



# Desktop Biodiversity Report

Land at Wisborough Green Parish

ESD/14/249

Jill Sutcliffe

12th May 2014



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**Sussex Biodiversity Record Centre**  
**report regarding**  
**Wisborough Green Parish**  
**12/05/2014**

**Prepared for Jill Sutcliffe**  
**ESD/14/249**

**The following information is included in this report:**

<b>Maps</b>	<input checked="" type="checkbox"/>
<b>Sussex Protected Species Register</b>	<input type="checkbox"/>
<b>Sussex Bat Inventory</b>	<input type="checkbox"/>
<b>Sussex Bird Inventory</b>	<input type="checkbox"/>
<b>UK BAP Species Inventory</b>	<input type="checkbox"/>
<b>Sussex Rare Species Inventory</b>	<input type="checkbox"/>
<b>Sussex Invasive Alien Species</b>	<input type="checkbox"/>
<b>Full Species List</b>	<input type="checkbox"/>
<b>Environmental Survey Directory</b>	<input type="checkbox"/>

**SNCI**

C42 - Dunhurst & Northup Copses; C51 - Old Orchard Meadows; C62 - Badlands Meadows, Badland Hanger and Brickkiln Common Complex; C82 - The Quells; C89 - Wey & Arun Canal, River Arun & adjacent meadows; C97 - Wisborough Green Pastures.

**SSSI**

The Mens; Upper Arun.

**Other Designations/Ownership**

Environmental Stewardship Agreement; National Park; Special Area of Conservation.

**Habitats**

Ancient tree; Ancient woodland; Coastal and floodplain grazing marsh; Lowland fen; Traditional orchard; Wood-pasture and parkland.

## Important information regarding this report

**It must not be assumed that this report contains the definitive species information for the site concerned.**

The species data held by the Sussex Biodiversity Record Centre (SxBRC) is collated from the biological recording community in Sussex. However, there are many areas of Sussex where the records held are limited, either spatially or taxonomically.

A desktop biodiversity report from SxBRC will give the user a clear indication of what biological recording has taken place within the area of their enquiry. The information provided is a useful tool for making an assessment of the site, but should be used in conjunction with site visits and appropriate surveys before further judgements on the presence or absence of key species or habitats can be made. It may be that the content of this report guides the reader as to which surveys should be carried out on the site.

This report was compiled using data held at SxBRC at the time of production. SxBRC takes data validation very seriously, but cannot be held responsible for the accuracy of data included in this report.

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### Data usage

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The data may be used for 12 months, after which a replacement SxBRC report must be requested. This ensures the most up-to-date information is being used.

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### Impartiality

SxBRC functions as custodian of biological data. Our role is to collect, manage and disseminate wildlife and habitat data. As such, we have to remain impartial and cannot offer opinions on the biodiversity value of a given site. Similarly, we cannot put forward objections to planning applications or be involved in campaigns.

### Supplying records

Our desktop biodiversity reports are only as good as the data we hold. We rely on the continuous submission of records to keep our database up-to-date. We are always grateful to receive records from ecological consultants and members of the public alike. We accept records in many different formats – please see our [website](#) for more details.

## MAPS

There are three maps included in a standard desktop biodiversity report which show designated sites (statutory and non-statutory); habitats and natural features; and ownership and management.

The key on a map only shows those layers which are located within the enquiry area or immediate area. Below is a list of all layers which we currently use in our maps, with details of the data source:

<b>Designated sites</b>	
<b>Statutory</b>	
Area of Outstanding Natural Beauty (AONB)	Downloaded from NE website.
Country Park	Downloaded from NE website.
Local Nature Reserve (LNR)	Downloaded from NE website.
Marine Site of Nature Conservation Importance (MSNCI)	Supplied by ESCC in 2005.
National Nature Reserve (NNR)	Downloaded from NE website.
National Park	Downloaded from NE website.
Ramsar	Downloaded from NE website.
Site of Special Scientific Interest (SSSI)	Downloaded from NE website.
Special Area of Conservation (SAC)	Downloaded from NE website.
Special Protection Area (SPA)	Downloaded from NE website.
<b>Non-Statutory</b>	
Local Geological Site (LGS)	Originally supplied as hand drawn maps by the Booth Museum (Brighton) in 2009, LGS boundaries were digitised by SxBRC. Site boundaries are now administered by SxBRC and the Sussex Geodiversity Partnership and have been further improved as a result of ground surveys during 2010 to 2012.
Notable Road Verge	Owned and provided by ESCC and WSCC.
Site of Nature Conservation Importance (SNCI)	Supplied by WSCC, ESCC & BHCC.
<b>Habitats and natural features</b>	
Ancient/veteran tree	Merged dataset created in July 2009. Data from Ancient Tree Hunt (national survey carried out in 2007/2008) and Tree Register of the British Isles (a charity which collates and updates data on notable trees).
Ancient woodland	Downloaded from NE website.
Black poplar	Created by SxBRC based upon species records arising from Sussex Wetland Landscapes Project.
Chalk stream	Created and owned by SWLP and SxBRC.
Coastal & floodplain grazing marsh	Downloaded from NE website.
Coastal saltmarsh	Supplied by EA, based on data from the SRCMP Habitat Mapping Project.
Coastal sand dune	Supplied by EA, based on data from the SRCMP Habitat Mapping Project.
Coastal vegetated shingle	Downloaded from NE website.
Ghyll woodland	Boundaries drawn on paper maps by Dr Francis Rose which were then digitised by SxBRC. Not ground-truthed.
Intertidal chalk	Supplied by EA, based on data from the SRCMP Habitat Mapping Project.
Intertidal mudflat	Supplied by EA, based on data from the SRCMP Habitat Mapping Project.

Lowland calcareous grassland	Merged dataset from NE and SDJC sources, created in 2005. Administered by SxBRC.
Lowland fen	Created by SxBRC in June 2011. Layer is an amalgamation of all the fen data currently available to SxBRC.
Lowland heathland	High Weald Heathland data created by the High Weald Unit in 2006. The rest of Sussex Heathland data was created by SxBRC, with funding from WSCC and RSPB in 2007.
Lowland meadow	Downloaded from NE website.
Maritime cliff and slope	Supplied by EA, based on data from the SRCMP Habitat Mapping Project.
Open water	Derived from OS mapping. This includes inland and tidal, running and standing water.
Reedbed	Created by SxBRC in June 2011. Layer is an amalgamation of all the reedbed data currently available to SxBRC.
Saline lagoon	Downloaded from NE website.
Traditional orchard	Downloaded from NE website.
Wood-pasture & parkland	Downloaded from NE website.
<b>Ownership and management</b>	
Environmental Stewardship Agreement	Downloaded from NE website.
National Trust property	Owned and provided by National Trust.
RSPB reserve	Owned and provided by RSPB. Downloadable from their website.
Sussex Wildlife Trust reserve	Created and maintained by SxBRC on behalf of SWT.
Woodland Trust site	Owned and provided by the Woodland Trust.

### Abbreviations

BHCC	Brighton and Hove City Council
EA	Environment Agency
ESCC	East Sussex County Council
NE	Natural England
PTES	People's Trust for Endangered Species
RSPB	Royal Society for the Protection of Birds
SDJC	South Downs Joint Committee
SRCMP	Strategic Regional Coastal Monitoring Programme
SxBRC	Sussex Biodiversity Record Centre
SWLP	Sussex Wetland Landscapes Project
SWT	Sussex Wildlife Trust
WSCC	West Sussex County Council

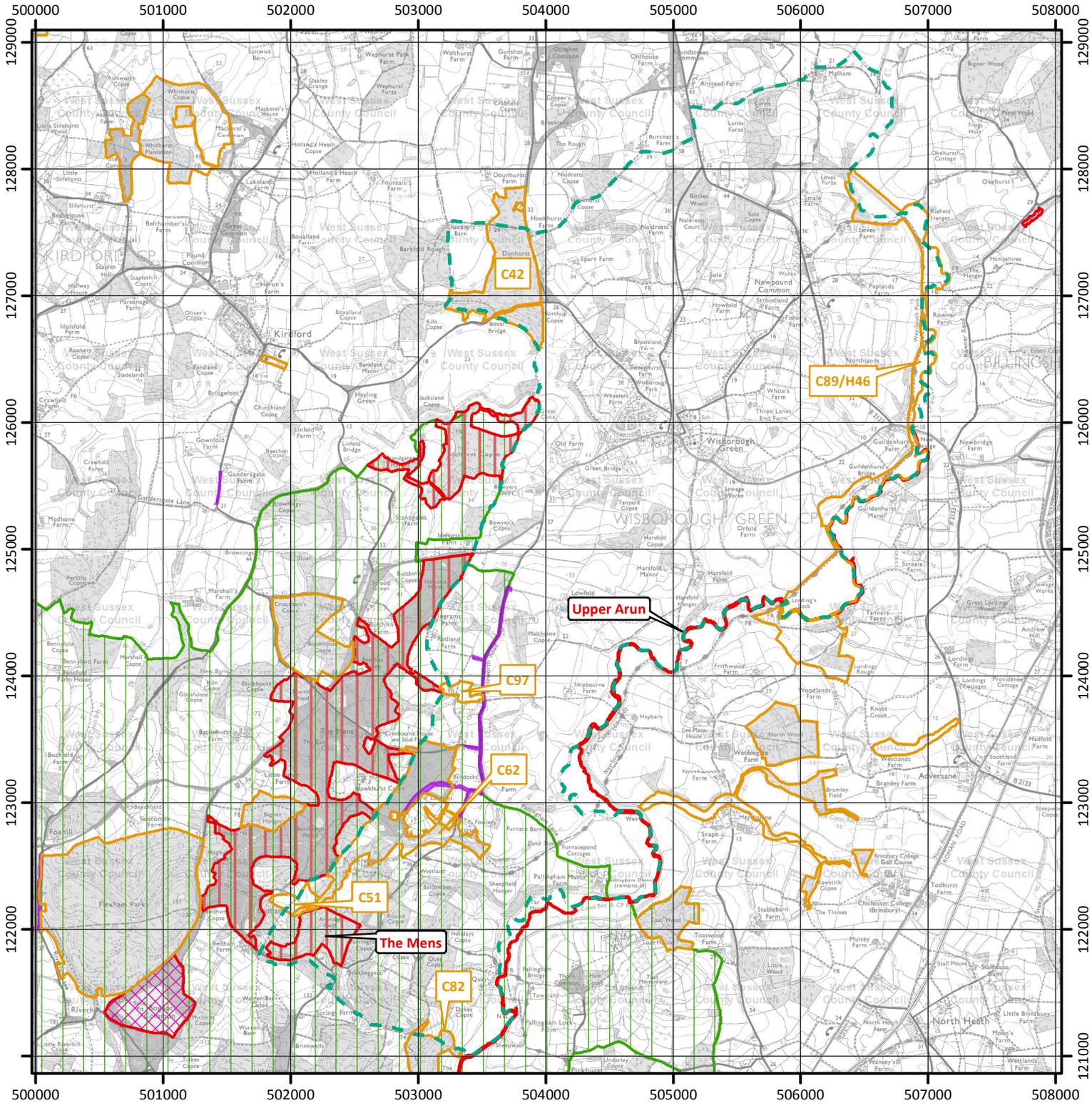
### Natural England datasets

These are available for anyone to download and use in their own Geographical Information System (GIS). Visit [www.gis.naturalengland.org.uk](http://www.gis.naturalengland.org.uk) for more information and register as a user.

