



LAND NORTH OF BEECHES AVENUE (SITE 1)
PRELIMINARY ECOLOGICAL SUMMARY REPORT

Prepared for Worthing Borough Council

by

Hankinson Duckett Associates

HDA ref: 454.2

November 2015

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1 Site summary

- 1.1 Site 1 comprises 2.8ha of land bordered to the north by grassland paddocks; to the east by Worthing Football Club ground; to the south by residential development; and to the west by Charmandean Lane with residential development beyond.
- 1.2 In general terms, the site is dominated by two intensively grazed grassland paddocks with commercial buildings in the south-east and a concrete access track from Beeches Avenue to the south. The southern boundary of the site comprises garden fences and residential buildings, and the eastern and western boundaries comprise scrub and trees. The northern margin of the site supports a strip of recent tree and scrub planting with stock fence forming the boundary.
- 1.3 Locations and detailed descriptions of the habitats present at the site are provided in the Phase 1 habitat survey plan and target notes in *Appendix A*.

2 Desk study

- 2.1 No statutory or non-statutory nature conservation designations pertain to the site or adjacent land.
- 2.2 No areas of international importance (i.e. SPA, SAC or RAMSAR) occur within 10km and no National Nature Reserves (NNRs) occur within 5km of the site boundary.
- 2.3 The closest area of national importance to the site is 'Cissbury Ring' Site of Special Scientific Interest (SSSI) which is located approximately 1.5km to the north and designated for its chalk grassland habitat. No other SSSIs are located within 5km of the site boundary.
- 2.4 There are no Local Nature Reserves (LNRs) located within 2km of the site.
- 2.5 Three Sites of Nature Conservation Importance (SNCIs) occur within 2km of the site. The closest of these are 'Worthing & Hill Barn Golf Courses' and 'Tenants Hill and Reservoirs' SNCIs, both of which are located approximately 400m north-west of the site and designated primarily for their species-rich grassland habitats.
- 2.6 No records of protected and notable species pertain to the site itself. Records provided for within 2km of the site include bats, Hazel Dormouse, reptiles, Water Vole, and notable birds, invertebrates and plants.
- 2.7 The full results of the desk study including plans showing the locations of nearby designated nature conservation sites and complete protected and notable species records for within 2km of the site are provided in *Appendix B*.

3 Constraints and opportunities

- 3.1 The site is dominated by habitats of **negligible/ less than local** conservation interest in their own right including species-poor grassland, scrub, non-native trees, tall ruderals and recent tree and scrub planting.
- 3.2 Although dense linear scrub along the western site margin is of **less than local** value in its own right due to being species-poor with a high abundance of Bramble, it provides opportunities for a range of species and contributes to a corridor of linear semi-natural habitat along Charmandean Lane facilitating the movement of wildlife across the wider area which in combination is considered of **local** value.
- 3.3 Any development proposals at the site should seek to retain features of local value and where appropriate enhance these features and the wider site through management and complimentary habitat creation. Ways in which this could be achieved include:
- Enhancement of linear scrub habitat along the western site boundary through selective clearance of Bramble and non-native trees/ scrub, and infilling using a species-rich mix of native shrubs and trees.
 - Use of native species-rich hedgerow, scrub and tree planting around the site boundaries to enhance habitat connectivity across the site.
 - Creation of a range of habitats with high wildlife interest within areas of public open space such as species-rich grassland and native scrub.
 - Creation of wetland habitats such as ponds and swales in conjunction with SuDS proposals.
 - Creation of new opportunities for nesting birds and roosting bats through provision of bird and bat boxes on existing trees and new buildings.
 - Use of native species typical of the local area in landscape planting where appropriate to do so. Where possible these should be sourced from stock of local provenance.
 - Prioritising the use of plants which benefit native wildlife within formal landscaping schemes, including nectar- and pollen-rich and fruit- and nut-producing species.

4 Further information requirements

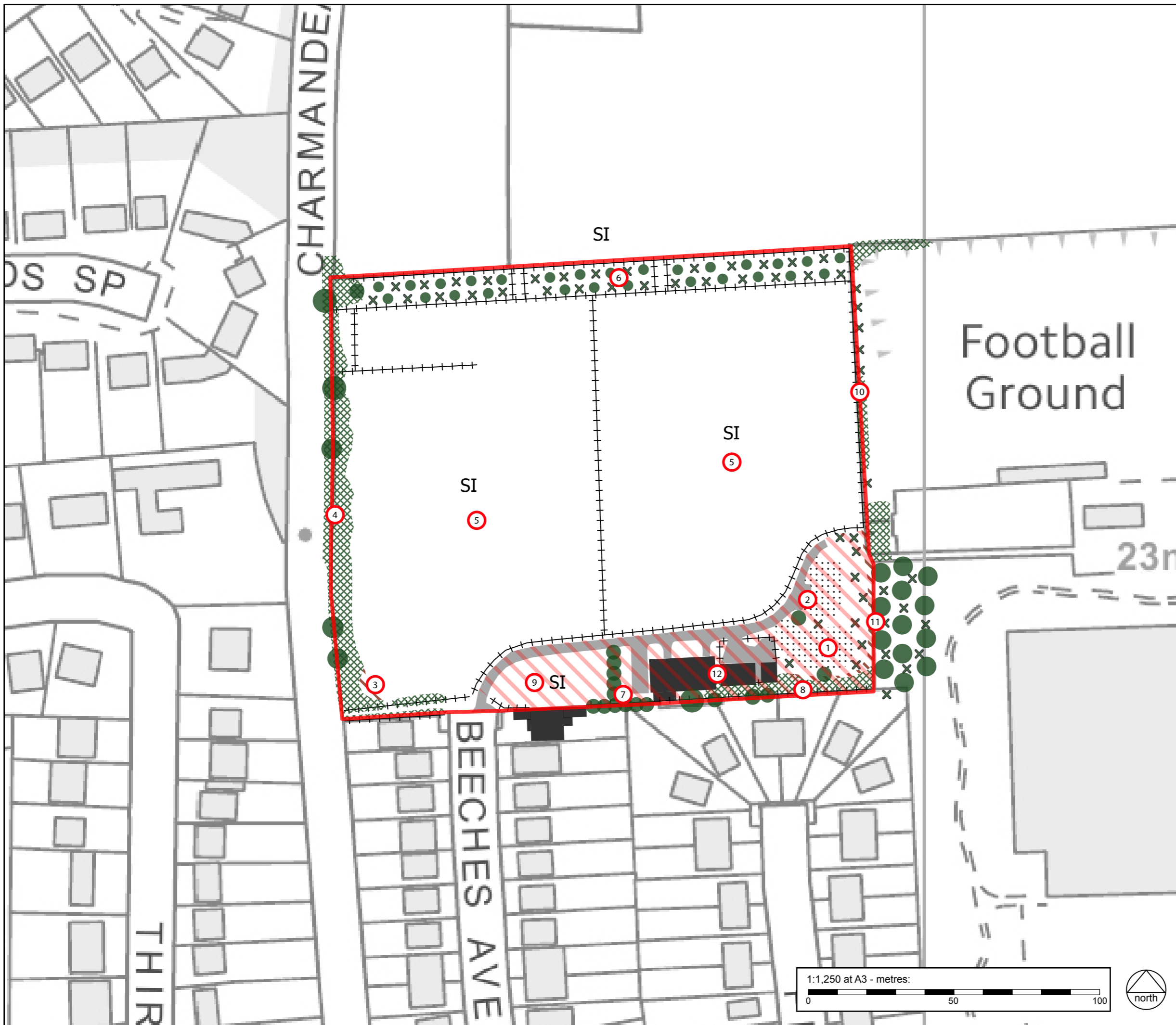
- 4.1 In view of the findings of the desk study and/or habitat resource of the site, consideration should be given to the requirement for the following further surveys and assessment work in support of a planning application:
- Phase 1 bat survey (scoping inspections of buildings and trees)
 - Phase 2 emergence surveys (if potential for roosting bats identified during Phase 1 bat survey)
 - Phase 2 bat activity survey
 - Reptile survey
 - Badger survey

- Implications of increased recreational pressure on off-site designated areas both alone and in combination with other plans and projects.

4.2 It is recommended that the extended Phase 1 habitat survey and desk study are updated by the applicant prior to submission of a planning application. This is in order to ensure that the assessment of habitats at the site and its potential to support protected and notable species reflect any subsequent changes in the ecological character of the site and its surrounds, and strategic nature conservations objectives. The actual requirements for further work should also take into account the nature and extent of proposed development works.

APPENDIX A

Phase 1 habitat survey: Plan and Target Notes



KEY

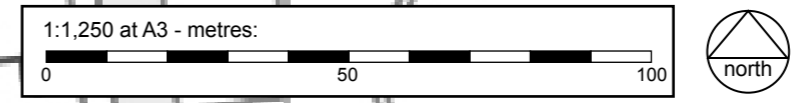
	Site boundary
	Area with restricted access during survey
	Scattered trees
	Dense scrub
	Scattered scrub
	Tall ruderals
	Species-poor semi-improved grassland
	Fence
	Bare ground
	Hard standing
	Buildings
	Target Notes

CLIENT:
 Worthing Borough Council
 PROJECT:
 Worthing Landscape and Ecology Study
 TITLE:
 Site 1 - Phase 1 Habitat Survey
 SCALE AT A3: 1:1,250 DATE: November 2015

454.2 / 103

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Landscape Architecture
 Masterplanning
 Ecology



