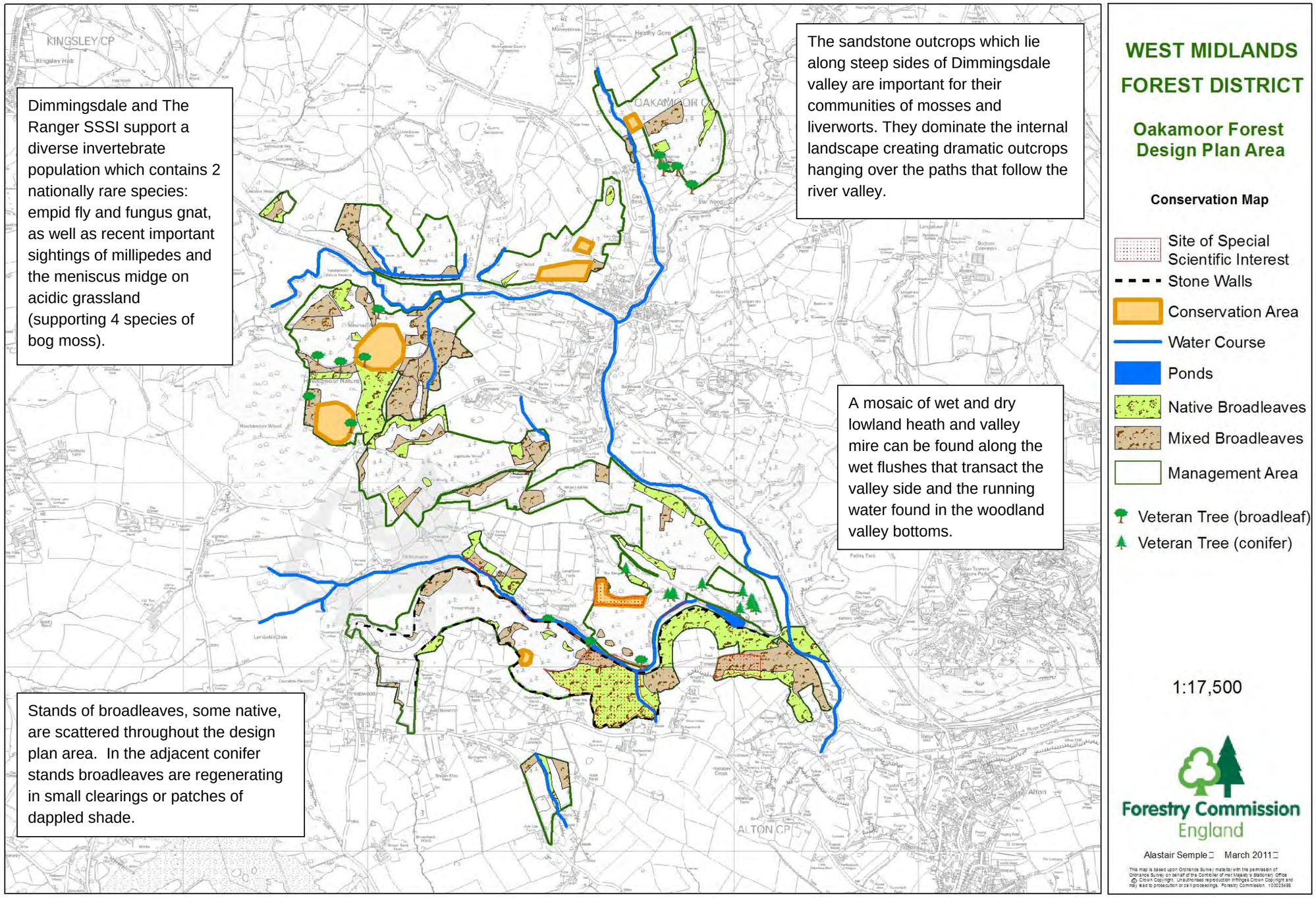
Veteran broadleaves and Scots pine can be found throughout the design plan area with the most dramatic being the Scots pine growing out of the sandstone outcrops with their exposed roots system, in many cases, defying gravity to hold the veteran pines in situ.

The network of forest rides, carriageways and public rights of way provide an increasing number of people with easy access around the woodlands on a daily basis.






Ipstones
Froghall
Kingsleybanks
Town Head
Foxt
River Churnet
N
Stands of broadleaves, some native, are scattered throughout the design plan area. In the adjacent conifer stands broadleaves are regenerating in small clearings or patches of dappled shade.
The woodlands contain a wide variety of conservation interests associated with the various woodland habitats: ancient woodland, wet woodland, open water, grasslands and plantation woodland.
The SSSI designation for Churnet Valley is for semi-natural ancient woodland, marsh and Carr woodland. Alder woodland can be found on the lower wetter slopes with ash, then oak on the drier more acidic soils. Oak is the predominant woodland species. The area supports an outstanding assemblage of woodland birds and lies adjacent to an RSPB nature reserve.
WEST MIDLANDS FOREST DISTRICT
Oakamoor Forest Design Plan Area
Conservation Map
Site of Special Scientific Interest
Stone Walls
Conservation Area
Water Course
Ponds
Native Broadleaves
Mixed Broadleaves
Management Area
1:10,000
Forestry Commission England
Alastair Semple March 2011


