

Isle of Wight Biodiversity Action Plan

Woodland Habitat Action Plan

Introduction

This Habitat Action Plan has been prepared through consultation with a range of organisations and specialists within the Isle of Wight BAP partnership. It covers a ten-year period from 2003 - 2013, with a review in 2008.

The UK Biodiversity Action Plan (BAP) identifies a total of six native woodland types as priority habitats, of which three can be found on the Isle of Wight, namely:

- wet woodland
- lowland beech and yew woodland
- lowland wood-pasture and parkland

National Habitat Action Plans (HAPs) have been published for all priority native woodland types and a further HAP for 'lowland mixed broadleaved woodland' is anticipated. In addition, 'broadleaved, mixed and yew woodland' and 'coniferous woodland' are listed as broad habitat types within the UK BAP.

The UK Sustainable Forestry Programme, published in 1994 as a sister document to the UK BAP, includes further policies for woodland biodiversity conservation including:

- maintenance and appropriate enhancement of biodiversity in all woodlands
- protection and expansion of our ancient and semi-natural woodlands
- creation of new native woodlands and encouraging the planting of site-native trees and broadleaved woodlands more generally
- research into methods of assessing and enhancing biodiversity in woodlands;

The Isle of Wight Biodiversity Audit and Assessment (IW BAP Steering Group 2000) identifies three woodland types of importance to biodiversity on the Isle of Wight namely:

- semi-natural broadleaved woodland (including ancient semi-natural woodland, recent secondary woodland and wet woods)
- parkland and pasture woodland
- plantation woodland

This action plan seeks to ensure that national objectives for woodland biodiversity conservation identified in the UK BAP and UK Sustainable Forestry Programme are translated into effective action on the Island, taking into account local issues. To develop objectives and actions for the range of national and local woodland biodiversity priorities the Island's woodlands can be divided into four categories:

- Ancient semi-natural woodland
- Ancient replanted woodland (including conifer plantations and non site-native broadleaves)
- Recent semi-natural woodland
- Recent plantation woodland

The identification of these categories of woodland types for biodiversity action on the Isle of Wight is based upon the following factors:

1. Ancient woodlands are of greatest value to woodland biodiversity. A total of 1,614 hectares of ancient woodland remains on the Island. However, 714 hectares of this (44%) has been

converted to plantations of non-native or non-indigenous species that significantly reduces the biodiversity value of these woods.

2. A further area of at least 84 ha of ancient woodland has been destroyed over the past century, mostly through clearance to agriculture but also to urban expansion and mineral extraction.
3. Much of the remaining 900 ha of ancient semi-natural woodland is un-managed or inappropriately managed to meet biodiversity objectives.
4. Parkland and wood-pasture is a priority UK BAP habitat. The Island contains several good examples of former wood pastures. However, these have not been grazed for many years and they require extensive restoration to bring back their specialist habitat structure and the biodiversity this supports.
5. Some 228 ha of more recent secondary woodland has developed on the Island over the past 400 years that also requires appropriate management to enhance its value to biodiversity.
6. There are 1,632 ha of recent conifer and broadleaved plantation woodland on the Isle of Wight. Most of this has been established within the last century on former heathland and semi-natural grassland habitats that were of much greater biodiversity value. However, these plantations have developed new value for biodiversity in particular for red squirrels and some birds such as the long-eared owl.
7. Many of the Island's woodlands are small and isolated, making populations of rare and endangered woodland mammals as well as other woodland species vulnerable to local extinction and genetic isolation.

2 Current Status

2.1 Description of Habitat

2.1.1 Ancient woodland

Ancient woodlands are those that have been continuously wooded for at least the last 400 years. Some of these woods are of great antiquity and may have remained as woodland since the end of the last Ice Age – these are often termed primary woods. More recent ancient woods have developed at various times through history, with phases of woodland expansion associated with agricultural decline, for example at the end of the Roman occupation.

Semi-natural woodlands are those composed of a mix of native tree and shrub species that have been perpetuated through natural regeneration. However, the proportions of individual species, the size and age of the trees and the resultant structure of these woods have been greatly influenced by a long history of human intervention and management. Some woods have been managed to produce a continual supply of small diameter wood from coppicing whilst others have been managed to produce larger diameter timber. Wood pastures are woodlands in which timber production is managed along with livestock grazing. These different woodland management systems create different habitats and support a different range of biodiversity.

The varied geology of the Isle of Wight supports a wide range of ancient woodland types and further diversifies the wildlife of the Island's woodlands. The heavy clay soils, such as those in the north of the Island support, the most extensive and varied ancient woodlands. These are fundamentally oak woods, but within this general description is a great variety. On the more acid soils, such as those within Parkhurst Forest and Briddlesford Copse, sessile oak woodland predominates although frequently with an abundance of beech. In these woods the ground flora and even the shrub layer is naturally impoverished and includes an abundance of bracken, together with more specialist species including sedges, heathers and mosses. On more neutral soils, the woodland canopy is dominated by pedunculate oak, often with birches and an

understorey of hazel. The ground flora can be dominated by carpets of bluebell together with wood anemone, pignut and sometimes wild daffodils. As the soils become more calcareous in nature, then ash and field maple occur together with other shrubs such as spindle. The ground flora also changes and includes an abundance of primroses, barren strawberry and forget-me-not. Along streams and in valley bottoms are the most calcareous clay woods. Wych elm is a feature of these wet woodlands, although many have suffered from Dutch elm disease. The ground flora can be very rich and includes species such as dog's mercury, wild garlic or ramsons and in some places, the green hellebore can be found.

On the chalk downs the woods tend to be dominated by ash, sometimes with a scatter of pedunculate oak over a dense understorey of hazel coppice - once cut to make hurdles in which to fold the sheep grazing the adjacent downland. These chalk woods have much in common with the calcareous clay woods in the north of the Island, but the better draining soils support a range of other plants such as nettle-leaved bellflower, columbine and the parasitic toothwort.

The Lower Greensand soils in the centre and south of the Island have relatively few ancient woodlands. Those that occur tend to be on relatively well draining sandy soils and support a slightly acidic flora dominated by pedunculate oak and birch with an understorey of hazel. The ground flora is typically dominated by bluebell, bracken and bramble sometimes with species such as great wood-rush.

A small number of very interesting ancient woods occur on the steep Upper Greensand exposures that outcrop at the foot of the chalk downs. Cliff Copse near Wroxall is a good example where a mix of woodland types occurs, ranging from wet woodland flushed with highly calcareous spring water to beech and whitebeam woodland on the better draining greensand exposures.

In many ancient woodlands, these natural mixes of native trees, shrubs and ground flora plants, and the other wildlife that depends upon them, have been displaced through the planting of non-native or inappropriate species including conifers or non-indigenous broadleaves such as sycamore, red oak and sweet chestnut or the creation of dense beech plantations.

As has been mentioned the best preserved and most extensive wood pasture on the Island is within Parkhurst Forest. However, other good examples of this priority UK BAP habitat occur at America Wood and Apse Castle Wood near Shanklin, Borthwood Copse near Alverstone, North Park Copse at Calbourne and Rowridge Copse.

Wet woodland is also a native woodland type listed as a priority habitat in the UK BAP. This includes both ancient and more recent woodlands. Wet woodlands are mostly dominated by alder and willows and occur on wet peaty soils in river valleys. Extensive areas of ancient and more recent alder woodland occur in the valley of the Medina at Gatcombe, with smaller areas at Alverstone, Freshwater Marshes and along the valley of the Scotchells Brook. These are often characterised by large clumps of tussock sedge and, in spring, carpets of marsh marigold. There are also some good examples of wet oak woodland such as the Wilderness Wood near Rookley.

