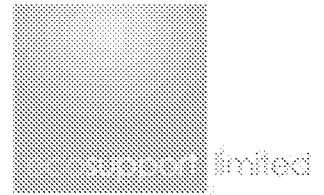


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Ecological Assessment

Land off Stanhorn Grove, Felpham, Bognor Regis

Date of Issue **4th September 2018**

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For **Worthing Homes**

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1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd. was commissioned by Worthing Homes to conduct an Ecological Assessment of land off Stanhorn Grove, Felpham, Bognor Regis, hereafter known as 'the site', to inform a planning application for the proposed residential development of the site. The aims of the survey were as follows:

- Identify current land use and distribution of broad habitat types including plant communities of ecological importance within the area of impact of the proposals and surrounding land (where relevant);
- Identify and classify any priority habitats;
- Identify signs and habitat features of legally Protected Species;
- Identify the requirement for, and undertake, any necessary Phase II Protected Species Surveys to support the Planning Application;
- Assess the likely ecological effects of the development against relevant legislation and policy;
- Recommend avoidance and/or mitigation and compensation measures to reduce the ecological impact of the proposals;
- Make recommendations for ecological enhancements of the site as per national and local policy.

This survey takes no account of seasonal variation or fluctuations in the presence of any species that might take up residence following this report. Lack of signs of a particular species does not confirm its absence, merely that there was no indication of its presence at the time of survey.

This survey does not constitute a full site assessment for invasive species such as Japanese Knotweed.

A search for the presence of Tree Preservation Orders (TPOs) on site has not been undertaken.

Should the proposed development not be underway within 24 months of the date of issue of this report, it is strongly recommended that the assessment be repeated.

1.2 Site Description

The site is located off Stanhorn Grove, Felpham, Bognor Regis, West Sussex (approximate central Ordnance Survey Grid Reference SU 95349 01053) (**Figure 1**). The site comprises a matrix of successional scrub and unmanaged grassland, with mature and part mature trees present at some boundaries. The site lies within a partially urbanised area, with a golf course to the immediate west but surrounded

on all other aspects by recent residential development. The total area of the site is approximately 0.4ha.

Figure 1. Aerial photograph of the site, with approximate boundaries illustrated in red (Google Maps, 2018).



Figure 2. The site in the wider context of the local area (Google Maps, 2018).



1.3 Proposed Development

The proposed development of the site comprises the construction of 18 residential units (16 dwellings and two flats) plus associated gardens and parking, with access off Staghorn Grove. An ecologically-enhanced 5m buffer is included around the northern, western and southern boundaries to provide opportunities for wildlife and ensure a dark corridor for bats (**Appendix 1**).

2.0 RELEVANT LEGISLATION & POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species Regulations (2017)*

This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is

likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.2 The Wildlife and Countryside Act (1981) (as amended)

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built). Further, the Act requires the identification and subsequent protection of Sites of Special Scientific Interest (SSSIs).

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 art II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrots Feather (*Myriophyllum aquaticum*).

2.1.3 The Countryside and Rights of Way Act (2000)

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 Natural Environment and Rural Communities Act (2006)

This places a duty on Local Authorities to consider the conservation of biodiversity in their policy and decision making procedures and 'in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'.

2.1.5 The Protection of Badgers Act (1992)

The Protection of Badgers Act (1992) makes it an offence to:

- Kill or injure Badgers;
- Damage a Badger sett or any part of it;
- Destroy a Badger sett;

- Obstruct access to, or any entrance of a Badger sett;
- Disturbing a Badger when it is occupying a sett.

If a proposed development may contravene any of the above points then a licence would be required from Natural England and an appropriate mitigation scheme proposed.

2.2 Policy

The development seeks to comply with relevant Planning Policy. The National Planning Policy Framework (NPPF) 2018 supersedes the previous national policy and sets out the Government's vision for biodiversity in England in line with the country's 25 Year Environment Plan. Chapter 15 of this policy outlines key principles related to the natural environment and states that plans should take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure and should provide net gains for biodiversity. Plans should promote the conservation, restoration and enhancement of priority habitats and ecological networks and the protection and recovery of priority species.

On a local scale, the site falls within the jurisdiction of Arun District Council. Within the Arun District Local Plan 2003 adopted in April 2003 policy GEN29 'Nature Conservation Across the District' states that because biodiversity is an important resource, found throughout the District Arun District Council development will only be permitted on sites which contain semi-natural habitats, features of nature conservation interest, or within wildlife corridors, where these can be largely retained and sympathetically incorporated into the scheme. Legal agreements may be used to offset the loss of, or impact on, any nature conservation resource present on the site prior to development. This is to protect undesignated sites from the harmful effects of development, in order to retain their value as a biodiversity resource.

Arun's Local Plan (2011 – 2031) strategic objective for the Natural Environment is 'to plan for climate change and work in harmony with the environment to conserve natural resources and increase biodiversity.'

'Natural environment' broadly refers to living things in all their diversity: wildlife, rivers and streams, lakes and seas, urban green space and open countryside, forests and farmed land. As such the Natural Environment comprises of both biodiversity and Natural Heritage which are inextricably linked. Biodiversity is a term used to describe the variety of life on earth, it includes plants, animals, invisible micro-organisms and bacteria which, together, interact in complex ways with the environment to create living ecosystems. Natural heritage refers to the many types of contact people have with nature in both town and countryside, the natural

environment is a result of thousands of years of interaction between people and nature. The Natural environment is fundamental to survival: food, fuel, air and water, together with the natural systems that cycle our water, clean out pollutants, produce healthy soil, protect us from floods and regulate our climate.

The NPPF states that to minimise the impacts on biodiversity and geodiversity local planning authorities must identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them, along with areas identified by local partnerships for habitat restoration or creation.

Policy ENV SP1 'Natural Environment' states Arun District Council will encourage and promote the conservation and enhancement of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species.

2.3 Biodiversity Action Plans & UK Post-2010 Biodiversity Framework

The UK Post-2010 Biodiversity Framework (JNCC & DEFRA, 2010) supersedes the UK Biodiversity Action Plan 1992-2012 (UKBAP), setting out goals relating to nature conservation at a UK scale, for example the reduction and reversal in the decline of threatened species and improving the status of biodiversity. The specific habitats and species contained within the UKBAP continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework, and are required to be a material consideration in the planning process under the 2012 NPPF.

3.0 METHODS

3.1 Desktop Survey

A search was undertaken of available online resources to determine the presence of sites designated for their conservation value and habitats designated under the UK Biodiversity Action Plan within 2km of the site where possible. An application was also made to the Sussex Biodiversity Record Centre (SxBRC) for records of nearby protected species and locally designated sites.

In addition a search was made of the local planning portal for recent planning applications within the vicinity of the site to determine any previously identified features of ecological value.

Any ponds or ditches located on or within 500 metres of the proposed development, where they were not considered isolated from the site by dispersal barriers such as

main roads, were searched for using Ordnance Survey maps and available aerial images. Although Great Crested Newts (GCN) *Triturus cristatus* have been known to travel up to 1.3km from breeding sites, the Natural England (was English Nature) GCN Mitigation Guidelines (2001) suggest that GCN more commonly disperse up to approximately 500m from a breeding pond, with most movement occurring closer to the pond than this, under 250m. Therefore a 500m search radius was considered suitable for the purposes of this assessment.

3.2 Extended Phase I Habitat Survey

3.2.1 Site Walkover

The walkover survey was carried out on 3rd January 2018 by Sophie Hughes BSc (Hons) MSc, Natural England Class Level 1 Licence holder for Great Crested Newts, bats and Dormice and experienced Ecologist of Ecosupport Ltd. The survey comprised a site walkover (loosely based on the “Phase 1” methodology (JNCC, 2003), modified to suit the situation) with all habitats within the area of impact of the proposals assessed. The habitats present were generally described, with particular attention paid to their potential to support protected species. In addition, a general search for evidence of protected species was undertaken.

3.2.2 Assessment of Trees to Support Bats

An assessment of all trees within the area of impact of the proposals was made to identify the presence of any bats and/or signs of bats, and to determine the likelihood of them supporting bats. This information was used to inform whether Phase II Bat Surveys would be required, and to what level. Trees were examined from ground level using 8 x 42 Avian Trekker binoculars and a high powered torch for any gaps or other suitable features that bats may use, as well as bats themselves and evidence of bat use such as droppings and feeding remains. The trees were subsequently classified as to their potential to support bats using the categories developed by the Bat Conservation Trust. The survey was carried out in accordance with *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)* published by the Bat Conservation Trust (Collins, J. (ed.), 2016).

3.2.3 Assessment of Waterbodies to Support Great Crested Newts

A Habitat Suitability Index (HSI) assessment was undertaken for all waterbodies identified within 500m of the site wherever access was possible (where they were not isolated from the site) to assess their potential to support breeding GCN, based upon guidance published by Oldham *et al.* (2000) and ARG's Active Advice Sheet 5 (2010). An HSI assessment takes into account the following factors, calculating a value between 0 and 1 as to the waterbody's level of potential:

- Location;
- Surface Area;

- Desiccation Rate;
- Water Quality;
- Shade;
- Presence of Waterfowl and Fish;
- Number of Ponds within 1km;
- Quality of Terrestrial Habitat;
- Macrophyte Cover.

Where a waterbody is found to hold a level of potential, further assessment via Phase II GCN surveys is usually necessary to determine presence/likely absence of the species.

3.2.4 Assessment of Waterbodies to Support Water Voles

Two ditches were present on/adjacent to the site; one along the western boundary and one alongside but beyond the northern boundary. Due to the presence of records of Water Voles within the area, these were assessed as to their potential to support the species during the Extended Phase I Habitat Survey. The assessment followed standard best practice methodology as per *The Water Vole Mitigation Handbook* (Dean *et al.* 2016) and the *Water Vole Conservation Handbook* (Strachan *et al.*, 2011). Weather conditions during the survey were good, with no breeze, rain or cloud cover, and an air temperature of 16C.

The survey covered the full extent of the northern ditch, as well as the western ditch alongside the site boundary plus as much as possible of its remaining area during the walkover of the golf course associated with the GCN assessment. The survey area of these sections was considered to include all areas of the ditches and immediate banks plus 6m into the adjacent riparian and grassland habitats either side of the ditches. Details of the survey area included descriptions of the habitat, bankside and in-stream vegetation, bank profiles, water depth, water width and current. Evidence of Water Voles was searched for as follows:

- **Faeces** – 8-12mm long and 4-5mm wide, cylindrical with blunt ends and symmetrical with colour varying from green, brown, black and even purple
- **Latrines** – Deposits of several droppings found near the nest, at range boundaries and where they enter/leave the water
- **Feeding Stations** – Neat piles of chewed lengths of vegetation, typically up to 10cm long showing the marks of two large incisors; found along pathways or at haul-out stations
- **Lawns** – Grazed areas of vegetation (lawns) found around land holes
- **Burrows** – Entrances are typically found in a series along the water's edge and are wider than high with a diameter of 4-8cm; latrines or feeding stations are often found nearby active burrows

- **Footprints** – Water vole footprints may be found along the soft margins of a water course and have a star arrangement with four toes in the fore foot and five toes in the hind foot; the hind foot typically measures 26-34mm for an adult

The initial habitat assessment was undertaken at the time of Extended Phase I Habitat Survey, however the ditches were re-searched for evidence of Water Vole presence during the reptile survey checks to coincide with the Water Vole breeding season.

3.3 GCN eDNA Survey

eDNA sampling was undertaken of five ponds as illustrated in **Figure 3** to determine the presence/likely absence of GCN due to their confirmed suitability. Pond references 1, 2, 4, 5 and 6 were surveyed; pond 3 was fully desiccated. The survey was undertaken on 16th April 2018 by Sophie Hughes BSc MSc, experienced Ecologist of Ecosupport Ltd. and Natural England Great Crested Newt Class Level 1 Licence holder. Weather conditions were good during the survey, with an air temperature of 16C, clear skies and an absence of wind or rain.

The survey was undertaken in full compliance with best practice guidance published by Defra (Biggs *et al.*, 2014). A total of 20 water samples were taken from each waterbody, spaced as evenly as possible around the margins and targeting in particular areas where suitable egg-laying vegetation was present, as well as areas of open water which could facilitate displaying male GCN. Care was taken to avoid disturbance of the substrate. 30ml samples were taken at each survey point and combined in a sterile bag. Six individual 15ml samples of this water were then mixed thoroughly with ethanol to preserve the samples. These samples were then sent for analysis immediately following the survey. Analysis of the eDNA samples was undertaken by Surescreen Scientifics, a recognised 'quality supplier' by Natural England. The survey was undertaken in compliance with the recommended timings to provide the best chance of identifying GCN eDNA if present. See **Appendix 3** for full details of sample analysis methodology.

Figure 3. Ponds identified within 500m of the site (Google Maps, 2018).



3.4 Phase II Reptile Survey

Due to the presence of habitat considered suitable to support reptiles, a Phase II Reptile Survey was undertaken across the full extent of the site to identify the presence/likely absence of reptiles following best practice guidelines published by Froglife (1999). Artificial refugia (a combination of bitumen roofing felt and corrugated tin) were distributed through all accessible suitable areas of reptile habitat on 28th March 2018. The refugia were left to 'bed in' for two weeks as per best practice guidelines, and then checked a total of seven times by experienced Ecologists of Ecosupport Ltd. Each check was made during suitable weather conditions (between 9 and 18 degrees Celsius with full sun or sunny spells) and the survey was undertaken between April and May so as to coincide with the optimum survey season for reptiles in the UK. In addition to checking beneath the refugia, all suitable habitat areas were checked for any reptiles present via a short transect walk during each visit.

3.5 Assessment

The methodology for the assessment of the likely ecological effects of the proposed development is based on CIEEM's Guidelines for Ecological Assessment in the UK (CIEEM, 2006). Although the assessment of the site does not constitute a formal Ecological Impact Assessment (EclA), the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

The approach of the guidelines is to assess potential impacts to all features of ecological interest that could be affected by a scheme. As a scheme may have effects beyond its boundaries, it is important to identify the 'zone of influence' of the scheme and to assess the potential for significant impacts throughout this area, for

example impacts upon nearby species, habitats and sites designated for their nature conservation value. All potential impacts are considered in the absence of any avoidance, mitigation or compensation measures to inform the suitable design of such measures (where necessary).

3.6 Limitations

Although the Phase I Survey was undertaken outside of the optimal season for botanical identification it was considered that the majority of the species present could be successfully recorded. The full extent of the site was accessible at the time of survey. The survey was considered to provide an accurate representation of the site at the time of visit.

The only limitation present during the GCN eDNA survey was that pond 3 was fully desiccated at the time of visit and therefore water samples could not be taken. It is, however, considered highly unlikely that the waterbody supported GCN, and therefore this was not considered to pose a significant limitation to the identification of GCN within the Zone of Influence of the proposals. The pond was fully vegetated, with species including grasses, suggesting regular desiccation, a regular quality of attenuation basins associated with SUDs schemes.

No limitations were considered present during the Phase II Reptile Survey.

Please note, the botanical species noted during the survey do not represent a full species list for the site, but a list of those species considered to dominate the habitat areas at the time of survey, and those of particular conservation interest (if present).

4.0 SURVEY RESULTS

4.1 Desktop Search

4.1.1 Designated Sites

No statutory sites of nature conservation value were located within the boundaries of the site. **Table 1** details such sites within 2km of the site of the proposed development. Full details provided in **Appendix 2**.

Table 1. Designated sites within 2km of the site.

Site Name	Site Code	Proximity to Site (distance & direction/km)	Designation/Details of Site
Felpham Site of Special Scientific Interest (SSSI)	-	1.86km SSE	Site of Special Scientific Interest. Notified in 1988 for its Tertiary Palaeobotany geological feature. 0.967ha in area.
The Brooks Local Nature Reserve (LNR)	-	1.49km W	Local Nature Reserve. Declared in 2010 for its importance to wildlife. Site includes areas of meadow, narrow reedbeds and ditches, ponds and planted floodplain woodland. Site annually floods in winter, providing wetland habitat.
Middleton Shingle Local Wildlife Site (LWS)	Ar19	2.00km SE	Local Wildlife Site.
Felpham Foreshore, Bognor Regis LWS	SU90/55	1.86km SSE	Local Geological Site.

No habitats listed as UKBAP Priority Habitats were identified either within or adjacent to the site (MagicMap, 2018).

4.1.2 Protected Species

No Protected Species records were identified either on site or immediately adjacent to the site. **Table 2** provides all records within 2km of the site (SxBRC, 2018). Only records from the last 10 years were included. Full details provided in **Appendix 2**.

Table 2. Protected Species records within 2km of the site.

Name (common, <i>latin</i>)	Date of Record	Proximity to Site – distance in km (accuracy in km) & direction	No. of Individuals Found
Great Crested Newt, <i>Triturus cristatus</i>	20/05/2016	0.46km to E	1 adult female
Great Crested Newt, <i>Triturus cristatus</i>	26/02/2010	1.62km to SE	1 adult male
European Water Vole, <i>Arvicola amphibious</i>	30/05/2015	1.46km to N	1 juvenile

European Water Vole, <i>Arvicola amphibious</i>	12/05/2015	0.72km to NW	
European Water Vole, <i>Arvicola amphibious</i>	28/04/2015	1.24km to NE	1 adult
European Water Vole, <i>Arvicola amphibious</i>	24/04/2015	1.31km to SW	1 adult
European Water Vole, <i>Arvicola amphibious</i>	08/04/2015	1.75km to NNE	2 adults
European Water Vole, <i>Arvicola amphibious</i>	14/09/2014	1.60km to NNE	1
European Water Vole, <i>Arvicola amphibious</i>	09/08/2014	1.47km to NNE	
European Water Vole, <i>Arvicola amphibious</i>	07/2014	1.66km to W	
European Water Vole, <i>Arvicola amphibious</i>	07/2014	1.21km to WNW	
European Water Vole, <i>Arvicola amphibious</i>	30/07/2014	1.48km to N	1
European Water Vole, <i>Arvicola amphibious</i>	28/07/2014	1.36km to N	6
European Water Vole, <i>Arvicola amphibious</i>	27/07/2014	1.47km to NNE	1
European Water Vole, <i>Arvicola amphibious</i>	01/06/2014	1.47km to NNE	1
European Water Vole, <i>Arvicola amphibious</i>	30/05/2014	1.49km to NNE	2
European Water Vole, <i>Arvicola amphibious</i>	28/05/2014	1.49km to NNE	1
European Water Vole, <i>Arvicola amphibious</i>	28/05/2014	1.57km NNE	1
European Water Vole, <i>Arvicola amphibious</i>	25/05/2014	1.47km to NNE	1
European Water Vole, <i>Arvicola amphibious</i>	22/05/2014	0.72km to NW	
European Water Vole, <i>Arvicola amphibious</i>	14/05/2014	0.72km to NW	1
European Water Vole, <i>Arvicola amphibious</i>	02/05/2014	2.00km to NE	1
European Water Vole, <i>Arvicola amphibious</i>	30/04/2014	1.72km to NNE	
European Water Vole, <i>Arvicola amphibious</i>	30/04/2014	1.76km to NNE	
European Water Vole, <i>Arvicola amphibious</i>	30/04/2014	1.47km to SW	1
European Water Vole, <i>Arvicola amphibious</i>	01/04/2014	1.72km to NNE	
European Water Vole, <i>Arvicola amphibious</i>	12/10/2013	1.11km to E	1 adult
European Water Vole, <i>Arvicola amphibious</i>	05/08/2013	1.23km to NE	1
European Water Vole, <i>Arvicola amphibious</i>	28/07/2013	0.71km to NW	1
European Water Vole, <i>Arvicola amphibious</i>	24/06/2013	1.72km to W	1
West European Hedgehog,	17/07/201	1.07km to E	1 juvenile

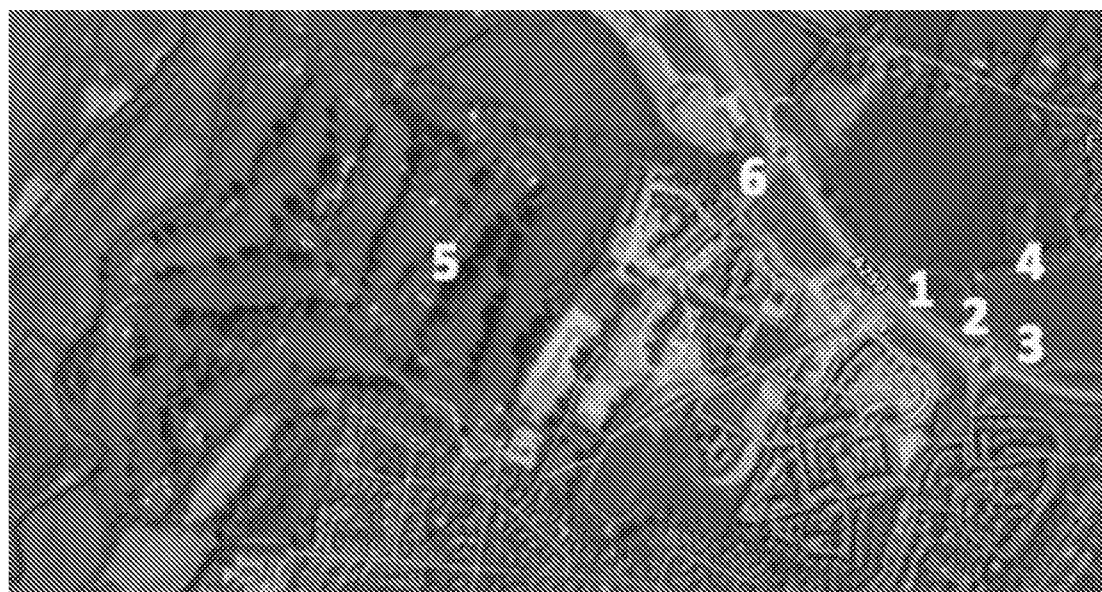
<i>Erinaceus europaeus</i>	6		
West European Hedgehog, <i>Erinaceus europaeus</i>	01-05/2016	1.39km to SW	
West European Hedgehog, <i>Erinaceus europaeus</i>	01-05/2016	1.16km to S	
West European Hedgehog, <i>Erinaceus europaeus</i>	07/05/2016	1.96km to SE	1
West European Hedgehog, <i>Erinaceus europaeus</i>	2015	1.88km to SW	
West European Hedgehog, <i>Erinaceus europaeus</i>	2015	1.34km to W	
West European Hedgehog, <i>Erinaceus europaeus</i>	2015	1.30km to SW	
West European Hedgehog, <i>Erinaceus europaeus</i>	2015	0.84km to S	
West European Hedgehog, <i>Erinaceus europaeus</i>	2015	1.21km to SE	
West European Hedgehog, <i>Erinaceus europaeus</i>	2015	1.05km to E	
West European Hedgehog, <i>Erinaceus europaeus</i>	2015	1.84km to SSW	
West European Hedgehog, <i>Erinaceus europaeus</i>	2015	1.62km to SSW	
West European Hedgehog, <i>Erinaceus europaeus</i>	2012	1.40km to SW	1
West European Hedgehog, <i>Erinaceus europaeus</i>	2012	1.13km to SSE	1
West European Hedgehog, <i>Erinaceus europaeus</i>	2011	1.92km to NE	
West European Hedgehog, <i>Erinaceus europaeus</i>	2010	0.84km to S	
Brown Hare, <i>Lepus europaeus</i>	12/05/2010	1.36km to N	1
Slow-worm, <i>Anguis fragilis</i>	07/08/2014 – 15/08/2014	1.22km to NW	2
Grass Snake, <i>Natrix natrix</i>	05/2011	1.79km to NE	2
Grass Snake, <i>Natrix natrix</i>	27/05/2008	1.79km to NE	
Western Barbastelle, <i>Barbastella barbastellus</i>	2015	0.31km to W	2
Western Barbastelle, <i>Barbastella barbastellus</i>	2015	1.00km to N	1
Western Barbastelle, <i>Barbastella barbastellus</i>	2015	1.97km to N	20
Western Barbastelle, <i>Barbastella barbastellus</i>	2015	0.67km to E	2
Western Barbastelle, <i>Barbastella barbastellus</i>	2015	1.16km to NE	11
Western Barbastelle, <i>Barbastella barbastellus</i>	2015	2.00km to NNE	30
Bat, <i>Chiroptera</i>	05/08/2015	1.63km to SW	2
Bat, <i>Chiroptera</i>	12/09/201	1.81km to SSW	1, roosting in building

	2		
Bat, <i>Chiroptera</i>	14/09/201 2	1.78km to SSW	1, roosting in house
Serotine, <i>Eptesicus serotinus</i>	23/06/201 4	1.20km to NW	
Noctule, <i>Nyctalus noctula</i>	23/06/201 4	1.20km to NW	
Common Pipistrelle, <i>Pipistrellus pipistrellus</i>	23/08/201 6	1.75km to SW	4 adults, Day roost identified
Common Pipistrelle, <i>Pipistrellus pipistrellus</i>	23/08/201 6	1.76km to SW	3, Day roost identified
Common Pipistrelle, <i>Pipistrellus pipistrellus</i>	08/08/201 6	1.78km to SW	5 adults, Day roost identified
Common Pipistrelle, <i>Pipistrellus pipistrellus</i>	27/07/201 6	1.80km to SW	7 adults, Day roost identified
Common Pipistrelle, <i>Pipistrellus pipistrellus</i>	26/07/201 6	1.84km to SW	5 adults, Day roost identified
Common Pipistrelle, <i>Pipistrellus pipistrellus</i>	23/06/201 4	1.64km to WNW	
Common Pipistrelle, <i>Pipistrellus pipistrellus</i>	23/06/201 4	1.21km to NW	
Soprano Pipistrelle, <i>Pipistrellus pygmaeus</i>	23/06/201 4	1.64km to WNW	
Brown Long-eared Bat, <i>Plecotus auritus</i>	23/06/201 4	1.21km to NW	
Brown Long-eared Bat, <i>Plecotus auritus</i>	18/04/200 8	1.41km to SSE	

4.1.3 Waterbodies

A total of six waterbodies were identified within 500m of the site of the proposed development, as illustrated in **Figure 4**.

Figure 4. Waterbodies within 500m of the site (Google Maps, 2018).



4.2 Extended Phase I Habitat Survey

4.2.1 Site Walkover

The following habitats were identified on site.

Species-poor Semi-improved Grassland

The site comprised a matrix of unmanaged grassland and scrub. The grassland element was unmanaged with a largely tussocky sward structure, grazed in places by deer and rabbits (**Figure 5**). Species noted included False Oat-grass *Arrhenatherum elatius*, Buttercup *Ranunculus spp.*, Bryophyte *spp.*, Cock's-foot *Dactylis glomerata*, Common Nettle *Urtica dioica*, Broad-leaved Dock *Rumex obtusifolius*, Spear Thistle *Cirsium vulgare*, Ragwort *Senecio jacobaea*, Cleaver *Galium aparine*, Hogweed *Heracleum sphondylium*, Teasel *Dipsacus fullonum*, Bristly Oxtongue *Helminthotheca echinoides*, Dandelion *Taraxacum officinale*, Clover *Trifolium spp.* and Common Daisy *Bellis perennis*. A number of mammal trails were noted through the grassland areas, with deer and rabbit droppings noted.

Figure 5. Grassland, including mammal trails.



Scrub

A network of relatively young, scattered scrub was present throughout the site (**Figure 6**). Species noted included Gorse *Ulex europaeus*, Blackthorn *Prunus spinosa*, Willow *Salix spp.*, Dog Rose *Rosa canina*, Oak *Quercus robur*, Bracken *Pteridium aquilinum*, Common Bramble *Rubus fruticosus* and Silver Birch *Betula pendula*. Scrub extended to the site boundaries in places, however where present in these locations it was of relatively low density/age. Large lengths of the site boundaries were bare, aside from boundary fencing and scattered trees (as detailed below).

Figure 6. Scattered scrub.



Scattered Trees

A low number of scattered, part-mature and mature trees were present along and beyond the site's boundaries.

Trees were most numerous along the western boundary (running alongside but mostly beyond the site's red line boundary), alongside an overgrown, dry ditch, where adjacent tree species included Oak, Leylandii *Cupressus × leylandii*, Hawthorn *Crataegus monogyna* and Ivy *Ilex aquifolium*. Trees ranged from saplings to mature specimens.

Two mature Oaks were present at the eastern end of the northern boundary (**Figure 7**).

A low number of part-mature Oaks and Hawthorn were present along the eastern boundary (**Figure 8**).

All trees appeared to be in a relatively good state of health, with minimal Ivy colonisation.

Figure 7. Mature Oaks along northern boundary.



Figure 8. Part-mature trees along eastern boundary.



Ditches

Two ditches were noted on site. A dry, overgrown ditch ran along the western boundary (**Figure 9**). This appeared to tie into a further dry ditch along the adjacent golf course's eastern boundary. The ditch appeared to have been fully desiccated for a relatively long period, reflected by the dense colonisation of vegetation within and its increasingly shallow depth.

A ditch ran alongside (but beyond) the site's northern boundary; this was overgrown with ruderal and scrub vegetation and contained shallow pools of water in places,

however the survey followed a night of very heavy rain. It is likely that this ditch is usually fully desiccated, again reflected by the presence of well-established vegetation throughout (**Figure 10**).

Figure 9. Dry ditch along western boundary.



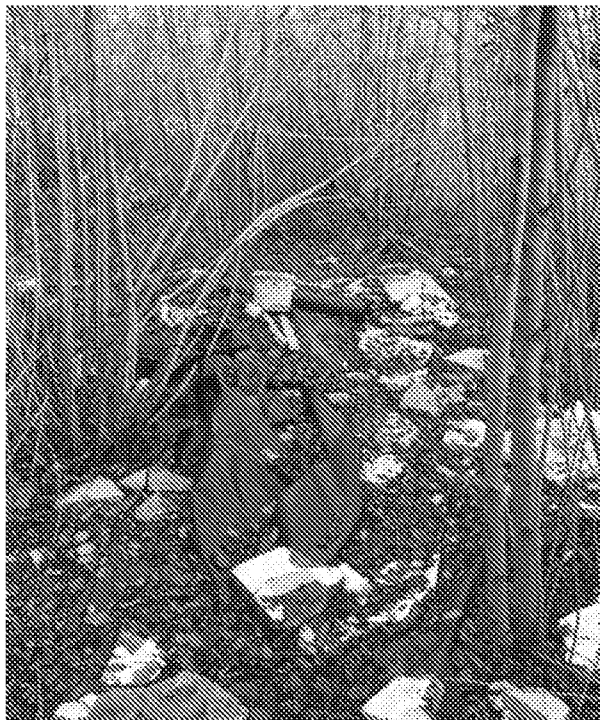
Figure 10. Ditch along northern boundary, with occasional shallow pools at the time of survey.