KINGSLEY CP
OAKAMOOR CP
ALTON CP
Alton
Dimmingsdale and The Ranger SSSI support a diverse invertebrate population which contains 2 nationally rare species: empid fly and fungus gnat, as well as recent important sightings of millipedes and the meniscus midge on acidic grassland (supporting 4 species of bog moss).
The sandstone outcrops which lie along steep sides of Dimmingsdale valley are important for their communities of mosses and liverworts. They dominate the internal landscape creating dramatic outcrops hanging over the paths that follow the river valley.
A mosaic of wet and dry lowland heath and valley mire can be found along the wet flushes that transact the valley side and the running water found in the woodland valley bottoms.
Stands of broadleaves, some native, are scattered throughout the design plan area. In the adjacent conifer stands broadleaves are regenerating in small clearings or patches of dappled shade.
WEST MIDLANDS FOREST DISTRICT
Oakamoor Forest Design Plan Area
Conservation Map
Site of Special Scientific Interest
Stone Walls
Conservation Area
Water Course
Ponds
Native Broadleaves
Mixed Broadleaves
Management Area
Veteran Tree (broadleaf)
Veteran Tree (conifer)
1:17,500
Forestry Commission England
Alastair Semple March 2011
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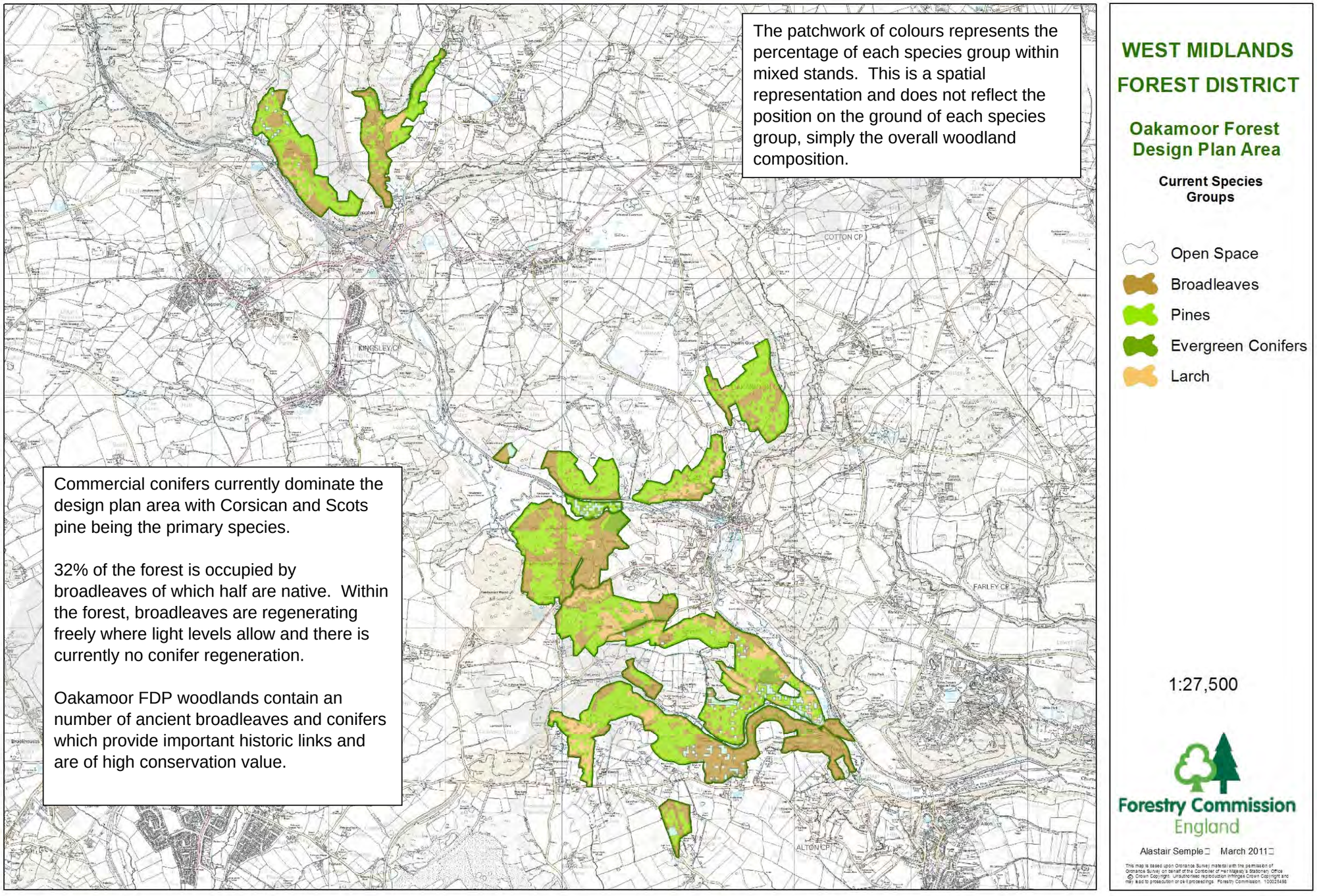
The patchwork of colours represents the percentage of each species group within mixed stands. This is a spatial representation and does not reflect the position on the ground of each species group, simply the overall woodland composition.
Commercial conifers currently dominate the design plan area with Corsican and Scots pine being the primary species.
32% of the forest is occupied by broadleaves of which half are native. Within the forest, broadleaves are regenerating freely where light levels allow and there is currently no conifer regeneration.
Oakamoor FDP woodlands contain an number of ancient broadleaves and conifers which provide important historic links and are of high conservation value.
KINGSLEY CP
COTTON CP
FARLEY CP
ALTON CP
WEST MIDLANDS FOREST DISTRICT
Oakamoor Forest Design Plan Area
Current Species Groups
Open Space
Broadleaves
Pines
Evergreen Conifers
Larch
1:27,500
Forestry Commission England
Alastair Semple March 2011
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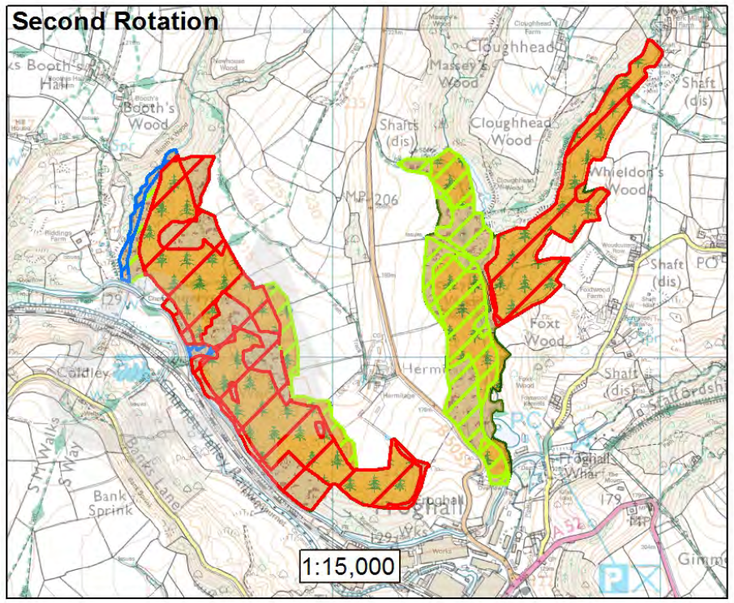
The design plan area comprises of 203ha of Plantation on Ancient Woodland Site (PAWS), 92ha of Secondary Woodland and 72ha of Ancient Semi-natural Woodland.

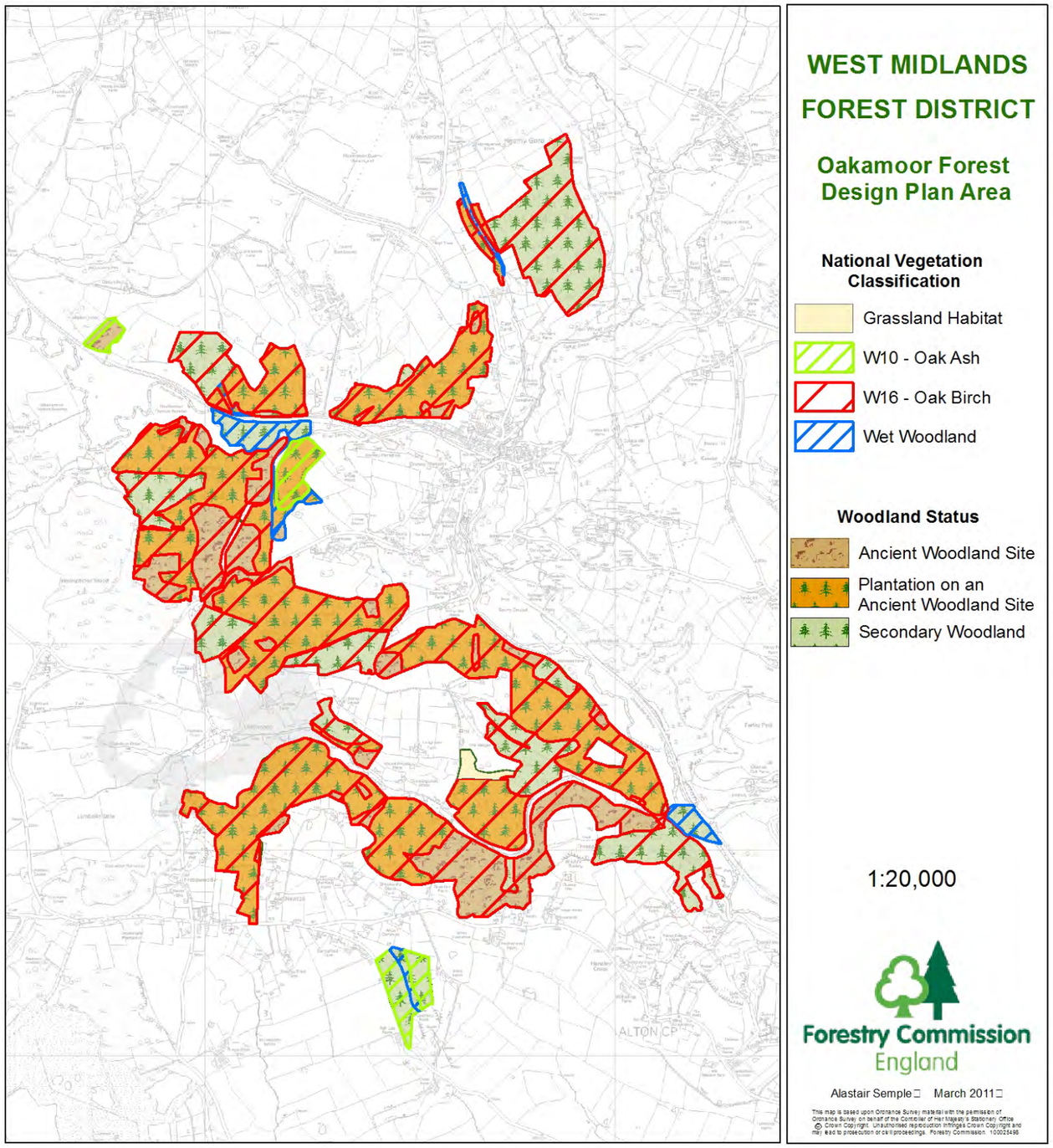
The design plan areas has been classified as largely W16 Oak Birch Woodlands (88%), W10 Oak Ash Woodland (8%) and W4 Wet Woodland (4 %).