The other native woodland type listed as a priority habitat in the UK BAP is beech woodland. Ancient semi-natural beech woods are not that common on the Island and tend to occur in complex mosaics with other woodland types. Beech woodland occurs in two distinctive types. On more acid soils it grows with oaks and the distinction between 'oak woodland' and 'beech woodland' can be difficult to make. The best examples of these mixed beech woods on acid soils occur in the former wood pasture of Parkhurst Forest, where they display characteristics very similar to the beech woods in the New Forest. Beech also grows on calcareous soils such as the chalk and Upper Greensand. Small areas of probably ancient calcareous beech wood occur in Cliff Copse near Shanklin.

2.1.2 Recent semi-natural woodlands

These are woods less than 400 years old that have developed largely through natural regeneration. They occur over a range of soil types on the Island, and often have features in common with nearby ancient semi-natural woodlands, especially where the recent woodland is connected to the ancient woodland. However, in most of these woods, the ground flora is noticeably more impoverished than in the adjacent ancient woodland and normally lacks the specialist ancient woodland species such as bluebell, wood anemone or wild service tree. Glades and clearings in these woods often contain relicts of the former grassland or heathland habitats from which they have derived.

A remarkable and extensive area of recent secondary woodland has developed on the steep chalk slopes above Ventnor. Although composed of non-native holm oak this wood is semi-natural in that it has developed through natural regeneration over the last century. It is also becoming gradually more diverse as other plant species native to the Mediterranean have colonised it, either from introductions or naturally.

The Undercliff between Ventnor and St Lawrence supports extensive areas of secondary woodland that has become established on the jumble of chalk and Upper Greensand that has fallen from the inner cliff. These woods are formed from a diverse mix of native species such as ash, wych elm and field maple and non-native introduced species such as beech, horse chestnut, sycamore and holm oak. These were introduced into the Undercliff by the Victorians but have subsequently become naturalised. The resultant woodlands have a unique atmosphere with a luxuriant ground flora dominated by ivy and an abundance of ferns.

Some good examples of the priority wet woodland habitat on the Isle of Wight occur as more recent secondary woodlands. These have often developed from former withy beds where willow was traditionally grown for basket weaving. In addition to the extensive area of recent secondary woodland within Gatcombe Withybed are those at Ninham (Apse Heath) and Horryngford Withybed at Newchurch. The Wilderness at Cridmore is an unusual example of wet oak and alder woodland that has developed over peaty soils in the Medina valley.

2.1.3 Plantations

Plantation woodland has been established on ancient woodland sites where it displaces the native woodland flora and fauna. Extensive plantations have also been created over the past century on former open habitats such as heathland and chalk grassland. These plantations are composed of a mix of conifer and broadleaved species. The conifer plantations include a wide range of species including Corsican pine, Scots pine, Monterey pine, western red cedar, larch, grand fir and Norway spruce. Some of these conifers, particularly the Scots pine, are important food trees for red squirrels but others are of little or no value for squirrels. Other plantations are composed of broadleaved species. These include native species such as beech and ash, as well as a wide range of non-native species such as sycamore. Apart from their value for red squirrels, the conifer plantations created on former open habitats on the Island have little intrinsic biodiversity value although they are used by some birds such as the common crossbill that are not found in other woodland types. However, where clearings and glades have been created and where rides are wide something of the original open ground habitat is able to re-establish itself. These relatively small and often temporary patches of grassland and heathland within the plantations can be of considerable biodiversity value.

Whereas beech woodland is a priority UK BAP habitat, the plantations of beech created over the last century on the chalk downs, such as Westover Plantation near Calbourne, currently lack the structure and species diversity associated with native beech woodlands. However, in time these plantations are likely to assume a more natural structure and species composition, although this could take many centuries.

2.2 Distribution and Extent

The Isle of Wight Biodiversity Audit and Assessment records a total woodland area of some 3,474 ha of the Isle of Wight. However, the Forestry Commission census of woodland identifies a larger area of some 4,490 ha of woodland (>2 ha.) on the Island. Of the 3,474 ha of woodland identified in the Biodiversity Audit and Assessment, 1,614 ha (46%) is ancient woodland, although only 900 ha of the ancient woodland on the Island remains in a semi-natural state with much having been converted to conifer or non-native broadleaved plantations. The remaining 1,860 ha of woodland is recent, most having been planted in the last 100 years on former open habitats. However, some 228 ha of this recent woodland is semi-natural in origin, having arisen from natural regeneration within the last 400 years.

Ancient woodland tends to be concentrated on the heavier clay soils in the north of the Island where the largest and most diverse areas of ancient semi-natural woodland survive. Further areas of ancient woodland occur on the steep chalk slopes of the downs both along the central chalk ridge of the Island and around Wroxall and Ventnor in the south. The central Lower Greensand vale of the Island is relatively poor in ancient woodland but has some notable examples on steeper slopes around Shanklin and on wet clay soils and along river valleys as at Kingston.

Former wood pastures occur in areas of the Island once set aside as hunting forests. They occur both on the heavy clay soils and gravels in the north west of the Island between the Medina and Newtown estuaries and on the more freely draining Lower Greensand soils in the south east between Newchurch and Shanklin.

Wet woodlands can be both ancient and more recent in origin and occur often as narrow or linear woodlands along water courses. The river valleys of the Medina and Eastern Yar and their tributaries support the best examples of wet woodland on the Isle of Wight.

The largest of the recent plantation woodlands is often referred to as Brighstone Forest which extends along the chalk ridge from Brook in the west to Shorwell in the east. Other forestry plantations on former open grassland and heathland habitats occur at Wilmingham, Bouldnor and Hamstead and in the southern part of Parkhurst Forest.

Recent semi-natural woodlands have developed on former meadows around Newtown, for example Walters Copse. They have also become established on chalk downland for instance the woodland and scrub on the north side of Tennyson Down. Perhaps the largest extent of recent semi-natural woodland is in the Undercliff between St Lawrence and Ventnor.

Unlike other habitats considered in the Island's BAP, there is now more woodland on the Isle of Wight than there has been at any time in the last few hundred years. However, there has been a decline in the extent and quality of the most important woodlands for biodiversity – the ancient semi-natural woods. Some 84 ha of these have been destroyed in the last century alone whilst a much larger proportion (44%) has been converted to plantations of non-native or inappropriate species.

2.3 Legislation and Site Designation

A comprehensive review of all ancient woodlands on the Isle of Wight was undertaken by the Nature Conservancy Council (NCC) in 1981. This identified the most important ancient woodland sites and resulted in the notification of a number of woodland Sites of Special Scientific Interest (SSSI). These were selected to ensure the best examples of all the ancient woodland types on the Island were given statutory protection. The largest and most diverse site to be notified is Briddlesford Copses SSSI between Wootton Bridge and Havenstreet. The northern part of Parkhurst Forest has also been notified as a SSSI as an example of former pasture woodland. On the chalk downs woodlands have been notified in the Rowridge Valley near Calbourne and at Eagle Head and Bloodstone Copse at Ashley. On the sandy Lower Greensand soils in the south of

the Island, America Woods has been notified as a SSSI whilst the best example of Upper Greensand ancient woodland is at Great Wood and Cliff Copse near Shanklin.

A number of more recent semi-natural woodlands have also been included within SSSI, for example Walters Copse at Newtown is within Newtown Harbour SSSI and forms part of the National Nature Reserve. Parts of the Undercliff woodland are included in Bonchurch Landslips SSSI and the Hanover Point to St Catherine's Point SSSI whilst secondary woodland SSSI on the chalk include those on Tennyson Down and the holm oak woods on Ventnor Downs.

Many woodlands on the Island are managed as nature reserves and some have been declared Local Nature Reserves by the Isle of Wight Council. Eagle Head and Bloodstone Copses and Swanpond Copse (near Ryde) are both ancient woodlands that are managed as nature reserves by Wight Wildlife. Atkies Copse, near Ningwood is leased by the Isle of Wight Natural History and Archaeological Society. Much of the Briddlesford Copses SSSI has been purchased by the People's Trust for Endangered Species is also managed as a nature reserve. Dickson's Copse at Dodnor is an ancient woodland that forms part of the Dodnor Creek Local Nature Reserve.

