

# Oak woodland

## 1. A Definition

The oak is a powerful symbol of strength and of history, and has long been associated with national identity. Though Devon is not a heavily wooded County, woodlands are nevertheless a central part of the character of the Devon countryside, and no tree contributes more to that character than the oak. Oak woodlands



clothe the sides of many of the County's steep river valleys, occupy quite large areas of southern Dartmoor, and occur as isolated, usually fairly small, blocks across the rest of Devon's lowland landscape.

For the purposes of this Plan oak woodlands are defined as those Devon woods which are dominated by English oak, sessile oak or the hybrids between the two. Most deciduous woods in Devon are made up of a mixture of species, and the degree to which oak dominates varies, but as a rule in Devon those woods on higher ground and steep slopes tend to be primarily of oak. These western sessile oakwoods are recognised as internationally important, for their extent and distinctive plant and animal communities.

Devon's oak woodlands have a long-established place in the County's history, having been the source of timber to fuel industry, building and overseas exploration. Today the character of much oak woodland is clearly a product of the purposes for which they were used in the past. The combination of that history with the geology and topography of the land on which they grow, gives oak woodlands a very specialised biodiversity.

## 2. Why an Action Plan?

Devon is one of the least wooded counties in Britain, with only 2.2% ancient woodland cover, as compared to other southern English counties like East Sussex (10.6%) and Kent (8.5%). Oak of course only occupies a proportion of this wooded area. Nevertheless oak woodland remains a key component of Devon's character. If one looks at our woodland resource as a whole – not just Ancient Woodland – Devon has 9.9% woodland cover, of which 57% is broadleaved and a significant percentage of this is likely to be oak dominated.

A number of the oak woodlands which remain in the County are either managed as nature reserves or for public recreation, in which case their long term health is relatively secure. Others are neglected, because of their inaccessibility or because they seem to have little economic relevance for landowners. Very little oak woodland is integrated into sustainable forestry systems, and there is a risk of stagnation in those that remain.

However, with a renewed current interest in timber production as an alternative use of agricultural land, the opportunity now exists to extend the area of predominantly oak woodland in Devon, to reinvigorate many existing woods, and to recognise the value of such woodland for biodiversity conservation, alongside timber production, recreation and other uses. This Plan presents a framework of issues and actions which can facilitate that process.

### 3. Characteristic wildlife

Aside from the two species of oak and their intermediates, other common and characteristic trees of oak woodland are birch, rowan, hazel and holly. More rarely wild service or small-leaved lime may be found. Beech is also frequently found in oak woodland, though it is probably only truly native in parts of the eastern half of the County.

The ground flora of oak woodland is generally rich in mosses and ferns, sometimes joined by dense growth of bilberry, especially in the woods of steep slopes and higher ground, or great woodrush, especially in coastal woods. Lower lying oak woodland on level ground is often carpeted more by bracken and bramble, with richer soils producing bluebell, ramsons and dogs mercury.

The acid soils and relatively high humidity of oak woodland, especially on higher ground, gives rise to very diverse assemblages of lichens and mosses, which require continuity of conditions, and clean air to thrive.

A rich invertebrate fauna is most conspicuously represented by the large mounds of wood ant nests, and by butterflies like silver-washed fritillary, and the canopy dwelling purple hairstreak. The bird community of oak woodlands is characteristic, with breeding pied flycatcher, wood warbler and redstart, and a range of common mammals such as badgers and squirrels.

