



Desktop Biodiversity Report

Land at Turners Hill Road, Rowfant + 1km radius

ESD/14/198

Prepared for Brionny Brady (Calumma Ecological Services)

22nd April 2014



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Sussex Biodiversity Record Centre
report regarding
land at Turners Hill Road, Rowfant +
1km radius
22/04/2014

Prepared for Brionny Brady
Calumma Ecological Services
ESD/14/198

The following information is included in this report:

Maps	☒
Sussex Protected Species Register	☒
Sussex Bat Inventory	☒
Sussex Bird Inventory	☒
UK BAP Species Inventory	☒
Sussex Rare Species Inventory	☒
Sussex Invasive Alien Species	☒
Full Species List	☒
Environmental Survey Directory	☒

SNCI

M13 - Oaken Wood, Stony Plats & High Lanes.

SSSI

None

Other Designations/Ownership

Area of Outstanding Natural Beauty; Country Park;
Environmental Stewardship Agreement.

Habitats

Ancient tree; Ancient woodland; Ghyll woodland; 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.

Copyright

The Sussex Biodiversity Record Centre must be acknowledged in all documents containing any part of the information contained in this report. You can also use the whole of a SxBRC report (unedited) as an appendix in your own report.

The SxBRC operates as agent to the individuals and groups who provide their records free of charge. The data suppliers retain copyright on their data, while SxBRC retains copyright on its desktop biodiversity reports.

Data usage

The data contained within this report is for use in the project for which the data was requested. It is not to be shared with third parties for use in other projects, unless permission is granted from SxBRC.

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.

Ordnance Survey maps

Members of the public wishing to reproduce maps made by SxBRC under East and West Sussex County Council or Brighton and Hove City Council licences must use copying facilities that have been authorised by Ordnance Survey (OS). Further information can be found on the [OS website](#).

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.

Confidential Records

Badgers

Badgers are one of our most recognisable native British mammals. They are not considered rare but are protected along with their setts under The Protection of Badgers Act 1992 and schedule 6 of the Wildlife and Countryside Act (1981, as amended).



It is an offence to kill, injure, or take a badger or interfere with a badger sett.

“Interference” is defined by section 3 of The Protection of Badgers Act and includes damaging or destroying a badger sett, obstructing any entrance to a sett and also disturbing a badger when it is occupying a sett. If you need to do any work near to a sett (within 30m) you must contact Natural England for guidance as your activities may require a licence.

With continued persecution of badgers, often for the most cruel and barbaric ‘sport’, detailed badger records are not included in our species inventory reports, as it has been requested that they remain confidential. However, the total number of badger records within the enquiry area is given in the full species list, if this has been requested.

If you need further information about badgers in your enquiry area please call the Badger Trust Sussex on 07910 198720 or visit their website: www.badgertrust-sussex.org.uk

The following species are not included in desktop biodiversity reports, but are flagged up as confidential at the end of the separate species inventories.

Otters

Otters are slowly making a return to Sussex after becoming extinct in the 1960s, but are nowhere near their former numbers and remain very vulnerable.

If there is a river or tributary within 1km of your enquiry area please be aware of the potential for otters in the vicinity, especially if you are undertaking operations that may impact potential otter habitat.



Otters are protected by European and UK law. It is an offence under the Wildlife and Countryside Act 1981 to kill, injure or take an otter from the wild without a licence; to damage or obstruct a holt; or disturb an otter in its resting place. Licences are required for checking holts or for carrying out work that may disturb otters, such as the management of trees that are known to be used as resting sites. Natural England are responsible for issuing these licences in England.

If you require further information about otters in your enquiry area, please contact SxBRC. Permission to release record details will be required from the Sussex Wetland Landscapes Project and SxBRC will liaise with the project officer on the enquirer’s behalf.

Wood White and Duke of Burgundy butterflies

These two rare butterfly species have a very restricted range in Sussex and records have been made confidential based on advice given from Butterfly Conservation Sussex Branch.

Other confidential records

SxBRC holds records of other species that are confidential. Confidentiality can be for a variety of reasons but is usually to benefit the site or the species. Full details of these records are not disclosed but the enquirer is referred back to SxBRC if further information is needed.

Any confidential records for your enquiry area will be flagged up at the end of the Protected Species Register, Rare Species Inventory and BAP Species Inventory.

Birds

SxBRC holds nearly 1.5 million bird records provided by the Sussex Ornithological Society (SOS). Commercial data requests will automatically include a Notable Bird Report, which is based on a list of birds that are particularly scarce or vulnerable to development in Sussex. Non-commercial data requests will not include records from this list, but will be directed to the SOS for further information.

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:

Designated sites	
Statutory	
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.
Non-Statutory	
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.
Habitats and natural features	
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.
Ownership and management	
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 for more information and register as a user.

Designated Site Map (ESD/14/198)

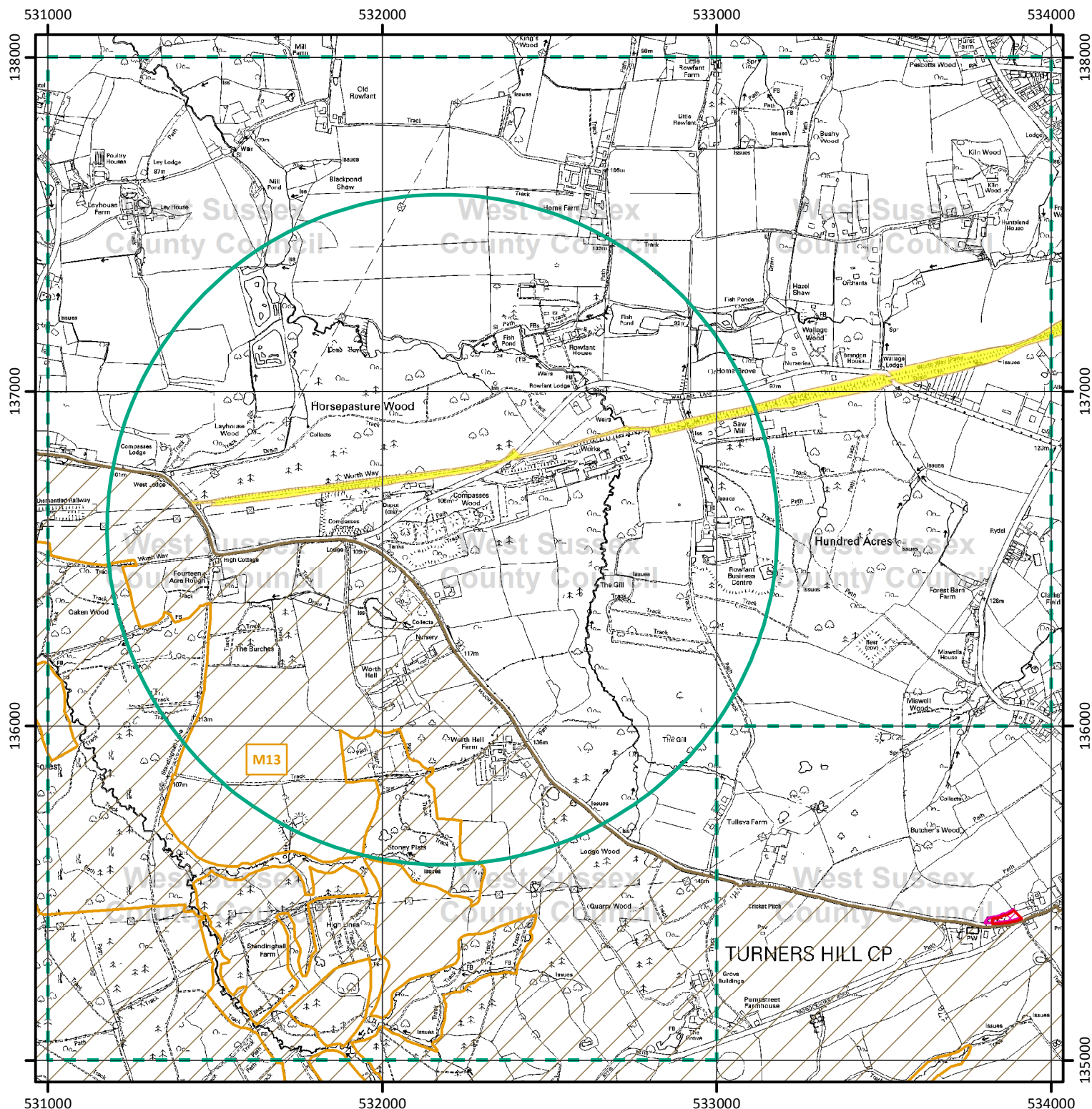
Land at Turners Hill Road, Rowfant + 1km radius

Prepared for Brionny Brady (Calumma Ecological Services) - 22/04/2014



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Key to Map:

- Enquiry area
- Species search area
- SNCI
- SSSI
- AONB
- Country 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/14/198)

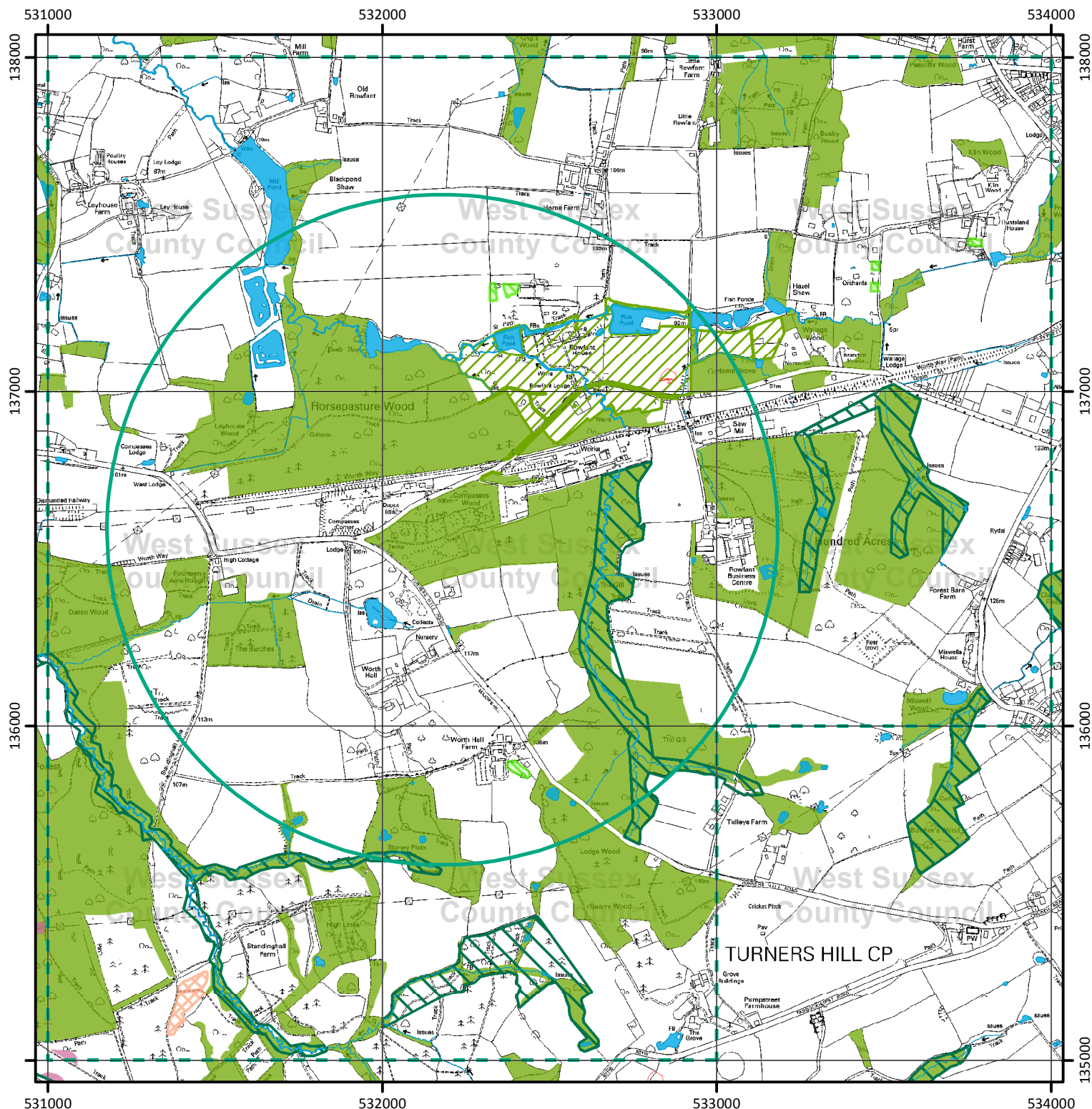
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Key to Map:

- Enquiry area
- Species search area
- Ancient/veteran tree
- Open Water
- Ghyll woodland
- Traditional orchard
- Lowland meadow
- Wood - pasture & parkland
- Lowland heathland
- Ancient woodland

0 0.5 1 Km



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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 (Sxbrc) are created in-house or obtained from a variety of dataset providers. Sxbrc 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/14/198)

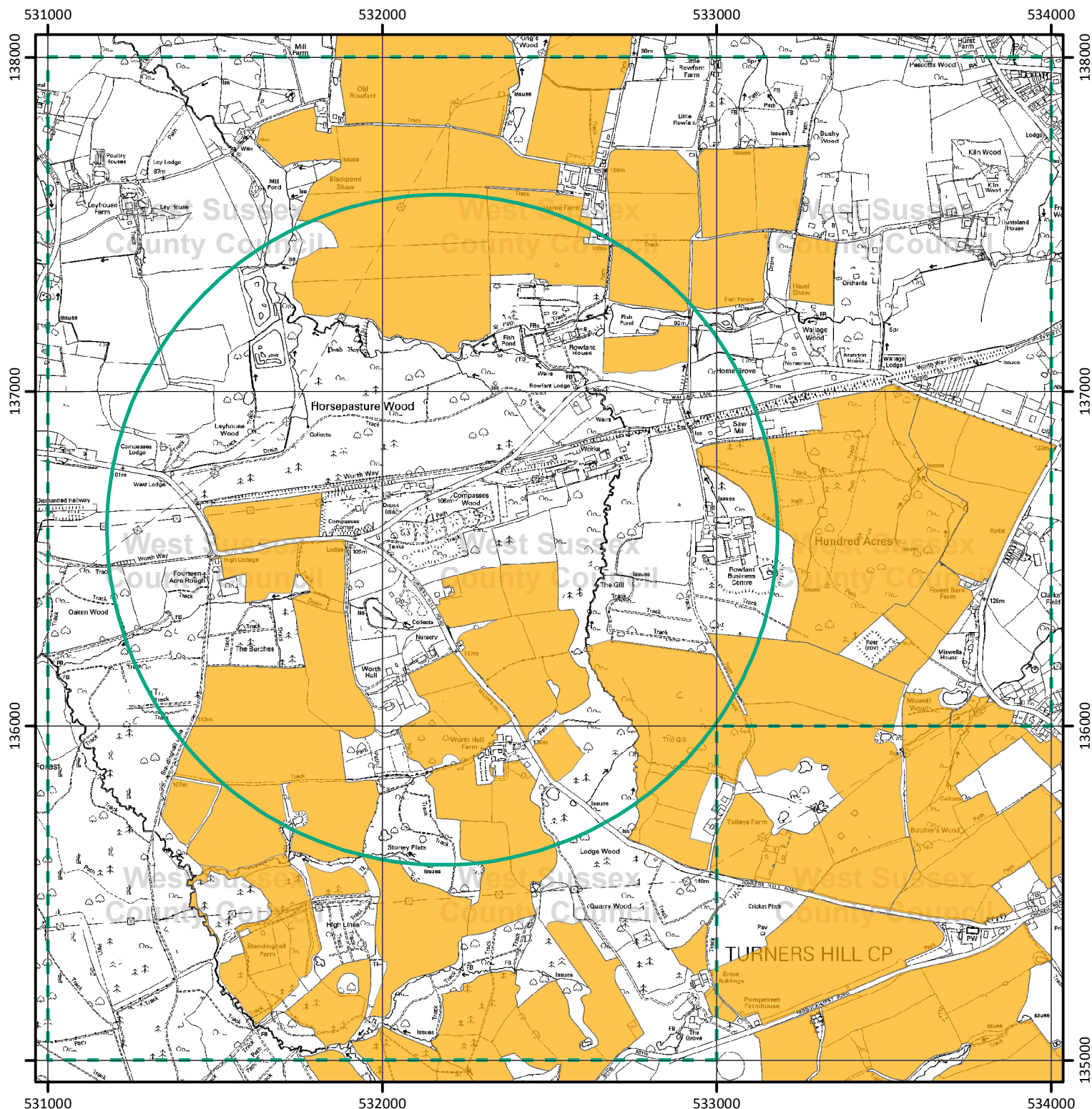
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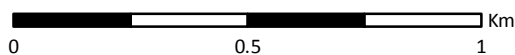


Key to Map:

- Enquiry area
- Species search area

Environmental Stewardship Agreements:

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



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Environmental Stewardship Agreement data reproduced with permission of Natural England. Other datasets reproduced respectively with permission of the Woodland Trust, National Trust, Sussex Wildlife Trust and Royal Society for the Protection of Birds. © Crown Copyright. All rights reserved 2014.