Those ancient and semi-natural woodlands that have not been notified as SSSI have generally been recorded as Sites of Importance to Nature Conservation (SINC) within the IW UDP.

Certain trees and woodlands are also given protection from felling through Tree Preservation Orders (TPO). A felling licence is also required from the Forestry Commission to fell all but a minimal volume of timber above a certain diameter at any one time.

2.4 Summary of Important Sites

Briddlesford Copses SSSI is the most important ancient woodland site on the Isle of Wight. This SSSI includes fine examples of a wide range of woodland types ranging from highly calcareous stream side wet woodland with wych elm and green hellebore through neutral oak – ash and oak – birch woodland with bluebell, wild daffodil, wood anemone and the nationally scarce narrow-leaved lungwort. On the most acid soils within the SSSI are areas of sessile oak woodland. The woods are of great importance for woodland mammals and include populations of red squirrel, dormouse, Bechstein's bat and barbastelle bat. The invertebrate fauna of the SSSI is also very rich and includes many ancient woodland specialist species.

Parkhurst Forest SSSI incorporates the former wood pasture in the north of the Forest. This comprises a mix of beech and sessile oak woodland that shows many features in common with the ancient and ornamental wood pastures of the New Forest.

On the chalk, important ancient woodlands occur within the Rowridge Valley where they support the only known population of the wood calamint in Britain. Other important ancient chalk woods include the extensive complex of copses including Tolt Copse, Long Copse and Short Copse above the village of Gatcombe, Eaglehead and Bloodstone Copses near Ashley and in the south of the Island, Wroxall Copse and Rew Copse.

The estuary edge and cliff face woods on the north coast of the Island are also particularly interesting and show unusual transitions from ancient woodland to saltmarsh and intertidal mudflat. Good examples occur around King's Quay near Wootton, at Town Copse within Newtown Harbour, Salterns Wood near Yarmouth and Fishbourne Copse near Binstead. These coastal woodlands are also characterised by an abundance of wild service trees, narrow-leaved lungwort and other ancient woodland indicator plants.

Some remarkable ancient woodlands occur on the Upper Greensand exposures particularly near Shanklin where Greatwood and Cliff Copses occur. These support a range of woodland types ranging from wet flushed woodland dominated by ash and wych elm to dry ash maple woodland and areas of beech woodland. Cliff Copse is also characterised by the presence of ancient whitebeams that grow from crevices in the near vertical Greensand exposures.

America Wood on the Lower Greensand is also a former wood pasture and comprises a mix of mature oaks and an abundance of birch. The ground flora is dominated by a dense growth of bracken and bramble but includes some interesting areas dominated by great wood rush. Other good examples of Lower Greensand woodland occur in Lynch Copse near Newchurch and Alverstone Lynch at Alverstone. These steeply sloping oak woods on the edge of the flood plain show fine transitions to wet woodland and marsh.

The Island has a number of important wet woods including the extensive complex of woodland known at Gatcombe Withybed. Other important wet woodlands include Ninham Withybed, Herringford Withybed, Dungewood Withybed and The Wilderness.

Table 1: Distribution and extent of ancient woodland within SSSI

Site name	Ancient Woodland	Ancient Woodland Plantation
Alverstone Marsh	0.60	
America Wood	14.53	
Bouldnor and Hamstead	3.27	3.19
Brading Marshes/St Helens Ledges	8.52	
Bridlesford Copse	83.87	50.61
Eaglehead/Bloodstone Copse	6.75	
Greatwood/Cliff Copse	12.33	
Kings Quay Shore	18.08	
Medina estuary	3.72	
Newtown Harbour	18.44	
Northpark Copse	9.38	
Parkhurst Forest	103.42	60.74
Priory Woods		
Rowridge Valley	19.20	
Ryde Sands/Wootton Creek	12.33	
Thorness Bay	3.34	
Ventnor Downs	3.24	
Total area	321.03	114.53

Table 2: Distribution and extent of ancient woodland within SINCs

SINC number	SINC name	Ancient Woodland	Ancient Woodland Plantation
3	Saltern Wood	9.07	
4	Mill Copse		5.75
5	Clavell's Copse	2.20	
6	Wilmington Plantation	0.90	12.65
7	Horseground Copse	3.08	
9	Tapnell Furze		7.20
12	Lee Copse		8.82
13	Bouldnor Copse		8.56
19	Brook House Wood		5.90
20	Cooks Copse	0.89	
21	Nunney's Wood		7.82
25	Woodside Copse	1.50	

SINC number	SINC name	Ancient woodland	Ancient Woodland Plantation
29	Fleetlands Copse	2.73	
31	Yatland Copse	1.54	
32	Flatbrooks/Pound Copse	1.07	
33	Crainges	4.59	
35	Westover Copse		4.35
38	Chessell Copse	3.05	
44	Little Down	4.21	
45	Pump Copse		3.27
46	Rushcroft Copse	6.29	
49	Cats Copse	2.29	
50	Hummet Wood	1.58	1.81
52	Burnt Wood		29.51
55	Long Copse Calbourne	3.61	
57	Round Copse	2.27	4.06
58	Bulls Wood	7.94	
59	Apesdown Copse	7.87	
61	Bunts Hill Copse	7.76	
62	Thorness Wood	3.34	
63	Thorley Copse	4.10	
64	Rolls Bridge Copse	4.85	
65	Rolls Farm Wood	1.00	
66	Whitehouse Copse	2.58	
68	Chalkclose Copse	11.49	
70	Parkhurst Forest	11.79	35.15
71	Alvington Manor chalkpit	1.44	
75	Mudless Copse/High Wood	19.19	16.69
77	Idlecombe Down		5.46
78	Plaish Copse	2.55	
79	Barchams Copse	3.08	
80	Dukem Copse		12.07
81	Westridge Copse	4.66	12.66
82	Lorden Copse	7.12	
84	Newbarn Down	16.01	
85	Wolverton Marsh	4.55	
87	Dungewood Withy	2.60	
88	Sheard's Copse	4.44	
89	Kingston Copse	9.25	
92	Billingham Manor	3.14	
93	Gotten Copse	2.05	
97	Upper Dolcoppice	2.00	
101	Rew Copse	8.87	
102	Appuldurcombe	4.74	
103	Sainham Copse	2.43	
106	Upper Yar valley	2.61	
108	Bottoms Copse	2.53	
110	Ramsdown Copse	1.53	
119	Gatcombe Withybed	5.16	
120	Marvel Copse		3.17
124	Standen Copse	2.56	
125	Standen Heath	0.54	
126	Combley Great Wood		37.16
127	Staplers Heath/Copse	19.61	

SINC number	SINC name	Ancient woodland	Ancient Woodland Plantation
128	Quarr Old Abbey	1.25	
129	Brocks/Woodhouse Copse	9.28	26.88
131	Wallishill Copse	4.42	
132	Osborne Estate	12.73	71.41
133	Puckers Copse	8.89	2.56
134	Firestone Copse	1.61	53.53
135	Staynes Copse	1.61	
137	Stroud Wood	3.59	
139	Rowlands Wood		46.69
140	Ramcroft Copse	5.63	58.25
142	Bucket's Copse	7.68	
143	Mersley Down North	2.22	
145	Fry's Copse	0.89	
147	Knighton West Wood		7.76
148	Knighton East Wood	1.50	11.12
149	Lynch Copse	6.38	
154	Hornhill Copse	1.56	
155	Youngwoods Copse	3.66	
156	Alverstone Marsh	4.27	
164	Broadley Copse		4.51
165	Peakyclose Copse	22.93	
167	Angels Copse/Swanpond Copse	6.44	
168	Whitefield Woods	2.08	61.35
172	Hill Farm Copse	2.81	7.23
173	Spring Copse	5.90	
174	Eight Acre Copse	3.84	
175	Centurion's Copse	1.67	
177	Bembridge Down	2.11	
178	Breaches Copse	2.16	
180	Apse Castle Wood	2.92	
181	Pennyfeathers	0.16	
182	Quarr Wood	6.20	
185	Newbarn Copse	2.60	3.16
189	Stroud Coppice	1.43	
195	Ridge Copse	10.85	
196	Great Werrar Wood	16.09	
199	Little Werrar Wood	4.54	
201	Blackbush Copse		3.04
208	Woodslade Copse	1.62	
209	Pondclose Copse	1.81	
211	Ryde House Grounds	3.47	
217	Cothey Bottom Copse	7.81	
218	Lushington Copse	6.78	
219	Quarrel's Copse	8.87	
222	New Copse	7.69	
223	Ashlake Copse	4.17	
224	Steyne Wood	11.79	
227	Longlands Copse	1.80	
228	Marshcombe Copse	4.50	
230	Heathfield Copse	3.96	