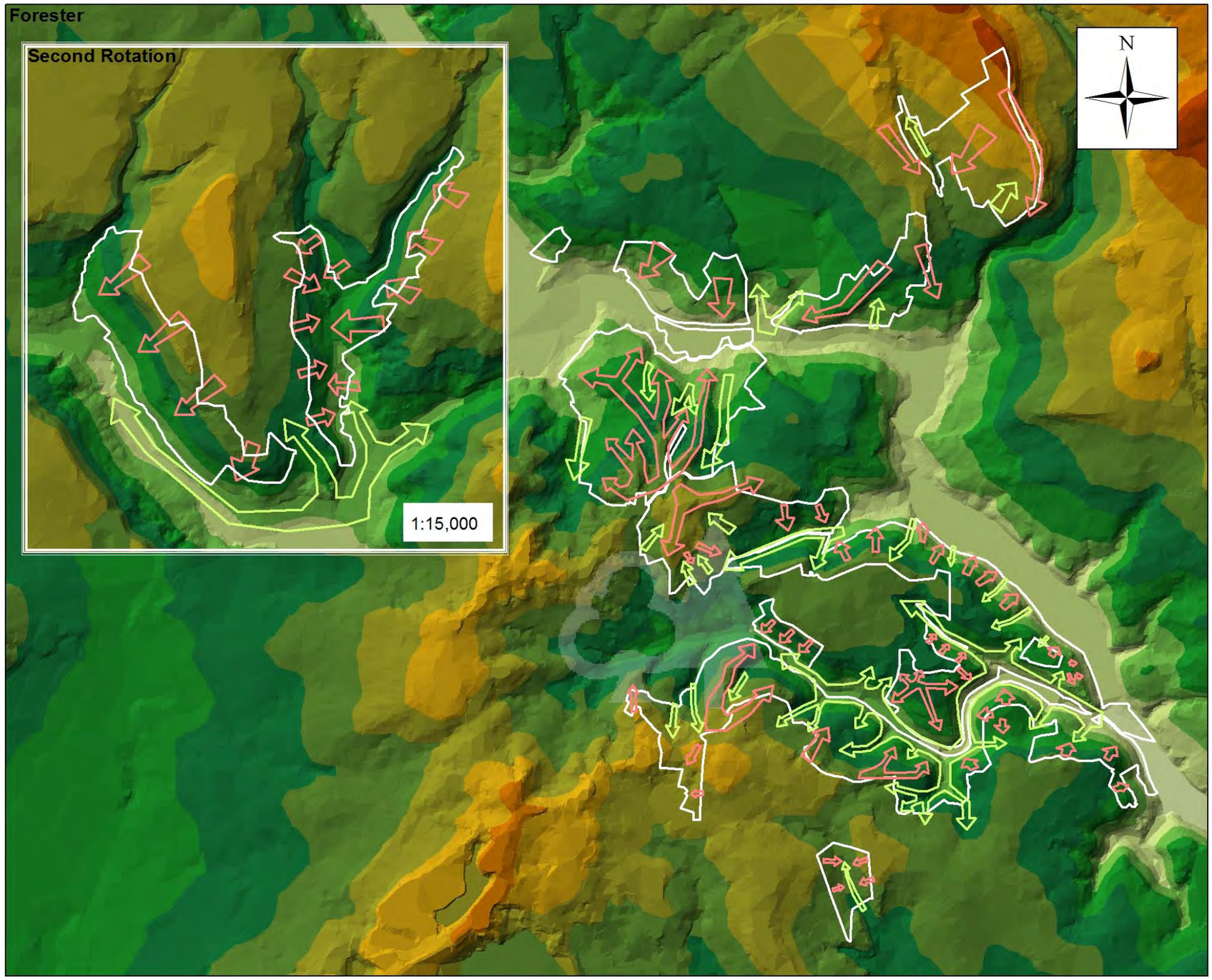
The remaining stands of Ancient Semi-natural Woodland will be managed through continuous cover forestry to provide a seed source for the regeneration of adjacent woodland areas and to help conserve the sites biodiversity.



With the exception of Heathy Gore and Bradley Wood which will continue to be managed for the production of commercial conifers the objective for the rest of the FDP area will be the gradual reversion back to broadleaf woodland over the next 80 years. Areas of Corsican pine and Lodgepole pine (21% of FDP) that are now experiencing serious attack from Red Band Needle Blight, which is likely to kll the trees, will therefore be felled in the next 10 year period.

Moseymoor, Ruelow, Carr and Hawksmoor woods all contain good levels of broadleaf regeneration and reversion in these woodlands should be achieved successfully in the next rotation of trees. The levels of regeneration and distribution of seed trees within Dimmingsdale, Light Oaks and Key wood
are much more patchy and following the rapid removal of the Corsican pine the reversion here is likely to be over the next 80years.





WEST MIDLANDS FOREST REGION

Landscape Analysis

Landform patterns affect many things, including drainage, soils, vegetation patterns and shelter. 'Visual Force' is a principle embodied in design and architecture, where the eye responds to patterns in a predictable manner (Up hollows and down Ridges). Forest Coupes should be designed to reflect the landform and create a relationship between landform and structure. Landform also affects the sensitivity of an area (flat landscapes generally being less sensitive than hilly areas) and this in turn affects the scale of forestry operations.

Ridges, plateau & high ground

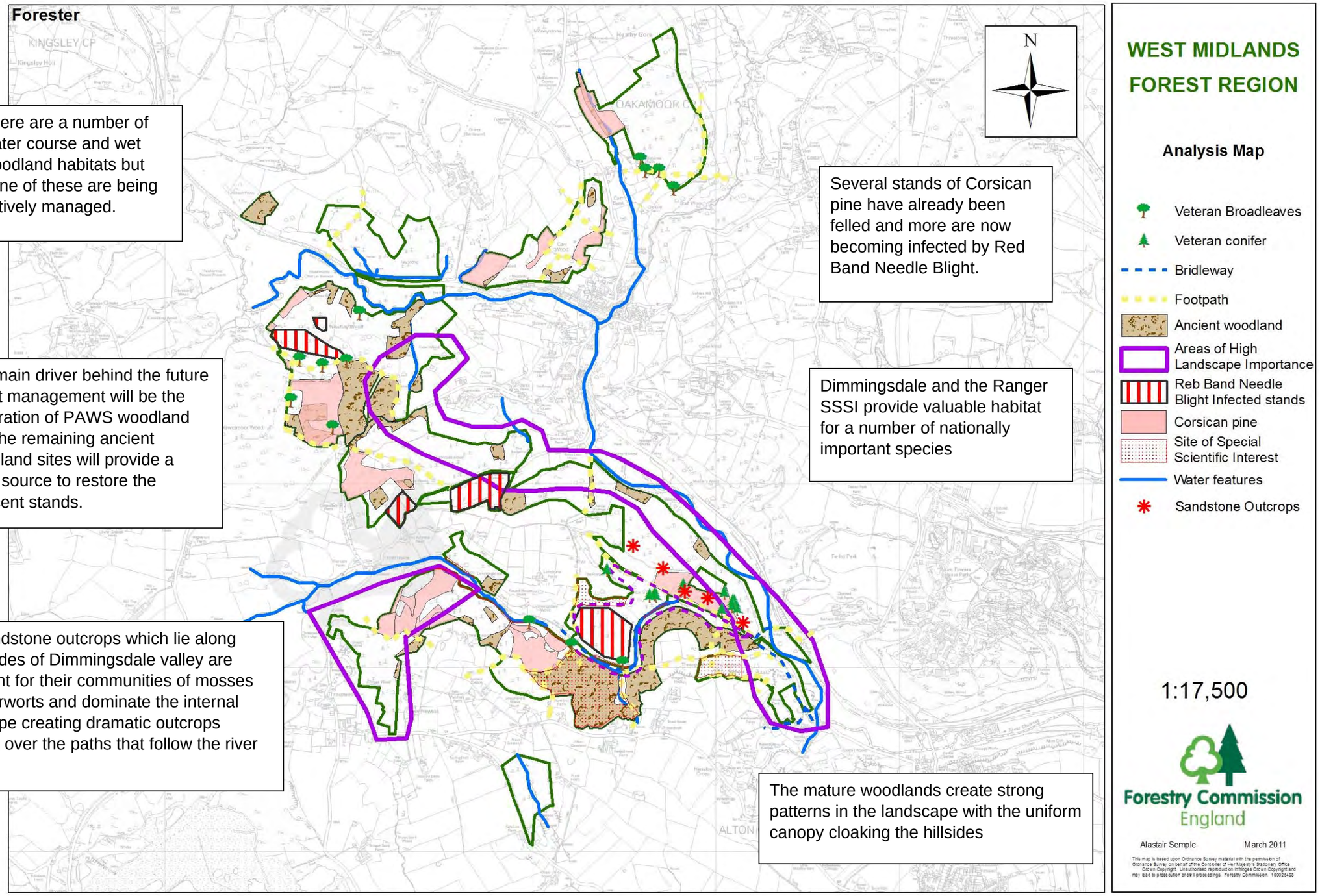
Gullies, hollows & valley bottoms

1:17,500

Forestry Commission England

Alastair Semple March 2011

Oakamoor FDP



Oakamoor FDP

Forester

Target watercourses for habitat improvement through the creation of more open space and increased light levels. Leave some small groups and individual trees for wildlife cover immediately adjacent to the watercourses.