# Designated Site Map (ESD/14/249)

Land at Wisborough Green parish

Prepared for Jill Sutcliffe - 12/05/2014



**Key to Map:**

-  Wisborough Green parish boundary
-  SNCI
-  SSSI
-  Notable road verge
-  SAC
-  National Park
-  LGS

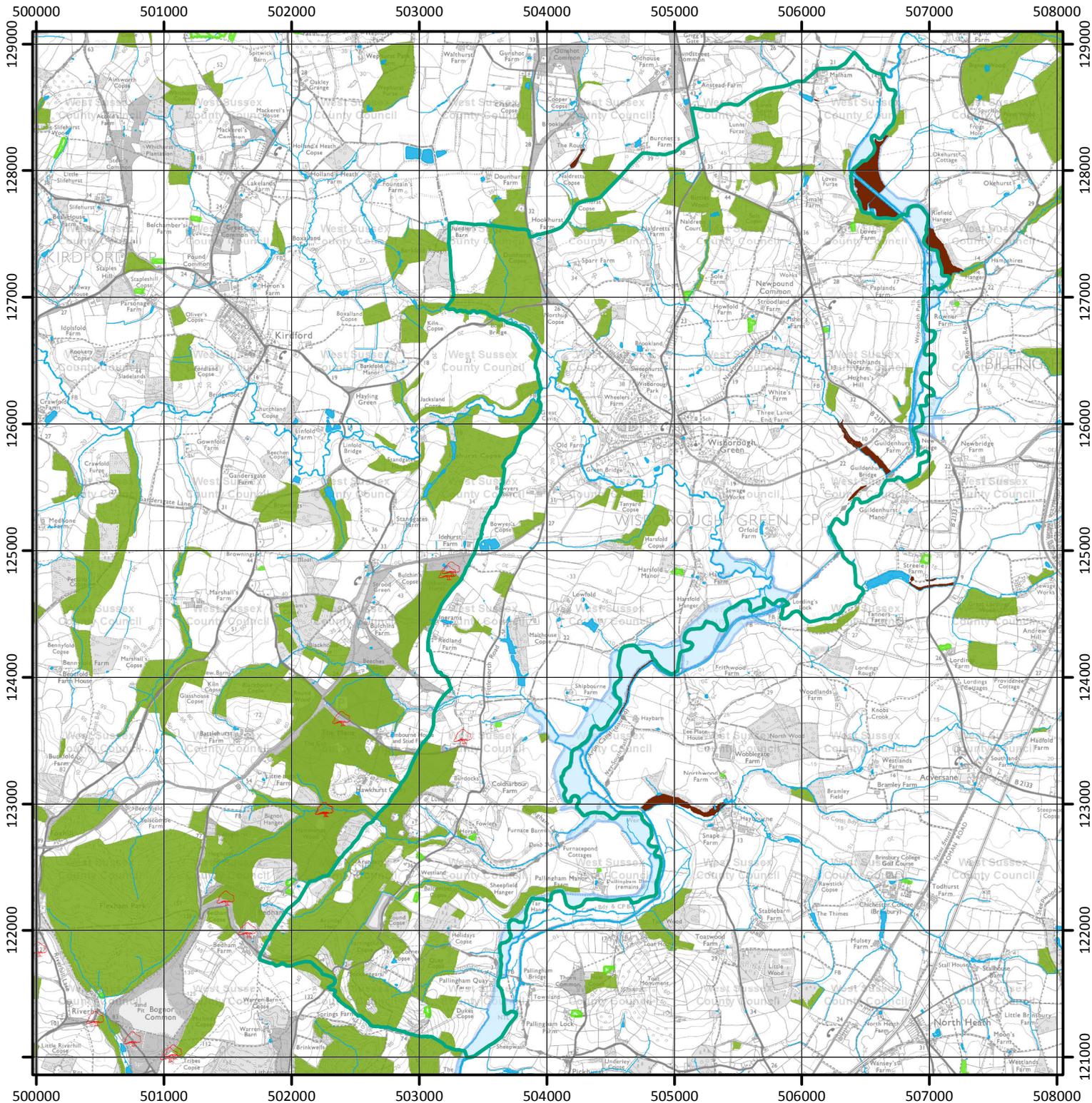
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RAMSAR, Special Area of Conservation (SAC), Special Protection Area (SPA), National Park, Area of Outstanding Natural Beauty (AONB), National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI), Local Nature Reserve (LNR) and Country Park data reproduced with permission of Natural England. Site of Nature Conservation Importance (SNCI) data provided by East and West Sussex County Councils, and Brighton & Hove City Council. Notable Road Verge data supplied by East and West Sussex County Councils. Local Geological Site (LGS) data created by Sxbrc in partnership with Sussex Geodiversity Group. © Crown Copyright. All rights reserved 2014.

# Habitat & Natural Features Map (ESD/14/249)

Land at Wisborough Green parish

Prepared for Jill Sutcliffe - 12/05/2014



**Key to Map:**

-  Wisborough Green parish boundary
-  Ancient/veteran tree
-  Lowland fen
-  Open Water
-  Traditional orchard
-  Ancient woodland
-  Coastal & floodplain grazing marsh

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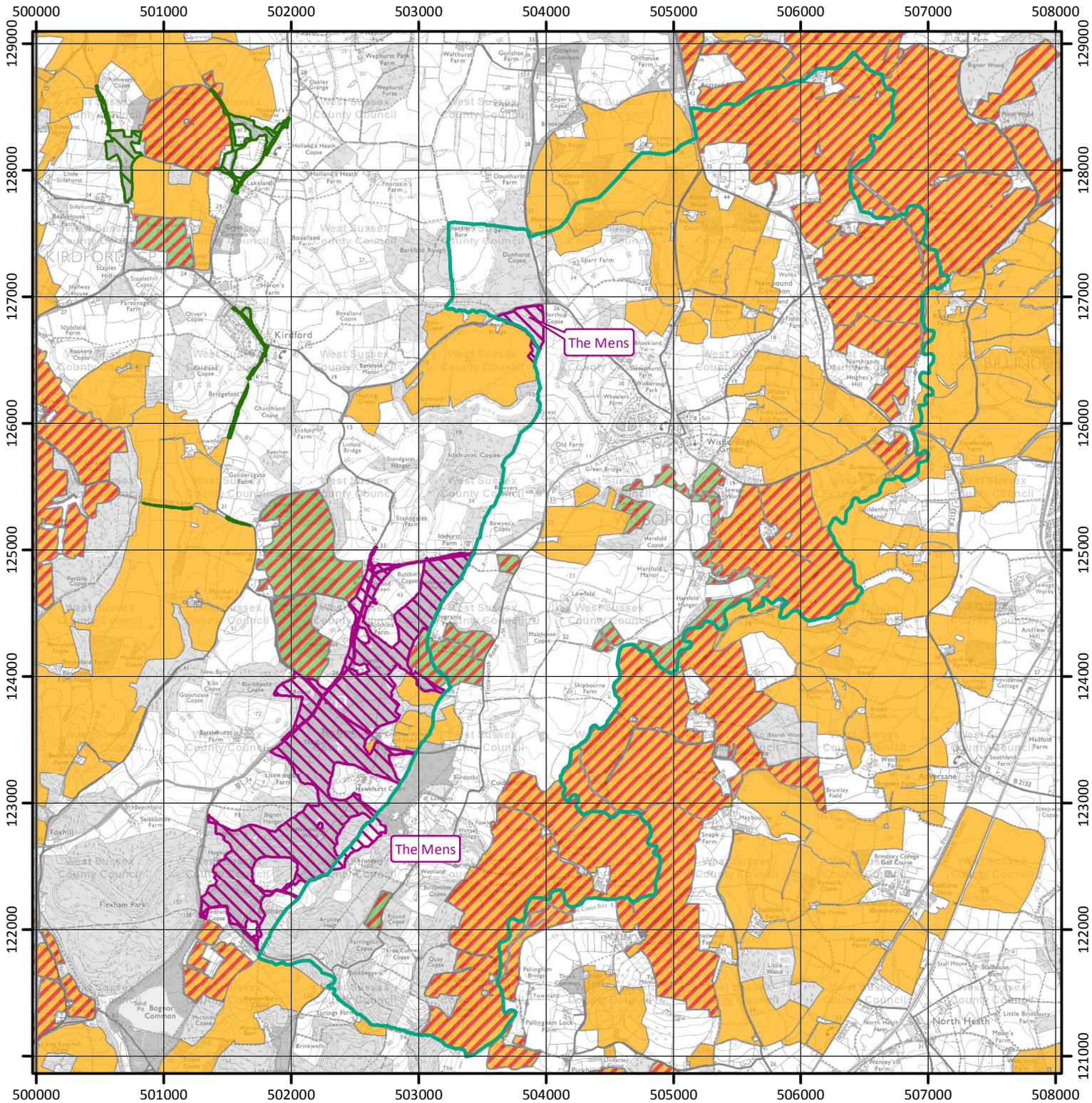
Ancient woodland, traditional orchards, woodpasture and parkland, vegetated shingle and saline lagoon data reproduced with permission of Natural England. Revised coastal and floodplain grazing marsh data remains provisional and is also reproduced with permission of Natural England. Chalk grassland data supplied by Natural England and South Downs Conservation Board. Black Poplar data supplied by Sussex Wetland Landscapes Project. Ghyll woodland data supplied by Dr Francis Rose. Reedbed data funded by Environment Agency and West Sussex County Council is provided by Sussex Biodiversity Record Centre and maintained by RSPB. Heathland data funded by West Sussex County Council, RSPB and High Weald AONB Unit. Ancient/veteran tree data derived from results of the Ancient Tree Hunt Project and the Tree Register of the British Isles (TROBI). South East Coastal Habitat Mapping data reproduced with permission of Environment Agency. © Crown Copyright. All rights reserved 2014.