SINC number	SINC name	Ancient woodland	Ancient Woodland Plantation
232	Springhill Copse	10.77	
234	Princes Esplanade	1.74	
237	Ruffins Copse	14.79	
238	Wards Copse	2.36	
240	Calving Close Copse	4.70	2.75
241	Shamblers Copse/Cowes Cemetery	5.60	
242	Waterclose Copse		7.30
244	Wroxall Copse	8.28	
252	Hungerberry Copse	4.95	
254	Bullen Cross Wood	1.63	
255	Barton/Ninham Withybed	2.86	
260	Borthwood Copse	21.77	
266	Dodnor Creek	1.45	
268	Whitefield Farm Copse	2.17	
270	Rowdown Copse	3.94	
275	Fattingpark Copse	18.66	
	Totals	592.39	598.80

3 Current Factors affecting the habitat

3.1 Woodland management for biodiversity

Unlike many other habitats, woodland does not need to be managed to stay as woodland – it developed and maintained itself as woodland for thousands of years prior to any human influence. However, the primeval deciduous forests of Britain have been radically reduced in extent over the last four thousand years or so leaving only remnants of woodland. These fragments of a once much more extensive habitat have been managed for many centuries. This created a much greater concentration of woodland micro-habitats than would naturally have existed. The decline in traditional woodland management practices and the development of modern forestry techniques over the past century has seen a decline in the biodiversity of many ancient woodlands due to a combination of either no management or inappropriate management. One of the greatest challenges facing woodland biodiversity is to develop modern forestry techniques that can deliver biodiversity gains.

The greatest factor affecting woodland biodiversity on the Isle of Wight is therefore promoting appropriate woodland management. In all ancient woodlands as well as all recent semi-natural woodlands this needs to have the following broad objectives:-

1. Maintain and restore semi-natural woodland composed of native and indigenous trees and shrubs of local provenance
2. Develop a diverse woodland age structure comprising a mosaic of seedling and saplings, thicket and pole stage, mature, over-mature and senile trees.
3. Perpetuate open glade conditions within all but the smallest woodlands (<1 ha)
4. Enhance connectivity, both between and within woodland on the island by reconnecting isolated woodland fragments and linking open space within individual woodland blocks.

Achieving these objectives will be dependent on a number of additional factors; these are described further below.

3.1.1 Markets and marketing

In the past there was a demand for woodland products produced by traditional woodland management – typically coppice with standards management. This produced a continual supply of

small diameter wood, as well as larger diameter timber. The decline in coppice management in the latter half of the 20th century has left the former coppice woodlands derelict and in need of restoration. Meanwhile, the skills needed to manage coppice and create coppice products such as wattle hurdles have been all but lost. Despite this there appears to be a demand for such coppice products on the Island, and in theory there is no reason why a proportion of former coppiced woodlands could not be bought back into commercial coppice production. If this is to happen, a significant input of training and coppice restoration is needed to bring these former coppices back into commercial production and to develop the skilled work-force necessary to manage them.

Coppice management is not however going to be financially viable in probably the majority of formerly coppiced ancient woodlands unless other markets can be developed. Some coppice in nature reserves will be maintained solely for nature conservation purposes, other areas might be maintained for shooting but most are likely to remain unmanaged unless other woodland products can be obtained from them. To achieve this change, management systems need to be developed that produce good quality timber to meet local needs. Conversion of former coppice with standards woodland to create productive high forest native woodland presents a significant challenge.

3.1.2 Restoration of planted ancient woodlands

It would be desirable to restore much of the extensive area of ancient woodland that has been converted to plantations to native woodland. The type of woodland these plantations are restored to and the type of woodland produce that they will eventually generate needs careful consideration and planning. Such a move will also result in changes to the habitat of red squirrels that could cause a reduction in population size and density. However, such changes need to be balanced against the biodiversity gains, in particular for the other equally important woodland mammals such as the dormouse and the internationally threatened woodland bats.

3.2 Fragmentation

Although there is more woodland on the Island than there has been for centuries, the most important ancient and semi-natural woods tend to be small and often isolated from each other. Woodland plants and animals, in particular the nationally and internationally important assemblage of woodland mammals that the Island's woods support, are more likely to thrive in extensive areas of uninterrupted habitat. Indeed, for some species a minimum area of suitable woodland is required to sustain their population. The Forestry Commission are providing very important funding to resolve this issue for the Island's woodland through the JIGSAW Challenge fund. However, the resources to maintain this fund are currently allocated only for a limited period. It is hoped that further funding will be forthcoming to maintain the initiative in the future.

3.3 Genetic integrity and naturalness

The ancient semi-natural woodlands of the Island have evolved and developed over many thousands of years through natural regeneration, and in some instances, planting. However, up until the 19th century planting would have been undertaken almost exclusively with seed collected from Isle of Wight woodlands: for example, there is evidence of Napoleonic planting of oak in Parkhurst. The genetic make-up of the Island's woodlands has therefore been maintained and allowed to evolve over thousands of years to reflect the specific environmental conditions of the Isle of Wight. The distribution of trees, shrubs and ground flora plants also shows endless variation in relation to soil types, slope and past management practices. Planting trees from stock derived outside of the Island and often outside of the UK reduces the important genetic integrity of the Islands ancient woodlands and if undertaken un-sympathetically results in the creation of even aged regularly spaced stands of trees that do not respect the natural variation found in unplanted woodland. If we are to restore planted ancient woodlands to a semi-natural state, create more new woodland or improve the timber production value of former coppice with standards woodlands there will be a need to plant more trees. However, in future this should be with local provenance

trees planted in ways that follow changes in soil type and which reflect natural patterns of woodland growth.

3.4 Inappropriate management practices

Some woodland management practices damage the biodiversity value of woodland. Factors include excessive tidying of woodland worksites, burning of wood waste and leaving no dead wood. Extraction of timber along wet unmade rides during the winter can cause long term damage to the ride flora and drainage. Siting of pheasant release pens in sensitive areas of woodland and excessive pheasant stocking, strawing of rides and even planting of game crops within woods can all cause damage to their biodiversity.

3.5 Adjacent land-use

Woodland biodiversity is also affected by the management and use of the land around them. Intensive arable cultivation around woods can lead to problems of spray drift, drainage and nutrient run-off. Removal or bad management of hedges linking woods can also damage woodland biodiversity. The growth of urban development around or adjacent to woods can lead to damage of woodland biodiversity from vandalism, trampling, encroachment of gardens into the wood and predation and disturbance of woodland mammals and birds by pets, particularly cats. The management of road verges bordering woodlands can also have an impact upon their biodiversity.

3.6 Wet woodland

Factors affecting wet woodland are rather different from those affecting other woodland types. The first major problem is that we have no real idea of the extent, distribution or variation in character of this priority BAP habitat on the Isle of Wight. In terms of its vegetation, it includes most alder and willow woodlands but it also includes wet ash-maple woodland within the flood plains of streams and rivers and associated with hill side flushes. Wet woodlands often occur as part of larger woodland complexes which are dominated by dry woodland types which again makes it difficult to assess the extent of wet woodland without further survey. Forest Enterprise has however started this process by mapping the extent of wet woodland within their woods on the Island.