SUMMARY REPORT

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014 ESD/14/198 Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235
Brionny Brady (Calumma Ecological Services)

W&CA Schedule 5 and 8 (not including bats, badgers or birds)

Number of species recorded	2
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European Protected Species

Number of species recorded	11
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Bats

Number of species recorded	3
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Birds

Number of species recorded	68
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Number of BoCC Red list species recorded	16
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Number of BoCC Amber list species recorded	17
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Number of W&CA Schedule 1 species recorded	8
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Number of excluded significant breeding bird records	0
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BAP species (not including bats or birds)

Number of species recorded	2
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Rare Species (not including bats, birds or otters)

Number of species recorded	6
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Invasive Alien Species

Number of species recorded	9
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SUSSEX PROTECTED SPECIES REGISTER

The Protected Species Register does not include bat, bird, badger or otter records.
Bat and bird records are included in separate inventories, while badger and otter records are not included in SxBRC reports.

The Sussex Protected Species Register (PSR) consists of species of plants, fungi and animals that are protected under Schedules 5, 6 and 8 of the Wildlife and Countryside Act 1981 and other legislation.

Please note the following limitations to the PSR:

- PSR records are labelled so that only one record per species per grid reference is included in a SxBRC report. This will usually be the most up to date record.
- If a protected species record appears in a SxBRC biodiversity report it does not mean that the species is still present. It means that the protected species was recorded last at that time and place by the recorder listed. The implications of the record should be further evaluated, and a survey to establish the current status of the species may be required.
- If there is no record of any particular protected species, this does not confirm that the species is absent from the site in question. It may mean that it has not been recorded, that the site has not been surveyed for this species, or that the Record Centre has not been informed of its presence.
- Some sites are part of the National Dormouse Monitoring Programme (NDMP) and therefore we are likely to hold historic records/more detailed information. If NDMP is mentioned in the location name of a record and you would like the historic dormouse data for that site, please contact the SxBRC.

Wildlife Protection Legislation in England

Legislation that protects wildlife in England exists at the European and national level.

European law

Legislation produced at a European level is an EU Directive, produced to have an effect at national level as regulations. The most relevant regulation for biodiversity is the 'Conservation of Habitats & Species Regulations 2010 (informally known as 'The Habitats Directive'). Further information can be found here: www.naturenet.net/law/habsregs.html

National law

The Wildlife and Countryside Act (WCA) 1981 (as amended), strengthened by the Countryside and Rights of Way Act 2000, are together the most important legislation aimed at protecting wildlife in England. The Wildlife and Countryside Act is divided into four parts, details of which are available from: www.naturenet.net/law/wcagen.html

Species protection is provided under Schedules 1, 5, 6 and 8 of the WCA:

Schedule 1: Birds – Please refer to the Sussex Bird Inventory results and explanation sheet in your SxBRC biodiversity report.

Schedule 5: Protected animals (other than birds)

Intentional or reckless killing, injuring, taking, possessing, disturbing and selling (including parts and derivatives) as well as damaging, destroying or obstructing access to any structure or place of refuge etc. are prohibited. N.B. Protection of some species is limited to certain sections of the Act, which are indicated in the lists as follows:

Section 9(1) Protection limited to intentional killing, injury or taking.

Section 9(2) Protection limited to possessing and controlling.

- Section 9(4a)** Protection limited to damaging, destroying or obstructing access to any structure or place used by the animal for shelter or protection.
- Section 9(4b)** Protection limited to disturbing the animal while it is occupying any structure or place which it uses for shelter or protection.
- Section 9(5a)** Protection limited to selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative).
- Section 9(5b)** Protection limited to advertising for buying or selling such things.

Schedule 6: Animals which may not be killed or taken by certain methods

Methods include traps and nets, poisons, automatic weapons, electrical devices, smokes/gases and various others. Even humane trapping for research requires a licence.

Schedule 8: Protected plants and fungi

Intentional picking, uprooting, destroying, trading (including parts and derivatives) etc. are prohibited. Under the Wildlife and Countryside Act, all wild plants in Britain are protected from intentional uprooting by an unauthorised person. Land owners, land occupiers, persons authorised by either of these, or persons authorised in writing by the Local Authority for the area are however exempt from this, except for Schedule 8 species which you can see on this website: www.naturenet.net/law/sched8.html

Legislation protecting bats

Please refer to the explanation sheet of the Sussex Bat Inventory within your SxBRC biodiversity report, or visit [our website](#).

Legislation protecting badgers and otters

Please refer to the 'Confidential Records' sheet at the start of the report for information on badger and otter records in Sussex.

SUSSEX PROTECTED SPECIES REGISTER REPORT

Please note that bat, bird, badger and otter records are not included in this report.

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014

ESD/14/198

Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235

Brionny Brady (Calumma Ecological Services)

Arvicola amphibius

European Water Vole

Terrestrial mammal

The fastest declining native British mammal, the water vole was 'Ratty' in Wind in the Willows. Water voles prefer slow flowing streams, rivers and dykes with steep earth banks and luxuriant emergent vegetation. They have been in decline for over a century mainly due to loss of habitat while the presence of American mink has greatly hastened this decline. In many areas of mainland Britain water voles are already extinct but there are still some strong populations in Sussex. A legally protected species, listed on the Sussex Rare Species Inventory and the subject of a Sussex Species Action Programme.

Designations

Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Protected Species Register Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.1 killing/injuring; 9.1 taking; 9.2; 9.4a; 9.4b; 9.5a; 9.5b; Schedule 5)

Grid Reference	Recorder	Date	Locality
TQ330373	Ken Ashby	1981	VC14 East Sussex, East Sussex (VC14)

0 confidential records exist for this enquiry area. Please contact the record centre if you require further information.
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Bat species

There are 18 species of bat which are resident in the UK (17 of which are known to be breeding here), all of which have been recorded in Sussex:

Barbastella barbastellus **Barbastelle**
Eptesicus serotinus **Serotine**
Myotis alcathoe **Alcathoe**
Myotis bechsteinii **Bechstein's**
Myotis brandtii **Brandt's**
Myotis daubentonii **Daubenton's**
Myotis myotis **Greater mouse-eared**
Myotis mystacinus **Whiskered**
Myotis nattereri **Natterer's**

Nyctalus leisleri **Leisler's**
Nyctalus noctula **Noctule**
Pipistrellus nathusii **Nathusius's pipistrelle**
Pipistrellus pipistrellus **Common pipistrelle**
Pipistrellus pygmaeus **Soprano pipistrelle**
Plecotus auritus **Brown long-eared**
Plecotus austriacus **Grey long-eared**
Rhinolophus ferrumequinum **Greater horseshoe**
Rhinolophus hipposideros **Lesser horseshoe**

Four other bat species have been recorded in Sussex as vagrants: Savi's pipistrelle (*Hypsugo savii*), Kuhl's pipistrelle (*Pipistrellus kuhlii*), parti-coloured bat (*Vespertilio murinus*) and Geoffroy's bat (*Myotis emarginatus*).

Five species are included in Annex II of the EU Habitats Directive: Barbastelle, Bechstein's, greater mouse-eared, greater horseshoe and lesser horseshoe. All 18 species are included in Annex IV.

Seven species are included in the UK Biodiversity Action Plan: Barbastelle, Bechstein's, brown long-eared, greater horseshoe, lesser horseshoe, noctule and soprano pipistrelle.

Background

Bats are the only mammals capable of true flight. Those found in the UK feed exclusively on insects and use a sophisticated form of sonar to navigate and catch their prey at night. In late spring and summer, female bats form maternity colonies to raise their young. This is when they are most obvious to us, as they leave the roost at or after sunset in search of food. Bats hibernate during the winter when insects are scarce, usually at a different site to the maternity roost where a constant cool temperature can be found i.e. in underground sites or within deep crevices in trees or buildings. **Bats return to the same roost sites every year, so even if the animals themselves are not present, the roost is still legally protected.**

Unfortunately there are many misconceptions about bats. They are in fact sociable, intelligent, clean animals that rarely come into contact with humans. They do not build nests and very rarely cause structural damage to buildings.

Current status and threats

Bat populations have suffered huge declines in the last century. The common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) remain the most abundant and widespread species of bat, but are thought to have suffered from a huge reduction in numbers. Estimates from a National Bat Colony Survey suggest a population decline of around 70% between 1978 and 1993.

This reduction in bat numbers is largely due to their roosts being disturbed or destroyed, a loss of suitable feeding and flightline habitat (e.g. hedgerows) and a reduction in insect numbers (e.g. through farming intensification and the use of pesticides). A number of species are now included in the National Bat Monitoring Programme (NBMP), run by the Bat Conservation Trust (BCT), which gives up-to-date information on population trends.

Bats are also particularly vulnerable to human interference for the following reasons:

- They have a low reproductive rate; generally one pup a year.
- They require specific conditions for each of their roost types.
- They are very secretive and often go unnoticed until discovered by building works or home improvements.

Consequently, bats and their roosts receive some of the highest levels of legal protection.

Bats and the law

All species of bat and their roosts are protected by UK and European law. Bats and their roosts may also be protected by site designations, for example if their roost site or feeding grounds are notified as a Special Area of Conservation (SAC) or a Site of Special Scientific Interest (SSSI).

You could be committing a criminal offence if you:

1. Deliberately capture, injure or kill a bat
2. Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
3. Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
4. Intentionally or recklessly obstruct access to a bat roost
5. Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat

It is not illegal to:

Tend/care for a bat solely for the purpose of restoring it to health and subsequent release. (This should always be done by an experienced bat handler, contact details of which can be found through the Sussex Bat Group.)

Licensing

If you have a bat roost in your property, it does not necessarily mean that building work cannot take place. Work can be planned so as not to interfere with the roost and at a time that bats may be absent. If you are planning any sort of work that may interfere with bats, advice must be sought first from Natural England (see contact details below). Similarly, if you discover bats after work has begun, you must stop and contact Natural England for their advice before continuing.

Licences to permit illegal activities relating to bats and their roost sites can be issued for specific purposes. It is an offence not to comply with the terms and conditions of such a licence. If you carry out work affecting bats or roosts without a licence, you will be breaking the law.

Further advice and information:

Bat Conservation Trust

The national charity working for bat conservation.

Website: www.bats.org.uk

Bat helpline: 0845 1300 228

Email: enquiries@bats.org.uk

Natural England

The government body responsible for issuing licences for work that may affect bats or their roosts.

Website: www.naturalengland.org.uk/ourwork/regulation/wildlife/species/bats.aspx

General and licensing enquiries. Tel: 0845 601 4523 (local rate).

Sussex Bat Group

A local voluntary group working for the conservation of bats in Sussex.

Website: www.sussexbatgroup.org.uk

Email: contact@sussexbatgroup.org.uk

SUSSEX BAT INVENTORY REPORT SUMMARY

Please note that all species of bat and their roosts are protected by UK and European law, under the Wildlife and Countryside Act 1981 (WCA) in the UK and the Habitats Directive in the EU. Bats and their roosts may also be protected by site designations, for example if their roost site or feeding grounds are notified as Special Area of Conservation (SAC) or a Site of Special Scientific Interest (SSSI).

You could be committing a criminal offence if you :

1. Deliberately capture, injure or kill a bat. 2. Intentionally or recklessly disturb a bat in the roost or deliberately disturb a group of bats. 3. Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time). 4. Intentionally or recklessly obstruct access to a bat roost. 5. Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.

Key to Indicators

M/S Mating/Swarming
H Hibernaculum
FR Feeding Roost
MR Maternity Roost
UR Unspecified Roost
D Droppings

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014

ESD/14/198

Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235

Brionny Brady (Calumma Ecological Services)

Common Name	Latin Name	No of Records	M/S	H	FR	MR	UR	D
Bat sp.	<i>Chiroptera</i>	1	☐	☐	☐	☐	☒	☐
Brown Long-eared Bat	<i>Plecotus auritus</i>	3	☐	☐	☐	☒	☒	☒
Long-eared sp.	<i>Plecotus</i>	4	☐	☐	☐	☒	☒	☒

SUSSEX BAT INVENTORY REPORT

Please note that all species of bat and their roosts are protected by UK and European law, under the Wildlife and Countryside Act 1981 (WCA) in the UK and the Habitats Directive in the EU. Bats and their roosts may also be protected by site designations, for example if their roost site or feeding grounds are notified as Special Area of Conservation (SAC) or a Site of Special Scientific Interest (SSSI).

You could be committing a criminal offence if you :

1. Deliberately capture, injure or kill a bat. 2. Intentionally or recklessly disturb a bat in the roost or deliberately disturb a group of bats. 3. Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time). 4. Intentionally or recklessly obstruct access to a bat roost. 5. Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.

Key to Indicators

M/S	Mating/Swarming
H	Hibernaculum
FR	Feeding Roost
MR	Maternity Roost
UR	Unspecified Roost
D	Droppings

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014

ESD/14/198

Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235

Brionny Brady (Calumma Ecological Services)

Chiroptera

Bat sp.

Chiroptera (from the ancient Greek for 'wing hand') is the natural group, or order, that covers all the bats. In Britain we have 18 bat species and all have the highest level of legal protection. Many people simply record bats in general when they are not able to assign them to a particular species and these are then included under Chiroptera in our reports.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
01/08/1982	Old Club House, North Street, Turners Hill, West Sussex (VC13)	TQ339360	NE Bat Worker	Building Inspection	☐	☐	☐	☐	☒	☐	20 Present	

Plecotus

Long-eared sp.

It is difficult to distinguish the rare grey long-eared bat from the much more common brown long-eared bat without studying in the hand. This also applies to identifying the species from their droppings.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
11/05/2011	Miswell House, Turners Hill, West Sussex (VC13)	TQ337362	K. Suppel;David King;Sheila Wright	Building Inspection	☐	☐	☐	☐	☒	☒		Droppings on first floor of barn
01/11/2009	Tulleys Farm, Turners Hill, West Sussex (VC13)	TQ324358	Recorder @ Corylus Ecology	Building Inspection	☐	☐	☐	☐	☒	☒	1 Day Roost	Approximately 300 bat droppings identified within the roof void above the garage indicative of a small long-eared bat roost
08/10/2008	2 Gladstone Villas, Turners Hill Road, Turners Hill RH10 4NW, West Sussex (VC13)	TQ338364	NE Bat Worker	Building Inspection	☐	☐	☐	☒	☐	☒	16 Present	1893 brick semi-detached house. Large quantity of very fresh droppings. Colony established for 20 years (pers.com) and used for whole of active season.
27/05/2008	2 Gladstone Villas, Turners Hill Road, Turners Hill RH10 4NW, West Sussex (VC13)	TQ338364	NE Bat Worker	Building Inspection	☐	☐	☐	☒	☐	☒	15 Present	1893 brick semi-detached house. Bats seen in tight cluster. Large quantity of droppings.

Plecotus auritus

Brown Long-eared Bat

BAP

One of the more common British bat species, but difficult to distinguish from the much rarer grey long-eared bat (*Plecotus austriacus*), unless in the hand. It frequents woodland and orchards and has summer roosts in older buildings and trees. It often hibernates in caves, tunnels and mines. The brown long-eared has declined in the British Isles though it remains widespread.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
14/06/2005	Tanglewood, Wallage Lane, Rowfant, Crawley, East Sussex (VC14)	TQ333370	NE Bat Worker	Building Inspection	☐	☐	☐	☐	☒	☐		
01/01/1992	Tanglewood, Wallage Lane, Rowfant, Crawley, West Sussex (VC13)	TQ333370	NE Bat Worker	Building Inspection	☐	☐	☐	☐	☒	☒		Possible roost in roof apex. Droppings found old/fresh.
11/07/1986	Fonthill Lodge School, Coombe Hill Road, West Sussex (VC13)	TQ318365	Tony Hutson	Building Inspection	☐	☐	☐	☒	☐	☒		House converted to junior school; possible breeding roost in upper roof near water tanks.

SUSSEX NOTABLE BIRD REPORT



The Sussex Notable Bird Report is based on a list of birds that are particularly scarce or vulnerable to development in Sussex. This report has been created with ecological consultants in mind, to help sort the more sensitive bird species from the more common. These records are only available to ecological consultants due to the sensitivity of the data. The Sussex Ornithological Society (SOS) has kindly shared this data with us, with the view that better planning decisions can be made with the availability of this data. Please see the appended list of species included in this report and the date ranges/criteria for each species' inclusion.

Icons used in the Notable Bird Report:



Schedule 1 birds

Schedule 1 of the Wildlife and Countryside Act 1981 provides an additional tier of protection so that rare species are specially protected by increased penalties and cannot be intentionally or recklessly disturbed when nesting. **Schedule 1 status also infers a right of arrest** by a police officer if someone is suspected of committing certain offences against one of these species.

BAP Biodiversity Action Plan Species (UK BAP)

Twenty-six species of bird are identified as Priority Species in the UK Biodiversity Action Plan (UK BAP), each the subject of a dedicated action plan which seeks to reverse their declines and protect vulnerable populations. Any Priority Species recorded within your enquiry area will be indicated in the species information of the bird report. Further details of BAP bird species can be found on the [JNCC website](http://jncc.gov.uk).



Natural Environment & Rural Communities (NERC) Act

There are 49 bird species on the England Biodiversity List which was drawn up to meet the requirements of Section 41 of the Act. Further details of the NERC Act can be found on the [Natural England website](http://naturalengland.gov.uk).