Site 1 - Target Notes

- 1. Storage area:** Areas of bare ground used for storing cars and other equipment. Occasional scattered scrub includes Willow *Salix* sp., Ash *Fraxinus excelsior*, Elder *Sambucus nigra* and Buddleia *Buddleja davidii*. Rough species-poor grassland and ruderal vegetation occurs on the margins of this area.
- 2. Hardstanding:** A concrete access road which enters from Beeches Avenue to the south and continues through the south-eastern area of the site.
- 3. Tall ruderals:** Dense Elder scrub with Common Nettle *Urtica dioica* and Burdock *Arctium* sp. growing in the south-western corner of the grazed paddock.
- 4. Western boundary scrub:** Outgrown scrub/ hedgerow along the western boundary of the site dominated by Elder and dense Bramble *Rubus fruticosus* agg. Other scrub species present include occasional English Elm *Ulmus procera*, Hazel *Corylus avellana* and Dogwood *Cornus sanguinea*. Occasional young to early-mature Sycamore *Acer pseudoplatanus* trees also grow along the boundary.
- 5. Grazed grassland paddocks:** The site is dominated by species-poor semi-improved grassland grazed by horses. The dominant grass species in the sward are Perennial Ryegrass *Lolium perenne* and Cocksfoot *Dactylis glomerata*, with less frequent Common Bent *Agrostis capillaris*, Yorkshire Fog *Holcus lanatus*, Fescue *Festuca* sp., and False Oat-grass *Arrhenatherum elatius*. Forb species included Dandelion *Taraxacum* agg., Yarrow *Achillea millefolium*, Ribwort Plantain *Plantago minor*, Hawkbit *Leontodon* sp., Hairy Tare *Vicia hirsuta*, Lesser Trefoil *Trifolium dubium*, Common Ragwort *Senecio jacobaea*, Wild Carrot *Daucus carota*, Spear Thistle *Cirsium vulgare*, Common Bird's-foot Trefoil *Lotus corniculatus*, Creeping Buttercup *Ranunculus repens*, White Clover *Trifolium repens*, Common Mallow *Malva neglecta* and Bristly Ox-tongue *Picris echioides*.
- 6. Recently planted trees/ scrub:** Relatively recently planted (approximately 3-5 years old) strip of tree and scrub planting along the northern margin of the site, comprising Wild Cherry *Prunus avium*, Dogwood, Hawthorn *Crataegus monogyna*, Blackthorn *Punus spinosa*, Wayfaring-tree *Viburnum lanata*, Gorse *Ulex europaeus*, Beech *Fagus sylvatica*, Field Maple *Acer campestre*, Ash, Yew *Taxus baccata*, Spruce *Picea* sp. and Guelder Rose *Viburnum opulus*. Regenerating Elm scrub has also colonised this area. The ground layer comprises rough species-poor grassland (as TN5).
- 7. Cypress trees:** Lines of Leyland Cypress *Cupressus leylandii* trees in the south of the site.
- 8. South-eastern boundary:** Boundary of the site bordering residential gardens to the south supporting dense Bramble and scattered scrub including abundant Elder and Buddleia. Occasional trees include Pine *Pinus* sp., Wild Cherry and Silver Birch *Betula pendula*.
- 9. Rough grassland:** Small area of species-poor semi-improved grassland (as TN5) which was unmanaged, rough and tussocky at the time of survey. The southern boundary of this area directly abuts an off-site residential property.
- 10. Eastern boundary:** The eastern boundary of the site abutting the Worthing Football Club grounds comprises a low post and wire fence with scattered scrub. Scrub species include Elder, Buddleia, Blackthorn, Dog Rose, Hawthorn and abundant dense Bramble. Ground layer species included abundant Ivy *Hedera helix* with Broad-leaved Dock *Rumex obtusifolius*, Common Mallow, Yarrow and Ragwort.
- 11. Off-site trees and scrub:** To the south-east is an area of relatively recently established early-mature tree and scrub planting within public open space measuring up to approximately 10m in height. Species present include Ash, Hawthorn, Scot's Pine *Pinus sylvestris*, Hazel, Yew, Wild Cherry, Sycamore, Field Maple and Spindle *Euonymus europaeus*. Bramble is also frequent in the understorey.
- 12. Buildings:** A complex of three single-storey commercial buildings associated with a car garage business. The larger western shed has a pitched roof and is used as a car workshop and two smaller flat-roofed buildings are located to the immediate east.

APPENDIX B
Desk Study Results



Desktop Biodiversity Report

Land north of Beeches Avenue, Worthing + 2km radius

ESD/15/560

Prepared for Alex Leishman (Hankinson Duckett Associates)

18th August 2015

Sussex Biodiversity Record Centre
report regarding
land north of Beeches Avenue,
Worthing + 2km radius
18/08/2015

Prepared for Alex Leishman
Hankinson Duckett Associates
ESD/15/560

The following information was requested:

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

SNCI

W07 - Worthing & Hill Barn Golf Courses; W10 - Tenants Hill & Reservoirs.

SSSI

Cissbury Ring.

Other Designations/Ownership

Environmental Stewardship Agreement; Local Geological Site; National Park.

Habitats

Lowland calcareous grassland; 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

The following species are not included in desktop biodiversity reports

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 our species inventory reports, as it has been requested that they remain confidential.

If you need further information about badgers in your enquiry area please contact the Badger Trust Sussex. Contact details can be found on their website: www.badgertrust-sussex.org.uk

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 need to find out if otters have been recorded in your enquiry area, please get in touch with the Record Centre.

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. If you need to know if any confidential records have been recorded in your enquiry area, please get in touch with the Record Centre.

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 show on our maps, with details of the data source. Citation sheets and further information on each layer can be found towards the back of the pdf report.

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 Conservation Zone (MCZ)	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 between 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.

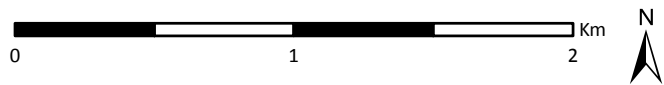
Intertidal mudflat	Supplied by EA, based on data from the SRCMP Habitat Mapping Project.
Lowland calcareous grassland	Merged dataset from NE and SDJC sources, created in 2005. Administered by SxBRC.
Lowland fen	Created by SxBRC in June 2011. Layer is an amalgamation of all the fen data currently available 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	Created by SxBRC.
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.



Key to Map:

-  Enquiry area
-  Species search area
-  SNCI
-  SSSI
-  National Park
-  LGS

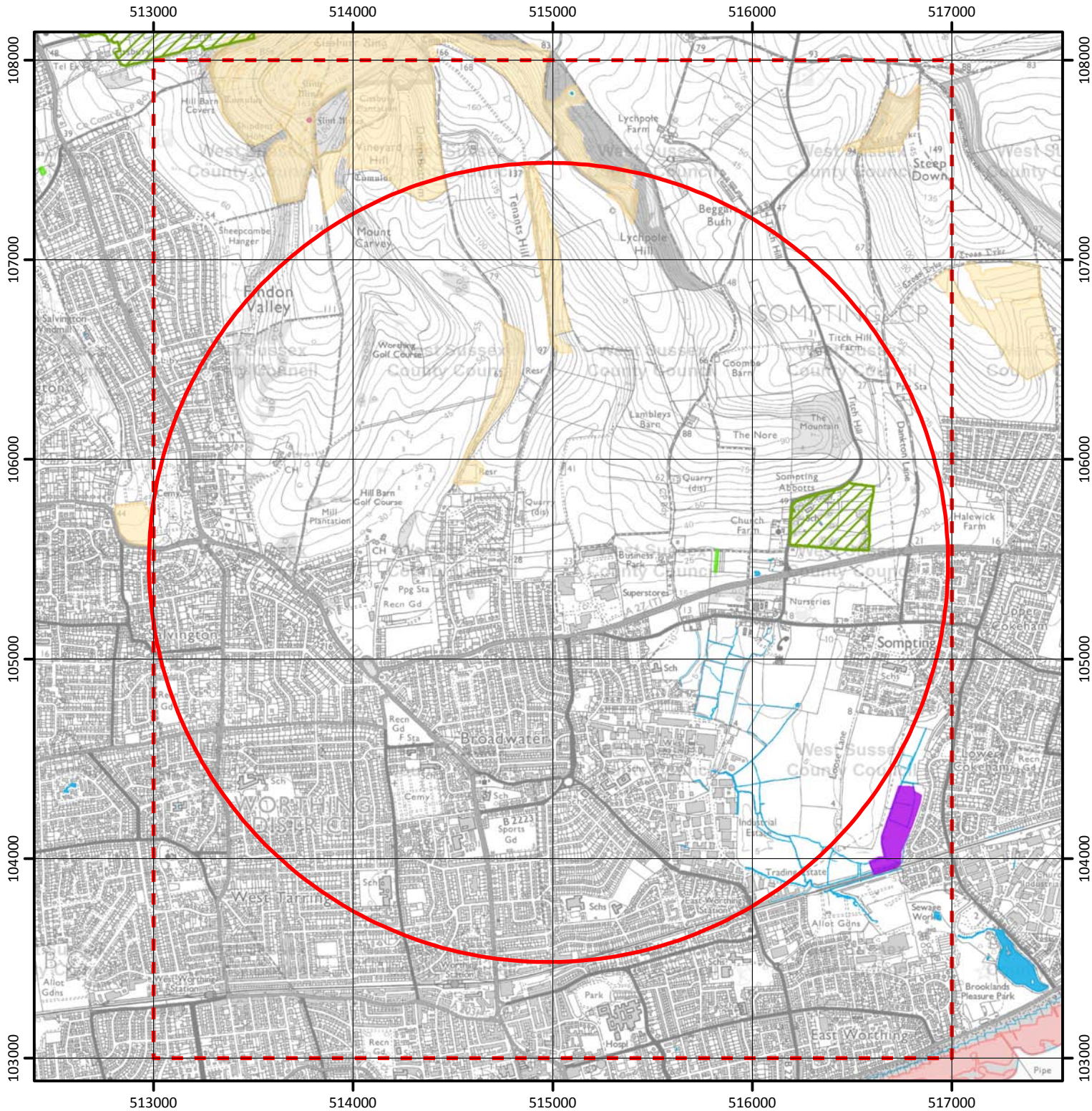
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RAMSAR, Special Area of Conservation (SAC), Special Protection Area (SPA), National Park, Area of Outstanding Natural Beauty (AONB), National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI), Local Nature Reserve (LNR) and Country Park data reproduced with permission of Natural England. Site of Nature Conservation Importance (SNCI) data provided by East and West Sussex County Councils, and Brighton & Hove City Council. Notable Road Verge data supplied by East and West Sussex County Councils. Local Geological Site (LGS) data created by SxBRc in partnership with Sussex Geodiversity Group. © Crown Copyright. All rights reserved 2015.





Habitat & Natural Features Map (ESD/15/560)

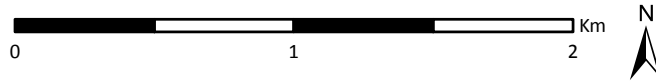
Land north of Beeches Avenue, Worthing + 2km radius

Prepared for Alex Leishman (Hankinson Duckett Associates) - 18/08/2015



Key to Map:

-  Enquiry area
-  Species search area
-  Ancient/veteran tree
-  Reedbed
-  Intertidal mudflat
-  Open Water
-  Traditional orchard
-  Wood-pasture & parkland
-  Lowland heathland
-  Lowland calcareous grassland