### 4. Special species

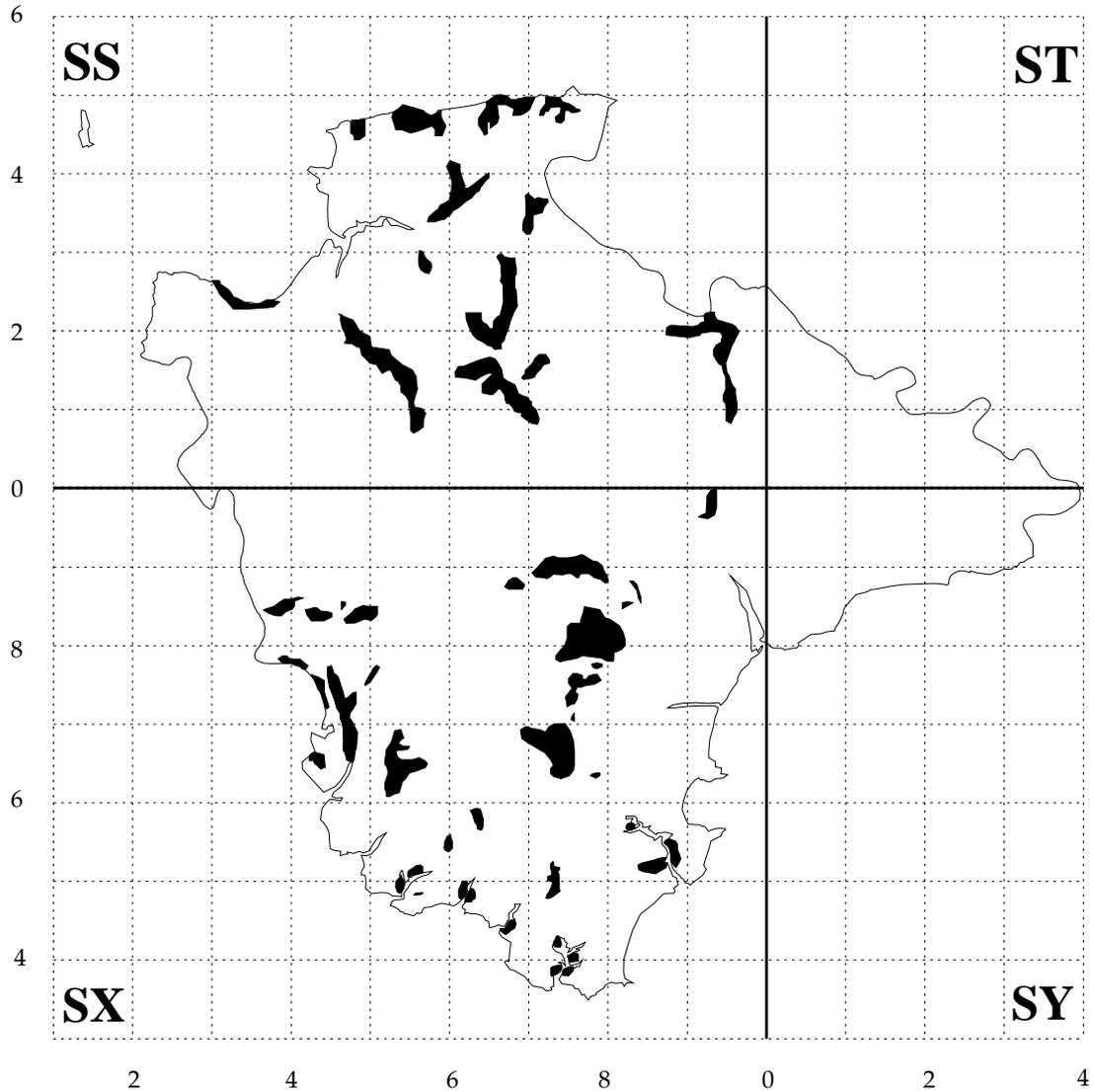
The following species of conservation concern are associated with oak woodland in Devon. Species marked (p) are 'Species of Principal Importance in England' (NERC Act, S.41).

- **Mammals:** Dormouse (p), pipistrelle bat, greater horseshoe bat (p), lesser horseshoe bat (p)