Wet woods were mostly managed in the past, although many have undergone a long period without any woodland management. Nevertheless, wet woodlands are subject to the same problems of lack of management experienced in other woodland types. However, they are also vulnerable to changes in wetness and water quality. This can result from land drainage, water abstraction for irrigation or public water supply and declines in water quality.

An important feature of the water courses through many wet woods is their relatively natural character comprising complex meanders, pool and riffle sequences and debris dams. The fauna of these woodland streams is however poorly recorded but could provide a valuable barometer of stream quality and condition both within the wet woodland and beyond.

3.7 Further loss of habitat

Woodland and in particular ancient woodland must be given a high degree of protection both from destruction for agriculture and development. However, the threat of further losses, often as small scale incursions into woodlands, remains. This incremental loss of woodland needs to be strongly resisted and necessary planning and other policies implemented to prevent further loss.

4 Current Action

4.1.1 Site and Species Protection

4.1.1 Site designation SSSI, cSAC

The Briddlesford Copses SSSI has been identified as a potential Special Area of Conservation (SAC) to conserve the population of Bechstein's bat it supports. Bechstein's bats are listed on

Annex I of the EU Habitats Directive and are one of a number of nationally and internationally rare and endangered mammal species that occur within Isle of Wight woodlands.

Staplers Copse, the chalk copses above Gatcombe village and Gatcombe Withybeds have all been considered for SSSI notification in the past although there are currently no plans to notify these woodlands as new SSSI.

Most, if not all semi-natural woodlands and many ancient replanted woods have been identified as SINC in the IW UDP. There is a constant programme of updating and designating new SINC which might include further woodlands in the future.

4.1.2 Purchase of additional reserves or properties

It is possible that further areas of woodland, particularly ancient semi-natural woodland, will become available for purchase by nature conservation organisations. Further action to bring this land into management by nature conservation organisations needs to be planned and coordinated.

4.1.3 Habitat management

The Forestry Commission are encouraging appropriate management of privately owned woodlands through grant aid and advice through the Woodland Grant Scheme (WGS). Woodland Improvement Grants (WIGs) are also available to assist with management aimed at improving biodiversity including coppice restoration.

New woodland planting can be grant aided by the Forestry Commission through the Farm Woodlands Premium Scheme (FWPS). The Isle of Wight has also been fortunate to have available to it funding through the JIGSAW Challenge fund. This provides generous grant support for the creation of new native woodlands that link and extend existing ancient semi-natural woodlands. The fund is however limited to five years (until 2005/06) and qualifying applicants are required to enter competitive bids for the available funding each year.

The Forest Enterprise division of the Forestry Commission is undertaking a rolling programme of Forest Design Plan preparation. These plans provide the opportunity to build biodiversity actions into the future management of the state owned woodlands on the Island. Forest Enterprise is also committed to the restoration to a semi-natural state of all the planted ancient woodlands on the Isle of Wight in its management, and the enhancement of biodiversity within more recent plantations through the creation of open space and restoration of grassland and heathland habitats.

Forest Enterprise is also in discussion with English Nature and others over the potential restoration of grazed wood pasture to part of Parkhurst Forest.

America Wood is owned and managed by the Woodland Trust to enhance biodiversity and provide opportunities for informal recreation.

An area of about 100 hectares of the Bridlesford Copses SSSI is owned and managed by the People's Trust for Endangered Species to maintain and enhance the value of these woodlands for biodiversity and the important assemblage of native woodland mammals in particular.

The National Trust own a number of important ancient and more recent secondary woodlands on the Island where they undertake a programme of woodland management including coppice restoration and ride management.

Wight Wildlife manages Swanpond Copse and Eaglehead and Bloodstone Copses as nature reserves. The Isle of Wight Natural History and Archaeology Society leases and manages Atkies Copse.

Mill Copse near Yarmouth is an ancient woodland near Yarmouth that is owned and managed by Wight Nature Fund. Management has included the gradual removal of conifer plantations to restore native woodland.

The Environment Agency is currently considering ways of improving and restoring wet woodlands on the Isle of Wight through restoration of natural drainage systems and removal of culverts and other artificial drains.

The Isle of Wight Woodland Forum serves as a valuable forum for the dissemination of information about woodland management and biodiversity and serves as a sounding board for ideas and information.

The Wessex Coppice Group supports the training of coppice workers and aims to expand and open up new markets for coppice products. The Group also acts as a point of information exchange. The Isle of Wight Woodland Forum should become a member of the Wessex Coppice Group as soon as possible.

4.2 Survey, research and monitoring

English Nature is currently carrying out an assessment of the condition of all SSSI on the Isle of Wight with a target of ensuring that 95% are in favourable or recovering condition by 2010.

The PTES have recently commissioned a survey of invertebrates within the Briddlesford Copses SSSI that has revealed a rich and diverse fauna including an important assemblage of ancient woodland indicator species.

PTES has also funded a long-term programme of dormouse monitoring at Briddlesford to assess the impact of different woodland management techniques on dormouse populations.

A programme of bat trapping and subsequent radio tracking funded by the PTES at Briddlesford Copses in 2002 has revealed the presence of an important bat fauna within this SSSI, including a significant population of Bechstein's bat together with smaller numbers of the equally rare and endangered barbastelle bat.

A programme of red squirrel monitoring within Isle of Wight woodlands is being undertaken by volunteers for the Wight Squirrel Project.

A Forest Research Landscape Ecologist will initiate a partnership to monitor species colonisation on JIGSAW sites.

4.3 Action for species

Appendix 1 gives details species on the Isle of Wight found primarily in woodland. Action proposed in this Plan will be the principal means of conserving most of these species. Individual Species Action Plans (SAPs) will be prepared for red squirrels and possibly dormice, rare woodland bats and butterflies.

In some cases, additional action plans and programmes will also contribute to conserving priority species: for example, UK Species Action Plans (UK SAP) and Butterfly Conservation Regional Action Plans (BC RAP).

The National Trust undertakes a rolling programme of species survey including several butterfly monitoring transects within their woodlands.

Forest Enterprise has also funded a number of species surveys including lichen surveys in Parkhurst Forest and has involvement with the reddish buff moth re-establishment project at Parkhurst and Bouldnor Forests.

5 Objectives and Targets

The overall aim of this Plan is to protect and enhance biodiversity of woodland on the Isle of Wight. This broad aim translates into the specific objectives set out below. Where feasible, objectives have been allocated targets against which achievement can be measured. The 'Proposed Action' table in section 6 identifies the action to be taken to meet these objectives.

	Objectives	Proposed Actions
A	Ensure no further loss or degradation of woodland: <ul style="list-style-type: none"> • Ensure no further removal or conversion of ancient semi-natural woodland. • Prevent degradation of native woodlands by damaging management operations and other influences. 	1, 2, 3, 4, 5, 6
B	Improve the biodiversity value of woodlands: <ul style="list-style-type: none"> • Restore 80% of all planted ancient woodlands to a semi-natural state. • Manage native woodlands to maintain and enhance biodiversity value. • Improve the biodiversity value of recent plantations by increasing diversity and expanding areas of grassland and heathland to occupy 20% of forest area. 	1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26
C	Increase the extent of native woodland and reverse the effects of isolation and fragmentation.	8, 11, 13
D	Ensure that the needs of the Isle of Wight priority species are taken into account in the restoration of existing and creation of new native woodland.	23, 24, 25, 26
E	Improve knowledge of native woodlands and of all priority species associated with them through survey, research and monitoring.	1, 4, 15, 21, 23, 24, 25, 26, 27
F	Communication, Awareness and Promotion: <ul style="list-style-type: none"> • Promote the importance of woodland its associated species and threats to them. • Communicate with and provide information to key sectors including statutory agencies, NGOs, landowners and managers, schools, community groups and members of the public 	1, 15, 17, 33, 35, 38, 39, 40, 41, 42, 43, 44

6 Proposed Action

The following table lists the actions required to achieve the objectives set out in this plan. Each action has been assigned to one or more Key Partners. Key Partners are those organisations that are expected to take responsibility for the delivery of the actions assigned to them, according to the targets set in this Plan. Other organisations may also be involved in the delivery of action and they have been indicated in the Others column.