Habitat data held by Sussex Biodiversity Record Centre (SxBRCC) are created in-house or obtained from a variety of dataset providers. SxBRCC continually strive to further improve and update these data wherever possible. However, this map should be treated as indicative rather than definitive: data may be generated from a range of field survey and/or predictive methods, each of which may have its own inherent limitations. In some situations a recent ground survey may be required to establish definitively the current status of a particular habitat at a specific location.

# Ownership & Management Map (ESD/14/249)

Land at Wisborough Green parish

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**Key to Map:**

-  Wisborough Green parish boundary
-  National Trust property
-  SWT reserve

**Environmental Stewardship Agreements:**

-  Higher Level Stewardship (HLS)
-  Entry Level Stewardship (ELS)
-  Organic ELS
-  Organic ELS plus HLS
-  ELS plus HLS

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# **MAP CITATION SHEETS**

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

Sites of Nature Conservation Importance (SNCIs) are non-statutory designations which are identified at a county level. They typically form a network of sites that are recognised to be of local conservation importance and are often included in Local Authority development plans. In other areas of the country they are sometimes called SINCS (Sites of Importance for Nature Conservation) or County Wildlife sites.

There are many sites within East and West Sussex and Brighton and Hove that are not recognised under the national designation of SSSI (Site of Special Scientific Interest) but are of considerable wildlife value due to the special interest of their flora or fauna. In May 1990 a Sussex-wide project was instigated to identify which non-designated sites were important for wildlife. The selected sites are now known as SNCIs. The aim of this identification was to protect such sites from land management changes, which may lessen their nature conservation interest, and to encourage sensitive management to maintain and enhance their importance.

Sites within both rural and urban areas were considered but the evaluation process considers two types of site under slightly different criteria:

- **Rural sites**, that may contain habitats such as heathland or ancient woodland, must be of county-wide importance.
- **Urban sites** must recognise the importance to safeguard important urban wildlife sites, to link all significant greenspaces and to ensure that people in towns have easy access to wildlife areas.

The selection of SNCIs was made, after extensive survey work, by a panel of expert ecologists. This panel included representatives from the relevant County Council, English Nature (now Natural England) and the Sussex Wildlife Trust. A range of specialists with either specific species knowledge or a sound knowledge of the county's ecology were also involved with the selection process. Assessment and identification of SNCIs is a continuing process with new sites being identified and others deleted as ecological knowledge of the total resource and specific sites increase.

In West Sussex SNCI selection is steered by the County Council, whereas in East Sussex it is steered by the District Councils. Currently there are over 600 SNCIs in Sussex.

Although SNCIs have no statutory protection they need to be considered in the planning process through Planning Policy Guidance such as PPG9 which refers to the Town & Country Planning Act 1990 Section 30. This states that nature conservation issues should be included in the surveys of local authority areas to ensure that the plans are based on fully adequate information about local species, habitats, geology and landform. Plans should be concerned not only with designated areas but also with other land of conservation value and the possible provision of new habitats.

SNCI site accounts outline the characteristics of the area based on its semi-natural vegetation and the underlying geology and are in three main sections :-

- **Summary** which highlights the nature conservation importance of the site
- **Site description or site notes** which gives further descriptive details about the site and its associated species
- **Management recommendations** which give a brief indication of the type of management that would best maintain the nature conservation interest of the site.

It is important to realise that classification as an SNCI in no way reduces the value of other wildlife sites. Sites of SNCI quality may not have been surveyed for various reasons. All areas of semi-natural vegetation are important to wildlife. Many rare plants and animals occur in seemingly otherwise uninteresting sites and may be overlooked by the survey.

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

### West Sussex

<b>Site Name:</b>	Dunhurst & Northup Copses		
<b>Site Ref:</b>	C42	<b>Owner:</b>	Private
<b>District:</b>	Chichester	<b>Size (ha):</b>	40.1
<b>Parish:</b>	Wisborough Green & Loxwood	<b>Date:</b>	Identified May 1992
<b>National Grid Ref:</b>	TQ037272	<b>Author:</b>	Louise Clark
<b>Habitat:</b>	Semi-natural woodland		

#### Summary

This is a large block of ancient woodland, dominated by Oak and Hazel, with Birch, Aspen and Ash locally abundant. There are areas of Ash and Field Maple near the stream, and a small stand of Oak over Hornbeam. Wild Service is locally abundant. Tracks and old banks are present.

#### Site description

The majority of the woodland is dominated by Oak, growing over dense Hazel and Hawthorn. The Oaks vary in age, but generally form a dense canopy; where they are sparse, Birch and Aspen form a sub-canopy. On heavier soils, Ash is co-dominant. The ground flora includes Ivy (*Hedera helix*), Bluebell (*Hyacinthoides non-scripta*) and Goldenrod (*Solidago virgaurea*), with mosses locally abundant. In clearings, additional species such as Foxglove (*Digitalis purpurea*) and Marsh Thistle (*Cirsium palustre*) occur.

The Ash and Field Maples are multi-stemmed, with occasional Birch, Oak, Grey Willow and Wild Service amongst the canopy. The ground flora is more diverse than under other stand types.

The small area of Hornbeam has also regrown from coppice, but has a poorer ground flora, due to dense shade.

The tracks are grassy, with herbs such as Devil's-bit Scabious (*Succisa pratensis*) and Betony (*Stachys officinalis*).

The stream has steep, mossy banks and the adjacent ground is herb-rich.

#### Management recommendations

The canopy is generally closed, so the woodland would benefit from reworking areas of coppice, managing rides and selective thinning. Dead wood should be left to rot down where possible, as it is a valuable habitat for invertebrates, fungi and hole-nesting birds and mammals.

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

### West Sussex

<b>Site Name:</b>	Old Orchard Meadows		
<b>Site Ref:</b>	C51	<b>Owner:</b>	Private
<b>District:</b>	Chichester	<b>Size (ha):</b>	2.5
<b>Parish:</b>	Fittleworth & Wisborough Green	<b>Date:</b>	Identified May 1992
<b>National Grid Ref:</b>	TQ020222	<b>Author:</b>	Marion Finch
<b>Habitat:</b>	Neutral grassland		

#### Summary

The site consists of three relatively species-rich fields, two of which are pasture, and the third is a hay field.

The site is surrounded by the woodland of The Mens SSSI.

#### Site description

The pasture fields are relatively species-rich neutral grassland, with Common Bent (*Agrostis capillaris*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Red Fescue (*Festuca rubra*), Yorkshire-fog (*Holcus lanatus*) and some Crested Dog's-tail (*Cynosurus cristatus*). Herbs include frequent Common Knapweed (*Centaurea nigra*), Yarrow (*Achillea millefolium*), Agrimony (*Agrimonia eupatoria*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Plantains (*Plantago* spp), Selfheal (*Prunella vulgaris*), Creeping Buttercup (*Ranunculus repens*), Meadow Buttercup (*Ranunculus acris*) and clovers (*Trifolium* spp). The proximity of the woodland means that Bugle (*Ajuga reptans*), Strawberry (*Fragaria vesca*), Ground Ivy (*Glechoma hederacea*) and Violet (*Viola riviniana*) occur. Rougher areas, possibly due to localised enrichment have coarser grasses, thistles (*Cirsium* spp) and abundant Knapweed.

The hay field is similar, but has frequent Knapweed, Ox-eye Daisy (*Leucanthemum vulgare*) and plantains.

#### Management recommendations

The pasture fields are grazed and the hay field is cut and the aftermath is grazed. The latter is also treated with fertiliser very occasionally, but no herbicides are used. The use of fertilisers should be kept to a minimum.

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

### West Sussex

<b>Site Name:</b>	<b>Badlands Meadows, Badland Hanger &amp; Brickkiln Common Complex</b>		
<b>Site Ref:</b>	C62	<b>Owner:</b>	Private
<b>District:</b>	Chichester	<b>Size (ha):</b>	44.6
<b>Parish:</b>	Wisborough Green	<b>Date:</b>	Identified May 1992. Revised May 1994.
<b>National Grid Ref:</b>	TQ028228	<b>Author:</b>	Marion Finch & Graham Roberts
<b>Habitat:</b>	Acid and neutral grassland, stream and semi-natural woodland		

#### Summary

The site which lies adjacent to The Mens SSSI, consists of a series of herb-rich meadows and ancient semi-natural woodland.

#### Site description

The meadows support many species characteristic of unimproved grassland, such as Devil's-bit Scabious (*Succisa pratensis*), Sneezewort (*Achillea ptarmica*), Dyer's Greenweed (*Genista tinctoria*), Betony (*Stachys officinalis*), Pepper Saxifrage (*Silaum silaus*), Cowslip (*Primula veris*), Bitter Vetch (*Lathyrus montanus*) and Adder's-tongue Fern (*Ophioglossum vulgatum*). Other species of interest include Restharrow (*Ononis repens*), Fragrant Agrimony (*Agrimonia odorata*), Burnet Saxifrage (*Pimpinella saxifraga*), Common Twayblade (*Listera ovata*), Early-purple Orchid (*Orchis mascula*), Zigzag Clover (*Trifolium medium*), Heath Speedwell (*Veronica officinalis*) and Dwarf Thistle (*Cirsium acaule*). Hair Lady's-mantle (*Alchemilla filicaulis* ssp. *vestita*) an extremely rare plant in West Sussex, has been discovered in these meadows.