Within the existing ancient woodland, low impact felling systems will be used to ensure that there is no further loss of area over the next rotation (50 years). These stands will be selectively felled to stabilise the stand, encourage natural regeneration and provide a seed source for adjacent PAWS areas.

The trees surrounding the sandstone outcrops on the south facing slopes will be felled to open them up to visitors to the woodlands. Any north facing sandstone blocks will be carefully managed to ensure that they remain shaded as this is where the important communities of liverworts and mosses reside.

Future forest management will need to be reactive to the spread of RBNB in Corsican pine stands by removing infected trees.

Dimmingsdale and the Ranger SSSI will be managed in accordance with the agreed management plan drawn up with Natural England.

The shape and timing of planned felling operations will be designed to soften the impact on the landscape as the mature stands begin to be felled.

N

WEST MIDLANDS FOREST REGION

Concept Map

- Veteran Broadleaves
- Veteran conifer
- Bridleway
- Footpath
- Ancient woodland
- Areas of High Landscape Importance
- Reb Band Needle Blight Infected stands
- Corsican pine
- Site of Special Scientific Interest
- Water features
- Sandstone Outcrops

1:17,500

Forestry Commission England

Alastair Semple March 2011

Forester

Veteran oak, beech and cherry are found within the woodlands primarily along the boundaries.

Remnant ancient woodland still remains and there is a good level of regeneration where light allows.

The paths and forest rides are well used linking with the canal paths and the car park which lies on adjacent land.

The Churnet Valley SSSI forms part of the largest remaining concentration of semi-natural ancient woodland in Staffordshire and supports an outstanding assemblage of woodland birds.

Ruelow Wood lies on a western escarpment and provides a strong backdrop to the village of Froghall. Moseymoor lies on an eastern escarpment and it not visible from any of the public roads or villages.

RBNB has moved into Moseymoor and killed one stand of Corsican pine. The remaining Corsican pine stands are now very susceptible to infection.

N

WEST MIDLANDS FOREST REGION

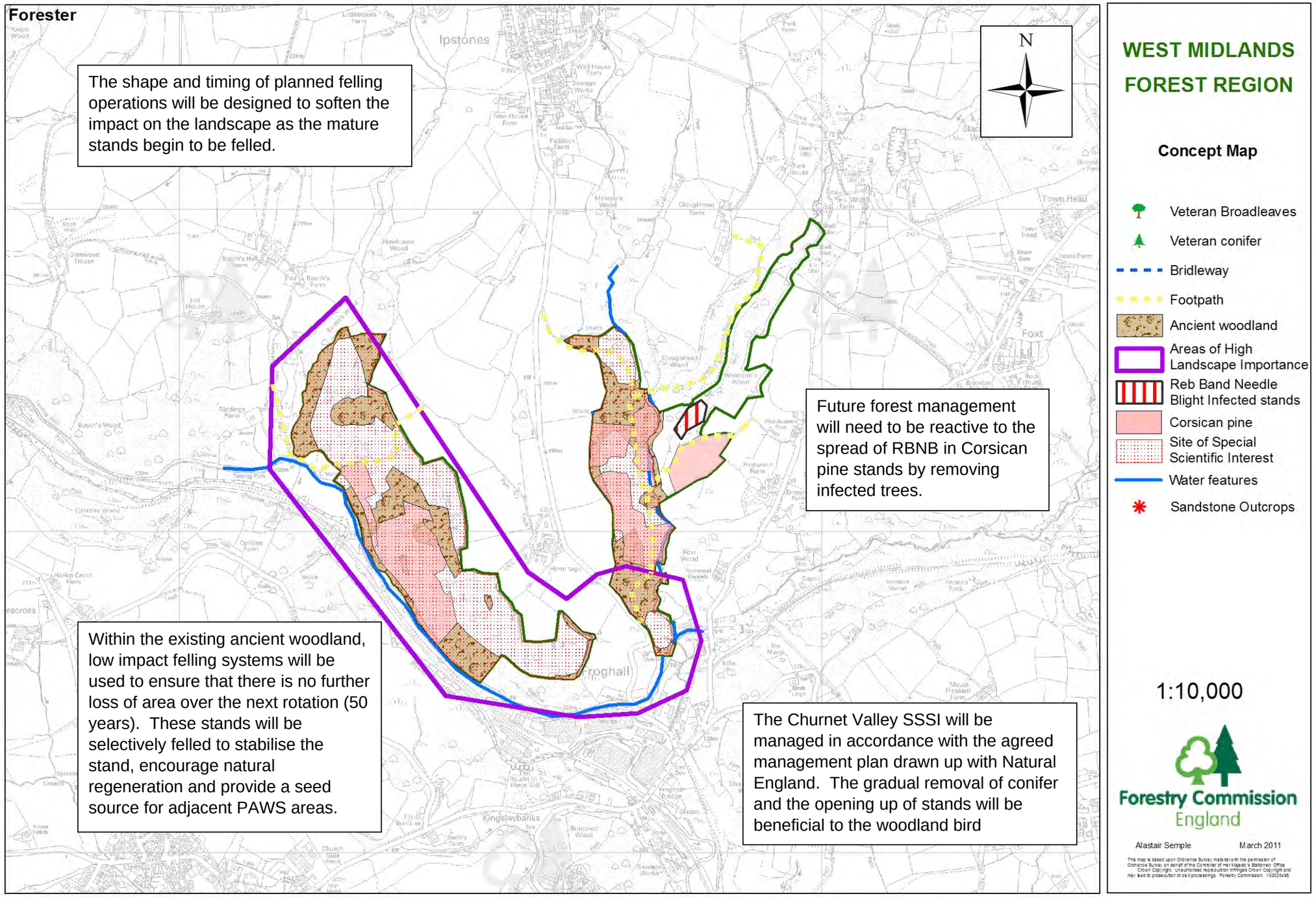
Analysis Map

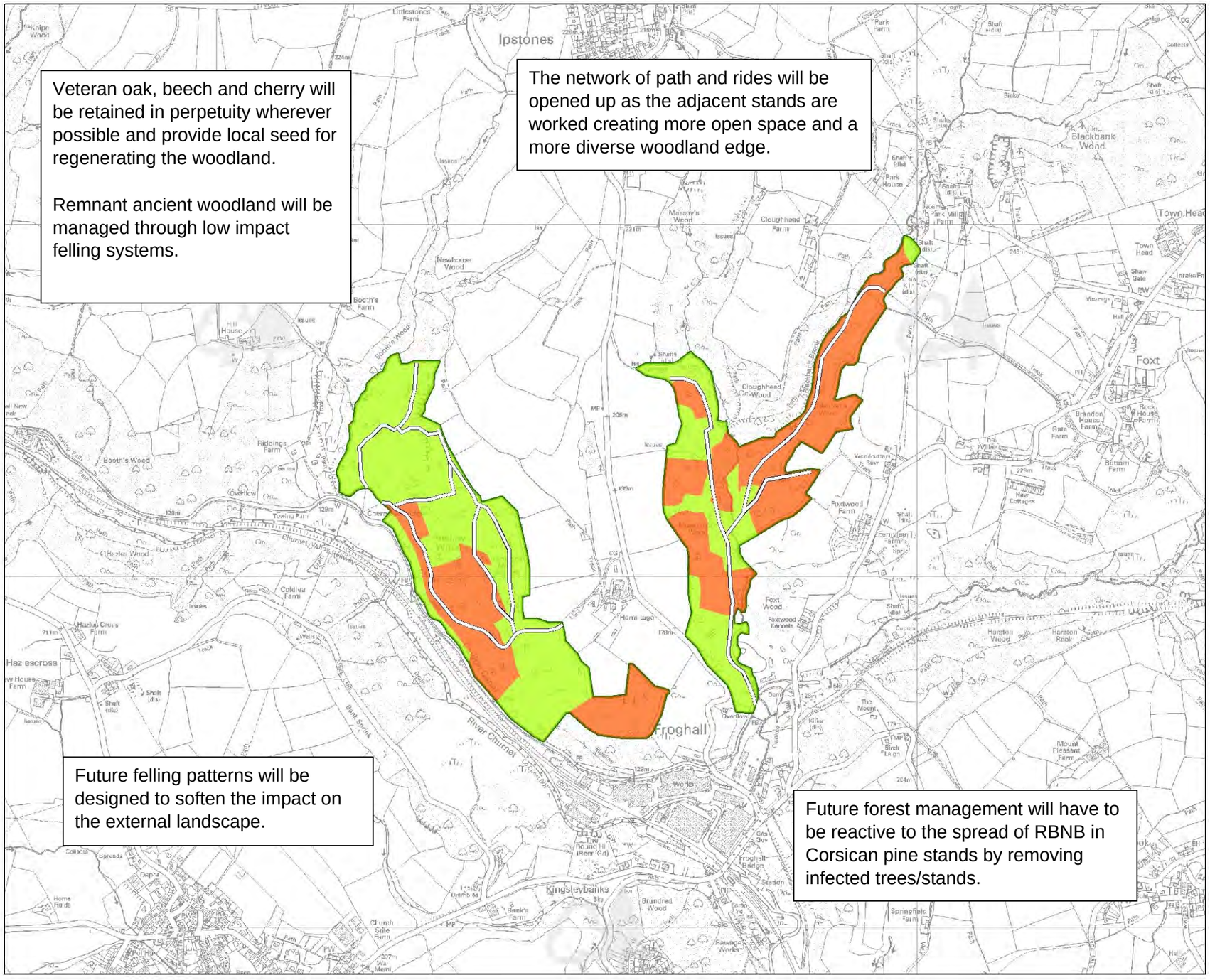
- Veteran Broadleaves
- Veteran conifer
- Bridleway
- Footpath
- Ancient woodland
- Areas of High Landscape Importance
- Reb Band Needle Blight Infected stands
- Corsican pine
- Site of Special Scientific Interest
- Water features
- Sandstone Outcrops

