

Ahern Ecology Ltd

An extended Phase 1 habitat survey of land at Woodgate, Westergate



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Contents

Executive Summary	3
Introduction	4
Site Description and Proposed Work	4
Methodology	6
Results	7
Discussion and Recommendations	11
References	12
Appendix A	13
Appendix B	14
Appendix C	15

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Executive Summary

- The site includes a number of paddocks, areas of hard standing and a variety of farm buildings. These contain a variety of habitats including; scrub, bare ground, poor, semi-improved grassland, scattered broad leaved and coniferous trees, buildings & intact, species poor hedgerows.
- The results of the data search with the Sussex Biodiversity Record Centre returned records which indicate a reasonably diverse reptile assemblage within the search area. Records for great crested newt and three species of bats were also returned.
- Habitats on site are suitable for nesting birds. All vegetation clearance should ideally take place outside of breeding bird season (March – September inclusive).
- A number of buildings were present on site, these were noted as having moderate potential to support roosting bats though no evidence of bats were recorded during the field survey. If the proposed development includes alterations or demolition of any of the site buildings then activity surveys are recommended prior to any works.
- Similarly a number of the single broad leaved trees on site offer moderate potential to support bats. Should the proposed development include their removal they will need to be checked by a Natural England licensed bat worker prior to felling.
- Habitats recorded on site including scrub, semi-improved grassland, rubble, debris and compost provide potentially suitable refuge and foraging opportunities for common species of reptile such as slow worm *Anguis fragilis*. Depending upon the details of the proposed development a reptile survey may be recommended to establish a clear understanding of the size and nature of any reptile population using the site.
- The small ephemeral pond may be used by amphibians to breed and it is recommended that a precautionary approach is adopted to any potential site clearance.

Introduction

Ahern Ecology Ltd was commissioned by Planning & Property consultants Ltd on behalf of Builtform Developments Ltd to undertake an extended Phase 1 habitat survey of land at Woodgate, Westergate.

The purpose of the survey was to provide a survey of the current ecological conditions and assess potential ecological constraints as part of preliminary investigations of the site.

The ecological investigations undertaken by Ahern Ecology include:

- A desk study to review existing protected species records and statutory/non-statutory sites as well as a search of readily available internet databases for the site and surrounding area;
- An extended Phase 1 habitat survey involving a walkover of the site to record habitat types and dominant vegetation, including invasive plants, and a survey for evidence of protected animal species or habitats capable of supporting such species; and
- An assessment of the potential ecological constraints and recommendations for further survey where appropriate.

The work was undertaken by an experienced ecologist who is a full member of the Institute of Ecology and Environmental Management on the 8th March.

Site Location and Proposed Work

The proposed development site is located at Woodgate, Westergate approximately 3.5 miles north of Bognor Regis (OS Grid Ref. SU941 041). The site includes a number of paddocks, areas of hard standing and a variety of farm buildings. It's set within a semi-rural area to the east of Woodgate, see Figure 1 below.

The proposed development involves the construction of a housing estate.

Figure 1 – Aerial photo of the Woodgate site and surrounds with the approximate site boundary marked in red.



Methodology

Desk Study

The Sussex Biodiversity Record Centre was consulted to obtain ecological data, specifically relating to legally protected sites and species within a 1km radius of the site.

Existing ecological data from readily available internet resources was also collated¹.

The online UK Biodiversity Action Plan (BAP)² and Local Biodiversity Action Plan (LBAP), in this case 'The Sussex Biodiversity Action Plan'³ was accessed for information on habitats and species which are important in the local area and to prioritise action required to conserve Sussex's biodiversity.

Extended Phase 1 Habitat Survey

An extended Phase 1 habitat survey was conducted within the study area on 8th March 2011. The vegetation and habitat types within the site were noted during the walkover survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey⁴. Dominant plant species were recorded for each habitat present and target notes written for habitats of conservation interest.

The site was inspected for evidence of and its potential to support protected or notable species, especially those listed under the *Wildlife & Countryside Act 1981* (as amended), the *Conservation of Habitats and Species Regulations 2010*, including those given extra protection under the *Countryside & Rights of Way (CROW) Act 2000*, and UK and local Biodiversity Action Plan Priority Species.

All areas of the site were investigated and as recommended by English Nature's *Badgers and Development* (2002), with a 30m buffer around the site investigated for evidence of badger activity, where possible. The site was also appraised for its suitability to support other protected or notable fauna including mammals, birds, reptiles, amphibians and invertebrates using recognised guidelines⁵. Evidence of any current or historical presence of such species was recorded.

¹ NBN Gateway <http://data.nbn.org.uk/>, Magic Interactive Map <http://www.magic.gov.uk/website/magic/>, Nature on the Map <http://www.natureonthemap.org.uk/>, Google Maps <http://maps.google.co.uk/>.

² UK BAP www.ukbap.org.uk/,

³ Sussex BAP <http://www.ukbap.org.uk>

⁴ Joint Nature Conservation Committee (2003) *Handbook for Phase 1 Habitat Survey- a technique for environmental audit*

⁵ Institute of Ecology and Environmental Management (2000) *In Practice: Guidelines for Ecological Assessment*

Results

Data search

There are several records of bats within 1km of the site, many have not been identified to species level but those that have include common pipistrelle *Pipistrellus pipistrellus* and serotine *Eptesicus serotinus*. Other records were for members of one of the long eared species, *Plecotus*.

Results from the data search indicate a reasonably diverse reptile fauna within the search area. Records were returned for slow worm *Anguis fragilis*, common lizard *Zootoca vivipara*, grass snake *Natrix natrix* & adder *Vipera berus*.

Records for amphibians were limited to a single record for great crested newts *Triturus cristatus* and none for any other amphibian species within the search area.

The full data search results can be found in the accompanying document, Desktop Biodiversity Report, Land at Woodgate + 1km radius, ESD/11/120. Sussex Biodiversity Record Centre.

Field survey

The site incorporates a number of paddocks, areas of hard standing and a variety of farm buildings which contain the following habitats in order of area or abundance;

- Semi-improved grassland
- Bare ground
- Fenceline
- Single/scattered trees
- Buildings
- Mixed plantation woodland
- Coniferous plantation woodland
- Dense scrub
- Species poor hedgerow

Photographs of the site are found in Appendix B. These are shown on the Phase I Habitat Map (Figure 2) in Appendix A. Target Notes (TN1 – 45) represent features of note and are described below:

Table 1: Target notes (see Figure 2 for locations).

Target note (TN)	Notes
1	Bare ground, composed mainly of gravel - low ecological potential.
2	Stable block – moderate bat & bird potential.
3	A paddock composed of poor semi-improved grassland with scattered scrub around the margin – low reptile potential.