The adjacent stream valley woodlands are also of great botanical interest. Their diverse tree and shrub layer includes Wild Service Tree, Crab Apple, Holly, Midland Hawthorn, Aspen, Guelder-rose, Spurge Laura, Mezereon, Butcher's-broom and Black Currant. The herb-rich ground flora has many species of note, particularly Solomon's-seal (*Polygonatum multiflorum*), Tutsan (*Hypericum androsaemum*), Wild Daffodil (*Narcissus pseudonarcissus*), Great Butterfly Orchid (*Platanthera chlorantha*), Early-purple Orchid (*Orchis mascula*), Common Twayblade (*Listera ovata*) and Early Do-violet (*Viola reichenbachiana*).

Brickkiln Common is an ancient semi-natural woodland.

#### Management recommendations

The meadows require management, perhaps an annual hay cut followed by sheet grazing. Invading scrub should be removed from the fields. Bracken (*Pteridium aquilinum*) control may be desirable.

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

### West Sussex

<b>Site Name:</b>	<b>The Quells</b>	<b>Owner:</b>	Private
<b>Site Ref:</b>	C82	<b>Size (ha):</b>	13.2
<b>District:</b>	Chichester	<b>Date:</b>	Identified May 1994
<b>Parish:</b>	Stopham	<b>Author:</b>	Graham Roberts
<b>National Grid Ref:</b>	TQ032207		
<b>Habitat:</b>	Semi-natural woodland		

#### Summary

The Quells forms part of a complex of ancient woodlands situated on an east-facing hillslope above the River Arun. It is noted for its rich flora and abundance of Wild Daffodils (*Narcissus pseudonarcissus*).

#### Site description

Much of the Quells has been planted with Sweet Chestnut. This is managed as coppice. Pedunculate Oak is the main standard tree but Ash and Silver Birch are also common. There is a small stand of Alder where a spring-line creates wetter soil conditions. There are also a few Field Maple, Wild Cherry, Rowan and Yew.

In addition to Chestnut coppice, the shrub layer includes Hazel, Elder, Hawthorn, Blackthorn and suckering English Elm. The presence of Butcher's-broom (*Ruscus aculeatus*) is also of note. There are a few Rhododendron and Box, perhaps planted as cover for Pheasants.

The rich ground flora includes many species largely confined to ancient woodlands such as Wild Daffodil, Yellow Archangel (*Lamiastrum galeobdolon*), Bluebell (*Hyacinthoides non-scripta*), Wood Spurge (*Euphorbia amygdaloides*), Pignut (*Conopodium majus*) and Yellow Pimpernel (*Lysimachia nemorum*). The drifts of Wild Daffodil and Bluebell make a fine display in spring.

The few woodland rides support light demanding species such as Red Campion (*Silene dioica*), Foxglove (*Digitalis purpurea*) and Barren Strawberry (*Potentilla sterilis*).

Amongst the birds recorded are Treecreeper, Long-tailed Tit, Marsh Tit, Nuthatch and Great Spotted Woodpecker.

#### Management recommendations

The current management, as coppice, appears to encourage a rich ground flora and in particular a good display of Wild Daffodils. Some compartments have not been cut for many years. Coppicing would benefit the ground flora.

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

### West Sussex

<b>Site Name:</b>	<b>Wey &amp; Arun Canal, River Arun &amp; adjacent meadows</b>		
<b>Site Ref:</b>	H46 / C89	<b>Owner:</b>	Private
<b>District:</b>	Horsham & Chichester	<b>Size (ha):</b>	56.2
<b>Parish:</b>	Wisborough Green & Billingshurst	<b>Date:</b>	Identified May 1994
<b>National Grid Ref:</b>	TQ058245 to TQ064280	<b>Author:</b>	Graham Roberts
<b>Habitat:</b>	Canal, river and neutral grassland		

#### Summary

This site includes a section of the Wey and Arun Canal, part of the upper stretches of the River Arun and adjacent meadows. The disused canal has developed a moderately rich flora which includes several notable species. Both the canal and the river support a rich assemblage of dragonflies. A nationally rare plant occurs in the meadows.

#### Site description

This section of the canal has an interesting flora including aquatic species such as Rigid Hornwort (*Ceratophyllum demersum*), Nuttall's Waterweed (*Elodea nuttallii*) and Yellow Water-lily (*Nuphar lutea*). There is a well developed marginal vegetation with Yellow Loosestrife (*Lysimachia vulgaris*), Narrow-leaved Water-plantain (*Alisma lanceolatum*) and Yellow Iris (*Iris pseudacorus*). The presence of at least four species of duckweed is of interest. Among the locally uncommon plants growing in or beside the canal are Fat Duckweed (*Lemna gibba*), Fine-leaved Water-dropwort (*Oenanthe aquatica*), Lesser Water-parsnip (*Berula erecta*) and Cyperus Sedge (*Carex pseudocyperus*). A nationally scarce plant, Greater Water-parsnip (*Sium latifolium*) grows in the canal south of New Bridge.

The River Arun south of New Bridge forms part of the Upper Arun SSSI. However, the section of river north of New Bridge is also of considerable interest, notably for its dragonflies. The uncommon Slender Tufted-sedge (*Carex acuta*) has recently been discovered on the riverbank. Two uncommon bryophytes, *Cinclidotus mucronatus* and *Leskea polycarpa*, occur on the exposed roots of mature oaks overhanging the river.

The rich assemblage of dragonflies includes a large population of the nationally rare Scarce Chaser, and the rare White-legged Damselfly, Hairy Dragonfly and Club-tailed Dragonfly. Others of note include the Red-eyed Damselfly and Ruddy Darter.

The nationally rare Narrow-leaved Water-dropwort (*Oenanthe silaifolia*) occurs in several of the meadows between New Bridge and Lording's Lock. Most of the meadows have been at least partially improved. One of the few unimproved meadows is near Lording's Lock. Its flora includes notable species such as Narrow-leaved Water-dropwort, Sneezewort (*Achillea ptarmica*), Creeping-Jenny (*Lysimachia nummularia*), Ragged-Robin (*Lychnis flos-cuculi*) and Meadow Barley (*Hordeum secalinum*).

#### Management recommendations

The current management regime of this section of canal and river is obviously favourable to its rich flora and fauna. It is hoped that the few remaining unimproved meadows will never receive fertiliser. Cattle grazing or cutting for hay are probably the best methods of managing the meadows. However, there is great potential for enhancing the wildlife value of the site, particularly the flood meadows.

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

### West Sussex

<b>Site Name:</b>	Wisborough Green Pastures		
<b>Site Ref:</b>	C97	<b>Owner:</b>	Private
<b>District:</b>	Chichester	<b>Size (ha):</b>	3.0
<b>Parish:</b>	Wisborough Green & Kirdford	<b>Date:</b>	Identified May 1997
<b>National Grid Ref:</b>	TQ033238	<b>Author:</b>	Kate Ryland
<b>Habitat:</b>	Unimproved neutral grassland and scrub		

#### Summary

This site comprises two adjacent pastures bisected by a small stream. Both fields are herb-rich and support a range of species typical of unimproved grassland. The northern field contains areas of scrub and has both east and south facing slopes within it. The southern field has a north facing slope and a damp flush along the streamline.

#### Site description

The northern field has a very rich grassland flora which includes Agrimony (*Agrimonia eupatoria*), Common Knapweed (*Centaurea nigra*), Betony (*Stachys officinalis*), Devil's-bit Scabious (*Succisa pratensis*), Common Sorrel (*Rumex acetosa*), Tormentil (*Potentilla erecta*), Field Woodrush (*Luzula campestris*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Autumn Hawkbit (*Leontodon autumnalis*) and Mouse-ear Hawkweed (*Pilosella officinarum*). Fine leaved grasses including Bents (*Agrostis spp.*), Red Fescue (*Festuca rubra*) and Crested Dog's-tail (*Cynosurus cristatus*) dominate the open areas whilst around the patches of scrub at the foot of the slope Cocksfoot (*Dactylis glomerata*) and Yorkshire Fog (*Holcus lanatus*) occur. Bracken (*Pteridium aquilinum*) is present on the main slope in small patches. Wild Daffodil (*Narcissus pseudonarcissus*), Cowslip (*Primula veris*), Common Spotted Orchid (*Dactylorhiza fuchsii*) and Early Purple Orchid (*Orchis mascula*) have all been recorded in this pasture.

A herb-rich, east facing bank at the western end of the field supports anthills. The hedgerows surrounding the field and the patches of scrub within it contain a good range of tree and shrub species including a large Wild Service Tree (*Sorbus torminalis*).

The southern field has a northerly aspect and a wetter character but supports a similar range of grasses and herbs. In addition Common Marsh Bedstraw (*Galium palustre*), Sedges (*Carex spp.*), Pepper Saxifrage (*Silaum silaus*), Soft Rush (*Juncus effusus*) and Greater Bird's-foot-trefoil (*Lotus pedunculatus*) occur. A good colony of Common Bistort (*Persicaria bistorta*) and Sneezewort (*Achillea ptarmica*) have been recorded here.

#### Management recommendations

The mosaic of species-rich grassland and scrub in the northern field should continue to be maintained by grazing and the spread of Bracken controlled. The southern field could be grazed rather more lightly than at present, especially in drought years, to prevent gaps in the sward spreading and allowing in weedy species.

## SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

Sites of Special Scientific Interest (SSSIs) are areas notified under the Wildlife and Countryside Act 1981, as being of special interest for nature conservation. They represent the finest sites for wildlife and natural features supporting many characteristic, rare and endangered species, habitats and natural features. Notification as a SSSI is primarily a legal mechanism organised by Natural England and selected according to specific scientific criteria. *The Guidelines for the Selection of Biological SSSIs*, published in 1989 by the Joint Nature Conservation Council, set down the selection criteria for both biological and geological SSSIs.

**Biological SSSIs** form a national network of wildlife sites. Sites are selected in such a way that the protection of each site, and hence the network, aims to conserve the minimum area of wildlife habitat necessary to maintain the natural diversity and distribution of Britain's native flora and fauna and the communities they comprise. Each site, therefore, is of national significance for its nature conservation value.