Birds of Conservation Concern 3 (2009)

Every five years the leading governmental and non-governmental conservation organisations in the UK review the population status of the 247 species of bird that are regularly found in the UK. There are three lists – Red, Amber and Green - into which each of the species has been placed. 40 species are Red-listed, 121 are Amber-listed and 86 are Green-listed. The status decisions are based on several factors which include: the species' global and European conservation status; recent and historical decline; whether it is a rare breeder; if it is only confined to a few sites in the UK; and if the species is of international importance.



Red List species are those that are **Globally Threatened** according to IUCN criteria; those whose population or range has decline rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.



Amber List species are those with **Unfavourable Conservation Status** in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.

Green List species are those that do not fulfil any of the above criteria. Some of these species are however protected by law and the list includes some Schedule 1 species which have the highest level of protection. A green icon will not appear in our reports.

This information has been obtained from '**Birds of Conservation Concern 3' (BoCC3)** which can be downloaded from the [RSPB website](http://rspb.org.uk).

Other bird legislation and conservation measures:

Wildlife and Countryside Act (WCA) 1981

All British birds, their nests and eggs are protected by UK law. It is an offence to take, kill or injure any wild bird or to take, damage, destroy any nest or egg of any wild bird under Part 1 of the Wildlife and Countryside Act 1981, Schedules 1-4.

Hedgerow removal and birds

It is advisable not to trim, cut or remove hedgerows during the bird nesting season. You will be violating the Wildlife and Countryside Act if there are birds nesting within it due to the disturbance or destruction of their habitat whilst nesting. The Hedgerows Regulations were introduced in 1997 to protect important hedgerows in the countryside. The regulations state that it is a criminal offence, unless an exception applies, to deliberately remove or otherwise destroy a hedgerow without permission. Please apply to your local planning authority for a Hedgerow Removal Application. Domestic hedges are not included in this regulation, however it is still illegal to cut or remove any hedges if birds are suspected to be nesting in it.

Birds in roofs

There are various species that may nest in roofs. Unless they are causing a health hazard, the nests, eggs and chicks are protected by law. The parent birds must not be prevented from gaining access to their nest. Many of the birds that use roof spaces are now species of conservation concern because of their population decline over the past 25 years. Starlings and House Sparrows are Red-listed, while Barn Owls, House Martins and Swallows are Amber-listed (see next page for details). Roofs are also important for Swifts.

Further information about birds and the law can be found on the [RSPB website](#).

Environmental Stewardship Target Species

Farmland birds are one of the key targets of which a landowner can be awarded points through the Higher Level Stewardship scheme. Each Joint Character Area (e.g. High Weald, South Downs, South Coast Plain etc.) has specific key bird species whose populations must be maintained or enhanced to gain points as part of the land owner's 'Farm Environment Plan'. This can be done through a combination of management practices which should provide year round habitat requirements, in locations where these birds are known to be present or within 2km of such sites. If a key farmland bird species appears in your report, it will show to which Joint Character Area it is linked.

Further information about agri-environment schemes can be found on the [RSPB website](#).

EU Birds Directive

The Birds Directive addresses the conservation of all wild birds throughout the European Union, including marine areas, and covers their protection, management, control and exploitation. It applies to the birds, their eggs, nests and habitats. It places a broad requirement on Member States to take necessary measures to maintain the populations of all wild birds at levels determined by ecological, scientific and cultural needs. In doing so, Member States must also consider economic and recreational needs.

The Directive divides into two main parts: **habitat conservation** and **species protection**. In summary, it requires Member States to preserve, maintain and re-establish sufficient diversity and area of habitats for all wild birds.

Annex 1:

Species listed in Annex 1 of the Birds Directive are the subject of special conservation measures concerning their habitat to ensure their survival and reproduction. This includes the designation of areas as Special Protection Areas (SPAs).

Annex 2:

Annex 2 of the Birds Directive lists birds that can be hunted under the legislation of the Member States. The Directive bans certain non-selective methods of hunting and defines the limits within which Member States can set the hunting season.

Further information about the EU Birds Directive can be found on the [BirdLife website](#).

IUCN Red List

The World Conservation Union (IUCN) has been assessing the conservation status of species, subspecies, varieties and even selected sub-populations on a global scale in order to highlight taxa threatened with extinction, and therefore promote their conservation. The IUCN Red List (different from the previously mentioned Red List) is the world's most comprehensive inventory of the global conservation status of plant and animal species. It uses a set of criteria to evaluate the extinction risk of thousands of species and subspecies. These criteria are relevant to all species and all regions of the world. With its strong scientific base, the IUCN Red List is recognized as the most authoritative guide to the status of biological diversity.

Further information about the Red List can be found on the [IUCN website](#).

SUSSEX BIRD INVENTORY REPORT SUMMARY

N.B. This summary report gives details of a ALL bird records. Details of notable bird records appear after this summary.

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014 ESD/14/198 Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235

Brionny Brady (Calumma Ecological Services)

Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Mallard	<i>Anas platyrhynchos</i>	10/04/1983	22/04/2006	8	37	13
Greylag Goose	<i>Anser anser</i>	11/04/1990	-	1	4	4
Tufted Duck	<i>Aythya fuligula</i>	22/04/2006	-	1	1	1
Greater Canada Goose	<i>Branta canadensis</i>	30/05/1990	-	1	1	1
Mute Swan	<i>Cygnus olor</i>	17/04/1983	06/07/1990	4	19	9
Eurasian Woodcock	<i>Scolopax rusticola</i>	01/06/1980	19/06/1981	5	10	3
Green Sandpiper	<i>Tringa ochropus</i>	21/04/1976	-	1	1	1
Stock Pigeon	<i>Columba oenas</i>	08/06/1982	09/05/2002	3	8	5
Common Wood Pigeon	<i>Columba palumbus</i>	08/06/1982	22/04/2006	3	12	10
Eurasian Collared Dove	<i>Streptopelia decaocto</i>	09/05/2002	-	1	1	1
European Turtle Dove	<i>Streptopelia turtur</i>	08/06/1982	27/05/1985	2	3	2
Common Kingfisher	<i>Alcedo atthis</i>	14/07/1980	17/08/1996	2	3	2
Common Cuckoo	<i>Cuculus canorus</i>	08/06/1982	09/05/2002	2	4	3
Eurasian Sparrowhawk	<i>Accipiter nisus</i>	08/06/1982	26/04/2008	2	2	1
Common Buzzard	<i>Buteo buteo</i>	15/07/2000	08/10/2010	7	16	4
Osprey	<i>Pandion haliaetus</i>	22/04/2006	-	1	1	1
Common Kestrel	<i>Falco tinnunculus</i>	08/06/1982	18/05/2010	6	6	1
Common Pheasant	<i>Phasianus colchicus</i>	09/05/2002	02/01/2005	2	21	20
Common Coot	<i>Fulica atra</i>	10/04/1983	22/05/1990	2	8	5
Common Moorhen	<i>Gallinula chloropus</i>	16/04/1983	22/04/2006	5	6	2
Long-tailed Tit	<i>Aegithalos caudatus</i>	08/06/1982	09/04/2009	7	20	9
Eurasian Treecreeper	<i>Certhia familiaris</i>	08/06/1982	09/04/2006	3	7	5
Carrion Crow	<i>Corvus corone</i>	08/06/1982	22/04/2006	3	8	6

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Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Eurasian Jackdaw	<i>Corvus monedula</i>	08/06/1982	22/04/2006	3	12	6
Eurasian Jay	<i>Garrulus glandarius</i>	08/06/1982	-	1	10	10
Black-billed Magpie	<i>Pica pica</i>	08/06/1982	22/04/2006	3	6	4
Yellowhammer	<i>Emberiza citrinella</i>	08/06/1982	30/06/1990	2	4	3
Reed Bunting	<i>Emberiza schoeniclus</i>	30/04/1990	-	1	1	1
Lesser Redpoll	<i>Carduelis cabaret</i>	08/06/1982	09/04/2006	2	2	1
Common Linnet	<i>Carduelis cannabina</i>	08/06/1982	30/04/1990	2	3	2
European Goldfinch	<i>Carduelis carduelis</i>	08/06/1982	09/05/2002	3	4	2
European Greenfinch	<i>Carduelis chloris</i>	09/05/2002	22/04/2006	2	2	1
Eurasian Siskin	<i>Carduelis spinus</i>	09/04/2006	07/05/2006	2	28	27
Chaffinch	<i>Fringilla coelebs</i>	08/06/1982	22/04/2006	4	91	70
Brambling	<i>Fringilla montifringilla</i>	16/02/1994	-	1	2	2
Common Crossbill	<i>Loxia curvirostra</i>	12/01/2003	-	1	10	10
Common Bullfinch	<i>Pyrrhula pyrrhula</i>	08/06/1982	26/05/2003	4	9	4
Meadow Pipit	<i>Anthus pratensis</i>	22/09/1991	23/11/1991	2	35	20
Tree Pipit	<i>Anthus trivialis</i>	08/06/1982	30/05/1999	3	10	6
Pied Wagtail	<i>Motacilla alba</i>	30/04/1990	09/05/2002	4	44	40
Grey Wagtail	<i>Motacilla cinerea</i>	07/05/1967	30/07/2003	17	23	2
Spotted Flycatcher	<i>Muscicapa striata</i>	08/06/1982	-	1	7	7
Blue Tit	<i>Cyanistes caeruleus</i>	08/06/1982	22/04/2006	3	26	23
Great Tit	<i>Parus major</i>	08/06/1982	22/04/2006	3	14	11
Coal Tit	<i>Periparus ater</i>	08/06/1982	-	1	17	17
Willow Tit	<i>Poecile montanus</i>	08/06/1982	-	1	1	1
Marsh Tit	<i>Poecile palustris</i>	01/06/1980	09/05/2002	4	11	6
House Sparrow	<i>Passer domesticus</i>	22/04/2006	-	1	1	1
Hedge Accentor	<i>Prunella modularis</i>	08/06/1982	09/04/2006	3	4	2
Goldcrest	<i>Regulus regulus</i>	08/06/1982	09/04/2009	4	35	17
European Robin	<i>Erithacus rubecula</i>	08/06/1982	09/05/2002	2	36	26
Wood Nuthatch	<i>Sitta europaea</i>	08/06/1982	06/03/2008	10	33	12
Common Starling	<i>Sturnus vulgaris</i>	08/06/1982	09/05/2002	2	3	2
Common Chiffchaff	<i>Phylloscopus collybita</i>	08/06/1982	07/05/2006	7	34	15
Wood Warbler	<i>Phylloscopus sibilatrix</i>	13/05/1977	22/05/1991	2	2	1
Willow Warbler	<i>Phylloscopus trochilus</i>	08/06/1982	07/05/2006	5	52	32
Blackcap	<i>Sylvia atricapilla</i>	08/06/1982	29/04/2007	6	19	6
Garden Warbler	<i>Sylvia borin</i>	08/06/1982	07/05/2006	5	18	13
Winter Wren	<i>Troglodytes troglodytes</i>	08/06/1982	22/04/2006	3	36	29
Redwing	<i>Turdus iliacus</i>	26/03/2006	-	1	40	40
Common Blackbird	<i>Turdus merula</i>	08/06/1982	22/04/2006	3	25	20
Song Thrush	<i>Turdus philomelos</i>	08/06/1982	07/05/2006	4	25	11

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Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Fieldfare	<i>Turdus pilaris</i>	26/03/2006	-	1	80	80
Mistle Thrush	<i>Turdus viscivorus</i>	08/06/1982	07/05/2006	4	8	5
Great Spotted Woodpecker	<i>Dendrocopos major</i>	01/06/1980	07/05/2006	9	17	4
Lesser Spotted Woodpecker	<i>Dendrocopos minor</i>	19/06/1981	08/06/1982	2	2	1
Green Woodpecker	<i>Picus viridis</i>	08/06/1982	06/03/2008	6	12	4
Tawny Owl	<i>Strix aluco</i>	20/06/1980	09/07/1997	4	5	2

SUSSEX NOTABLE BIRD REPORT

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014 ESD/14/198 Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235
Brionny Brady (Culumma Ecological Services)

Streptopelia turtur

European Turtle Dove

A declining summer migrant that breeds at the northern edge of its range in the UK. It is confined largely to the south and east of England and is associated with fertile arable farmland in warm, dry situations where it feeds on seed. Nests in thick hedges, bushes and low trees in woodland edges, copses, commons, heaths and parkland. Easily identified by its evocative purring call.

Bird Population Status - red; Birds Directive Annex 2.2; EC CITES Annex A; Environmental Stewardship Target Species (High Weald); Environmental Stewardship Target Species (Low Weald); Environmental Stewardship Target Species (Romney Marsh); Environmental Stewardship Target Species (South Downs); Environmental Stewardship Target Species (Wealden Greensand); Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; UK Biodiversity Action Plan priority species

Grid Reference	Recorder	Date	Locality	Abundance	Selection Based On
TQ312362	Anon @ Sussex Wildlife Trust;RSPB Woodland Survey	08/06/1982	Worth Oaken Wood	1 Present	Positive Breeding
TQ314354	Sussex Ornithological Society	27/05/1985	Worth Worthlodge Forest	2 Present	Positive Breeding

Alcedo atthis

Common Kingfisher

Fairly common resident and occasional winter visitor which is widespread across Sussex, but often declines following hard winters. A brilliantly coloured blue and orange bird which can be found in lowland freshwater areas such as rivers, ponds and streams, and during the winter on the coast and in estuarine areas. Nests in hole in riverbank or sandpit.

Bern Convention Appendix 2; Bird Population Status - amber; Birds Directive Annex 1; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

Grid Reference	Recorder	Date	Locality	Abundance	Selection Based On
TQ3137	Sussex Ornithological Society	17/08/1996	Rowfant nr Crawley	2 Present	Date
TQ3237	SOS Archived Records	14/07/1980	Rowfant nr Crawley	1 Present	Date

Poecile montanus

Willow Tit

A scarce resident that favours damp woodland close to rivers, streams and gravel pits. It also likes undergrowth in broadleaved woodland and is sometimes found well away from water in marginal habitat not so suitable for other Tit species. This species has suffered recent population declines. It has a large sooty-black cap extending to the back of the neck and a small untidy black bib; it feeds on insects, seeds and berries.

Bern Convention Appendix 2; Bird Population Status - red; Nerc Act 2006; UK Biodiversity Action Plan priority species

Grid Reference	Recorder	Date	Locality	Abundance	Selection Based On
TQ312362	Anon @ Sussex Wildlife Trust;RSPB Woodland Survey	08/06/1982	Worth Oaken Wood	1 Present	All records

Phylloscopus sibilatrix

Wood Warbler

A very scarce summer resident and passage migrant. This large white and yellow leaf warbler is associated with damp oak woodland where it feeds mainly on insects and spiders. Its best locations are in the north of our area, although it has never been common in Sussex and seems to be declining.

Bird Population Status - red; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; UK Biodiversity Action Plan priority species

Grid Reference	Recorder	Date	Locality	Abundance	Selection Based On
TQ3135	Sussex Ornithological Society	22/05/1991	Worth Forest	1 Male	Date
TQ326369	SOS Archived Records	13/05/1977	Rowfant nr Crawley	1 Present	Positive Breeding

Dendrocopos minor

Lesser Spotted Woodpecker

The size of a sparrow, this is Europe's smallest woodpecker and it is a scarce Sussex resident that favours damp, open, broad leaved woodland. It feeds on insects, especially larvae, spiders and wood-boring insects. It requires decaying wood in which it makes a new nest chamber each year. Its population is scattered across Sussex in suitable areas; the county holds a significant proportion of the national population.

Bern Convention Appendix 2; Bird Population Status - red; Nerc Act 2006; UK Biodiversity Action Plan priority species

Grid Reference	Recorder	Date	Locality	Abundance	Selection Based On
TQ312362	Anon @ Sussex Wildlife Trust;RSPB Woodland Survey	08/06/1982	Worth Oaken Wood	1 Present	All records
TQ3337	SOS Archived Records	19/06/1981	Rowfant nr Crawley	1 Present	All records

BIODIVERSITY ACTION PLAN SPECIES INVENTORY

The BAP Species Inventory does not include bat, bird or otter records.
Bat and bird records are included in separate inventories, while otter records are not included in SxBRC reports.

The background

In 1992 the UK and 159 other governments signed the Convention on Biological Diversity (CBD) at the Earth Summit in Rio de Janeiro. The CBD called for signatories to develop national strategies and action plans to conserve biodiversity, and the UK responded with the UK Biodiversity Action Plan (UK BAP). This was first published in 1994 and included specific plans for species and habitats afforded priority conservation action. These plans set out the threats faced by species and habitats as well as the actions being taken or to be taken to help tackle the threats. The UK BAP list was updated in 2007 and has since been superseded by the 'UK Post-2010 Biodiversity Framework', as a result of a change in strategic thinking.

Further information on the UK BAP and details of the species and habitat action plans can be found on the [JNCC website](#).

At the local level

An important aspect to the success of the UK BAP is the translation of the national strategy into effective action at the local level. The Sussex Biodiversity Partnership co-ordinates action for Priority Species and Habitats. Further details can be found on their website: www.biodiversitysussex.org.uk

BAP species within this report

- BAP records are labelled so that only one record per species per grid reference is included in a SxBRC report. This will usually be the most up to date record.
- Species which appear in the 'England Biodiversity List' to meet the requirements of Section 41 of the NERC Act (2006) * are labelled with the symbol **N**.