- **Birds:** Redstart, tree pipit (p), wood warbler (p), pied flycatcher, buzzard, lesser-spotted woodpecker (p)
- **Beetles:** Blue ground beetle (p)
- **Butterflies:** Pearl-bordered fritillary (p), silver washed fritillary, wood white (p), purple emperor
- **Moths:** Scarce blackneck, orange upperwing (p), double line
- **Cricket:** Wood cricket
- **Vascular plants:** Bluebell, bastard balm (p), wild daffodil, endemic whitebeams - *Sorbus vexans* (p), *S. subcuneata* (p), *S. devoniensis*, S Taxon D, Killarney fern, Filmy ferns, hay-scented buckler fern
- **Fungi:** *Amanita phalloides*, *Boletus albidus*, *B. torosus*, *B. impolitus*, *Hygrophorus mesetphrus*, *H. quercetorum*
- **Mosses:** *Zygodon forsteri* (p), *Douinia ovata*
- **Lichens:** *Schismatomma graphidoides* (p), *Graphina pauciloculata* (p), *Parmelia taylorensis*, golden hair-lichen *Teloschistes flavicans* (p), *Pannaria sampaiana* (p), *Bryoria smithii* (p), *Lobaria amplissima*, *Lobaria virens*



## 5. Oak woodland distribution in Devon



10 Km grid squares showing main areas of oak woodland ■

(Data supplied by Devon County Council)

## 6. Current extent (1998)

Devon has approximately 14,937 hectares of ancient woodland (Isaac and Reid 1997) of which the largest element is oak woodland.

## 7. Current problems for oak woodland in Devon

(1998)

Legacy of past management: The past management of oak woodlands, particularly where this was predominantly by coppicing or clear-felling of large areas, has left many stands with an artificially uniform age structure and little diversity in the canopy. In addition the acid soils of valley side oak woodlands do not provide enough nutrients to sustain the continual re-growth of coppiced trees for many cycles, and such formerly coppiced woods in many cases have individual trees with a weak multi-stemmed structure. This lack of structural diversity and weak stock means regeneration of these woodlands is hampered, and wildlife diversity is below optimum.

Grazing pressure: Much oak woodland is used to shelter stock, including both cattle and sheep. In addition some woods support a high deer population. The grazing pressure in such circumstances can reduce the capacity of woodland to regenerate. Conversely, the importance of much oak woodland, especially of higher ground, for mosses, lichens and birds like wood warbler is reliant on a certain grazing pressure to maintain open conditions and prevent a smothering of scrub. Other habitats within oak woodland, notably heathland, rely on grazing pressure to prevent colonisation by trees. In the past such habitats would have been more extensive when grazing pressure was even higher. Thus a careful balance is required in managing grazing in oak woodlands.

Invasive Species: oak woodland is often colonised by fast-spreading non-native species, such as rhododendron, cherry laurel, sycamore and beech. These may smother ground vegetation, and slow canopy regeneration by hampering seedling germination.

Softwood forestry: Many of the larger former oak woodlands of the lowlands of Devon were converted to conifer plantations many years ago. As well as removing the natural canopy, coniferisation generally changes or suppresses the diversity of the woodland floor, and reduces or removes the woodland's capacity to support most of the characteristic wildlife mentioned above. Though conversion of existing oak woodland to conifer plantation no longer occurs, it remains an issue when the time comes to harvest conifer crops and decide on their replacement. The introduction of the new English Woodland Grant Scheme and growing popularity of forest certification provides incentive for the restoration of native woodland on plantations on ancient woodland sites (PAWS). The Forestry Commission conservancy in the South West has chosen to prioritise PAWS restoration across the region including Devon in the recently published consultation document the Regional Woodland and Forestry Framework.

'Over-tidiness' in woodland management: Dead wood is a vital part of the oak woodland ecosystem, providing a habitat for a large proportion of the potential invertebrate fauna. However dead wood, either standing or lying, is seldom allowed to remain or build up in heavily managed woods.

Neglect: In a truly natural situation, large tracts of oak woodland do not need to be managed in order to maintain their biodiversity. However, most oak woods in Devon are small and vulnerable to colonisation by invasive species, and do not have the inherent structural variety to regenerate themselves unassisted. When these small



woods are neglected they may deteriorate by losing diversity and failing to regenerate. Decline in woodland biodiversity has increasingly been linked to shading which tends to result from a lack of management. Aspects of the English Woodland Grant Scheme, Entry Level Scheme and Higher Level Scheme are designed to help arrest the decline in woodland management.