Key to symbols in Action Table:

- ◆ To be completed by the indicated year. Work can commence at any time before the due date, at the discretion of the key partner.
- ◆⇒ Design or production of a plan/strategy to be completed by this year and then followed by its implementation.
- ➔ To start by the indicated year and usually followed by ongoing work. A start arrow in year 2003 can indicate a new action or a new impetus to existing work.
- ⇒ Work that has already begun and is ongoing.

Key to Organisations in Action Table

IWC = Isle of Wight Council, EN = English Nature, EA = Environment Agency, FC = Forestry Commission FE = Forest Enterprise, FR = Forest Research, PTES = Peoples Trust for Endangered Species, WNF = Wight Nature Fund, RSPB = Royal Society for the Protection of Birds, WT = Woodland Trust, BC = Butterfly Conservation, DEFRA = Department for Environment, Food and Rural Affairs, WW = Wight Wildlife, NT = National Trust, , CLA = Country Landowners Association, NFU = National Farmers Union, AONB = IW AONB Project, WF = IW Woodland Forum, I2K = Island 2000 Trust

	ACTION	DELIVERY BY		YEAR						Meets Obj. Nos
		Key Partner	Others	2003	2004	2005	2006	2007	2013	
Habitat Protection										
1.	Review the extent of ASNW owned by conservation organisations & Forest Enterprise	IWC	WW	➔						B, E
2.	Review woodland SSSI coverage and consider need to notify new SSSI, particularly Staplers Copse, Gatcombe Withy Bed and Gatcombe Woods	EN	WW/IWC						➔	A, B
3.	Review SINC coverage and ensure any additional woodland SINC are identified and designated	IWC	WW	⇒						A, B
4.	Review the extent of ASNW owned by conservation organisations and Forest Enterprise	IWC	WW	➔						B, E

	ACTION	DELIVERY BY		YEAR (action to be completed or in place by)						Meets Obj. Nos	
		Key Partner	Others	2003	2004	2005	2006	2007	2013		
5.	Ensure that all woodland is safeguarded from development through forward planning and development control	IWC	WW/EN/FC	⇒							A
6.	Review and develop site acquisition policies and purchase woodlands of high biodiversity value where appropriate	WW/NT/PTES/WT/WNF	IWC	⇒							A, B
Habitat management, Incentive Schemes and Other Resources											
7.	Ensure appropriate management to achieve favourable or recovering condition of 95% of woodland SSSI and SINC by area by 2010.	EN/IWC	ALL	⇒							B
8.	Seek to extend funding for further native woodland establishment on the Isle of Wight, target new woodland to link and extend ancient woodlands	FC	ALL			➔					B, C
9.	Establish working group to develop area targets for woodland management systems (coppice, high forest, non-intervention etc.) and distribution on the Isle of Wight	IWC/WW	ALL	➔							B
10.	Work with Forest Enterprise to complete/update Forest Design Plans for all state-owned woodland, incorporating biodiversity objectives	FE	EN/IWC/FC	⇒							B
11.	Develop and implement integrated management guidelines for woodland within the Isle of Wight AONB	AONB	ALL		◆⇒						B, C
12.	Promote the application of the Forestry Standard guidelines to WGS and certified woodlands e.g. restrict burning of wood waste, limit extraction damage and ensure appropriate siting and stocking of pheasant pens	FC	ALL	⇒							B
13.	Increase the area of woodland managed under WGS	FC	ALL	⇒							B, C

	ACTION	DELIVERY BY		YEAR (action to be completed or in place by)						Meets Obj. Nos
		Key Partner	Others	2003	2004	2005	2006	2007	2013	
14.	Promote the development of a self-sustaining coppice industry on the Island by supporting marketing and training of coppice workers	IWC/WF	FC/WF	⇒						B
15.	Continue to support the IW Woodland Forum	IWC	ALL	⇒						B, E, F
16.	Support Forest Enterprise in their initiative to restore actively grazed wood pasture to Parkhurst Forest and restore PAWS to semi-natural woodland.	FE	EN/IWC	⇒						B
17.	Support initiatives that develop and promote markets for Isle of Wight Woodland products	IWC/I2K	ALL	⇒						F
18.	Promote the restoration of derelict coppice woodland where it is still viable and the seek to improve the quality of in-cycle coppice	FC	ALL	⇒						B
19.	Promote the appropriate management of land adjoining woodland of high biodiversity value, in particular hedgerows and unimproved grassland	DEFRA / WW	ALL	⇒						B
20.	Seek support for the establishment of an Island tree nursery to collect and propagate seed of Island trees for planting in Island woods	IWC	FE/WW/ FC	⇒						B
21.	Take action to conserve wet woodland based upon the results of surveys identified in this plan	EA	ALL	⇒						B, E
22.	Consider the potential/feasibility of developing a bio-fuel power station on the Island fuelled with wood from Island woodlands	IWC	FE/WW/ FC	⇒						B
Species Action										
23.	Encourage landowners/managers and their advisors to manage their woodland appropriately for species on IW BAP species audit	IWC	ALL	⇒						B, D, E
24.	Prepare species action plans for red squirrel	IWC	ALL	⇒						B, D, E
25.	Prepare a species action plan for woodland bats, particularly the Bechstein's and Barbastelle bats	IWC	ALL				➔			B, D, E

	ACTION	DELIVERY BY		YEAR (action to be completed or in place by)						Meets Obj. Nos
		Key Partner	Others	2003	2004	2005	2006	2007	2013	
26.	Prepare species action plan for threatened /declining woodland butterflies	BC	ALL	⇒						B, D, E
27.	Develop monitoring strategy for national priority species which occur in Isle of Wight woodland	IWC/FR	ALL	⇒						E
Survey, Research and Monitoring										
28.	Develop a monitoring programme for pasture woodland restoration	EN	FE/IWC						➔	E
29.	Monitor success of JIGSAW challenge fund including monitoring of species colonisation of JIGSAW sites	FC/FR	ALL		➔					E
30.	Develop a programme of woodland vegetation survey to update and reassess the 1981 NCC ancient woodland survey	EN	ALL						➔	E
31.	Produce an updated inventory of ancient woodland for the Isle of Wight	EN	ALL						➔	E
32.	Develop and maintain a database on the condition of coppice woodland on the Island	IWC	ALL			◆⇒				E
33.	Review research into the impact of commercial coppice management on dormouse and red squirrel populations and promote new research where appropriate	FC/FR	ALL	⇒						E, F
34.	Research and monitor the benefits of minimum intervention woodland	EN/FC	ALL				➔			E
35.	Take opportunities to survey the extent and character of wet woodland and their water courses on the Island especially where this will inform planned action	EA	ALL	⇒						E, F
36.	Monitor the condition of all woodland SINCC on a 10 year rolling programme	IWC	ALL	⇒						E
37.	Monitor the condition of all woodland SSSI on a 6 year rolling programme	EN	ALL	⇒						E

	ACTION	DELIVERY BY		YEAR (action to be completed or in place by)						Meets Obj. Nos
		Key Partner	Others	2003	2004	2005	2006	2007	2013	
Communication and Publicity										
38.	Raise awareness of incentive schemes and projects that assist with meeting the objectives of this HAP	FC/WW	ALL	⇨						F
39.	Make information more widely available on the distribution and character of the Island's woodlands and in particular the location of woodlands SINCs and SSSIs.	IWC	ALL	⇨						F
40.	Promote appropriate woodlands as demonstration woodlands for research and training in woodland management	FC/WF	ALL		➔					F
41.	Develop links with the Hampshire Woodland Forum and become a member of the Wessex Coppice Group to help inform and disseminate ideas on woodland management and conservation	IWC/WF	ALL	➔						F
42.	Increase public awareness of woodland conservation issues using well used publicly accessible woodlands as show cases	FE/WW	WW/NT/ IWC	⇨						F
43.	Involve local communities in the conservation of their woodlands through support for voluntary conservation groups	WW/IWC	ALL	⇨						F
44.	Promote the IW Woodland Forum as the main forum for discussion of woodland issues on the Island and use the Forum to promote and develop action set out in this plan	IWC/WF	ALL	⇨						F