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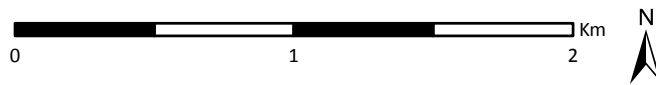
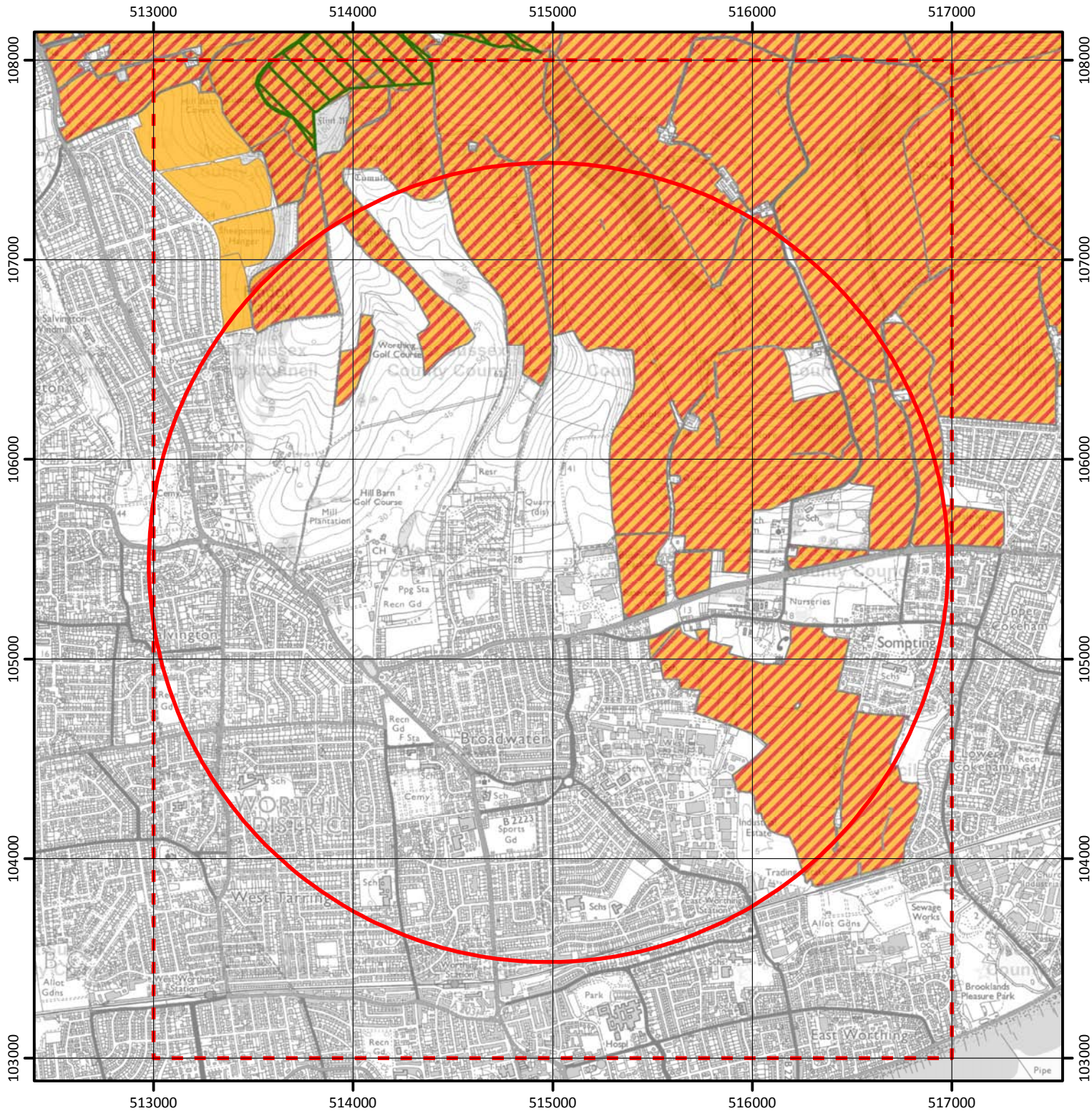
Ancient woodland, traditional orchards, woodpasture and parkland, vegetated shingle and saline lagoon data reproduced with permission of Natural England. Revised coastal and floodplain grazing marsh data remains provisional and is also reproduced with permission of Natural England. Chalk grassland data 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 2015.

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/15/560)

Land north of Beeches Avenue, Worthing + 2km radius






Prepared for Alex Leishman (Hankinson Duckett Associates) - 18/08/2015



Key to Map:

-  Enquiry area
-  Species search area
-  National Trust property

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 2015.

Sussex Environmental Survey Directory

Report on behalf of Alex Leishman (Hankinson Duckett Associates) regarding land north of Beeches Avenue, Worthing + 2km radius.

Our Ref: ESD/15/560

Date: 18-Aug-15

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	Entomological Survey of Cokeham Brooks - (3651)	
Survey Author	EDWARDS, Mike	
Survey Comment	Cokeham Brooks is an Area of flushed fen at the southern edge of the South Downs, South of Sompting Village, West Sussex. Visits were made to record the largest numbers of species associated with the wetland habitats.	
Date	11/6/2009-4/7/2009	
Site Name	Lower Cokeham Ditches (pSNCI)	TQ168044
Site Comment	Potential SNCI. A stretch of reed bed transected and bounded by a number of watery ditches. Rough grazed meadows are found along the western length of the reed bed. Includes Lower Cokeham Reedbed & Ditches - SNCI Ad07.	
Copies Available	SxBRC Digital	

Survey Name	Worthing Viridor Site Ecological Surveys - (3793)	
Survey Author	THOMSON ECOLOGY	
Survey Comment	Thomson Ecology was commissioned in April 2004 by Babbie Group on behalf of Viridor Waste management Ltd to crest newts, reptiles, badgers and water voles at a site in Worthing.	
Date	April 2004	
Site Name	Worthing Waste Transfer Station	TQ161042
Site Comment	The site traverses arable land; rough pasture; ley; reed-filled ditches; a stream; secondary rank vegetation; hedges and some lines of old trees including a Black Poplar.	
Copies Available	SxBRC Digital	

Survey Name	Badgers Survey - Worthing Bypass - (180)		
Survey Author	SKINNER, Paul		
Survey Comment	A letter and map detailing further locations of badger setts which may be affected by the bypass.		
Date	2.95		
Site Name	A27 Improvement: Worthing - Lancing Bypass Route Corridors Area		TQ140070
Site Comment	Three proposed road routes run through this area of mainly arable land and chalk downland. This site encloses those proposed routes, as well as the surrounding lands. Also falls into parishes of Clapham & Coombes (although: NB: exact site boundaries estimated, since only the exact corridor routes indicated on provided map, & not the extent of surrounding area which was also included in survey area).		
Copies Available	WSCC		

Survey Name	Bryophytes and Lichens in Chalk Grassland in West Sussex. - (283)		
Survey Author	ROSE, Francis (Dr).		
Survey Comment	A detailed survey of the Bryophytes (mosses and liverworts) on West Sussex chalk grassland. Areas were identified from Graham Steven's chalk grassland report of 1992. Each area is given a grading according to how rich it is in Bryophytes. Much information was gathered during spring 1993, but information from previous years is also included. (Phase II). [SxBRC (2 copies) filed in G1-3 Box].		
Date	1.93-4.93		
Site Name	Steep Down, Sompting - SNCI Ad8		TQ167077
Site Comment	A steep hillside rising to Steep Down to the east and bordered by Cross Dyke. Predominantly chalk grassland, supporting typical downland species, but with coarser grass and more "woodland" plants where scrub has been cleared. A large area of scrub remains at the base of the slope on the western side of the site, but some has been removed from the north-west corner and from the top of the slope. The area is being actively managed to restore its downland interest. Only the more widespread bryophytes and lichens occur here.		
Copies Available	SxBRC Boxes, WSCC, EN/LEWES/LIB		

Survey Name	Bryophytes and Lichens in Chalk Grassland in West Sussex. - (283)		
Survey Author	ROSE, Francis (Dr).		
Survey Comment	A detailed survey of the Bryophytes (mosses and liverworts) on West Sussex chalk grassland. Areas were identified from Graham Steven's chalk grassland report of 1992. Each area is given a grading according to how rich it is in Bryophytes. Much information was gathered during spring 1993, but information from previous years is also included. (Phase II). [SxBRC (2 copies) filed in G1-3 Box].		
Date	1.93-4.93		
Site Name	Reservoir Area by Tenantshill Barn, Worthing Golf Course		TQ146059
Site Comment	This is one of the richest chalk grasslands for lichens. The surface was scraped off in 1890 during the construction of an underground reservoir and a rich community has developed. A very small site.		
Copies Available	SxBRC Boxes, WSCC, EN/LEWES/LIB		

Survey Name	Report on the Molluscs of the West Sussex Chalk Downs 1993 - (293)	
Survey Author	WILLING, Martin J	
Survey Comment	Land molluscs were surveyed at 68 chalk grassland sites in West Sussex (plus 2 further sites reported to the author following completion of the main text). At each site field searches were undertaken and bulk samples of vegetation were taken to record smaller species. Species found are given an abundance rating at sites being newly surveyed for molluscs. The report also contains notes on selected species. (Phase II). [SxBRC copies held in G8 Molluscs box].	
Date	8.92-4.93	
Site Name	Reservoir Area by Tenantshill Barn, Worthing Golf Course	TQ146059
Site Comment	This is one of the richest chalk grasslands for lichens. The surface was scraped off in 1890 during the construction of an underground reservoir and a rich community has developed. A very small site.	
Copies Available	SxBRC Digital, WSCC, EN/LEWES/LIB	

Survey Name	Report on the Molluscs of the West Sussex Chalk Downs 1993 - (293)	
Survey Author	WILLING, Martin J	
Survey Comment	Land molluscs were surveyed at 68 chalk grassland sites in West Sussex (plus 2 further sites reported to the author following completion of the main text). At each site field searches were undertaken and bulk samples of vegetation were taken to record smaller species. Species found are given an abundance rating at sites being newly surveyed for molluscs. The report also contains notes on selected species. (Phase II). [SxBRC copies held in G8 Molluscs box].	
Date	8.92-4.93	
Site Name	Lyons Farm Chalk Grassland, East of Tenants Hill	TQ156065
Site Comment	A small West facing area of chalk grassland which has been used as a tip and is very degraded. Only a few catholic mollusc species present.	
Copies Available	SxBRC Digital, WSCC, EN/LEWES/LIB	

Survey Name	Report on the Molluscs of the West Sussex Chalk Downs 1993 - (293)	
Survey Author	WILLING, Martin J	
Survey Comment	Land molluscs were surveyed at 68 chalk grassland sites in West Sussex (plus 2 further sites reported to the author following completion of the main text). At each site field searches were undertaken and bulk samples of vegetation were taken to record smaller species. Species found are given an abundance rating at sites being newly surveyed for molluscs. The report also contains notes on selected species. (Phase II). [SxBRC copies held in G8 Molluscs box].	
Date	8.92-4.93	
Site Name	Tenants Hill Chalk Downland	TQ150068
Site Comment	A component of SSCI W10.	
Copies Available	SxBRC Digital, WSCC, EN/LEWES/LIB	