Use of broadleaved trees of local provenance: When oak woodlands are restocked with new oak material from the outside, the trees used have generally been grown in a different area, sometimes a very long way away from the woodland in which they are planted. This practice dilutes and obscures the natural genetic character of Devon oak woodland, and removes diversity of a different kind. It should be noted, however, that establishing true local provenance of stock may not be straightforward. Increasingly, nurseries can supply local provenance planting stock and recent changes in legislation have eased this process. Although the collection and propagation of local seed is desirable the genetic variability of native stock has clearly been diminished by the historic design of woodland cover. The uncertainty of climate change has the potential to undermine a presumption in favour of local provenance stock if the genetic material available comes from a limited gene pool.

Air pollution and climate: Some of the most important biological features of Devon oak woodland, notably their very diverse lower plant flora, are very sensitive to air pollution and any disruption in the continuity of climatic conditions. Air pollution and climatic change is likely gradually to change the species composition of these woodlands, and may affect tree health also.

## 8. Recent changes in extent

Although up to date figures on the extent of losses of oak woodlands in the County are not available, it is believed that 6742 hectares of ancient woodland was lost between 1950 and 1978.

## 9. Current site protection

South Dartmoor Woodlands is a Special Area of Conservation, under the EC Devon BAP  
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Habitats Directive.

Several of Devon's most important oak woodland sites are Sites of Special Scientific Interest, including: Yarner Wood, Bovey Valley, Holne Woodlands, Hembury Woods, Wistman's Wood, Dendle's Wood, Black-a-tor Copse, Shaugh Prior Woods, Sampford Spiney, West Exmoor Coast and Woods, Watersmeet and Hobby Peppercombe.

Four National Nature Reserves contain excellent examples of oak woodland; Yarner Wood (part of East Dartmoor Woods and Heaths NNR), Wistman's Wood, Black-a-tor Copse and Dendle's Wood.

Devon Wildlife Trust Reserves which contain good examples of oak woodland are those at: Dunsford, Dart Valley, Scanniclift Copse, Warleigh Point.

National Trust owns much oak woodland in Devon, which means that the land cannot normally be either sold or compulsorily purchased without the involvement of parliament.



## 10. Biodiversity planning context

### National BAP Context

Habitat of principal importance in England (NERC Act, S.41):

- Upland oakwood

Current national BAP targets can be viewed on the [Biodiversity Action Reporting System](#) (BARS).

### Regional Plan Context

Regional targets for priority BAP habitats can be found on the website of [Biodiversity South West](#).

## Associated Action Plans within the Devon BAP:

- Pearl-bordered fritillary
- Golden hair-lichen
- Primrose
- Greater horseshoe bat
- Dormouse
- Alder and willow wet woodland
- Parkland and wood pasture
- Devon whitebeams



## 11. Biodiversity objectives and targets for oak woodland in Devon

Please note: objectives and targets have not yet been reviewed (with the

exception of Objective 4).

## Objective 1

To ensure that the existing area of oak woodland is not lost to other land uses.

### Targets:

- No absolute loss of ancient semi-natural sites.
- No net loss of more recent sites.

## Objective 2

To ensure the existing stock of oak woodland is managed so that it retains its capacity to perpetuate itself and its oak-dominated natural character.

### Targets:

- All oak woods already under management to come under regimes which promote sustainable natural regeneration by 2000.
- The proportion of smaller (<5 hectares) WGS-funded woods subject to management which promotes oak regeneration to increase by 25% by 2005.

## Objective 3

To ensure that the existing stock of oak woodland is managed to enhance its wildlife value.

### Targets:

- All woodland under management to be subject to regimes promoting characteristic oak woodland fauna and flora by 2000.
- Proportion of smaller (<5 hectares) WGS-funded woodlands subject to management which enhances wildlife value to increase by 25% by 2005.

## Objective 4

To expand the area in Devon of well-managed oak woodland with a diverse and characteristic community of animals and plants, without consequent loss to other semi-natural habitats.

Targets:

- 5000 hectares of new, predominantly oak, woodland by 2025, largely through the enlargement and linking of existing semi-natural woodlands.