**Geological SSSIs** are sites chosen for their research value, the criterion being that they are of national or international importance. Geological conservation is concerned with the maintenance of our geological and geomorphological heritage.

There are over 4,000 SSSIs in England of which just under 150 are in Sussex. Natural England is responsible for identifying and protecting these sites. This is achieved, primarily, in partnership with SSSI owners and managers, and as a result the majority are in good condition and well managed.

Ever growing pressures on our landscape and countryside mean that SSSIs are an increasingly precious part of our natural heritage. Damaging SSSIs is unacceptable, either in the short or long term, and must be avoided if they are to remain the finest wildlife and natural heritage sites in England. Once lost, the special interest of a site may be difficult or impossible to restore or recreate. Owners and occupiers (i.e. landowners, tenants and commoners) of SSSIs must give Natural England written notice before initiating any operations likely to damage the site, or allowing someone else to carry out these activities. None of the operations listed in the notification documents may proceed without Natural England's consent.

Under the Countryside and Rights of Way Act 2000 (CROW) anyone who intentionally or recklessly destroys or damages any of the flora, fauna or geological or physiological features of an SSSI is guilty of an offence. They are liable, on summary conviction, of a fine of up to £20,000.

For more information on SSSIs visit the [Natural England website](#).

## SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

<b>Site Name:</b>	<b>The Mens</b>		
<b>County:</b>	West Sussex		
<b>District:</b>	Chichester		
<b>Local Planning Authority:</b>	Chichester District Council		
<b>Size:</b>	204.4 hectares (505.1 acres)		
<b>National Grid Ref:</b>	TQ025231		
<b>Date Notified (Under 1949 Act):</b>	1963	<b>Date of last revision:</b>	1980
<b>Date Notified (Under 1981 Act):</b>	1986	<b>Date of last revision:</b>	-

**Other Information:** This is a Nature Conservation Review Site. A large part of the site is a reserve of the Sussex Trust for Nature Conservation. The site lies within the South Downs Area of Outstanding Natural Beauty and was formerly known as The Mens, The Cut and Bedham Escarpment.

### Reason for Notification

The Mens remains as one of the most extensive examples of Wealden Woodland in West Sussex. It is important for its size, structural diversity and the extremely rich fungal and lichen floras which occur here. The wood supports a diverse community of breeding birds, and is the locality of a nationally endangered species of fly.

Much of the woodland lies on Weald Clay although in some places Paludina limestone outcrops at the surface. The woodland is predominantly high forest of sessile and pedunculate oak (*Quercus petraea* and *Q. robur* respectively), beech *Fagus sylvatica* holly *Ilex aquifolium* and locally, ash *Fraxinus excelsior*, birches *Betula* spp. and wild servicetree *Sorbus torminalis*. Beech dominates the lighter soils over an understorey of holly and yew *Taxus baccata*. On the heavier clay soils oak-ash woodland occurs over a mixed shrub layer which includes hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, crab apple *Malus sylvestris* and blackthorn *Prunus spinosa*. In more open areas the dense ground flora is dominated by honeysuckle *Lonicera periclymenum*, bramble *Rubus fruticosus*, wood melick *Melica uniflora* and bluebell *Hyacinthoides non-scripta* with occasional butcher's broom *Ruscus aculeatus* and hairy woodrush *Luzula pilosa*. In the extreme north of the site the wood has been intensively managed on a coppice, or coppice-with-standards system. Here the shrub layer and ground flora are more diverse and include dog's mercury *Mercurialis perennis*, sanicle *Sanicula europaea* and a number of orchids. Several uncommon tree species occur here, notably small-leaved lime *Tilia cordata* and the wild service tree, both of which are indicators of ancient woodland sites.

The Mens has one of the richest lichen floras in the south-east, including several species closely associated with ancient woodlands. The site also supports a rich bryophyte flora (mosses and liverworts), with a number of locally rare species such as the moss *Brachyontium trichodes*. In addition The Mens is one of the richest woods in the country for fungi with three species of *Russula* for which this is the only known site. Two other species have been recorded from only two other sites in Britain.

The Mens has an important insect fauna. Many rare beetles (Coleoptera) are found here together with one species of fly *Chelostoma curvinervis* which is endangered with extinction. Woodland butterflies and moths (Lepidoptera) are also well represented here and include such notable species as the purple emperor *Apatura iris* and the orange footman moth *Eilema sororcula*. There is a diverse woodland breeding bird population; nightingale, woodcock, wood warbler and all three British woodpeckers are amongst the birds which breed here.

## SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

### Operations likely to damage the special interest

**Site name: The Mens (OLD1000537)**

#### **Ref. No. Type of operation**

1. Cultivation, including ploughing, rotovating, harrowing, and re-seeding.
2. Grazing and changes in the grazing regime (including type of stock or intensity or seasonal pattern of grazing and cessation of grazing).
3. Stock feeding and changes in stock feeding practice.
4. Mowing or other methods of cutting vegetation and changes in the mowing or cutting regime (including hay making to silage and cessation).
5. Application of manure, fertilisers and lime.
6. Application of pesticides, including herbicides (weedkillers).
7. Dumping, spreading or discharge of any materials.
8. Burning.
9. The release into the site of any wild, feral or domestic animal\*, plant or seed.
10. The killing or removal of any wild animal\*, including pest control.
11. The destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf.
12. Tree and/or woodland management+ and changes in tree and/or woodland management+.
- 13a. Drainage (including the use of mole, tile, tunnel or other artificial drains).
- 13b. Modification of the structure of watercourses (eg rivers, streams, springs, ditches, dykes, drains), including their banks and beds, as by re-alignment, re-grading and dredging.
- 13c. Management of aquatic and bank vegetation for drainage purposes.
14. The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
15. Infilling of ditches, dykes, drains, ponds, pools, marshes or pits.
- 16a. Freshwater fishery production and/or management, including sporting fishing and angling.
20. Extraction of minerals, including shingle, sand and gravel, topsoil, subsoil, shells and spoil.
21. Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground.
22. Storage of materials.
23. Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
26. Use of vehicles or craft likely to damage or disturb features of interest.
27. Recreational or other activities likely to damage or disturb features of interest.
28. Game and waterfowl management and hunting practice.

\* 'Animal' includes any mammal, reptile, amphibian, bird, fish or invertebrate.

+ Including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management.

## SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

<b>Site Name:</b>	Upper Arun		
<b>County:</b>	West Sussex		
<b>District:</b>	Chichester, Horsham		
<b>Local Planning Authority:</b>	Chichester District Council, Horsham District Council		
<b>Size:</b>	40.0 hectares (99.0 acres)		
<b>National Grid Ref:</b>	TQ030184 – TQ069259		
<b>Date Notified (Under 1949 Act):</b>	-	<b>Date of last revision:</b>	-
<b>Date Notified (Under 1981 Act):</b>	1988	<b>Date of last revision:</b>	-
<b>Other Information:</b>	This is a new site.		

### Reason for Notification

The Upper Arun consists of a 13km length of the River Arun, flowing south across the weald clay and lower greensand between New Bridge, Billingshurst and Stopham Bridge, Pulborough. It supports an outstanding assemblage of breeding dragonflies including a number of rare species.

The Upper Arun is relatively unpolluted and supports a diverse riverine flora. This, together with a varied river structure caused by cattle trampling and other erosion, has resulted in an extremely complex habitat upon which the dragonflies depend for breeding, feeding and resting sites. Common clubrush *Schoenoplectus lacustris* and reed canarygrass *Phalaris arundinacea* are abundant, together with sedges *Carex* spp, water plantain *Alisma plantago-aquatica*, branched bur-reed *Sparganium erectum*, arrowhead *Sagittaria sagittifolia* and yellow water-lily *Nuphar lutea*. The river banks are largely vegetated with grasses such as tufted hair-grass *Deschampsia cespitosa* together with nettle *Urtica dioica* and docks *Rumex* spp. In places the banks have been trodden-in by cattle and are bare of vegetation.

Fifteen species of dragonfly breed within the river, including the nationally rare scarce chaser *Libellula fulva*, for which this is the best stretch of river in West Sussex. Also found are the notable species club-tailed dragonfly *Gomphus vulgatissimus*, brilliant emerald *Somatochlora metallica* and the hairy dragonfly *Brachytron pratense*.

## SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

### Operations likely to damage the special interest

**Site name: Upper Arun (OLD1000768)**

#### **Ref. No. Type of operation**

1. Cultivation, including ploughing, rotovating, harrowing, and re-seeding.
2. Grazing and changes in the grazing regime (including type of stock or intensity or seasonal pattern of grazing and cessation of grazing).
3. Stock feeding and changes in stock feeding practice.
4. Mowing or other methods of cutting vegetation and changes in the mowing or cutting regime (including hay making to silage and cessation).
5. Application of manure, fertilisers and lime.
6. Application of pesticides, including herbicides (weedkillers).
7. Dumping, spreading or discharge of any materials.
8. Burning.
9. The release into the site of any wild, feral or domestic animal\*, plant or seed.
10. The killing or removal of any wild animal\*, including pest control.
11. The destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf.
12. Tree and/or woodland management+ and changes in tree and/or woodland management+.
- 13a. Drainage (including the use of mole, tile, tunnel or other artificial drains).
- 13b. Modification of the structure of watercourses (eg rivers, streams, springs, ditches, dykes, drains), including their banks and beds, as by re-alignment, re-grading and dredging.
- 13c. Management of aquatic and bank vegetation for drainage purposes.
14. The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
15. Infilling of ditches, dykes, drains, ponds, pools, marshes or pits.
- 16a. Freshwater fishery production and/or management, including sporting fishing and angling.
20. Extraction of minerals, including shingle, sand and gravel, topsoil, subsoil, shells and spoil.
21. Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground.
22. Storage of materials.
23. Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
26. Use of vehicles or craft likely to damage or disturb features of interest.
27. Recreational or other activities likely to damage or disturb features of interest.
28. Game and waterfowl management and hunting practice.

\* 'Animal' includes any mammal, reptile, amphibian, bird, fish or invertebrate.

+ Including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management.