4	A paddock composed of poor semi-improved grassland with scattered scrub around the margin - low reptile potential.
5	An unmade track composed of unmanaged poor semi-improved grassland - moderate reptile potential
6	Dense scrub dominated by bramble <i>Rubus fruticosus</i> as well as hawthorn <i>Crataegus monogyna</i> & common nettle <i>Urtica dioica</i> - moderate breeding bird & reptile potential.
7	Poor semi-improved grassland, recently unmanaged with scattered scrub throughout. Two established English Oak <i>Quercus robur</i> - moderate breeding bird & reptile potential.
8	Mixed plantation woodland with leylandii <i>Cupressocyparis leylandii</i> , English Oak & ash <i>Fraxinus excelsior</i> - moderate breeding bird & bat potential.
9	Mixed plantation woodland with leylandii <i>Cupressocyparis leylandii</i> , English Oak & ash <i>Fraxinus excelsior</i> - moderate breeding bird & bat potential.
10	Single coniferous tree, leylandii - moderate breeding bird potential.
11	Single broad leaved tree, English Oak - moderate breeding bird & bat potential.
12	Poor semi-improved grassland, recently unmanaged with scattered scrub throughout. Two established English Oak, bramble and hazel <i>Corylus avellana</i> - moderate breeding bird & reptile potential.
13	A large paddock composed of poor semi-improved grassland with scattered scrub around the margin - low reptile potential.
14	Coniferous plantation woodland, leylandii - moderate breeding bird potential.
15	An unmade track composed of unmanaged poor semi-improved grassland - low reptile potential
16	An unmade track composed of unmanaged poor semi-improved grassland - low reptile potential
17	An unmade track composed of unmanaged poor semi-improved grassland - low reptile potential
18	Single broad leaved tree, an ivy <i>Hedera helix</i> covered English Oak - moderate breeding bird & bat potential.
19	Single broad leaved tree, an ivy covered ash - moderate breeding bird & bat potential.
20	Single broad leaved tree, an English Oak - moderate breeding bird & bat potential.
21	A large paddock composed of poor semi-improved grassland with scattered scrub around the margin - low reptile potential.
22	An unmade track composed of unmanaged poor semi-improved grassland - low reptile potential
23	Coniferous plantation woodland, leylandii - moderate breeding bird potential.
24	Single broad leaved tree, an ivy covered English Oak - moderate breeding bird & bat potential.
25	Dense scrub dominated by bramble & hawthorn - moderate breeding bird & reptile potential.

26	An ephemeral pond overhung by a single crack willow <i>Salix fragilis</i> . Aquatic macrophyte flora at the margins of the pond characterised by hard rush <i>Juncus inflexus</i> , bogbean <i>Menyanthes trifoliata</i> & common starwort <i>Callitriche stagnalis</i> – moderate amphibian potential
27	An unmade track composed of unmanaged poor semi-improved grassland – low reptile potential
28	Single broad leaved tree, an English Oak – moderate breeding bird & bat potential.
29	A paddock composed of poor semi-improved grassland with scattered scrub around the margin – low reptile potential.
30	Single broad leaved tree, an English Oak – moderate breeding bird & bat potential.
31	An unmade track composed of unmanaged poor semi-improved grassland – low reptile potential
32	A paddock composed of poor semi-improved grassland with scattered scrub around the margin – low reptile potential.
33	Species poor, intact hedge composed of leylandii – low to moderate breeding bird potential.
34	A paddock composed of poor semi-improved grassland – low reptile potential.
35	Mobile home – low bat or breeding bird potential.
36	An unmade track composed of unmanaged poor semi-improved grassland – moderate reptile potential
37	Stable block – moderate bat & bird potential.
38	Stable block & workshops – moderate bat & bird potential.
39	Dry ditch, hard rush, great willow herb <i>Epilobium hirsutum</i> & soft rush <i>Juncus effusus</i> – moderate amphibian potential.
40	Storage shed - moderate bat & bird potential.
41	Workshop building - moderate bat & bird potential.
42	Workshop building - moderate bat & bird potential.
43	Bare ground with scattered scrub and piles of woodchip – moderate to high reptile potential.
44	Single broad leaved tree, an English Oak – moderate breeding bird & bat potential.
45	Dense scrub dominated by bramble & hawthorn with English Oak establishing – moderate breeding bird & reptile potential.

Limitations

The data from the Sussex Biodiversity Record Centre has not been included in this draft version of the report. It is therefore possible that protected species occur within the vicinity of the proposed development site.

The comprehensiveness of any ecological assessment will be limited by the season in which the site visit is undertaken. To confirm the presence or absence of protected species usually requires multiple visits at different times of the year and this initial site visit can only assess the *potential* of the site to support species of note, (i.e. those considered to be of principal importance for the conservation of biodiversity and those protected under British or European legislation). This report cannot therefore be considered to provide a comprehensive analysis of the ecological interest of the site. However, it does provide an assessment of the ecological interest present at the time of survey and highlights areas where further work may be required.

The details within this report will remain valid for a period of 12 months, beyond that date it is advised that a review of ecological conditions is undertaken.

Discussion & recommendations

Habitats

The habitats present on site are in general of poor to moderate quality. The sites setting, within a semi-rural environment, means that it is well connected with other areas of similar habitat in the locality.

Consideration should be given to the incorporation of biodiversity enhancing features within any development in order to ensure that the development meets criteria set out within PPS9 for creating biodiversity gain (see Appendix C).

Protected species

Relevant legislation applicable to protected species of potential importance to this site can be found in Appendix C.

Habitats on site which are suitable for breeding birds include dense scrub, hedgerows and scattered trees. Where these habitats are to be removed this should ideally take place outside breeding bird season (March to September inclusive), where this is not possible the site should be checked by a suitably qualified ecologist prior to vegetation removal.

A number of buildings were present on site, these were noted as having moderate potential to support roosting bats though no evidence of bats were recorded during the field survey. If the proposed development includes alterations or demolition of any of the site buildings then activity surveys are recommended prior to any works.

Similarly a number of the single broad leaved trees on site offer moderate potential to support bats. Should the proposed development include their removal they will need to be checked by a Natural England licensed bat worker prior to felling.

Habitats recorded on site including scrub, semi-improved grassland, rubble, debris and compost provide potentially suitable refuge and foraging opportunities for common species of reptile such as slow worm. These areas will need to be cleared by means of destructive search when discreet and depending upon the details of the proposed development a reptile survey may be recommended to establish a clear understanding of the size and nature of any reptile population using the site.

The small ephemeral pond may be used by amphibians to breed and it is recommended that a precautionary approach is adopted to any potential site clearance.

No signs of other protected species were found on site and there are no further constraints to development expected.

References

English Nature (2002). *Badgers and Development*. English Nature, Peterborough, UK.

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Biodiversity: The UK Action Plan. H.M.S.O. (1994), London.

Countryside and Rights of Way Act. 2000 Section 74. HMSO, London

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Appendix A

Figure 2. Phase 1 habitat map of land at Woodgate near Westergate.



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Appendix B

Photographs of land at Woodgate near Westergate.



Appendix C

Relevant Legislation and Policy

Planning Policy Statement 9 and its accompanying document ODPM 06/2005 sets out government policy on biodiversity and nature conservation and places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications. PPS9 also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within the development.

Badgers

Badgers and their setts are fully protected under the Protection of Badgers Act, 1992. It is a criminal offence to wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or attempt to do so. It is also a criminal offence to interfere with a sett by damaging or destroying it; to obstruct access to, or any entrance of, a badger sett; and to disturb a badger when it is occupying a sett.

Bats

All bat species are fully protected under the Wildlife and Countryside Act 1981 (WCA), as amended, through inclusion in Schedule 5. In England and Wales this Act has been amended by the Countryside and Rights of Way Act 2000 (CROW). All bats are also included in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994, (or Northern Ireland, 1995) (the Habitats Regulations), which defines 'European protected species of animals'.