* Natural Environment & Rural Communities (NERC) Act

The NERC Act (2006) was established with the intention to help ensure that biodiversity becomes an integral consideration in the development of policies, and that decisions of public bodies work with nature and not against it.

The England Biodiversity List has been drawn up to meet the requirements of Section 41 of the Act. The S41 list consists of **943 species** and **56 habitats** of principal importance in England and will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act.

Further details of the NERC Act can be found on the [Natural England website](#).

UK BIODIVERSITY ACTION PLAN SPECIES INVENTORY REPORT

Please note that bat, bird and otter records are not included in this report

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014 ESD/14/198 Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235

Brionny Brady (Calumma Ecological Services)

Erinaceus europaeus

West European Hedgehog

N

Terrestrial mammal

The hedgehog is one of our most familiar and endearing small mammals and it is still widespread in Sussex and Britain. However, hedgehog numbers have been adversely affected by changes in agriculture with less permanent pasture and fewer hedgerows. Climate change may also affect the availability of earthworms, one of their main foods, during hot, dry summers. There is some survey evidence that hedgehogs are most common where badgers are rarer and badgers do, of course, prey on them.

Designations

Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; UK Biodiversity Action Plan priority species

Grid Reference	Recorder	Date	Locality
TQ317365	Alan Gillham	03/09/2006	Turners Hill Road near Compasses Corner, East Sussex (VC14)

Arvicola amphibius

European Water Vole

N

Terrestrial mammal

The fastest declining native British mammal, the water vole was 'Ratty' in Wind in the Willows. Water voles prefer slow flowing streams, rivers and dykes with steep earth banks and luxuriant emergent vegetation. They have been in decline for over a century mainly due to loss of habitat while the presence of American mink has greatly hastened this decline. In many areas of mainland Britain water voles are already extinct but there are still some strong populations in Sussex. A legally protected species, listed on the Sussex Rare Species Inventory and the subject of a Sussex Species Action Programme.

Designations

Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Protected Species Register Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.1 killing/injuring; 9.1 taking; 9.2; 9.4a; 9.4b; 9.5a; 9.5b; Schedule 5)

Grid Reference	Recorder	Date	Locality
TQ330373	Ken Ashby	1981	VC14 East Sussex, East Sussex (VC14)

0 confidential records exist for this enquiry area. Please contact the record centre if you require further information.

SUSSEX RARE SPECIES INVENTORY

The Rare Species Inventory does not include bat, bird or otter records.

Bat and bird records are included in separate inventories, while otter records are not included in SxBRC reports.

The Sussex Rare Species Inventory (RSI) contains over 3,400 species. These species are selected according to strict criteria of rarity associated with their occurrence in Sussex.

The criteria for selection of species are listed below:

- **All species in the British Red Data Books including all Notable fauna and Nationally Scarce flora and British endemic taxa which have ever occurred in Sussex whether extinct or not.**
- **Species included in the UK Biodiversity Action Plan (BAP species).**
- **Internationally rare taxa cited in the Bern Convention, IUCN Red Data lists, or EU Habitats Directive which are not covered by any of the above.**
- **County rarities.**

The RSI has been designed to be comprehensive for species but representative for records. This is managed in several ways:

- RSI records are labelled so that only one record per species per grid reference gets flagged up. This will usually be the most up to date record.
- SxBRC does not hold marine information other than coastal species and cetaceans.
- The following species are relatively common in Sussex but are in the RSI because they are Notable or Nationally Scarce. Only *one* record of these species is labelled per 2km tetrad:

Round-headed Rampion	<i>Phyteuma orbiculare</i>
Frogbit	<i>Hydrocharis morus-ranae</i>
Adonis Blue	<i>Lysandra bellargus</i>
Long-winged Conehead	<i>Conocephalus discolor</i> (syn. <i>C. fuscus</i>)
Door snail	<i>Macrogastra rolphii</i>
Variable Damselfly	<i>Coenagrion pulchellum</i>
Downy Emerald	<i>Cordulea aenea</i>

For records of rare vascular plants, bryophytes and lichens the Record Centre recommends the Sussex Rare Plant Register, compiled by the Sussex Botanical Recording Society. This gives up to date (2001) information on the distribution and status of over 400 Sussex Rare Plants, putting data from RSI reports into a Sussex-wide context. Please look on the publication page of our website for more information: www.sxbrc.org.uk/biodiversity/publications

IUCN Categories of Rarity

The following is a summary of the IUCN categories of rarity. For further information visit the [IUCN website](http://www.iucn.org).

Extinct (EX)

A taxon is Extinct when there is no reasonable doubt that the last individual has died.

Extinct in the Wild (EW)

A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range.

Critically Endangered (CR)

A taxon is Critically Endangered when it is considered to be facing an extremely high risk of extinction in the wild.

Endangered (EN)

A taxon is Endangered when it is considered to be facing a very high risk of extinction in the wild.

Vulnerable (VU)

A taxon is Vulnerable when it is considered to be facing a high risk of extinction in the wild.

Near Threatened (NT)

A taxon is Near Threatened when it is close to qualifying for or is likely to qualify for a threatened category in the near future.

Least Concern (LC)

A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened.

Data Deficient (DD)

A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status.

Not Evaluated (NE)

A taxon is Not Evaluated when it has not yet been evaluated against the criteria.

Regionally Scarce (NR)

Occurs in 5 or fewer 10km squares in a particular region of Britain. Locally determined.

SUSSEX RARE SPECIES INVENTORY REPORT

Please note that bat, bird and otter records are not included in this report

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014

ESD/14/198

Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235

Brionny Brady (Calumma Ecological Services)

Cardamine bulbifera

Coralroot

Flowering plant

One of the strongholds of this Nationally Scarce plant is in NE Sussex and there are also scattered sites in West Sussex. Mainly found near paths in ancient woodland, along wooded streams and on road verges where populations currently appear to be stable.

Designations

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
TQ334375	Anon @ Sussex Bot. Rec. Soc.; Alan Knapp	1995	East Sussex (VC14)

Graptodytes granularis

Insect - beetle (Coleoptera)

A dysticid water beetle associated with well-vegetated permanent ponds and ditches. A species mainly of grazing marshes in the far east of East Sussex, ut there are also records from Ashdown Forest and the Crawley area. Widespread in the British Isles to souther Scotland.

Designations

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
TQ3237	Garth Foster	1955	East Sussex (VC14)

Dolichovespula (Dolichovespula) media

Insect - hymenopteran

Designations

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
TQ334377	Recorder @ BWARS	14/08/1991	Crawley Down

Apatura iris

Purple Emperor

Insect - butterfly

Much rarer today than in the past, this swallow-feeding woodland butterfly has shown some signs of recovery in recent years. Currently widespread nationally, but rare in West Sussex.

Designations

IUCN (2001) - Lower risk - near threatened; Sussex Rare Species Inventory Species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.5a; 9.5b)

Grid Reference	Recorder	Date	Locality
TQ3236	Clifford Marsh	08/07/2010	East Sussex (VC14)

Cordulia aenea

Downy Emerald

Insect - dragonfly (Odonata)

A dragonfly of nutrient-poor tree-lined or woodland ponds, lakes, canals, slow-flowing rivers and streams. Thinly but widely scattered across our area. Elsewhere it is a scarce species and southern and south eastern England are its main strongholds in the British Isles.

Designations

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
TQ317375	James Havers	29/05/1993	East Sussex (VC14)
TQ317378	J R Havers & E Lecomber	29/05/1993	East Sussex (VC14)

Arvicola amphibius

European Water Vole

Terrestrial mammal

The fastest declining native British mammal, the water vole was 'Ratty' in Wind in the Willows. Water voles prefer slow flowing streams, rivers and dykes with steep earth banks and luxuriant emergent vegetation. They have been in decline for over a century mainly due to loss of habitat while the presence of American mink has greatly hastened this decline. In many areas of mainland Britain water voles are already extinct but there are still some strong populations in Sussex. A legally protected species, listed on the Sussex Rare Species Inventory and the subject of a Sussex Species Action Programme.

Designations

Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Protected Species Register Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.1 killing/injuring; 9.1 taking; 9.2; 9.4a; 9.4b; 9.5a; 9.5b; Schedule 5)

Grid Reference	Recorder	Date	Locality
TQ330373	Ken Ashby	1981	East Sussex (VC14)

0 Confidential records exist for this enquiry area. Please contact the record centre if you require further information.
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SUSSEX INVASIVE ALIEN SPECIES REPORT

The Sussex Invasive Alien Species Report is produced in order to help minimise the threat posed by invasive alien species in Sussex. Records are labelled so that only one record per species per grid reference is included - this will usually be the most up to date record.

Most alien species pose no threat to native species, and indeed many naturalised non-natives represent important additions to our flora and fauna. An older record of an alien invasive species may denote that there was once a problem at this site, but it has subsequently been dealt with. However, the problem may still persist but no up to date information is available.

What is an Invasive Alien Species?

The term alien is synonymous with the term non-native. An invasive alien is defined as an alien species whose introduction and/or spread threatens biological diversity. Invasive alien species are referred to by several names, which are often used interchangeably: non-natives, introduced, non-indigenous, exotic, foreign, noxious, aggressive, pest or harmful species.

What's the problem?

With no natural predators and a benign climate, invasive alien species can out-compete our native plant and animal species. For example, some invasive alien plants species can change light levels, decrease dissolved oxygen in water, change soil chemistry and its structure, and increase surface run-off and soil erosion. On a more subtle level, invasive alien species can affect ecosystem processes such as nutrient cycling, pollination and regeneration of soils. Invasive fauna can compete with native species, displace them, consume them, act as parasites or transmit diseases, reduce growth and survival rates, cause the decline or extinction of local populations or even entire species.

What control is in place?

Section 14 of The Wildlife and Countryside Act (1981) is the principal legislation dealing with the release of non-native species. This has been amended by the Natural Environment and Rural Communities (NERC) Act (2006) in England and Wales. Section 14 of the Act makes it illegal to allow any animal which is not ordinarily resident in Great Britain, or is listed on Schedule 9 of the Act, to escape into the wild, or to release it into the wild. It is also illegal to plant or otherwise cause to grow in the wild any plant listed on Schedule 9 of the Act.

What to do if there is an invasive alien species on your site

If you have any of the species listed in this report on your site, firstly investigate the recommended control for the particular species. You can search by species name on the [GB non-native species secretariat website](#) for further advice.

If there are invasive alien species at your site that are not in this report please contact us on sxbrc@sussexwt.org.uk or 01273 497521 so that we can update our database.

SUSSEX INVASIVE ALIEN SPECIES REPORT

Please note that bird records are not included in this report.

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014 ESD/14/198 Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235
Brionny Brady (Calumma Ecological Services)

Crocasmia pottsii x *aurea* = *C. x* Montbretia *crocosmiiflora*

Flowering plant

A well-known garden escape with orange flowers from South Africa. Widespread across Sussex. Listed on Schedule 9 of the Wildlife & Countryside Act 1981.

Designations

Grid Reference	Recorder	Date	Locality
TQ33I	Alan Knapp	15/08/2007	W of Crawley Down, East Sussex (VC14)

Hyacinthoides non-scripta x *hispanica* Hybrid bluebell = *H. x massartiana*

Flowering plant

A species from Spain and Portugal that has been recorded as a garden escape since 1909 and occasionally becomes naturalised. Often confused with its more invasive hybrid with our native bluebell *H. hispanica* x *H. non-scripta*. Widespread in Sussex.

Designations

Scottish Biodiversity List of species of principal importance for biodiversity conservation; Wildlife and Countryside Act 1981 (Schedule 8)

Grid Reference	Recorder	Date	Locality
TQ33I	Alan Knapp	18/05/2006	E of Rowfant, East Sussex (VC14)

Crassula helmsii New Zealand Pigmyweed

Flowering plant

An Australasian aquatic plant introduced to Britain in the 1920s. It started to spread rapidly in the late 1970s and is now widespread around ponds, lakes and reservoirs, though possibly declining. It has a very damaging effect on indigenous flora and fauna by smothering waterside habitat and is almost impossible to eradicate from a site once it is established.

Designations

Grid Reference	Recorder	Date	Locality
TQ33I	Arthur Hoare	22/06/2004	Turners Hill/Rowfant, East Sussex (VC14)

Prunus laurocerasus

Cherry Laurel

Flowering plant

From eastern Europe and western Asia a now widely planted and often self-sown shrub in many woods in Britain. In some cases it makes up the whole of the lower canopy, effectively shading out any ground flora and preventing the natural regeneration of trees and shrubs. Widespread and increasing in Sussex.

Designations

Grid Reference	Recorder	Date	Locality
TQ33I	Arthur Hoare	22/06/2004	Turners Hill/Rowfant, East Sussex (VC14)

Rosa rugosa

Japanese Rose

Flowering plant

A native of eastern Asia and now widespread as a garden escape in Britain, favouring waste ground and sandy areas. It can form extensive thickets and is increasing. Widely recorded in Sussex. Listed on Schedule 9 of the Wildlife & Countryside Act 1981.

Designations

Farm Environment Plan Guidance 001

Grid Reference	Recorder	Date	Locality
TQ334373	Alan Knapp	15/08/2007	W of Crawley Down, East Sussex (VC14)

Fallopia japonica

Japanese Knotweed

Flowering plant

Listed on Schedule 9 Part II of the Wildlife & Countryside Act (1981). It is an offence to plant or otherwise cause to grow the species in the wild. Described as the most pernicious weed in Britain by Plantlife, Japanese knotweed was introduced in the UK in the mid-19th century as an ornamental plant. It is now a problem invasive perennial throughout Europe. It is an offence to plant, or otherwise cause to grow, the species in the wild. Landowners are liable to prosecution if they allow the plant to spread from their land.

Designations

Grid Reference	Recorder	Date	Locality
TQ320369	Mary Scruby	28/06/1982	Horsepasture & Layhouse Woods, Blackpond Shaw, Cra
TQ33I	Alan Knapp	18/05/2006	E of Rowfant, East Sussex (VC14)

Rhododendron ponticum

Rhododendron

Flowering plant

A naturalised, purple-flowered shrub introduced in 1763. Most UK plants derive from Spanish stock. A highly invasive species that suppresses native vegetation and its associated flora and fauna.

Designations

Grid Reference	Recorder	Date	Locality
TQ312363	Kate Ryland	August 1999	Oaken Wood North
TQ319354	Unknown	10/06/1982	Oaken Wood, Stony Plats and High Lines, Worth
TQ320369	Mary Scruby	28/06/1982	Horsepasture & Layhouse Woods, Blackpond Shaw, Cra
TQ321357	Kate Ryland	August 1999	Stony Plats
TQ33I	Arthur Hoare	22/06/2004	Turners Hill/Rowfant, East Sussex (VC14)

Lamium galeobdolon subsp.
argentatum

Yellow Archangel

Flowering plant

Often listed just as *Lamiastrum galeobdolon montanum*. However, the New Atlas of the British Flora and other sources point out that *L. g. montanum* is the widespread yellow archangel of the British countryside and that the nominate subspecies *L. g. ssp. galeobdolon* is a rare plant confined as a native to Lincolnshire and Kirkcudbrightshire. Some authorities position the variegated invasive alien yellow archangel as *L. g. ssp. montanum*, others as *L. g. ssp. argentatum*. This latter form is thought to have been introduced in the late 1960s and is spreading rapidly. It is widespread in Sussex and listed on Schedule 9 of the Wildlife & Countryside Act 1981.

Designations

Grid Reference	Recorder	Date	Locality
TQ33I	Alan Knapp	18/05/2006	E of Rowfant, East Sussex (VC14)

Petasites fragrans

Winter Heliotrope

Flowering plant

A large-leaved, rampant perennial plant from the Far East spreading by means of underground stems by up to 1 metre per year. Very invasive, often forming large wayside colonies to the exclusion of all other species. Sweet scented mauve pink spikes of flower in winter.