Survey Name	Report on the Molluscs of the West Sussex Chalk Downs 1993 - (293)	
Survey Author	WILLING, Martin J	
Survey Comment	Land molluscs were surveyed at 68 chalk grassland sites in West Sussex (plus 2 further sites reported to the author following completion of the main text). At each site field searches were undertaken and bulk samples of vegetation were taken to record smaller species. Species found are given an abundance rating at sites being newly surveyed for molluscs. The report also contains notes on selected species. (Phase II). [SxBRC copies held in G8 Molluscs box].	
Date	8.92-4.93	
Site Name	Cissbury Ring SW Slopes	TQ136078
Site Comment		
Copies Available	SxBRC Digital, WSCC, EN/LEWES/LIB	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Lower Cokeham Ditches (pSNCI)	TQ168044
Site Comment	Potential SNCI. A stretch of reed bed transected and bounded by a number of watery ditches. Rough grazed meadows are found along the western length of the reed bed. Includes Lower Cokeham Reedbed & Ditches - SNCI Ad07.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	The Mountain, Sompting (pSNCI)	TQ164063
Site Comment	Potential SNCI. An area of severely storm damaged beech and sycamore woodland which has been extensively replaced with beech, and some ash. The wood is extremely open, with some mature trees on the edges and northern part of the site, but with young sycamore and open ground covering most of the area.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Steep Down, Sompting - SNCI Ad8	TQ167077
Site Comment	A steep hillside rising to Steep Down to the east and bordered by Cross Dyke. Predominantly chalk grassland, supporting typical downland species, but with coarser grass and more "woodland" plants where scrub has been cleared. A large area of scrub remains at the base of the slope on the western side of the site, but some has been removed from the north-west corner and from the top of the slope. The area is being actively managed to restore its downland interest. Only the more widespread bryophytes and lichens occur here.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Steep Down Track, Sompting (pSNCI)	TQ167067
Site Comment	Potential SNCI. The site consists of a grassy track with rank chalk grassland on either side and on the adjoining banks, with are of scrub at the bottom. Scattered scrub occurs along the north-eastern boundary of the track.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Offington Cemetery/Durrington Cemetary (pSNCI)	TQ130057
Site Comment	Potential SNCI. It is a large area of unimproved herb-rich grassland within urban Worthing District. It contains some rank grassland and disturbed ground but much unimproved calcareous grassland. Only the south-west corner of the site is SNCI W6.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Shepherd's Mead Field, Field Valley (pSNCI)	TQ134067
Site Comment	Potential SNCI. This site consists of thick hedges around an arable field. The hedges are species-rich chalk scrub.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Long Meadow Field, Findon Valley (pSNCI)	TQ133075
Site Comment	Potential SNCI. The site consists of an improved rye grass ley, a chalk scrub patch and thick hedges linking it to areas of scrub and woodland.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Mill Plantation, Salvington (pSNCI)	TQ138058
Site Comment	Potential SNCI. This small wood is on the south-facing slope of the South Downs on the Hill Barn Golf Course. It is secondary woodland with old beech trees and poor ground flora. It has some holm oak, scots pine and sweet chestnut.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
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Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	London & Edinburgh Ins HQ Grounds (pSNCI)	TQ140053
Site Comment	Potential SNCI. This site is on the lower south facing slopes of Cissbury Hill. It consists of amenity grassland with some specimen trees and a wildlife garden.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
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Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Deep Bottom & Vineyard Hill, Worthing (pSNCI)	TQ141076
Site Comment	Potential SNCI. An area of chalk grassland to the south of Cissbury Ring. The steep slopes are heavily grazed unimproved chalk grassland. The level ground at the top of the slope in the centre of the site is improved and re-seeded. Includes designated area SNCI W07.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
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Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Broadwater & Worthing Cemetery (pSNCI)	TQ143044
Site Comment	Potential SNCI. A large cemetery within urban Worthing. It has areas of specie-rich unimproved chalk grassland, less species-rich grassland and scattered trees with patches of scrub.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Deep Bottom, Worthing (pSNCI)	TQ143075
Site Comment	Potential SNCI. An area of species-rich chalk grassland to the south of Cissbury Ring. It has some areas of tall herbs and secondary invasive scrub. Northern part is also within Cissbury Ring SSSI.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Broadwater Churchyard & Manor School Fields (pSNCI)	TQ147044
Site Comment	Potential SNCI. A one acre churchyard within urban Worthing, derived from old meadowland. The grassland is rank and there are patches of scrub and planted trees.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Chesswood Farm Allotment Gardens (pSNCI)	TQ165038
Site Comment	Potential SNCI. The northern part of the site is mainly derelict allotments with species-rich tall herbs. The southern part is mainly used allotments with tall herbs/grass on the edges and on derelict plots. Shrubs are scattered throughout. A polluted stream runs through the site.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	West Sussex Potential SNCI Project - (397)	
Survey Author	FINCH, Marion, CLARK, Louise	
Survey Comment	A survey of potential SNCIs to assess their significance. Incidental records of mammals, birds, butterflies and moths, and ferns/bryophytes/lichens were included. ONLY West Sussex covered in the survey. Where relevant, info. In EN/SSSI Files. NB: some sites listed below have since been designated, and are now named accordingly.	
Date	1990-3.92	
Site Name	Hill Barn Golf Course Copse (pSNCI)	TQ143057
Site Comment	Potential SNCI. A small copse of secondary woodland at the south of Hillbarn Golf Course. On the site of a derelict chalk pit. It is young oak and ash woodland, with much dead wood. It is used by the public.	
Copies Available	WSCC, EN/SSSI/SCI	

Survey Name	Chalk Grassland on South Downs of West Sussex - (499)	
Survey Author	PAGE, Martin	
Survey Comment	Areas of chalk grassland were identified from aerial photographs. In each site random quadrats were chosen and the vegetation described in detail. (WSCC have copies of some of the original quadrat data). (Phase II). [SxBRC copy held in H3 box].	
Date	7.81-12.81	
Site Name	Steep Down, Sompting - SNCI Ad8	TQ167077
Site Comment	A steep hillside rising to Steep Down to the east and bordered by Cross Dyke. Predominantly chalk grassland, supporting typical downland species, but with coarser grass and more "woodland" plants where scrub has been cleared. A large area of scrub remains at the base of the slope on the western side of the site, but some has been removed from the north-west corner and from the top of the slope. The area is being actively managed to restore its downland interest. Only the more widespread bryophytes and lichens occur here.	
Copies Available	EN, SxBRC Boxes, WSCC	

Survey Name	Designated SNCIs (in West Sussex) - (500)
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Survey Author WSCC

Survey Comment 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 Steep Down, Sompting - SNCI Ad8 TQ167077

Site Comment A steep hillside rising to Steep Down to the east and bordered by Cross Dyke. Predominantly chalk grassland, supporting typical downland species, but with coarser grass and more "woodland" plants where scrub has been cleared. A large area of scrub remains at the base of the slope on the western side of the site, but some has been removed from the north-west corner and from the top of the slope. The area is being actively managed to restore its downland interest. Only the more widespread bryophytes and lichens occur here.

Copies Available EN, SWT, WSCC

Survey Name	Designated SNCIs (in West Sussex) - (500)
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Survey Author WSCC

Survey Comment 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 Lower Cokeham Reedbed & Ditches - SNCI Ad07 TQ167043

Site Comment An area of reed-bed and tall fen crossed and bordered by wet ditches located on the edge of a heavily built up area.

Copies Available EN, SWT, WSCC

Survey Name	Designated SNCIs (in West Sussex) - (500)	
Survey Author	WSCC	
Survey Comment	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	Deep Bottom & Vineyard Hill, Worthing - SNCI W7	TQ142079
Site Comment	The site is a mosaic of chalk grassland with some scrubby areas on the eastern & western slopes of Vineyard Hill.	
Copies Available	EN, SWT, WSCC	

Survey Name	Designated SNCIs (in West Sussex) - (500)	
Survey Author	WSCC	
Survey Comment	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	Tenants Hill & Reservoirs, Broadwater - SNCI W10	TQ150070
Site Comment	Two areas of chalk grassland, scrub & a dew pond owned by Worthing Borough Council. Several old, short-turf indicator species of mollusc. The covered reservoirs have very herb-rich communities.	
Copies Available	EN, SWT, WSCC	

Survey Name	Botanical Survey of Unimproved Grassland on South Downs in West Sussex 1992 - (549)	
Survey Author	STEVEN, Graham	
Survey Comment	Areas of long-established grassland were surveyed botanically. Areas excluded were under 1ha., pioneer communities on bare chalk in pits, road cuttings and areas recently re-established following scrub clearance. (Phase II). NB: since survey aimed to record area of unimproved grassland on the downs, some sites are identified in report (and included below in site list) even if they were not surveyed as part of this study. [SxBRC (2 copies) held in H3 box].	
Date	05-10.92	
Site Name	Steep Down, Sompting - SNCI Ad8	TQ167077
Site Comment	A steep hillside rising to Steep Down to the east and bordered by Cross Dyke. Predominantly chalk grassland, supporting typical downland species, but with coarser grass and more "woodland" plants where scrub has been cleared. A large area of scrub remains at the base of the slope on the western side of the site, but some has been removed from the north-west corner and from the top of the slope. The area is being actively managed to restore its downland interest. Only the more widespread bryophytes and lichens occur here.	
Copies Available	EN, SxBRC Boxes, WSCC	

Survey Name	Steep Down Site Visit - (588)	
Survey Author	ROBERTSON, Heather (Dr)	
Survey Comment	A site visit to Steep Down where a list of plants present was made and a note of the butterflies seen. (A copy of this is kept on file DA01/5-2 - Chalk Grassland (Vol 2)). (Phase II)	
Date	7.93	
Site Name	Steep Down, Sompting - SNCI Ad8	TQ167077
Site Comment	A steep hillside rising to Steep Down to the east and bordered by Cross Dyke. Predominantly chalk grassland, supporting typical downland species, but with coarser grass and more "woodland" plants where scrub has been cleared. A large area of scrub remains at the base of the slope on the western side of the site, but some has been removed from the north-west corner and from the top of the slope. The area is being actively managed to restore its downland interest. Only the more widespread bryophytes and lichens occur here.	
Copies Available	EN	

Survey Name	Lichens of Chalk Grassland. - (598)	
Survey Author	GILBERT, Oliver L.	
Survey Comment	This survey gives species lists of lichens present and a brief description of the communities on each site. It is a paper from the Lichenologist 25(4):379-414. (At EN it is kept in the Lichens box in the library). (Phase II)	
Date	1987-1992	
Site Name	Reservoir Area by Tenantshill Barn, Worthing Golf Course	TQ146059
Site Comment	This is one of the richest chalk grasslands for lichens. The surface was scraped off in 1890 during the construction of an underground reservoir and a rich community has developed. A very small site.	
Copies Available	EN	

Survey Name	Worthing Waste Transfer Station Survey - (612)
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Survey Author	MacDONALD, Mott.
Survey Comment	A preliminary inspection of the area conducted by a walk-over survey. Basic habitat types and some plant species present listed. A summary of likely impact and mitigation measures of the proposed waste transfer station are also given.
Date	9.93
Site Name	Worthing Waste Transfer Station TQ161042
Site Comment	The site traverses arable land;rough pasture;ley;reed-filled ditches; a stream;secondary rank vegetation;hedges and some lines of old trees including a Black Poplar.
Copies Available	EN, WSCC

Survey Name	Survey of Sompting Abbot's Churchyard - (620)
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Survey Author	BISHOP, George and Betty, HAES, E. C. M.
Survey Comment	A full species list of the plants found in the churchyard on the day of the site visit. (At EN it is kept in file 'BO5/4-3/10 - West Sussex Wildlife Recording Group'). (Phase II)
Date	7.81
Site Name	St Mary's Churchyard, Sompting Abbots TQ162056
Site Comment	The grassland in this churchyard has a chalky aspect to it.
Copies Available	EN

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)
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Survey Author	CHRIS BLANDFORD ASSOC.
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)
Date	6.90
Site Name	Lower Cokeham Ditches (pSNCI) TQ168044
Site Comment	Potential SNCI. A stretch of reed bed transected and bounded by a number of watery ditches. Rough grazed meadows are found along the western length of the reed bed. Includes Lower Cokeham Reedbed & Ditches - SNCI Ad07.
Copies Available	SxBRC Digital