Collectively this makes it an offence to:

- intentionally or deliberately kill, injure or capture bats;
- deliberately disturb bats;
- recklessly disturb roosting bats or obstruct access to their roosts;
- damage or destroy bat roosts;
- possess or transport a bat or any part of a bat, unless acquired legally; and
- sell or exchange bats, or parts of bats.

Currently there are priority species UK Biodiversity Action Plans (BAPs) for seven of the UK's 17 bat species. As bats tend to reuse the same roosts, the roost is protected whether the bats are present at the time of survey or not.

Breeding birds

All birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended), Part 1. It is thus an offence to intentionally:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while it is in use or being built.
- Take or destroy the egg of any wild bird.
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Reptiles

All native reptiles are protected in Britain under the Wildlife and Countryside Act 1981 and its subsequent amendments. It is an offence to intentionally or recklessly kill, injure or sell (or advertise to sell) any of the six native species.



Desktop Biodiversity Report

Land at Woodgate + 1km radius

ESD/11/120

Prepared for Daniel Ahern (Ahern Ecology Ltd) – 22nd March 2011



This report is not to be passed on to third parties without prior permission of the Sussex Biodiversity Record Centre.
Please be aware that printing maps from this report requires an appropriate OS licence.

**Sussex Biodiversity Record Centre
report regarding
land at Woodgate + 1km radius
22/03/2011**

**Prepared for Daniel Ahern
Ahern Ecology Ltd
ESD/11/120**

The following information is enclosed within this report:

Sussex Rare Species Inventory Report	☐
Sussex Protected Species Register Report	☒
UK BAP Species Inventory Report	☐
Sussex Bat Inventory Report	☒
Sussex Bird Inventory Report	☐
Sussex Invasive Alien Species Report	☐
Environmental Survey Directory Report	☐
Maps	☒
Ancient Woodland	☐

SNCI

None

SSSI

None

Other Designations/Ownership

None

Habitats

Ancient/Veteran Tree; Floodplain Grassland.

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 the 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 the SxBRC at the time of printing. The 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 the 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 the SxBRC under East and West Sussex County Council or Brighton and Hove City Council licences must use copying facilities that have been authorised by the Ordnance Survey. A list of printers and copying shops licensed to reproduce maps can be found on the Ordnance Survey website: www.ordnancesurvey.co.uk/oswebsite/business/copyright/printers/index.html

Impartiality

The SxBRC functions as custodian of biological data. Our role is to collect, manage and disseminate wildlife 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: <http://sxbr.org.uk/biodiversity/recording/#sending-records>

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', **badger records are not included in Sussex Biodiversity Record Centre (SxBRC) reports**, as it has been requested that they remain confidential.

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 1960's, 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 the SxBRC. Permission to release record details will be required from the Sussex Wetland Landscapes Project and the 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

The 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 the SxBRC if further information is needed.

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

Birds

The SxBRC holds approximately one million bird records provided by the Sussex Ornithological Society (SOS). However, **records within the breeding season of 15 Schedule 1 birds and three other species which are classed as sensitive in Sussex are not included in our reports.** Please see the Sussex Bird Inventory explanation sheet for further information.

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.

Records of these species and where they have been recorded are held on the Record Centre's database and are included in desktop biodiversity reports. PSR data are updated weekly.

Some species are both protected and rare and therefore show up in the PSR and the Rare Species Inventory (RSI) reports. Reports to enquirers may reflect this relationship between rarity and protection, with records for the same species at a given location appearing in both reports.

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 might 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.

Wildlife Protection Legislation in England

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

European law

The Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979) was aimed at ensuring conservation and protection of all wild plants and animals, increasing cooperation between states, and affording special protection to the most vulnerable or threatened species. It is implemented by the EU Birds Directive (Council Directive 79/409/EEC) and the EU Habitats Directive (Council Directive 92/43/EEC).

ANNEX II lists animal and plant species whose conservation requires the designation of special areas of conservation.

ANNEX IV lists animal and plant species in need of strict protection.

ANNEX V lists animal and plant species whose taking in the wild and exploitation may be subject to management measures.

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:

S9(1) Protection limited to intentional killing, injury or taking.

S9(2) Protection limited to possessing and controlling

S9(4a) Protection limited to damaging, destroying or obstructing access to any structure or place used by the animal for shelter or protection.

S9(4b) Protection limited to disturbing the animal while it is occupying any structure or place which it uses for shelter or protection.

S9(5) Protection limited to selling, offering for sale, possessing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from such an animal. This includes Common Frogs, Pool Frogs, Common Toads and both Smooth and Palmate Newts. Records of these species are not kept on the Protected Species Register.

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: www.sxbrc.org.uk/biodiversity/speciesinventories

Legislation protecting birds

Please refer to the explanation sheet of the Sussex Bird Inventory within your SxBRC biodiversity report, or visit our website: www.sxbrc.org.uk/biodiversity/speciesinventories

Legislation protecting badgers and otters

Please refer to the information sheets at the start of the report for information on badger and otter records in Sussex.