Designations

Grid Reference	Recorder	Date	Locality
TQ33I	Arthur Hoare	22/06/2004	Turners Hill/Rowfant, East Sussex (VC14)

FULL SPECIES LIST (Excluding Birds)

Land at Turners Hill Road, Rowfant + 1km radius

22 April 2014 ESD/14/198 Search Area: TQ3136 to TQ3337; TQ3135 to TQ3235

Brionny Brady (Calumma Ecological Services)

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Pellia endiviifolia</i>	Endive Pellia	liverwort	31/08/1957	-	1
<i>Pellia epiphylla</i>	Overleaf Pellia	liverwort	10/06/1982	28/06/1982	2
<i>Scapania nemorea</i>	Grove Earwort	liverwort	31/08/1957	-	1
<i>Nardia scalaris</i>	Ladder Flapwort	liverwort	31/08/1957	-	1
<i>Sphagnum palustre</i>	Blunt-leaved Bog-moss	moss	28/06/1982	-	1
<i>Atrichum undulatum</i>	Common Smoothcap	moss	10/06/1982	28/06/1982	2
<i>Polytrichum formosum</i>	Bank Haircap	moss	28/06/1982	-	1
<i>Polytrichum longisetum</i>	Slender Haircap	moss	31/08/1957	-	1
<i>Fissidens bryoides</i>	Lesser Pocket-moss	moss	28/06/1982	-	1
<i>Fissidens taxifolius</i>	Common Pocket-moss	moss	10/06/1982	-	1
<i>Dicranella heteromalla</i>	Silky Forklet-moss	moss	10/06/1982	28/06/1982	2
<i>Dicranum scoparium</i>	Broom Fork-moss	moss	28/06/1982	-	1
<i>Leucobryum glaucum</i>	Large White-moss	moss	28/06/1982	-	1
<i>Philonotis fontana</i>	Fountain Apple-moss	moss	31/08/1957	-	1
<i>Bryum pseudotriquetrum</i> var. <i>pseudotriquetrum</i>		moss	31/08/1957	-	1
<i>Mnium hornum</i>	Swan's-neck Thyme-moss	moss	10/06/1982	28/06/1982	2
<i>Rhizomnium punctatum</i>	Dotted Thyme-moss	moss	10/06/1982	-	1
<i>Plagiomnium undulatum</i>	Hart's-tongue Thyme-moss	moss	10/06/1982	-	1
<i>Fontinalis antipyretica</i>	Greater Water-moss	moss	10/06/1982	-	1
<i>Thuidium tamariscinum</i>	Common Tamarisk-moss	moss	31/08/1957	28/06/1982	3
<i>Eurhynchium praelongum</i>	Common Feather-moss	moss	10/06/1982	28/06/1982	2
<i>Eurhynchium striatum</i>	Common Striated Feather-moss	moss	10/06/1982	-	1
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss	moss	28/06/1982	-	1
<i>Scleropodium purum</i>	Neat Feather-moss	moss	10/06/1982	28/06/1982	2
<i>Calliergonella cuspidata</i>	Pointed Spear-moss	moss	31/08/1957	-	1
<i>Hypnum cupressiforme</i>		moss	10/06/1982	28/06/1982	2
<i>Pleurozium schreberi</i>	Red-stemmed Feather-moss	moss	31/08/1957	-	1
<i>Rhytidiadelphus squarrosus</i>	Springy Turf-moss	moss	31/08/1957	10/06/1982	2

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Hylocomium splendens</i>	Glittering Wood-moss	moss	31/08/1957	-	1
<i>Pseudotaxiphyllum elegans</i>	Elegant Silk-moss	moss	10/06/1982	-	1
<i>Pteridium aquilinum</i>	Bracken	fern	10/06/1982	22/06/2004	8
<i>Phyllitis scolopendrium</i>	Hart's-tongue	fern	22/06/2004	-	1
<i>Asplenium adiantum-nigrum</i>	Black Spleenwort	fern	22/06/2004	-	2
<i>Oreopteris limbosperma</i>	Lemon-scented Fern	fern	08/06/2004	-	1
<i>Athyrium filix-femina</i>	Lady-fern	fern	10/06/1982	03/07/2012	5
<i>Blechnum spicant</i>	Hard-fern	fern	28/06/1982	22/06/2004	6
<i>Polystichum setiferum</i>	Soft Shield-fern	fern	31/08/1999	15/04/2006	5
<i>Dryopteris filix-mas</i> agg.	Male Fern	fern	10/06/1982	31/08/1999	3
<i>Dryopteris affinis</i>	Scaly Male-fern	fern	31/12/2006	-	1
<i>Dryopteris dilatata</i>	Broad Buckler-fern	fern	10/06/1982	03/07/2012	5
<i>Dryopteris filix-mas</i>	Male-fern	fern	31/08/1999	03/07/2012	6
<i>Polypodium vulgare</i>	Polypody	fern	21/06/2005	-	1
<i>Equisetum arvense</i>	Field Horsetail	horsetail	22/06/2004	-	1
<i>Equisetum fluviatile</i>	Water Horsetail	horsetail	28/06/1982	-	1
<i>Pinaceae</i>		conifer	28/06/1982	-	1
<i>Tsuga heterophylla</i>	Western Hemlock-spruce	conifer	31/12/1995	21/02/2004	2
<i>Larix decidua</i>	European Larch	conifer	21/02/2004	-	1
<i>Pinus sylvestris</i>	Scots Pine	conifer	10/06/1982	21/02/2004	4
<i>Taxus baccata</i>	Yew	conifer	10/06/1982	31/12/2006	8
<i>Nuphar lutea</i>	Yellow Water-lily	flowering plant	28/06/1982	-	1
<i>Liriodendron tulipifera</i>	Tulip-tree	flowering plant	09/10/2004	-	1
<i>Arum maculatum</i>	Lords-and-Ladies	flowering plant	10/06/1982	22/06/2004	5
<i>Lemna minor</i>	Common Duckweed	flowering plant	22/06/2004	05/12/2009	2
<i>Lemna minuta</i>	Least Duckweed	flowering plant	08/03/2005	-	1
<i>Potamogeton crispus</i>	Curled Pondweed	flowering plant	05/12/2009	-	1
<i>Dioscorea communis</i>	Black Bryony	flowering plant	10/06/1982	03/07/2012	4
<i>Orchidaceae</i>	Orchid	flowering plant	31/08/1999	-	2
<i>Epipactis helleborine</i>	Broad-leaved Helleborine	flowering plant	30/08/2005	31/12/2006	2
<i>Neottia nidus-avis</i>	Bird's-nest Orchid	flowering plant	20/05/2004	22/06/2004	5
<i>Listera ovata</i>	Common Twayblade	flowering plant	10/06/1982	24/04/2006	6
<i>Dactylorhiza fuchsii</i>	Common Spotted-orchid	flowering plant	10/06/1982	03/07/2012	23
<i>Orchis morio</i>	Green-winged Orchid	flowering plant	31/12/2000	18/05/2006	3
<i>Iris pseudacorus</i>	Yellow Iris	flowering plant	21/06/2005	18/05/2006	2
<i>Crocus pottsii x aurea</i> = <i>C. x crocosmiiflor</i>	Montbretia	flowering plant	15/08/2007	-	2
<i>Allium ursinum</i>	Ramsons	flowering plant	28/06/1982	04/06/2005	3
<i>Galanthus nivalis</i>	Snowdrop	flowering plant	05/02/2003	08/03/2005	4
<i>Narcissus pseudonarcissus</i>	Daffodil	flowering plant	21/02/2004	-	1
<i>Narcissus pseudonarcissus subsp. pseudonar</i>	Daffodil	flowering plant	04/06/2005	-	1
<i>Hyacinthoides non-scripta</i>	Bluebell	flowering plant	10/06/1982	03/07/2012	9
<i>Hyacinthoides non-scripta x hispanica</i> = <i>H. x</i>	Hybrid bluebell	flowering plant	18/05/2006	-	2
<i>Ruscus aculeatus</i>	Butcher's-broom	flowering plant	10/06/1982	-	1
<i>Sparganium erectum</i>	Branched Bur-reed	flowering plant	28/06/1982	22/06/2004	2

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Typha latifolia</i>	Bulrush	flowering plant	28/06/1982	-	1
<i>Juncus bufonius</i> agg.	Toad Rush agg.	flowering plant	31/08/1999	-	1
<i>Juncus acutiflorus</i>	Sharp-flowered Rush	flowering plant	28/06/1982	-	1
<i>Juncus articulatus</i>	Jointed Rush	flowering plant	28/06/1982	31/08/1999	2
<i>Juncus bufonius</i>	Toad Rush	flowering plant	22/06/2004	-	1
<i>Juncus bulbosus</i>	Bulbous Rush	flowering plant	28/06/1982	22/06/2004	2
<i>Juncus conglomeratus</i>	Compact Rush	flowering plant	28/06/1982	20/05/2004	5
<i>Juncus effusus</i>	Soft-rush	flowering plant	10/06/1982	03/07/2012	7
<i>Juncus inflexus</i>	Hard Rush	flowering plant	10/06/1982	-	1
<i>Juncus tenuis</i>	Slender Rush	flowering plant	22/06/2004	-	1
<i>Luzula campestris</i>	Field Wood-rush	flowering plant	29/04/2007	-	1
<i>Luzula forsteri</i>	Southern Wood-rush	flowering plant	04/06/2005	-	1
<i>Luzula multiflora</i>	Heath Wood-rush	flowering plant	10/06/1982	20/05/2004	2
<i>Luzula pilosa</i>	Hairy Wood-rush	flowering plant	10/06/1982	22/06/2004	3
<i>Carex</i>	Sedge	flowering plant	03/07/2012	-	1
<i>Carex divulsa</i> subsp. <i>divulsa</i>	Grey Sedge	flowering plant	22/06/2004	-	1
<i>Carex flacca</i>	Glaucous Sedge	flowering plant	10/06/1982	18/05/2006	2
<i>Carex pallescens</i>	Pale Sedge	flowering plant	10/06/1982	-	1
<i>Carex pendula</i>	Pendulous Sedge	flowering plant	10/06/1982	22/06/2004	3
<i>Carex remota</i>	Remote Sedge	flowering plant	10/06/1982	03/07/2012	8
<i>Carex riparia</i>	Greater Pond-sedge	flowering plant	28/06/1982	-	1
<i>Carex sylvatica</i>	Wood-sedge	flowering plant	10/06/1982	22/06/2004	6
<i>Sasa palmata</i>	Broad-leaved Bamboo	flowering plant	08/03/2005	-	1
<i>Sasa ramosa</i>	Hairy Bamboo	flowering plant	08/03/2005	-	1
<i>Milium effusum</i>	Wood Millet	flowering plant	04/06/2005	-	1
<i>Lolium perenne</i>	Perennial Rye-grass	flowering plant	31/08/1999	22/06/2004	2
<i>Festuca rubra</i> agg.	Red Fescue	flowering plant	31/08/1999	17/06/2009	2
<i>Festuca arundinacea</i>	Tall Fescue	flowering plant	17/06/2009	-	1
<i>Festuca filiformis</i>	Fine-leaved Sheep's-fescue	flowering plant	18/05/2006	-	1
<i>Festuca gigantea</i>	Giant Fescue	flowering plant	10/06/1982	20/05/2004	3
<i>Vulpia myuros</i>	Rat's-tail Fescue	flowering plant	22/06/2004	-	1
<i>Cynosurus cristatus</i>	Crested Dog's-tail	flowering plant	10/06/1982	28/06/1982	2
<i>Poa pratensis</i>	Smooth Meadow-Grass	flowering plant	20/05/2004	-	1
<i>Poa annua</i>	Annual Meadow-grass	flowering plant	10/06/1982	22/06/2004	3
<i>Poa nemoralis</i>	Wood Meadow-grass	flowering plant	10/06/1982	22/06/2004	4
<i>Poa trivialis</i>	Rough Meadow-grass	flowering plant	10/06/1982	22/06/2004	3
<i>Dactylis glomerata</i>	Cock's-foot	flowering plant	10/06/1982	22/06/2004	6
<i>Arrhenatherum elatius</i>	False Oat-grass	flowering plant	31/08/1999	22/06/2004	2
<i>Deschampsia cespitosa</i>	Tufted Hair-Grass	flowering plant	10/06/1982	04/06/2005	7
<i>Deschampsia flexuosa</i>	Wavy Hair-grass	flowering plant	28/06/1982	22/06/2004	5
<i>Holcus lanatus</i>	Yorkshire-fog	flowering plant	10/06/1982	22/06/2004	7
<i>Holcus mollis</i>	Creeping Soft-grass	flowering plant	10/06/1982	22/06/2004	5
<i>Aira praecox</i>	Early Hair-grass	flowering plant	28/06/1982	-	1
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	flowering plant	10/06/1982	18/05/2006	5

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Agrostis canina</i>	Velvet Bent	flowering plant	28/06/1982	-	1
<i>Agrostis canina</i>	Velvet Bent	flowering plant	10/06/1982	-	1
<i>Agrostis capillaris</i>	Common Bent	flowering plant	10/06/1982	15/08/2007	7
<i>Agrostis stolonifera</i>	Creeping Bent	flowering plant	31/08/1999	09/08/2008	2
<i>Alopecurus pratensis</i>	Meadow Foxtail	flowering plant	04/06/2005	-	1
<i>Phleum pratense</i>	Timothy	flowering plant	31/08/1999	-	1
<i>Phleum pratense</i>	Timothy	flowering plant	22/06/2004	-	1
<i>Melica uniflora</i>	Wood Melick	flowering plant	10/06/1982	22/06/2004	3
<i>Bromus hordeaceus subsp. hordeaceus</i>	Common Soft-brome	flowering plant	11/05/2005	-	1
<i>Bromus sterilis</i>	Barren Brome	flowering plant	22/06/2004	-	1
<i>Bromopsis ramosa</i>	Hairy-brome	flowering plant	15/08/2007	-	1
<i>Brachypodium sylvaticum</i>	False-brome	flowering plant	10/06/1982	22/06/2004	7
<i>Elytrigia repens</i>	Common Couch	flowering plant	22/06/2004	-	1
<i>Hordeum distichon</i>	Two-Rowed Barley	flowering plant	04/06/2005	-	1
<i>Hordeum distichon</i>	Two-rowed Barley	flowering plant	20/05/2004	-	1
<i>Molinia caerulea</i>	Purple Moor-grass	flowering plant	22/06/2004	-	1
<i>Phragmites australis</i>	Common Reed	flowering plant	22/10/2005	-	1
<i>Echinochloa crus-galli</i>	Cockspur	flowering plant	27/09/2003	-	1
<i>Papaver dubium subsp. dubium</i>	Long-headed Poppy	flowering plant	22/06/2004	-	1
<i>Papaver somniferum</i>	Opium Poppy	flowering plant	09/08/2008	-	1
<i>Chelidonium majus</i>	Greater Celandine	flowering plant	14/02/2006	-	1
<i>Caltha palustris</i>	Marsh-marigold	flowering plant	28/06/1982	29/04/2008	2
<i>Anemone nemorosa</i>	Wood Anemone	flowering plant	10/06/1982	22/06/2004	4
<i>Ranunculus acris</i>	Meadow Buttercup	flowering plant	20/05/2004	04/06/2005	2
<i>Ranunculus auricomus</i>	Goldilocks Buttercup	flowering plant	UNKNOWN	-	1
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	flowering plant	18/05/2006	-	1
<i>Ranunculus ficaria</i>	Lesser Celandine	flowering plant	10/06/1982	14/02/2006	2
<i>Ranunculus ficaria subsp. ficaria</i>	Lesser Celandine	flowering plant	04/06/2005	-	1
<i>Ranunculus flammula</i>	Lesser Spearwort	flowering plant	28/06/1982	22/06/2004	2
<i>Ranunculus repens</i>	Creeping Buttercup	flowering plant	10/06/1982	03/07/2012	9
<i>Aquilegia vulgaris</i>	Columbine	flowering plant	18/05/2006	-	1
<i>Ribes nigrum</i>	Black Currant	flowering plant	11/05/2005	-	1
<i>Ribes rubrum</i>	Red Currant	flowering plant	10/06/1982	03/07/2012	8
<i>Ribes uva-crispa</i>	Gooseberry	flowering plant	31/08/1999	03/07/2012	3
<i>Chrysosplenium oppositifolium</i>	Opposite-leaved Golden-saxifrage	flowering plant	10/06/1982	29/04/2008	7
<i>Crassula helmsii</i>	New Zealand Pigmyweed	flowering plant	22/06/2004	-	1
<i>Sedum telephium</i>	Orpine	flowering plant	22/06/2004	-	2
<i>Galega officinalis</i>	Goat's-rue	flowering plant	17/06/2009	-	1
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	flowering plant	10/06/1982	22/06/2004	4
<i>Lotus pedunculatus</i>	Greater Bird's-foot-trefoil	flowering plant	10/06/1982	22/06/2004	4
<i>Vicia cracca</i>	Tufted Vetch	flowering plant	28/06/1982	22/06/2004	4
<i>Vicia hirsuta</i>	Hairy Tare	flowering plant	22/06/2004	-	1
<i>Vicia sativa</i>	Common Vetch	flowering plant	10/06/1982	-	1
<i>Vicia sativa subsp. nigra</i>	Narrow-leaved Vetch	flowering plant	18/05/2006	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Vicia sativa</i> subsp. <i>segetalis</i>	Common Vetch	flowering plant	22/06/2004	-	1
<i>Vicia sepium</i>	Bush Vetch	flowering plant	22/06/2004	-	1
<i>Vicia tetrasperma</i>	Smooth Tare	flowering plant	22/06/2004	-	1
<i>Lathyrus linifolius</i>	Bitter-vetch	flowering plant	31/08/1999	-	1
<i>Lathyrus pratensis</i>	Meadow Vetchling	flowering plant	28/06/1982	15/08/2007	2
<i>Medicago lupulina</i>	Black Medick	flowering plant	22/06/2004	-	1
<i>Trifolium</i>	Clover	flowering plant	28/06/1982	-	1
<i>Trifolium dubium</i>	Lesser Trefoil	flowering plant	20/05/2004	-	1
<i>Trifolium hybridum</i> subsp. <i>hybridum</i>	Alsike Clover	flowering plant	22/06/2004	-	1
<i>Trifolium medium</i>	Zigzag Clover	flowering plant	22/06/2004	-	1
<i>Trifolium pratense</i>	Red Clover	flowering plant	31/08/1999	15/08/2007	2
<i>Trifolium repens</i>	White Clover	flowering plant	28/06/1982	22/06/2004	2
<i>Ulex europaeus</i>	Gorse	flowering plant	28/06/1982	18/05/2006	3
<i>Prunus avium</i>	Wild Cherry	flowering plant	10/06/1982	22/06/2004	5
<i>Prunus laurocerasus</i>	Cherry Laurel	flowering plant	21/02/2004	22/06/2004	2
<i>Prunus spinosa</i>	Blackthorn	flowering plant	10/06/1982	18/05/2006	7
<i>Oemleria cerasiformis</i>	Osoberry	flowering plant	15/04/2006	-	1
<i>Malus sylvestris</i>	Crab Apple	flowering plant	10/06/1982	31/08/1999	5
<i>Sorbus aucuparia</i>	Rowan	flowering plant	10/06/1982	22/06/2004	5
<i>Crataegus laevigata</i>	Midland Hawthorn	flowering plant	31/08/1999	-	2
<i>Crataegus monogyna</i>	Hawthorn	flowering plant	10/06/1982	22/06/2004	7
<i>Filipendula ulmaria</i>	Meadowsweet	flowering plant	28/06/1982	03/07/2012	3
<i>Rubus fruticosus</i> agg.	Bramble	flowering plant	10/06/1982	03/07/2012	9
<i>Rubus idaeus</i>	Raspberry	flowering plant	28/06/1982	22/06/2004	2
<i>Rubus arnipotens</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus cissburiensis</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus decussatus</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus flexuosus</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus largificus</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus leucostachys</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus nemorosus</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus newbridgensis</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus subinermoides</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Rubus tuberculatus</i>	Bramble	flowering plant	31/12/1994	-	1
<i>Potentilla anserina</i>	Silverweed	flowering plant	31/08/1999	22/06/2004	2
<i>Potentilla erecta</i>	Tormentil	flowering plant	10/06/1982	22/06/2004	6
<i>Potentilla reptans</i>	Creeping Cinquefoil	flowering plant	10/06/1982	22/06/2004	4
<i>Potentilla sterilis</i>	Barren Strawberry	flowering plant	10/06/1982	03/07/2012	6
<i>Fragaria vesca</i>	Wild Strawberry	flowering plant	10/06/1982	22/06/2004	3
<i>Geum urbanum</i>	Wood Avens	flowering plant	10/06/1982	22/06/2004	7
<i>Agrimonia eupatoria</i>	Agrimony	flowering plant	28/06/1982	15/08/2007	2
<i>Agrimonia procera</i>	Fragrant Agrimony	flowering plant	20/07/2008	-	1
<i>Alchemilla mollis</i>	Garden Lady's-mantle	flowering plant	04/06/2005	-	1
<i>Aphanes arvensis</i>	Parsley-piert	flowering plant	22/06/2004	-	1