7 Sources of information

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Species associated with woodland

Woodland as primary habitat

LATIN NAME	ENGLISH NAME	CLASS	BAP Status	RARITY	PRIMARY HABITAT	SUBSIDIARY HABITAT
<i>Muscardinus avellanarius</i>	Dormouse	Mammal	1		Broad-leaved mixed woodland	ANCIENT AND/OR SPP RICH HEDGEROWS
<i>Sciurus vulgaris</i>	Red Squirrel	Mammal	1		Broad-leaved mixed woodland	ANCIENT AND/OR SPP RICH HEDGEROWS
<i>Asio otus</i>	Long-eared owl	Bird	2		Coniferous woodland	Broad-leaved mixed woodland
<i>Buteo buteo</i>	Buzzard	Bird	2		Broad-leaved mixed woodland	LOWLAND MEADOWS
<i>Caprimulgus europaeus</i>	Nightjar	Bird	1		Broad-leaved mixed woodland	LOWLAND HEATHLAND
<i>Certhia familiaris</i>	Treecreeper	Bird	2		Broad-leaved mixed woodland	
<i>Dendrocopos major</i>	Great spotted woodpecker	Bird	2		Broad-leaved mixed woodland	
<i>Dendrocopos minor</i>	Lesser spotted woodpecker	Bird	2		Broad-leaved mixed woodland	
<i>Luscinia megarhynchos</i>	Nightingale	Bird	2		Broad-leaved mixed woodland	
<i>Muscicapa striata</i>	Spotted flycatcher	Bird	1		Broad-leaved mixed woodland	
<i>Parus ater</i>	Coal tit	Bird	2		Coniferous woodland	Broad-leaved mixed woodland
<i>Parus caeruleus</i>	Blue tit	Bird	2		Broad-leaved mixed woodland	Built-up areas and gardens
<i>Parus major</i>	Great tit	Bird	2		Broad-leaved mixed woodland	ANCIENT AND/OR SPP RICH HEDGEROWS
<i>Parus palustris</i>	Marsh tit	Bird	2		Broad-leaved mixed woodland	
<i>Phylloscopus collybita</i>	Chiffchaff	Bird	2		Broad-leaved mixed woodland	
<i>Phylloscopus trochilus</i>	Willow warbler	Bird	2		Broad-leaved mixed woodland	
<i>Pyrhula pyrrhula</i>	Bullfinch	Bird	1		Broad-leaved mixed woodland	Arable & horticultural
<i>Regulus ignicapillus</i>	Firecrest	Bird	2		Coniferous woodland	Broad-leaved mixed woodland
<i>Regulus regulus</i>	Goldcrest	Bird	2		Coniferous woodland	Broad-leaved mixed woodland
<i>Scolopax rusticola</i>	Woodcock	Bird	2		Broad-leaved mixed woodland	
<i>Streptopelia turtur</i>	Turtle dove	Bird	1		Broad-leaved mixed woodland	ANCIENT AND/OR SPP RICH HEDGEROWS
<i>Sylvia atricapilla</i>	Blackcap	Bird	2		Broad-leaved mixed woodland	Boundary and linear features
<i>Sylvia borin</i>	Garden warbler	Bird	2		Broad-leaved mixed woodland	
<i>Turdus philmelos</i>	Song thrush	Bird	1		Broad-leaved mixed woodland	Built-up areas and gardens
<i>Formica rufa</i>	Red Wood Ant	Ants, Bees and Wasps	1		Broad-leaved mixed woodland	
<i>Drilus flavescens</i>	A beetle	Beetle	p 3		Broad-leaved mixed woodland	Built-up areas and gardens
<i>Argynnis paphia</i>	Silver-washed Fritillary	Butterflies	2		Broad-leaved mixed woodland	

LATIN NAME	ENGLISH NAME	CLASS	BAP Status	RARITY	PRIMARY HABITAT	SUBSIDIARY HABITAT
<i>Boloria euphrosyne</i>	Pearl-bordered Fritillary	Butterflies	1		Broad-leaved mixed woodland	
<i>Nemobius sylvestris</i>	Wood Cricket	Cricket and Grasshoppers	3		Broad-leaved mixed woodland	
<i>Apoda limacodes</i>	Festoon	Moth	2		Broad-leaved mixed woodland	
<i>Archiearis notha</i>	Light Orange Underwing	Moth	3		Broad-leaved mixed woodland	
<i>Atolmis rubricollis</i>	Red-necked Footman	Moth	3		Broad-leaved mixed woodland	
<i>Cepphis advenaria</i>	Little Thorn	Moth	3		Broad-leaved mixed woodland	
<i>Conistra rubiginea</i>	Dotted Chestnut	Moth	3		Broad-leaved mixed woodland	
<i>Cyclophora annulata</i>	Mocha	Moth	3		Broad-leaved mixed woodland	
<i>Eilema sororcula</i>	Orange Footman	Moth	2		Broad-leaved mixed woodland	
<i>Elaphria venustula</i>	Rosy Marbled	Moth	3		Broad-leaved mixed woodland	
<i>Eupithecia plumbeolata</i>	Lead-coloured Pug	Moth	3		Broad-leaved mixed woodland	ANCIENT AND/OR SPP RICH HEDGEROWS
<i>Meganola albula</i>	Kent Black Arches	Moth	3		Broad-leaved mixed woodland	
<i>Meganola strigula</i>	Small Black Arches	Moth	2		Broad-leaved mixed woodland	
<i>Mompha sturnipennella</i>	A micro-moth	Moth	3		Broad-leaved mixed woodland	
<i>Parascotia fuliginaria</i>	Waved Black	Moth	3		Broad-leaved mixed woodland	LOWLAND HEATHLAND
<i>Pechipogo strigilata</i>	Common Fan-foot	Moth	1		Broad-leaved mixed woodland	
<i>Schrankia taenialis</i>	White-line Snout	Moth	1		Broad-leaved mixed woodland	LOWLAND HEATHLAND
<i>Synanthedon flaviventris</i>	Sallow Clearwing	Moth	3		Broad-leaved mixed woodland	LOWLAND HEATHLAND
<i>Synanthedon vespiformis</i>	Yellow-legged Clearwing	Moth	3		Broad-leaved mixed woodland	
<i>Episinus maculipes</i>	A Spider	Spider group	2	RDB3	Broad-leaved mixed woodland	
<i>Eriophyes ilicis</i>	An eriophid mite	Spider group	3		Broad-leaved mixed woodland	
<i>Megalonotus dilatatus</i>	A ground bug	True bugs	3		Broad-leaved mixed woodland	LOWLAND DRY ACID GRASSLAND
<i>Callicera aurata (C.aenea)</i>	A hover-fly	True fly	3	RDB3	Broad-leaved mixed woodland	
<i>Criorhina ranunculi</i>	A hover-fly	True fly	3		Broad-leaved mixed woodland	
<i>Epistrophe diaphana</i>	A hover-fly	True fly	3		Broad-leaved mixed woodland	LOWLAND MEADOWS
<i>Eumerus ornatus</i>	A hover-fly	True fly	2		Broad-leaved mixed woodland	
<i>Mallota cimbiciformis</i>	A hover-fly	True fly	3		Broad-leaved mixed woodland	
<i>Metasyrphus nitens</i>	A hover-fly	True fly	3		Broad-leaved mixed woodland	
<i>Pelecocera tricincta</i>	A hoverfly	True fly	3	RDB3	Broad-leaved mixed woodland	LOWLAND HEATHLAND
<i>Volucella inflata</i>	A hover-fly	True fly	3		Broad-leaved mixed woodland	
<i>Xanthandrus comtus</i>	A hover-fly	True fly	3		Broad-leaved mixed woodland	