Protected species (excluding birds) found in Sussex

Unless indicated, all parts of the section apply

8	<i>Buellia asterella</i>	Starry Breck-lichen	5	<i>Gryllus campestris</i>	Field Cricket
8	<i>Caloplaca luteoalba</i>	Orange-fruited Elm lichen	5	<i>Hydrochara caraboides</i>	Lesser Silver Water Beetle
8	<i>Catapyrenium psomoroides</i>	Tree Psoromoides	5	<i>Papilio machaon</i>	Swallowtail Butterfly
8	<i>Cladonia convoluta</i>	a lichen	5	<i>Argynnis adippe</i>	High Brown Fritillary
8	<i>Gyalecta ulmi</i>	Elm Gyalecta	5	<i>Thalera fimbrialis</i>	Sussex Emerald
8	<i>Heterodermia leucomelos</i>	Ciliate Strap-lichen	5	<i>Chirocephalus diaphanus</i>	Fairy Shrimp
8	<i>Lecanactis hemisphaerica</i>	Churchyard Lecanactis	5	<i>Gammarus insensibilis</i>	Lagoon Sand Shrimp
8	<i>Squamarina lentigera</i>	Scaly Breck-lichen	5 * \$	<i>Austropotamobius pallipes</i>	Freshwater Crayfish
8	<i>Teloschistes flavicans</i>	Golden Hair-lichen	5	<i>Dolomedes plantarius</i>	Fen Raft Spider
8	<i>Hericium erinaceum</i>	a basidiomycete fungus	5	<i>Triturus cristatus</i>	Great Crested Newt
8	<i>Lamprothamnium papulosum</i>	Foxtail stonewort	5 * \$	<i>Anguis fragilis</i>	Slow-worm
8	<i>Acaulon triquetrum</i>	Triangular Pygmy-moss	5	<i>Coronella austriaca</i>	Smooth Snake
8	<i>Barbula glauca</i>	Glauconous Beard-moss	5	<i>Lacerta agilis</i>	Sand Lizard
8	<i>Bartramia stricta</i>	Rigid Apple-moss	5 * \$	<i>Lacerta vivipara</i>	Viviparous Lizard
8	<i>Drepanocladus vernicosus</i>	Slender Green Feather-moss	5 * \$	<i>Natrix natrix</i>	Grass Snake
8	<i>Micromitrium tenerum</i>	Millimetre Moss	5 * \$	<i>Vipera berus</i>	Adder
8	<i>Rhynchostegium rotundifolium</i>	Round-leaved Feather-moss	5 x	<i>Barbastella barbastellus</i>	Barbastelle
8	<i>Trichomanes speciosum</i>	Killarney Fern	5 x	<i>Eptesicus serotinus</i>	Serotine
8	<i>Ajuga chamaepitys</i>	Ground-pine	5 x	<i>Myotis bechsteini</i>	Bechstein's Bat
8	<i>Althaea hirsuta</i>	Rough Marsh-mallow	5 x	<i>Myotis brandti</i>	Brandt's Bat
8	<i>Alyssum alyssoides</i>	Small Alison	5 x	<i>Myotis daubentoni</i>	Daubenton's Bat
8	<i>Bupleurum baldense</i>	Small Hare's-ear	5 x	<i>Myotis myotis</i>	Greater Mouse-eared Bat
8	<i>Chenopodium vulvaria</i>	Stinking Goosefoot	5 x	<i>Myotis mystacinus</i>	Whiskered Bat
8	<i>Crepis foetida</i>	Stinking Hawk's-beard	5 x	<i>Myotis nattereri</i>	Natterer's Bat
8	<i>Dianthus armeria</i>	Deptford Pink	5 x	<i>Nyctalus leisleri</i>	Leisler's Bat
8	<i>Eryngium campestre</i>	Field Eryngo	5 x	<i>Nyctalus noctula</i>	Noctule
8	<i>Filago lutescens</i>	Red-tipped Cudweed	5 x	<i>Pipistrellus nathusii</i>	Nathusius' Pipistrelle
8	<i>Filago pyramidata</i>	Broad-leaved Cudweed	5 x	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle
8	<i>Fumaria reuteri</i>	Martin's Ramping-fumitory	5 x	<i>Pipistrellus pygmeus</i>	Soprano Pipistrelle
8	<i>Gentianella anglica</i>	Early Gentian	5 x	<i>Plecotus auritus</i>	Brown Long-eared Bat
8 x #	<i>Hyacinthoides non-scripta</i>	Bluebell	5 x	<i>Plecotus austriacus</i>	Grey Long-eared Bat
8	<i>Lactuca saligna</i>	Least Lettuce	5 x	<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat
8	<i>Lythrum hyssopifolia</i>	Grass-poly	5 x	<i>Vespertilio murinus</i>	Parti-coloured Bat
8	<i>Melampyrum arvense</i>	Field Cow-wheat	5	<i>Arvicola terrestris</i>	Water Vole
8	<i>Mentha pulegium</i>	Pennyroyal	5	<i>Muscardinus avellanarius</i>	Common Dormouse
8	<i>Orobancha artemisiae-campestris</i>	Oxtongue Broomrape	5	<i>Balaenoptera physalus</i>	Fin Whale
8	<i>Petrorhagia nanteuilii</i>	Childing Pink	5	<i>Delphinus delphis</i>	Common Dolphin
8	<i>Phyteuma spicatum</i>	Spiked Rampion	5	<i>Globicephala melaena</i>	Pilot Whale
8	<i>Polygonum maritimum</i>	Sea Knotgrass	5	<i>Lagenorhynchus acutus</i>	White-Sided Dolphin
8	<i>Pulicaria vulgaris</i>	Small Fleabane	5	<i>Orcinus orca</i>	Killer Whale
8	<i>Rhinanthus angustifolius</i>	Greater Yellow-rattle	5	<i>Stenella caeruleoalba</i>	Blue-White Dolphin
8	<i>Salvia pratensis</i>	Meadow Clary	5	<i>Stenella coeruleoalba</i>	Striped Dolphin
8	<i>Cephalanthera rubra</i>	Red Helleborine	5	<i>Tursiops truncatus</i>	Bottle-Nosed Dolphin
8	<i>Damasonium alisma</i>	Starfruit	5	<i>Phocoena phocoena</i>	Common Porpoise
8	<i>Himantoglossum hircinum</i>	Lizard Orchid	5 x	<i>Lutra lutra</i>	Otter
8	<i>Leersia oryzoides</i>	Cut-grass	5 x	<i>Meles meles</i>	Badger
8	<i>Ophrys sphegodes</i>	Early Spider-orchid			
8	<i>Schoenoplectus triquetar</i>	Triangular Club-rush			
5	<i>Clavopsella navis</i>	Brackish Hydroid			
5	<i>Edwardsia ivelli</i>	Ivell's Edwardsia			
5	<i>Nematostella vectensis</i>	Starlet Sea Anemone			
5	<i>Alkamaria romijini</i>	Tentacled lagoon-worm			
5	<i>Hirudo medicinalis</i>	Medicinal Leech			
5	<i>Decticus verrucivorus</i>	Wart Biter			
5	<i>Gryllotalpa gryllotalpa</i>	Mole Cricket			

x Records not included in PSR report

* Sch.5 section 9 (part 1)

\$ Sch.5 section 9 (part 5)

Sch.8 section13 (part 2)

SUSSEX PROTECTED SPECIES REGISTER REPORT

Land at Woodgate + 1km radius

22 March 2011 ESD/11/120 **Search Area:** SU9303 to SU9505
Daniel Ahern (Ahern Ecology Ltd)

The contextual information in this report is based on the latest data available to the Record Centre and is regularly updated. If relying on this information for important decisions please check with record centre for the most up to date position of this species in Sussex. Please note that bat, bird badger and otter records are not included in this report.

Triturus cristatus

Great Crested Newt

The largest British newt. It is black or dark brown and the males have a crest along the back and an orange underside spotted with black. Frequently confused with male smooth newts, which also have a crest. The great crested newt prefers larger, open ponds that are free of fish and waterfowl and has declined substantially in Britain and across Europe, mainly due to habitat loss. The species is fully legally protected and Britain has special responsibility for its conservation as some of the best European populations occur here. Scattered across East and Central Sussex but scarce in the west.

amphibian

Bern Convention Appendix 2
European Protected Species
Habitats Directive Annex 2 - non-priority species
Habitats Directive Annex 4
Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec
Sussex Biodiversity Action Plan Species
Sussex Protected Species Register Species
UK Biodiversity Action Plan priority species
Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4b)
Wildlife and Countryside Act 1981 (Schedule 5 Section 9.5a)
Wildlife and Countryside Act 1981 (Schedule 5 Section 9.5b)
Wildlife and Countryside Act 1981 (Schedule 5)

Grid Reference	Recorder	Date	Locality
SU9304	SARG Sussex Amphibian & Reptile Grp	01/01/1992	The Willows, Hook Lane, Aldingbourne, West Sussex (VC13)

Anguis fragilis

Slow-worm

A legally protected legless lizard resembling a small snake. Slow-worms are widespread in southern England and found in open habitats such as rough grassland, heath and on road and railway embankments. They are often common in urban and suburban areas. Like most reptiles and amphibians they have declined considerably and need protection wherever they occur.

reptile

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

Grid Reference	Recorder	Date	Locality
SU9504	SARG Sussex Amphibian & Reptile Grp	01/01/1995	Elm Grove South, Barnham, West Sussex (VC13)
SU953048	Elaine Sturgess	2009	Hook Lane area, Aldingbourne, West Sussex (VC13)
SU955046	SARG recorder	14/05/2001	Elm Grove South, Barnham, Barnham
SU956050	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)

Zootoca vivipara

Common Lizard

The most abundant British lizard and widespread in Sussex in the Weald and along the coast. Probably under-recorded and increasingly confined to small areas of open sunny habitat. A legally protected species due to concern about its overall decline.