## KEY NATIONAL AND INTERNATIONAL SITE DESIGNATIONS

### National Nature Reserve (NNR)

National Nature Reserves are statutory reserves established under the Wildlife and Countryside Act 1981. NNRs may be owned by the relevant national body (e.g. Natural England in England) or established by agreement. A few are owned and managed by non-statutory bodies, for example the Sussex Wildlife Trust. NNRs cover a selection of the most important sites for nature conservation in the UK. There are six NNRs in Sussex.

### Special Area of Conservation (SAC)

Special Areas of Conservation are sites designated by Member States under the EC Habitats Directive. The aim is to establish a European network of important high quality conservation sites that will make a significant contribution to conserving habitats and species considered to be most in need of conservation at a European level. There are 12 SAC sites in Sussex.

### Special Protection Area (SPA)

Special Protection Areas are designated under the EC Birds Directive, to conserve the habitat of certain rare or vulnerable birds and regularly occurring migratory birds. Any significant pollution or disturbance to or deterioration of these sites has to be avoided. All SPAs are also designated as SSSIs. There are six SPA sites in Sussex.

### Ramsar

Ramsar sites are designated under the Convention on Wetlands of International Importance. Under the Convention, each government must select its best wetlands according to very clear criteria, which include: a wetland that regularly supports 20,000 or more waterbirds; a wetland that regularly supports 1% of the individuals in a population of one species or subspecies of waterbird. Wetlands are broadly defined to include marsh, fen, peatland and water. All designated Ramsar sites are also designated as SSSIs. There are four Ramsar sites in Sussex.

### National Park

National Parks are beautiful, spectacular and often dramatic expanses of countryside. In the UK people live and work in the National Parks and the farms, villages and towns are protected along with the landscape and wildlife. They differ from Areas of Outstanding Natural Beauty (AONBs) in that each National Park has its own authority for planning control and other services.

The creation of the South Downs National Park (SDNP) was confirmed on 12th November 2009 and came into being on 1st April 2010.

Further information can be found on the [SDNP Authority website](#).

### Area of Outstanding Natural Beauty (AONB)

Areas of Outstanding Natural Beauty are areas of high scenic quality that have statutory protection in order to conserve and enhance the natural beauty of their landscapes. They differ from National Parks in their more limited opportunities for extensive outdoor recreation and by the way they are managed. AONBs are designated by Natural England under the Countryside and Rights of Way Act 2000.

There are two AONBs in Sussex covering approx. 114,000 hectares; Chichester Harbour and High Weald. Each has an associated body concerned with the area's conservation:

**Chichester Harbour Conservancy** [www.conservancy.co.uk](http://www.conservancy.co.uk)

**High Weald AONB Unit** [www.highweald.org](http://www.highweald.org)

### Local Nature Reserve (LNR)

Local Nature Reserves are for both people and wildlife. All district and county councils have powers to acquire, declare and manage LNRs. To qualify for LNR status, a site must be of importance for wildlife, geology, education or public enjoyment. Some are also SSSIs. There are 36 LNRs in Sussex.

## **Country Park**

Country Parks were established as a result of the 1968 Countryside Act to provide a wide range of opportunities for recreation, health, education and improve the quality of life for local communities. Natural England recognises Country Parks as significant places that contribute to England's accessible natural green space. There are 11 Country Parks in Sussex, the details of which can be obtained from the local authorities.

## **Local Geological Site (LGS)**

Local Geological Sites are non-statutory sites that have been identified by local geoconservation groups as being of importance. They are also known as Regionally Important Geological/Geomorphological Sites (RIGGS). A potential LGS in Sussex is assessed by the Sussex Geodiversity Group and, if a site is duly recommended, is notified to the relevant local authority. By designating a LGS, the features identified then become a material consideration in any future development. There are over 120 LGS in Sussex.

## **Marine Site of Nature Conservation Importance (MSNCI)**

Marine Sites of Nature Conservation Importance are non-statutory sites identified on account of the special interest of their marine habitats, the fauna and flora, or for unusual geological and geomorphological features. They are an extension of the series of terrestrial SNCIs. The identification of these sites is to highlight their importance for marine wildlife and to emphasise the risks of certain operations damaging their interest. There are 23 MSNCIs off the Sussex coast.

Further information on many of the designations listed above can be found on the [Natural England website](#).

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

1.5 Relationship with other Natura 2000 sites

<input type="checkbox"/>							
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1.6 Respondent(s)

1.7 Site name

### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	199506
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
00 32 27 W	51 00 04 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK533	West Sussex	100.00%

#### 2.6 Biogeographic region

Alpine
  Atlantic
  Boreal
  Continental
  Macaronesia
  Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer ( <i>Quercion robori-petraeae</i> or <i>Ilici-Fagenion</i> )	70	A	C	A	A

#### 3.2 Annex II species

Species name	Population				Site assessment			
	Resident	Migratory			Population	Conservation	Isolation	Global
		Breed	Winter	Stage				
<i>Barbastella barbastellus</i>	50	-	-	-	C	B	C	C

### 4. Site description

#### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	100.0
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

#### 4.1 Other site characteristics

<p><b>Soil &amp; geology:</b> Acidic, Basic, Clay, Nutrient-poor</p> <p><b>Geomorphology &amp; landscape:</b> Lowland</p>
---

#### 4.2 Quality and importance

Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer ( <i>Quercion robori-petraeae</i> or <i>Ilici-Fagenion</i> )
---

- for which this is considered to be one of the best areas in the United Kingdom.

*Barbastella barbastellus*

- for which the area is considered to support a significant presence.

### 4.3 Vulnerability

The majority of this ancient Wealden woodland is managed as an area of minimum intervention to allow the habitat to develop with as little human interference as possible. Tenure for nature conservation is secure, with the leasehold being held by Sussex Wildlife Trust. Registered Commoners and other smaller private landowners practice low-level woodland maintenance/management and are encouraged to leave dead wood *in situ*. Bridleway degradation by horse riding is a recurring threat. Barbastelles require a constant humidity around their roosts; any manipulation of the shrub layer must be carefully considered.

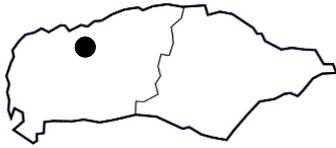
## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

# Sussex Wildlife Trust Nature Reserve

## The Mens



**A large wild area of ancient woodland in the Low Weald**

The unusual name of this area comes from the Anglo-Saxon word 'ge-mæennes', meaning common land. Although it lies fairly close to Ebernoe Common this reserve is quite different in character: there are fewer glades and open areas, but it has instead a wild and untamed feel, having been largely unmanaged for many decades. There are great towering cathedrals of beech, their high canopy filtering bright green light to the forest floor in the spring sunshine. Elsewhere oaks of different shapes and sizes form a more intimate atmosphere with typical ancient woodland trees such as wild service, midland hawthorn, and spindle. Here and there are tiny streams lined with mosses and ferns, and in places clumps of holly create a giant maze. The determined may find Badlands Meadows in the south-east of the reserve, where a stunning succession of wild flowers will greet the summertime visitor.

In the Great Storm of 1987 parts of this reserve were ravaged, with many trees succumbing to the gales, but the policy here is to let nature take its course, and the result is an immense variety of fungi and insects that depend on rotting timber – all too frequently 'tidied up' in many woodlands today. The gaps that have opened up provide the nursery for new young trees to grow. Here the saplings are able to take full advantage of the newly created space and increased exposure to sunlight. Natural development continues with the cycle of growth and decay being allowed free rein in this Site of Special Scientific Interest and candidate Special Area of Conservation.

### Access

There is a centrally placed car park on the road to Hawkhurst Court, from which you can explore the many paths, but a compass is worthwhile – it is easy to get lost in this huge 160 hectare reserve. The going is flat but often muddy and some of the tracks are bridleways. There are stiles at the entrances to Badlands Meadows.



*Woodland fungi*

### Highlights

A woodland reverting to a natural state; fungi and meadow flowers.