Rubbish

A small pile of rubbish, largely comprising tarpaulin and insulation, was noted within the scrub on site (**Figure 11**).

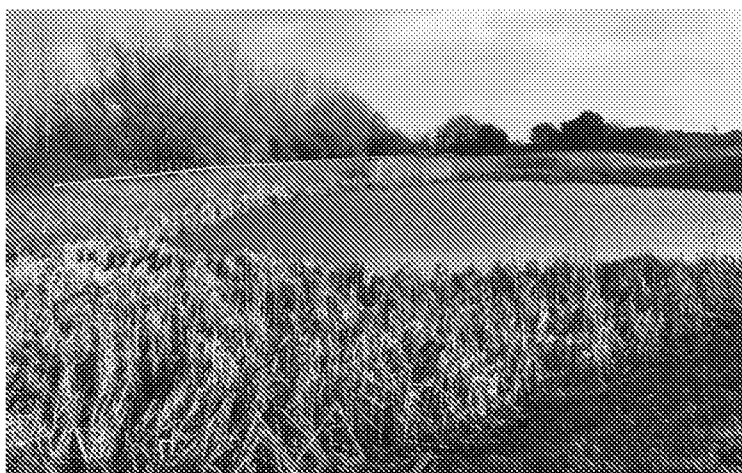
Figure 11. Rubbish on site.



4.2.2 Waterbodies

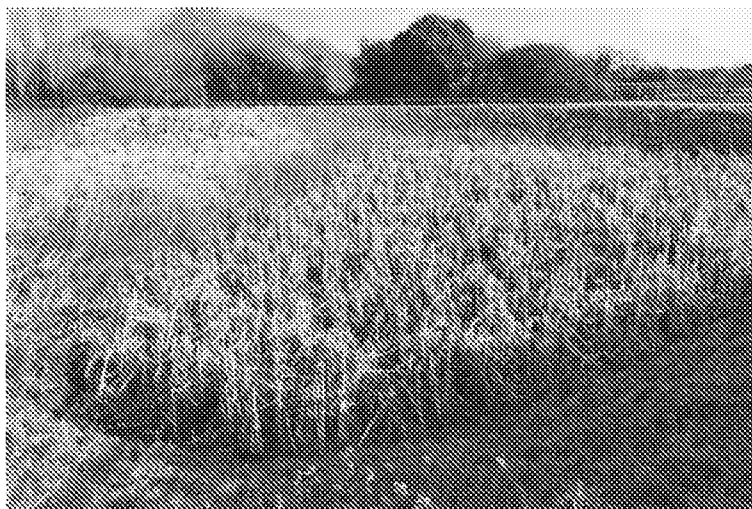
Waterbody 1 (**Figure 12**) appeared to comprise a drainage pond associated with the adjacent development. High densities of aquatic vegetation were present in places, including Common Reed *Phragmites australis*, however large areas of open water were also present.

Figure 12. Waterbody 1.



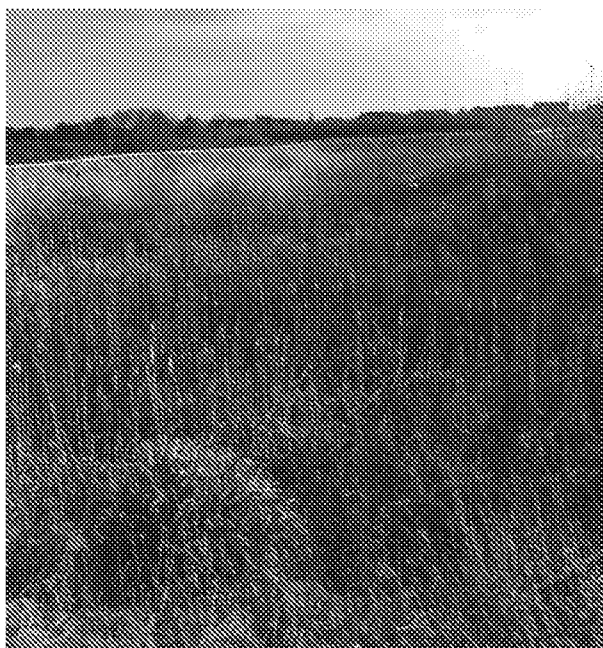
Waterbody 2 (**Figure 13**) lay adjacent to waterbody 1 and was of a similar structure, though a little smaller, with higher densities of vegetation and smaller areas of open water.

Figure 13. Waterbody 2.



Waterbody 3 (**Figure 14**) was similar to waterbody two, but was fully desiccated and more heavily vegetated, including grass species.

Figure 14. Waterbody 3.



Waterbody 4 was located in a grazed field (**Figure 15**). The waterbody was heavily shaded by mature *Salix spp.* Minimal aquatic vegetation was present, however grasses were present around the margins, growing into the water in places. The water quality was considered moderate.

Figure 15. Waterbody 4.



Waterbody 5 (**Figure 16**) comprised an interconnected network of ponds and wet ditches within the boundaries of the golf course. Low levels of aquatic vegetation were present within the pond, and trees overhung the water in places. Water within the network was flowing in places and pooling in others, with aquatic vegetation present in places (**Figures 17-19**).

Figure 16. Waterbody 5.

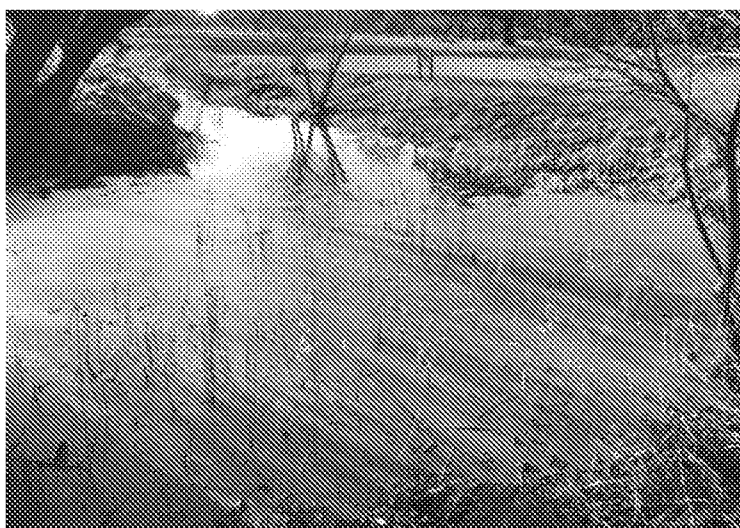


Figure 17. Wet ditch network within golf course.



Figure 18. Wet ditch network within golf course.



Figure 19. Wet ditch network within golf course.



Waterbody 6 comprised a pond and ditch SUDs system which spanned two underpasses beneath the roads (**Figures 20 & 21**). The waterbody appeared permanent due to its depth. Aquatic and marginal vegetation was present across the majority of the network. The water had pooled in places but was flowing in others.

Figure 20. Waterbody 6.

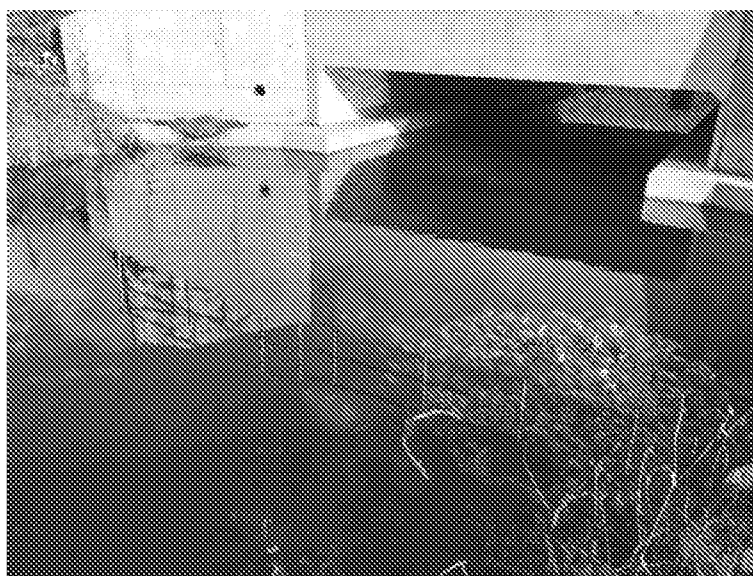


Figure 21. Waterbody 6.

4.3 GCN eDNA Survey

The analysis of the samples taken from the waterbodies identified a likely absence of GCN within all waterbodies, with no positive replicates generated (**Appendix 3**).

4.4 Phase II Reptile Survey

Table 3 details the dates and conditions during each reptile survey visit. No reptiles were identified on site during any survey visit, indicating a likely absence of any reptile populations on site.

Table 3. Dates and conditions of the Phase II Reptile Survey.

Date	Time	Cloud cover (%)	Precipitation	Temp (C)	Wind
11/04/2018	13:00	20%	0	13	Low
16/04/2018	11:50	0%	0	12	Low
18/04/2018	12:45	0%	0	15	Low
20/04/2018	10:00	0%	0	13	None
24/04/2018	13:10	50%	0	14	Low
26/04/2018	13:10	60%	0	15	Low
04/05/2018	11:00	0%	0	12	Low

5.0 EVALUATION & POTENTIAL IMPACTS IN THE ABSENCE OF MITIGATION

5.1 Introduction

This chapter evaluates all ecological features identified within the application site at the Phase I stage, then details the potential impacts of the proposals to all ecological features identified in the absence of avoidance, mitigation and compensation measures to inform the production of a suitable such strategy (where necessary). The potential impacts are identified in reference to the proposed activities associated with the scheme. In many cases, whilst a potential negative impact is identified at this stage, measures can be implemented to ensure that no actual negative impacts occur. Such measures are detailed in **Section 6** of this report.

Please note, it is not always possible at a Phase I stage to identify presence/likely absence of Protected Species, and therefore often Phase II Protected Species Surveys are required prior to a full evaluation being undertaken.

5.2 Desktop Search

5.2.1 Designated Sites

Due to the distance between the site and all nearby designated sites, together with the presence of surrounding buffers of residential dwellings and mature vegetation and the limited size of the proposed development, it is considered highly unlikely that the proposed development will result in any significant increase in existing baseline disturbance to such sites. That said, measures have been included within this report to limit any potential disturbance as far as possible.

5.2.2 Protected Species

The potential for all Protected Species that were identified within 2km of the site to be impacted by the proposed development are evaluated in the following section.

5.3 Extended Phase I Habitat Survey

5.3.1 Habitats

Species-poor Semi-improved Grassland

The grassland on site comprised common and widespread species and was therefore considered to hold minimal botanical value. Its loss during construction works is therefore considered highly unlikely to result in significant adverse botanical impacts.

The grassland was considered to hold a high level of suitability to support reptiles and terrestrial-phase amphibians due to its extent, tussocky structure and proximity to the habitats associated with the adjacent golf course. In addition, the scrub habitat on site further enhances the potential for these species groups to be present on site, as detailed below. Records of Great Crested Newts were identified within a

pond within 500m of the site; due to the suitable terrestrial habitat on site for the species, together with the connectivity between the pond and the site, the species could be present on site. Records of Grass Snake and Slow Worm were also identified within the vicinity. Site clearance therefore holds the potential to result in direct adverse impacts upon reptiles and amphibians should further survey identify their presence and suitable mitigation measures are not implemented.

The grassland was considered to offer suitable opportunities for invertebrates, which in turn would provide a foraging resource for bats, known to be present in the vicinity of the site. The size of the site is, however, relatively limited, with substantial areas of off-site optimal bat foraging habitat present associated with the adjacent golf course. Therefore any minimal loss of this habitat associated with the proposals is considered highly unlikely to result in any significant impacts to local foraging bats. In addition, the completed development will include lawned gardens, which will offer continued foraging opportunities on site in the future. The established vegetation along the site's western boundary forms part of a linear feature that provides suitable habitat connectivity for commuting bats. This vegetation is, however, understood to be retained under the proposals.

That said, any increases in lighting on site could cause disturbance to such usage of the site by bats should a sensitive lighting scheme not be implemented. Increased levels of artificial light can cause disturbance and disruption to bats. Though several bat species take advantage of artificial lighting systems for foraging due to the insects lighting can attract, other species avoid them.

Many night-flying insects are attracted to light, especially those lamps that emit an ultra-violet component and particularly if it is a single light source in a dark area (BCT, 2009). Studies have shown that, although Noctules, Leisler's Bat, Serotine and Pipistrelle bats swarm around white mercury and metal halide street lights, this behaviour is not true for all species. The slower-flying broad winged species such as Long-eared Bats, *Myotis* species and Barbastelle bats generally avoid streetlights (BCT, 2009). In addition it is also thought that insects are attracted to lit areas from further afield resulting in depletion of feeding sources elsewhere.

Artificial lighting is also thought to increase the risk of predation. For example observations have been made of Kestrels *Falco tinnunculus* hunting at night under the artificial light along motorways (BCT, 2009). Therefore increased light levels may lead to increases in mortality.

Bright light may also reduce social flight activity and cause bats to move away from the lit area. Studies have shown that continuous lighting along roads creates barriers which some bat species cannot cross. For example, Daubenton's Bat *Myotis daubentonii* move their flight paths to avoid street lamps (BCT, 2009).

Therefore increased lighting associated with the development is likely to impact upon the foraging and commuting bat species that are more sensitive to lighting should suitable avoidance measures not be implemented, particularly along the western site boundary.

Scrub

The scrub across the site provides suitable opportunities for nesting birds. Should this habitat be cleared during the active season for nesting birds (March-August inclusive) there exists the potential for direct adverse impacts upon breeding birds and active nests should suitable protective measures not be implemented. Due to the extent and quality of alternative nesting sites in the vicinity of the site, however, site clearance is not considered likely to result in significant decreases in nesting resources in the local area.

The scrub habitat provides sheltering and hibernating opportunities for reptiles, amphibians and small mammals, all of which are known to be present in the local area. Should this habitat be cleared without due regard to this potential use, such works could result in direct adverse impacts to these species groups.

The scrub habitat provides suitable opportunities for foraging bats as detailed within the grassland section above. Where scrub is present along site boundaries this, alongside the presence of scattered trees in places, could provide a linear feature for commuting bats (as discussed below).

Scattered Trees

The scattered trees along/adjacent to the site boundaries provide suitable opportunities for nesting birds. Should any trees require removal/reduction and such works are undertaken during the active season for nesting birds (March-August inclusive) there exists the potential for direct adverse impacts upon breeding birds and active nests should suitable protective measures not be implemented. Due to the extent and quality of alternative nesting sites in the vicinity of the site, however, removal of the trees where/if required is not considered likely to result in significant decreases in nesting resources in the local area.

Should adequate protection of retained trees not be implemented during construction works the potential exists for trees and hedgerows to be damaged/killed by both direct damage and impaction of roots.

Where present along the site boundaries, particularly the western boundary where trees are more numerous and tie into a larger network within the adjacent golf course, these provide a linear feature suitable for commuting bats. Such vegetation will be retained under the proposals, however an insensitive lighting scheme

associated with either the construction or operational phases of the proposals could disrupt such usage by bats.

The potential for trees to support roosting bats is discussed below.

Ditches

It is considered highly unlikely that the two ditches along the site boundaries hold permanent water, with both considered to be fully desiccated apart from the northern ditch following particularly heavy and sustained rain. The ditches were therefore not considered to provide permanent habitat features for amphibians.

The topography of the ditches provides suitable opportunities for sett-building Badgers *Meles meles*. No Badger setts were identified on site or within the close vicinity of the site, however due to the active nature of the species new setts could be constructed prior to works commencing on site. Both ditches will be retained under the proposals, which will also include a 5m buffer to both these boundaries. Should this situation arise, however, works have the potential to result in direct adverse impacts upon Badgers and their setts as subterranean tunnels can extend up to 20m from a sett entrance, should suitable mitigation not be implemented.

The potential for the ditches to support Water Voles is detailed below.

Rubbish

The tarpaulins and insulation present on site provides suitable sheltering and hibernating opportunities for small mammals, reptiles and amphibians. Removal of this material therefore holds the potential to result in direct adverse impacts to such species groups should suitable mitigation measures not be implemented.

5.3.2 Assessment of Trees to Support Bats

Aside from the two mature Oaks along the site's northern boundary, all trees on site were considered to hold *negligible potential to support bats* due to a lack of suitable features, as per best practice (Collins, ed., 2016). Any necessary removal of these trees is therefore considered highly unlikely to result in adverse impacts upon roosting bats.

No bat roosting features were noted associated with the two mature Oaks along the northern boundary during the ground level assessment. That said, these trees were of a level of maturity that could result in such features being present but not visible from ground level. Therefore the potential for bat roosts to be present within these trees cannot be discounted. That said, it is understood that these Oaks are to be retained under the proposals. Should roosting bats be present, direct adverse impacts are considered unlikely, however an insensitive lighting scheme could result in disturbance.

5.3.3 Assessment of Waterbodies to Support Great Crested Newts

An HSI assessment was undertaken on all waterbodies identified within 500m of the site to determine the suitability of them to support GCN (ARG, 2010). **Table 4** details the results of the HSI assessment.

Table 4. HSI assessment of all waterbodies within 500m of the site.

Waterbody	HSI Score	GCN Suitability	Notes
1	0.92	Excellent	GCN records, 2016
2	0.76	Good	
3	0.44	Poor	Fully desiccated
4	0.65	Average	
5	0.79	Good	Interconnected wet ditch and pond network
6	0.88	Excellent	

Due to the presence of a number of waterbodies considered to offer suitable GCN breeding habitat, together with the presence of high quality GCN terrestrial habitat on site and records of GCN within 500m of the site, there exists the potential for GCN to be present on site. The findings of the eDNA assessment are discussed below.

5.3.4 Assessment of Waterbodies to Support Water Voles

A number of Water Vole records were identified within 2km of the site in all directions, the closest of which being located approximately 0.7km to the north west. The ditches on/adjacent to the site were assessed against a list of suitable habitat features for Water Voles as detailed in best practice guidelines. It considered highly unlikely that the ditches along and adjacent to the site's northern and western boundaries support Water Voles.

Although banks were relatively steep sided, the western ditch was shallow, appeared fully and permanently desiccated and largely shaded. Although a network of permanently wet ditches were identified within the adjacent golf course, this ditch did not appear to represent an integral connective route between more suitable stretches.

A higher density of vegetation was present along the banks of the northern ditch due to less shading. Although this ditch contained a small amount of shallow water at the time of Phase I Survey, the initial visit followed a night of heavy rain and was undertaken in the middle of the Water Vole hibernation season. The ditch was found to be fully desiccated during all subsequent site visits in April and May, when Water Voles would be active. Further, this ditch ends at an access road, and does not therefore provide any level of habitat connectivity with the wider network.

Further, no evidence of Water Voles was identified associated with either ditch during the Phase I Survey. This assessment was repeated during site visits associated with the reptile survey, again with no evidence identified.

It is therefore considered highly unlikely that Water Voles are present on or adjacent to the application site, and therefore highly unlikely that the proposals will have any impacts upon the species. That said, in the highly unlikely event of their presence, the proposals have been updated to include a minimum 5m unbuilt and unlit ecological buffer strip along both the northern and western boundaries.

5.4 GCN eDNA Survey

The eDNA survey of all waterbodies within 500m of the development site presented no positive results for GCN eDNA in any of the water samples taken, indicating a likely absence of the species in any waterbody.

SxBRC was contacted to discuss the GCN record from 2016 within 0.46km of the site. This was likely associated with waterbody 1, 2 or 3. This record was verified at the time of release by the county recorder for amphibians, however it has since been deleted, which could be attributed to the data being incorrect. Based upon the lack of any GCN eDNA being present within any of these three waterbodies during the 2018 assessment, together with a lack of GCN presence in any other waterbody surveyed despite their suitability and connectivity, it is considered that this is the likely explanation for the data being deleted. In addition, it is understood that these ponds were surveyed again in 2016, with no GCN recorded.

It is therefore considered highly unlikely that GCN are present within 500m of the application site and subsequently highly unlikely that the proposed development will result in any impacts upon the species.

5.5 Phase II Reptile Survey

The reptile survey identified a likely absence of reptile populations on site. The survey was undertaken as per best practice guidelines, during suitable conditions and during the active season for reptiles in the UK. The survey is therefore considered to represent an accurate assessment of potential reptile presence on site at the time of survey.

It is considered highly unlikely that the proposed development will result in any impacts upon reptiles. It is considered highly unlikely that the site will be colonised by reptiles in the near future as long as the adjacent land within the golf course remains closely managed. That said, reflective of the continued presence of suitable habitat on site, the site will be cleared sensitively in order to protect reptiles (and any other wildlife) in the highly unlikely event of their presence.

6.0 REQUIREMENTS, RECOMMENDATIONS AND ENHANCEMENTS

6.1 Introduction

The following information is provided to reduce the ecological impact of works as far as possible to ensure compliance with wildlife legislation, and to ensure the proposals result in a positive outcome for biodiversity as per planning policy.

Avoidance/mitigation refers to measures that can be undertaken to avoid or reduce ecological impacts, for example by retaining and protecting suitable habitat on site or timing works to avoid certain ecological sensitive timings. Compensation refers to measures taken in order to offset potential significant impacts, for example by providing alternative habitat features to replace those lost as a result of the works. Measures referred to as 'enhancements' refer only to those that will deliver positive impacts to ecology compared to the current site conditions.

6.2 Designated Sites

A Homeowner Awareness Leaflet will be provided with the purchase documentation of all new dwellings. The leaflet will detail the presence and importance of nearby protected sites of nature conservation interest and ways in which they can be enjoyed respectfully, such as by keeping dogs on leads and sticking to footpaths.

6.3 Updating Badger Walkover

Due to the active nature of Badgers and their known presence within the vicinity of the site an updating Badger survey should be undertaken a maximum of one month prior to works commencing on site to ensure no new setts have been constructed within the area of impact of works (which comprises the works area plus 20 metres). Please note, should an active sett be identified, further survey may be necessary, as well as mitigation under a European Protected Species Licence, to be informed by the Ecologist.

6.4 Tree & Hedge Protection

Protective fencing will safeguard all retained trees and hedges from direct impact and from severance and/or asphyxiation of the roots, as well as any wildlife utilising such habitats, during construction works. Suitably secure construction fencing (Heras or similar) will be installed at the distance of the branch spread from the trunk (BSI,

2012) / at a distance of half the height of the tree/hedge. Access beyond the fence will not be permitted to construction personnel or vehicles and no construction materials will be stored within their protective area. All fencing will be installed prior to any construction works being undertaken (including the arrival of machinery on site), and remain in place until all work is completed, with suitable signage installed (**Appendix 4**).

Please note, should the mature Oaks along the northern boundary require removal/reduction, further assessment will be necessary prior to such works commencing to determine the presence/likely absence of roosting bats.

6.5 Vegetation Clearance

Reflective of the potential for nesting birds to utilise the site, alongside the potential for reptiles to colonise the site from surrounding land in the time between the Phase II Reptile Survey and commencement of construction works (although as discussed this is considered highly unlikely), vegetation clearance on site will be undertaken sensitively as follows to ensure full compliance with wildlife legislation.

Please note, should the mature Oaks along the northern boundary require removal/reduction, further assessment will be necessary prior to felling commencing to determine the presence/likely absence of roosting bats.

A first cut of all required vegetation will be made to avoid the bird nesting season, which spans March-August inclusive (Natural England, 2015). All scrub, trees and grass that requires removal will be cut to a **minimum height of 20cm** using hand held machinery, by/under the supervision of a suitably experienced Ecologist to ensure the protection of any wildlife present. All cutting will be made in a directional fashion from the eastern boundary towards the southern, northern and western boundaries, to passively encourage any wildlife present towards the retained ecological buffer strip and habitat beyond (see **Section 6.6**). During this first cut, scrub (but not grass) will also be cut from the ecological buffer strip to promote the establishment of a grassland strip prior to the planting of hedging.

If the first cut of vegetation is undertaken during the hibernation period (approximately October – March, weather dependent), care will be taken to avoid disturbance of any potential hibernacula such as rubbish or rubble piles.

If clearance is not possible during the winter months, this first cut must be preceded by a nesting bird survey undertaken by an Ecologist a maximum of 24 hours prior to clearance occurring. If any active nests are identified these will be protected by a minimum of a 3m buffer until all chicks have fledged and the nest has been deemed inactive by the Ecologist.

All arisings will be removed from site immediately to avoid creating suitable areas of shelter for wildlife. This will reduce the suitability of the vegetation to support wildlife whilst ensuring its immediate protection, encouraging wildlife to relocate into surrounding land.

Please note, should any potential Badger setts or Fox dens be identified during clearance works these must be assessed by the Ecologist to determine the likelihood of them being active, with mitigation implemented as required (to be agreed with the LPA prior to undertaking).

Following the initial cut of vegetation, sensitive habitat manipulation will be undertaken to progressively further reduce the suitability of habitat to support wildlife. This will comprise two additional cuts, gradually reducing vegetation height until vegetation is cut to ground level.

If the first cut was made during the hibernation season, the second and third cuts will be made following the end of the hibernation season from mid/late March (weather dependent, and no later than the end of September). If the first cut was made outside of the hibernation season, the second and third cuts will be made at one week intervals following the first cut. Remaining vegetation will again be cut using hand-held trimmers, in a directional fashion and by/under the supervision of an Ecologist. An initial cut to a height of no less than 15cm will be made, followed by a cut to as low as possible 1-2 weeks later.

Upon completion of the above, all vegetation on site requiring clearance will be regularly managed until site stripping commences to prevent any potential recolonisation of wildlife. If this is not possible, reptile exclusion fencing must be installed around all site boundaries immediately following the final cut of vegetation, to be advised by the Project Ecologist. If vegetation regenerates into that which could provide opportunities for nesting birds, the Project Ecologist must be consulted to ensure compliance with legislation.

6.6 Ecological Buffer Strip

To ensure the maintenance of continued habitat opportunities for foraging and commuting bats, as well as enhancing the site's potential to support a range of other wildlife and providing protection for the two ditches, an ecological buffer strip will be implemented along the site's northern, southern and western boundaries, as reflected within the proposed development plans (**Appendix 1**). This will comprise a strip of habitat of at least 5m within which no buildings or access roads will be constructed. The buffer strip will remain unlit throughout all phases of the proposals to prevent associated disturbance, and will be protected throughout the construction phase via the installation of suitable construction fencing and signage

(Appendix 4). Fencing will be installed prior to works commencing on site, and will be removed upon completion of the construction phase.

The buffer strip will be enhanced as follows to increase its ecological value:

Hedging

Hedgerows will be planted along the boundaries. Specimens will be planted in staggered double rows to promote the establishment of a dense structure. New hedgerows will aim for a 7-species native mix to provide a variety of foraging resources for wildlife throughout the year.

A 1m wide buffer strip of tussocky grassland will be implemented along the base of the boundary hedges. This will be left uncut to promote the establishment of a tussocky sward structure, providing opportunities for foraging and sheltering wildlife.

Log Piles

Three log piles will be created within the buffer strip to provide sheltering, hibernating and foraging opportunities for a range of wildlife. Wherever possible logs will be sourced from any trees that require felling under the scheme, so as to recycle the resource. These will be located within the unmanaged grassland strip at the base of the boundary hedgerows. Logs will be partially buried to provide opportunities for species such as Stag Beetle.

6.7 Toolbox Talk

Prior to commencing work, a site induction will be delivered by the site manager to all contractors detailing the requirements of the Ecological Avoidance, Mitigation, Compensation and Enhancement Strategy to ensure works comply in full with all relevant wildlife legislation and policy.

6.8 Excavations

During construction all excavations on site should be covered nightly and/or include a suitable escape ramp for the protection of wildlife such as Badgers and Hedgehog (a suitable escape can be provided by wooden planks placed at 45 degree angle or provision of a sloping end wall). Any temporarily exposed open pipe systems should be checked and then suitably capped when not in use to prevent access by wildlife.

6.9 Lighting

In order to avoid any disturbance to nocturnal wildlife construction works will as far as possible be limited to daylight hours and should not be undertaken between 30 minutes prior to dusk through to dawn.

A sensitive lighting scheme will be implemented in compliance with the following best practice (Bat Conservation Trust, 2009):

- The use of low-pressure sodium lighting instead of metal halide lamps;
- Lighting should be directed to where it is needed through careful design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct light to its intended area only;
- Use planting as a barrier as and where appropriate;
- Utilise sensor-operated lighting wherever possible, with the timer restricted to the minimum possible;
- Installation of security lighting only when absolutely necessary.

Additional guidance is provided in *Guidance Notes for the Reduction of Obtrusive Light* (ILP, 2011), which provides a greater level of detail on how light spill can be reduced.

Lighting should in particular avoid the western site boundary due to the presence of a potential bat commuting feature, and the mature Oak standards along the northern boundary, to prevent disturbance.

6.10 Roofing Underlining

In-line with Natural England (2015) guidance roofing felt should be utilised as opposed to Breathable Roof Membrane (BRM) for all roofing works as there is considerable evidence to suggest that BRM poses a threat to bats occupying a structure due to entanglement in the fibres (Natural England, 2015).

6.11 Ecological Enhancement Strategy

6.11.1 Bat Boxes

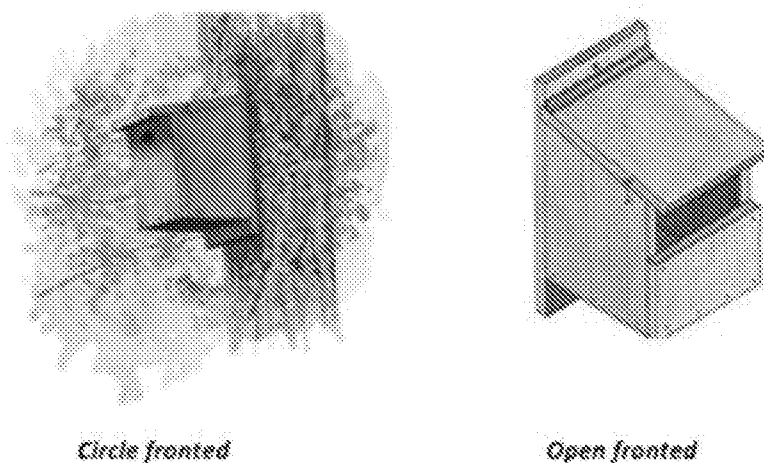
To comply with national and local policy, artificial bat roosting features will be installed on five of the new properties and both of the mature Oaks along the northern site boundary to provide roosting opportunities for bats, thereby enhancing the ecological value of the site. The features should be located at the greatest possible height (ensuring a minimum of a three metre clearance to the ground), in an open, sunny position and away from artificial lighting. The western aspects of the boundaries along the western boundary would be particularly suitable due to the presence of the adjacent golf course. The Schwegler Bat Box (General Purpose) is recommended.