reptile

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

Grid Reference	Recorder	Date	Locality
SU9505	SARG Sussex Amphibian & Reptile Grp	01/01/1998	70 Elm Grove, South Barnham, West Sussex (VC13)

Natrix natrix

Grass Snake

A widespread, but legally protected, snake with a normally olive body flecked with black and a distinctive yellow collar. Frequent in Sussex near places where its food, largely frogs, is readily available. Like most reptiles and amphibians, grass snakes have declined considerably and need protection wherever they occur.

reptile

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

Grid Reference	Recorder	Date	Locality
SU9304	C Doring	23/08/2001	Elder Cottage, Hook Lane, Aldingbourne, West Sussex (VC13)
SU940050	Jason Lavender	28/08/2001	13 St Richards Road, Chichester, West Sussex (VC13)
SU9504	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	25/05/1996	17, Elm Grove South, Barnham, West Sussex (VC13)
SU953048	Elaine Sturgess	2009	Hook Lane area, Aldingbourne, West Sussex (VC13)
SU955046	SARG recorder	14/05/2001	Elm Grove South, Barnham, Barnham

Vipera berus

Adder

Britain's only venomous snake, though incidences of snakebite involving man or domestic animals are relatively uncommon. Adders have a distinctive zig zag pattern of black or brown and white. They occur in open areas on downs, heaths and in heathy woods. Grass snakes and slow-worms are often misidentified as adders. Though widespread in Britain and found in suitable areas across Sussex, the adder, like all our native reptiles has declined substantially through habitat loss and other factors. The adder is a protected species and it is illegal intentionally to kill or injure them.

reptile

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

Grid Reference	Recorder	Date	Locality
SU937047	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	17/07/1999	35a Lamorna Gardens, Westergate, Chichester, West Sussex (VC13)

Arvicola terrestris**European Water Vole**

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.

terrestrial mammal

Sussex Biodiversity Action Plan Species
Sussex Protected Species Register Species
Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU942034	Anon	1996	Lidsey Rife, West Sussex (VC13)
SU955034	Bill Force	2003	Barnham Court Farm

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

Bat species

There are 18 species of bat in the UK (17 of which are known to be breeding here), all of which have been recorded in Sussex, although some more frequently than others and at different times of the year:

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**

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

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, 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 baby 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; under the Wildlife & Countryside Act 1981 (WCA) in the UK (to implement the Berne Convention) and the Habitats Directive in the EU, which is implemented in the UK through the The Conservation of Habitats and Species Regulations 2010. 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

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

West & East Sussex Regional Office (Contact Jo Clarke).

Tel: 0300 060 0300

Email: jo.clarke@naturalengland.org.uk

Sussex Bat Group

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

Website: www.sussexbatgroup.org.uk

Tel: 01903 816298

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).

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Key to Indicators

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

Land at Woodgate + 1km radius

22 March 2011

ESD/11/120

Search Area: SU9303 to SU9505

Daniel Ahern (Ahern Ecology Ltd)

Common Name	Latin Name	No of Records	M/S	H	FR	MR	UR	D
Long-eared sp.	<i>Plecotus</i>	2	☐	☐	☐	☐	☒	☒
Pipistrelle Bat (species aggregate)	<i>Pipistrellus pipistrellus</i>	2	☐	☐	☐	☐	☒	☐
Serotine	<i>Eptesicus serotinus</i>	2	☐	☐	☐	☐	☒	☒



Woods Mill, Henfield, West Sussex BN5 9SD
 Tel: 01273 497 558 / 557
 Fax: 0203 070 0709
 Email: sxbrc@sussexwt.org.uk
 Web: sxbrc.org.uk

SUSSEX BAT INVENTORY REPORT

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Land at Woodgate + 1km radius

22 March 2011 ESD/11/120 **Search Area:** SU9303 to SU9505

Daniel Ahern (Ahern Ecology Ltd)

The contextual information in this report is based on the latest data available to the Record Centre and is regularly updated.

Eptesicus serotinus

Serotine

A large bat that frequents pasture, parklands and gardens as well as the wider countryside. It forms summer roosts in buildings where it also probably hibernates. A widespread southern species in the UK, though often only present in small numbers. Its British strongholds are in the south east (widespread in Sussex) and parts of the West Country.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
03/11/2007	Highground House, Highground Lane, Barnham, PO22 0BU, West Sussex (VC13)	SU955037	NE Bat Worker	Building Inspection	☐	☐	☐	☐	☒	☒		Species identified by droppings alone.

04/02/2004 53 Elm Grove, Barnham, West Sussex (VC13) SU956051 NE Bat Worker Building Inspection ☐ ☐ ☐ ☐ ☒ ☒

Pipistrellus pipistrellus

Pipistrelle Bat (species aggregate)

The commonest bat in the British Isles, this small species is found in all types of countryside, except very exposed areas, as well as in towns and suburbs. Summer roosts are usually in buildings, though tree holes and bat boxes are also used. Winter roosts are in buildings, tree holes and caves.

Pipistrelles were often recorded as either 45 kHz or 55 kHz depending on the pitch of the echolocation calls picked up by bat detectors. These are now separate species; *Pipistrellus pipistrellus* being the 45 kHz animal and *P. pygmaeus* the 55 kHz.

This is the aggregate version of the Pipistrelle where the audio frequency or specific species is undetermined.

Both *Pipistrellus pipistrellus* (45 kHz) and *P. pygmaeus* (55 kHz) are widespread in Sussex and, like all bats are a legally protected species.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
01/07/1992-31/07/1992	Kiff House, 59 Barnham Road, Barnham, Chichester, West Sussex (VC13)	SU956046	NE Bat Worker	Visual	☐	☐	☐	☐	☐	☐	2 In flight	Seen flying in the vicinity of the farm buildings. No droppings found. Bats seen every summer for years.
01/07/1984-31/07/1984	Forest Point, Elm Grove, Barnham, West Sussex (VC13)	SU90M	NE Bat Worker	Building Inspection	☐	☐	☐	☐	☒	☐		Behind hanging tiles of 17 year old house.

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
03/11/2007	Highground House, Highground Lane, Barnham, PO22 0BU, West Sussex (VC13)	SU955037	NE Bat Worker	Building Inspection	☐	☐	☐	☐	☒	☒		Species identified by droppings.
04/02/2004	53 Elm Grove, Barnham, West Sussex (VC13)	SU956051	NE Bat Worker	Building Inspection	☐	☐	☐	☐	☒	☒		

MAPS

There are three maps included in a standard desktop biodiversity report which show:

- 1) Designated sites (statutory and non-statutory)
- 2) Habitats and natural features
- 3) Ownership and management

The key on a map only shows those layers which are located within the enquiry area. Below are the details of all layers which we currently use in our maps.

Designated sites

	Area of Outstanding Natural Beauty (AONB) Dataset downloaded from MAGIC website. Owned by NE.
	Country Park Dataset downloaded from NE website.
	Local Nature Reserve (LNR) Dataset downloaded from NE website.
	Marine Site of Nature Conservation Importance (MSNCI) Supplied by ESCC in 2005.
	National Nature Reserve (NNR) Dataset downloaded from NE website.
	National Park Dataset downloaded from NE website.
	Notable Road Verge Owned and provided by ESCC and WSCC.
	Ramsar Dataset downloaded from NE website.
	Regionally Important Geological/Geomorphological Site (RIGS) Data supplied by the Booth Museum, Brighton and digitised by SxBRC in April 2009.
	Site of Nature Conservation Importance (SNCI) Data supplied by WSCC, ESCC & BHCC.
	Site of Special Scientific Interest (SSSI) Dataset downloaded from NE website.
	Special Area of Conservation (SAC) Dataset downloaded from NE website.
	Special Protection Area (SPA) Dataset downloaded from NE website.