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<i>Rosa</i>	Rose	flowering plant	31/08/1999	-	3
<i>Rosa canina</i> agg.	Dog Rose	flowering plant	10/06/1982	22/06/2004	2
<i>Rosa arvensis</i>	Field-rose	flowering plant	10/06/1982	21/06/2005	4
<i>Rosa rugosa</i>	Japanese Rose	flowering plant	15/08/2007	-	1
<i>Rosa virginiana</i>	Virginian Rose	flowering plant	22/06/2004	-	1
<i>Frangula alnus</i>	Alder Buckthorn	flowering plant	28/06/1982	25/08/2009	3
<i>Urtica dioica</i>	Common Nettle	flowering plant	10/06/1982	22/06/2004	6
<i>Fagus sylvatica</i>	Beech	flowering plant	10/06/1982	22/06/2004	8
<i>Castanea sativa</i>	Sweet Chestnut	flowering plant	10/06/1982	22/06/2004	7
<i>Quercus petraea</i>	Sessile Oak	flowering plant	28/06/1982	15/08/2007	2
<i>Quercus petraea</i> x <i>robur</i> = <i>Q. x rosacea</i>	Hybrid Oak	flowering plant	22/06/2004	01/08/2004	2
<i>Quercus robur</i>	Pedunculate Oak	flowering plant	10/06/1982	22/06/2004	7
<i>Betula pendula</i>	Silver Birch	flowering plant	10/06/1982	22/06/2004	7
<i>Betula pubescens</i>	Downy Birch	flowering plant	10/06/1982	20/05/2004	3
<i>Alnus glutinosa</i>	Alder	flowering plant	28/06/1982	03/07/2012	6
<i>Alnus incana</i>	Grey Alder	flowering plant	31/12/2000	-	1
<i>Carpinus betulus</i>	Hornbeam	flowering plant	31/08/1999	-	3
<i>Corylus avellana</i>	Hazel	flowering plant	10/06/1982	03/07/2012	9
<i>Oxalis acetosella</i>	Wood-sorrel	flowering plant	10/06/1982	22/06/2004	7
<i>Oxalis corniculata</i>	Procumbent Yellow-sorrel	flowering plant	15/08/2007	-	1
<i>Mercurialis perennis</i>	Dog's Mercury	flowering plant	10/06/1982	22/06/2004	5
<i>Euphorbia amygdaloides</i>	Wood Spurge	flowering plant	10/06/1982	03/07/2012	8
<i>Euphorbia peplus</i>	Petty Spurge	flowering plant	21/02/2004	-	1
<i>Populus tremula</i>	Aspen	flowering plant	28/06/1982	22/06/2004	2
<i>Salix aurita</i>	Eared Willow	flowering plant	28/06/1982	-	1
<i>Salix caprea</i>	Goat Willow	flowering plant	10/06/1982	22/06/2004	6
<i>Salix cinerea</i>	Common Sallow	flowering plant	10/06/1982	31/08/1999	5
<i>Salix cinerea</i> subsp. <i>oleifolia</i>	Rusty Willow	flowering plant	22/06/2004	-	1
<i>Viola</i>	Violet	flowering plant	03/07/2012	-	1
<i>Viola palustris</i>	Marsh Violet	flowering plant	28/06/1982	-	1
<i>Viola riviniana</i>	Common Dog-violet	flowering plant	10/06/1982	22/06/2004	6
<i>Hypericum androsaemum</i>	Tutsan	flowering plant	10/06/1982	05/12/2009	4
<i>Hypericum maculatum</i>	Imperforate St John's-wort	flowering plant	10/06/1982	31/08/1999	3
<i>Hypericum perforatum</i>	Perforate St John's-wort	flowering plant	22/06/2004	-	1
<i>Hypericum pulchrum</i>	Slender St John's-wort	flowering plant	28/06/1982	05/12/2009	4
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort	flowering plant	28/06/1982	22/06/2004	2
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	flowering plant	29/04/2007	-	1
<i>Geranium endressii</i> x <i>versicolor</i> = <i>G. x oxonia</i>	Druce's Crane's-bill	flowering plant	09/08/2008	-	1
<i>Geranium phaeum</i>	Dusky Crane's-bill	flowering plant	31/12/2000	-	1
<i>Geranium pratense</i>	Meadow Crane's-bill	flowering plant	31/12/2000	-	1
<i>Geranium pyrenaicum</i>	Hedgerow Crane's-bill	flowering plant	20/05/2004	-	1
<i>Geranium robertianum</i>	Herb-Robert	flowering plant	10/06/1982	03/07/2012	7
<i>Lythrum portula</i>	Water-purslane	flowering plant	22/06/2004	-	1
<i>Epilobium ciliatum</i>	American Willowherb	flowering plant	22/06/2004	-	1

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<i>Epilobium hirsutum</i>	Great Willowherb	flowering plant	28/06/1982	22/06/2004	3
<i>Epilobium montanum</i>	Broad-leaved Willowherb	flowering plant	10/06/1982	22/06/2004	5
<i>Epilobium parviflorum</i>	Hoary Willowherb	flowering plant	22/06/2004	-	1
<i>Epilobium roseum</i>	Pale Willowherb	flowering plant	31/12/1997	22/06/2004	3
<i>Epilobium tetragonum</i>	Square-stalked Willowherb	flowering plant	15/08/2007	-	1
<i>Chamerion angustifolium</i>	Rosebay Willowherb	flowering plant	10/06/1982	22/06/2004	4
<i>Oenothera glazioviana</i>	Large-flowered Evening-primrose	flowering plant	22/06/2004	-	1
<i>Circaea lutetiana</i>	Enchanter's-nightshade	flowering plant	10/06/1982	03/07/2012	8
<i>Aesculus hippocastanum</i>	Horse-chestnut	flowering plant	31/08/1999	18/05/2006	3
<i>Acer campestre</i>	Field Maple	flowering plant	10/06/1982	31/08/1999	4
<i>Acer platanoides</i>	Norway Maple	flowering plant	10/06/1982	22/06/2004	3
<i>Acer pseudoplatanus</i>	Sycamore	flowering plant	10/06/1982	22/06/2004	5
<i>Acer saccharinum</i>	Silver Maple	flowering plant	31/12/1995	22/06/2004	3
<i>Malva moschata</i>	Musk-mallow	flowering plant	28/06/1982	22/06/2004	2
<i>Tilia cordata</i>	Small-leaved Lime	flowering plant	10/06/1982	30/09/2009	5
<i>Tilia platyphyllos</i> x <i>cordata</i> = <i>T. x europaea</i>	Lime	flowering plant	22/06/2004	-	1
<i>Erysimum cheiranthoides</i>	Treacle-mustard	flowering plant	10/09/2003	-	1
<i>Arabidopsis thaliana</i>	Thale Cress	flowering plant	04/06/2005	18/05/2006	2
<i>Capsella bursa-pastoris</i>	Shepherd's-purse	flowering plant	22/06/2004	-	1
<i>Barbarea vulgaris</i>	Winter-cress	flowering plant	22/06/2004	-	1
<i>Rorippa nasturtium-aquaticum</i> agg.	Water Cress	flowering plant	29/04/2007	-	1
<i>Rorippa nasturtium-aquaticum</i>	Water-cress	flowering plant	22/06/2004	-	1
<i>Rorippa sylvestris</i>	Creeping Yellow-cress	flowering plant	17/06/2009	-	1
<i>Cardamine bulbifera</i>	Coralroot	flowering plant	31/12/1995	-	1
<i>Cardamine flexuosa</i>	Wavy Bitter-cress	flowering plant	28/06/1982	22/06/2004	5
<i>Cardamine hirsuta</i>	Hairy Bitter-cress	flowering plant	26/03/2009	-	1
<i>Cardamine pratensis</i>	Cuckooflower	flowering plant	10/06/1982	04/06/2005	4
<i>Lepidium didymum</i>	Lesser Swine-cress	flowering plant	22/06/2004	09/08/2008	2
<i>Lunaria annua</i>	Honesty	flowering plant	29/04/2007	-	1
<i>Raphanus raphanistrum</i> subsp. <i>raphanistrum</i>	Wild Radish	flowering plant	22/06/2004	-	1
<i>Sisymbrium officinale</i>	Hedge Mustard	flowering plant	18/05/2006	-	1
<i>Alliaria petiolata</i>	Garlic Mustard	flowering plant	31/08/1999	22/06/2004	2
<i>Viscum album</i>	Mistletoe	flowering plant	21/02/2004	20/12/2011	4
<i>Limonium vulgare</i>	Common Sea-lavender	flowering plant	22/06/2004	-	1
<i>Persicaria amplexicaulis</i>	Red Bistort	flowering plant	22/06/2004	01/08/2004	2
<i>Persicaria hydropiper</i>	Water-pepper	flowering plant	31/08/1999	15/08/2007	5
<i>Persicaria maculosa</i>	Redshank	flowering plant	28/06/1982	22/06/2004	3
<i>Polygonum aviculare</i>	Knotgrass	flowering plant	15/08/2007	-	1
<i>Fallopia japonica</i>	Japanese Knotweed	flowering plant	28/06/1982	18/05/2006	2
<i>Rumex acetosa</i>	Common Sorrel	flowering plant	28/06/1982	20/05/2004	3
<i>Rumex crispus</i>	Curled Dock	flowering plant	22/06/2004	-	1
<i>Rumex obtusifolius</i>	Broad-leaved Dock	flowering plant	22/06/2004	-	1
<i>Rumex sanguineus</i>	Wood Dock	flowering plant	10/06/1982	22/06/2004	6
<i>Moehringia trinervia</i>	Three-nerved Sandwort	flowering plant	10/06/1982	22/06/2004	4

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<i>Stellaria media</i> agg.	Chickweed	flowering plant	10/06/1982	-	1
<i>Stellaria alsine</i>	Bog Stitchwort	flowering plant	10/06/1982	-	1
<i>Stellaria graminea</i>	Lesser Stitchwort	flowering plant	28/06/1982	22/06/2004	2
<i>Stellaria holostea</i>	Greater Stitchwort	flowering plant	28/06/1982	18/05/2006	4
<i>Stellaria media</i>	Common Chickweed	flowering plant	28/06/1982	04/06/2005	3
<i>Cerastium fontanum</i>	Common Mouse-ear	flowering plant	28/06/1982	22/06/2004	2
<i>Cerastium glomeratum</i>	Sticky Mouse-ear	flowering plant	22/06/2004	-	1
<i>Sagina apetala</i>	Annual Pearlwort	flowering plant	17/06/2009	-	1
<i>Sagina apetala</i> subsp. <i>apetala</i>	Annual Pearlwort	flowering plant	17/06/2009	-	1
<i>Sagina procumbens</i>	Procumbent Pearlwort	flowering plant	22/06/2004	-	1
<i>Spergula arvensis</i>	Corn Spurrey	flowering plant	22/06/2004	-	1
<i>Silene dioica</i>	Red Campion	flowering plant	22/06/2004	-	1
<i>Lychnis flos-cuculi</i>	Ragged-Robin	flowering plant	10/06/1982	28/06/1982	2
<i>Atriplex prostrata</i>	Spear-leaved Orache	flowering plant	15/08/2007	-	1
<i>Claytonia sibirica</i>	Pink Purslane	flowering plant	31/12/1995	-	1
<i>Montia fontana</i>	Blinks	flowering plant	10/06/1982	28/06/1982	2
<i>Impatiens parviflora</i>	Small Balsam	flowering plant	22/06/2004	03/07/2012	2
<i>Primula vulgaris</i>	Primrose	flowering plant	10/06/1982	22/06/2004	6
<i>Lysimachia nemorum</i>	Yellow Pimpernel	flowering plant	10/06/1982	22/06/2004	7
<i>Lysimachia nummularia</i>	Creeping-Jenny	flowering plant	22/06/2004	-	1
<i>Anagallis arvensis</i> subsp. <i>arvensis</i>	Scarlet Pimpernel	flowering plant	22/06/2004	-	1
<i>Rhododendron ponticum</i>	Rhododendron	flowering plant	10/06/1982	22/06/2004	6
<i>Calluna vulgaris</i>	Heather	flowering plant	28/06/1982	22/06/2004	4
<i>Galium aparine</i>	Cleavers	flowering plant	10/06/1982	22/06/2004	4
<i>Galium palustre</i>	Marsh-bedstraw	flowering plant	10/06/1982	03/07/2012	6
<i>Galium palustre</i> subsp. <i>palustre</i>	Common Marsh-bedstraw	flowering plant	22/06/2004	-	1
<i>Centaureum erythraea</i>	Common Centaury	flowering plant	22/06/2004	-	1
<i>Vinca minor</i>	Lesser Periwinkle	flowering plant	04/06/2005	18/05/2006	2
<i>Calystegia sepium</i>	Hedge Bindweed	flowering plant	31/12/2006	-	1
<i>Solanum dulcamara</i>	Bittersweet	flowering plant	10/06/1982	22/06/2004	6
<i>Solanum nigrum</i>	Black Nightshade	flowering plant	15/08/2007	-	1
<i>Fraxinus excelsior</i>	Ash	flowering plant	10/06/1982	22/06/2004	8
<i>Ligustrum ovalifolium</i>	Garden Privet	flowering plant	08/03/2005	-	1
<i>Ligustrum vulgare</i>	Wild Privet	flowering plant	21/02/2004	22/06/2004	2
<i>Digitalis purpurea</i>	Foxglove	flowering plant	10/06/1982	22/06/2004	7
<i>Veronica beccabunga</i>	Brooklime	flowering plant	10/06/1982	22/06/2004	4
<i>Veronica chamaedrys</i>	Germander Speedwell	flowering plant	10/06/1982	22/06/2004	5
<i>Veronica filiformis</i>	Slender Speedwell	flowering plant	29/04/2007	-	1
<i>Veronica hederifolia</i> subsp. <i>hederifolia</i>	Ivy-Leaved Speedwell	flowering plant	21/02/2004	04/06/2005	2
<i>Veronica montana</i>	Wood Speedwell	flowering plant	10/06/1982	09/03/2008	8
<i>Veronica officinalis</i>	Heath Speedwell	flowering plant	28/06/1982	31/08/1999	4
<i>Veronica persica</i>	Common Field-speedwell	flowering plant	29/04/2007	-	1
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	flowering plant	22/06/2004	-	1
<i>Plantago lanceolata</i>	Ribwort Plantain	flowering plant	28/06/1982	22/06/2004	3