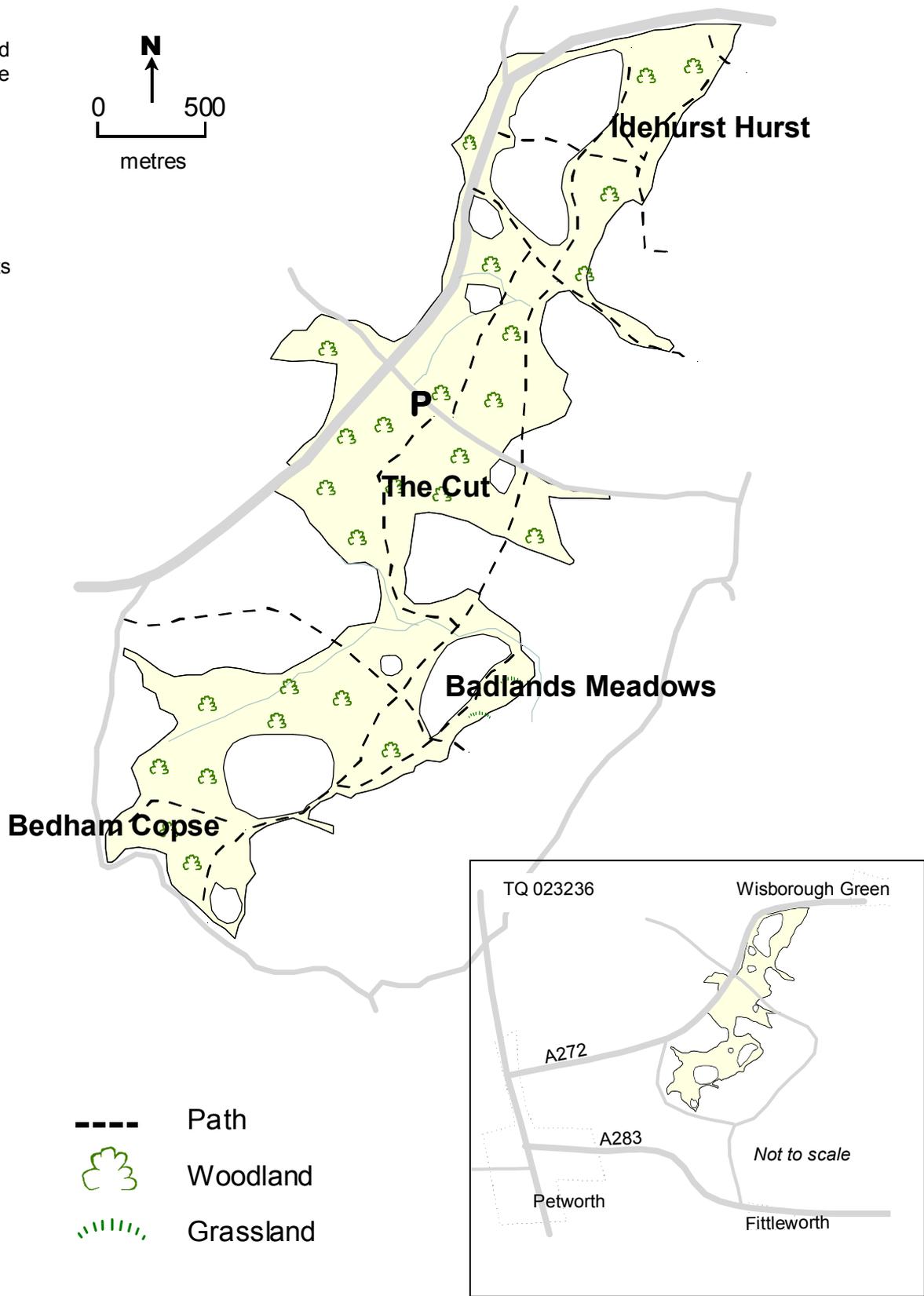


# The Mens

**Conservation  
Careline  
01273  
494777**

The Sussex Wildlife Trust manages 38 nature reserves and uses its knowledge and skills to help the people of Sussex enjoy, understand and care for wildlife and the places where it lives.

The Sussex Wildlife Trust is one of 47 trusts working to protect wildlife in town and country throughout the whole UK.



For more information on the work of the Sussex Wildlife Trust and how to become a member please contact:

**Sussex Wildlife Trust**  
**Woods Mill,**  
**Henfield**  
**West Sussex,**  
**BN5 9SD**

**01273 492630**

[www.sussexwt.org.uk](http://www.sussexwt.org.uk)

Registered charity  
 No 207005

**Careline Factsheet disclaimer:** All information contained within Sussex Wildlife Trust Careline factsheets is to the best of our knowledge true and accurate at the time of printing. The Sussex Wildlife Trust will not accept any responsibility or liability for any losses or damage resulting from following the advice given.

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## ANCIENT & VETERAN TREES

Ancient trees form a vital part of our landscape, heritage and biodiversity. They are scattered through most parts of the UK landscape where they are found in exceptionally large numbers compared with north east Europe. Ancient trees can be most easily found in the vestiges of the once extensive Royal Hunting Forests, such as Ashdown Forest, and medieval parks. Others occur in historic parkland, landscaped gardens, woodland, wood pasture and ancient wooded commons. There are also small groups and individual trees scattered around housing estates, urban parks, village greens and churchyards. Some ancient trees are found on farmland, usually in hedgerows or old boundary features.

In Sussex, some of the largest recorded girths belong to: the Queen Elizabeth oak of 12.67m at Cowdray Park, a yew of 8.5m in Wilmington churchyard; a beech of 8.4m on Ashdown Forest; and a sweet chestnut of 7.2m at Herstmonceux Castle.

There are different definitions for mature trees, depending mainly on their stage of life:

**Ancient trees.** Biologically, aesthetically or culturally interesting because of their great age; In ancient or post-mature stage of life; Have a large girth relative to others of the same species.

**Veteran trees.** Usually in the second or mature stage of life; Have important wildlife and habitat features including hollowing or associated decay fungi, holes, wounds and large dead branches.

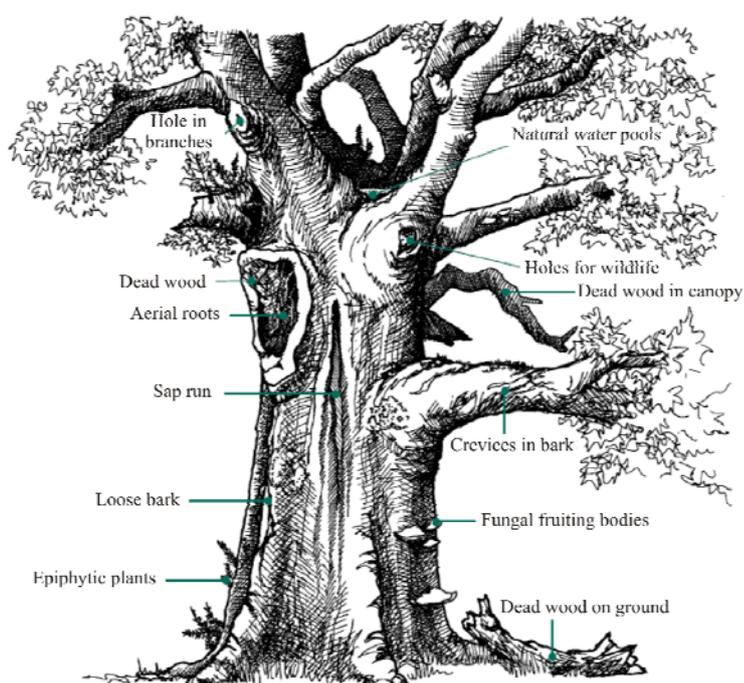
**Notable trees.** Locally important or of significance to the community; Specimen trees or considered to be the potential next generation of veteran trees.

### Ancient tree ecology

Ancient trees are unique as a wildlife habitat because of the exceptionally species-rich communities associated with wood decay and the bare surfaces of trunks, bough and roots. Clusters of ancient trees are even more important because together they offer a wide range of niche homes for many specialist species in one small area.

Approximately 1,700 (6%) invertebrate species in the British Isles are dependent on decaying wood to complete their life cycles. Species associated with decaying wood include: rare click beetles such as the violet click beetle *Limoniscus violaceus*, the wasp mimic crane fly *Ctenophora flaveolata* and the oak longhorn beetle *Rhagium mordax*. The black-headed cardinal beetle *Pyrochroa coccinea* is an insect associated with veteran trees and old growth woodland.

Old trees with splits, cracks, loose bark, holes and crevices are especially attractive to bats and in particular to woodland specialists such as the rare Barbastelle and Bechstein's bat.



### The Ancient Tree Hunt

The Ancient Tree Hunt is a nationwide search to map all of the old trees in the UK in order to plan for their active conservation. This project, led by the Woodland Trust in partnership with the Ancient Tree Forum and Tree Register of the British Isles, was launched in 2007.

Most of the trees recorded can be viewed on their website: [www.ancient-tree-hunt.org.uk](http://www.ancient-tree-hunt.org.uk)

### Characteristic features of a veteran tree

Source: *Veteran Trees: A guide to good management*. Natural England, 2000.

## ANCIENT WOODLAND

Ancient woodland is defined by Natural England as a site that has had a continuous woodland cover since at least 1600 AD. It is an irreplaceable, wildlife-rich habitat, and often includes important archaeological features.

Sussex is one of the most wooded parts of lowland Britain with ancient woodland covering approximately 39,000ha (10%) of the county. Bluebell woods associated with coppicing, open wood pasture associated with deer parks and the small Wealden woods in ghyll valleys are a key part of Sussex's distinctive and varied landscape.

The habitat can be placed into two broad categories:-

**Ancient semi-natural woodland** – woodland that retains a native tree and shrub cover that has not been planted, although it may have been managed by coppicing or felling and allowed to regenerate naturally. This covers all stands of ancient woodland which do not obviously originate from planting.

In terms of its nature conservation value, ancient semi-natural woodland is regarded as an important woodland type due to:

- The variety of native woodland plants and animals it supports, many of which are found only or mainly in ancient woodland.
- The natural and undisturbed water courses.
- The soils, which may never have been ploughed.
- The variety of woodland structure (often including very old trees and dead wood).
- The mosaic of semi-natural habitats such as grassland, heathland and marsh which may survive within the wood, often a result of past management practices.

**Plantations on ancient woodland sites** – woodland where the original tree cover has been felled and replaced by planting, often with conifers and usually this century.

In ancient replanted woodland the original woodland structure may have been substantially altered, water courses may have been displaced, soils may have been disturbed or drained and natural openings may have been planted up. However, these woods can still be important for nature conservation due to:

- The remnant ancient woodland species, which persist beneath the canopy or in areas where light levels are higher such as woodland rides or glades.
- The soil seed bank, which will often retain dormant ancient woodland plants.
- The potential for restoration to a semi-natural condition.

Other important terms:

**Primary woodland** constitutes the relicts of the natural tree cover which developed after the retreat of glaciation 10,000 years ago. Such woodland may have been managed by humans, but it has never been completely cleared of trees and converted to another land use.

**Ancient secondary woodland** is woodland that had developed on land which may have been open ground or farmland at some stage before the year 1600AD. Many ancient woods in West Sussex are likely to be of this type.

*Planning Policy Statement 9: Biodiversity & Geological Conservation (2005)* states that "ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated." Many ancient woodlands have some form of statutory protection and local planning authorities are advised to identify unprotected areas of ancient woodland.

Ancient woodland in Sussex can be identified by using the Ancient Woodland Inventory held by Natural England. The Ancient Woodland Inventory was set up in 1981 by the Nature Conservancy Council (now Natural England). Ancient woodland status is determined using information from historic Ordnance Survey and estate maps and information



Bluebell

about the name of the wood, its shape, relief, internal boundaries and location relative to other features such as parish boundaries. Ground survey information such as flora and historical features plus aerial photography interpretation is also used when available.

Initially, the original inventory only included sites over two hectares in size. However, the inventory did contain some smaller sites due to the subsequent clearance of parts of larger woods. Furthermore, measuring techniques were less precise and more laborious than the latest digital methods so some smaller woods were accidentally included, whilst some larger woods were overlooked.

The original inventory was produced on a county-by-county basis in the 1980's and 1990's. At first it was a paper-based inventory, which was converted to a digital map in 2000. Subsequent revisions and versions are available as digital maps.

Advances in digital mapping techniques mean that it is now possible to map woodlands under two hectares with greater ease and accuracy. This has led to a revision of the Ancient Woodland Inventory within the South East. The surveys for the revision of the inventory for Sussex were completed in 2010 and have been adopted by Natural England. However, the inventory will always be classed as "provisional" because it is reviewed and updated as new information comes to light.