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 The dataset is from the Revised Ancient Woodland Inventory carried out between 2007 and 2010. This dataset is not yet publicly available, but prior to adoption by NE we are using an interim version of what is expected to become the final dataset. It covers all districts in Sussex except Eastbourne, for which data from the original inventory has been carried over to the new dataset. N.B. Ancient Woodland data has limitations and should be treated as provisional. It is under constant review by NE.
	Black Poplar Dataset created by SxBRC based upon species records arising from Sussex Otters and Rivers Partnership.

	Chalk Grassland Merged dataset from NE and SDJC created in 2005.
	Floodplain Grassland Dataset downloaded from NE website.
	Ghyll Woodland Boundaries drawn on paper maps by Dr Francis Rose which were then digitised by SxBRC. Not ground-truthed.
	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.
	Reedbed/Fen Originally created in June 2007 by SxBRC. Ongoing updates provided by RSPB Sussex Reedbed Officer.
	Open Water Data extracted from Ordnance Survey Mastermap real world objects layers. This includes inland and tidal, running and standing water.
	Saline Lagoon Dataset downloaded from NE website.
	Traditional Orchard Provisional dataset from PTES. Based on existing survey data combined with aerial photography. Ground-truthing being undertaken by volunteers. Project to be completed in March 2011.
	Vegetated Shingle Dataset downloaded from NE website.

Ownership and management

	National Trust Property Owned and provided by National Trust.
	RSPB Reserve Owned and provided by RSPB.
	Sussex Wildlife Trust Reserve Created and maintained by SxBRC on behalf of SWT.
	Woodland Trust Site Owned and provided by the Woodland Trust.
	Environmental Stewardship Agreement Dataset downloaded from NE website.
	Higher Level Stewardship (HLS)
	Entry Level Stewardship (ELS)
	Organic ELS
	Organic HLS plus ELS
	ELS plus HLS

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
SWT	Sussex Wildlife Trust
SxBRC	Sussex Biodiversity Record Centre
WSCC	West Sussex County Council

Habitat Map (ESD/11/120):

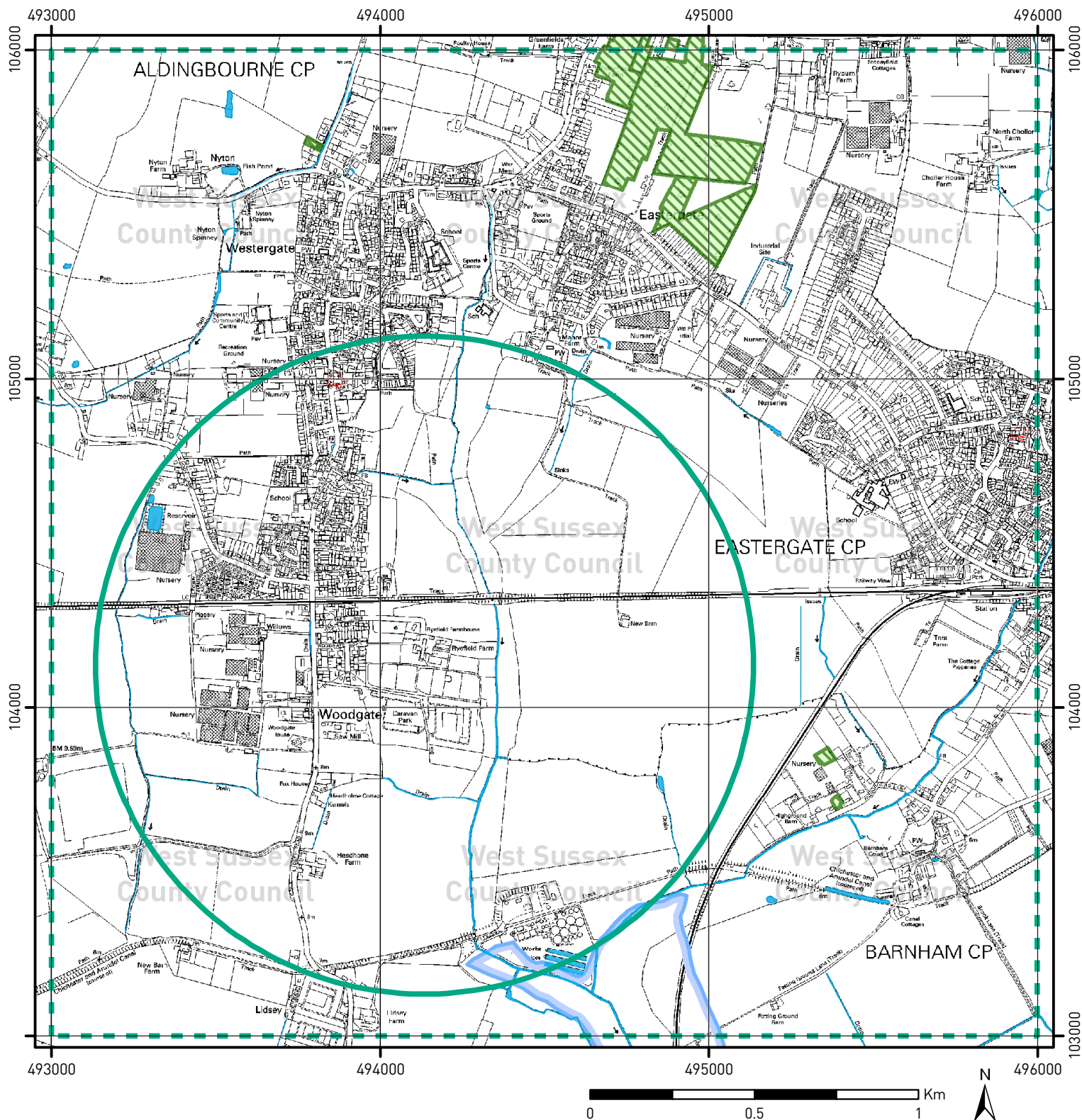
Land at Woodgate + 1km radius

Prepared for Daniel Ahern (Ahern Ecology Ltd) - 22/03/2011



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Key to Map:

- Enquiry Area
- Species Search Area
- Ancient/Veteran Tree
- Open Water
- Traditional Orchard
- Floodplain Grassland

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Ancient woodland, traditional orchards, floodplain grassland (coastal and floodplain grazing marsh), vegetated shingle and saline lagoon data reproduced with permission of Natural England. Chalk grassland data supplied by Natural England and South Downs Conservation Board. Black Poplar data supplied by Sussex Otters & Rivers Partnership. 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). © Crown Copyright. All rights reserved 2011.

This map contains ancient woodland data revised under the Weald and Downs Ancient Woodland Program (2010) on behalf of Natural England. Whilst every effort has been made to make this revision as accurate as possible, the inventories contain limitations and remain provisional. Further revisions are also pending within East Sussex. Habitat data held by Sussex Biodiversity Record Centre (SxBRCC) are created in-house or obtained from a variety of dataset providers. SxBRCC continually strive to further improve and update these data wherever possible. However, this map should be treated as indicative rather than definitive: data may be generated from a range of field survey and/or predictive methods, each of which may have its own inherent limitations. In some situations a recent ground survey may be required to establish definitively the current status of a particular habitat at a specific location.