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	The Mountain, Sompting (pSNCI)	TQ164063
Site Comment	Potential SNCI. An area of severely storm damaged beech and sycamore woodland which has been extensively replaced with beech, and some ash. The wood is extremely open, with some mature trees on the edges and northern part of the site, but with young sycamore and open ground covering most of the area.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Steep Down Track, Sompting (pSNCI)	TQ167067
Site Comment	Potential SNCI. The site consists of a grassy track with rank chalk grassland on either side and on the adjoining banks, with are of scrub at the bottom. Scattered scrub occurs along the north-eastern boundary of the track.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Offington Cemetery/Durrington Cemetary (pSNCI)	TQ130057
Site Comment	Potential SNCI. It is a large area of unimproved herb-rich grassland within urban Worthing District. It contains some rank grassland and disturbed ground but much unimproved calcareous grassland. Only the south-west corner of the site is SNCI W6.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
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Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Mill Plantation, Salvington (pSNCI)	TQ138058
Site Comment	Potential SNCI. This small wood is on the south-facing slope of the South Downs on the Hill Barn Golf Course. It is secondary woodland with old beech trees and poor ground flora. It has some holm oak, scots pine and sweet chestnut.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
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Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Hill Barn Golf Course Copse (pSNCI)	TQ143057
Site Comment	Potential SNCI. A small copse of secondary woodland at the south of Hillbarn Golf Course. On the site of a derelict chalk pit. It is young oak and ash woodland, with much dead wood. It is used by the public.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
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Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Tenants Hill & Reservoirs, Broadwater - SNCI W10	TQ150070
Site Comment	Two areas of chalk grassland, scrub & a dew pond owned by Worthing Borough Council. Several old, short-turf indicator species of mollusc. The covered reservoirs have very herb-rich communities.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
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Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Reservoir Area by Tenantshill Barn, Worthing Golf Course	TQ146059
Site Comment	This is one of the richest chalk grasslands for lichens. The surface was scraped off in 1890 during the construction of an underground reservoir and a rich community has developed. A very small site.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
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Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Hill Barn Covert	TQ133079
Site Comment	An area of mostly storm-damaged Ash/Sycamore wood with much regeneration.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
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Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Grassland E of Hill Barn Covert - A27 Improvement Area G8	TQ134079
Site Comment	An area of fairly specied rich; heavily grazed grassland.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Shipdens Holt	TQ135075
Site Comment	A woodland dominated by Ash and Sycamore with a species poor ground flora	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Grassland W of Cissbury Ring - A27 Improvement Area G7	TQ135079
Site Comment	A moderately species rich area of improved grassland.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Grassland S of Sheepcombe Hanger - A27 Improvement Area G12	TQ136068
Site Comment	An area of improved grassland on clay. It is fairly species rich.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Sheepcombe Hanger	TQ137071
Site Comment	An Ash/Sycamore wood on a steep west facing slope. It has a dense shrub layer of regenerating Ash and Sycamore.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Wood E of Worthing Golf Club House - A27 Improvement Area W13	TQ139060
Site Comment	A small wood of young Oak and Ash.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Worthing Golf Course (NE Area)	TQ145065
Site Comment	An area of mixed grassland types; some short shorn amenity; other areas of longer rough and scattered trees.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Tenants Hill North Covered Reservoir	TQ149061
Site Comment	A covered reservoir supporting a fairly species poor chalk flora.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Tenants Hill W Slope Scrub - A27 Improvement Area S5	TQ149065
Site Comment	An area of scrub on a steep west-facing slope.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Lychpole Hill Scrub Area	TQ152076
Site Comment	Scrub with enclaves of chalk grassland.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Lychpole Hill Chalk Grassland - A27 Improvement Area G18	TQ159067
Site Comment	A small area of chalk grassland on a slope. It is fairly species rich.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	The Nore Chalk Grassland, Sompting	TQ160063
Site Comment	An area of species rich chalk grassland on a north facing slope.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Woodland/Parkland by Church Lane, Sompting Abbots	TQ163058
Site Comment	A small area of woodland/parkland adjacent to a school. It is not of significant nature conservation interest.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Titch Hill Grassland - A27 Improvement Area G21	TQ165059
Site Comment	A small patch of unimproved grassland in an otherwise improved area.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Grassland W of Coombe Barn - A27 Improvement Area G19	TQ167065
Site Comment	An area of disturbed chalk grassland.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing/Lancing Improvement - Environmental Statement - (740)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	The ecological survey is an appendix to the statement. It identifies areas of semi-natural vegetation and mature conservation significance, giving botanical species lists and a very brief description of most sites. Appendices detail Cissbury Ring and Lancing Ring. (Phase II)	
Date	6.90	
Site Name	Dankton Lane Woodland Fragment	TQ168058
Site Comment	A small Sycamore dominated woodland fragment to the west of Dinkton Lane.	
Copies Available	SxBRC Digital	

Survey Name	A27 Worthing Improvement Badger Survey - (794)	
Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	A survey to ascertain the presence of badgers, their setts and their runs along the proposed routes of the new A27.	
Date	11.92	
Site Name	A27 Improvement: Worthing - Lancing Bypass Route Corridors Area	TQ140070
Site Comment	Three proposed road routes run through this area of mainly arable land and chalk downland. This site encloses those proposed routes, as well as the surrounding lands. Also falls into parishes of Clapham & Coombes (although: NB: exact site boundaries estimated, since only the exact corridor routes indicated on provided map, & not the extent of surrounding area which was also included in survey area).	
Copies Available	WSCC	

Survey Name	Sussex Churchyard Survey - (916)	
Survey Author	DONOVAN, Pat	
Survey Comment	Botanical survey of most of the churchyards in Sussex. The majority will have just a species list, but the ones with ecological significance have more detail. (Phase II). NB: Results held at SxBRC for some of sites covered (with details for each site filed according to grid squares), including ESD site nos. 841[TQ33], 1370 [TQ32], 4470 [TQ32], 4341 [SU90]., 4382 [TQ01]. [SxBRC also holds documents in BRC box H2b].	
Date	1980-	
Site Name	Broadwater & Worthing Cemetery (pSNCI)	TQ143044
Site Comment	Potential SNCI. A large cemetery within urban Worthing. It has areas of specie-rich unimproved chalk grassland, less species-rich grassland and scattered trees with patches of scrub.	
Copies Available	As contact, SxBRC File Cabs, SxBRC Boxes	

Survey Name	Sussex Churchyard Survey - (916)	
Survey Author	DONOVAN, Pat	
Survey Comment	Botanical survey of most of the churchyards in Sussex. The majority will have just a species list, but the ones with ecological significance have more detail. (Phase II). NB: Results held at SxBRC for some of sites covered (with details for each site filed according to grid squares), including ESD site nos. 841[TQ33], 1370 [TQ32], 4470 [TQ32], 4341 [SU90]., 4382 [TQ01]. [SxBRC also holds documents in BRC box H2b].	
Date	1980-	
Site Name	St Mary's Churchyard, Sompting Abbots	TQ162056
Site Comment	The grassland in this churchyard has a chalky aspect to it.	
Copies Available	As contact, SxBRC File Cabs, SxBRC Boxes	

Survey Name	Sussex Churchyard Survey - (916)	
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Survey Author	DONOVAN, Pat	
Survey Comment	Botanical survey of most of the churchyards in Sussex. The majority will have just a species list, but the ones with ecological significance have more detail. (Phase II). NB: Results held at SxBRC for some of sites covered (with details for each site filed according to grid squares), including ESD site nos. 841[TQ33], 1370 [TQ32], 4470 [TQ32], 4341 [SU90]., 4382 [TQ01]. [SxBRC also holds documents in BRC box H2b].	
Date	1980-	
Site Name	Offington Cemetery/Durrington Cemetery (Part of)	TQ130058
Site Comment	SW part of site is SNCI W06.	
Copies Available	As contact, SxBRC File Cabs, SxBRC Boxes	

Survey Name	Sussex Churchyard Survey - (916)	
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Survey Author	DONOVAN, Pat	
Survey Comment	Botanical survey of most of the churchyards in Sussex. The majority will have just a species list, but the ones with ecological significance have more detail. (Phase II). NB: Results held at SxBRC for some of sites covered (with details for each site filed according to grid squares), including ESD site nos. 841[TQ33], 1370 [TQ32], 4470 [TQ32], 4341 [SU90]., 4382 [TQ01]. [SxBRC also holds documents in BRC box H2b].	
Date	1980-	
Site Name	All Saints' Churchyard, Findon Valley	TQ130068
Site Comment		
Copies Available	As contact, SxBRC File Cabs, SxBRC Boxes	

Survey Name	Sussex Churchyard Survey - (916)	
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Survey Author	DONOVAN, Pat	
Survey Comment	Botanical survey of most of the churchyards in Sussex. The majority will have just a species list, but the ones with ecological significance have more detail. (Phase II). NB: Results held at SxBRC for some of sites covered (with details for each site filed according to grid squares), including ESD site nos. 841[TQ33], 1370 [TQ32], 4470 [TQ32], 4341 [SU90]., 4382 [TQ01]. [SxBRC also holds documents in BRC box H2b].	
Date	1980-	
Site Name	St Andrew's Churchyard, Tarring	TQ131041
Site Comment		
Copies Available	As contact, SxBRC File Cabs, SxBRC Boxes	

Survey Name	Sussex Churchyard Survey - (916)	
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Survey Author	DONOVAN, Pat	
Survey Comment	Botanical survey of most of the churchyards in Sussex. The majority will have just a species list, but the ones with ecological significance have more detail. (Phase II). NB: Results held at SxBRC for some of sites covered (with details for each site filed according to grid squares), including ESD site nos. 841[TQ33], 1370 [TQ32], 4470 [TQ32], 4341 [SU90]., 4382 [TQ01]. [SxBRC also holds documents in BRC box H2b].	
Date	1980-	
Site Name	St Andrew's Churchyard, Victoria Rd, Worthing	TQ144031
Site Comment		
Copies Available	As contact, SxBRC File Cabs, SxBRC Boxes	

Survey Name	Report on Badger Survey (A27 Worthing Bypass Study Area) - (952)	
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Survey Author	CHRIS BLANDFORD ASSOC.	
Survey Comment	To provide information about the presence of badgers within the A27 Worthing by-pass area. To be aware of any setts within the corridors and any points where badgers may cross the route corridors. It includes plans showing the position of setts and runs. (Phase II)	
Date	12.90-1.91	
Site Name	A27 Improvement: Worthing - Lancing Bypass Route Corridors Area	TQ140070
Site Comment	Three proposed road routes run through this area of mainly arable land and chalk downland. This site encloses those proposed routes, as well as the surrounding lands. Also falls into parishes of Clapham & Coombes (although: NB: exact site boundaries estimated, since only the exact corridor routes indicated on provided map, & not the extent of surrounding area which was also included in survey area).	
Copies Available	SxBRC Archive	

Survey Name	Sompting Meadows Management Plan - (1082)	
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Survey Author	SUSSEX WILDLIFE TRUST	
Survey Comment	A management plan with a botanical survey by Dolphin Ecological Surveys attached as an appendix. Also held in EN TQ01 File.	
Date	4.96 - 5.96	
Site Name	Sompting Meadows	TQ158050
Site Comment		
Copies Available	WSCC	

Survey Name	Land at Warren Road/Links Road, Worthing - Ecological Report - (1463)
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Survey Author	NEWCOMBE, Martin
Survey Comment	Site survey in connection with planning application.
Date	7.6.00
Site Name	Land at Warren Road/Links Road, Worthing TQ135056
Site Comment	Broadly level site - sandy, clay soil with scattered flints - bounded by existing developments. Site includes gardens of 'The Links House' and 'Rawdon House' and parts of rear gardens of 124-134 Warren Rd (although no access to 132 & 128: surveyed by sight from neighbouring gardens!). Site is of 'some ecological interest but does not appear to be in any way outstanding'.
Copies Available	SxBRC Digital

Survey Name	Ecological Appraisal of Proposed Car Park Site, Lyons Farm, Worthing - (1472)
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Survey Author	WANSBURY, Claire, BURTON, Emma
Survey Comment	Survey to assess ecological value of site of proposed car park at Lyons Farm. Supplementary survey 01/08/00
Date	25.1.00, 01.08.00
Site Name	Proposed Car Park Site, Lyons Farm, Worthing TQ152057
Site Comment	Site is part of arable field - deemed to be of 'negligible value to wildlife' - 'no features of ecological importance'.
Copies Available	SxBRC Digital

Survey Name	Cissbury Ring Butterfly Walk. - (2356)
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Survey Author	FELTON, J.C.
Survey Comment	Butterflies and aculeate Hymenoptera (social bees & wasps) recorded on a walk on a footpath from carpark and Cissbury Ring. New record for West Sussex of solitary wasp <i>Crossocerus distinguendus</i> .
Date	29/08/1993
Site Name	Cissbury Ring SW Sunken Path & Path ascending from W TQ135075
Site Comment	Footpath from E of car park at corner of Storrington Rise/Long Meadow (Findon Valley) ascending eastward to Cissbury Ring, and section along sunken path within SW section of ring's earthworks/defensive ditches.
Copies Available	EN/SSSI/SCI

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.

SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

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

There are many sites within East and West Sussex and Brighton and Hove that are not recognised under the national designation of SSSI (Site of Special Scientific Interest) but are of considerable wildlife value due to the special interest of their flora or fauna. In May 1990 a Sussex-wide project was instigated to identify which non-designated sites were important for wildlife. The selected sites are now known as SNCI. 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 SNCI 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 SNCI 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 SNCI in Sussex.

Although SNCI 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:	Worthing & Hill Barn Golf Courses		
Site Ref:	W07	Owner:	Private
District:	Worthing	Size (ha):	205.2
Parish:	N/A	Date:	Identified May 1992. Revised Dec 2003.
National Grid Ref:	TQ140164	Author:	Kate Ryland
Habitat:	Chalk grassland, scrub and woodland		

Summary

Worthing and Hill Barn golf courses encompass significant areas of unimproved chalk grassland, neutral grassland, mixed chalk scrub and woodland. Many of the fairways and areas of rough are of botanical interest with chalk flora including Round-headed Rampion *Phyteuma orbiculare* and Juniper *Juniperus communis*. Invertebrates and birds of interest recorded on Worthing golf course including the Dark Green Fritillary, Green Hairstreak, Chalkhill Blue, Grey Partridge, Skylark, Stonechat and Corn Bunting.

Site description

Hill Barn golf course is a fairly small site, contiguous with the much larger Worthing golf course. It has woodland and scrub boundaries to the east and west comprising rich secondary woodland and scrub with a variety of trees and shrubs. These include Ash, Holm Oak, Hawthorn, Beech, Wild Privet, Elm, Holly, Wayfaring Tree and a locally rich ground flora that includes Spurge-laurel *Daphne laureola*, Ivy *Hedera helix*, Traveller's Joy *Clematis vitalba*, Sweet Violet *Viola odorata* and Stinking Iris *Iris foetidissima*.

Unmown "wildflower" areas support a good range of plant species including Wild Carrot *Daucus carota*, Greater Knapweed *Centaurea scabiosa*, Harebell *Campanula rotundifolia*, Kidney Vetch *Anthyllis vulneraria*, Field Scabious *Knautia arvensis*, Sainfoin *Onobrychis viciifolia* and Yellow Rattle *Rhinanthus minor*. The southern part of this course has distinctly neutral grassland, parts of which have been improved, though common herbs such as Common Bird's-foot-trefoil *Lotus corniculatus*, Common Sorrel *Rumex acetosa*, Yarrow *Achillea millefolium* and Red Clover *Trifolium pratense* occur in places.

An unusually high proportion of Worthing golf course is not part of the playing area and is of potentially greater wildlife value. An area of scrub on the eastern side of the course supports a small number of Juniper bushes. Measures are underway to conserve and propagate this species under the guidance of Plantlife. It also occurs in Beech woodland in the north of the course.

Mount Carvey is an extremely valuable area of east facing unimproved chalk grassland that is managed by light sheep grazing. The turf is typically species rich and contains a good range of calcicoles including Harebell, Greater Knapweed, Squinancywort *Asperula cynanchica*, Pyramidal Orchid *Anacamptis pyramidalis*, Eyebright *Euphrasia agg.*, Field Scabious, Cowslip *Primula veris*, Small Scabious *Scabiosa columbaria*, Wild Thyme *Thymus polytrichus* and Round-headed Rampion.

Cissbury plantation contains numerous old Beech trees and a dense, regenerating shrub layer with herb rich, rabbit grazed glades. This woodland is valuable for invertebrates, including Silver-washed Fritillary, and birds such as woodpeckers.

Management recommendations

Both golf courses are already under sympathetic management for wildlife. Worthing golf course staff are endeavouring to minimise the use of greenkeeping chemicals and maximise water conservation.

SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

West Sussex

Site Name:	Tenants Hill & Reservoirs		
Site Ref:	W10	Owner:	Worthing Borough Council
District:	Worthing	Size (ha):	16.8
Parish:	N/A	Date:	Identified May 1992. Revised Dec 2003
National Grid Ref:	TQ150070 & TQ148063	Author:	Graham Roberts
Habitat:	Chalk grassland, scrub and dewpond		

Summary

Tenants Hill has a steep east-facing slope of species-rich unimproved chalk grassland. The two covered reservoirs have developed surprisingly rich chalk grassland floras. Small areas of species-rich grassland occur adjacent to both reservoirs. The flora immediately east of the southern reservoir is of exceptional interest. There are small herb-rich glades within the belt of scrub linking the two reservoirs.

Site description

The herb-rich flora of Tenants Hill includes Horseshoe Vetch *Hippocrepis comosa*, Round-headed Rampion *Phyteuma tenerum*, Yellow-wort *Blackstonia perfoliata*, Kidney Vetch *Anthyllis vulneraria*, Sweet Violet *Viola odorata*, Bladder Champion *Silene vulgaris*, Greater Knapweed *Centaurea scabiosa*, Common Milkwort *Polygala vulgaris*, Yellow Rattle *Rhinanthus minor*, Autumn Gentian *Gentianella amarella* and Carline Thistle *Carlina vulgaris*. Upright Brome *Bromus erectus* and Sheep's-fescue *Festuca ovina* are the dominant grasses, with frequent Quaking Grass *Briza media*. The lower part of the slope has dense Hawthorn scrub, where Whitethroat, Lesser Whitethroat, Willow Warbler and Yellowhammer may all breed. There is a dewpond, which has recently been restored.

The flora of both reservoirs includes Salad Burnet *Sanguisorba minor*, Wild Carrot *Daucus carota*, Oxeye Daisy *Leucanthemum vulgare*, Wild Mignonette *Reseda lutea*, Greater Knapweed and Quaking Grass. The southern reservoir has a particularly interest flora, including notable plants such as Autumn Lady's-tresses *Spiranthes spiralis*, Pyramidal Orchid *Anacamptis pyramidalis*, Squinancywort *Asperula cynanchica*, Dwarf Thistle *Cirsium acaule*, Marjoram *Origanum vulgare*, Kidney Vetch and Common Milkwort.

Noteworthy plants found in the species-rich grassland just east of the southern reservoir include Common Restharrow *Ononis repens*, Horseshoe Vetch, Pyramidal Orchid, Bladder Champion, Common Broomrape *Orobancha minor*, Slender Sandwort *Arenaria leptoclados* and Crested Hair-grass *Koeleria micrantha*.

Management recommendations

As with most chalk grasslands, scrub invasion needs to be monitored and if necessary controlled in order to maintain open, herb-rich swards.

SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

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

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

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

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

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

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

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

SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

Site Name: Cissbury Ring
County: West Sussex
District: Adur, Arun, Worthing
Local Planning Authority: Adur District Council, Arun District Council, Worthing Borough Council
Size: 81.9 hectares (202.4 acres)
National Grid Ref: TQ140080

Date Notified (Under 1949 Act): 1980 **Date of last revision:** -

Date Notified (Under 1981 Act): 1986 **Date of last revision:** -

Other Information: This site lies within the South Downs Area of Outstanding Natural Beauty (AONB). Part of the site is owned and managed by the National Trust. Cissbury Ring is of archaeological importance. There are several boundary amendments to the site.

Reason for Notification

Cissbury Ring is an ancient hill fort site situated on chalk. The main biological interest of the site centres on the areas of unimproved chalk grassland, a habitat type which has become rare nationally through being under constant threat from agricultural improvement. The scrub areas provide important habitats for wintering, breeding and migrant birds and also support a varied butterfly fauna.

Unimproved chalk grassland occupies the steep slopes which encircle the central plateau, the area round the old flint mines and the southern-most field. Upright brome *Bromus erectus* forms a compact turf in which kidney vetch *Anthyllis vulneraria*, horse-shoe vetch *Hippocrepis comosa* and yarrow *Achillea millefolium* are abundant; other components in the sward include harebell *Campanula rotundifolia*, marjoram *Origanum vulgare*, field fleawort *Senecio integrifolius*, wild basil *Clinopodium vulgare*, heath bedstraw *Galium saxatile* and the frog orchid *Coeloglossum viride*.

The belt of scrub along the north-east facing scarp slope consists of a diversity of shrub species including hawthorn *Crataegus monogyna*, privet *Ligustrum vulgare*, dogwood *Cornus sanguinea* and spindle *Euonymus europaeus*. Elsewhere, scrub invasion is more scattered particularly in the area occupied by the old flint mines. There are several juniper bushes *Juniperus communis* to the north of the Ring.

The main plain of the Cissbury Ring is situated on clay soils overlying the chalk. Here neutral grassland is dominated by Yorkshire fog *Holcus lanatus*, sheep's fescue *Festuca ovina* and creeping bent *Agrostis stolonifera* grasses with wood sage *Teucrium scorodonia* and bramble *Rubus fruticosus*.

Among the butterflies occurring here are the adonis blue *Lysandra bellargus*, the chalkhill blue *L. coridon* and the brown argus *Aricia agestis*.

The scrub along the escarpment supports a diverse breeding bird community notably of warblers and finches. The autumn passage is particularly important when the scrub is used by redstarts, whinchats, stonechats, tree pipits and warblers. Over-wintering numbers of thrushes and finches are significant and a range of birds of prey is regularly recorded.

SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

Operations likely to damage the special interest

Site name: Cissbury Ring (OLD1004162)

Ref. No. Type of operation

1. Cultivation, including ploughing, rotovating, harrowing, and re-seeding.
2. Grazing and changes in the grazing regime (including type of stock or intensity or seasonal pattern of grazing and cessation of grazing).
3. Stock feeding and changes in stock feeding practice.
4. Mowing or other methods of cutting vegetation and changes in the mowing or cutting regime (including hay making to silage and cessation).
5. Application of manure, fertilisers and lime.
6. Application of pesticides, including herbicides (weedkillers).
7. Dumping, spreading or discharge of any materials.
8. Burning.
9. The release into the site of any wild, feral or domestic animal*, plant or seed.
10. The killing or removal of any wild animal*, including pest control.
11. The destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf.
12. Tree and/or woodland management+ and changes in tree and/or woodland management+.
- 13a. Drainage (including the use of mole, tile, tunnel or other artificial drains).
14. The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
20. Extraction of minerals, including shingle, sand and gravel, topsoil, subsoil, shells and spoil.
21. Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground.
22. Storage of materials.
23. Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
24. Modification of natural or man-made features, clearance of loose rock, scree or spoil and battering, buttressing, grading or seeding rock-faces, outcrops or cuttings, infilling of pits and quarries.
25. Removal of geological specimens, including rock samples, minerals and fossils.
26. Use of vehicles or craft likely to damage or disturb features of interest.
27. Recreational or other activities likely to damage or disturb features of interest.
28. Game and waterfowl management and hunting practice.