1:10,000

Forestry Commission England

Alastair Semple March 2011


Forester
The shape and timing of planned felling operations will be designed to soften the impact on the landscape as the mature stands begin to be felled.
N
Future forest management will need to be reactive to the spread of RBNB in Corsican pine stands by removing infected trees.
Within the existing ancient woodland, low impact felling systems will be used to ensure that there is no further loss of area over the next rotation (50 years). These stands will be selectively felled to stabilise the stand, encourage natural regeneration and provide a seed source for adjacent PAWS areas.
The Churnet Valley SSSI will be managed in accordance with the agreed management plan drawn up with Natural England. The gradual removal of conifer and the opening up of stands will be beneficial to the woodland bird
WEST MIDLANDS FOREST REGION
Concept Map
Veteran Broadleaves
Veteran conifer
Bridleway
Footpath
Ancient woodland
Areas of High Landscape Importance
Reb Band Needle Blight Infected stands
Corsican pine
Site of Special Scientific Interest
Water features
Sandstone Outcrops
1:10,000
Forestry Commission England
Alastair Semple
March 2011



WEST MIDLANDS FOREST DISTRICT

Oakamoor Forest Design Plan Area

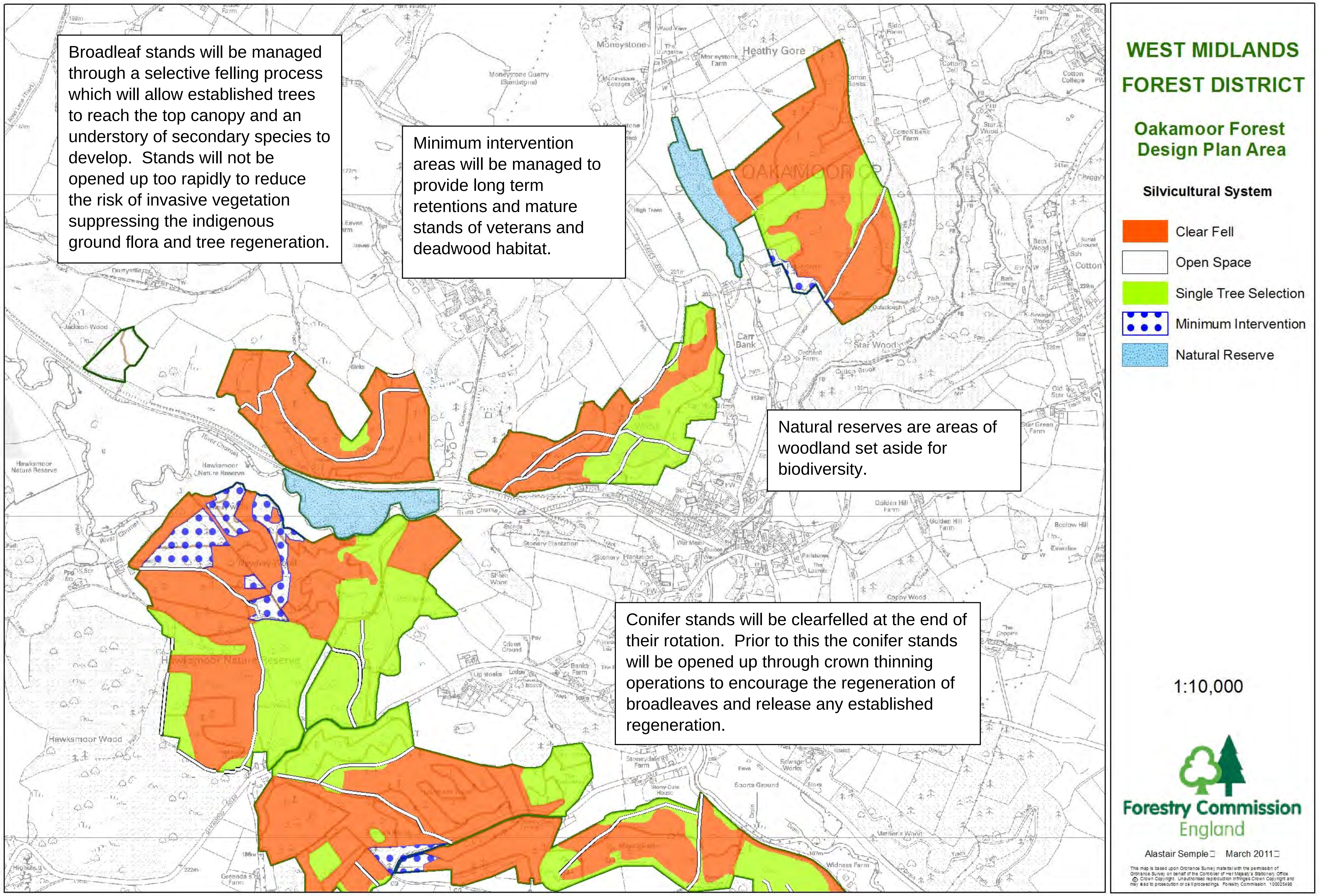
Silvicultural System

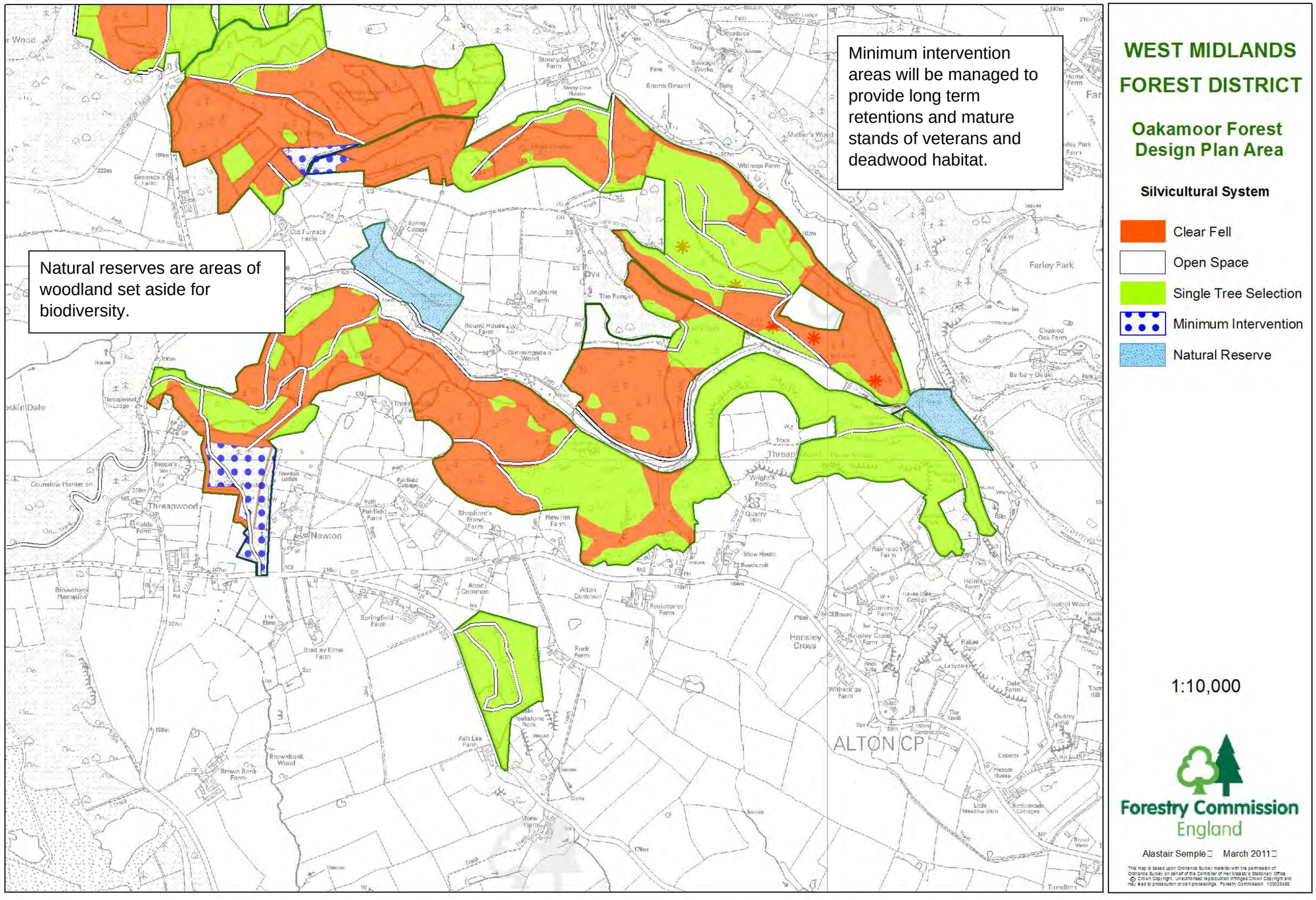
- Clear Fell
- Open Space
- Single Tree Selection
- Minimum Intervention
- Natural Reserve