Ownership & Management Map (ESD/11/120):

Land at Woodgate + 1km radius

Prepared for Daniel Ahern (Ahern Ecology Ltd) - 22/03/2011



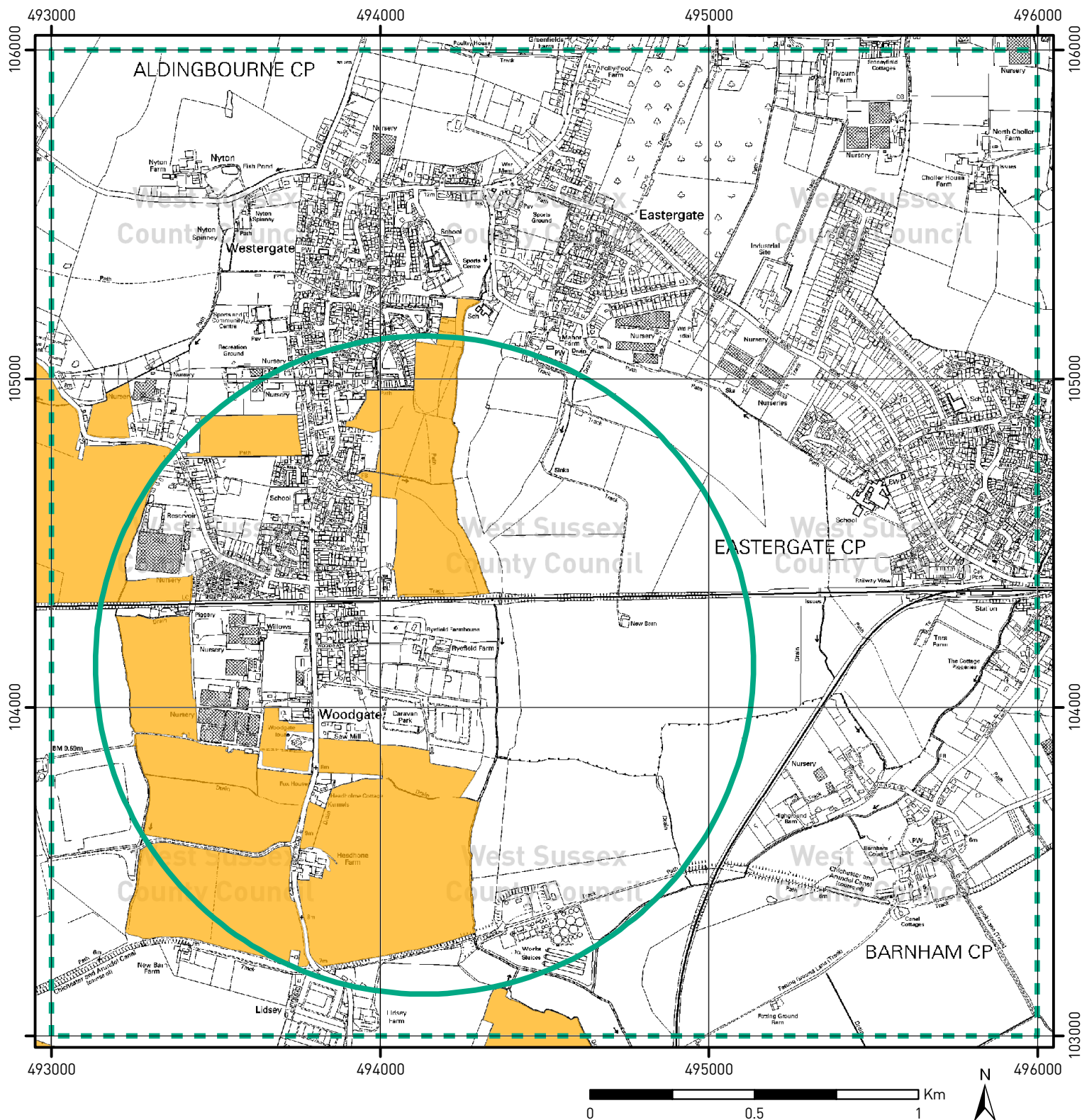
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Key to Map:

- Enquiry Area
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Environmental Stewardship Agreements:

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

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ANCIENT & VETERAN TREES

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

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

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

Ancient trees

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

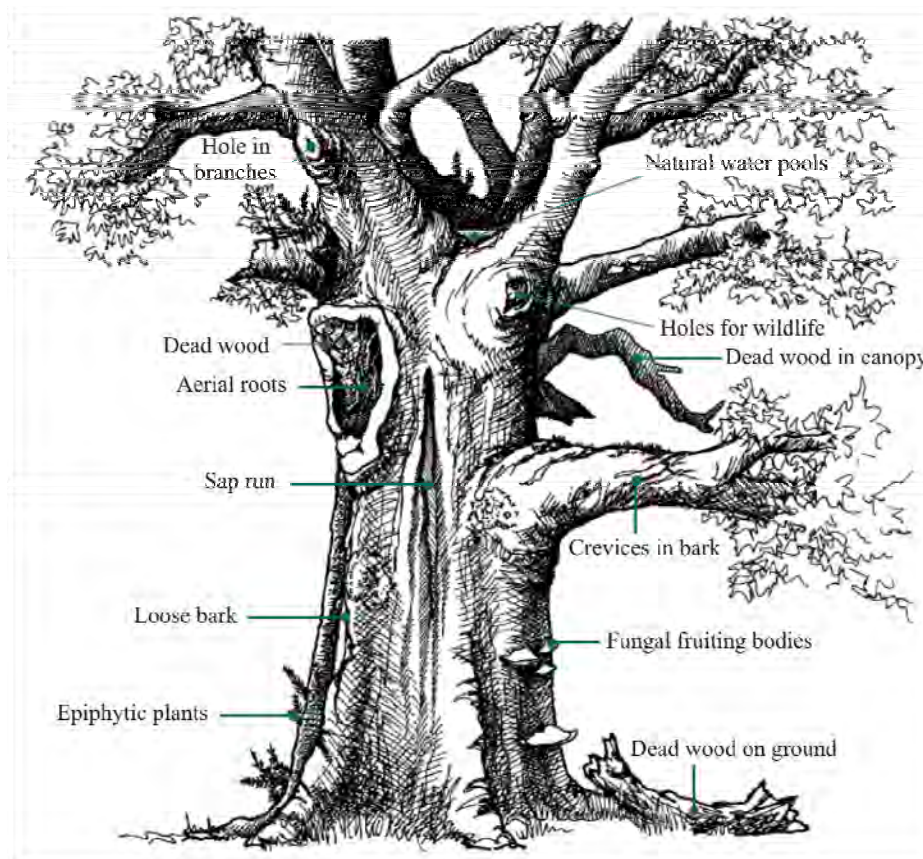
Veteran trees

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

Notable trees

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

Characteristic features of an ancient tree include:



- A reducing crown height but one that is more widely spread through the aging process.
- A large girth by comparison with other trees of the same species.
- A hollowing trunk - this may have one or more openings to the outside.
- Stag headedness i.e. branch dieback and deadwood in the upper canopy.
- Fruit bodies of heart-rot fungi.
- Sap runs or naturally forming water pockets in branch hollows.