6.11.2 Bird Boxes

Five bird boxes will be installed on site to increase local opportunities for nesting birds. Two will be open-fronted to provide suitable nesting habitat for species such as Robins, and three will be circular-fronted, which is more suited to species such as

Tits (**Figure 20**). The open-fronted boxes should be positioned at a height of 2m or lower and hidden within vegetation to reduce predation. The circular-fronted boxes should be placed approximately 3m high on a northern/eastern aspect where possible to reduce predation and exposure to extreme elements.

Figure 20. Bird boxes.



6.11.3 Retained and Enhanced Habitat Connectivity

The ecological buffer strip as detailed in Section 6.6 will retain and enhance habitat connectivity both around the site and with the wider landscape, as well as providing enhanced on-site opportunities for wildlife. Where the scheme allows, additional hedgerow planting on site such as between plots and along the northern and southern boundaries would further enhance the site's ecological value. Hedgerow planting should utilise locally-sourced, native species, such as:

Spindle *Euonymus europaeus*

Elm *Acer campestre*

Elder *Sambucus nigra*

Wild Privet *Ligustrum vulgare*

Guelder-rose *Viburnum opulus*

Field Maple *Acer campestre*

Crab Apple *Malus sylvestris*

Hazel *Corylus avellana*

Honeysuckle *Lonicera periclymenum*

Dog-rose *Rosa canina*

Rowan *Sorbus aucuparia*

Holly *Ilex aquifolium*

6.11.4 Native Planting

In line with the CIEEM guidance (2012) and to comply with national and local policy, any proposed planting scheme should favour local, native species over non-natives and ornamentals wherever possible. Where possible species should comprise those that produce berries and nectar to provide feeding opportunities for a range of wildlife. Evening-scented species will enhance the site's potential to support foraging bats.

6.11.5 Notable Species

Should close-board fencing be installed at property boundaries provision should be made to promote site connectivity and extended foraging ranges and opportunities for European Hedgehog, a UKBAP species known to be present in the local area. Holes measuring 5 square inches should be made at the base of fences.

7.0 CONCLUSION

An Ecological Assessment was undertaken at land off Stanhorn Grove to inform a planning application for the residential development of the site. The survey identified the potential for the site to support nesting birds, terrestrial-phase GCN, reptiles, Badgers and bats.

A Phase II reptile survey identified a likely absence of reptiles on site. A GCN eDNA assessment identified a likely absence of GCN within dispersal distance of the site.

Avoidance measures have been detailed within this report to reduce the potential for any potential ecological impacts to occur associated with the scheme to ensure compliance with wildlife legislation and policy.

In addition, ecological enhancements have been included to increase the site's potential to support biodiversity in the future, in compliance with planning policy.

Please note, although it is considered highly unlikely, if signs of any Protected Species are identified during works, works must halt immediately and advice sought from a Suitably Qualified Ecologist to ensure works comply in full with relevant legislation and policy.

8.0 REFERENCES

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9.0 APPENDIX

Appendix 1. Site proposals.

Rev.	Date	Note	Author	Checked
-	dd/mm/yy	Note	XXX	XXX



SCHEDULE OF ACCOMMODATION

6 3Bed 94m²(1011 ftsq)
3 3Bed 93m²(1001 ftsq)
7 2Bed 71m²(767 ftsq)
2 Flat 1Bed 52m²(555 ftsq)

TOTAL UNITS: 18

3 Beds: 9 (50%)
2 Beds: 7 (39%)
1 Beds: 2 (11%)

TOTAL CAR PARKING SPACES: 37

Allocated parking spaces : 34
Visitors parking spaces : 3

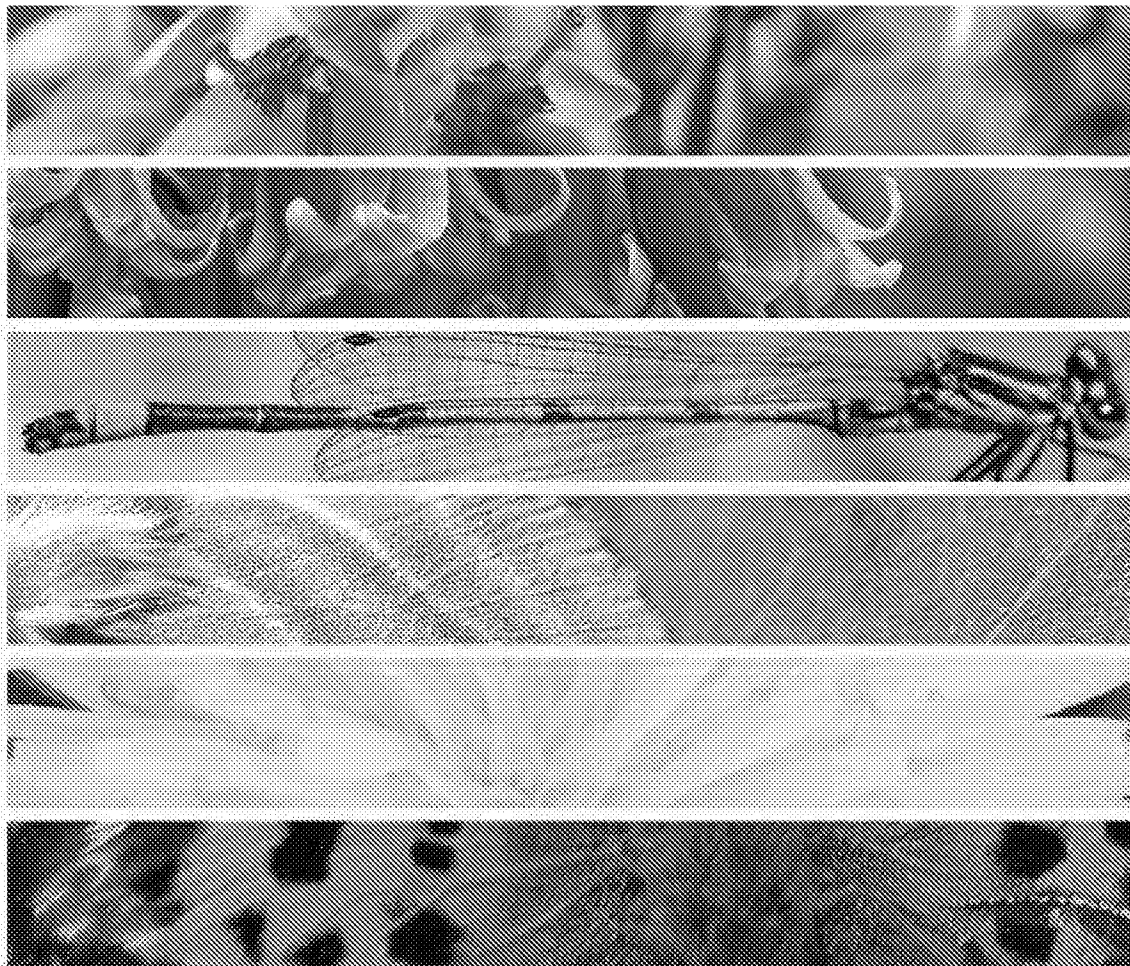
KEY

- Tree root protection area (Category B)
- Tree shadowing
- Tree to be removed



Project		NEW DWELLINGS LAND AT WELLERS CLOSE FELPHAM BOGNOR REGIS		Drawing		SITE LAYOUT				
				App-Devg Number		17094-PL-201		Rev	-	
Client		WORTHING HOMES GROUP		 JAMES POTTER ASSOCIATES www.jpa.design JPA - FORTHMOOTH 24 Fether Road, Southport, Preston, Lancashire PR10 9AT T: +44(0)7805512100						
Scheme		PLANNING								
Scale		1:500								Sheet Size
Author		RH		Checked		JP		Date		19/12/17

Appendix 2. Results of SxBRC data search.



Ecological data search for land at Felpham

On behalf of Sophie Hughes (Ecosupport Ltd)

Report reference SxBRC/17/646

Prepared on 04/01/2018



Contents

Introduction and summary of results

Important information

Maps

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- 2 Non-Statutory designations
- 3 Ownership/management
- 4 Section 41 habitats and other

Species data

- Table 1: Summary protected and designated species records
- Table 2: Protected and designated species records
- Table 3: Summary bat records
- Table 4: Bat records
- Table 5: Summary bird records
- Table 6: Sussex notable bird records
- Table 7: Summary invasive non-native species records
- Table 8: Invasive non-native species records

Map citation sheets

Annex: Supporting information

Introduction & Summary of Results

An ecological data search was carried out for land at Felpham on behalf of Sophie Hughes (Ecosupport Ltd) on 04/01/2018.

The following datasets were consulted for this report:

	Requested	Radius/buffer size
Designated sites, habitats & ownership maps	Yes	2km
Protected, designated and invasive species	Yes	2km

Summary of results

Sites and habitats

Statutory sites	1 SSSI / 1 LNR
Non-statutory sites	1 LWS / 1 LGS
Section 41 habitats	4 habitats
Ancient and/or ghyll woodland	Present

Protected and designated species

International designations	47 species	575 records
National designations	105 species	3,755 records
Other designations	167 species	5,144 records
Total	203 species	5,857 records
Invasive non-natives species	32 species	126 records

Important Information

PERMISSION

This report is valid until 04/01/2019

This report is for the internal use of Sophie Hughes of Ecosupport Ltd (which includes the client where applicable) to inform understanding of the site of interest. This report must not be distributed or published for an external or public audience, for example within the appendix of a report. However, data from within this report may be referenced as long as the Sussex Biodiversity Record Centre is acknowledged.

The separate summary sheet may be published.

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

The species data held by the Sussex Biodiversity Record Centre (SxBRC) are 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 data search from SxBRC will give the user a clear indication of what biological recording has taken place. 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.

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 data search reports.

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.

Maps

Based on data currently held at the Sussex Biodiversity Record Centre, the following appear within the search radius:

Statutory site designations	
Site of Special Scientific Interest (SSSI)	Felpham
Local Nature Reserve (LNR)	The Brooks
Non-statutory site designations	
Local Wildlife Site (LWS)	Ar19 - Middleton Shingle
Local Geological Site (LGS)	SU90/55 - Felpham Foreshore, Bognor Regis
Ownership/management	
Environmental Stewardship Agreement Woodland Trust site	
Section 41 habitats & other	
Chalk stream Coastal sand dune Coastal & floodplain grazing marsh Deciduous woodland Ancient Tree Hunt	

Any citation sheets currently available can be found towards the back of this report.

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.

Key to Maps

The numbers in the table below correlate with the maps on the following pages.

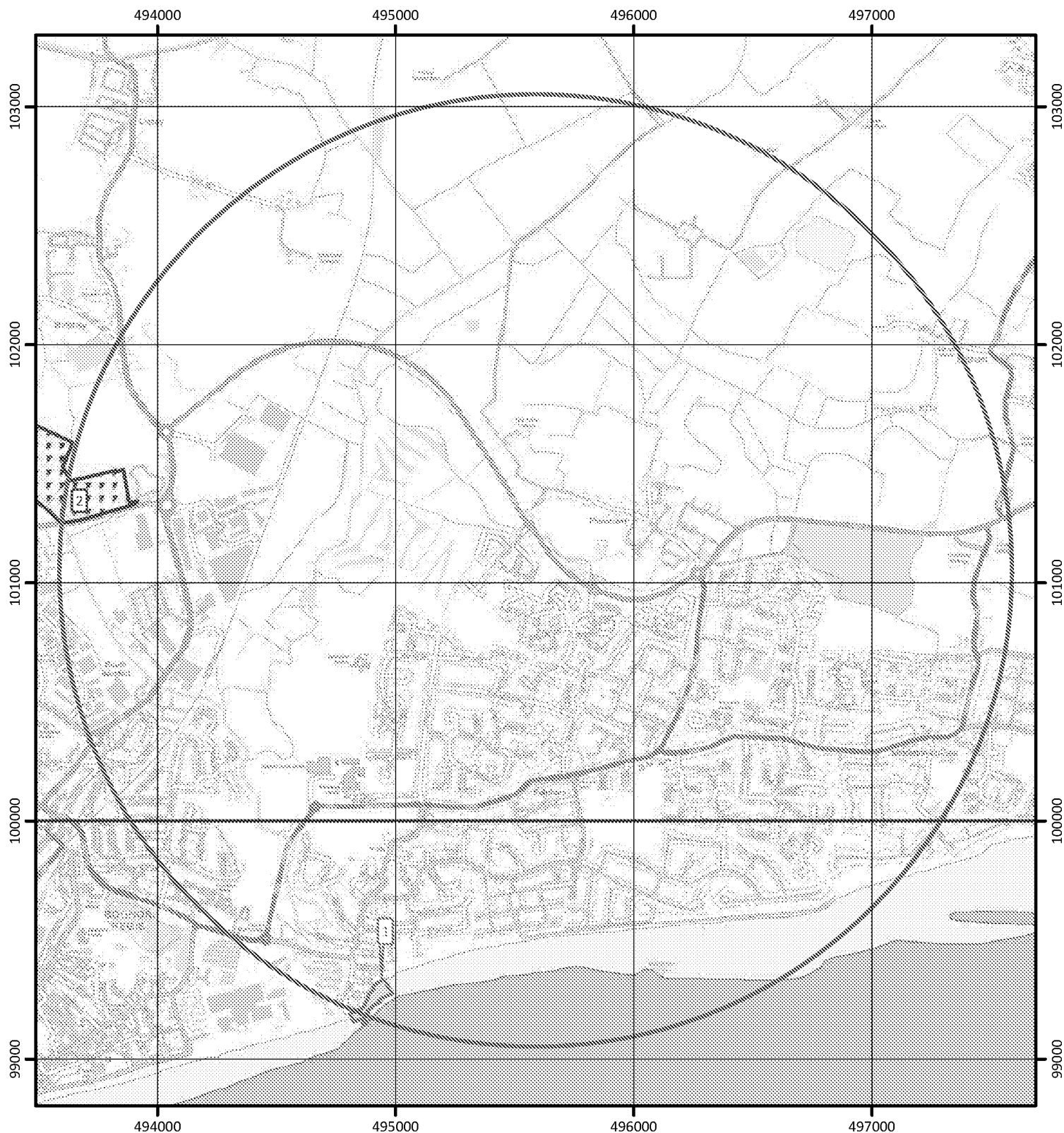
Map 1: Statutory site designations		
Site of Special Scientific Interest	1	Felpham
Local Nature Reserve	2	The Brooks
Map 2: Non-statutory site designations		
Local Wildlife Site	1	Ar19 - Middleton Shingle
Local Geological Site	2	Felpham Foreshore, Bognor Regis
Map 3: Ownership/management		
Woodland Trust site	1	Worms Wood

Map 1: Statutory site designations

Land at Felpham + 2km radius

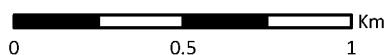
Prepared for Sophie Hughes (Ecosupport Ltd)

SxBRC/17/646 - 04/01/2018



Key to Map:

-  Search Area
-  Site of Special Scientific Interest
-  Local Nature Reserve

 0 0.5 1 Km



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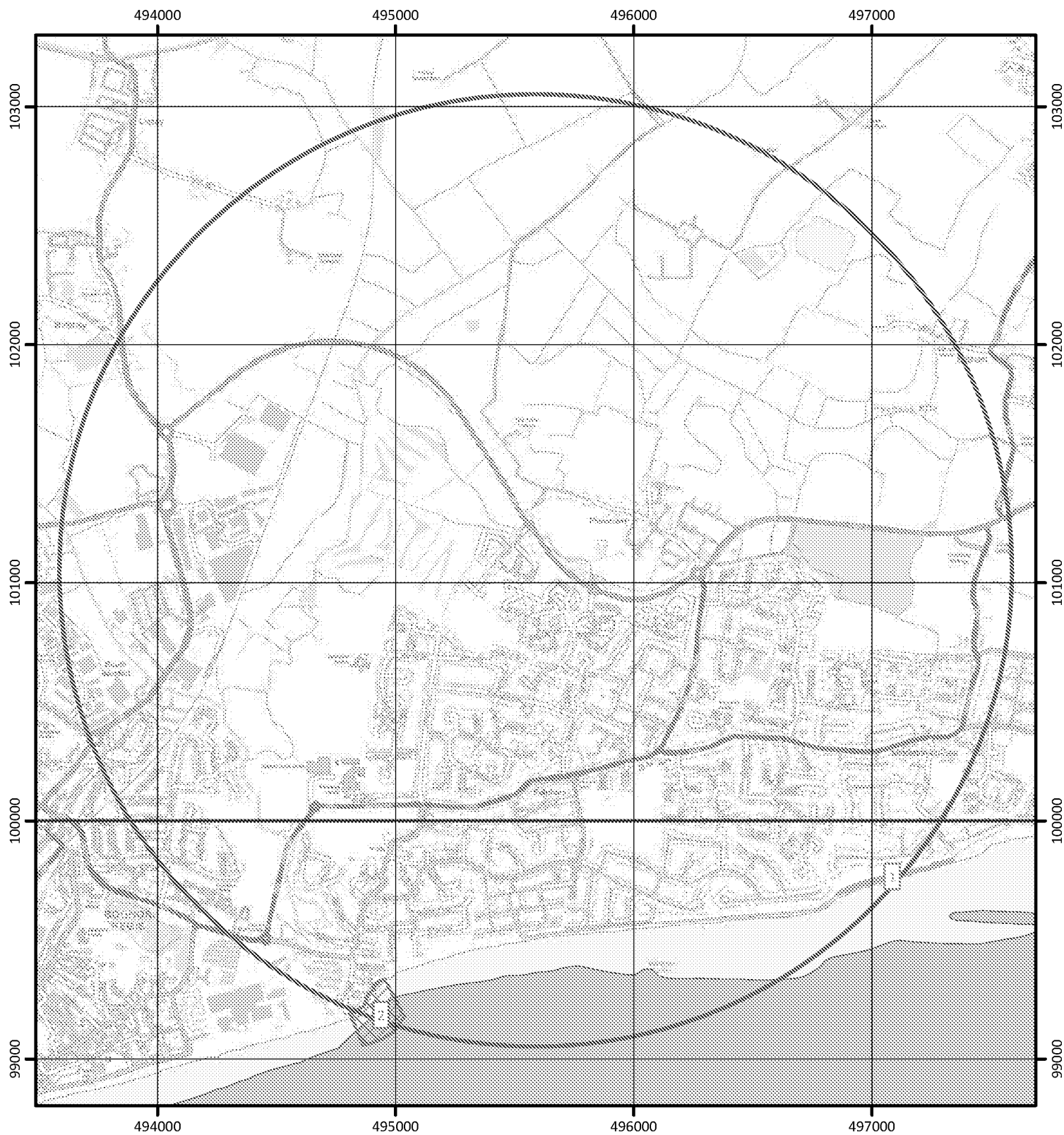
Ramsar, Special Area of Conservation (SAC), Special Protection Area (SPA), National Park, Area of Outstanding Natural Beauty (AONB), National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI), Local Nature Reserve (LNR) and Country Park data reproduced with permission of Natural England. © Crown Copyright. All rights reserved 2017.

Map 2: Non-statutory site designations

Land at Felpham + 2km radius

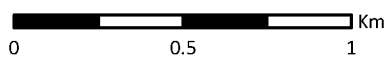
Prepared for Sophie Hughes (Ecosupport Ltd)

SxBRC/17/646 - 04/01/2018



Key to Map:

-  Search Area
-  Local Wildlife Site
-  Local Geological Site

 0 0.5 1 Km



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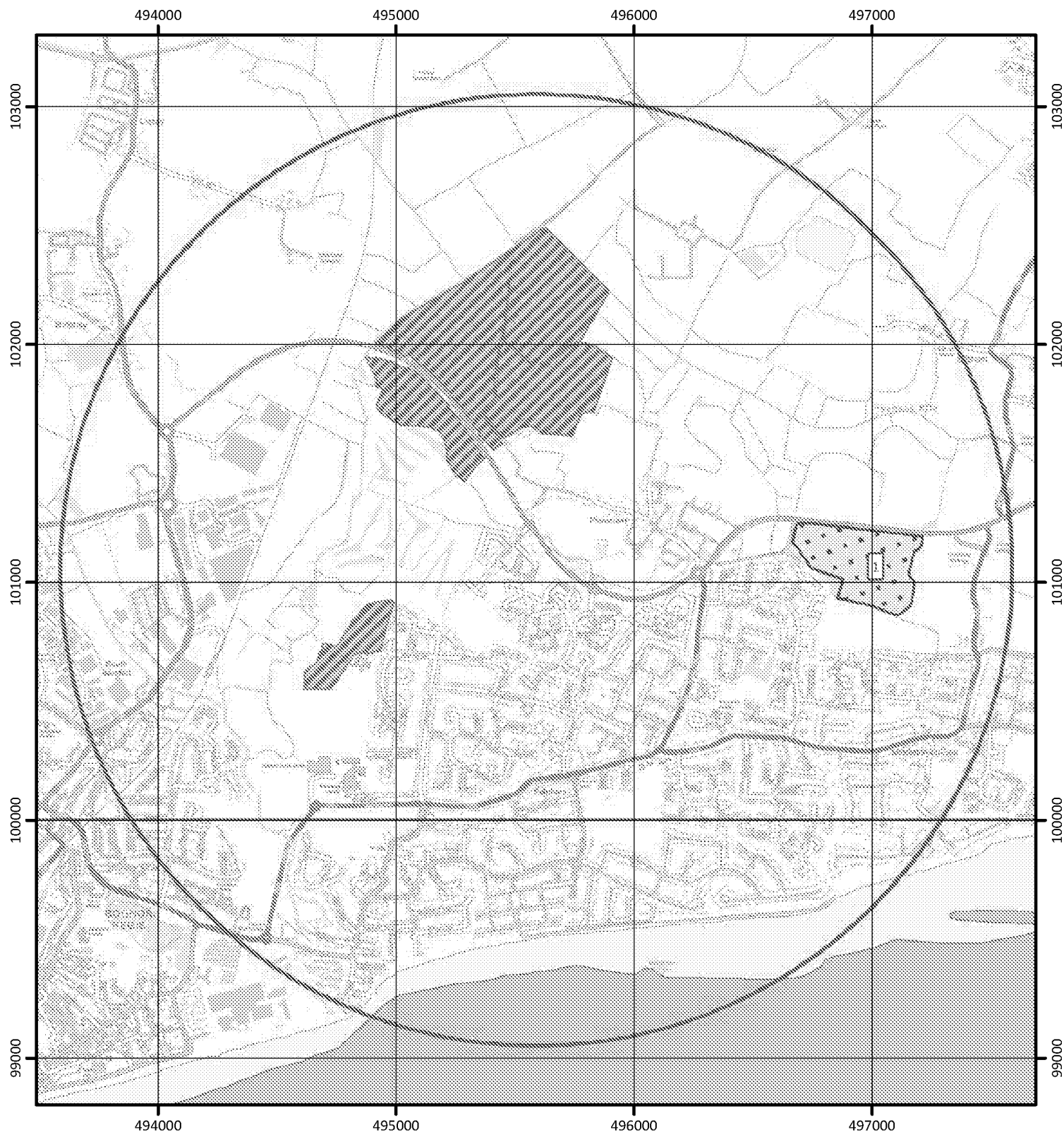
Local Wildlife Site (LWS) data provided by East and West Sussex County Councils, and Brighton & Hove City Council. Notable Road Verge data supplied by East and West Sussex County Councils. Local Geological Site (LGS) data created by SxBRC in partnership with Sussex Geodiversity Group. © Crown Copyright. All rights reserved 2017.

Map 3: Ownership & management

Land at Felpham + 2km radius

Prepared for Sophie Hughes (Ecosupport Ltd)

SxBRC/17/646 - 04/01/2018

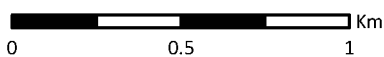


Key to Map:

-  Search Area
-  Woodland Trust site

Environmental Stewardship Agreements:

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

 0 0.5 1 Km



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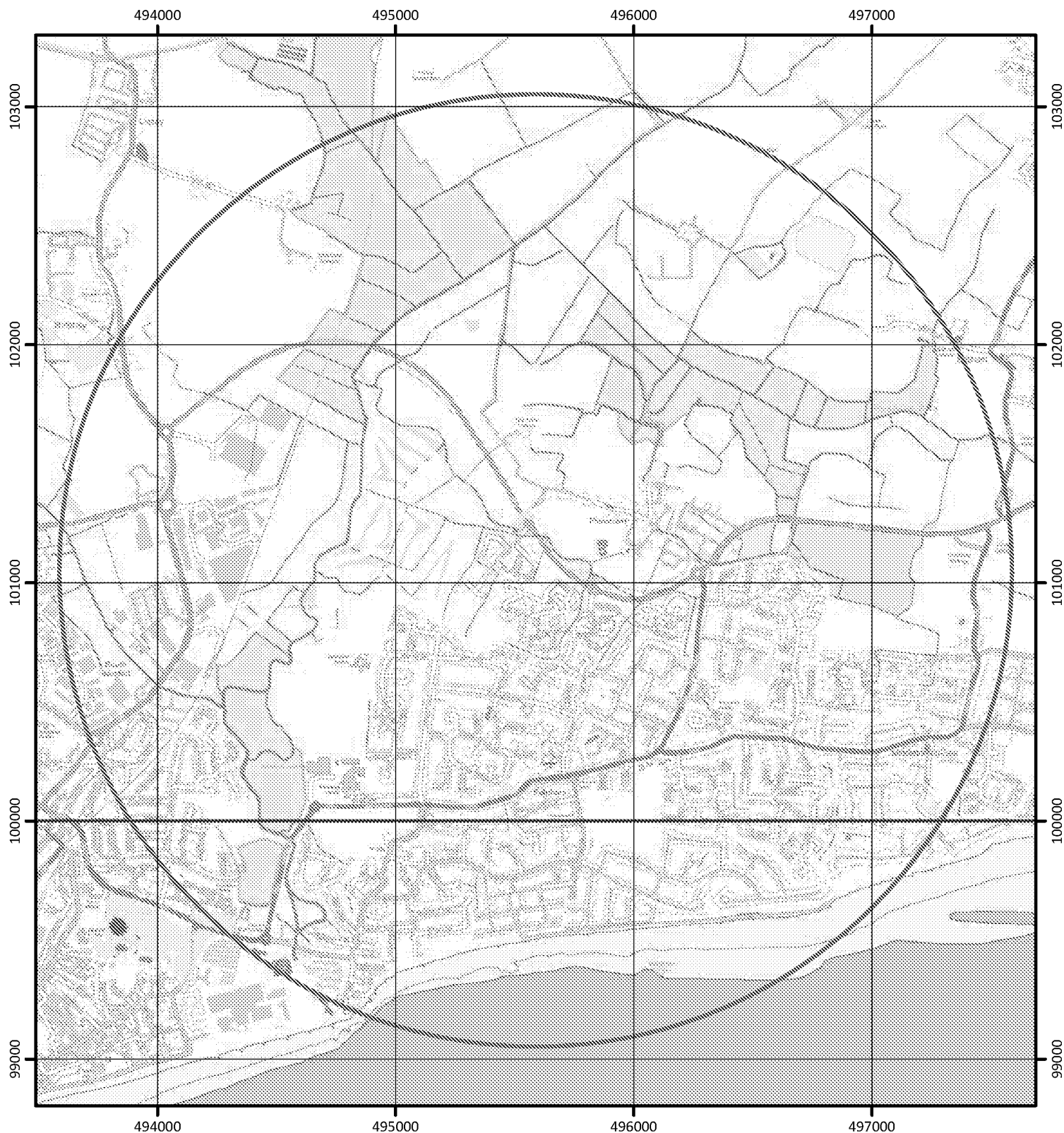
Environmental Stewardship Agreement data reproduced with permission of Natural England. Other datasets reproduced respectively with permission of the Woodland Trust, Forestry Commission, National Trust, Sussex Wildlife Trust and Royal Society for the Protection of Birds. © Crown Copyright. All rights reserved 2017.

Map 4: Section 41 habitats and other

Land at Felpham + 2km radius

Prepared for Sophie Hughes (Ecosupport Ltd)

SxBRC/17/646 - 04/01/2018



Key to Map:

-  Search Area
-  Ancient/veteran tree
-  Black poplar
-  Open Water
-  Deciduous woodland
-  Coastal & floodplain grazing marsh

0 0.5 1 Km



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Ancient woodland, traditional orchards, woodpasture and parkland, vegetated shingle and saline lagoon data reproduced with permission of Natural England. Revised coastal and floodplain grazing marsh data remains provisional and is also reproduced with permission of Natural England. Chalk grassland data supplied by Natural England and South Downs Conservation Board. Black Poplar data supplied by Sussex Wetland Landscapes Project. Ghyll woodland data supplied by Dr Francis Rose. Reedbed data funded by Environment Agency and West Sussex County Council is provided by Sussex Biodiversity Record Centre and maintained by RSPB. Heathland data funded by West Sussex County Council, RSPB and High Weald AONB Unit. Ancient/veteran tree data derived from results of the Ancient Tree Hunt Project and the Tree Register of the British Isles (TROBI). South East Coastal Habitat Mapping data reproduced with permission of Environment Agency. © Crown Copyright. All rights reserved 2017.

Species Data

Data presented on the following pages are from 1980 onwards and only include species which have a form of protection or designation.

The following designations have been used:

Abbreviation	Designation
Birds Dir A1	Birds Directive Annex 1
Hab Dir A2 P	Habitats Directive Annex 2 Priority Species
Hab Dir A2 NP	Habitats Directive Annex 2 Non-Priority Species
Hab Dir A4	Habitats Directive Annex 4
Hab Reg Sch2	Conservation of Habitats & Species Regulations 2010 Schedule 2
Hab Reg Sch5	Conservation of Habitats & Species Regulations 2010 Schedule 5
WCA	Wildlife & Countryside Act 1981
NERC S41	Natural Environment & Rural Communities Act 2006 Section 41
UK BAP	UK Biodiversity Action Plan Priority Species
Red List	IUCN Red list
Rare/Scarce	Nationally rare or scarce (formerly Nationally Notable)
Sussex Rare	Sussex Rare Species Inventory
BoCC Red	Birds of Conservation Concern 4: Red list
BoCC Amber	Birds of Conservation Concern 4: Amber list
Notable Bird	Sussex Notable Bird List

Details of each designation can be found in the annex of supporting information at the end of this report.

Invasive non-native species records, which are also relevant to the planning process, appear in a separate table to the above.

Confidential records

Badger and otter records are not included in our reports.

Badgers

Local badger groups have requested that badger records remain confidential. If you need further information about badgers in your enquiry area please visit the Badger Trust website:

www.badger.org.uk/southern-england

Please be aware that there are several local groups covering different geographic areas within Sussex.