1:10,000

Forestry Commission England

Alastair Semple □ March 2011 □


Broadleaf stands will be managed through a selective felling process which will allow established trees to reach the top canopy and an understory of secondary species to develop. Stands will not be opened up too rapidly to reduce the risk of invasive vegetation suppressing the indigenous ground flora and tree regeneration.
Minimum intervention areas will be managed to provide long term retentions and mature stands of veterans and deadwood habitat.
Natural reserves are areas of woodland set aside for biodiversity.
Conifer stands will be clearfelled at the end of their rotation. Prior to this the conifer stands will be opened up through crown thinning operations to encourage the regeneration of broadleaves and release any established regeneration.
WEST MIDLANDS FOREST DISTRICT
Oakamoor Forest Design Plan Area
Silvicultural System
Clear Fell
Open Space
Single Tree Selection
Minimum Intervention
Natural Reserve
1:10,000
Forestry Commission England
Alastair Semple
March 2011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WEST MIDLANDS FOREST DISTRICT
Oakamoor Forest Design Plan Area
Silvicultural System
Clear Fell
Open Space
Single Tree Selection
Minimum Intervention
Natural Reserve
1:10,000
Forestry Commission England
Alastair Semple March 2011
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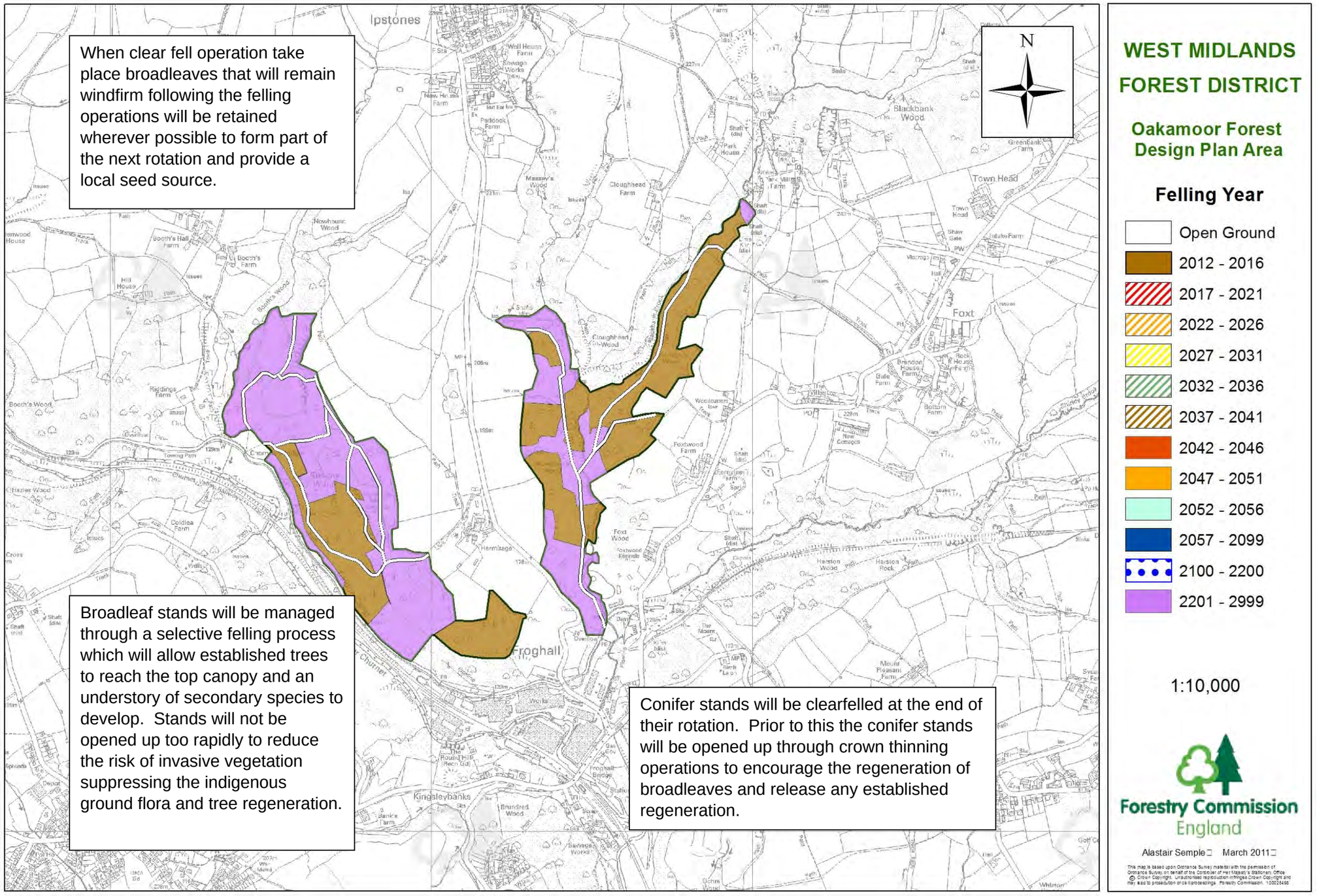
ALTON CP
Newton
Threapwood
Farley Park
Hansley Cross