Characteristic features of a veteran tree

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

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.

In woodland ecosystems, fungi play an important role in recycling nutrients and in individual trees. Fungi can be extremely long lived; some species are known to grow continuously. The two main types of fungi associated with ancient trees are mycorrhizal (which form symbiotic relationships with the roots of trees) and decomposers. Ancient trees support many rare and threatened fungi species, for example *Sulphur polypore* - a specialised wood decay fungus.

Ancient trees are incredibly important to invertebrate life. Approximately 1,700 (6%) invertebrate species in the British Isles are dependent on decaying wood to complete their life cycles. The invertebrate community of a tree often changes as the decay process proceeds. Some invertebrates are more dependent on the type of decay than on the species of tree. Others depend on the species of fungi present.

Insects 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.



Bats particularly like woodland because of the abundance of insects and the variety of niches trees offer for bat roosts. All 17 species of bat found in the UK frequent woods, with a few being woodland specialists, such as the rare Bechstein's and Barbastelle bats. Old trees with splits, cracks, loose bark, holes and crevices are especially attractive to bats. Oak and beech trees seem to be preferred, but any tree species can be suitable.

Ancient tree management

Many ancient trees are vulnerable and suffer from neglect or lack of awareness of their great importance to our heritage and wildlife. Threats to old trees include: root compaction from roads, buildings, vehicles and livestock; root severance by cultivation and development; felling for development work and 'safety' reasons; pests and diseases such as rhododendron and Phytophthora; and neglect of traditional techniques such as pollarding.

Active management may not involve actually doing much. Trees need to be checked regularly but management should only be carried out where necessary. When managing ancient trees it is important to think not just about the tree, but also about the management of the land surrounding it.

Planning Policy Statement 9 (PPS9) requires local authorities to avoid the loss of aged and veteran trees. Currently, few veteran trees are granted Tree Preservation Orders (TPO), as a TPO is not usually issued to a tree that is deemed 'dead, diseased, dying or decayed'. A veteran tree, however, may be given indirect protection if it is associated with a rare species.

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

(Illustrations courtesy of Natural England.)

FLOODPLAIN GRASSLAND

(Also known as grazing marsh, wet grassland & wetland pasture)

Wet grasslands are one of the richest wildlife resources in the UK, because they often form a transition zone between wet and dry habitats. This habitat consists mainly of low-lying, periodically inundated pastures or meadows with or without ditches which maintain water levels, and which contain standing brackish or fresh water. Almost all areas are grazed or cut for hay or silage. Ditches in floodplain grassland tend to be especially rich in plants and invertebrates, as most of the wetland interest drains into these channels. Many of the species found in floodplain grasslands are rare or threatened, and some are endemic to this habitat.

The majority of Sussex floodplain grazing marsh now contains networks of man made ditches, whose historical function was to drain floodplain areas in order to enable wider agricultural cultivation, and to create 'wet' fences. Naturally functioning floodplains are rare in the UK where most rivers are intensively engineered and regulated. However, Sussex is a county rich in 'natural' wetlands with some 11,400ha of wet pasture, meadows, marshes and river levels or floodplain. The rivers Arun, Adur, Ouse and Cuckmere all have important areas of floodplain grasslands or 'levels'. Almost all these areas are grazed and some are cut for hay or silage. Good examples in Sussex of grazing marsh designated as Sites of Special Scientific Interest can be found at Amberley Wildbrooks and Pevensey Levels.



Lapwing

Approximately 500 species of vascular plants have been recorded from UK wet grassland and associated drainage channels. The drainage channels alone support some 130 of Britain's 170 species of brackish and fresh water vascular plants. Many of the plant species that occur on Sussex wet grasslands are nationally rare such as Narrow-leaved water dropwort and Cut grass.

Wet grassland is particularly important for the large number of breeding waders they support as well as internationally important populations of wintering wildfowl such as Bewick's and whooper swan. Birds of Conservation Concern (2002-2007) lists over 40 red or amber list species that are partially or totally dependent upon floodplain grassland. These include wigeon, lapwing, snipe, black-tailed godwit and redshank.

Over a thousand nationally notable invertebrate species have been recorded on wet grasslands, about a quarter of which are listed in Red Data Books. For instance, Pevensey Levels in East Sussex, is one of only two sites in Britain where our largest spider, the fen raft spider, is found.



Water vole

The still, sheltered waters of the levels provide safe spawning areas for fish and amphibians, which in their turn support an abundance of predators such as the grey heron, kingfisher and grass snake. Floodplain grassland drainage channels are an ideal habitat for water voles, which are a UK protected species. However it is thought that the linear nature of these channels may also form easy hunting routes for one of their major predators, the American mink (*Mustela vison*).

Besides the ecological importance, there are other benefits to be gained from the maintenance of the wet grasslands, mainly in the improvement of water quality and the provision of natural flood defences. The pastures receive nutrient rich alluvial deposits during winter and spring flooding. Traditionally, Sussex cattle have been grazed on these floodplain areas in the summer – a type of extensive livestock grazing that should be conserved and promoted.

However, despite their importance, floodplain grassland are directly under threat from pump drainage schemes that lower the water table allowing their conversion to arable and more intensive grassland management. Increased use of artificial inputs and earlier spring grazing are among the resulting practices that are detrimental to wildlife – especially ground nesting birds. The remaining levels become less prone to the seasonal flooding that is required to maintain the habitat. The lowered river and ditch water levels lead to reduce water quality because pollutants are concentrated in the remaining water.

Threats to the rivers themselves such as domestic, industrial and agricultural pollution, unsympathetic flood prevention schemes and development on the estuaries and mudflats can indirectly lead to degradation of wet grassland habitat by changing water flow and water quality in the floodplains.

The Floodplain Grassland Habitat Action Plan gives detailed information and advice for this priority habitat and can be found at: www.biodiversitysussex.org. Targets and objectives in the Sussex Habitat Action Plan include:

Objectives

- Identify the full extent and quality of existing areas of floodplain grassland.
- Prevent further loss, fragmentation or deterioration by ensuring appropriate protection and management.
- Undertake a planned programme of floodplain grassland resource expansion through the restoration of neglected or damaged sites and the creation of new sites.
- Implement suitable hydrological management to enable floodplain grassland enhancement and expansion.
- Implement, promote and market traditional farming methods (such as beef production) in order to maintain and enhance floodplain grassland areas.
- Increase floodplain grassland area to support viable populations of important floodplain grassland species.
- Traditionally, Sussex cattle have been grazed on these floodplain areas in the summer – a type of extensive livestock grazing that should be conserved and promoted.

Targets

- Ensure there is no further loss of grazing marsh, and that the existing priority areas of floodplain grassland are under appropriate management by 2005.
- Restore at least 5000ha of lowland wet grassland to a favourable conservation status by 2050.
- Achieve restoration of at least 1500 ha by 2010.
- Re-create 2000ha of grazing marsh from cultivated land, in the vicinity of existing high quality wetland, by 2050.
- Ensure that remaining areas of floodplain grassland in the major river valleys are subject to management agreements under Countryside Stewardship, WES or ESA schemes, as appropriate, by 2005.

(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 between East and West Sussex County Councils, Natural England, Environment Agency, South Downs Joint Committee, High Weald AONB Unit, Southern Water and Local Authorities throughout Sussex.

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