(Illustration courtesy of Natural England.)

## COASTAL & FLOODPLAIN GRAZING MARSH

Grazing marsh is periodically inundated pasture, or meadow with ditches that maintain the water levels, containing standing brackish or fresh water. Sites may contain seasonal water-filled hollows and permanent ponds with emergent swamp communities.



Lapwing

### **Why is it important?**

- Wading birds such as redshank feed on invertebrates forced close to the surface by the high water table and shallow surface floods.
- Around 500 species of vascular plant have been recorded from grazing marsh including rare species such as narrow-leaved water-dropwort.
- It supports large numbers of invertebrates including over a thousand nationally notable species.
- Drainage channels and open water associated with grazing marsh support a number of fish species and can provide important spawning areas.
- Water filled ditches are often used by otter, water vole, and various dragonflies.

### **Coastal and floodplain grazing marsh in Sussex**

Sussex has around 14,000 hectares of grazing marsh, with the rivers Arun, Adur, Ouse and Cuckmere all having important areas. Just under half of Sussex's floodplains consist of wet grassland, however much of this has been agriculturally improved decreasing its value for wildlife. Pevensey Levels is one of only three sites in Britain where the large fen raft spider is found, and two rare species of ramshorn snail can also be found in Sussex.

### **What are the threats?**

- Conversion to agriculture through drainage and fertilizer application.
- Drainage and flood defences can disrupt the hydrology of sites.
- Overgrazing, neglect or early grazing, can affect breeding birds.
- Water pollution, which can be exacerbated if concentrated by over-abstraction.
- Floodplain development, aggregate extraction and recreational pressure.
- Isolation and fragmentation of sites reduces dispersal opportunities making species more susceptible to extinction.

### **Some associated species**

- Lapwing *Vanellus vanellus*
- Merlin *Falco columbarius*
- Marsh mallow moth *Hydraecia osseola*
- Desmoulin's whorl snail *Vertigo moulinsiana*
- Greater water parsnip *Sium latifolium*
- Star sedge *Carex echinata*

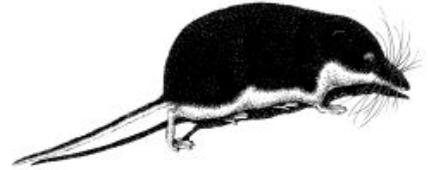
### **Further information**

- Floodplain Meadows Partnership: [www.floodplainmeadows.org.uk/content/home](http://www.floodplainmeadows.org.uk/content/home)
- Sussex Wetland Landscapes Project: [www.sussexotters.org](http://www.sussexotters.org)
- Buglife: [www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/coastalandfloodplainingrazingmarsh](http://www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/coastalandfloodplainingrazingmarsh)

(Illustration courtesy of Natural England.)

## LOWLAND FEN

Lowland fens are permanently waterlogged wetlands which receive water and nutrients from soil, rock and groundwater as well as rainfall.



Water shrew

### **Why are they important?**

- Lowland fen has declined dramatically and the UK has a large proportion on the European resource.
- They have a mosaic of plant communities and some fens contain up to 550 species of higher plants.
- Lowland fen is important for invertebrates including aquatic beetles and dragonflies.

### **Lowland fens in Sussex**

Current estimates put the total hectareage of fen in Sussex at under 100 hecatres. It is often found alongside other wetland habitats such as marshy grassland and carr woodland.

### **What are the threats?**

- Drainage and conversion to intensive agriculture.
- Lack of management resulting in succession to scrub and woodland.
- Changes to hydrology resulting from excessive water abstraction and development.
- Isolation and fragmentation.
- Nutrient enrichment which can affect species composition.

### **Some associated species**

- Water shrew *Neomys fodiens*
- Reed bunting *Emberiza schoeniclus*
- Fen's wainscot *Arenostola phragmitidis*
- Scarce chaser *Libellula fulva*
- Sphagnum moss *Sphagnum* spp.
- Gypsywort *Lycopus europaeus*

### **Further information**

- Buglife: [www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/fens](http://www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/fens)
- Sussex Wetland Landscapes Project: [www.sussexotters.org](http://www.sussexotters.org)

(Illustrations courtesy of Natural England.)

## TRADITIONAL ORCHARDS

Traditional orchards are areas of land on which a range of fruit and nut trees are cultivated that are managed in a low intensity way. Permanent grassland beneath the trees was traditionally grazed by livestock.



### ***Why are they important?***

- The mosaic of habitats such as hedgerows, dead wood and fruit trees make traditional orchards important for a wide range of species.
- Traditional orchards provide the conditions needed for many bryophytes and lichens.
- Holes and crevices in old trees provide habitat for bats and nest sites for birds such as redstart and bullfinch.
- Dead and decaying wood makes traditional orchards hugely important for invertebrates, lichens and fungi.

### ***Traditional orchards in Sussex***

The traditional orchards inventory\* lists over 900 sites in Sussex covering an area of approximately 300 hectares. It is estimated that around half of these orchards are currently in a poor condition.

### ***What are the threats?***

- Changes in farming policy and markets has led to a decline in income from traditional orchard produce.
- A decline in the skills and knowledge to manage traditional orchards can lead to neglect.
- Loss of orchards can occur as fruit trees dying of old age are not replaced.
- Lack of protection under the current planning system.

### ***Some associated species***

- Lesser spotted woodpecker *Picoides minor*
- Noctule *Nyctalus noctula*
- Lichen running-spider *Philodromus margaritatus*
- Noble chafer *Gnorimus nobilis*
- Mistletoe *Viscum album*
- A lichen *Ramonia chrysophaea*

### ***\* The Traditional Orchard Inventory for England***

The traditional orchard data used in Sussex Biodiversity Record Centre reports are the result of a project run by the People's Trust for Endangered Species (PTES) on behalf of Natural England. The resulting inventory is based on combining existing survey data with aerial photograph interpretation, together with ground-truthing survey work by local volunteers. The inventory is provisional, and is still being refined and updated as new data becomes available. The project was completed in March 2011.

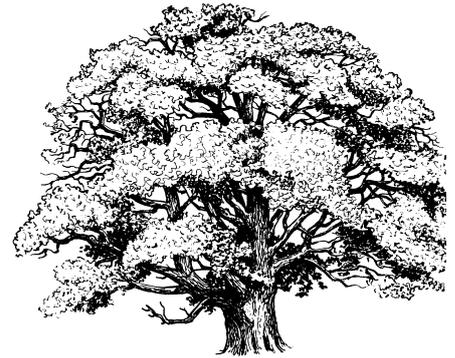
For the purpose of the inventory, traditional orchards are defined as sites where at least five fruit trees must be present with no more than 20m between their crown edges.

**Further information** on traditional orchards can be found here: [www.orchardnetwork.org.uk](http://www.orchardnetwork.org.uk)

## WOOD-PASTURE & PARKLAND

Many parks were established in medieval times for aesthetic reasons, to provide grazing for farm animals or deer and to provide wood from pollarded trees. In later centuries, new landscaped parks were created from these medieval parks or by enclosing ordinary farmland. Wood-pasture and parkland is therefore the result of a distinctive, historic land-use system, and represents a vegetation structure rather than being a particular plant community.

Typically this structure consists of veteran trees with wide, spreading crowns growing in a matrix of grazed grassland or heathland. It is a habitat of cultural and historical significance and can also be of great ecological importance due to the wide range of species it supports. For these reasons, and due the threats facing the habitat, it is a UK Biodiversity Action Plan (BAP) habitat.



Pedunculate Oak

There are many definitions within the Action Plan that relate to wood-pasture and parkland. The map produced as part of our desktop biodiversity reports shows it as three sub-categories; medieval deer park, post-medieval designed park and post-medieval gentrification.

### Current status and distribution

There are no reliable statistics on the extent of this habitat in the UK, but it is most common in southern Britain. Sussex is particularly rich in wood-pasture and parkland with several large old deer parks, such as Petworth Park and Parham Park.

### Ecological significance

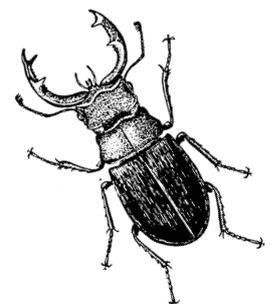
Wood-pasture and parkland is important for wildlife for a number of reasons:

- The mosaic of habitats together with the presence of veteran trees provides the conditions needed by certain species for every stage of their life cycle.
- There is often a continuity of old trees over hundreds of years, or even in some cases back to the post ice-age 'wildwood'. The trees have often been pollarded; this management technique extends their life and creates rot holes and crevices which are used by bats, hole-nesting birds and invertebrates.
- Sussex has the majority of the UK's mature English Elms following the loss of millions to Dutch Elm Disease.
- Rotten wood within ancient tree trunks supports saproxylic invertebrates (those that rely on dead wood for all or part of their life cycle) and are amongst the most threatened group of species in Europe. One such species is the click beetle *Lacon querceus*, which develops in dry red-rotten oak wood in veteran trunks and fallen boughs. The Stag Beetle is another saproxylic beetle often associated with pasture parkland.
- The old tree trunks also support unique communities of lichens, mosses and liverworts which depend on the stability of the surface provided by veteran trees. Two BAP Priority Species of lichen found on old trees include *Bacidia incompta* and *Enterographa sorediata*.

### Threats facing the habitat include:

- Isolation and fragmentation of the remaining parklands.
- Inappropriate grazing resulting in the loss of plant diversity and habitat structure.
- Agricultural intensification including reseeded, ploughing and use of fertilisers.
- Neglect and loss of veteran trees, and over-tidying of deadwood.

The Sussex Biodiversity Action Plan is currently being written for this habitat. For further information visit: <http://www.biodiversitysussex.org/habitats/wood-pastures-parkland>



Stag Beetle

(Illustrations courtesy of Natural England.)

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The Sussex Biodiversity Record Centre is managed by the Sussex Wildlife Trust as a partnership project.  
A list of our current funding partners can be found on our website: [www.sxbrc.org.uk/about/partners](http://www.sxbrc.org.uk/about/partners)

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