Otters

Otters became extinct in Sussex and many other parts of the UK in the late 1960s. This was a result of deteriorating water quality due to industrial and agricultural pollution, along with hunting and habitat degradation. Recent improvements to the state of watercourses and a reduction in persecution have led to the slow return of the otter to the South East. Sussex has over 4,500km of rivers and tributaries. There are no recent breeding otter records and very few resident otters in Sussex. Over the last 20 years however, signs of otter activity have been found in most of the Sussex river catchments.

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

Sensitive records

Wood White and Duke of Burgundy

These two rare butterfly species have a very restricted range in Sussex and so records are reported at a 1km resolution on advice from Butterfly Conservation Sussex Branch.

The Sussex Biodiversity Record Centre must be acknowledged whenever data is cited from this report.

Table 1: Summary protected and designated species records (excluding bats and birds)

This table summarises records from 1980 onwards. See table 2 for detailed records.

See tables 3 & 4 for bat records, tables 5 & 6 for bird records and tables 7 & 8 for invasive non-native species.

Maximum abundance = highest total number of species recorded at one time.

N.B. Where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record.

Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
Amphibians								
<i>Bufo bufo</i>	Common Toad		WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority	2002	2002	1	Present
<i>Lissotriton helveticus</i>	Palmate Newt		WCA Sch5 Sec9.5a		01/01/1993	20/05/2016	5	4
<i>Lissotriton vulgaris</i>	Smooth Newt		WCA Sch5 Sec9.5a		01/01/1993	20/05/2016	7	2
<i>Rana temporaria</i>	Common Frog		WCA Sch5 Sec9.5a		03/07/1996	2002	11	1
<i>Triturus cristatus</i>	Great Crested Newt	Hab Dir A2 NP, Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority	26/03/2010	20/05/2016	2	1
Fish - Bony								
<i>Anguilla anguilla</i>	European Eel		NERC S41	UK BAP Priority, RedList Global post2001 CR	15/01/2001	30/04/2014	3	19
Higher Plants - Ferns								
<i>Polypodium cambricum</i>	Southern Polypody			Sussex Rare	1986 - 2003	1986 - 2003	1	1
Higher Plants - Flowering Plants								
<i>Agrostemma githago</i>	Corncockle			Sussex Rare	20/06/2003	06/01/2004	3	1
<i>Allium schoenoprasum</i>	Chives			Nat Scarce	17/08/2014	17/08/2014	1	1
<i>Arum italicum subsp. neglectum</i>	A Flowering Plant			RedList GB post2001 NT, Nat Scarce, Sussex Rare	2005	2005	3	1
<i>Calamagrostis epigejos</i>	Wood Small-reed			Sussex Rare	12/02/2006	12/02/2006	1	1
<i>Callitriche brutia</i>	Pedunculate Water-starwort			Sussex Rare	26/07/2013	26/07/2013	1	1
<i>Carex arenaria</i>	Sand Sedge			Sussex Rare	1999	1999	1	1

The Sussex Biodiversity Record Centre must be acknowledged whenever data is cited from this report.

Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Carex divisa</i>	Divided Sedge		NERC S41	UK BAP Priority, RedList GB post2001 VU, Nat Scarce, Sussex Rare	16/05/2009	16/05/2009	1	1
<i>Carlina vulgaris</i>	Carline Thistle			RedList GB post2001 NT	01/01/2010 - 31/12/2010	01/01/2010 - 31/12/2010	1	1
<i>Centaurea cyanus</i>	Cornflower		NERC S41	UK BAP Priority, Sussex Rare	20/06/2003	24/09/2013	3	1
<i>Cichorium intybus</i>	Chicory			RedList GB post2001 VU	21/08/2008	21/08/2008	1	1
<i>Erodium moschatum</i>	Musk Stork's-bill			Sussex Rare	16/05/2009	09/01/2015	3	1
<i>Euphorbia exigua</i>	Dwarf Spurge			RedList GB post2001 VU, RedList GB post2001 NT	26/08/2009	26/08/2009	1	1
<i>Filago vulgaris</i>	Common Cudweed			RedList GB post2001 NT	01/01/2010 - 31/12/2010	01/01/2010 - 31/12/2010	1	1
<i>Fragaria vesca</i>	Wild Strawberry			RedList GB post2001 NT	2006	24/07/2016	9	1
<i>Frankenia laevis</i>	Sea-heath			RedList GB post2001 NT, Nat Scarce, Sussex Rare	08/09/1990	17/02/2015	14	1
<i>Glaucium flavum</i>	Yellow Horned-poppy			RedList GB post2001 NT	29/07/2005	30/04/2009	2	1
<i>Helleborus foetidus</i>	Stinking Hellebore			Nat Scarce, Sussex Rare	28/02/2012	28/03/2012	2	1
<i>Hippophae rhamnoides</i>	Sea-buckthorn			Nat Scarce, Sussex Rare	21/08/2008	21/08/2008	1	1
<i>Hyacinthoides non-scripta</i>	Bluebell		WCA Sch8		09/11/2005	05/08/2016	7	1
<i>Juncus compressus</i>	Round-fruited Rush			RedList GB post2001 VU, RedList GB post2001 NT, Sussex Rare	15/07/2007	15/07/2007	1	1
<i>Knautia arvensis</i>	Field Scabious			RedList GB post2001 NT	31/07/2005	08/06/2010	3	1
<i>Meconopsis cambrica</i>	Welsh Poppy			Nat Scarce, Sussex Rare	2007	2007	1	1
<i>Mentha arvensis</i>	Corn Mint			RedList GB post2001 NT	09/11/2005	17/11/2010	2	1

The Sussex Biodiversity Record Centre must be acknowledged whenever data is cited from this report.

Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Mentha pulegium</i>	Pennyroyal		WCA Sch8, NERC S41	UK BAP Priority, RedList GB post2001 CR, RedList GB post2001 EN, Nat Scarce, Sussex Rare	1986	1986	1	1
<i>Mespilus germanica</i>	Medlar			Nat Scarce, Sussex Rare	26/07/2013	26/07/2013	1	1
<i>Misopates orontium</i>	Weasel's-snout			RedList GB post2001 VU, Sussex Rare	14/07/2013	14/07/2013	1	1
<i>Orobanche hederæ</i>	Ivy Broomrape			Sussex Rare	07/04/2010	06/07/2011	2	1
<i>Parapholis incurva</i>	Curved Hard-grass			Nat Scarce, Sussex Rare	1994	16/08/2014	6	1
<i>Petroselinum segetum</i>	Corn Parsley			Sussex Rare	2006	04/01/2013	3	1
<i>Peucedanum ostruthium</i>	Masterwort			RedList GB post2001 NT, Nat Scarce	11/03/1989	11/03/1989	1	Present
<i>Poa infirma</i>	Early Meadow-grass			Nat Scarce, Sussex Rare	28/02/2012	28/02/2012	1	1
<i>Puccinellia fasciculata</i>	Borrer's Saltmarsh-grass		NERC S41	UK BAP Priority, RedList GB post2001 VU, RedList GB post2001 NT, Nat Scarce, Sussex Rare	08/09/1990	1993	2	1
<i>Puccinellia rupestris</i>	Stiff Saltmarsh-grass			Nat Scarce, Sussex Rare	1990	1990	2	1
<i>Senecio aquaticus</i>	Marsh Ragwort			RedList GB post2001 NT	11/01/2005	31/07/2008	2	1
<i>Spergula arvensis</i>	Corn Spurrey			RedList GB post2001 VU	12/02/2006	12/02/2006	1	1
<i>Spiranthes spiralis</i>	Autumn Lady's-tresses			RedList GB post2001 NT	08/01/2004	08/01/2004	1	1
<i>Thalictrum flavum</i>	Common Meadow-rue			Sussex Rare	06/01/2005	06/01/2005	1	1
<i>Torilis arvensis</i>	Spreading Hedge-parsley		NERC S41	UK BAP Priority, RedList GB post2001 EN, Nat Scarce, Sussex Rare	31/07/2005	31/07/2005	3	1
<i>Trifolium fragiferum</i>	Strawberry Clover			RedList GB post2001 VU	08/01/2004	2014	5	1
Invertebrates - Ants, Bees, Sawflies & Wasps								

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Nomada fucata</i>	Painted Nomad Bee			Notable A, Sussex Rare	07/01/1997	07/01/1997	1	1
Invertebrates - Beetles								
<i>Longitarsus tabidus</i>	A Beetle			Notable B, Sussex Rare	07/01/1997	07/01/1997	1	1
Invertebrates - Butterflies								
<i>Coenonympha pamphilus</i>	Small Heath		NERC S41	UK BAP Priority, RedList GB post2001 NT	08/08/2010	25/07/2011	2	1
<i>Cupido minimus</i>	Small Blue		WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority, RedList GB post2001 NT	22/07/2016	22/07/2016	1	1
Invertebrates - Grasshoppers & Crickets								
<i>Conocephalus fuscus</i>	Long-winged Cone-head			Sussex Rare	26/08/2013	26/08/2013	1	1
Invertebrates - Moths								
<i>Amphipoea oculatea</i>	Ear Moth		NERC S41	UK BAP Priority	24/07/1987	24/07/1987	1	1
<i>Dolicharthria punctalis</i>	Long-legged China-mark			Notable B, Sussex Rare	07/12/1987	23/07/1987	2	1
<i>Euxoa tritici</i>	White-line Dart		NERC S41	UK BAP Priority	24/07/1987	24/07/1987	1	1
<i>Rhizedra lutosus</i>	Large Wainscot		NERC S41	UK BAP Priority	20/10/1990	20/10/1990	1	1
<i>Thera cypressata</i>	Cypress Carpet			Sussex Rare	18/10/1997	18/10/1997	1	1
Lichens								
<i>Arthonia ilicina</i>	A Lichen			Sussex Rare	08/09/1990	08/09/1990	1	Present
<i>Athallia holocarpa</i>	A Lichen			Nat Scarce	08/09/1990	08/09/1990	1	Present
<i>Opegrapha rupestris</i>	A Lichen			Nat Scarce	08/09/1990	08/09/1990	1	Present
Mammals - Marine								
<i>Halichoerus grypus</i>	Grey Seal	Hab Dir A2 NP			18/04/2001	18/04/2001	1	1
<i>Phoca vitulina</i>	Common Seal	Hab Dir A2 NP	NERC S41	UK BAP Priority	12/06/2001	12/06/2001	1	1
Mammals - Terrestrial (excl. bats)								
<i>Arvicola amphibius</i>	European Water Vole		WCA Sch5 Sec9.4a, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, NERC S41	UK BAP Priority, Sussex Rare	1997	30/05/2015	32	6
<i>Erinaceus europaeus</i>	West European Hedgehog		NERC S41	UK BAP Priority	08/03/2001	17/07/2016	27	8
<i>Lepus europaeus</i>	Brown Hare		NERC S41	UK BAP Priority	06/01/2003	05/12/2010	2	1

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
Reptiles								
<i>Anguis fragilis</i>	Slow-worm		WCA Sch5 Sec9.1, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority	17/05/1998	07/08/2014 - 15/08/2014	2	2
<i>Natrix natrix</i>	Grass Snake		NERC S41	UK BAP Priority	01/01/1993	05/01/2011	5	2
<i>Zootoca vivipara</i>	Common Lizard		WCA Sch5 Sec9.1, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority	09/06/1996	09/06/1996	1	1

Table 2: Protected and designated species records (excluding bats and birds)

Records in the table are from 1980 onwards.

See tables 3 & 4 for bat records, tables 5 & 6 for bird records and tables 7 & 8 for invasive non-native species.

N.B. Where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record.

Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method
Amphibians						
<i>Bufo bufo</i>	Common Toad	2002	SZ959996	West Sussex		Field Observation
<i>Lissotriton helveticus</i>	Palmate Newt	20/05/2016	SU958011	Flansham	1 Adult Male; 3 Adult Female	Field Observation
		25/05/2008	SU965024	West Sussex, Land off Bilsham Lane, Bilsham	1 Male	Field Observation
		10/05/2008	SU965024	West Sussex, Land off Bilsham Lane, Bilsham	4 Male	Field Observation
		2002	SZ959996	West Sussex		Field Observation
		01/01/1993	SU9500	11 Coniston Close, Felpham	Present	Field Observation
<i>Lissotriton vulgaris</i>	Smooth Newt	20/05/2016	SU958011	Flansham	1 Adult Male; 1 Adult Female	Field Observation
		25/05/2008	SU965024	West Sussex, Land off Bilsham Lane, Bilsham	2 Male	Field Observation
		15/04/2008	SU965024	West Sussex, Land off Bilsham Lane, Bilsham	2 Male	Field Observation
		2002	SU950003	West Sussex		Field Observation
		2002	SU955004	West Sussex		Field Observation
		2002	SZ959996	West Sussex		Field Observation
		01/01/1993	SU9500	11 Coniston Close, Felpham	Present	Field Observation
<i>Rana temporaria</i>	Common Frog	2002	SU950003	West Sussex		Field Observation
		2002	SU955004	West Sussex		Field Observation
		2002	SU960000	West Sussex		Field Observation
		2002	SU964004	West Sussex		Field Observation
		2002	SU967003	West Sussex		Field Observation
		2002	SZ959996	West Sussex		Field Observation
		13/08/1999	SU9500	3 Roundle Square Road, Felpham	Present	Field Observation
		13/08/1999	SU9500	5 Roundle Square Road, Felpham	Present	Field Observation
		23/06/1997	SZ9699	38, Crossbush Road, Felpham	Present	Field Observation
		26/03/1997	SU9700	37, The Byway, Middleton	Present	Field Observation
<i>Triturus cristatus</i>	Great Crested Newt	07/03/1996	SU9702	Bilsham Road, Yapton	Present	Field Observation
		20/05/2016	SU958011	Flansham	1 Adult Female	Field Observation
		26/03/2010	SU966000	28 Caledon Avenue, Felpham, Bognor Regis	1 Adult Male	Photograph

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method
Fish - Bony						
Anguilla anguilla	European Eel	30/04/2014	SZ9456799877	Aldingbourne Rife, Felpham Way	8 Present	Electric Fishing
		31/10/2001	SU9400000500	Aldingbourne Rife, South Bersted	7 Present	Electric Fishing
		15/01/2001	SU9450000600	Lidsey Rife, Marylands Crescent sq	19 Present	Electric Fishing
Higher Plants - Ferns						
Polypodium cambricum	Southern Polypody	1986 - 2003	SU90R		Present	Field Observation
Higher Plants - Flowering Plants						
Agrostemma githago	Corncockle	Jun-04	SU96340236	Drove Lane, Yapton	Present	Field Observation
		Jun-04	SU96410238	Drove Lane, Yapton	Present	Field Observation
		20/06/2003	SU964024	Drove Lane, Yapton	Present	Field Observation
Allium schoenoprasum	Chives	17/08/2014	SU9554200281	Felpham [north]	Present	Field Observation
Arum italicum subsp. neglectum	A Flowering Plant	2005	SU962011	Felpham area	Present	Field Observation
		08/01/2005	SU972021	Bilsham	Present	Field Observation
		03/01/2005	SU962011	Flansham	Present	Field Observation
Calamagrostis epigejos	Wood Small-reed	02/12/2006	SU9715501045	Worms Copse	Present	Field Observation
Callitriche brutia	Pedunculate Water-starwort	26/07/2013	SU95670254	South of Barnham	Present	Field Observation
Carex arenaria	Sand Sedge	1999	SZ946993	Felpham	Present	Field Observation
Carex divisa	Divided Sedge	16/05/2009	SU95060134	Flansham East	Present	Field Observation
Carlina vulgaris	Carline Thistle	01/01/2010 - 31/12/2010	SU90K	NW Felpham	Present	Field Observation
Centaurea cyanus	Cornflower	24/09/2013	SZ9473899844	North Way,Felpham	Present	Field Observation
		03/07/2011	SU96600014	Felpham N.E.	Present	Field Observation
		20/06/2003	SU964024	Drove Lane, Yapton	Present	Field Observation
Cichorium intybus	Chicory	21/08/2008	SZ99P	Felpham	Present	Field Observation
Erodium moschatum	Musk Stork's-bill	01/09/2015	SU90F	Bognor Regis: North Bersted	Present	Field Observation
		28/03/2015	SZ94859984	Felpham village	Present	Field Observation
		16/05/2009	SU958003	Flansham East	Present	Field Observation
Euphorbia exigua	Dwarf Spurge	26/08/2009	SU90G	Shripney area	Present	Field Observation
Filago vulgaris	Common Cudweed	01/01/2010 - 31/12/2010	SU90K	NW Felpham	Present	Field Observation
Fragaria vesca	Wild Strawberry	24/07/2016	SZ99J	Bognor Regis	Present	Field Observation
		14/05/2016	SU90F	St. Mary Magdalene churchyard, South Bersted	Present	Field Observation
		03/09/2015	SU90F	Bognor Regis: South Bersted	Present	Field Observation
		01/04/2013	SZ99P	Bognor Regis	Present	Field Observation

Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method
		23/05/2009	SU90F	Bersted	Present	Field Observation
		19/06/2008	SZ99J	West Bognor	Present	Field Observation
		2007	SU90R	Yapton,	Present	Field Observation
		2006	SU90K	NW Felpham	Present	Field Observation
		2006	SU90Q	Felpham/Flansham area	Present	Field Observation
<i>Frankenia laevis</i>	Sea-heath	17/02/2015	SZ9599	Felpham	Present	Field Observation
		18/10/2013	SZ959996	Felpham Seafront	Present	Field Observation
		21/10/2011	SZ9635299596	Felpham	Present	Field Observation
		12/06/2009	SZ949995	Felpham Seafront	Present	Field Observation
		21/08/2008	SZ9580199549	Felpham seafront	Present	Field Observation
		07/03/2008	SZ9579799555	Felpham, First Avenue	Present	Field Observation
		Aug-04	SZ99P	Felpham	Present	Field Observation
		1999	SZ953996	Felpham	Present	Field Observation
		24/09/1999	SZ960996	Shore at Felpham	Present	Field Observation
		1996	SZ953996	Felpham	Present	Field Observation
		1996	SZ953996	Felpham	Present	Field Observation
		1996	SZ968996	Felpham	Present	Field Observation
		1992	SZ953994	Felpham	Present	Field Observation
<i>Glaucium flavum</i>	Yellow Horned-poppy	09/08/1990	SZ957995	Felpham nr Bognor Regis,		Field Observation
		30/04/2009	SZ99P	East Bognor Regis	Present	Field Observation
<i>Helleborus foetidus</i>	Stinking Hellebore	29/07/2005	SZ99U	S.Felpham/Middleton area	Present	Field Observation
		28/03/2012	SZ9610399912	Felpham	Present	Field Observation
<i>Helleborus foetidus</i>	Stinking Hellebore	28/02/2012	SZ9609799911	Felpham	Present	Field Observation
		21/08/2008	SZ962995	Felpham seafront	Present	Field Observation
<i>Hippophae rhamnoides</i>	Sea-buckthorn	21/08/2008	SZ962995	Felpham seafront	Present	Field Observation
<i>Hyacinthoides non-scripta</i>	Bluebell	08/05/2016	SZ99J	Bognor Regis	Present	Field Observation
		24/04/2010	SZ99U	Felpham	Present	Field Observation
		16/05/2009	SU90K	Flansham East	Present	Field Observation
		30/04/2009	SZ99P	East Bognor Regis	Present	Field Observation
		11/09/2008	SZ941996	College Copse,	O DAFOR	Field Observation
		2006	SU90Q	Middleton on Sea	Present	Field Observation
		11/09/2005	SU90R	Bilsham/Yapton area	Present	Field Observation
<i>Juncus compressus</i>	Round-fruited Rush	15/07/2007	SU972003	Middleton,	Present	Field Observation
<i>Knautia arvensis</i>	Field Scabious	06/08/2010	SU90L	Lidsey to Barnham	Present	Field Observation
		11/09/2005	SU90R	Bilsham/Yapton area	Present	Field Observation
		31/07/2005	SU90Q	Flansham / Middleton area	Present	Field Observation

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method
<i>Meconopsis cambrica</i>	Welsh Poppy	2007	SU9724600288	Middleton, Sea Lane	Present	Field Observation
<i>Mentha arvensis</i>	Corn Mint	17/11/2010	SU90R	Yapton (Part)	Present	Field Observation
		11/09/2005	SU90R	Bilsham/Yapton area	Present	Field Observation
<i>Mentha pulegium</i>	Pennyroyal	1986	SU90R	Barnham	Present	Field Observation
<i>Mespilus germanica</i>	Medlar	26/07/2013	SU9605502992	South of Barnham	Present	Field Observation
<i>Misopates orontium</i>	Weasel's-snout	14/07/2013	SU9745300974	Yapton Road, Middleton-on-Sea	Present	Field Observation
<i>Orobancha hederæ</i>	Ivy Broomrape	07/06/2011	SZ9502499801	Felpham	Present	Field Observation
		04/07/2010	SZ9574499822	Felpham	Present	Field Observation
<i>Parapholis incurva</i>	Curved Hard-grass	16/08/2014	SZ961995	Felpham	Present	Field Observation
		18/10/2013	SZ95609952	Felpham Seafront	Present	Field Observation
		12/06/2009	SZ9557599528	Felpham Seafront	Present	Field Observation
		12/06/2009	SZ957995	Felpham Seafront	Present	Field Observation
		12/06/2009	SZ9601899573	Felpham seafront	Present	Field Observation
		1994	SZ961995	Pagham	Present	Field Observation
<i>Petroselinum segetum</i>	Corn Parsley	01/04/2013	SZ99P	Bognor Regis	Present	Field Observation
		24/04/2007	SU9751001275	Middleton, Yapton Road	Present	Field Observation
		2006	SU9572300705	Westmoreland Drive, Felpham	Present	Field Observation
<i>Peucedanum ostruthium</i>	Masterwort	03/11/1989	SU944004	Aldingbourne Rife,		Field Observation
<i>Poa infirma</i>	Early Meadow-grass	28/02/2012	SZ9597299838	Felpham	Present	Field Observation
<i>Puccinellia fasciculata</i>	Borrer's Saltmarsh-grass	1993	SZ99P	Bognor	Present	Field Observation
		09/08/1990	SZ957995	Felpham nr Bognor Regis,		Field Observation
<i>Puccinellia rupestris</i>	Stiff Saltmarsh-grass	1990	SZ957995	Felpham sea wall	Present	Field Observation
		09/08/1990	SZ957995	Felpham nr Bognor Regis,		Field Observation
<i>Senecio aquaticus</i>	Marsh Ragwort	31/07/2008	SU94700125	Bognor Regis	Present	Field Observation
		Nov-05	SU974013	Middleton on Sea CP, Middleton-on-Sea	Present	Field Observation
<i>Spergula arvensis</i>	Corn Spurrey	02/12/2006	SU90Q	Comet Corner	Present	Field Observation
<i>Spiranthes spiralis</i>	Autumn Lady's-tresses	Aug-04	SZ99P	Felpham	Present	Field Observation
<i>Thalictrum flavum</i>	Common Meadow-rue	01/06/2005	SU96580237	Diamond Mead	Present	Field Observation
<i>Torilis arvensis</i>	Spreading Hedge-parsley	31/07/2005	SU90Q	Flansham / Middleton area	Present	Field Observation
		31/07/2005	SU96270198	Middleton	Present	Field Observation
		31/07/2005	SU963020	N of Weststone Bridge	Present	Field Observation
<i>Trifolium fragiferum</i>	Strawberry Clover	2014	SU90R	Yapton	Present	Field Observation
		02/07/2006	SZ99J	Bognor	Present	Field Observation
		2005	SU90Q	Middleton/Felpham area	Present	Field Observation
		08/07/2005	SU9301	Bersted Brooks	Present	Field Observation

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method
		Aug-04	SZ99P	Felpham	Present	Field Observation
Invertebrates - Ants, Bees, Sawflies & Wasps						
<i>Nomada fucata</i>	Painted Nomad Bee	Jul-97	SU967027	Slindon Estate (National Trust property), Stane Street, also by The Crescent, SU 956104	Present	Field Observation
Invertebrates - Beetles						
<i>Longitarsus tabidus</i>	A Beetle	Jul-97	SU967026	Slindon Estate (National Trust property), Stane Street	Present	Field Observation
Invertebrates - Butterflies						
<i>Coenonympha pamphilus</i>	Small Heath	25/07/2011	SU9602	Yapton, Drove Lane Farm (1km sq)	1 Adult	Field Observation
		08/08/2010	SU9602	West Yapton (2km sq)	1 Adult	Field Observation
<i>Cupido minimus</i>	Small Blue	22/07/2016	SU9700	Middleton	1 Present	Field Observation
Invertebrates - Grasshoppers & Crickets						
<i>Conocephalus fuscus</i>	Long-winged Cone-head	26/08/2013	SU945006	Felpham	1 Adult	Field Observation
Invertebrates - Moths						
<i>Amphipoea oculea</i>	Ear Moth	24/07/1987	SZ9699	Felpham	1 Adult	MV Light Trap
<i>Dolicharthria punctalis</i>	Long-legged China-mark	23/07/1987	SZ9699	Felpham	1 Adult	MV Light Trap
		12/07/1987	SZ9699	Felpham	Present Adult	Not Recorded
<i>Euxoa tritici</i>	White-line Dart	24/07/1987	SZ9699	Felpham	1 Adult	MV Light Trap
<i>Rhizedra lutosa</i>	Large Wainscot	20/10/1990	SZ9799	Foreshore, Middleton-on-Sea	Present Adult	Unknown
<i>Thera cupressata</i>	Cypress Carpet	18/10/1997	SZ9799	Foreshore, Middleton-on-Sea	Present Adult	Unknown
Lichens						
<i>Arthonia ilicina</i>	A Lichen	09/08/1990	SZ949998	Felpham Churchyard		Field Observation
<i>Athallia holocarpa</i>	A Lichen	09/08/1990	SZ949998	Felpham Churchyard		Field Observation
<i>Opegrapha rupestris</i>	A Lichen	09/08/1990	SZ949998	Felpham Churchyard		Field Observation
Mammals - Marine						
<i>Halichoerus grypus</i>	Grey Seal	18/04/2001	SZ955995	Off Felpham Beach	Present	Field Observation
<i>Phoca vitulina</i>	Common Seal	06/12/2001	SZ99J	off Bognor Regis	1 Present	Field Observation
Mammals - Terrestrial (excl. bats)						
<i>Arvicola amphibius</i>	European Water Vole	30/05/2015	SU95620249	Lidsey Rife	1 Juvenile	Field Observation
		12/05/2015	SU94870162	Lidsey Rife and Golf Course	Present Signs	Field Observation
		28/04/2015	SU96190194	Ryebank Rife	1 Adult	Field Observation
		24/04/2015	SU94350019	The Aldingbourne Rife	One Adult	Field Observation
		08/04/2015	SU95850270	Lidsey Rife	2 Adult	Field Observation
		14/09/2014	SU95750260	Lidsey Rife	1 Present	Field Observation
		09/08/2014	SU956025	Flansham	Present	Unknown

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method
		Jul-14	SU937013	Bognor Regis, A29	Present	Unknown
		Jul-14	SU942015	Bognor Regis, A29	Present	Unknown
		30/07/2014	SU95600248	Lidsey Rife	1 Adult	Unknown
		28/07/2014	SU955024	Flansham	6 Present	Unknown
		27/07/2014	SU95620249	Junction of Ryebank and Lidsey Rife	1 Adult	Unknown
		01/06/2014	SU95630250	Lidsey Rife	1 Present	Unknown
		30/05/2014	SU95640251	Lidsey Rife	2 Present	Unknown
		28/05/2014	SU957025	Lidsey Rife near The Footbridge	1 Present	Unknown
		28/05/2014	SU95710257	Lidsey Rife	1 Present	Unknown
		25/05/2014	SU95620249	Lidsey and Ryebank Rife	1 Present	Unknown
		22/05/2014	SU94860160	Bognor Golf Course	Present	Unknown
		14/05/2014	SU94860161	Bognor Golf Course	1 Present	Unknown
		02/05/2014	SU96120292	Lidsey Rife	1 Present	Unknown
		30/04/2014	SU958027	Lidsey Rife	Present	Unknown
		30/04/2014	SU95860272	Lidsey Rife	Present	Unknown
		30/04/2014	SZ9454599776	Aldingbourne Rife	1 Present	Unknown
		01/04/2014	SU95840269	Lidsey Rife	Present	Unknown
		12/10/2013	SU9643801181	Worms Lane, Felpham	1 Adult	Field Observation
		05/08/2013	SU962019	Ryebank Rife	1 Swimming	water vole survey
		28/07/2013	SU949016	Lidsey Rife at Golf Course	1 Swimming	water vole survey
		24/06/2013	SU936012	Bersted Brooks LNR, Bersted Brooks, Bognor Regis	1 Present	water vole survey
		2003	SU960013	Flansham,	1	Field Observation
		1997	SU949017	Ryebank Rife	Present	Field Observation
		Mar-97	SU943004	Marylands Cres, Bognor Regis	present	Field Observation
		Mar-97	SU949017	Felpham Relief Rd, Bognor Regis	present	Field Observation
<i>Erinaceus europaeus</i>	West European Hedgehog	17/07/2016	SU964009	The Hartings	1 Juvenile	Field Observation
		January 2016 - May 2016	SU942002	Unspecified Location Within Bognor Regis CP	present	Field Observation
		January 2016 - May 2016	SZ951999	Unspecified Location Within Felpham CP	present	Field Observation
		07/05/2016	SU9700	Middleton	1 Present	Field Observation
		2015	SU937001	Unspecified Location Within Bognor Regis CP	present	Field Observation
		2015	SU940009	Unspecified Location Within Bersted CP	present	Field Observation
		2015	SU942004	Unspecified Location Within Bognor Regis CP	present	Field Observation
		2015	SU952002	Unspecified Location Within Felpham CP	present	Field Observation

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method
		2015	SU9600	Unspecified Location Within Felpham CP	present	Field Observation
		2015	SU964010	Unspecified Location Within Felpham CP	present	Field Observation
		2015	SZ947993	Unspecified Location Within Bognor Regis CP	present	Field Observation
		2015	SZ948995	Unspecified Location Within Felpham CP	present	Field Observation
		2012	SU942002	Unspecified Location Within Bognor Regis CP	1 Present	Field Observation
		2012	SU959001	Unspecified Location Within Felpham CP	1 Present	Field Observation
		2011	SU9702	Yapton Drove Lane Farm,	present	Field Observation
		2010	SU953002	Glynde Crescent		Field Observation
		2006	SU9400	Unspecified Location Within Felpham CP	4 Juvenile; 4 Adult	Field Observation
		2006	SU9500	Unspecified Location Within Felpham CP	1 Adult	Field Observation
		2006	SU9501	Unspecified Location Within Yapton CP	present Juvenile; present Adult	Field Observation
		2006	SU9600	Unspecified Location Within Felpham CP	1 Adult	Field Observation
		2005	SU9300	Unspecified Location Within Bognor Regis CP	present	Field Observation
		2005	SU9500	Unspecified Location Within Felpham CP	present	Field Observation
		2005	SU9600	Unspecified Location Within Felpham CP	present	Field Observation
		2005	SZ9399	Unspecified Location Within Bognor Regis CP	present	Field Observation
		04/08/2002	SU974012	VC13 West Sussex	1 Dead	Field Observation
		24/08/2001	SU962006	A259 Roundle Avenue, Feltham	1 Dead	Field Observation
		03/08/2001	SU940013	Shripney Road	1 Dead	Field Observation
<i>Lepus europaeus</i>	Brown Hare	12/05/2010	SU953024	Flansham	1 Individual	Field Observation
		Jun-03	SU964023	VC13 West Sussex	1 Present	Field Observation
Reptiles						
<i>Anguis fragilis</i>	Slow-worm	07/08/2014 - 15/08/2014	SU942015	Bognor Regis, A29	2 Present	Unknown
		17/05/1998	SU9700	2, Elmer Road, Middleton-on-Sea	2 Present	Field Observation
<i>Natrix natrix</i>	Grass Snake	May-11	SU967022	Yapton CP, Bilsham Farm	2 present	Field Observation
		27/05/2008	SU96580235	Bilsham Lane, Bilsham	Present	Field Observation
		06/09/1996	SZ946995	Aldingbourne Rife	1 Present	Field Observation
		15/07/1996	SU9702	Shamrock, Bisham Road, Yapton	1 Present	Field Observation
		01/01/1993	SU9600	41, Roundle Avenue, Felpham	1 Present	Field Observation
<i>Zootoca vivipara</i>	Common Lizard	06/09/1996	SZ946995	Aldingbourne Rife	1 Present	Field Observation

Table 3: Summary bat records

This table summarises records from 1980 onwards. See table 4 for detailed bat records.