LATIN NAME	ENGLISH NAME	CLASS	BAP Status	RARITY	PRIMARY HABITAT	SUBSIDIARY HABITAT
<i>Amanita echinocephala</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	
<i>Amanita ovoidea</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	
<i>Cantharellus cinereus</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Collybia acervata</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	Coniferous woodland
<i>Collybia proxima</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	Coniferous woodland
<i>Cortinarius balteocumatilis</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	
<i>Cortinarius crassus</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	Coniferous woodland
<i>Cortinarius multiformis</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	Coniferous woodland
<i>Cortinarius subtortus</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	Coniferous woodland
<i>Cortinarius varius</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	Coniferous woodland
<i>Cortinarius violaceus</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	Coniferous woodland
<i>Creolophus cirrhatus</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Hydnellum conrescens</i>	A tooth-fungus	Fungus	2		Broad-leaved mixed woodland	
<i>Lactarius mairei</i>		Fungus	3	pRDB	Broad-leaved mixed woodland	Coniferous woodland
<i>Lepiota ignivolvata</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Leucoagaricus badhamii</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Leucoagaricus georginae</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Leucoagaricus marriagei</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Limacella glioderma</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Melanophyllum eyrei</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Mycena seynii</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Plectania melastoma</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Pseudocraterellus sinusus</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Ramaria broomei</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Ramariopsis crocea</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Rozites caperatus</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Russula azurea</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Russula decipiens</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Russula lilacea</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Russula persicina</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Sowerbyella radiculata</i>		Fungus	3		Broad-leaved mixed woodland	
<i>Sparassis laminosa</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland

LATIN NAME	ENGLISH NAME	CLASS	BAP Status	RARITY	PRIMARY HABITAT	SUBSIDIARY HABITAT
<i>Suillus fluryi</i>		Fungus	3		Coniferous woodland	
<i>Tricholoma atosquamosum</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Tricholoma pessundatum</i>		Fungus	3		Broad-leaved mixed woodland	Coniferous woodland
<i>Cryptolechia carneolutes</i>	A lichen	Lichens	3		Broad-leaved mixed woodland	
<i>Lobaria pulmonaria</i>	"Lungwort"	Lichens	3		Broad-leaved mixed woodland	
<i>Usnea articulata</i>	A lichen	Lichens	3		Broad-leaved mixed woodland	ANCIENT AND/OR SPP RICH HEDGEROWS
<i>Wadeana dendrographa</i>	A lichen	Lichens	3		Broad-leaved mixed woodland	
<i>Cololejeunea minutissima</i>	'Minute Pouncewort'	Liverworts	3		Broad-leaved mixed woodland	
<i>Lophocolea fragrans</i>	'Fragrant Crestwort'	Liverworts	3		Broad-leaved mixed woodland	
<i>Ptilidium pulcherrimum</i>	'Tree Fringewort'	Liverworts	3		Broad-leaved mixed woodland	WOOD PASTURE & PARKLAND
<i>Scapania nemorea</i>	'Grove Earwort'	Liverworts	3		Broad-leaved mixed woodland	LOWLAND HEATHLAND
<i>Scapania undulata</i>	'Water Earwort'	Liverworts	3		Broad-leaved mixed woodland	
<i>Eurhynchium schleicheri</i>	'Twist-tip Feather-moss'	Mosses	3		Broad-leaved mixed woodland	Boundary and linear features
<i>Hertzogiella seligeri</i>	"Silesian Feather-moss"	Mosses	3		Broad-leaved mixed woodland	
<i>Hypnum lindbergii</i>	'Lindberg's Plait-moss'	Mosses	3		Broad-leaved mixed woodland	
<i>Leucodon sciuroides</i>	'Squirrel-tail Moss'	Mosses	3		Broad-leaved mixed woodland	Inland rock
<i>Orthotrichum striatum</i>	'Shaw's Bristle-moss'	Mosses	3		Broad-leaved mixed woodland	
<i>Orthotrichum tenellum</i>	'Slender Bristle-moss'	Mosses	3		Broad-leaved mixed woodland	
<i>Pohlia lescuriana</i>	'Pretty Nodding-moss'	Mosses	3		Broad-leaved mixed woodland	
<i>Pterogonium gracile</i>	'Birds-foot Wing-moss'	Mosses	3		Broad-leaved mixed woodland	Inland rock
<i>Helleborus viridis</i>	Green Hellebore	Flowering plant	3		Broad-leaved mixed woodland	
<i>Monotropa hypopitys</i>	Yellow Birdsnest	Flowering plant	3		Broad-leaved mixed woodland	
<i>Tilia cordata</i>	Small-leaved Lime	Flowering plant	3		Broad-leaved mixed woodland	ANCIENT AND/OR SPP RICH HEDGEROWS
<i>Sedum telephium</i>	Orpine	Flowering plant	3		Broad-leaved mixed woodland	Boundary and linear features
<i>Atropa belladonna</i>	Deadly Nightshade	Flowering plant	3		Broad-leaved mixed woodland	
<i>Pulmonaria longifolia</i>	Narrow-leaved Lungwort	Flowering plant	3		Broad-leaved mixed woodland	
<i>Clinopodium menthifolium</i>	Wood Calamint	Flowering plant	2	EN	Broad-leaved mixed woodland	
<i>Orobanche hederaceae</i>	Ivy Broomrape	Flowering plant	3		Broad-leaved mixed woodland	MARITIME CLIFFS & SLOPES
<i>Arum italicum</i> ssp. <i>neglectum</i>	Italian Lords and Ladies	Flowering plant	3		Broad-leaved mixed woodland	
<i>Cephalanthera damasonium</i>	White Helleborine	Flowering plant	3		Broad-leaved mixed woodland	

Woodland as secondary habitat

LATIN NAME	ENGLISH NAME	CLASS	BAP Status	RARITY	PRIMARY HABITAT	SUBSIDIARY HABITAT
<i>Meles meles</i>	Badger	Mammal	2		LOWLAND MEADOWS	Broad-leaved mixed woodland
<i>Mustela erminea</i>	Stoat	Mammal	2		LOWLAND MEADOWS	Broad-leaved mixed woodland
<i>Mustela nivalis</i>	Weasel	Mammal	2		LOWLAND MEADOWS	Broad-leaved mixed woodland
<i>Egretta garzetta</i>	Little egret	Bird	2		MUDFLATS	Broad-leaved mixed woodland
<i>Boloria selene</i>	Small Pearl-bordered	Butterfly	2		LOWLAND MEADOWS	Broad-leaved mixed woodland
<i>Anticollix sparsata</i>	Dentated Pug	Moth	3		FENS	Broad-leaved mixed woodland
<i>Microstega hyalinis</i>	Translucent Straw Belle	Moth	3		LOWLAND CALCAREOUS GRASSLANDS	Broad-leaved mixed woodland
<i>Pardosa paludicola</i>	A Wolf Spider	Spider group	2	RDB3	LOWLAND MEADOWS	Broad-leaved mixed woodland
<i>Aphrophora alpina</i>	A froghopper	True bug	3		LOWLAND HEATHLAND	Broad-leaved mixed woodland
<i>Volucella inanis</i>	A hover-fly	True fly	3		MARITIME CLIFFS & SLOPES	Broad-leaved mixed woodland
<i>Xerocomus leonis</i>		Fungus	3		Boundary and linear features	Broad-leaved mixed woodland
<i>Porella arboris-vitae</i>	'Bitter Scalewort'	Liverworts	3		LOWLAND CALCAREOUS GRASSLANDS	Broad-leaved mixed woodland
<i>Ephemerum serratum v. minutissimum</i>	'Minute Earth-moss'	Mosses	3		Arable & horticultural	Broad-leaved mixed woodland
<i>Stellaria neglecta</i>	Greater Chickweed	Flowering plant	3		Boundary and linear features	Broad-leaved mixed woodland
<i>Vaccinium myrtillus</i>	Bilberry	Flowering plant	3		LOWLAND HEATHLAND	Broad-leaved mixed woodland