When clear fell operation take place broadleaves that will remain windfirm following the felling operations will be retained wherever possible to form part of the next rotation and provide a local seed source.
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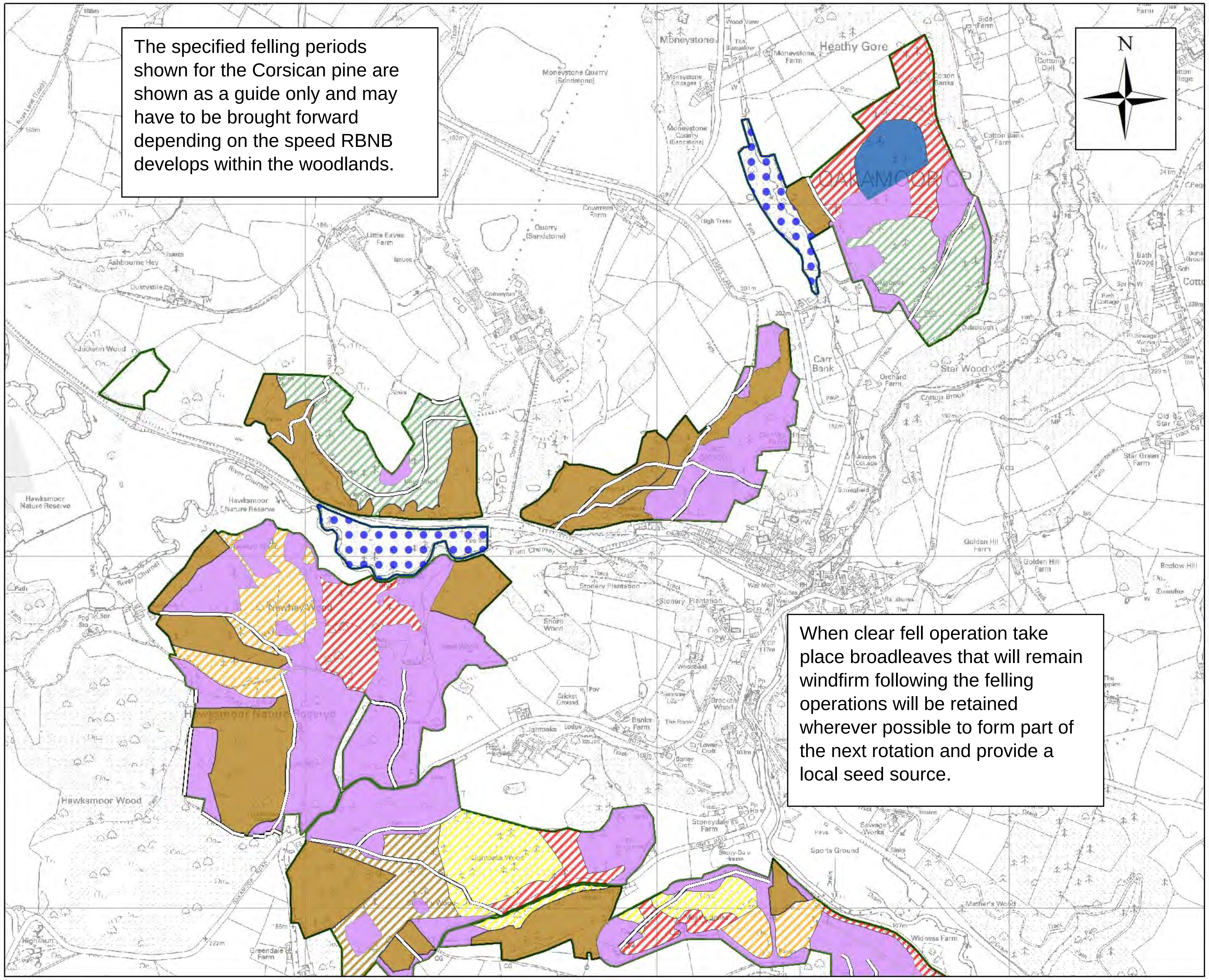
Conifer stands will be clearfelled at the end of their rotation. Prior to this the conifer stands will be opened up through crown thinning operations to encourage the regeneration of broadleaves and release any established regeneration.
N
WEST MIDLANDS FOREST DISTRICT
Oakamoor Forest Design Plan Area
Felling Year
Open Ground
2012 - 2016
2017 - 2021
2022 - 2026
2027 - 2031
2032 - 2036
2037 - 2041
2042 - 2046
2047 - 2051
2052 - 2056
2057 - 2099
2100 - 2200
2201 - 2999
1:10,000
Forestry Commission England
Alastair Semple March 2011


The specified felling periods shown for the Corsican pine are shown as a guide only and may have to be brought forward depending on the speed RBNB develops within the woodlands.
When clear fell operation take place broadleaves that will remain windfirm following the felling operations will be retained wherever possible to form part of the next rotation and provide a local seed source.
N
Heathy Gore
Moneystone
Star Wood
Carr Bank
Newhay Wood
Hawksmoor Nature Reserve
Hawksmoor Wood
Stoney Plantation
Golden Hill Farm

WEST MIDLANDS FOREST DISTRICT

Oakamoor Forest Design Plan Area

Felling Year

- Open Ground
- 2012 - 2016
- 2017 - 2021
- 2022 - 2026
- 2027 - 2031
- 2032 - 2036
- 2037 - 2041
- 2042 - 2046
- 2047 - 2051
- 2052 - 2056
- 2057 - 2099
- 2100 - 2200
- 2201 - 2999

1:10,000

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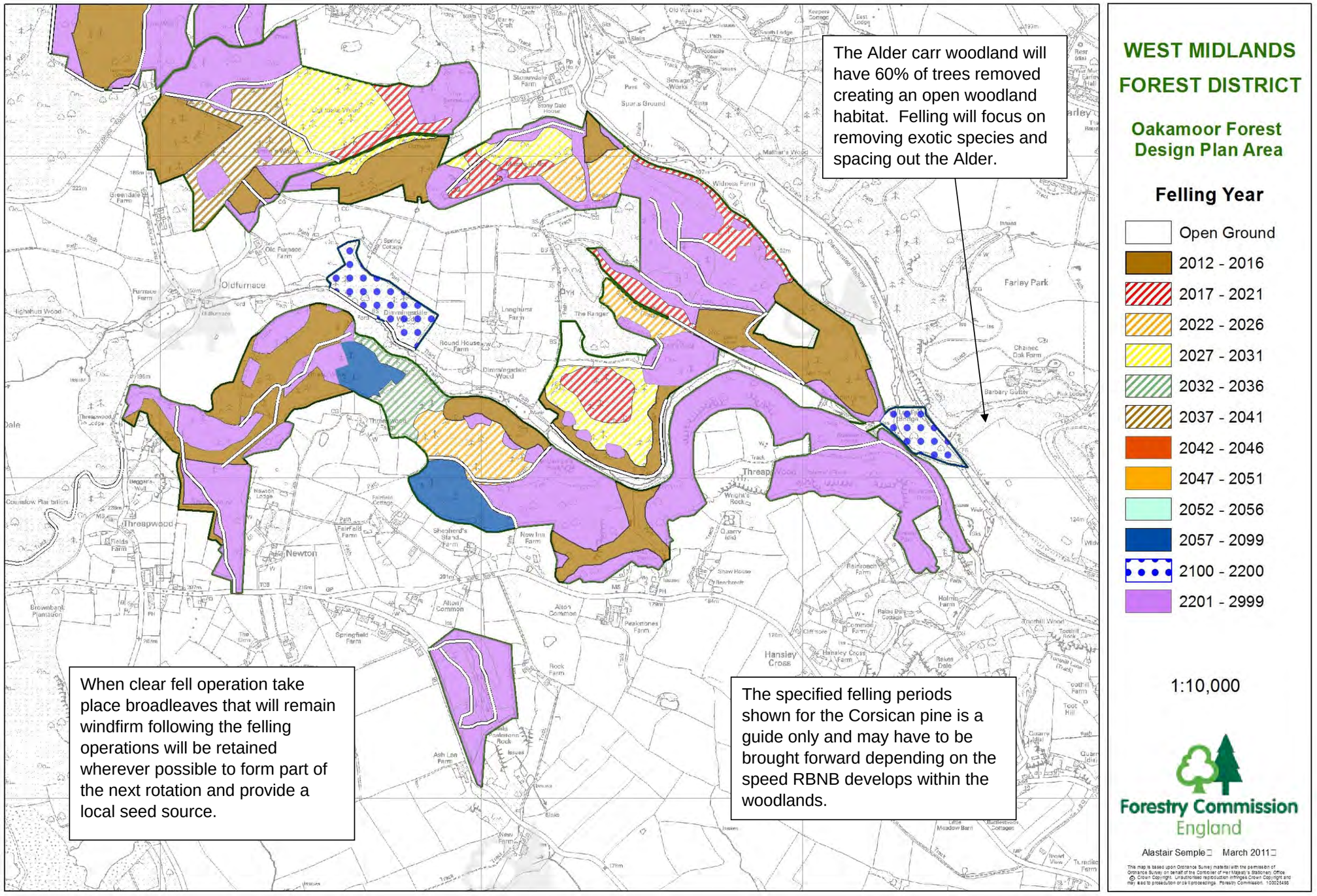

The Alder carr woodland will have 60% of trees removed creating an open woodland habitat. Felling will focus on removing exotic species and spacing out the Alder.
When clear fell operation take place broadleaves that will remain windfirm following the felling operations will be retained wherever possible to form part of the next rotation and provide a local seed source.
The specified felling periods shown for the Corsican pine is a guide only and may have to be brought forward depending on the speed RBNB develops within the woodlands.
WEST MIDLANDS FOREST DISTRICT
Oakamoor Forest Design Plan Area
Felling Year
Open Ground
2012 - 2016
2017 - 2021
2022 - 2026
2027 - 2031
2032 - 2036
2037 - 2041
2042 - 2046
2047 - 2051
2052 - 2056
2057 - 2099
2100 - 2200
2201 - 2999
1:10,000
Forestry Commission England
Alastair Semple March 2011

The broadleaf stands will be allowed to naturally regenerate, creating a diverse structure. Veteran and notable trees will be retained beyond their economic rotation to provide long-term retentions, increase the volume of standing deadwood and the woodlands biodiversity.

Enrichment planting will be used in places to supplement the natural regeneration.