Maximum abundance = highest total number of bats recorded at one time.

N.B. Where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record.

Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Barbastella barbastellus</i>	Western Barbastelle	Hab Dir A2 NP, Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority, RedList Global post2001 NT		2015	6	1
<i>Chiroptera</i>	Bat sp.	Hab Dir A2 NP, Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority, RedList Global post2001 NT	09/12/2012	08/05/2015	3	2
<i>Eptesicus serotinus</i>	Serotine	Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a		23/06/2014	23/06/2014	1	1
<i>Myotis mystacinus</i>	Whiskered Bat	Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a		06/01/2004	06/01/2004	1	1
<i>Nyctalus noctula</i>	Noctule Bat	Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority	23/06/2014	23/06/2014	1	1
<i>Pipistrellus</i>	Pipstrelle sp.	Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority	07/09/2004	07/09/2004	1	2
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Hab Dir A4	Hab Reg Sch2, NERC S41, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a	UK BAP Priority	23/06/2014	23/08/2016	7	7

Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Pipistrellus pygmaeus</i>	Soprano Pipstrelle (55 kHz)	Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority	23/06/2014	23/06/2014	1	1
<i>Plecotus auritus</i>	Brown Long-eared Bat	Hab Dir A4	Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a, NERC S41	UK BAP Priority	07/09/2004	23/06/2014	3	1

Table 4: Bat records

Records in this table are from 1980 onwards.

N.B. Where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record.

Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method	Roost type	Roost location	Comments
<i>Barbastella barbastellus</i>	Western Barbastelle	2015	SU9501	Unspecified locations within the parish of Yapton	Present	Radio-Tracked			2 occurrences of foraging and commuting recorded in this 1km grid square
		2015	SU9502	Unspecified location within the parish of Yapton	Present	Radio-Tracked			1 occurrence of foraging and commuting recorded in this 1km grid square
		2015	SU9503	Unspecified locations within the parish of Barnham	Present	Radio-Tracked			20 occurrences of foraging and commuting recorded in this 1km grid square
		2015	SU9601	Unspecified locations within the parish of Yapton	Present	Radio-Tracked			2 occurrences of foraging and commuting recorded in this 1km grid square
		2015	SU9602	Unspecified locations within the parish of Barnham	Present	Radio-Tracked			11 occurrences of foraging and commuting recorded in this 1km grid square
		2015	SU9603	Unspecified locations within the parish of Barnham	Present	Radio-Tracked			33 occurrences of foraging and commuting recorded in this 1km grid square
<i>Chiroptera</i>	Bat sp.	05/08/2015	SU93980009	Elmwood Avenue	2 Present	Field Observation			Two bats in flight at 20.48, feeding. Verified by Sally-Ann Hurry
		14/09/2012	SZ948993	Beachcroft Hotel, Bognor Regis	1 Bat(s)	Visual	Unspecified Roost	House	Bat seen circling over car park between 5am and 6am. At 6am bat entered ridge below roof of building.
		12/09/2012	SZ9490499297	Beach near Clyde Road, Bognor Regis	1 Bat(s)	Visual	Unspecified Roost	House	Saw it go to roost in the front of the building. Flying around.
<i>Eptesicus serotinus</i>	Serotine	23/06/2014	SU942015	Bognor Regis, A29	Present	Unknown			
<i>Myotis mystacinus</i>	Whiskered Bat	01/06/2004	SZ956999	5 West Close, Summerley, Felpham	1 Male	Grounded Bat			
<i>Nyctalus noctula</i>	Noctule Bat	23/06/2014	SU942015	Bognor Regis, A29	Present	Unknown			

Taxon name	Common name	Date	Grid reference	Location name	Abundance	Sampling method	Roost type	Roost location	Comments
<i>Pipistrellus</i>	Pipistrelle sp.	09/07/2004	SU938021	Walnut Tree Cottage, Shripney Lane, Bognor Regis	2 Present	Building Inspection	Unspecified Roost		
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	23/08/2016	SZ94679940	Bognor Regis	4 Adult	Aural bat detector			Common pipistrelle day roost identified during dusk emergence survey by ecological consultancy. Verified by: Sally-Ann Hurry
		23/08/2016	SZ94709940	Bognor Regis	3 Present	Aural bat detector			Pipistrelle day roost identified during dusk emergence survey by ecological consultancy. Verified by: Sally-Ann Hurry
		08/08/2016	SZ94659938	Bognor Regis	5 Adult	Aural bat detector			Common pipistrelle day roost - identified during bat survey work by ecological consultancy . Verified by: Sally-Ann Hurry
		27/07/2016	SZ94659940	Bognor Regis	7 Adult	Aural bat detector			Common pipistrelle day roost identified during dawn re-entry survey by ecological consultancy. Verified by: Sally-Ann Hurry
		26/07/2016	SZ94699931	Bognor Regis	5 Adult	Aural bat detector			Common pipistrelle day roost identified during dusk emergence survey by ecological consultancy. Verified by: Sally-Ann Hurry
		23/06/2014	SU937013	Bognor Regis, A29	Present	Unknown			
		23/06/2014	SU942015	Bognor Regis, A29	Present	Unknown			
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle (55 kHz)	23/06/2014	SU937013	Bognor Regis, A29	Present	Unknown			
<i>Plecotus auritus</i>	Brown Long-eared Bat	23/06/2014	SU942015	Bognor Regis, A29	Present	Unknown			
		18/04/2008	SZ958997	Felpham	1 Adult Male	Grounded Bat			Dead bat submitted to VLA Passive Surveillance Programme
		09/07/2004	SU938021	Oak Tree Cottage, Shripney Lane, Shripney		Building Inspection	Unspecified Roost		

Table 5: Summary bird records

Records of birds classed as confidential by the Sussex Ornithological Society (SOS) are not included in our reports. These records relate to a range of different species. 1 such record has been flagged up in this search area. The SOS should be contacted directly if potentially damaging operations are to occur.

Email: conservation@sos.org.uk

Records in this table are from 1980 onwards.

This table provides a summary of all bird records. Table 6 provides records of Sussex Notable Birds (where applicable).

Maximum abundance = highest total number of birds recorded at one time.

N.B. Where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record.

Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Parus ater subsp. ater</i>	Continental Coal Tit				11/10/2008	11/10/2008	1	1
<i>Buffon's Macaw</i>	A Bird				26/04/2005	17/04/2006	2	1
<i>Branta canadensis</i>	Canada Goose				18/04/2009	18/04/2009	1	3
<i>Branta leucopsis</i>	Barnacle Goose	Birds Dir A1			03/01/2015	03/01/2015	1	1
<i>Branta bernicla</i>	Brent Goose				13/12/1991	23/11/2015	18	1100
<i>Bucephala clangula</i>	Goldeneye			Bird Amber	02/08/2011	02/08/2011	1	2
<i>Cygnus olor</i>	Mute Swan			Bird Amber, Notable Bird	15/06/1992	26/10/2016	125	75
<i>Cygnus columbianus</i>	Bewick's Swan	Birds Dir A1	WCA Sch1 Pt1, NERC S41	Bird Amber	27/01/2011	30/01/2011	3	1
<i>Cygnus columbianus subsp. bewickii</i>	Bewick's Swan	Birds Dir A1	WCA Sch1 Pt1, NERC S41, NERC S41	UK BAP Priority, Bird Amber	29/01/2011	15/12/2014	2	4
<i>Cygnus cygnus</i>	Whooper Swan	Birds Dir A1	WCA Sch1 Pt1		01/11/2011	30/03/2015	26	5
<i>Cygnus atratus</i>	Black Swan				27/01/2011	13/02/2015	5	1
<i>Mergus serrator</i>	Red-breasted Merganser				22/01/1998	16/01/2016	21	120
<i>Mergus merganser</i>	Goosander				13/01/1997	16/02/1997	2	1
<i>Anser albifrons</i>	White-fronted Goose		NERC S41	UK BAP Priority, Bird Red	17/11/2013	12/03/2014	3	9
<i>Anser anser</i>	Greylag Goose			Bird Amber	02/12/2013	02/03/2016	2	30
<i>Alopochen aegyptiacus</i>	Egyptian Goose				01/02/2014	18/04/2016	2	1
<i>Tadorna tadorna</i>	Common Shelduck			Bird Amber, Notable Bird	30/06/1994	15/09/2016	23	9
<i>Aix galericulata</i>	Mandarin Duck				28/09/1998	28/09/1998	1	1
<i>Aix sponsa</i>	Wood Duck				19/11/1991	19/11/1991	1	1

The Sussex Biodiversity Record Centre must be acknowledged whenever data is cited from this report.

Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Anas penelope</i>	Wigeon			Bird Amber, Notable Bird	25/10/2001	24/12/2016	24	150
<i>Anas strepera</i>	Gadwall			Bird Amber, Notable Bird	29/01/1992	27/11/2016	18	36
<i>Anas crecca</i>	Teal			Bird Amber, Notable Bird	31/12/2002	24/12/2016	37	160
<i>Anas platyrhynchos</i>	Mallard			Bird Amber, Notable Bird	15/06/1992	29/12/2016	284	86
<i>Anas acuta</i>	Pintail			Bird Amber, Notable Bird	17/01/2010	10/04/2016	6	20
<i>Anas querquedula</i>	Garganey		WCA Sch1 Pt1	Bird Amber, Notable Bird	16/04/1993	04/12/2009	3	2
<i>Anas clypeata</i>	Shoveler			Bird Amber, Notable Bird	01/07/2010	27/11/2016	23	60
<i>Aythya ferina</i>	Pochard			Bird Red, Notable Bird	20/11/2010	05/11/2016	3	2
<i>Aythya fuligula</i>	Tufted Duck			Notable Bird	14/01/1997	05/03/2011	5	2
<i>Aythya affinis</i>	Lesser Scaup				24/01/2013	24/01/2013	1	5
<i>Melanitta nigra</i>	Common Scoter		WCA Sch1 Pt1, NERC S41	UK BAP Priority, Bird Red	24/01/1981	05/05/2014	9	115
<i>Melanitta fusca</i>	Velvet Scoter		WCA Sch1 Pt1	RedList Global post2001 EN, Bird Red	20/01/2008	25/12/2016	2	6
<i>Egretta garzetta</i>	Little Egret	Birds Dir A1		Notable Bird	27/01/1997	19/11/2016	102	19
<i>Ardea alba</i>	Great White Egret				14/01/2014	14/01/2014	1	1
<i>Ardea cinerea</i>	Grey Heron				04/01/1987	14/09/2016	144	28
<i>Ardea purpurea</i>	Purple Heron	Birds Dir A1	WCA Sch1 Pt1		30/08/1982	30/08/1982	1	1
<i>Ciconia ciconia</i>	White Stork	Birds Dir A1			13/09/2002	05/02/2012	2	5
<i>Plegadis falcinellus</i>	Glossy Ibis	Birds Dir A1			16/02/2014	05/01/2014	9	2
<i>Platalea leucorodia</i>	Spoonbill	Birds Dir A1	WCA Sch1 Pt1	Bird Amber	31/08/2002	11/04/2014	2	3
<i>Alectoris rufa</i>	Red-legged Partridge				07/11/2008	02/02/2015	6	12
<i>Perdix perdix</i>	Grey Partridge		NERC S41	UK BAP Priority, Notable Bird	03/10/1991	11/02/2016	55	16
<i>Coturnix coturnix</i>	Quail		WCA Sch1 Pt1	Bird Amber, Notable Bird	28/06/1987	28/05/1997	5	3
<i>Phasianus colchicus</i>	Pheasant				24/02/2003	12/07/2016	85	6
<i>Chrysolophus pictus</i>	Golden Pheasant				13/03/2015	13/03/2015	1	4
<i>Gavia</i>	Diver sp.		WCA Sch1 Pt1		05/11/2011	05/11/2011	1	1

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Gavia stellata</i>	Red-throated Diver	Birds Dir A1	WCA Sch1 Pt1		14/03/2005	14/06/2014	2	4
<i>Gavia arctica</i>	Black-throated Diver	Birds Dir A1	WCA Sch1 Pt1	UK BAP Priority, Bird Amber	16/11/2007	16/11/2007	2	1
<i>Tachybaptus ruficollis</i>	Little Grebe			Notable Bird	24/11/1988	15/09/2016	96	5
<i>Podiceps cristatus</i>	Great Crested Grebe				27/04/1991	20/08/2013	18	14
<i>Podiceps grisegena</i>	Red-necked Grebe			Bird Red	13/10/1997	13/10/1997 - 20/10/1997	2	1
<i>Podiceps auritus</i>	Slavonian Grebe	Birds Dir A1	WCA Sch1 Pt1	Bird Red	14/03/2005	02/10/2015	4	5
<i>Fulmarus glacialis</i>	Fulmar			Bird Amber, Notable Bird	21/04/2009	05/03/2013	3	1
<i>Morus bassanus</i>	Gannet			Bird Amber	27/04/1991	05/03/2013	9	7
<i>Phalacrocorax carbo</i>	Cormorant				13/11/1990	17/11/2016	82	195
<i>Phalacrocorax aristotelis</i>	Shag			Bird Red	26/11/1991	02/02/2009	2	1
<i>Pernis apivorus</i>	Honey-buzzard	Birds Dir A1	WCA Sch1 Pt1	Bird Amber, Notable Bird	09/01/1993	27/08/2001	4	1
<i>Milvus milvus</i>	Red Kite	Birds Dir A1	WCA Sch1 Pt1	RedList Global post2001 NT, Notable Bird	05/10/2006	04/02/2016	12	3
<i>Circus aeruginosus</i>	Marsh Harrier	Birds Dir A1	WCA Sch1 Pt1	Notable Bird	05/02/1991	08/05/2015	13	1
<i>Circus cyaneus</i>	Hen Harrier	Birds Dir A1	WCA Sch1 Pt1, NERC S41	Notable Bird	24/02/2003	08/12/2013 - 19/12/2013	8	1
<i>Accipiter nisus</i>	Sparrowhawk				27/01/1989 - 27/01/1989	12/07/2016	117	2
<i>Buteo buteo</i>	Buzzard				27/08/2001	12/07/2016	106	5
<i>Pandion haliaetus</i>	Osprey	Birds Dir A1	WCA Sch1 Pt1	Bird Amber, Notable Bird	13/10/1997	13/10/1997	1	1
<i>Falco tinnunculus</i>	Kestrel			Notable Bird	10/01/1989 - 10/01/1989	12/07/2016	150	8
<i>Falco columbarius</i>	Merlin	Birds Dir A1	WCA Sch1 Pt1		17/11/1992	11/02/2015	18	1
<i>Falco subbuteo</i>	Hobby		WCA Sch1 Pt1	Notable Bird	05/09/1985 - 05/09/1985	09/08/2016	30	4
<i>Falco peregrinus</i>	Peregrine	Birds Dir A1	WCA Sch1 Pt1	Notable Bird	27/10/2004	27/12/2016	54	3
<i>Gallinula chloropus</i>	Moorhen				15/06/1992	14/09/2016	251	25
<i>Rallus aquaticus</i>	Water Rail				26/10/1991	11/11/2016	21	2
<i>Fulica atra</i>	Coot				15/06/1992	07/10/2016	136	16
<i>Grus grus</i>	Crane	Birds Dir A1		Bird Amber	23/04/2014	30/04/2014	3	1

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Haematopus ostralegus</i>	Oystercatcher			Bird Amber, Notable Bird	05/06/1990	08/11/2016	27	12
<i>Charadrius dubius</i>	Little Ringed Plover		WCA Sch1 Pt1	Notable Bird	18/08/2007	14/09/2016	12	3
<i>Charadrius hiaticula</i>	Ringed Plover			Bird Red, Notable Bird	24/08/2002	09/08/2016	31	81
<i>Pluvialis apricaria</i>	Golden Plover	Birds Dir A1			27/12/1990	12/07/2016	26	250
<i>Pluvialis squatarola</i>	Grey Plover			Bird Amber	23/02/2008	16/01/2016	13	6
<i>Vanellus vanellus</i>	Lapwing		NERC S41	UK BAP Priority, Notable Bird	27/12/1990	12/07/2016	118	600
<i>Himantopus himantopus</i>	Black-winged Stilt	Birds Dir A1	WCA Sch1 Pt1	Notable Bird	06/06/2014	06/06/2014	1	1
<i>Actitis hypoleucos</i>	Common Sandpiper			Notable Bird	16/04/1993	10/04/2016	14	6
<i>Gallinago gallinago</i>	Snipe			Notable Bird	02/06/1992	13/11/2016	35	28
<i>Lymnocyrtus minimus</i>	Jack Snipe				02/03/2012	24/01/2015	2	2
<i>Numenius phaeopus</i>	Whimbrel		WCA Sch1 Pt1	Bird Red	22/07/1982	14/05/2016	18	65
<i>Numenius arquata</i>	Curlew		NERC S41	UK BAP Priority, RedList Global post2001 NT, Notable Bird	27/04/1991	11/11/2016	31	80
<i>Scolopax rusticola</i>	Woodcock			Bird Red, Notable Bird	17/01/1985	30/11/2016	16	2
<i>Calidris canutus</i>	Knot			Bird Amber	02/02/2009	14/09/2016	4	1
<i>Calidris alba</i>	Sanderling			Bird Amber	03/08/1993	16/01/2016	28	200
<i>Calidris minuta</i>	Little Stint				09/08/2016	18/09/2016	8	3
<i>Calidris melanotos</i>	Pectoral Sandpiper				09/08/2016	13/09/2016	7	1
<i>Calidris ferruginea</i>	Curlew Sandpiper			Bird Amber	09/08/2016	18/09/2016	7	3
<i>Calidris alpina</i>	Dunlin				05/06/1990	09/08/2016	16	61
<i>Calidris maritima</i>	Purple Sandpiper		WCA Sch1 Pt1	Bird Amber	26/03/2007	26/03/2007	1	1
<i>Calidris pugnax</i>	Ruff	Birds Dir A1	WCA Sch1 Pt1		07/06/1982	26/10/2016	13	14
<i>Limosa limosa</i>	Black-tailed Godwit		WCA Sch1 Pt1	UK BAP Priority, RedList Global post2001 NT	03/06/2010	24/12/2016	26	75
<i>Limosa lapponica</i>	Bar-tailed Godwit	Birds Dir A1		Bird Amber	05/06/1990	29/11/2013	4	6
<i>Tringa erythropus</i>	Spotted Redshank			Bird Amber	31/08/2012	31/08/2012	1	1
<i>Tringa totanus</i>	Redshank			Notable Bird	05/05/1992	26/06/2016	15	2
<i>Tringa nebularia</i>	Greenshank		WCA Sch1 Pt1	Bird Amber	05/01/2014	15/09/2016	15	3
<i>Tringa ochropus</i>	Green Sandpiper		WCA Sch1 Pt1	Bird Amber	07/03/1991	24/12/2016	27	7
<i>Tringa glareola</i>	Wood Sandpiper	Birds Dir A1	WCA Sch1 Pt1	Bird Amber	21/06/2012	13/09/2016	12	1

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Arenaria interpres</i>	Turnstone			Bird Amber	13/01/2007	29/08/2016	37	40
<i>Phalaropus fulicarius</i>	Grey Phalarope				12/08/2006	12/08/2006	1	1
<i>Stercorarius pomarinus</i>	Pomarine Skua				07/03/2006	24/04/2016	5	4
<i>Stercorarius parasiticus</i>	Arctic Skua			UK BAP Priority, Bird Red	05/05/2011	05/05/2011	1	1
<i>Stercorarius skua</i>	Great Skua				09/09/2007	09/09/2007	2	1
<i>Hydrocoloeus minutus</i>	Little Gull	Birds Dir A1	WCA Sch1 Pt1		18/02/2014	18/02/2014	1	12
<i>Sternula albifrons</i>	Little Tern	Birds Dir A1	WCA Sch1 Pt1	Bird Amber, Notable Bird	06/10/2009	06/10/2009	1	2
<i>Larus melanocephalus</i>	Mediterranean Gull	Birds Dir A1	WCA Sch1 Pt1	Bird Amber, Notable Bird	05/04/1989	08/11/2016	49	40
<i>Larus canus</i>	Common Gull			Bird Amber, Notable Bird	10/11/2004	08/10/2016	30	20
<i>Larus fuscus</i>	Lesser Black-backed Gull			Bird Amber, Notable Bird	08/03/2000	08/03/2016	41	20
<i>Larus argentatus</i>	Herring Gull		NERC S41	UK BAP Priority, Bird Red, Notable Bird	27/04/1991	29/12/2016	498	500
<i>Larus hyperboreus</i>	Glaucous Gull			Bird Amber	24/12/1983	02/09/1991	2	1
<i>Larus marinus</i>	Great Black-backed Gull			Bird Amber, Notable Bird	05/06/1990	15/09/2016	61	250
<i>Chroicocephalus ridibundus</i>	Black-headed Gull			Bird Amber, Notable Bird	22/01/1983	29/12/2016	223	5000
<i>Rissa tridactyla</i>	Kittiwake			Bird Red, Notable Bird	17/04/1994	17/04/1994	1	1
<i>Chlidonias niger</i>	Black Tern	Birds Dir A1	WCA Sch1 Pt1		24/04/2009	21/08/2016	3	7
<i>Sterna sandvicensis</i>	Sandwich Tern	Birds Dir A1		Notable Bird	27/04/1991	08/10/2016	20	6
<i>Sterna hirundo</i>	Common Tern	Birds Dir A1		Bird Amber, Notable Bird	27/04/1991	04/11/2016	9	6
<i>Uria aalge</i>	Guillemot			Bird Amber	01/04/1995	03/05/2003	2	1
<i>Alca torda</i>	Razorbill			Bird Amber	03/11/1995	02/01/2011	2	1
<i>Alle alle</i>	Little Auk				11/04/1990	13/12/2008	3	1
<i>Columbidae</i>	Doves, pigeons				20/04/2015	20/04/2015	1	2
<i>Columba livia</i>	Rock Dove				28/09/1997	29/12/2016	208	97
<i>Columba oenas</i>	Stock Dove			Bird Amber, Notable Bird	02/01/1993	12/07/2016	234	30
<i>Columba palumbus</i>	Woodpigeon				02/06/1992	29/12/2016	635	10000
<i>Streptopelia decaocto</i>	Collared Dove				22/10/1992	12/07/2016	476	74

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Streptopelia turtur</i>	Turtle Dove		NERC S41	UK BAP Priority, Notable Bird	05/02/2008	09/09/2016	8	2
<i>Psittacula krameri</i>	Ring-necked Parakeet				05/08/1995	24/09/2000	4	1
<i>Ara macao</i>	Scarlet Macaw				30/01/2007	30/01/2007	1	1
<i>Cuculus canorus</i>	Cuckoo		NERC S41	UK BAP Priority, Bird Red, Notable Bird	03/05/1993 - 17/06/1993	18/06/2016	29	2
<i>Tyto alba</i>	Barn Owl		WCA Sch1 Pt1	Notable Bird	11/01/1980	12/07/2016	51	4
<i>Athene noctua</i>	Little Owl				03/01/1986	11/02/2016	55	3
<i>Strix aluco</i>	Tawny Owl			Bird Amber, Notable Bird	28/06/1987	15/02/2015	39	3
<i>Asio otus</i>	Long-eared Owl			Notable Bird	10/02/1986	26/05/1987	2	1
<i>Asio flammeus</i>	Short-eared Owl	Birds Dir A1		Notable Bird	23/11/1980	27/12/2016	86	8
<i>Apus apus</i>	Swift			Bird Amber, Notable Bird	05/08/1994	09/04/2016	79	100
<i>Alcedo atthis</i>	Kingfisher	Birds Dir A1	WCA Sch1 Pt1	Notable Bird	18/06/1982	10/05/2016	48	2
<i>Upupa epops</i>	Hoopoe		WCA Sch1 Pt1	Notable Bird	21/04/1992	04/10/2014	2	1
<i>Picus viridis</i>	Green Woodpecker			Notable Bird	06/01/1984	12/07/2016	328	6
<i>Dendrocopos major</i>	Great Spotted Woodpecker				06/01/1982	09/11/2016	167	3
<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker		NERC S41	UK BAP Priority, Bird Red, Notable Bird	09/04/1989 - 09/04/1989	15/05/1993	6	2
<i>Acrocephalus schoenobaenus</i>	Sedge Warbler				05/05/1992	05/09/2017	66	12
<i>Acrocephalus scirpaceus</i>	Reed Warbler				05/05/1992	07/10/2016	117	72
<i>Cettia cetti</i>	Cetti's Warbler		WCA Sch1 Pt1	Notable Bird	16/02/2004	19/05/2016	130	7
<i>Phylloscopus collybita</i>	Chiffchaff				15/02/1989 - 15/02/1989	12/07/2016	190	30
<i>Phylloscopus trochilus</i>	Willow Warbler			Bird Amber, Notable Bird	21/04/1994	09/11/2016	40	3
<i>Lullula arborea</i>	Woodlark	Birds Dir A1	WCA Sch1 Pt1, NERC S41	UK BAP Priority, Notable Bird	15/06/1989 - 15/06/1989	22/01/2013	4	8
<i>Alauda arvensis</i>	Skylark		NERC S41	UK BAP Priority, Notable Bird	23/01/1991	05/09/2017	127	71
<i>Hirundinidae</i>	Hirundine Species				24/07/2015	24/07/2015	1	1
<i>Riparia riparia</i>	Sand Martin			Notable Bird	17/08/2001	09/11/2016	19	300
<i>Hirundo rustica</i>	Swallow			Notable Bird	27/04/1991	13/10/2016	103	1000

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Delichon urbicum</i>	House Martin			Bird Amber, Notable Bird	09/10/1994	08/10/2016	29	350
<i>Anthus pratensis</i>	Meadow Pipit			Bird Amber, Notable Bird	15/12/1982	12/07/2016	58	200
<i>Anthus petrosus</i>	Rock Pipit				12/01/1982	29/09/2015	19	8
<i>Anthus spinoletta</i>	Water Pipit			Bird Amber	14/03/1989	14/03/1989	1	1
<i>Motacilla flava</i>	Yellow Wagtail		NERC S41	UK BAP Priority, Notable Bird	31/08/1998	14/09/2016	38	50
<i>Motacilla cinerea</i>	Grey Wagtail			Bird Red, Notable Bird	03/01/1994	12/07/2016	36	3
<i>Motacilla alba</i>	Pied Wagtail				01/11/1988 - 31/12/1988	12/07/2016	82	132
<i>Motacilla alba subsp. yarrellii</i>	Pied Wagtail				04/08/2007	12/06/2013	15	11
<i>Bombicilla garrulus</i>	Waxwing				01/01/2011	02/05/2013	5	19
<i>Troglodytes troglodytes</i>	Wren				16/02/1993	12/07/2016	501	22
<i>Prunella modularis</i>	Dunnock		NERC S41	UK BAP Priority, Bird Amber, Notable Bird	16/02/1993	29/12/2016	468	16
<i>Erithacus rubecula</i>	Robin				02/01/1993	31/12/2016	555	27
<i>Phoenicurus ochruros</i>	Black Redstart		WCA Sch1 Pt1	Bird Red, Notable Bird	18/10/1993	31/01/2016	33	2
<i>Phoenicurus phoenicurus</i>	Redstart			Bird Amber, Notable Bird	10/08/1989	31/08/2016	37	10
<i>Saxicola rubetra</i>	Whinchat			Bird Red, Notable Bird	29/04/1990	15/09/2016	45	14
<i>Saxicola rubicola</i>	Stonechat				11/01/1990	12/07/2016	60	7
<i>Oenanthe oenanthe</i>	Wheatear			Notable Bird	21/03/1993	26/10/2016	80	25
<i>Turdus torquatus</i>	Ring Ouzel		NERC S41	UK BAP Priority	29/04/1989	13/10/2015	11	2
<i>Turdus merula</i>	Blackbird				27/04/1991	29/12/2016	610	59
<i>Turdus pilaris</i>	Fieldfare		WCA Sch1 Pt1	Bird Red	28/01/1992	02/04/2016	67	400
<i>Turdus philomelos</i>	Song Thrush		NERC S41	UK BAP Priority, Notable Bird	19/01/1993	29/12/2016	283	35
<i>Turdus iliacus</i>	Redwing		WCA Sch1 Pt1	Bird Red	12/05/1993	16/02/2016	76	152
<i>Turdus viscivorus</i>	Mistle Thrush			Bird Red, Notable Bird	13/04/1991	14/09/2016	60	11
<i>Muscicapa striata</i>	Spotted Flycatcher		NERC S41	UK BAP Priority, Notable Bird	09/02/1989	31/08/2016	44	20
<i>Ficedula hypoleuca</i>	Pied Flycatcher			Bird Red, Notable Bird	20/08/2013	04/09/2016	3	2
<i>Sylvia atricapilla</i>	Blackcap				02/01/1993	05/08/2016	137	6
<i>Sylvia borin</i>	Garden Warbler				04/05/2009	21/08/2012	3	1

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Sylvia curruca</i>	Lesser Whitethroat				30/06/1994	29/08/2016	39	2
<i>Sylvia communis</i>	Whitethroat			Notable Bird	15/06/1992	15/05/2016	84	11
<i>Sylvia undata</i>	Dartford Warbler	Birds Dir A1	WCA Sch1 Pt1	RedList Global post2001 NT, Notable Bird	29/11/2016	29/11/2016	1	1
<i>Regulus regulus</i>	Goldcrest				03/10/1994	29/12/2016	78	8
<i>Regulus ignicapilla</i>	Firecrest		WCA Sch1 Pt1	Notable Bird	03/11/2001	10/09/2016	14	1
<i>Aegithalos caudatus</i>	Long-tailed Tit				11/04/1991	12/07/2016	122	38
<i>Cyanistes caeruleus</i>	Blue Tit				19/01/1993	12/07/2016	514	26
<i>Parus major</i>	Great Tit				19/01/1993	29/12/2016	436	15
<i>Periparus ater</i>	Coal Tit				02/01/1993	12/07/2016	65	2
<i>Poecile palustris</i>	Marsh Tit		NERC S41	UK BAP Priority, Bird Red, Notable Bird	14/04/2008	27/09/2012	2	1
<i>Sitta europaea</i>	Nuthatch				08/04/1999	14/09/2012	31	3
<i>Certhia familiaris</i>	Treecreeper				02/01/1993	28/04/2016	22	2
<i>Oriolus oriolus</i>	Golden Oriole		WCA Sch1 Pt1	Bird Red	30/05/2001	30/05/2001	2	1
<i>Corvidae</i>	Crows				07/04/2016	07/04/2016	1	4
<i>Garrulus glandarius</i>	Jay				02/01/1993	23/05/2016	94	8
<i>Pica pica</i>	Magpie				02/01/1993	12/07/2016	398	28
<i>Corvus monedula</i>	Jackdaw				24/09/2000	14/09/2016	40	100
<i>Corvus frugilegus</i>	Rook				04/11/1991	12/07/2016	277	300
<i>Corvus corone</i>	Carrion Crow				16/02/1993	29/12/2016	579	105
<i>Corvus corax</i>	Raven				16/11/2009	12/07/2016	34	3
<i>Pastor roseus</i>	Rose-coloured Starling				25/10/2006	25/10/2006	2	1
<i>Sturnus vulgaris</i>	Starling		NERC S41	UK BAP Priority, Notable Bird	05/06/1990	12/07/2016	357	14000
<i>Passer domesticus</i>	House Sparrow		NERC S41	UK BAP Priority, Bird Red, Notable Bird	27/04/1991	12/07/2016	312	125
<i>Acanthis cabaret</i>	Lesser Redpoll		NERC S41	UK BAP Priority, Notable Bird	18/12/1990	04/02/2016	14	20
<i>Chloris chloris</i>	Greenfinch				27/04/1991	08/11/2016	375	63
<i>Linaria cannabina</i>	Linnet		NERC S41	UK BAP Priority, Notable Bird	03/01/1994	12/07/2016	60	90
<i>Spinus spinus</i>	Siskin				15/10/1994	11/02/2016	32	32
<i>Fringilla coelebs</i>	Chaffinch				16/02/1993	12/07/2016	299	27

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Taxon name	Common name	International Designation	National Designation	Other Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Fringilla montifringilla</i>	Brambling		WCA Sch1 Pt1		01/06/2008	20/03/2011	3	1
<i>Serinus serinus</i>	Serin		WCA Sch1 Pt1	Notable Bird	04/03/2008	05/03/2008	2	1
<i>Carduelis carduelis</i>	Goldfinch				16/09/1990	12/07/2016	212	146
<i>Loxia curvirostra</i>	Common Crossbill		WCA Sch1 Pt1	Notable Bird	17/10/2015	17/10/2015	1	1
<i>Pyrrhula pyrrhula</i>	Bullfinch		NERC S41	UK BAP Priority, Notable Bird	27/01/1997	23/04/2016	36	6
<i>Coccothraustes coccothraustes</i>	Hawfinch		NERC S41	UK BAP Priority, Bird Red, Notable Bird	26/06/1988	26/06/1988	1	1
<i>Emberiza citrinella</i>	Yellowhammer		NERC S41	UK BAP Priority, Notable Bird	11/05/1990	05/09/2017	132	102
<i>Emberiza schoeniclus</i>	Reed Bunting		NERC S41	UK BAP Priority, Notable Bird	25/11/1990	09/11/2016	137	97
<i>Emberiza calandra</i>	Corn Bunting		NERC S41	UK BAP Priority, Notable Bird	23/08/1982	06/01/2014	24	10

Table 6: Sussex notable bird records

Records in this table are from 1980 onwards.