## Objective 5

To foster greater public understanding, involvement and enjoyment of oak woodland, its wildlife and its management.

Targets:

- At least one accessible oak woodland nature reserve or Community Woodland within 20km of every main settlement (>10,000 people) in Devon by 2005 (where appropriate on landscape conservation grounds).
- Double the number of oak woodlands with public access and/or involvement, targeted to those areas currently lacking such sites, by 2005.

## 12. Wider benefits from pursuing these objectives

The pursuit of the objectives and targets set out above will not only benefit the biodiversity of oak woodland. Conservation has wider benefits and advantages for society, by providing a resource which is the basis of many aspects of the local economy, and by adding to the quality of life of the people of Devon in ways which are beyond financial measure. Thus enhancing the interests of biodiversity will also enhance the interests of society as a whole. Some of these wider benefits are as follows:

Enhanced recreation and tourism: One of the features of the Devon countryside which attracts visitors is the wooded nature of the County, particularly the often dramatic landscapes of our western oak woods in gorges and valleys fringing the coasts and moors. By enhancing the landscape and wildlife value of existing oak woodlands, and by increasing

the area of the County that is wooded, Devon will become even more attractive as a place to visit for tourism and recreation.

Local rural economy: Increasing the area of Devon that is wooded and enhancing the management of existing woodlands will necessitate

considerable development of local forestry and woodland management contractors. This will enhance local economies.

Agricultural diversification: Silviculture is one of the main areas for the diversification of farming systems.

Education: Oak woodland, because of the vast number of species which it supports, and because of their sheer natural beauty, is a valuable and attractive resource for education.

Sustainable products: Well-managed oak woodland can support sustainable production of timber for building and furniture, and for supporting traditional local industries such as charcoal-making or wood-turning. There is a growing market today for products which have been grown from sustainable woodlands.



### 13. Priority or indicative actions for oak woodland in Devon

Action	Key Partners
1. Ensure planning policies protect oak woodland sites from inappropriate development requiring planning permission by linking to Ancient Woodland Inventory, CWS data and other sources of information.	LAs; EN; DWT
2. Encourage new woodland planting and natural regeneration where it will not damage existing important habitat. Priority to linking, buffering and expanding existing oak woodland sites. Use local genetic material where possible.	FA; LAs; EN; DWT; SWF
3. Continue to instigate management programmes within oak woodlands to include, as appropriate, control of invasive species (e.g. rhododendron), management to diversify woodland canopy and age structure (including deadwood habitat), grazing regimes and access.	FA; Site owners and managers; LAs; NPAs; WT; EN; DWT; NT; SWF
4. Offer advisory services to woodland owners and managers on management techniques which promote regeneration, mixed age structure and which benefit characteristic wildlife. To include training and appropriate literature.	FA; LAs; Silvanus; TGA; DWT; FWAG; NPAs; SWF
5. Continue to survey and monitor woodland sites including identifying CWS and maintaining and updating Ancient Woodland Inventory, even for small sites of <2 hectares.	EN; DWT; NPAs; WT; LAs
6. Conduct and co-ordinate research into appropriate management methods which promote natural regeneration and which maintain characteristic oak woodland wildlife. Ensure such research is co-ordinated and communicated to all relevant stakeholders.	FA; EN; NPAs; Universities
7. Encourage public enjoyment and understanding of oak woodlands through on-site interpretation (including explanation of woodland management operations); access to suitable woodlands, and events including rural industries involved in using oak woodland produce (e.g. charcoal, furniture, timber etc).	Working Woodlands; FA; WT; EN; DWT; NT; NPAs; LAs; SWF

Oak Woodland Action Plan Champion - South West Forest

Abbreviations used in text and table

DWT	Devon Wildlife Trust
EN	English Nature
FA	Forestry Authority
FE	Forest Enterprise
FWAG	Farming and Wildlife Advisory Group
LA	Local Authority
NPA	National Park Authority
NT	National Trust
SWF	South West Forest project
TGA	Timber Growers Association
WGS	Woodland Grant Scheme
WT	Woodland Trust