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

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

KEY NATIONAL AND INTERNATIONAL SITE DESIGNATIONS

National Nature Reserve (NNR)

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

Special Area of Conservation (SAC)

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

Special Protection Area (SPA)

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

Ramsar

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

National Park

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

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

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

Area of Outstanding Natural Beauty (AONB)

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

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

Chichester Harbour Conservancy www.conservancy.co.uk

High Weald AONB Unit www.highweald.org

Marine Conservation Zone (MCZ)

MCZs protect a range of nationally important marine wildlife, habitats, geology and geomorphology. In November 2013 27 MCZs were designated in English inshore and English and Welsh offshore waters in the first tranche of sites. Three of these sites were designated off Sussex; Kingmere, Beachy Head West and Pagham Harbour. More MCZs will be designated in future rounds or 'tranches', although it is uncertain how many.

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

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)

Previously known as Regionally Important Geological/Geomorphological Sites (RIGGS), LGS are non-statutory designations that have been identified by local geodiversity groups as being of importance. There are over 120 LGS in Sussex which have been assessed by the Sussex Geodiversity Partnership. The features identified as being important become a material consideration in any future development, and should be taken into account by the relevant local authority.

A selection of LGS with public access in Sussex can be viewed on the [Sussex Geodiversity Partnership's website](#).

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.

Environmental Stewardship

Environmental Stewardship is an agri-environment scheme managed by Natural England that provides funding to farmers and other land managers to deliver effective environmental management.

There are four elements to Environmental Stewardship, three of which are relevant in Sussex:

Entry Level Stewardship (ELS) goes beyond the Single Payment Scheme requirement to maintain land in good agricultural and environmental condition.

Organic Entry Level Stewardship (OELS) is the organic strand of ELS. It is geared to organic and organic/conventional mixed farming systems and is open to all farmers not receiving Organic Farming Scheme aid.

Higher Level Stewardship (HLS) involves more complex types of management where agreements are tailored to local circumstances.

Further information can be found on the [Natural England website](#).

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

West Sussex Local Geological Site (LGS) Survey 2010



Condition Monitoring Form for NI 197 Reporting

Woods Mill, Henfield, West Sussex BN5 9SD. Tel: 01273 497521
Email: sxbrcl@sussexwt.org.uk Website: www.sxbrc.org.uk

1. Site Information									
Site Name & LGS ID		Gaster Pit 7, Lambley's Lane, Sompting TQ10/07							
Site Type		ED		Grid Reference		TQ156059 (revised)			
Date of Visit		20/07/2010		Local Authority					
Surveyor		Peter Anderton		Landowner					
1:50,000 BGS Sheet no.		318/333		1:25,000 OS Sheet no.		121			
LGS designation	Scientific	X	Educational	X	Aesthetic		Historical		
Interest Feature(s): Disused chalk quarry exposing Culver Chalk Formation. This site and TQ10/10 between them form the only exposure of this part of the Culver Chalk, which is generally poorly exposed in England. Quarry face about 40m long and up to 7m high. Stratigraphy: Tarrant Chalk member, Culver Chalk Formation, White Chalk Subgroup, late Cretaceous in age. Type locality for the Charmandean Flint marker bed. Sedimentology: soft white chalk limestone with layers of irregular flints including the prominent Charmandean Flint. Deposited in relatively deep (→100m) open marine environment. Sedimentary structures: The flints are irregular, often in the shape of burrow-fills. Palaeontology: Fossil echinoid <i>Offaster pilula</i> occurs in thin band just below the Charmandean Flint layer. <i>Echinocorys</i> fossils also found.									
Previous management and dates (if any)									

2. Primary Factors					
Bedrock feature	Is (are) the feature(s) exposed?	Y	If No, can it (they) practically be re-exposed?		
	Is (are) the feature(s) being affected by the following factors?				
	Factor	Y/N	Comments		
	Vegetation	Y	The main face is mostly free from vegetation but overhanging vegetation is starting to affect the extremities of the exposure and shrubs are taking over the debris at the foot of the cliff.		
	Scree/Mass Movement	Y	Debris obscures the base of the face.		
	Flooding	N			
	Dumping/Landfill	N			
	Quarrying/Engineering Works	N			
Development (housing/industrial)	N				
Others (please define) -	N				
Superficial deposit feature	Is (are) the feature(s) exposed?	N/A	If No, can it (they) practically be re-exposed?		
	Is (are) the feature(s) being affected by the following factors?				
	Vegetation (Trees or crop planting)				
	Agricultural practices (deep ploughing)				
	Quarrying/Engineering Works				
	Development (housing/industrial)				
Others (please define) -					

Geomorphology feature	Is (are) the geomorphological feature(s) being allowed to evolve naturally?		N/A
	Is (are) the feature(s) being affected by the following factors?		
	Vegetation	N	
	Sea Defences	N	
	River Management	N	
	Ground Stabilisation (slopes/sand dunes)	N	
	Water level change	N	
	Development (housing/industrial)	N	
Others (please define) –	N		

3. Secondary Factors			
Factors that do not directly affect the feature(s) but may need to be managed in order for feature(s) to maintain a desirable condition			
	Factor	Y/N	Comments
Site access	Are any of the following causing difficulties in accessing the site?		
	Physical obstacles	Y	Access is difficult because the quarry floor is covered with small trees, shrubs (brambles and buddleia) and nettles, and vegetation is taking over the base of the cliff. The debris slope at the foot of the cliff is steep and unstable.
	Landowner permissions	N	
	Protected species/habitats	N	
	Other (please define) Parking	Y	The narrow lane leading to the quarry is a private road although designated as a public footpath. With permission it would be possible to park on the verge near the quarry entrance.
Furniture	Are any of the following in an undesirable condition?		
	Interpretation Boards	N	
	Benches/Fences/Gates	N	
	Earthworks	N/A	
	Other (please define)		
Other features	Are there any other features of interest that should be considered?		
	Biodiversity	N	
	Historic Environment	N	
	Other (please define)		

4. Site Status

Overall, is the site in a desirable condition for use(s) of the feature(s) identified?

Yes / No / Uncertain

If Yes - what management is required (if any) for the feature(s) to maintain a desirable condition:

Vegetation clearance on the quarry floor and along the foot of the face would allow better access to the exposure and improve visibility.

For the above, is the management: *Being undertaken / Going to be undertaken / **Not going to be undertaken** / Not possible*

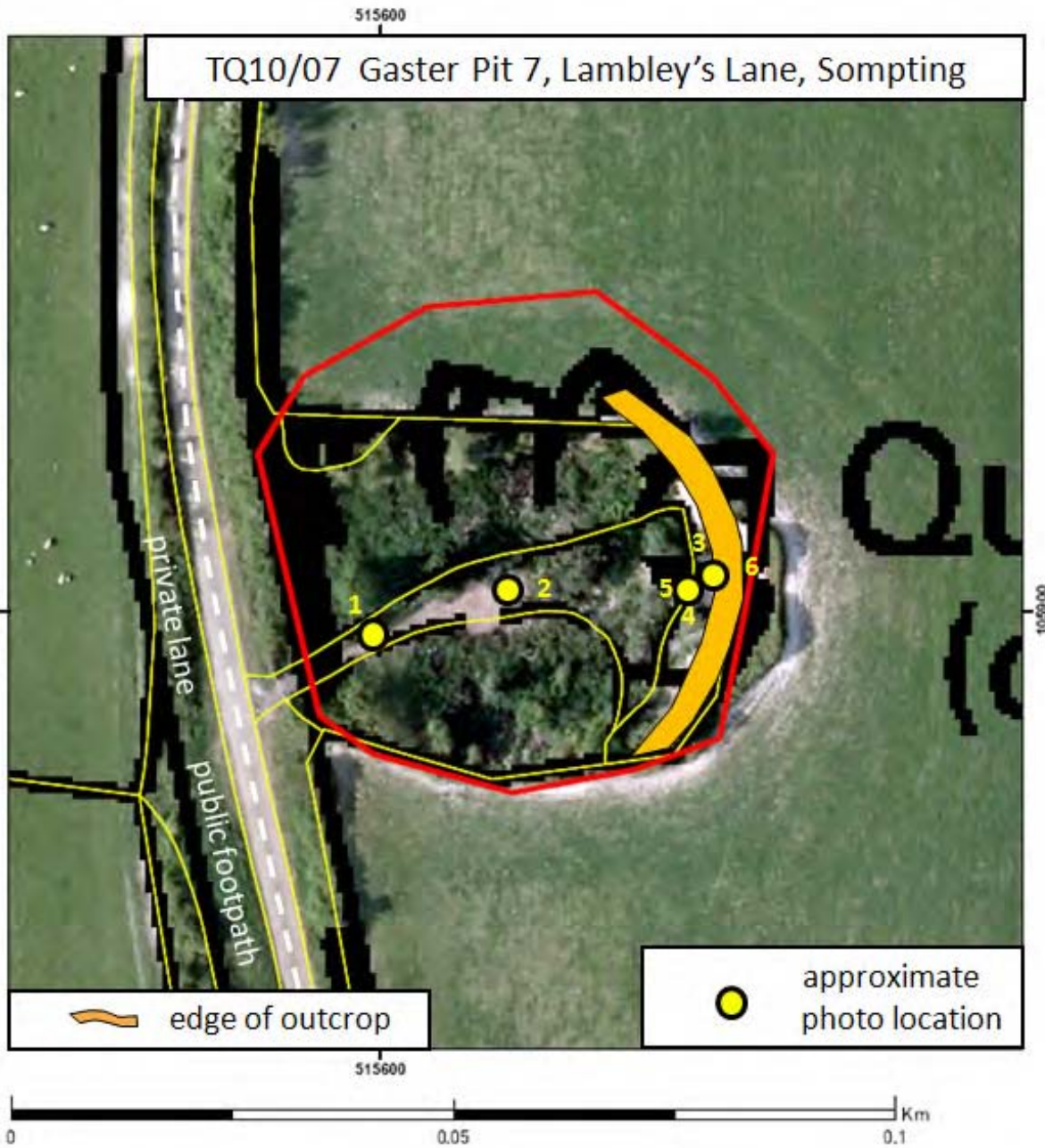
If Uncertain or No - what management is required for the feature(s) to reach and maintain a desirable condition:

For the above, is the management: *Being undertaken / Going to be undertaken / Not going to be undertaken / Not possible*

Are there any secondary factors that need further management?

Yes / No / Not applicable

Suggested management in order for the feature(s) to reach/maintain a desirable condition:



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Key to Map:

 LGS



Photos



1. Chalk face viewed from entrance. Bedding dips 5 degrees to the right (SSW). Grid ref. TQ15600590. Direction east.



2. Almost impenetrable mass of nettles and shrubs hindering access to the face. Grid ref. TQ16610590. Direction east.



3. Northern part of chalk face showing prominent layer of large flints (Charmandean Flint band). Grid ref. TQ15640590. Direction NNW.



4. Southern part of chalk face showing the Charmandean Flint band. Bedding dips at 5 degrees to the right (SSW). Grid ref. TQ15640590. Direction SSW.



5. Part of central chalk face showing prominent Charmandean Flint band at centre, thinner flint bands near base and possible thin marl seams in the upper section. Face 5.5m high. Grid ref. TQ15640590. Direction east.



6. Detail of Charmandean Flint band showing large irregular flints. Thickness of layer is 10 to 15cm. Grid ref. TQ15640590. Direction NE.