The list of notable birds can be found in the appendix together with an explanation of the basis of selection.

N.B. Where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record.

Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
<i>Cygnus olor</i>	Mute Swan	08/07/2015	SU9301	Bognor South Bersted	Present	Date
		04/02/2015	SU9402	Lidsey Lodge	6 Present	Positive Breeding
		15/12/2014	SU9603	Barnham	52 Present	Positive Breeding
		27/05/2013	SU9502	Barnham Lidsey Rife	Present	Date
		01/04/2012	SU9502	Barnham Lidsey Rife	1 Present	Positive Breeding
		03/03/2012	SU9502	Barnham Lidsey Rife	32 Present	Positive Breeding
		30/07/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		17/08/2010	SU90K	Bognor Regis Golf Course	8 Present	Positive Breeding
		15/07/2009	SU9502	Barnham Lidsey Rife	1 Present	Positive Breeding
		13/06/2009	SU9301	Bognor North Bersted	2 Present	Date
		08/06/2009	SU9400	Aldingbourne Rife	2 Present	Date, Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	2 Present	Date, Positive Breeding
		27/05/2009	SU9301	Bognor South Bersted	2 Present	Date
		26/07/2008	SU90R	Yapton	2 Present	Positive Breeding
		18/06/2008	SU9301	Bognor South Bersted	1 Present	Date
		04/06/2008	SU90K	Bognor Regis Golf Course	4 Present	Date, Positive Breeding
		31/05/2008	SU954023	Flansham Hoe Farm	5 Present	Date
		18/04/2008	SU90K	Bognor Regis Golf Course	2 Present	Positive Breeding
		09/06/2007	SU9400	Aldingbourne Rife,	2 Present	Date
		22/05/2007	SU9400	Aldingbourne Rife,	4 Present	Date
		02/05/2007 - 22/05/2007	SU9400	Aldingbourne Rife,	1 Present	Date
		30/06/2004	SU953021	Aldingbourne Rife	2 Present	Date
		30/06/2003	SU9400	Aldingbourne Rife	2 Present	Date
		30/06/2000	SU9400	Aldingbourne Rife	3 Present	Date
		30/06/1999	SU943005	Aldingbourne Rife	2 Present	Date
		30/06/1998	SU944003	Aldingbourne Rife	2 Present	Date
		30/06/1997	SU9400	Aldingbourne Rife	2 Present	Date
		30/05/1995	SU9502	Barnham Lidsey Rife	3 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		30/06/1994	SU9502	Barnham Lidsey Rife	3 Present	Date
		01/06/1993	SU9502	Barnham Lidsey Rife	3 Present	Date
		15/06/1992	SU9502	Barnham Lidsey Rife	3 Present	Date
<i>Tadorna tadorna</i>	Common Shelduck	14/08/2016	SU9401	Bognor Lec Airfield	9 Present	Positive Breeding
		26/06/2016	SU9401	Shripney flood relief pool	7 Present	Date, Positive Breeding
		03/06/2016	SU9401	Shripney flood relief pool	9 Present	Date, Positive Breeding
		04/06/2009	SU90L	Lidsey Sewage Works	2 Present	Date, Positive Breeding
		30/06/1994	SU9502	Barnham Lidsey Rife	1 Present	Date
<i>Anas strepera</i>	Gadwall	25/04/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		30/06/2004	SU9401	Aldingbourne Rife	2 Present	Date
<i>Anas platyrhynchos</i>	Mallard	08/07/2015	SU9301	Bognor South Bersted	Present	Date
		24/04/2015	SZ9599	Felpham nr Bognor Regis	1 Female; 6 Present	Positive Breeding
		21/04/2015	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		24/06/2013	SU936012	Bersted Brooks LNR, Bersted Brooks, Bognor Regis	2 Present	Date
		27/05/2013	SU9502	Barnham Lidsey Rife	Present	Date
		26/05/2013	SU9301	Bognor North Bersted	Present	Date
		23/07/2012	SU90K	Bognor Regis Golf Course	5 Present	Positive Breeding
		30/07/2011	SU90K	Bognor Regis Golf Course	12 Present	Positive Breeding
		24/06/2011	SZ99P	Felpham nr Bognor Regis	12 Present	Date
		03/06/2011 - 24/06/2011	SZ9399	Bognor Hotham Park	5 Present	Date
		25/05/2011	SU9301	Bognor South Bersted	4 Present	Date
		23/05/2011	SU943003	Felpham CP, Felpham Rec Ground	15 Present	Date
		23/05/2011	SZ9399	Bognor Hotham Park	2 Present	Date
		01/05/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		07/04/2011 - 25/04/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		08/07/2010	SU9400	Aldingbourne Rife		Date, Positive Breeding
		11/06/2010	SU90K	Bognor Regis Golf Course		Date, Positive Breeding
		07/06/2010	SU9301	Bognor South Bersted	12 Present	Date, Positive Breeding
		07/05/2010 - 24/05/2010	SU9301	Bognor South Bersted	6 Present	Date
		17/05/2010	SU943003	Bognor Regis	7 Present	Positive Breeding
		21/04/2010	SU944005	Bognor Regis	3 Present	Positive Breeding
		21/04/2010	SU949020	Flansham Hoe Farm	1 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		13/06/2009	SU9301	Bognor North Bersted	6 Present	Date
		11/06/2009	SZ99P	Bognor Regis East	1 Present	Date, Positive Breeding
		03/06/2009	SU90F	Bognor North Bersted	10 Present	Date, Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	5 Present	Date, Positive Breeding
		07/05/2009 - 27/05/2009	SU9301	Bognor South Bersted	1 Present	Date
		21/05/2009	SU9301	Bognor South Bersted	5 Present	Date
		21/04/2009	SZ99P	Bognor Regis East	2 Present	Positive Breeding
		20/04/2009	SU946009	Bognor Regis	6 Present	Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	3 Present	Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	3 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	2 Present	Date, Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	5 Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	4 Present	Positive Breeding
		01/06/2007 - 09/06/2007	SU9400	Aldingbourne Rife,	6 Present	Date
		14/05/2007 - 28/05/2007	SU9500	Felpham nr Bognor Regis,	1 Present	Date
		02/05/2007 - 22/05/2007	SU9400	Aldingbourne Rife,	4 Present	Date
		30/06/2006	SZ9399	Bognor Hotham Park	1 Present	Date
		06/06/2005 - 18/06/2005	SZ9399	Bognor Hotham Park	2 Present	Date
		23/05/2005	SZ9399	Bognor Hotham Park	1 Present	Date
		05/07/2004	SZ9399	Bognor Hotham Park	2 Present	Date
		30/06/2004	SU9401	Aldingbourne Rife	5 Present	Date
		30/06/2003	SU9400	Aldingbourne Rife	6 Present	Date
		21/06/2002	SZ9399	Bognor Hotham Park	1 Present	Date
		30/06/2000	SU9400	Aldingbourne Rife	6 Present	Date
		22/05/2000	SZ9399	Bognor Hotham Park	5 Present	Date
		07/07/1999	SZ9399	Bognor Hotham Park	10 Present	Date
		30/06/1999	SU943005	Aldingbourne Rife	12 Present	Date
		05/06/1999	SZ9399	Bognor Hotham Park	17 Present	Date
		30/06/1998	SU944003	Aldingbourne Rife	14 Present	Date
		30/06/1997	SU9400	Aldingbourne Rife	16 Present	Date
		27/05/1997	SZ9399	Bognor Hotham Park	4 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		23/06/1995	SZ9399	Bognor Hotham Park	8 Present	Date
		30/05/1995	SU9502	Barnham Lidsey Rife	13 Present	Date
		30/06/1994	SU9502	Barnham Lidsey Rife	13 Present	Date
		23/06/1994	SZ9399	Bognor Hotham Park	14 Present	Date
		01/06/1993	SU9502	Barnham Lidsey Rife	8 Present	Date
		15/06/1992	SU9502	Barnham Lidsey Rife	8 Present	Date
<i>Anas querquedula</i>	Garganey	16/04/1993	SU956024	Barnham Lidsey Rife	2 Present	Positive Breeding
<i>Aythya fuligula</i>	Tufted Duck	03/05/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
<i>Egretta garzetta</i>	Little Egret	01/05/2016	SU951020	Flansham Hoe Farm	2 Present	Positive Breeding
		01/05/2015	SU951020	Barnham Lidsey Rife	4 Present	Positive Breeding
		06/05/2014	SU9301	Bognor North Bersted	1 Present	Positive Breeding
		10/11/2013	SU9401	Bognor Lec Airfield	2 Present	Roost
		18/05/2013	SU9502	Barnham Lidsey Rife	5 Present	Positive Breeding
		02/01/2013	SU9401	Bognor Lec Airfield	6 Present	Roost
		18/12/2012	SU9401	Bognor Lec Airfield	6 Present	Roost
		01/06/2012	SU9502	Flansham Hoe Farm	1 Present	Positive Breeding
		29/05/2010	SU9501	Flansham Hoe Farm	8 Present	Positive Breeding
		25/04/2010	SU953021	Flansham Hoe Farm		Positive Breeding
		27/06/2009	SU9502	Barnham Lidsey Rife	8 Present	Positive Breeding
		13/06/2009	SU953021	Flansham Hoe Farm	4 Present	Positive Breeding
		20/04/2009	SU954022	Flansham Hoe Farm	6 Present	Positive Breeding
		01/06/2008	SU9502	Flansham Hoe Farm	4 Present	Positive Breeding
		16/05/2008	SU954022	Flansham Hoe Farm	4 Present	Positive Breeding
		12/04/2008	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		09/09/2007	SU9700	Middleton on Sea CP, Middleton-on-Sea	2 Present	Positive Breeding
		05/06/2007	SU9502	Flansham Hoe Farm	3 Present	Positive Breeding
		11/06/2006	SU953021	Flansham Hoe Farm,	7 Present	Positive Breeding
		29/04/2006	SU954021	Flansham Hoe Farm,	1 Present	Positive Breeding
		03/06/2005	SU953021	Flansham Hoe Farm,	3 Present	Positive Breeding
		30/06/2004	SU953021	Aldingbourne Rife,	3 Present	Positive Breeding
		30/06/2003	SU954021	Aldingbourne Rife,	2 Present	Positive Breeding
		26/06/2003	SU953021	Flansham Hoe Farm,	5 Present	Positive Breeding
		20/06/2003	SU953021	Flansham Hoe Farm,	9 Present	Positive Breeding
		09/06/2003	SU953021	Flansham Hoe Farm,	3 Present	Positive Breeding
		17/03/2003	SU947017	Bognor Lec Airfield,	5 Present	Roost

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
<i>Perdix perdix</i>	Grey Partridge	17/07/2016	SU9402	Lidsey Lodge	2 Present	Date
		05/08/2015	SU9502	Barnham Lidsey Rife	13 Present	Positive Breeding
		31/07/2015	SU9601	Flansham nr Bognor	7 Present	Date, Positive Breeding
		10/05/2015	SU9401	Bognor Lec Airfield	2 Present	Date
		22/07/2014	SU9502	Flansham Hoe Farm	6 Present	Date
		01/06/2014	SU9502	Flansham Hoe Farm	2 Present	Date
		30/05/2014	SU9501	Flansham Hoe Farm	2 Present	Date
		25/05/2014	SU949019	Bognor Regis Golf Course	1 Present	Date
		02/05/2014	SU9503	Barnham	2 Present	Date
		04/08/2013	SU9502	Barnham Lidsey Rife	9 Present	Positive Breeding
		12/05/2013	SU9401	Bognor Lec Airfield	1 Present	Date
		29/05/2012	SU9603	Barnham Lidsey Rife	2 Present	Date
		18/05/2012	SU951023	Barnham Lidsey Rife	2 Present	Date, Positive Breeding
		03/05/2008	SU90R	Yapton	1 Present	Date
<i>Coturnix coturnix</i>	Quail	28/05/1997	SU9702	Yapton,	2 Present	Date
		03/07/1987	SU9503	Barnham	2 Present	Date, Positive Breeding
		30/06/1987	SU9503	Barnham	3 Present	Date, Positive Breeding
		29/06/1987	SU9503	Barnham	2 Present	Date, Positive Breeding
		28/06/1987	SU9503	Barnham	2 Present	Date, Positive Breeding
<i>Tachybaptus ruficollis</i>	Little Grebe	21/04/2015	SU9401	Bognor Lec Airfield	2 Present	Positive Breeding
		31/03/2015	SU9401	Bognor Lec Airfield	2 Present	Positive Breeding
		07/08/2012	SU9401	Bognor Lec Airfield	4 Present	Date, Positive Breeding
		01/08/2012	SU9502	Barnham Lidsey Rife	1 Present	Date
		14/07/2011	SU90L	Lidsey Sewage Works	Present	Date, Positive Breeding
		11/07/2011	SU90K	Bognor Regis Golf Course	1 Present	Date
		25/05/2011	SU9301	Bognor South Bersted	1 Present	Date
		23/05/2011	SU944006	Bognor Regis Golf Course	2 Present	Date
		26/04/2011	SU90F	Bognor North Bersted	Present	Positive Breeding
		01/04/2011 - 07/04/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		08/07/2010	SU9400	Aldingbourne Rife	2 Present	Date, Positive Breeding
		27/04/2010	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		27/04/2010	SU9400	Aldingbourne Rife		Positive Breeding
		21/04/2010	SU943002	Bognor Regis	2 Present	Positive Breeding
		21/04/2010	SU950021	Lidsey Lodge	2 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		21/04/2010	SU960028	Flansham Hoe Farm	1 Present	Positive Breeding
		15/04/2010	SU90K	Bognor Regis Golf Course	3 Present	Positive Breeding
		16/08/2009	SU9502	Barnham Lidsey Rife	1 Present	Positive Breeding
		08/06/2009	SU9400	Aldingbourne Rife	1 Present	Date, Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	1 Present	Positive Breeding
		03/04/2009	SU9400	Aldingbourne Rife	2 Present	Positive Breeding
		16/07/2008	SU9400	Aldingbourne Rife	4 Present	Date
		04/06/2008	SU90K	Bognor Regis Golf Course	1 Present	Date, Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		09/06/2007	SU9400	Aldingbourne Rife,	1 Present	Date
		30/06/2003	SU9400	Aldingbourne Rife	1 Present	Date
		07/08/2001	SU944002	Aldingbourne Rife	2 Present	Date
		15/07/1991	SU944003	Aldingbourne Rife	1 Present	Date
		01/09/1989 - 01/09/1989	SU9400	Aldingbourne Rife	4 Present	Positive Breeding
		28/01/1989 - 31/03/1989	SU9400	Aldingbourne Rife	1 Present	Positive Breeding
<i>Milvus milvus</i>	Red Kite	02/04/2016	SU9503	Barnham	1 Present	Date
		14/04/2015	SU9603	Yapton Drove Lane Farm	1 Present	Date
		08/04/2015	SU9502	Barnham Lidsey Rife	1 Present	Date
		24/03/2015	SU9401	Bognor Lec Airfield	1 Present	Date
		15/05/2014	SU9602	Yapton Drove Lane Farm	3 Present	Date
		02/05/2014	SU9502	Flansham Hoe Farm	1 Present	Date
		23/03/2014	SU9502	Flansham Hoe Farm	1 Present	Date
		18/06/2013	SU9501	Flansham Hoe Farm	1 Present	Date
		05/03/2013	SU9401	Bognor Lec Airfield	1 Present	Date
		01/04/2012	SU9402	Lidsey Lodge	1 Present	Date
<i>Falco tinnunculus</i>	Kestrel	10/05/2006	SZ9599	Felpham nr Bognor Regis	2 Present	Date
		14/05/2016	SU9301	Bersted Brooks nr Bognor	1 Present	Date
		08/07/2015	SU9301	Bognor South Bersted	Present	Date
		24/06/2013	SU936012	Bersted Brooks LNR, Bersted Brooks, Bognor Regis	1 Hunting	Date
		27/05/2013	SU9502	Barnham Lidsey Rife	2 Present	Date
		07/06/2012	SU9301	Bognor North Bersted	1 Present	Date
		14/07/2011 - 27/07/2011	SU90L	Lidsey Sewage Works	Present	Date, Positive Breeding

Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		13/07/2011	SU9601	Flansham, Flansham nr Bognor	1 Present	Date
		01/05/2011	SU90L	Lidsey Sewage Works	Present	Date, Positive Breeding
		24/05/2010	SU9301	Bognor South Bersted	1 Present	Date
		27/04/2010	SU9400	Aldingbourne Rife	1 Present	Positive Breeding
		13/06/2009	SU9301	Bognor North Bersted	2 Present	Date
		21/05/2009	SU9301	Bognor South Bersted	1 Present	Date
		02/05/2009	SU9502	Flansham Hoe Farm	1 Male	Date, Positive Breeding
		26/07/2008	SU90R	Yapton	1 Present	Date
		14/06/2008	SZ99J	Bognor Regis	Present	Date, Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	1 Present	Date, Positive Breeding
		07/05/2008	SU90Q	Middleton on Sea CP, Middleton-on-Sea	1 Present	Date
		05/05/2008	SU90G	Lidsey Old Canal & Tip	1 Present	Date, Positive Breeding
		03/05/2008	SU90R	Yapton	1 Present	Date
		07/05/2007	SU90G	Lidsey Old Canal & Tip,	1 Present	Date
		05/06/2006	SU9600	Middleton on Sea CP, Middleton-on-Sea	1 Present	Date
		10/07/2005	SU960010	Flansham, Flansham nr Bognor	2 Present	Date
		22/05/2001	SZ9399	Bognor Hotham Park	1 Present	Date
		14/07/2000	SZ9399	Bognor Hotham Park	2 Present	Date
		19/05/1999	SZ9399	Bognor Hotham Park	1 Present	Date
		15/06/1997	SU948010	Bognor Regis Golf Course	2 Present	Date
		25/07/1995	SZ9399	Bognor Hotham Park	1 Present	Date
		13/05/1994	SU948011	Bognor Regis	2 Present	Date
		07/06/1993	SZ9399	Bognor Hotham Park	2 Present	Date
		30/07/1990	SZ942998	Bognor Regis	5 Present	Date
		28/07/1990	SZ9399	Bognor Regis	4 Present	Date
		11/07/1989 - 11/07/1989	SU9400	Felpham CP, Felpham Rec Ground	3 Present	Date
		03/03/1989 - 30/04/1989	SU9501	Bognor Regis Golf Course	1 Present	Positive Breeding
		18/04/1989 - 18/04/1989	SU9602	Yapton Bilsham	2 Present	Positive Breeding
		16/04/1989 - 16/04/1989	SU9401	Bognor Regis Golf Course	2 Present	Positive Breeding
<i>Falco subbuteo</i>	Hobby	18/06/2016	SU9401	Shripney flood relief pool	1 Present	Date
		15/05/2016	SU9301	Bersted Brooks nr Bognor	1 Present	Date
		14/04/2016	SU9503	Barnham	1 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		29/08/2015	SU9402	Lidsey Lodge	1 Present	Date
		28/08/2015	SU9601	Flansham nr Bognor	1 Present	Date
		12/08/2015	SU9602	Yapton Drove Lane Farm	1 Present	Date
		08/07/2015	SU9501	Bognor Regis Golf Course	1 Present	Date
		27/08/2014	SU9503	Barnham	1 Present	Date
		13/06/2014	SU9401	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		30/04/2014	SU9503	Barnham	2 Present	Date
		22/05/2013	SU9302	Shripney nr Bognor	1 Present	Date
		02/05/2013	SU9402	Lidsey Lodge	1 Present	Date
		24/08/2012	SU9503	Barnham	1 Present	Date
		21/06/2012	SU9502	Barnham Lidsey Rife	1 Present	Date
		03/05/2012	SU9402	Lidsey Lodge	1 Present	Date
		24/05/2011	SU90L	Lidsey Sewage Works	Present	Date
		20/07/2009	SU90G	Lidsey Old Canal & Tip	Present	Date
		04/05/2005	SZ9399	Bognor Regis	Present	Date
		26/08/2001	SU9700	Middleton on Sea CP, Middleton-on-Sea	1 Present	Date
		17/08/2001	SU9700	Middleton on Sea CP, Middleton-on-Sea	1 Present	Date
		03/07/1991	SU944001	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		05/06/1989	SZ9599	Felpham nr Bognor Regis	1 Present	Date
<i>Haematopus ostralegus</i>	Oystercatcher	14/06/2008	SZ99J	Bognor Regis	Present	Date, Positive Breeding
<i>Charadrius dubius</i>	Little Ringed Plover	08/05/2016	SU9401	Shripney flood relief pool	1 Present	Date
		06/05/2016	SU9401	Shripney flood relief pool	3 Present	Date
		14/04/2016	SU9402	Lidsey Lodge	1 Present	Date
		05/04/2016	SU9502	Barnham Lidsey Rife	1 Present	Date
		27/05/2014	SU9502	Barnham Lidsey Rife	1 Present	Date
		03/04/2014	SU9402	Lidsey Lodge	1 Present	Date
<i>Charadrius hiaticula</i>	Ringed Plover	27/05/2014	SU9502	Barnham Lidsey Rife	3 Present	Date
<i>Vanellus vanellus</i>	Lapwing	26/04/2016	SU9501	Flansham, Flansham nr Bognor	2 Present	Date
		20/04/2016	SU953024	Barnham Lidsey Rife	5 Present	Date, Positive Breeding
		04/04/2016	SU9501	Flansham, Flansham nr Bognor	3 Present	Date
		10/03/2015	SU9502	Barnham Lidsey Rife	12 Present	Positive Breeding
		26/05/2014	SU9402	Lidsey Lodge	8 Present	Date
		23/04/2014	SU9501	Flansham nr Bognor	2 Present	Date
		14/03/2014	SU9502	Flansham Hoe Farm	15 Present	Positive Breeding
		03/03/2014	SU9402	Lidsey Lodge	1 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		22/02/2014	SU9501	Barnham Lidsey Rife	100 Present	Positive Breeding
		16/05/2013 - 27/05/2013	SU9502	Barnham Lidsey Rife	5 Present	Date, Positive Breeding
		14/04/2013	SU9501	Flansham nr Bognor	2 Present	Date
		18/05/2012	SU951023	Barnham Lidsey Rife	7 Present	Date, Positive Breeding
		04/05/2012	SU9502	Barnham Lidsey Rife	5 Present	Date
		30/04/2012	SU9503	Barnham	4 Present	Date
		13/07/2011	SU90G	Lidsey Old Canal & Tip	Present	Positive Breeding
		01/05/2011	SU90L	Lidsey Sewage Works	Present	Date, Positive Breeding
		10/04/2011	SU90L	Lidsey Sewage Works	2 Present	Date, Positive Breeding
		17/05/2010	SU90G	Lidsey Old Canal & Tip		Date, Positive Breeding
		12/05/2010	SU953022	Flansham	3 Present	Date
		14/04/2010	SU9301	Bognor South Bersted	1 Present	Date
		14/04/2010	SU952025	Barnham Court Farm	4 Present	Date
		10/04/2010	SU9502	Barnham Lidsey Rife	8 Present	Date, Positive Breeding
		27/06/2009	SU9502	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		02/05/2009	SU9502	Barnham Lidsey Rife	5 Present	Date, Positive Breeding
		25/04/2009	SU953026	Barnham Lidsey Rife	2 Present	Date, Positive Breeding
		18/06/2008	SU9301	Bognor South Bersted	1 Present	Date
		07/06/2008	SU952027	Barnham Lidsey Rife	3 Present	Date
		19/05/2008	SU9301	Bognor South Bersted	1 Present	Date
		18/05/2008	SU951027	Barnham Lidsey Rife	6 Present	Date
		26/04/2008	SU951027	Barnham Lidsey Rife	7 Present	Date
		01/04/2008	SU9502	Barnham Lidsey Rife	5 Present	Date
		15/06/2007	SU90G	Lidsey Old Canal & Tip,	4 Present	Date
		07/05/2007	SU90G	Lidsey Old Canal & Tip,	4 Present	Date
		11/04/2007	SU951028	Barnham Lidsey Rife,	4 Male; 4 Present	Date
		10/04/2007	SU90G	Lidsey Old Canal & Tip,	1 Present	Date
		07/04/2007	SU9502	Barnham Lidsey Rife,	4 Present	Date
		14/05/2006	SU953025	Barnham Lidsey Rife	12 Present	Date
		09/04/2006	SU955025	Barnham Lidsey Rife	2 Present	Date
		30/06/2004	SU9401	Aldingbourne Rife	3 Present	Date, Positive Breeding
		30/06/2003	SU9400	Aldingbourne Rife	4 Present	Date, Positive Breeding
		15/05/2003	SU955030	Barnham	3 Present	Date
		30/06/2000	SU9400	Aldingbourne Rife	3 Present	Date, Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		30/06/1999	SU943005	Aldingbourne Rife	4 Present	Date, Positive Breeding
		30/06/1998	SU944003	Aldingbourne Rife	4 Present	Date, Positive Breeding
		30/06/1997	SU9400	Aldingbourne Rife	3 Present	Date, Positive Breeding
		30/06/1994	SU9502	Barnham Lidsey Rife	3 Present	Date, Positive Breeding
		01/06/1993	SU9502	Barnham Lidsey Rife	3 Present	Date
		05/05/1992	SU9402	Barnham	6 Present	Date, Positive Breeding
<i>Himantopus himantopus</i>	Black-winged Stilt	06/06/2014	SU9502	Barnham Lidsey Rife	1 Present	Date
<i>Actitis hypoleucos</i>	Common Sandpiper	04/07/2012	SZ9499	Bognor Regis	1 Present	Date
<i>Gallinago gallinago</i>	Snipe	24/12/2014	SU9502	Flansham Hoe Farm	12 Present	Positive Breeding
		20/04/2012	SU953022	Barnham Lidsey Rife	1 Present	Date
		04/04/2003	SU9400	Aldingbourne Rife	2 Present	Date
<i>Numenius arquata</i>	Curlew	06/04/2015	SU9301	Bognor South Bersted	6 Present	Date
		09/06/2012	SU9402	Lidsey Lodge	2 Present	Date
		30/07/2011	SU90R	Yapton	Present	Date
		10/04/2011	SU90L	Lidsey Sewage Works	1 Present	Date
		11/06/2009	SZ99P	Bognor Regis East	2 Present	Date
		15/04/2009	SU90L	Lidsey Sewage Works	1 Present	Date
		01/04/2004	SU9401	Aldingbourne Rife	1 Present	Date
		03/05/1991	SU952028	Barnham	24 Present	Date
<i>Scolopax rusticola</i>	Woodcock	27/04/1991	SZ9699	Middleton on Sea CP, Middleton-on-Sea	3 Present	Date, Positive Breeding
		20/03/2015	SU9502	Barnham Lidsey Rife	1 Present	Date
		14/03/2010	SU90G	Lidsey Old Canal & Tip	1 Present	Date
		16/03/1998	SU946009	Bognor Lec Airfield	1 Present	Date
<i>Tringa totanus</i>	Redshank	01/03/1986	SU954013	Flansham Hoe Farm	1 Present	Date
		26/06/2016	SU9401	Shripney flood relief pool	1 Present	Date
		01/05/2014	SU9502	Barnham Lidsey Rife	1 Present	Date
		06/05/2013	SU9502	Barnham Lidsey Rife	1 Present	Date
		04/05/2012	SU9502	Barnham Lidsey Rife	1 Present	Date
		15/04/2009	SU90L	Lidsey Sewage Works	1 Present	Date
		30/06/1999	SU943005	Aldingbourne Rife	1 Present	Date, Positive Breeding
		30/06/1998	SU944003	Aldingbourne Rife	1 Present	Date, Positive Breeding
		30/06/1994	SU9502	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
<i>Larus fuscus</i>	Lesser Black-backed Gull	05/05/1992	SU9402	Barnham	1 Present	Date
		19/07/2011	SU90F	Bognor North Bersted	Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
<i>Larus argentatus</i>	Herring Gull	10/08/2016	SZ9699	Middleton on Sea CP, Middleton-on-Sea	1 Present	Positive Breeding
		08/08/2016	SZ9699	Middleton on Sea CP, Middleton-on-Sea	1 Present	Positive Breeding
		24/06/2015	SU9400	Felpham Rec Ground	9 Present	Positive Breeding
		24/06/2015	SU9401	Bognor Lec Airfield	2 Present	Positive Breeding
		30/07/2011	SU90R	Yapton	Present	Positive Breeding
		20/07/2011	SZ99J	Bognor Regis	Present	Positive Breeding
		19/07/2011	SU90F	Bognor North Bersted	Present	Positive Breeding
		04/05/2011	SZ99P	Bognor Regis East	Present	Positive Breeding
		09/07/2010 - 22/07/2010	SZ9399	Bognor Hotham Park		Positive Breeding
		08/07/2010	SU9400	Aldingbourne Rife	12 Present	Positive Breeding
		29/05/2010	SU966002	Felpham nr Bognor Regis		Positive Breeding
		03/06/2009	SZ9399	Bognor Regis	2 Present	Positive Breeding
		14/06/2008	SZ99J	Bognor Regis	8 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	8 Present	Positive Breeding
		23/04/2008	SZ99J	Bognor Regis	18 Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	13 Present	Positive Breeding
<i>Columba oenas</i>	Stock Dove	14/06/2015	SZ9599	Felpham nr Bognor Regis	1 Present	Date
		05/07/2013	SU960023	Yapton Stakers Farm	2 Present	Date, Positive Breeding
		05/07/2013	SU960025	Yapton Stakers Farm	2 Present	Date, Positive Breeding
		23/07/2012	SU90K	Bognor Regis Golf Course	1 Present	Date
		04/05/2012	SZ99P	Bognor Regis East	2 Present	Date
		11/07/2011	SU90K	Bognor Regis Golf Course	1 Present	Date
		08/07/2011	SU959025	Yapton Stakers Farm	2 Present	Date
		24/06/2011	SZ9399	Bognor Hotham Park	3 Present	Date
		03/06/2011 - 24/06/2011	SZ9399	Bognor Hotham Park	2 Present	Date
		25/05/2011	SU9301	Bognor South Bersted	1 Present	Date
		23/05/2011	SZ9399	Bognor Hotham Park	2 Present	Date
		10/04/2011	SU90L	Lidsey Sewage Works	2 Present	Positive Breeding
		07/04/2011 - 10/04/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		09/07/2010 - 22/07/2010	SZ9399	Bognor Hotham Park	4 Present	Date, Positive Breeding
		05/07/2010	SU962025	Yapton Drove Lane Farm	2 Present	Date, Positive Breeding
		12/06/2010	SZ9399	Bognor Hotham Park	2 Present	Date, Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		07/06/2010	SU9301	Bognor South Bersted	1 Present	Date, Positive Breeding
		20/05/2010	SU90K	Bognor Regis Golf Course		Date
		05/05/2010 - 17/05/2010	SU90G	Lidsey Old Canal & Tip		Date
		13/05/2010	SZ9399	Bognor Hotham Park	2 Present	Date
		07/05/2010	SU9301	Bognor South Bersted	1 Present	Date
		24/07/2009	SZ9399	Bognor Hotham Park	4 Present	Date
		13/07/2009 - 24/07/2009	SZ9399	Bognor Hotham Park	1 Present	Date
		26/06/2009	SU90K	Bognor Regis Golf Course	1 Present	Date
		25/06/2009	SU962025	Yapton Stakers Farm	2 Present	Date, Positive Breeding
		09/06/2009 - 25/06/2009	SZ9399	Bognor Hotham Park	8 Present	Date
		02/05/2009 - 22/05/2009	SZ9399	Bognor Hotham Park	6 Present	Date
		26/07/2008	SU90R	Yapton	30 Present	Date
		08/07/2008	SZ9399	Bognor Hotham Park	7 Present	Date
		30/06/2008	SZ9399	Bognor Hotham Park	3 Present	Date
		23/06/2008	SZ9399	Bognor Hotham Park	4 Present	Date
		14/06/2008	SU90G	Lidsey Old Canal & Tip	1 Present	Date, Positive Breeding
		14/06/2008	SZ99J	Bognor Regis	5 Present	Date, Positive Breeding
		01/05/2008 - 29/05/2008	SZ9399	Bognor Hotham Park	5 Present	Date
		23/05/2008	SZ9399	Bognor Hotham Park	7 Present	Date
		07/05/2008	SU90Q	Middleton on Sea CP, Middleton-on-Sea	2 Present	Date
		03/05/2008	SU90R	Yapton	7 Present	Date
		23/04/2008	SZ99J	Bognor Regis	2 Present	Positive Breeding
		25/07/2007 - 31/07/2007	SZ9399	Bognor Hotham Park,	2 Present	Date
		05/06/2007 - 20/06/2007	SZ9399	Bognor Hotham Park,	4 Present	Date
		12/06/2007	SU962025	Yapton Drove Lane Farm,	2 Present	Date
		01/06/2007	SZ9399	Bognor Hotham Park,	3 Present	Date
		20/05/2007	SZ9399	Bognor Hotham Park,	4 Present	Date
		03/05/2007 - 20/05/2007	SZ9399	Bognor Hotham Park,	3 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		04/07/2006 - 22/07/2006	SZ9399	Bognor Hotham Park	4 Present	Date
		30/06/2006	SZ9399	Bognor Hotham Park	3 Present	Date
		05/06/2006 - 24/06/2006	SZ9399	Bognor Hotham Park	5 Present	Date
		08/05/2006	SZ9399	Bognor Hotham Park	5 Present	Date
		05/07/2005 - 31/07/2005	SZ9399	Bognor Hotham Park	3 Present	Date
		05/07/2005	SZ9399	Bognor Hotham Park	3 Present	Date
		18/06/2005	SZ9399	Bognor Hotham Park	6 Present	Date
		18/06/2005	SZ9399	Bognor Hotham Park	6 Present	Date
		06/06/2005 - 18/06/2005	SZ9399	Bognor Hotham Park	3 Present	Date
		23/05/2005	SZ9399	Bognor Hotham Park	3 Present	Date
		03/05/2005 - 23/05/2005	SZ9399	Bognor Hotham Park	3 Present	Date
		06/07/2004	SZ9399	Bognor Hotham Park	7 Present	Date
		21/06/2004	SZ9399	Bognor Hotham Park	2 Present	Date
		11/05/2004	SZ9399	Bognor Hotham Park	7 Present	Date
		28/07/2003	SZ9399	Bognor Hotham Park	3 Present	Date
		23/06/2003	SZ9399	Bognor Hotham Park	3 Present	Date
		02/05/2003	SZ9399	Bognor Hotham Park	5 Present	Date
		11/07/2002	SZ9399	Bognor Hotham Park	3 Present	Date
		02/07/2002	SU962025	Yapton Drove Lane Farm	2 Present	Date
		25/05/2002	SZ9399	Bognor Hotham Park	3 Present	Date
		19/07/2001	SU962025	Yapton Stakers Farm	2 Present	Date
		06/06/2001	SZ9399	Bognor Hotham Park	4 Present	Date
		22/05/2000	SZ9399	Bognor Hotham Park	3 Present	Date
		24/07/1999	SZ9399	Bognor Hotham Park	3 Present	Date
		02/05/1999	SZ9399	Bognor Hotham Park	4 Present	Date
		23/07/1997	SZ9399	Bognor Hotham Park	6 Present	Date
		27/05/1997	SZ9399	Bognor Hotham Park	5 Present	Date
		22/07/1996	SZ9399	Bognor Hotham Park	5 Present	Date
		08/06/1995	SZ9399	Bognor Hotham Park	4 Present	Date
		08/05/1994	SZ9399	Bognor Hotham Park	5 Present	Date
		08/07/1993	SZ9399	Bognor Hotham Park	7 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
<i>Streptopelia turtur</i>	Turtle Dove	04/05/2012	SU9503	Barnham	2 Present	Date
		13/07/2011	SU90G	Lidsey Old Canal & Tip	Present	Date
		07/08/2009	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		10/07/2009	SU90G	Lidsey Old Canal & Tip	1 Present	Date, Positive Breeding
		02/05/2008	SU90G	Lidsey Old Canal & Tip	2 Present	Date
<i>Cuculus canorus</i>	Cuckoo	18/06/2016	SU9402	Lidsey Lodge	1 Present	Date
		04/05/2015	SU9401	Bognor Lec Airfield	1 Present	Date
		04/05/2015	SZ9599	Felpham nr Bognor Regis	1 Present	Date, Positive Breeding
		01/06/2014	SU9402	Lidsey Lodge	1 Present	Date
		01/05/2014	SU9502	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		30/07/2011	SU90L	Lidsey Sewage Works	Present	Date
		01/05/2011	SU90G	Lidsey Old Canal & Tip	Present	Date, Positive Breeding
		12/06/2010	SU9602	Yapton Drove Lane Farm	1 Present	Date, Positive Breeding
		13/06/2009	SU9301	Bognor North Bersted	1 Present	Date
		03/06/2009	SU90F	Bognor North Bersted	1 Present	Date, Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	1 Present	Date, Positive Breeding
		31/05/2008	SU960028	Yapton Drove Lane Farm	1 Present	Date
		25/06/2006	SU960024	Flansham Hoe Farm	1 Male	Date
		04/06/2006	SU9402	Lidsey Lodge	1 Male	Date
		27/05/2006	SU948024	Lidsey Lodge	1 Male	Date
		27/05/2006	SU960020	Flansham Hoe Farm	1 Male	Date
		29/05/1999	SU954022	Barnham Lidsey Rife	1 Present	Date
		14/05/1999	SU947008	Bognor Regis Golf Course	1 Present	Date
		14/05/1999	SU952013	Bognor Regis Golf Course	1 Present	Date
		14/05/1997	SU948018	Bognor Regis Golf Course	1 Present	Date
		03/05/1993 - 17/06/1993	SU956025	Barnham Lidsey Rife	2 Present	Date
<i>Tyto alba</i>	Barn Owl	07/12/2016	SU9601	Flansham, Flansham nr Bognor	1 Present	All Records
		05/12/2016	SU9502	Barnham Lidsey Rife	1 Present	All Records
		30/11/2016	SU9502	Barnham Lidsey Rife	1 Present	All Records
		27/11/2016	SU9502	Barnham Lidsey Rife	1 Present	All Records
		20/05/2016	SU9502	Barnham Lidsey Rife	1 Present	All Records
		17/03/2016	SU9701	Yapton Bilsham	2 Present	All Records
		07/01/2016	SU9701	Yapton Bilsham	1 Present	All Records
		26/01/2015	SU90L	Lidsey Water Treatment Works (WTW)	1 Present	All Records

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		23/02/2013	SU9601	Flansham nr Bognor	1 Present	All Records
		06/02/2013	SU9503	Barnham	1 Present	All Records
		19/11/2012	SU9701	Yapton Bilsham	1 Present	All Records
		21/06/2012	SU959025	Yapton Stakers Farm	2 Present	All Records
		18/01/2012	SU965028	Yapton Drove Lane Farm	1 Present	All Records
		15/01/2012	SU9503	Barnham	1 Present	All Records
		08/07/2011	SU959025	Yapton Stakers Farm	2 Present	All Records
		08/07/2011	SU965028	Yapton Drove Lane Farm	1 Present	All Records
		06/06/2011	SU9502	Barnham Lidsey Rife	1 Present	All Records
		05/07/2010	SU962025	Yapton Stakers Farm	2 Present	All Records
		05/07/2010	SU965028	Yapton Drove Lane Farm	1 Present	All Records
		16/10/2009	SZ9499	Bognor Regis	1 Present	All Records
		25/06/2009	SU90R	Yapton	3 Present	All Records
		25/06/2009	SU962025	Yapton Stakers Farm	2 Present	All Records
		25/06/2009	SU965028	Yapton Drove Lane Farm	1 Present	All Records
		07/07/2008	SU90R	Yapton	Present	All Records
		07/07/2008	SU962025	Yapton Drove Lane Farm	2 Present	All Records
		07/07/2008	SU965028	Yapton Drove Lane Farm	2 Present	All Records
		10/06/2008	SU962025	Yapton Drove Lane Farm	2 Present	All Records
		12/06/2007	SU962025	Yapton Drove Lane Farm	2 Present	All Records
		27/01/2007	SU9600	Middleton on Sea CP, Middleton-on-Sea	1 Present	All Records
		16/06/2006	SU962025	Yapton Drove Lane Farm	2 Present	All Records
		30/06/2005	SU962025	Yapton Drove Lane Farm	2 Present	All Records
		09/07/2004	SU962025	Yapton Drove Lane Farm	2 Present	All Records
		07/12/2003	SZ9499	Bognor W.Sx Institute H.E.	1 Present	All Records
		20/06/2003	SU962025	Yapton Stakers Farm	2 Present	All Records
		24/01/2003	SU964023	Barnham Lidsey Rife	1 Present	All Records
		02/07/2002	SU962025	Yapton Drove Lane Farm	2 Present	All Records
		2001	SU962024	Barn N of Felpham	1 Pair; 1 Nest	All Records
		19/07/2001	SU962025	Yapton Stakers Farm	2 Present	All Records
		25/06/1999	SU962025	Yapton Stakers Farm	2 Present	All Records
		27/11/1998	SU972010	Middleton on Sea CP, Middleton-on-Sea	1 Present	All Records
		16/07/1998	SU953015	Bognor Regis Golf Course	1 Present	All Records
		09/07/1998	SU962025	Yapton Stakers Farm	4 Present	All Records
		22/01/1998	SU9700	Middleton on Sea CP, Middleton-on-Sea	1 Present	All Records

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		30/01/1996	SU9603	Yapton Drove Lane Farm	1 Present	All Records
		01/02/1995	SU9502	Barnham Lidsey Rife	1 Present	All Records
		20/01/1995	SU960023	Barnham Lidsey Rife	1 Present	All Records
		07/01/1995	SU963024	Barnham Lidsey Rife	1 Present	All Records
		06/09/1986	SU9402	Shripney nr Bognor	1 Present	All Records
		20/04/1986	SU9702	Cobnor Farm (Ch)	1 Present	All Records
		30/01/1986	SU9702	Cobnor Farm (Ch)	1 Present	All Records
		01/11/1980	SU960025	Yapton	3 Present	All Records
<i>Strix aluco</i>	Tawny Owl	18/05/2012	SU956025	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		17/05/2002	SU949011	Bognor Regis Golf Course	3 Present	Date
		25/06/2001	SU9700	Middleton on Sea CP, Middleton-on-Sea	1 Present	Date
		04/05/1989	SZ9599	Felpham nr Bognor Regis	1 Present	Date
		28/06/1987	SU9400	Felpham CP, Felpham Rec Ground	3 Present	Date, Positive Breeding
<i>Asio otus</i>	Long-eared Owl	26/05/1987	SU954016	Flansham, Flansham nr Bognor	1 Present	Date, Positive Breeding
<i>Asio flammeus</i>	Short-eared Owl	20/05/2016	SU9502	Barnham Lidsey Rife	1 Present	Date
		15/05/2016	SU9502	Barnham Lidsey Rife	1 Present	Date
		19/01/2014	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		06/05/2013	SU9502	Barnham Lidsey Rife	1 Present	Date
		03/05/2012	SU9502	Barnham Lidsey Rife	1 Present	Date
<i>Apus apus</i>	Swift	05/07/2013	SU951000	Felpham nr Bognor Regis	10 Present	Positive Breeding
		28/05/2012	SU950000	Felpham nr Bognor Regis	10 Present	Positive Breeding
		03/07/2009	SZ99P	Felpham nr Bognor Regis	2 Present	Positive Breeding
		01/06/2009	SU9500	Felpham nr Bognor Regis	1 Present	Positive Breeding
		01/06/2009	SU9600	Middleton on Sea CP, Middleton-on-Sea	1 Present	Positive Breeding
		01/06/2009	SU961001	Middleton on Sea CP, Middleton-on-Sea	1 Present	Positive Breeding
		01/06/2009	SZ949997	Bognor Regis	1 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	11 Present	Positive Breeding
		06/05/2006	SU9400	Felpham CP, Felpham Rec Ground	25 Present	Positive Breeding
		20/06/1994	SU9702	Yapton	46 Present	Positive Breeding
		30/05/1994	SZ9399	Bognor Regis	44 Present	Positive Breeding
<i>Alcedo atthis</i>	Kingfisher	09/08/2016	SU9502	Barnham Lidsey Rife	1 Present	Date
		28/08/2015	SU9601	Flansham nr Bognor	1 Present	Date
		21/06/2014	SU9401	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		08/07/2001	SU943003	Aldingbourne Rife,	1 Present	Date
		17/04/2000	SU944002	Aldingbourne Rife,	1 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		24/03/2000	SU944002	Aldingbourne Rife,	1 Present	Date
		20/08/1999	SU944001	Aldingbourne Rife,	1 Present	Date
		01/04/1999	SU946010	Barnham Lidsey Rife,	1 Present	Date
		14/08/1997	SU943005	Aldingbourne Rife,	1 Present	Date
		17/08/1996	SU9400	Aldingbourne Rife,	1 Present	Date
		09/03/1994	SU9502	Barnham Lidsey Rife,	1 Present	Date
		15/06/1992	SU946008	Barnham Lidsey Rife,	1 Present	Date
		29/08/1990	SU948012	Bognor Regis Golf Course,	1 Present	Date
		16/03/1990	SU9401	Bognor Regis Golf Course,	1 Present	Date
		18/06/1982	SU9400	Aldingbourne Rife	1 Present	Date, Positive Breeding
<i>Picus viridis</i>	Green Woodpecker	11/06/2016	SU9602	Yapton Drove Lane Farm	1 Present	Positive Breeding
		29/03/2015	SU9301	Bognor South Bersted	1 Present	Positive Breeding
		15/02/2015	SZ9599	Felpham nr Bognor Regis	1 Present	Positive Breeding
		30/07/2011	SU90L	Lidsey Sewage Works	4 Present	Positive Breeding
		27/07/2011 - 30/07/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		08/07/2011	SU90G	Lidsey Old Canal & Tip	Present	Positive Breeding
		04/05/2011	SZ99P	Bognor Regis East	Present	Positive Breeding
		08/04/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		14/07/2010	SU90G	Lidsey Old Canal & Tip		Positive Breeding
		08/07/2010	SU9400	Aldingbourne Rife	1 Present	Positive Breeding
		11/06/2010	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		26/06/2009	SU90K	Bognor Regis Golf Course	2 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	1 Present	Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	1 Present	Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	3 Present	Positive Breeding
		14/06/2008	SZ99J	Bognor Regis	2 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	2 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	3 Present	Positive Breeding
		03/05/2008	SU90R	Yapton	2 Present	Positive Breeding
		23/04/2008	SZ99J	Bognor Regis	2 Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	2 Present	Positive Breeding
		31/07/1985	SZ9499	Bognor W.Sx Institute H.E.	3 Present	Positive Breeding
		01/06/1984	SU9702	Yapton	2 Present	Positive Breeding
<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	15/05/1993	SU9503	Barnham,	1 Present	All Records

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		07/05/1993	SU9503	Barnham,	1 Present	All Records
		14/04/1993	SU9503	Barnham,	1 Present	All Records
		13/04/1991	SZ9399	Bognor Hotham Park,	2 Present	All Records
		17/02/1991	SZ9499	Bognor W.Sx Institute H.E.	1 Female	All Records
		09/04/1989 - 09/04/1989	SZ9399	Bognor Hotham Park	1 Present	All Records
<i>Cettia cetti</i>	Cetti's Warbler	19/05/2016	SU9400	SU90 10km (Barnham area)	6 Present	Date, Positive Breeding
		19/05/2016	SU942005	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		19/05/2016	SU943001	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		19/05/2016	SU944006	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		19/05/2016	SU948018	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		19/05/2016	SU948020	Bognor Regis Golf Course	1 Present	Date, Positive Breeding
		19/05/2016	SU954023	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		20/04/2016	SU9400	SU90 10km (Barnham area)	7 Present	Date, Positive Breeding
		20/04/2016	SU943001	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		20/04/2016	SU943003	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		20/04/2016	SU945006	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		20/04/2016	SU948015	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		20/04/2016	SU948018	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		20/04/2016	SU951020	Bognor Regis Golf Course	1 Present	Date, Positive Breeding
		20/04/2016	SU952022	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		04/04/2016	SU9501	Flansham, Flansham nr Bognor	1 Present	Date
		11/03/2016	SU9501	Flansham, Flansham nr Bognor	1 Present	Date
		04/05/2015	SU9401	Bognor Lec Airfield	3 Present	Date, Positive Breeding
		04/05/2015	SZ9599	Felpham nr Bognor Regis	1 Present	Date
		28/04/2015	SU9601	Flansham nr Bognor	1 Present	Date, Positive Breeding
		21/04/2015	SU9401	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		14/04/2015	SU9401	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		10/04/2015	SU9301	Bognor South Bersted	5 Present	Date
		02/04/2015	SU9301	Bognor South Bersted	Present	Date
		31/03/2015	SU9401	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		18/03/2015	SU9501	Bognor Regis Golf Course	1 Present	Date
		26/05/2014	SU9402	Lidsey Lodge	1 Present	Date
		25/05/2014	SU942005	Felpham Rec Ground	1 Present	Date
		25/05/2014	SU946007	Bognor Regis Golf Course	1 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		25/05/2014	SU948018	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		25/05/2014	SU955024	Barnham Lidsey Rife	1 Present	Date
		25/05/2014	SZ944999	Bognor Regis East	1 Present	Date
		23/04/2014	SU9501	Flansham nr Bognor	1 Present	Date
		04/03/2014	SU9502	Barnham Lidsey Rife	1 Present	Date
		05/07/2013	SU9401	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		21/05/2012	SU9300	Bognor South Bersted	1 Present	Date
		19/05/2012	SU9502	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		18/05/2012	SU9400	Barnham Lidsey Rife	7 Present	Date, Positive Breeding
		16/05/2012	SU9301	Bognor South Bersted	3 Present	Date
		02/05/2012 - 16/05/2012	SU9301	Bognor South Bersted	1 Present	Date
		04/05/2012	SU9401	Bognor Lec Airfield	1 Present	Date
		02/04/2012 - 30/04/2012	SU9301	Bognor South Bersted	1 Present	Date
		22/04/2012	SU90K	Bognor Regis Golf Course	1 Present	Date
		20/04/2012	SU9401	Bognor Lec Airfield	1 Present	Date
		20/04/2012	SU943005	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		20/04/2012	SU946007	Felpham CP, Felpham Rec Ground	1 Present	Date, Positive Breeding
		20/04/2012	SU950021	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		20/04/2012	SU951021	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		20/04/2012	SU954024	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		21/03/2012	SU9301	Bognor South Bersted	1 Present	Date
		25/05/2011	SU9301	Bognor South Bersted	2 Present	Date
		23/05/2011	SU948019	Bognor Regis Golf Course	1 Present	Date
		01/05/2011	SU90L	Lidsey Sewage Works	Present	Date, Positive Breeding
		29/04/2011	SU9301	Bognor South Bersted	2 Present	Date
		01/04/2011 - 29/04/2011	SU9301	Bognor South Bersted	1 Present	Date
		26/04/2011	SU90F	Bognor North Bersted	Present	Date, Positive Breeding
		20/04/2011	SU949020	Bognor Regis Golf Course	1 Present	Date
		20/04/2011	SU961028	Yapton Drove Lane Farm	1 Present	Date
		10/04/2011 - 16/04/2011	SU90L	Lidsey Sewage Works	Present	Date, Positive Breeding
		10/04/2011	SU90K	Bognor Regis Golf Course	Present	Date, Positive Breeding
		12/03/2011	SU9502	Barnham Lidsey Rife	1 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		11/06/2010	SU90K	Bognor Regis Golf Course	1 Present	Date, Positive Breeding
		07/06/2010	SU9301	Bognor South Bersted	1 Present	Date, Positive Breeding
		07/05/2010 - 24/05/2010	SU9301	Bognor South Bersted	2 Present	Date
		17/05/2010	SU942004	Bognor Regis	1 Present	Date, Positive Breeding
		17/05/2010	SU948016	Bognor Regis		Date, Positive Breeding
		17/05/2010	SU948018	Bognor Regis	1 Present	Date, Positive Breeding
		08/05/2010 - 17/05/2010	SU90G	Lidsey Old Canal & Tip		Date, Positive Breeding
		27/04/2010	SU90L	Lidsey Sewage Works	1 Present	Date, Positive Breeding
		27/04/2010	SU9400	Aldingbourne Rife	1 Present	Date, Positive Breeding
		24/04/2010	SU90G	Lidsey Old Canal & Tip	1 Present	Date, Positive Breeding
		14/04/2010 - 23/04/2010	SU9301	Bognor South Bersted	2 Present	Date, Positive Breeding
		21/04/2010	SU942005	Bognor Regis		Date, Positive Breeding
		21/04/2010	SU946008	Bognor Regis	1 Present	Date, Positive Breeding
		21/04/2010	SU949020	Lidsey Lodge	1 Present	Date, Positive Breeding
		21/04/2010	SU949021	Lidsey Lodge	1 Present	Date, Positive Breeding
		19/04/2010	SU90G	Lidsey Old Canal & Tip	1 Present	Date, Positive Breeding
		24/06/2009	SU9301	Bognor South Bersted	1 Present	Date
		13/06/2009	SU9301	Bognor North Bersted	2 Present	Date
		03/06/2009	SU90F	Bognor North Bersted	1 Present	Date, Positive Breeding
		02/06/2009	SU948017	Shripney nr Bognor	1 Present	Date, Positive Breeding
		02/06/2009	SU948018	Shripney nr Bognor	1 Present	Date, Positive Breeding
		07/05/2009 - 27/05/2009	SU9301	Bognor South Bersted	1 Present	Date, Positive Breeding
		23/05/2009	SU948016	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		21/05/2009	SU9301	Bognor South Bersted	2 Present	Date, Positive Breeding
		30/04/2009	SU9301	Bognor South Bersted	1 Present	Date, Positive Breeding
		24/04/2009	SU90L	Lidsey Sewage Works	1 Present	Date, Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	1 Present	Date, Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	1 Present	Date, Positive Breeding
		13/03/2009 - 23/03/2009	SU9301	Bognor South Bersted	1 Present	Date
		04/06/2008	SU90K	Bognor Regis Golf Course	2 Present	Date, Positive Breeding
		28/04/2008	SU9400	Aldingbourne Rife	2 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		14/04/2008 - 28/04/2008	SU9400	Aldingbourne Rife	1 Present	Date
		18/04/2008	SU90K	Bognor Regis Golf Course	1 Present	Date, Positive Breeding
		03/04/2004	SU944001	Aldingbourne Rife,	1 Present	Date
		01/04/2004	SU9401	Aldingbourne Rife,	1 Present	Date
		05/03/2004	SU944001	Aldingbourne Rife,	1 Present	Date
<i>Phylloscopus trochilus</i>	Willow Warbler	21/06/2016	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		22/04/2015	SU9402	Lidsey Lodge	1 Present	Positive Breeding
		01/04/2011 - 10/04/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
<i>Lullula arborea</i>	Woodlark	20/06/2008	SU90Q	Middleton on Sea CP, Middleton-on-Sea	1 Present	Date
		08/05/1999	SU957025	Barnham Lidsey Rife,	1 Present	Date
		15/06/1989 - 15/06/1989	SU9502	Flansham Hoe Farm	1 Present	Date, Positive Breeding
<i>Alauda arvensis</i>	Skylark	09/05/2017	SU958028	Barnham	2-5 Adult	Date
		26/04/2016	SU9501	Flansham, Flansham nr Bognor	3 Present	Date
		04/04/2016	SU9501	Flansham, Flansham nr Bognor	2 Present	Date
		02/04/2016	SU9502	Barnham Lidsey Rife	1 Present	Date, Positive Breeding
		19/05/2015	SU9501	Bognor Regis Golf Course	2 Present	Date
		21/04/2015	SU9401	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		23/04/2014	SU9501	Flansham nr Bognor	3 Present	Date
		27/05/2013	SU9502	Barnham Lidsey Rife	5 Present	Date
		15/04/2013	SU9301	Bognor North Bersted	Present	Date
		14/04/2013	SU9501	Flansham nr Bognor	5 Present	Date
		02/05/2012 - 16/05/2012	SU9301	Bognor South Bersted	3 Present	Date
		02/04/2012 - 30/04/2012	SU9301	Bognor South Bersted	1 Present	Date
		20/04/2012	SU9301	Bognor South Bersted	2 Present	Date
		03/03/2012	SU9502	Barnham Lidsey Rife	2 Present	Positive Breeding
		25/05/2011	SU9301	Bognor South Bersted	3 Present	Date
		10/04/2011	SU90K	Bognor Regis Golf Course	Present	Date, Positive Breeding
		07/04/2011 - 10/04/2011	SU90L	Lidsey Sewage Works	Present	Date, Positive Breeding
		01/04/2011	SU9502	Barnham Lidsey Rife	4 Present	Date
		07/06/2010	SU9301	Bognor South Bersted	3 Present	Date, Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		07/05/2010 - 24/05/2010	SU9301	Bognor South Bersted	3 Present	Date
		12/05/2010	SU958025	Flansham	1 Individual	Date
		05/05/2010 - 08/05/2010	SU90G	Lidsey Old Canal & Tip	2 Present	Date
		24/04/2010	SU90G	Lidsey Old Canal & Tip	6 Present	Date
		05/04/2010 - 24/04/2010	SU90G	Lidsey Old Canal & Tip	4 Present	Date
		14/04/2010 - 23/04/2010	SU9301	Bognor South Bersted	3 Present	Date
		14/04/2010	SU957023	Barnham Court Farm	1 Individual	Date
		14/07/2009	SU9301	Bognor South Bersted	5 Present	Date
		07/07/2009	SU90Q	Flansham, Flansham nr Bognor	2 Present	Date
		24/06/2009	SU9301	Bognor South Bersted	2 Present	Date
		13/06/2009	SU9301	Bognor North Bersted	12 Present	Date
		03/06/2009	SU90F	Bognor North Bersted	6 Present	Date, Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	1 Present	Date, Positive Breeding
		07/05/2009 - 27/05/2009	SU9301	Bognor South Bersted	1 Present	Date
		21/05/2009	SU9301	Bognor South Bersted	3 Present	Date
		20/05/2009	SU90G	Lidsey Old Canal & Tip	3 Present	Date
		30/04/2009	SU9301	Bognor South Bersted	3 Present	Date
		29/04/2009	SU90G	Lidsey Old Canal & Tip	2 Present	Date
		21/04/2009	SU90Q	Flansham, Flansham nr Bognor	2 Present	Date
		14/04/2009 - 21/04/2009	SU90Q	Flansham, Flansham nr Bognor	1 Present	Date
		15/04/2009	SU90L	Lidsey Sewage Works	3 Present	Date
		05/04/2009	SU90Q	Middleton-on-Sea	5 Present	Date, Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	6 Present	Date, Positive Breeding
		02/07/2008 - 30/07/2008	SU9301	Bognor South Bersted	4 Present	Date
		20/06/2008	SU90Q	Middleton on Sea CP, Middleton-on-Sea	1 Present	Date
		18/06/2008	SU9301	Bognor South Bersted	5 Present	Date
		14/06/2008	SU90G	Lidsey Old Canal & Tip	4 Present	Date, Positive Breeding
		31/05/2008	SU952022	Flansham Hoe Farm	1 Present	Date
		29/05/2008	SU90Q	Middleton on Sea CP, Middleton-on-Sea	1 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		19/05/2008 - 21/05/2008	SU9301	Bognor South Bersted	4 Present	Date
		05/05/2008	SU90G	Lidsey Old Canal & Tip	7 Present	Date, Positive Breeding
		03/05/2008	SU90R	Yapton	5 Present	Date, Positive Breeding
		14/04/2008 - 28/04/2008	SU9301	Bognor South Bersted	3 Present	Date
		01/04/2008	SU9502	Barnham Lidsey Rife	4 Present	Date
		15/06/2007	SU90G	Lidsey Old Canal & Tip,	3 Present	Date
		01/06/2007 - 09/06/2007	SU9400	Aldingbourne Rife,	1 Present	Date
		07/05/2007	SU90G	Lidsey Old Canal & Tip,	4 Present	Date
		02/05/2007	SU9400	Aldingbourne Rife,	1 Present	Date
		10/04/2007	SU90G	Lidsey Old Canal & Tip,	3 Present	Date
		07/04/2007	SU9503	Barnham,	5 Present	Date
		09/04/2006	SU9503	Barnham	2 Male	Date
		09/04/2006	SU955025	Barnham Lidsey Rife	3 Male	Date
		05/07/2005	SZ9399	Bognor Hotham Park	1 Present	Date
		03/04/2005	SU960030	Barnham	6 Present	Date
		23/04/2001	SU968011	Middleton on Sea CP, Middleton-on-Sea	5 Present	Date
		14/04/1995	SU9502	Barnham Lidsey Rife	6 Present	Date
<i>Hirundo rustica</i>	Swallow	19/05/2012	SU9502	Barnham Lidsey Rife	4 Present	Positive Breeding
		01/05/2011	SU90L	Lidsey Sewage Works	Present	Positive Breeding
		08/07/2010	SU9400	Aldingbourne Rife	2 Present	Positive Breeding
		27/04/2010	SU9400	Aldingbourne Rife	3 Present	Positive Breeding
		16/08/2009	SU9503	Barnham	4 Present	Positive Breeding
		04/06/2009	SU90L	Lidsey Sewage Works	6 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	9 Present	Positive Breeding
		12/07/2008	SU9602	Yapton Drove Lane Farm	3 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	3 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	4 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	9 Present	Positive Breeding
<i>Delichon urbicum</i>	House Martin	03/05/2008	SU90R	Yapton	2 Present	Positive Breeding
		08/08/2015	SU958008	Felpham nr Bognor Regis	1 Present	Positive Breeding
		16/06/2015	SU958008	Felpham nr Bognor Regis	2 Present	Positive Breeding
		16/06/2015	SU959009	Felpham nr Bognor Regis	2 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		01/06/2009	SU90Q	Middleton-on-Sea	2 Present	Positive Breeding
		26/07/2008	SU90R	Yapton	16 Present	Positive Breeding
		21/08/1997	SZ9399	Bognor Regis	1 Present	Positive Breeding
<i>Anthus pratensis</i>	Meadow Pipit	08/07/2015	SU9301	Bognor North Bersted	Present	Date
<i>Motacilla flava</i>	Yellow Wagtail	03/09/2014	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		02/09/2014	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		03/06/2014	SU9502	Flansham Hoe Farm	1 Present	Date
		05/07/2013	SU961026	Yapton Stakers Farm	2 Present	Positive Breeding
<i>Motacilla cinerea</i>	Grey Wagtail	03/05/2013	SZ9399	Bognor Regis	1 Present	Date
		01/05/2011	SU90L	Lidsey Sewage Works	1 Present	Date, Positive Breeding
<i>Prunella modularis</i>	Dunnock	21/04/2015	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		02/10/2014	SZ99J	Bognor Regis	2 Present	Positive Breeding
		19/07/2011	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		01/04/2011 - 07/04/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		14/06/2010	SU90Q	Middleton on Sea CP, Middleton-on-Sea		Positive Breeding
		11/06/2010	SU90K	Bognor Regis Golf Course	3 Present	Positive Breeding
		07/06/2010	SU9301	Bognor South Bersted		Positive Breeding
		10/06/2009	SZ99U	Felpham nr Bognor Regis	10 Present	Positive Breeding
		04/06/2009	SU90L	Lidsey Sewage Works	4 Present	Positive Breeding
		03/06/2009	SU90F	Bognor North Bersted	1 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	9 Present	Positive Breeding
		21/04/2009	SZ99P	Bognor Regis East	1 Present	Positive Breeding
		21/04/2009	SZ99U	Felpham nr Bognor Regis	9 Present	Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	11 Present	Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	9 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	6 Present	Positive Breeding
		14/06/2008	SZ99J	Bognor Regis	3 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	4 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	6 Present	Positive Breeding
		03/05/2008	SU90R	Yapton	6 Present	Positive Breeding
		23/04/2008	SZ99J	Bognor Regis	2 Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	3 Present	Positive Breeding
<i>Phoenicurus phoenicurus</i>	Redstart	28/04/2016	SU9501	Flansham Hoe Farm	1 Present	Date
		18/04/2016	SU9401	Bognor Lec Airfield	1 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		12/04/2016	SU9502	Barnham Lidsey Rife	1 Present	Date
		05/09/2014	SU9402	Lidsey Lodge	1 Present	Positive Breeding
		22/04/2014	SU9401	Bognor Lec Airfield	1 Present	Date, Positive Breeding
		13/04/2014	SU9502	Flansham Hoe Farm	1 Present	Date
		01/04/2014	SU9503	Barnham	1 Present	Date
		17/04/2013	SZ9499	Bognor Regis	1 Present	Date
		04/05/2012	SU9401	Bognor Lec Airfield	1 Present	Date
		13/04/2012	SU9402	Lidsey Lodge	1 Present	Date
		12/04/2008	SU90L	Lidsey Sewage Works	1 Present	Date
		23/04/2007	SZ9599	Felpham nr Bognor Regis,	1 Present	Date
<i>Saxicola rubetra</i>	Whinchat	05/09/2014	SU9301	Bognor North Bersted	8 Present	Positive Breeding
		14/05/2014	SU9401	Bognor Lec Airfield	3 Present	Date
		04/05/2012	SU9603	Barnham Lidsey Rife	2 Present	Date
		03/05/2012 - 04/05/2012	SU9502	Barnham Lidsey Rife	1 Present	Date
		24/05/2010	SU90F	Bognor North Bersted	1 Present	Date
		04/05/1993	SU944006	Barnham Lidsey Rife	4 Present	Date
<i>Oenanthe oenanthe</i>	Wheatear	07/05/2016	SU9503	Barnham	1 Present	Date
		07/05/2015	SU9502	Barnham Lidsey Rife	1 Present	Date
		01/05/2015	SU9501	Bognor Regis Golf Course	1 Present	Date
		30/07/2014	SU9503	Barnham	1 Present	Date
		07/05/2014	SU9503	Barnham	2 Present	Date
		06/05/2014	SZ942996	Bognor Regis East	1 Present	Date
		18/03/2014	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		07/05/2012	SU9601	Flansham, Flansham nr Bognor	12 Present	Date
		04/05/2012 - 07/05/2012	SU9402	Lidsey Lodge	3 Present	Date
		06/05/2012	SU9402	Lidsey Lodge	7 Present	Date
		04/05/2012	SU9501	Flansham Hoe Farm	1 Present	Date
		04/05/2012	SU9502	Barnham Lidsey Rife	25 Present	Date
		04/05/2012	SU9503	Barnham	1 Present	Date
		04/05/2012	SU9602	Yapton Drove Lane Farm	25 Present	Date
		04/05/2012	SU9603	Barnham Lidsey Rife	2 Present	Date
		03/05/2012 - 04/05/2012	SU9502	Barnham Lidsey Rife	1 Present	Date