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Plantago major</i>	Greater Plantain	flowering plant	28/06/1982	31/08/1999	3
<i>Plantago major</i> subsp. <i>major</i>	Greater Plantain	flowering plant	22/06/2004	-	1
<i>Callitriche stagnalis</i>	Common Water-Starwort	flowering plant	UNKNOWN	-	1
<i>Callitriche stagnalis</i>	Common Water-starwort	flowering plant	22/06/2004	-	1
<i>Verbascum thapsus</i>	Great Mullein	flowering plant	22/06/2004	-	1
<i>Scrophularia auriculata</i>	Water Figwort	flowering plant	10/06/1982	09/08/2008	3
<i>Scrophularia nodosa</i>	Common Figwort	flowering plant	10/06/1982	03/07/2012	7
<i>Buddleja davidii</i>	Butterfly-bush	flowering plant	22/06/2004	-	1
<i>Stachys officinalis</i>	Betony	flowering plant	10/06/1982	22/06/2004	4
<i>Stachys palustris</i>	Marsh Woundwort	flowering plant	10/06/1982	-	1
<i>Stachys sylvatica</i>	Hedge Woundwort	flowering plant	10/06/1982	03/07/2012	8
<i>Lamium album</i>	White Dead-nettle	flowering plant	21/02/2004	-	1
<i>Lamium galeobdolon</i>	Yellow Archangel	flowering plant	28/06/1982	-	1
<i>Lamium galeobdolon</i> subsp. <i>argentatum</i>	Yellow Archangel	flowering plant	04/06/2005	18/05/2006	3
<i>Lamium galeobdolon</i> subsp. <i>montanum</i>	Yellow Archangel	flowering plant	04/06/2005	18/05/2006	3
<i>Lamium purpureum</i>	Red Dead-nettle	flowering plant	29/04/2007	-	1
<i>Galeopsis tetrahit</i> agg.	Common Hemp-Nettle agg.	flowering plant	31/08/1999	15/08/2007	2
<i>Galeopsis bifida</i>	Bifid Hemp-nettle	flowering plant	15/08/2007	-	1
<i>Galeopsis tetrahit</i>	Common Hemp-nettle	flowering plant	28/06/1982	-	1
<i>Scutellaria galericulata</i>	Skullcap	flowering plant	31/08/1999	-	1
<i>Scutellaria galericulata</i> x <i>minor</i> = <i>S. x hybrida</i>	Hybrid Skullcap	flowering plant	20/07/2008	-	1
<i>Scutellaria minor</i>	Lesser Skullcap	flowering plant	10/06/1982	01/08/2004	4
<i>Teucrium scorodonia</i>	Wood Sage	flowering plant	10/06/1982	03/07/2012	8
<i>Ajuga reptans</i>	Bugle	flowering plant	10/06/1982	22/06/2004	7
<i>Glechoma hederacea</i>	Ground-ivy	flowering plant	10/06/1982	22/06/2004	6
<i>Prunella vulgaris</i>	Selfheal	flowering plant	10/06/1982	22/06/2004	5
<i>Clinopodium vulgare</i>	Wild Basil	flowering plant	22/06/2004	-	1
<i>Lycopus europaeus</i>	Gypsywort	flowering plant	10/06/1982	21/06/2005	5
<i>Mentha aquatica</i>	Water Mint	flowering plant	10/06/1982	22/06/2004	5
<i>Mentha arvensis</i>	Corn Mint	flowering plant	31/08/1999	17/06/2009	3
<i>Melampyrum pratense</i>	Common Cow-wheat	flowering plant	10/06/1982	-	1
<i>Euphrasia officinalis</i> agg.	Eyebright	flowering plant	31/08/1999	-	1
<i>Euphrasia anglica</i>	Small-flowered Sticky Eyebright	flowering plant	20/07/2008	-	1
<i>Odontites vernus</i> subsp. <i>serotinus</i>	Red Bartsia	flowering plant	22/06/2004	-	1
<i>Rhinanthus minor</i>	Yellow-rattle	flowering plant	10/06/1982	-	1
<i>Ilex aquifolium</i>	Holly	flowering plant	10/06/1982	22/06/2004	8
<i>Wahlenbergia hederacea</i>	Ivy-leaved Bellflower	flowering plant	22/06/2004	01/08/2004	2
<i>Menyanthes trifoliata</i>	Bogbean	flowering plant	21/06/2005	-	1
<i>Arctium minus</i>	Lesser Burdock	flowering plant	10/06/1982	18/05/2006	5
<i>Arctium nemorosum</i>	Wood Burdock	flowering plant	22/06/2004	-	1
<i>Cirsium arvense</i>	Creeping thistle	flowering plant	31/08/1999	22/06/2004	3
<i>Cirsium palustre</i>	Marsh Thistle	flowering plant	10/06/1982	22/06/2004	7
<i>Cirsium vulgare</i>	Spear thistle	flowering plant	28/06/1982	22/06/2004	3
<i>Centaurea nigra</i>	Common Knapweed	flowering plant	10/06/1982	22/06/2004	4

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Lapsana communis</i>	Nippelwort	flowering plant	10/06/1982	03/07/2012	7
<i>Hypochaeris radicata</i>	Cat's-ear	flowering plant	22/06/2004	-	1
<i>Picris echioides</i>	Bristly Oxtongue	flowering plant	22/06/2004	-	1
<i>Sonchus arvensis</i>	Perennial Sow-thistle	flowering plant	20/05/2004	22/06/2004	2
<i>Sonchus asper</i>	Prickly Sow-thistle	flowering plant	22/06/2004	-	1
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	flowering plant	21/02/2004	22/06/2004	2
<i>Lactuca serriola</i>	Prickly Lettuce	flowering plant	28/06/1982	-	1
<i>Mycelis muralis</i>	Wall Lettuce	flowering plant	22/06/2004	03/07/2012	3
<i>Taraxacum</i>	Dandelion Agg.	flowering plant	21/02/2004	22/06/2004	2
<i>Taraxacum officinale</i> agg.	Dandelion	flowering plant	28/06/1982	-	1
<i>Crepis capillaris</i>	Smooth Hawk's-beard	flowering plant	22/06/2004	15/08/2007	2
<i>Crepis vesicaria</i>	Beaked Hawk's-beard	flowering plant	04/06/2005	-	1
<i>Pilosella officinarum</i>	Mouse-ear-hawkweed	flowering plant	28/06/1982	18/05/2006	2
<i>Hieracium aggregatum</i>	Hawkweed	flowering plant	04/06/2005	15/08/2007	2
<i>Hieracium sabaudum</i>	Sharp-toothed Hawkweed	flowering plant	15/08/2007	-	1
<i>Gnaphalium uliginosum</i>	Marsh Cudweed	flowering plant	28/06/1982	22/06/2004	2
<i>Pulicaria dysenterica</i>	Common Fleabane	flowering plant	10/06/1982	15/08/2007	5
<i>Solidago virgaurea</i>	Goldenrod	flowering plant	10/06/1982	22/06/2004	5
<i>Bellis perennis</i>	Daisy	flowering plant	10/06/1982	22/06/2004	4
<i>Artemisia vulgaris</i>	Mugwort	flowering plant	04/06/2005	-	1
<i>Achillea millefolium</i>	Yarrow	flowering plant	21/02/2004	22/06/2004	2
<i>Achillea ptarmica</i>	Sneezewort	flowering plant	20/07/2008	-	2
<i>Leucanthemum vulgare</i>	Oxeye Daisy	flowering plant	28/06/1982	22/06/2004	2
<i>Matricaria discoidea</i>	Pineappleweed	flowering plant	22/06/2004	-	1
<i>Tripleurospermum inodorum</i>	Scentless Mayweed	flowering plant	22/06/2004	-	1
<i>Senecio jacobaea</i>	Ragwort	flowering plant	28/06/1982	22/06/2004	5
<i>Senecio vulgaris</i>	Groundsel	flowering plant	22/06/2004	-	1
<i>Tussilago farfara</i>	Colt's-foot	flowering plant	28/06/1982	22/06/2004	3
<i>Petasites fragrans</i>	Winter Heliotrope	flowering plant	21/02/2004	22/06/2004	2
<i>Petasites hybridus</i>	Butterbur	flowering plant	28/06/1982	-	1
<i>Petasites japonicus</i>	Giant Butterbur	flowering plant	31/12/1994	26/03/2009	2
<i>Eupatorium cannabinum</i>	Hemp-agrimony	flowering plant	31/08/1999	22/06/2004	2
<i>Adoxa moschatellina</i>	Moschatel	flowering plant	03/07/2012	-	1
<i>Sambucus nigra</i>	Elder	flowering plant	10/06/1982	22/06/2004	6
<i>Viburnum opulus</i>	Guelder-rose	flowering plant	10/06/1982	22/06/2004	3
<i>Symphoricarpos albus</i>	Snowberry	flowering plant	18/05/2006	-	1
<i>Lonicera nitida</i>	Wilson's Honeysuckle	flowering plant	18/05/2006	-	1
<i>Lonicera periclymenum</i>	Honeysuckle	flowering plant	10/06/1982	22/06/2004	7
<i>Valeriana dioica</i>	Marsh Valerian	flowering plant	10/06/1982	03/07/2012	6
<i>Valeriana officinalis</i>	Common Valerian	flowering plant	28/06/1982	-	1
<i>Succisa pratensis</i>	Devil's-bit Scabious	flowering plant	10/06/1982	31/08/1999	3
<i>Hedera helix</i>	Ivy	flowering plant	10/06/1982	21/02/2004	7
<i>Hedera helix</i> subsp. <i>helix</i>	Common Ivy	flowering plant	22/06/2004	-	1
<i>Sanicula europaea</i>	Sanicle	flowering plant	31/08/1999	03/07/2012	5

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Anthriscus sylvestris</i>	Cow Parsley	flowering plant	10/06/1982	04/06/2005	4
<i>Conopodium majus</i>	Pignut	flowering plant	10/06/1982	18/05/2006	5
<i>Aegopodium podagraria</i>	Ground-elder	flowering plant	28/06/1982	04/06/2005	3
<i>Oenanthe crocata</i>	Hemlock Water-dropwort	flowering plant	28/06/1982	-	1
<i>Angelica sylvestris</i>	Wild Angelica	flowering plant	10/06/1982	15/08/2007	7
<i>Heracleum sphondylium</i>	Hogweed	flowering plant	28/06/1982	22/06/2004	4
<i>Torilis japonica</i>	Upright Hedge-parsley	flowering plant	15/08/2007	-	1
<i>Pentaglottis sempervirens</i>	Green Alkanet	flowering plant	18/05/2006	-	1
<i>Myosotis arvensis</i>	Field Forget-me-not	flowering plant	22/06/2004	-	1
<i>Myosotis discolor</i>	Changing Forget-me-not	flowering plant	10/06/1982	-	1
<i>Myosotis scorpioides</i>	Water Forget-me-not	flowering plant	22/06/2004	-	1
<i>Myosotis sylvatica</i>	Wood Forget-me-not	flowering plant	31/08/1999	-	1
<i>Graptodytes granularis</i>		insect - beetle (Coleoptera)	31/12/1955	-	1
<i>Dolichovespula (Dolichovespula) media</i>		insect - hymenopteran	14/08/1991	-	2
<i>Agriphila straminella</i>	Straw Grass-veneer	insect - moth	09/10/1997	-	1
<i>Erannis defoliaria</i>	Mottled Umber	insect - moth	20/11/2000	-	1
<i>Celastrina argiolus</i>	Holly Blue	insect - butterfly	04/08/2004	29/08/2010	4
<i>Celastrina argiolus subsp. britanna</i>	Holly Blue	insect - butterfly	15/07/2001	-	1
<i>Apamea monoglypha</i>	Dark Arches	insect - moth	09/10/1997	-	1
<i>Aglaia urticae</i>	Small Tortoiseshell	insect - butterfly	26/05/2003	19/04/2010	2
<i>Apatura iris</i>	Purple Emperor	insect - butterfly	08/07/2010	-	1
<i>Inachis io</i>	Peacock	insect - butterfly	10/04/2010	27/04/2010	3
<i>Maniola jurtina</i>	Meadow Brown	insect - butterfly	04/08/2004	14/08/2010	4
<i>Pararge aegeria</i>	Speckled Wood	insect - butterfly	09/09/1997	23/04/2011	13
<i>Polygonia c-album</i>	Comma	insect - butterfly	30/07/1998	01/10/2009	3
<i>Pyronia tithonus</i>	Hedge Brown	insect - butterfly	04/08/2004	14/08/2010	5
<i>Vanessa atalanta</i>	Red Admiral	insect - butterfly	07/06/2003	04/08/2004	2
<i>Anthocharis cardamines</i>	Orange-tip	insect - butterfly	26/05/2003	22/04/2011	9
<i>Gonepteryx rhamni</i>	Brimstone	insect - butterfly	05/12/1996	22/04/2011	5
<i>Pieris brassicae</i>	Large White	insect - butterfly	30/07/1998	14/08/2010	9
<i>Pieris rapae</i>	Small White	insect - butterfly	26/05/2003	29/08/2010	4
<i>Amblyptilia punctidactyla</i>	Brindled Plume	insect - moth	09/10/1997	-	1
<i>Aeshna grandis</i>	Brown Hawker	insect - dragonfly (Odonata)	31/12/1974	30/07/2003	4
<i>Anax imperator</i>	Emperor Dragonfly	insect - dragonfly (Odonata)	25/06/1993	30/07/2003	4
<i>Coenagrion puella</i>	Azure Damselfly	insect - dragonfly (Odonata)	31/12/1974	25/06/1993	8
<i>Erythromma najas</i>	Red-eyed Damselfly	insect - dragonfly (Odonata)	31/12/1974	30/07/2003	8
<i>Ischnura elegans</i>	Blue-tailed Damselfly	insect - dragonfly (Odonata)	31/12/1974	30/07/2003	11
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	insect - dragonfly (Odonata)	31/12/1974	29/05/1993	4
<i>Cordulia aenea</i>	Downy Emerald	insect - dragonfly (Odonata)	29/05/1993	-	3
<i>Orthetrum cancellatum</i>	Black-tailed Skimmer	insect - dragonfly (Odonata)	25/06/1993	30/07/2003	4
<i>Platycnemis pennipes</i>	White-legged Damselfly	insect - dragonfly (Odonata)	25/06/1993	30/07/2003	6
<i>Capreolus capreolus</i>	Roe Deer	terrestrial mammal	31/12/1956	31/12/1960	2
<i>Vulpes vulpes</i>	Red Fox	terrestrial mammal	30/05/2000	-	1
<i>Mustela erminea</i>	Stoat	terrestrial mammal	29/04/1998	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Chiroptera</i>	Bat sp.	terrestrial mammal	01/08/1982	-	2
<i>Plecotus</i>	Long-eared sp.	terrestrial mammal	27/05/2008	11/05/2011	8
<i>Plecotus auritus</i>	Brown Long-eared Bat	terrestrial mammal	11/07/1986	14/06/2005	3
<i>Erinaceus europaeus</i>	West European Hedgehog	terrestrial mammal	03/09/2006	-	1
<i>Talpa europaea</i>	European Mole	terrestrial mammal	31/01/1999	09/11/2011	37
<i>Oryctolagus cuniculus</i>	European Rabbit	terrestrial mammal	21/02/1997	03/10/2006	4
<i>Arvicola amphibius</i>	European Water Vole	terrestrial mammal	31/12/1981	-	2
<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	terrestrial mammal	31/12/2001	02/10/2010	15
<i>Natrix natrix</i>	Grass Snake	reptile	UNKNOWN	-	1

Sussex Environmental Survey Directory

Report on behalf of Brionny Brady (Calumma Ecological Services) regarding land at Turners Hill Road, Rowfant + 1km radius.

Our Ref: ESD/14/198

Date: 22-Apr-14

The Sussex Environmental Survey Directory (ESD) was initiated in 1990 as a tool to report on biological surveys that had taken place in Sussex. The directory now contains information on over 2,000 surveys covering over 22,000 sites. This report details what surveys have been carried out on specific sites and directs the enquirer to where this information is held. The Record Centre does not hold copies of all the reports that it refers enquirers to, but simply directs the enquirer to organisations or individuals who do.

The directory is updated on a weekly basis and also contains summary data on the county's ornithological data, (courtesy of the Sussex Ornithological Society) and on the county's geological sites (courtesy of the Booth Museum).