West Sussex Local Geological Site (LGS) Survey 2010



Condition Monitoring Form for NI 197 Reporting

Woods Mill, Henfield, West Sussex BN5 9SD. Tel: 01273 497521
Email: sxbrcl@sussexwt.org.uk Website: www.sxbrc.org.uk

1. Site Information							
Site Name & LGS ID		Gaster Pit 10, Charmandean Quarry, Worthing TQ10/10					
Site Type	ED	Grid Reference		TQ148057			
Date of Visit	20/07/2010	Local Authority					
Surveyor	Peter Anderton	Landowner					
1:50,000 BGS Sheet no.	318/333	1:25,000 OS Sheet no.		121			
LGS designation	Scientific	X	Educational	X	Aesthetic		Historical
Interest Feature(s): Disused chalk quarry exposing Culver Chalk Formation. This site and TQ10/07 between them form the only exposure of this part of the Culver Chalk, which is generally poorly exposed in England. Quarry is about 150m long, 40m wide with faces up to 20m high. Stratigraphy: lower to middle Tarrant Chalk member, Culver Chalk Formation, White Chalk Subgroup, late Cretaceous in age. Sedimentology: soft white chalk limestone with layers of flint. Deposited in relatively deep (→100m) open marine environment. Palaeontology: a variety of fossils have been found but they are not abundant.							
Previous management and dates (if any)							

2. Primary Factors			
Bedrock feature	Is (are) the feature(s) exposed?	Y	If No, can it (they) practically be re-exposed?
	Is (are) the feature(s) being affected by the following factors?		
	Factor	Y/N	Comments
	Vegetation	Y	Most of the quarry faces are heavily overgrown by trees and shrubs with only small patches of chalk visible. A 70m long section on the west side near the entrance shows more exposure but even this is obscured by ivy and overhanging vegetation.
	Scree/Mass Movement	N	
	Flooding	N	
	Dumping/Landfill	N	
	Quarrying/Engineering Works	N	
Development (housing/industrial)	Y	Disused open sheds along the western edge reduce visibility of the exposure but their presence has probably preserved the face here from the encroaching vegetation. The SW corner of the quarry appears to be used for stabling.	
Others (please define) -	N		
Superficial deposit feature	Is (are) the feature(s) exposed?	N/A	If No, can it (they) practically be re-exposed?
	Is (are) the feature(s) being affected by the following factors?		
	Vegetation (Trees or crop planting)		
	Agricultural practices (deep ploughing)		
	Quarrying/Engineering Works		
	Development (housing/industrial)		
	Others (please define) -		

Geomorphology feature	Is (are) the geomorphological feature(s) being allowed to evolve naturally?		N/A
	Is (are) the feature(s) being affected by the following factors?		
	Vegetation	N	
	Sea Defences	N	
	River Management	N	
	Ground Stabilisation (slopes/sand dunes)	N	
	Water level change	N	
	Development (housing/industrial)	N	
Others (please define) -	N		

3. Secondary Factors			
<i>Factors that do not directly affect the feature(s) but may need to be managed in order for feature(s) to maintain a desirable condition</i>			
	Factor	Y/N	Comments
Site access	Are any of the following causing difficulties in accessing the site?		
	Physical obstacles	Y	Thick scrub prevents access to most of the quarry faces and the northernmost part of the quarry is almost impenetrable.
	Landowner permissions	N	
	Protected species/habitats	N	
	Other (please define) Parking	Y	The lane to the west of the quarry is only suitable for 4W vehicles beyond the initial section. There nowhere convenient to park lower down. I parked next to a house with the owner's permission.
Furniture	Are any of the following in an undesirable condition?		
	Interpretation Boards	N	
	Benches/Fences/Gates	N	
	Earthworks	N/A	
	Other (please define)		
Other features	Are there any other features of interest that should be considered?		
	Biodiversity	N	
	Historic Environment	N	
	Other (please define)		

4. Site Status

Overall, is the site in a desirable condition for use(s) of the feature(s) identified?

Yes / No / Uncertain

If Yes - what management is required (if any) for the feature(s) to maintain a desirable condition:

For the above, is the management: *Being undertaken* / *Going to be undertaken* / *Not going to be undertaken* / *Not possible*

If Uncertain or No - what management is required for the feature(s) to reach and maintain a desirable condition:

Clearance of vegetation from the best exposed section is needed just to be able to see it properly and removal of the disused open sheds in front of the exposure would improve visibility. Substantial clearance would be required to re-expose any other part of the quarry.

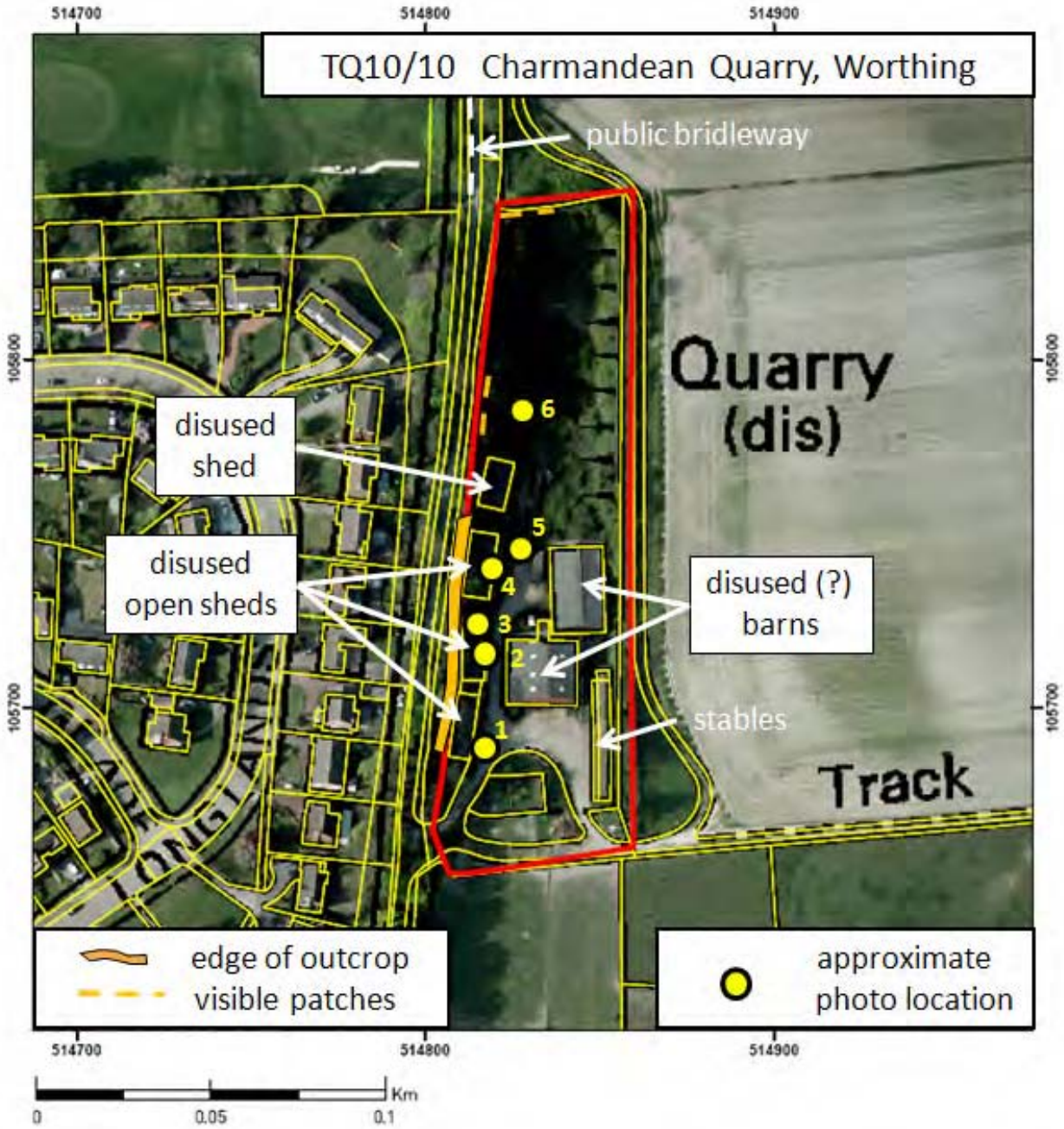
For the above, is the management: *Being undertaken* / *Going to be undertaken* / *Not going to be undertaken* / *Not possible*

Are there any secondary factors that need further management?

Yes / No / Not applicable

Suggested management in order for the feature(s) to reach/maintain a desirable condition:

Removal of the disused sheds would improve access to the best exposed section and substantial vegetation clearance would be essential for access to any other part of the quarry.



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Key to Map:

 LGS



Photos



1. View from southern entrance showing disused open sheds along the western side and one of the barns in the centre. Grid ref. TQ14820569. Direction north.



2. Vegetated chalk face visible behind second open shed. Grid ref. TQ14820571. Direction west.



3. Third open shed showing vegetated chalk face behind. Grid ref. TQ14820572. Direction NW.



4. Vegetated chalk face at back of third open shed. Grid ref. TQ014820574. Direction west.



5. Beyond the northernmost shed the quarry floor is filled with impenetrable scrub and the faces are almost completely covered by vegetation with occasional glimpses of chalk behind. Grid ref. TQ014820575. Direction north.



6. Western face beyond northernmost shed showing glimpse of chalk through dense vegetation cover. Grid ref. TQ014830578. Direction west.

LOWLAND CALCAREOUS GRASSLAND

Lowland calcareous grasslands develop on shallow lime-rich soils generally overlying limestone rocks - in Sussex it occurs exclusively on chalk.

Why is it important?

- Chalk grassland can support over 50 species of flowering plant per square metre, including a number of nationally scarce species.
- Many species of rare invertebrates are found including hoverflies, molluscs and moths.
- Rare assemblages of mosses and lichens can be found on some chalk grasslands.
- The grasslands and associated patches of scrub provide breeding and feeding habitat for many birds including scarce species such as stone curlew.



Round-headed rampion

Lowland calcareous grassland in Sussex

The South Downs represents one of the major areas of chalk grassland in the UK. It is estimated that the habitat now covers only around 3% of the South Downs, where it is predominantly confined to steeper slopes. It continues to support a rich diversity of animals and plants including many rare species.

What are the threats?

- Agricultural intensification by use of fertilisers, liming, reseeding and ploughing.
- Lack of grazing stock results in dominance of coarse grasses and scrub, and a decline in overall botanical diversity.
- Recreation effects including disturbance of wildlife, compaction of soil, trampling and increased nutrients in soil. High public access can also cause conflicts where grazing animals are present.
- Isolation and fragmentation of sites reduces dispersal opportunities making species more susceptible to extinction.
- Losses can result from development including redevelopment of abandoned chalk quarries which can develop good quality grassland.

Some associated species

- Linnet *Carduelis cannabina*
- Whitethroat *Sylvia communis*
- Adonis blue *Polyommatus bellargus*
- Glow-worm *Lampyrus noctiluca*
- Round-headed rampion *Phyteuma orbiculare*
- Yellow-wort *Blackstonia perfoliata*

(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

Orchard Network: 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

Current status and distribution

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

Ecological significance

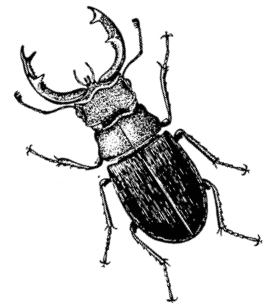
Wood-pasture and parkland is important for wildlife for a number of reasons:

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

Threats facing the habitat include:

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

(Illustrations courtesy of Natural England.)



Stag Beetle

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