N

WEST MIDLANDS FOREST DISTRICT

Oakamoor Forest Design Plan Area

Future Species

- Roads & Rides
- Open Ground
- Adler
- Broadleaves
- Spruce
- Douglas fir

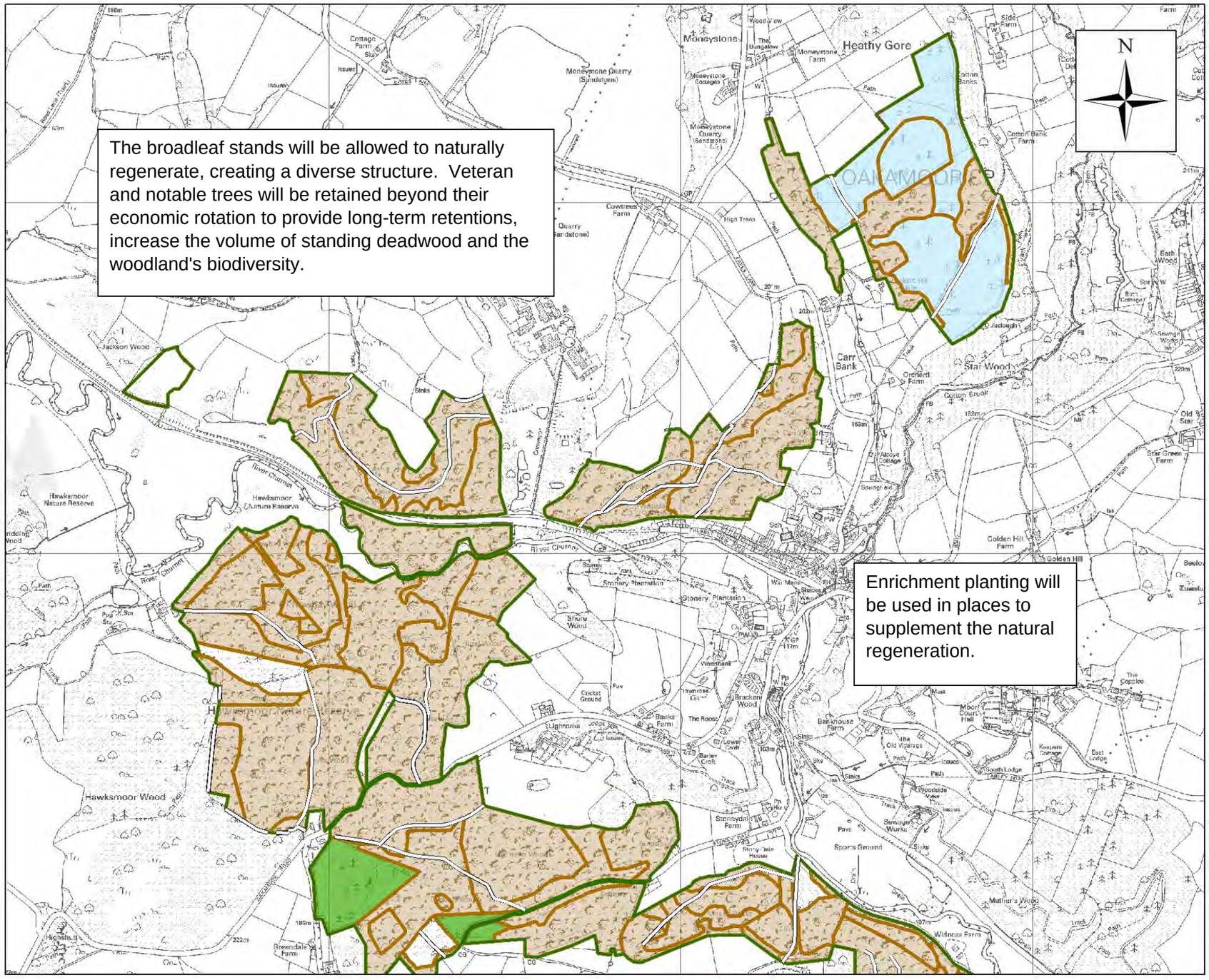
1:10,000

Forestry Commission England

Alastair Semple March 2011

The broadleaf stands will be allowed to naturally regenerate, creating a diverse structure. Veteran and notable trees will be retained beyond their economic rotation to provide long-term retentions, increase the volume of standing deadwood and the woodland's biodiversity.

Enrichment planting will be used in places to supplement the natural regeneration.



WEST MIDLANDS FOREST DISTRICT

Oakamoor Forest Design Plan Area

Future Species

- Roads & Rides
- Open Ground
- Adler
- Broadleaves
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Forestry Commission England

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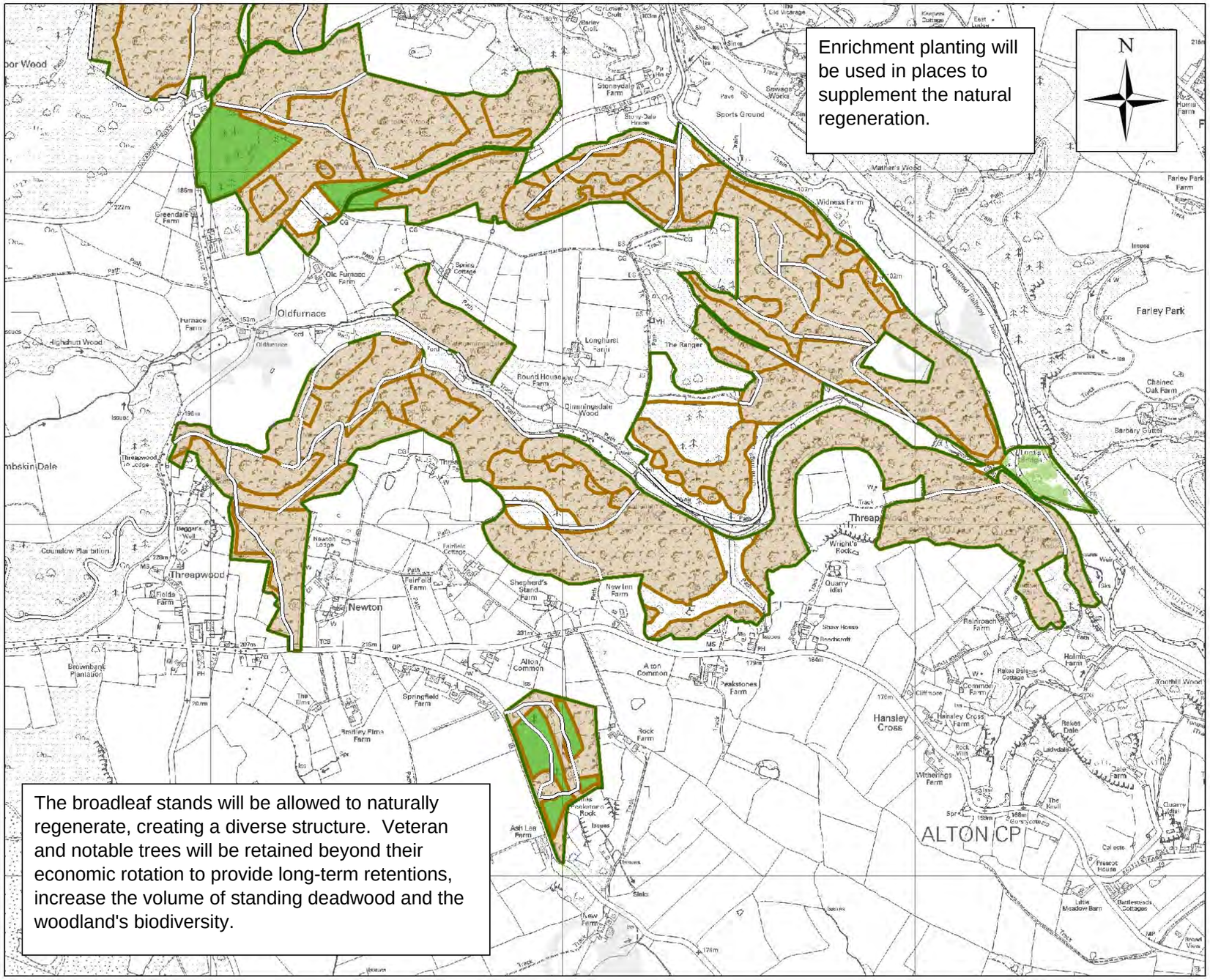

WEST MIDLANDS FOREST DISTRICT

Oakamoor Forest Design Plan Area

Future Species

- Roads & Rides
- Open Ground
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- Broadleaves
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- Douglas fir

1:10,000

Forestry Commission England

Alastair Semple March 2011

Forestry Commission England

Oakamoor FDP

West Midlands
Forest District