Survey Name	Ecological Survey of Woodlands in NW Sussex-Vol. 2. - (312)		
Survey Autho	BEALY, C. E., PARDON, B. J.		
Survey Commen	A detailed survey of woods in the Horsham area. Common mosses and liverworts as well as incidental sightings of Lepidoptera (butterflies) were recorded. Details of geology, situation, and soils given for each site. Bird surveys were not carried out at every site. A joint venture by SxWT and RSPB. (See Authors for a full list of recorders.)		
Date	1982		
Site Name	Stony Plats & High Lines Woodland Complex	TQ319354	
Site Comment	Hazel- Oak stand of varying composition & density. Oak & locally frequent Ash & Beech. Small leaved Lime forms sub-canopy in many areas. Shrub layer Hazel coppice & Hawthorn. Includes much of SNCI M13.		
Copies Availabl	EN, SxBRC Archive, WSCC		

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Date	1982	
Site Name	Oaken Wood & The Burches, Worth	TQ312362
Site Comment	Hazel- Oak & Birch Oak woodland grade together giving an intermediate stand type in parts. Height & density of Hazel & Birch vary. Saplings frequent throughout. Seedlings locally frequent. Several large clearings. Chestnut in patches & Alder along streams. Site includes much of SNCI M13.	
Copies Availabl	EN, SxBRC Archive, WSCC	

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Date	1982	
Site Name	Horsepasture Wood & Mill Pond, Worth	TQ320369
Site Comment	Birch-Oak stand from which nearly all the Oak has been removed. In some areas there are young Oak among regenerating Birch. Large areas dominated by Rhododendron. Downy Birch in stream valley. Chestnut trees in patches grown from coppice. 2 blocks of conifer plantation. Ground flora species-poor. Pylon ride dominated by heather.	
Copies Availabl	EN, SxBRC Archive, WSCC	

Survey Name		Designated SNCIs (in West Sussex) - (500)
Survey Autho	WSCC	
Survey Commen	All SNCIs in West Sussex are covered here. All sites have management prescriptions. Each site was surveyed botanically, but additional information on other groups is included where known. (A hand-book 'West Sussex Sites of Nature Conservation Importance' has been produced). (Phase II). In 1998 a further 26 new sites were added. In 2001 a further 23 new sites were added and 1 deleted. [NB: a number of additional sites are also included which are not designated, but which were presumably considered for designation at some stage, or which were at some time designated but which have since be deselected].	
Date	1990-	
Site Name	Oaken Wood, Stony Plats & High Lines, Worth - SNCI M13	TQ314355
Site Comment	Broadleaf woodland with numerous streams; a number of large clearings and several stagnant ponds.	
Copies Availabl	EN, SWT, WSCC	

Survey Name	Survey of the Land Adjacent to Worth Hall Farm and Tulley's Farm - (1139)		
Survey Autho	GRIFFITHS, Ann		
Survey Commen	A preliminary inspection of the sited to determine the significance and possibility of the success of a planning application for a nature trail. A more detailed survey management plan recommended. (Phase I)		
Date	27.1.98		
Site Name	Minepit Shaw, adjacent to Worth Hall & Tulleys Farms, Worth	TQ327360	
Site Comment	Full survey recommended + management plan		
Copies Availabl	WSCC		

Survey Name	Worth Way Plant List - (1150)		
Survey Autho	HOARE, A.G.		
Survey Commen	A plant list as an indication of the flora quality found along the Worth Way. (Phase II)		
Date	1997		
Site Name	Worth Way (Crawley Down Cutting)	TQ335379	
Site Comment	Part of Worth Way (site 247) and Worth Way Country Park (site 3517). Disused railway line used as public footpath.		
Copies Availabl	WSCC		

Survey Name	Worth Way Plant List - (1150)		
Survey Autho	HOARE, A.G.		
Survey Commen	A plant list as an indication of the flora quality found along the Worth Way. (Phase II)		
Date	1997		
Site Name	Worth Way (Rowfant Station)	TQ326369	
Site Comment	Part of Worth Way - 247 and Worth Way Country Park - 3517. Disused railway line used as public footpath.		
Copies Availabl	WSCC		

Survey Name	Worth Way Plant List - (1150)		
Survey Autho	HOARE, A.G.		
Survey Commen	A plant list as an indication of the flora quality found along the Worth Way. (Phase II)		
Date	1997		
Site Name	Worth way (Compasses Crossing)	TQ325368	
Site Comment	Part of Worth way - site 247 and Worth Way Country Park - 3517. Disused railway line used as public footpath.		
Copies Availabl	WSCC		

Survey Name	Ecological Survey Of Minepit Shaw, Tulley's Farm - (1153)		
Survey Autho	BENATT, Ben., ANTONINI, Bob		
Survey Commen	The survey has shown Minepit Shaw is of ecological value and contains a diverse woodland flora, supporting rich fauna.		
Date	5.98		
Site Name	Minepit Shaw, adjacent to Worth Hall & Tulleys Farms, Worth	TQ327360	
Site Comment	Full survey recommended + management plan		
Copies Availabl	SWT, WSCC		

Survey Name	Botanical Survey of Woodland at Paddockhurst Estate - (1251)		
Survey Autho	RYLAND, Kate		
Survey Commen	A survey of five woodland blocks forming part of an SNCI - all ancient semi-natural woodland and unmanaged. (25% ancient woodland indicator species). Possible re-instatement of coppicing for charcoal production. (Phase II)		
Date	9.8.99, 10.8.99		
Site Name	Stony Plats & High Lines Woodland Complex	TQ319354	
Site Comment	Hazel- Oak stand of varying composition & density. Oak & locally frequent Ash & Beech. Small leaved Lime forms sub-canopy in many areas. Shrub layer Hazel coppice & Hawthorn. Includes much of SNCI M13.		
Copies Availabl	WSCC		

Survey Name	Botanical Survey of Woodland at Paddockhurst Estate - (1251)		
Survey Autho	RYLAND, Kate		
Survey Commen	A survey of five woodland blocks forming part of an SNCI - all ancient semi-natural woodland and unmanaged. (25% ancient woodland indicator species). Possible re-instatement of coppicing for charcoal production. (Phase II)		
Date	9.8.99, 10.8.99		
Site Name	Oaken Wood & The Burches, Worth	TQ312362	
Site Comment	Hazel- Oak & Birch Oak woodland grade together giving an intermediate stand type in parts. Height & density of Hazel & Birch vary. Saplings frequent throughout. Seedlings locally frequent. Several large clearings. Chestnut in patches & Alder along streams. Site includes much of SNCI M13.		
Copies Availabl	WSCC		

Survey Name	Botanical Survey of Woodland at Paddockhurst Estate - (1251)		
Survey Autho	RYLAND, Kate		
Survey Commen	A survey of five woodland blocks forming part of an SNCI - all ancient semi-natural woodland and unmanaged. (25% ancient woodland indicator species). Possible re-instatement of coppicing for charcoal production. (Phase II)		
Date	9.8.99, 10.8.99		
Site Name	Oaken Wood, Stony Plats & High Lines, Worth - SNCI M13	TQ314355	
Site Comment	Broadleaf woodland with numerous streams; a number of large clearings and several stagnant ponds.		
Copies Availabl	WSCC		

Survey Name	Botanical Survey of Woodland at Paddockhurst Estate - (1251)		
Survey Autho	RYLAND, Kate		
Survey Commen	A survey of five woodland blocks forming part of an SNCI - all ancient semi-natural woodland and unmanaged. (25% ancient woodland indicator species). Possible re-instatement of coppicing for charcoal production. (Phase II)		
Date	9.8.99, 10.8.99		
Site Name	Paddockhurst Estate (Woods NW of Standinghall Fm, Worth Forest)	TQ313356	
Site Comment	Ancient semi-natural woodland - hazel coppice with oak and ash standards. Very species rich ground flora + small-leaved limes. Recommended re-instatement of coppice management.		
Copies Availabl	WSCC		

Survey Name	Survey of Cobb Close Pond, Crawley Down - (1252)		
Survey Autho	RILEY, Jean		
Survey Commen	A Pond Survey Sheet completed prior to the proposed restoration of a pond. (exotic species - Japanese knotweed). Conducted under the auspices of the 'Pond Environmental Group'.		
Date	4.5.99		
Site Name	Cobb Close Pond, Crawley Down	TQ338370	
Site Comment	Silted pond adjacent to Worth Way (not in SNCI). Restoration in progress.		
Copies Availabl	WSCC		

Survey Name	Brief Survey of Horsepasture Wood, W Sussex - (1409)		
Survey Autho	CURSON, Simon		
Survey Commen	A brief survey of Horsepasture wood which is mainly recent Birch regrowth with under-storey dominated by Rhododendron. The study determined that the management recommendations include the removal of all Rhododendron and that large pond and Alder provide a little diversity with some established heather, which could be extended.		
Date	20.10.99		
Site Name	Horsepasture Wood & Mill Pond, Worth	TQ320369	
Site Comment	Birch-Oak stand from which nearly all the Oak has been removed. In some areas there are young Oak among regenerating Birch. Large areas dominated by Rhododendron. Downy Birch in stream valley. Chestnut trees in patches grownfrom coppice. 2 blocks of conifer plantation. Ground flora species-poor. Pylon ride dominated by heather.		
Copies Availabl	As contact		

Survey Name	Pond Warden Scheme Survey Sheets - (2835)		
Survey Autho	Various		
Survey Commen	Standardised sheet with sections detailing pond location & surrounds, with tick boxes for species recorded, covering Marginal, Emergent, Floating, Aquatic and Non-Native Invasive Plants, as well as Amphibians & Reptiles, Invertebrates, Flying Insects, Birds, Mammals and Fish. [SxBRC copies held in "Pond Survey Info" box].		
Date	various		
Site Name	Pond by Worth Way, 300m west of B2028	TQ338370	
Site Comment	Pond fed by stream/ditch running along Worth Way. [NB: location approximate as not marked on any maps].		
Copies Availabl	SxBRC Boxes		

Glossary of Abbreviations

Organisations:

BBCS	British Butterfly Conservation Society (now Butterfly Conservation)	www.sussex-butterflies.org.uk
BMONH	Booth Museum of Natural History	Tel: 03000 290900
BSBI	Botanical Society of the British Isles	www.bsbi.org.uk
BTO	British Trust for Ornithology	Tel: 01842 750050
EA	Environment Agency	Tel: 08708 506506 (Southern Regional Office)
EN	English Nature (now Natural England)	Tel: 03000 600 300 (Sussex Team)
ESCC	East Sussex County Council	Tel: 01273 481621 (County Ecologist)
FC	Forestry Commission	Tel: 01420 23337 (SE England)
FWAG	Farming and Wildlife Advisory Group	Tel: 01273 891190 (Sussex Area)
NCC	Nature Conservancy Council (now NE)	Contact NE
NE	Natural England	Tel: 03000 600 300 (Sussex Team)
NRA	National Rivers Authority (now EA)	Contact EA
NT	National Trust	Tel: 01372 453401 (South East Office)
RSPB	Royal Society for the Protection of Birds	Tel: 01273 775333 (SE Regional Office)
SBRS	Sussex Botanical Recording Society	www.sussexflora.org.uk
SOS	Sussex Ornithological Society	www.sos.org.uk
SxBRC	Sussex Biodiversity Record Centre	Tel: 01273 497521
SxWT/SWT	Sussex Wildlife Trust	Tel: 01273 492630
WSCC	West Sussex County Council	Tel: 01243 756691 (County Ecologist)

Designations

AONB	Area of Outstanding Natural Beauty
COGS	County Geological/Geomorphological Site
LNR	Local Nature Reserve
NNR	National Nature Reserve
NP	National Park
RAMSAR	RAMSAR (internationally important wetlands)
RIGS	Regionally Important Geological/Geomorphological Site
SAC	Special Area of Conservation
SNCI	Site of Nature Conservation Importance
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Surveys:

Phase I	A broad habitat survey with a dominant species list and land use information.
Phase II	Mapping of vegetation communities with species lists and abundance/distribution.
Phase III	A detailed survey including ecological processes and long term monitoring information.
NVC	National Vegetation Classification.

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 SINC (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

Site Name:	Oaken Wood, Stony Plats & High Lines		
Site Ref:	M13	Owner:	Private
District:	Mid Sussex	Size (ha):	77.3
Parish:	Worth & Turners Hill	Date:	Identified May 1992
National Grid Ref:	TQ314355	Author:	Louise Clark
Habitat:	Semi-natural woodland, stream and pond		

Summary

Most of this site consists of Oak and Hazel woodland with Birch frequent in places. Small-leaved Lime occurs occasionally throughout. Alder occurs alongside the numerous streams. There are a number of large open clearings and several stagnant ponds. The wood supports good numbers of plants, mosses, liverworts, birds and butterflies.

Site description

Most of this woodland consists of Oak with occasional Ash, small-leaved Lime, Birch and Maple. In some areas, Birch is much more frequent. The shrub layer consists mainly of Hazel coppice. The ground flora is dominated by Bramble (*Rubus fruticosus*), but there are species rich patches where Ivy (*Hedera helix*), Sanicle (*Sanicula europaea*) and Wood Sedge (*Carex sylvatica*) occur. Nearer the streams, there is abundant Bluebell (*Hyacinthoides non-scripta*).

Alder trees (mainly grown from coppice) occur along the streams. In some areas, Ash is also contained in the canopy with a sparse shrub layer of Hazel coppice. Here the ground flora is variable, restricted to a few species such as Bracken (*Pteridium aquilinum*), Bramble and Bluebell, while in other areas, species such as Dog's Mercury (*Mercurialis perennis*), Enchanter's-nightshade (*Circaea lutetiana*) and Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium*) are also present.

There are a number of large clearings, generally dominated by common grass species, Bracken, Bluebell and Birch saplings.

Several ponds occur but these are all stagnant and overgrown.

This woodland site has a rich bird community. There are a large number of hole or crevice-nesting birds, including many species of Tit and all three Woodpecker species. Additionally, there are frequent butterflies.

Management recommendations

The re-introduction of a coppicing regime would greatly benefit this woodland. Standing and fallen dead wood should be left in place. Tracks and glades should be managed to keep them open.

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

High Weald AONB Unit 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](#).

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.

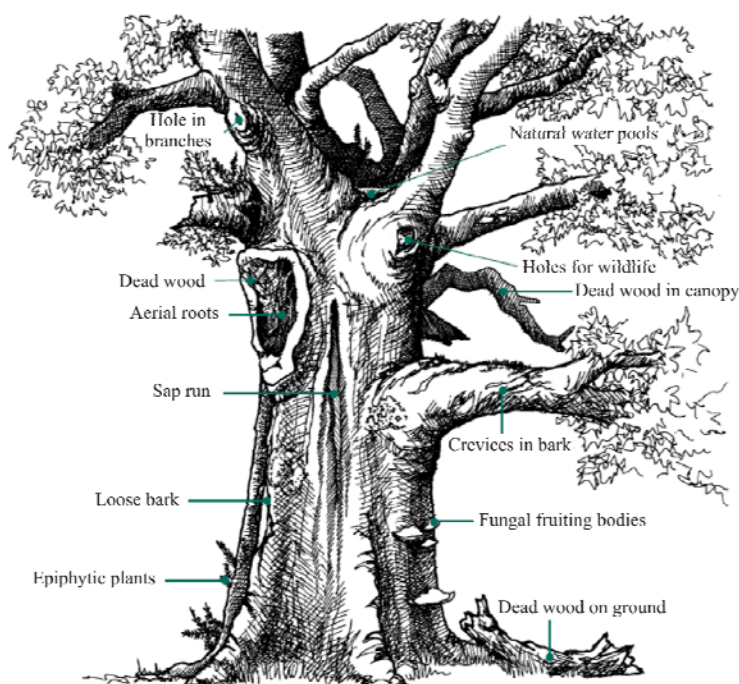
Notable trees. Locally important or of significance to the community; Specimen trees or considered to be the potential next generation of veteran trees.

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

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.)

GHYLL WOODLAND

Ghylls (or gills) are ancient steep-sided, wooded valleys created by streams cutting gullies into existing slopes. In the Sussex Weald, ghyll formation began in the Pleistocene period (pre 10,000 BC) by erosion of the sandstone making up the 'Hastings Beds'. Such ghylls occasionally contain outcrops of erosion resistant sandstone known as 'sandrock'.

Ghylls and sandrock outcrops create a microclimate similar to that of the Atlantic climate common to the west of England, but with different influences from the soil and geology. This microclimate is humid with a low frost incidence and for this reason our Sussex ghylls are strongholds for rare flora and fauna. Good examples of species adapted to this unique habitat are the Tunbridge filmy fern, the hay-scented buckler fern and bryophytes such as *Hyocomium armoricum*, *Dicranum scottianum* and *Scapania gracilis*. All of these species are rare in Britain and are found predominantly on the western seaboard of Wales.



Hard fern

The steep and rugged nature of these stream valleys has provided protection for this distinctive flora. Unlike much of the rest of the Sussex Weald, clearance and subsequent cultivation was not possible in the ghylls. The associated undisturbed woodland or scrubland can therefore often be regarded as 'ancient woodland'. In some cases there are remnants of original 'wildwood' as evidenced by the presence of indicator species such as small-leaved lime.

The hilly topography means that the land surrounding ghylls tends not to be intensively cultivated. As a consequence the water flowing in the streams is often relatively unpolluted and the delicate balance and biodiversity of this unique environment is maintained. Any contamination of the water supply, disruption to its flow or the invasion of exotic species such as rhododendron could do irreparable damage to this habitat.

Broadleaved woodland is a priority habitat for conservation in Sussex as it contains a higher number of UK Biodiversity Action Plan Priority Species than any other habitat. These species include dormouse, pearl bordered fritillary butterfly and the black-headed cardinal beetle.

Our ghyll woodlands are a particularly important feature of the Sussex Weald and are included in the Woodland Habitat Action Plan, which can be found at www.biodiversitysussex.org

Objectives in the Habitat Action Plan include:

- Maintain the extent and habitat quality of ghyll woodland.
- Reverse the trend of degradation in ghyll woodlands and ensure that they are managed to achieve conservation objectives.
- Replace non- native tree species on ancient woodland sites.
- Provide mechanisms to help clear invading rhododendron.
- Implement systems for the control of animals believed to cause damage to woodland, such as squirrel and deer.
- Identify where ghyll woods are located and recommend their optimum management for conservation.
- Ensure pollution is prevented wherever possible.
- Encourage planning departments to refuse permission for ghyll woodland development.

The Forestry Commissions' Woodland Improvement Grant provides some financial incentive for ghyll wood management. (Contact: The Forestry Commission, South East England Regional Office, 01420 23666.)

(Illustration 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

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

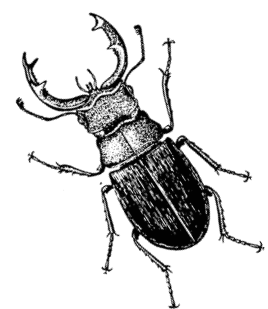
Wood-pasture and parkland is important for wildlife for a number of reasons:

- 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 soresdiata*.

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

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