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		01/05/2011	SU90L	Lidsey Sewage Works	1 Present	Date
		26/07/2008	SU90R	Yapton	2 Present	Date
<i>Turdus philomelos</i>	Song Thrush	21/04/2015	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		13/03/2015	SU9603	Yapton Drove Lane Farm	1 Present	Positive Breeding
		07/04/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		01/04/2011	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		11/06/2010	SU90K	Bognor Regis Golf Course	4 Present	Positive Breeding
		07/06/2010	SU9301	Bognor South Bersted	4 Present	Positive Breeding
		04/06/2009	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		03/06/2009	SU90F	Bognor North Bersted	3 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	3 Present	Positive Breeding
		21/04/2009	SZ99P	Bognor Regis East	1 Present	Positive Breeding
		21/04/2009	SZ99U	Felpham nr Bognor Regis	1 Present	Positive Breeding
		20/04/2009	SU948015	Shripney nr Bognor	1 Present	Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	4 Present	Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	1 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	8 Present	Positive Breeding
		14/06/2008	SZ99J	Bognor Regis	4 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		30/05/2008	SU90F	Bognor North Bersted	2 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	5 Present	Positive Breeding
		23/04/2008	SZ99J	Bognor Regis	3 Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	2 Present	Positive Breeding
<i>Turdus viscivorus</i>	Mistle Thrush	24/05/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		17/05/2010	SU946009	Bognor Regis		Positive Breeding
		05/07/2008	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
<i>Muscicapa striata</i>	Spotted Flycatcher	07/09/2014	SU9401	Bognor Lec Airfield	1 Present	Positive Breeding
		02/06/2009	SU948018	Shripney nr Bognor	1 Present	Positive Breeding
<i>Sylvia communis</i>	Whitethroat	21/04/2015	SU9401	Bognor Lec Airfield	3 Present	Positive Breeding
		30/07/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		19/06/2011	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		01/05/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		26/04/2011	SU90F	Bognor North Bersted	1 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		24/04/2011	SZ99J	Bognor Regis	1 Present	Positive Breeding
		23/04/2011	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		10/04/2011 - 16/04/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		14/06/2010	SU90Q	Middleton on Sea CP, Middleton-on-Sea		Positive Breeding
		11/06/2010	SU90K	Bognor Regis Golf Course		Positive Breeding
		07/06/2010	SU9301	Bognor South Bersted		Positive Breeding
		11/06/2009	SZ99P	Bognor Regis East	1 Present	Positive Breeding
		04/06/2009	SU90L	Lidsey Sewage Works	2 Present	Positive Breeding
		03/06/2009	SU90F	Bognor North Bersted	3 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	6 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	5 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	11 Present	Positive Breeding
		03/05/2008	SU90R	Yapton	4 Present	Positive Breeding
<i>Poecile palustris</i>	Marsh Tit	14/04/2008	SU9301	Bognor South Bersted	1 Present	Date
<i>Sturnus vulgaris</i>	Starling	07/05/2015	SU9301	Bognor South Bersted	2 Present	Positive Breeding
		14/02/2013	SU9301	Bognor North Bersted	20 Present	Positive Breeding
		04/05/2012 - 11/05/2012	SU9601	Flansham, Flansham nr Bognor	42 Present	Positive Breeding
		30/07/2011	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		27/07/2011 - 30/07/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		25/07/2011	SU90F	Bognor North Bersted	1 Present	Positive Breeding
		08/07/2011	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		19/06/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		25/04/2011	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		08/07/2010	SU9400	Aldingbourne Rife	7 Present	Positive Breeding
		14/06/2010	SU90Q	Middleton on Sea CP, Middleton-on-Sea	17 Present	Positive Breeding
		11/06/2010	SU90K	Bognor Regis Golf Course	7 Present	Positive Breeding
		07/06/2010	SU9301	Bognor South Bersted		Positive Breeding
		08/05/2010 - 17/05/2010	SU90G	Lidsey Old Canal & Tip	2 Present	Positive Breeding
		04/05/2010	SU90Q	Middleton on Sea CP, Middleton-on-Sea		Positive Breeding
		11/06/2009	SZ99P	Bognor Regis East	2 Present	Positive Breeding
		10/06/2009	SZ99U	Felpham nr Bognor Regis	16 Present	Positive Breeding
		04/06/2009	SU90L	Lidsey Sewage Works	19 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		03/06/2009	SU90F	Bognor North Bersted	62 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	102 Present	Positive Breeding
		07/05/2009 - 27/05/2009	SU9301	Bognor South Bersted	2 Present	Positive Breeding
		19/05/2009	SU90Q	Flansham, Flansham nr Bognor	23 Present	Positive Breeding
		05/05/2009 - 19/05/2009	SU90Q	Flansham, Flansham nr Bognor	12 Present	Positive Breeding
		21/04/2009	SZ99P	Bognor Regis East	28 Present	Positive Breeding
		21/04/2009	SZ99U	Felpham nr Bognor Regis	14 Present	Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	29 Present	Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	6 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	7 Present	Positive Breeding
		14/06/2008	SZ99J	Bognor Regis	5 Present	Positive Breeding
		06/06/2008	SU90Q	Middleton-on-Sea	1 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	52 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	20 Present	Positive Breeding
		03/05/2008	SU90R	Yapton	44 Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	4 Present	Positive Breeding
<i>Passer domesticus</i>	House Sparrow	30/07/2011	SU90L	Lidsey Sewage Works	10 Present	Positive Breeding
		28/07/2011 - 30/07/2011	SZ99J	Bognor Regis	1 Present	Positive Breeding
		08/07/2011	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		07/04/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		08/07/2010	SU9400	Aldingbourne Rife	4 Present	Positive Breeding
		14/06/2010	SU90Q	Middleton on Sea CP, Middleton-on-Sea	9 Present	Positive Breeding
		11/06/2010	SU90K	Bognor Regis Golf Course	2 Present	Positive Breeding
		07/06/2010	SU9301	Bognor South Bersted	2 Present	Positive Breeding
		11/04/2010	SZ99P	Felpham nr Bognor Regis		Positive Breeding
		16/08/2009	SU9503	Barnham	30 Present	Positive Breeding
		11/06/2009	SZ99P	Bognor Regis East	11 Present	Positive Breeding
		10/06/2009	SZ99U	Felpham nr Bognor Regis	14 Present	Positive Breeding
		04/06/2009	SU90L	Lidsey Sewage Works	11 Present	Positive Breeding
		03/06/2009	SU90F	Bognor North Bersted	7 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	22 Present	Positive Breeding
		21/04/2009	SZ99P	Bognor Regis East	4 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		21/04/2009	SZ99U	Felpham nr Bognor Regis	9 Present	Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	14 Present	Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	3 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	17 Present	Positive Breeding
		14/06/2008	SZ99J	Bognor Regis	2 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	12 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	15 Present	Positive Breeding
		03/05/2008	SU90R	Yapton	25 Present	Positive Breeding
		23/04/2008	SZ99J	Bognor Regis	5 Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	17 Present	Positive Breeding
<i>Linaria cannabina</i>	Linnet	22/04/2015	SU9401	Shripney nr Bognor	1 Present	Positive Breeding
		21/04/2015	SU9401	Shripney nr Bognor	2 Present	Positive Breeding
		30/07/2011	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		30/07/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		13/07/2011	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		10/04/2011	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		21/04/2010	SU943002	Bognor Regis	2 Present	Positive Breeding
		21/04/2010	SU952022	Flansham Hoe Farm	2 Present	Positive Breeding
		10/04/2010	SU967027	Yapton Drove Lane Farm	1 Present	Positive Breeding
		11/06/2009	SZ99P	Bognor Regis East	2 Present	Positive Breeding
		04/06/2009	SU90L	Lidsey Sewage Works	2 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	1 Present	Positive Breeding
		21/04/2009	SZ99U	Felpham nr Bognor Regis	1 Present	Positive Breeding
		20/04/2009	SU949020	Lidsey Lodge	2 Present	Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	2 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	5 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	3 Present	Positive Breeding
<i>Serinus serinus</i>	Serin	03/05/2008	SZ9399	Bognor Regis	1 Female	All Records
		03/04/2008	SZ9399	Bognor Regis	Present	All Records
<i>Pyrrhula pyrrhula</i>	Bullfinch	09/08/2013	SU9301	Bognor North Bersted	4 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	6 Present	Positive Breeding
<i>Coccothraustes coccothraustes</i>	Hawfinch	26/06/1988	SZ9599	Felpham nr Bognor Regis	1 Present	All Records
<i>Emberiza citrinella</i>	Yellowhammer	30/06/2016	SU9501	Flansham, Flansham nr Bognor	1 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		12/03/2016	SU958027	Barnham Lidsey Rife	1 Present	Positive Breeding
		15/07/2012	SU959030	Barnham Lidsey Rife	1 Present	Positive Breeding
		19/05/2012	SU9603	Yapton Drove Lane Farm	1 Present	Positive Breeding
		30/07/2011	SU90R	Yapton	1 Present	Positive Breeding
		25/07/2011	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		01/05/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		26/04/2011	SU90F	Bognor North Bersted	1 Present	Positive Breeding
		10/04/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		07/06/2010	SU9301	Bognor South Bersted	1 Present	Positive Breeding
		23/05/2010	SU961019	Flansham Hoe Farm		Positive Breeding
		23/05/2010	SU965025	Yapton Drove Lane Farm	2 Present	Positive Breeding
		08/05/2010 - 17/05/2010	SU90G	Lidsey Old Canal & Tip	1 Present	Positive Breeding
		15/05/2010	SU962021	Flansham Hoe Farm	1 Present	Positive Breeding
		10/04/2010	SU958030	Barnham Lidsey Rife	1 Male	Positive Breeding
		20/07/2009	SU90G	Lidsey Old Canal & Tip	2 Present	Positive Breeding
		03/06/2009	SU90F	Bognor North Bersted	2 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	1 Present	Positive Breeding
		23/05/2009	SU9502	Barnham Lidsey Rife	2 Present	Positive Breeding
		23/05/2009	SU959030	Barnham	1 Present	Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	3 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	3 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		05/05/2008	SU90G	Lidsey Old Canal & Tip	5 Present	Positive Breeding
<i>Emberiza schoeniclus</i>	Reed Bunting	21/05/2016	SU9502	Barnham Lidsey Rife	3 Male	Positive Breeding
		19/05/2016	SU944006	Felpham CP, Felpham Rec Ground	2 Present	Positive Breeding
		12/03/2016	SU958027	Barnham Lidsey Rife	1 Male; 1 Present	Positive Breeding
		08/07/2015	SU9301	Bognor North Bersted	Present	Positive Breeding
		21/04/2015	SU9401	Shripney nr Bognor	2 Present	Positive Breeding
		23/06/2013	SU9603	Yapton Drove Lane Farm	1 Male	Positive Breeding
		11/05/2013	SU9603	Yapton Drove Lane Farm	1 Present	Positive Breeding
		21/02/2013	SU9301	Bognor North Bersted	1 Present	Positive Breeding
		15/07/2012	SU9502	Barnham Lidsey Rife	2 Present	Positive Breeding
		19/05/2012	SU953027	Barnham Lidsey Rife	2 Present	Positive Breeding
		19/05/2012	SU9603	Yapton Drove Lane Farm	1 Present	Positive Breeding

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		03/03/2012	SU953027	Barnham Lidsey Rife	1 Present	Positive Breeding
		30/07/2011	SU90R	Yapton	1 Present	Positive Breeding
		19/06/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		01/05/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		26/04/2011	SU90F	Bognor North Bersted	1 Present	Positive Breeding
		10/04/2011	SU90L	Lidsey Sewage Works	1 Present	Positive Breeding
		08/07/2010	SU9400	Aldingbourne Rife	2 Present	Positive Breeding
		27/06/2010	SU954024	Barnham Lidsey Rife	2 Male	Positive Breeding
		20/06/2010	SU9602	Yapton Drove Lane Farm	1 Male	Positive Breeding
		11/06/2010	SU90K	Bognor Regis Golf Course		Positive Breeding
		17/05/2010	SU950021	Bognor Regis	1 Present	Positive Breeding
		17/05/2010	SU954024	Flansham Hoe Farm		Positive Breeding
		15/05/2010	SU954024	Barnham Lidsey Rife	1 Male	Positive Breeding
		09/05/2010	SU965025	Yapton Drove Lane Farm		Positive Breeding
		27/04/2010	SU9400	Aldingbourne Rife	2 Present	Positive Breeding
		10/04/2010	SU954023	Barnham Lidsey Rife	1 Male	Positive Breeding
		13/06/2009	SU9502	Barnham Lidsey Rife	3 Male	Positive Breeding
		11/06/2009	SZ99P	Bognor Regis East	1 Present	Positive Breeding
		03/06/2009	SU90F	Bognor North Bersted	2 Present	Positive Breeding
		01/06/2009	SU90Q	Middleton-on-Sea	2 Present	Positive Breeding
		29/05/2009	SU9502	Barnham Lidsey Rife	1 Present; 2 Male	Positive Breeding
		09/05/2009	SU961019	Flansham Hoe Farm	1 Male	Positive Breeding
		25/04/2009	SU953026	Barnham Lidsey Rife	2 Male	Positive Breeding
		05/04/2009	SU90Q	Middleton-on-Sea	1 Present	Positive Breeding
		03/04/2009	SU90F	Bognor North Bersted	1 Present	Positive Breeding
		14/06/2008	SU90G	Lidsey Old Canal & Tip	2 Present	Positive Breeding
		04/06/2008	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		29/04/2008	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
		18/04/2008	SU90K	Bognor Regis Golf Course	1 Present	Positive Breeding
<i>Emberiza calandra</i>	Corn Bunting	01/06/2014	SU90G	Lidsey Old Canal & Tip	Present	All Records
		01/06/2014	SU90K	Bognor Regis Golf Course	Present	All Records
		01/06/2014	SU90R	Yapton	Present	All Records
		03/05/2014	SU953026	Flansham Hoe Farm	1 Present	All Records
		30/07/2011	SU90R	Yapton	6 Present	All Records
		04/07/2010	SU9602	Barnham	1 Male	All Records

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Taxon name	Common name	Date	Grid reference	Location name	Abundance	Basis of selection
		08/05/2010	SU90G	Lidsey Old Canal & Tip	1 Present	All Records
		29/04/1999	SU956025	Barnham Lidsey Rife	1 Present	All Records
		07/06/1995	SU9602	Yapton Bilsham	1 Present	All Records
		01/06/1994	SU960028	Barnham Lidsey Rife	1 Present	All Records
		13/05/1994	SU957025	Barnham Lidsey Rife	1 Present	All Records
		01/06/1993	SU9402	Shripney nr Bognor	1 Present	All Records
		01/06/1993	SU9502	Barnham	1 Present	All Records
		01/06/1993	SU9602	Yapton Drove Lane Farm	2 Present	All Records
		01/06/1993	SU9603	Barnham	1 Present	All Records
		01/06/1993	SU9702	Yapton	1 Present	All Records
		05/05/1992	SU9402	Barnham	2 Present	All Records
		06/02/1992	SU9603	Yapton Drove Lane Farm	7 Present	All Records
		01/05/1991	SU947019	Bognor Regis	1 Present	All Records
		01/05/1991	SU9702	Yapton	1 Present	All Records
		05/11/1990	SU954020	Flansham, Flansham nr Bognor	9 Present	All Records
		30/04/1989 - 30/04/1989	SU9601	Flansham, Flansham nr Bognor	10 Present	All Records
		01/01/1986	SU9702	Yapton	1 Present	All Records
		23/08/1982	SZ9399	Bognor Regis	4 Present	All Records

Table 7: Summary invasive non-native species records

This table summarises records from 1980 onwards. See table 8 for detailed records.

Maximum abundance = highest total number of species recorded at one time.

N.B. Where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record.

Taxon name	Common name	Invasive Non-Native Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
Birds						
<i>Aix galericulata</i>	Mandarin Duck	W&CA Sch 9 INNS	28/09/1998	28/09/1998	1	1
<i>Aix sponsa</i>	Wood Duck	W&CA Sch 9 INNS	19/11/1991	19/11/1991	1	1
<i>Alopochen aegyptiacus</i>	Egyptian Goose	W&CA Sch 9 INNS	01/02/2014	18/04/2016	2	1
<i>Branta canadensis</i>	Canada Goose	W&CA Sch 9 INNS	18/04/2009	18/04/2009	1	3
<i>Branta leucopsis</i>	Barnacle Goose	W&CA Sch 9 INNS	03/01/2015	03/01/2015	1	1
<i>Chrysolophus pictus</i>	Golden Pheasant	W&CA Sch 9 INNS	13/03/2015	13/03/2015	1	4
<i>Cygnus atratus</i>	Black Swan	W&CA Sch 9 INNS	27/01/2011	13/02/2015	5	1
<i>Psittacula krameri</i>	Ring-necked Parakeet	W&CA Sch 9 INNS	05/08/1995	24/09/2000	4	1
Higher Plants - Ferns						
<i>Azolla filiculoides</i>	Water Fern	W&CA Sch 9 INNS	29/07/2005	29/07/2005	1	1
Higher Plants - Flowering Plants						
<i>Allium triquetrum</i>	Three-cornered Garlic	W&CA Sch 9 INNS	2007	05/08/2016	5	1
<i>Centranthus ruber</i>	Red valerian	Sussex INNS	08/01/2004	14/05/2016	15	1
<i>Cortaderia selloana</i>	Pampas-grass	Sussex INNS	17/09/2010	21/09/2014	3	1
<i>Cotoneaster horizontalis</i>	Wall Cotoneaster	W&CA Sch 9 INNS	29/07/2005	05/08/2016	6	1
<i>Cotoneaster integrifolius</i>	Small-leaved cotoneaster	W&CA Sch 9 INNS	1990	1990	1	1
<i>Crassula helmsii</i>	New Zealand Pigmyweed	W&CA Sch 9 INNS	23/05/2009	23/05/2009	1	1
<i>Crocsmia pottsii</i> x <i>aurea</i> = <i>C. x crocosmiiflora</i>	Montbretia	W&CA Sch 9 INNS	31/07/2005	25/07/2011	6	1
<i>Elodea nuttallii</i>	Nuttall's Waterweed	W&CA Sch 9 INNS	30/03/2008	09/03/2015	4	1
<i>Fallopia japonica</i>	Japanese Knotweed	W&CA Sch 9 INNS	08/01/2004	30/10/2008	4	1
<i>Heracleum mantegazzianum</i>	Giant Hogweed	W&CA Sch 9 INNS	12/02/2006	09/01/2015	2	1
<i>Hyacinthoides non-scripta</i> x <i>hispanica</i> = <i>H. x massartiana</i>	Hybrid bluebell	Sussex INNS	2005	14/05/2016	12	1
<i>Impatiens glandulifera</i>	Indian Balsam	W&CA Sch 9 INNS	09/10/2006	01/01/2010 - 31/12/2010	2	1

Taxon name	Common name	Invasive Non-Native Designation	Date of earliest record	Date of latest record	No. of records	Max. abundance
<i>Lamium galeobdolon</i> subsp. <i>argentatum</i>	Yellow Archangel	W&CA Sch 9 INNS	31/07/2005	10/07/2015	4	1
<i>Lemna minuta</i>	Least Duckweed	Sussex INNS	2005	2014	8	1
<i>Myriophyllum aquaticum</i>	Parrot's-feather	W&CA Sch 9 INNS	16/05/2009	23/05/2009	2	1
<i>Parthenocissus inserta</i>	False virginia creeper	W&CA Sch 9 INNS	10/07/2015	10/07/2015	1	1
<i>Petasites fragrans</i>	Winter Heliotrope	Sussex INNS	08/01/2004	05/08/2016	13	1
<i>Prunus laurocerasus</i>	Cherry Laurel	Sussex INNS	09/11/2008	09/11/2008	1	Present
<i>Quercus ilex</i>	Evergreen Oak	Sussex INNS	29/07/2005	05/08/2016	11	1
<i>Rhododendron ponticum</i>	A Flowering Plant	W&CA Sch 9 INNS	09/11/2008	09/11/2008	1	Present
<i>Robinia pseudoacacia</i>	False-acacia	W&CA Sch 9 INNS	21/08/2008	21/08/2008	1	1
Invertebrates - Beetles						
<i>Harmonia axyridis</i>	Harlequin Ladybird	Sussex INNS	11/02/2013	11/02/2013	1	1
Mammals - Terrestrial (excl. bats)						
<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	W&CA Sch 9 INNS	20/10/2000	03/01/2005	5	2

Table 8: Invasive non-native species records

Records in this table are from 1980 onwards.

N.B. Where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record.

Taxon name	Common name	Date	Grid reference	Location name	Abundance
Birds					
<i>Aix galericulata</i>	Mandarin Duck	28/09/1998	SU944001	Aldingbourne Rife	1 Present
<i>Aix sponsa</i>	Wood Duck	19/11/1991	SU945003	Barnham Lidsey Rife	1 Present
<i>Alopochen aegyptiacus</i>	Egyptian Goose	18/04/2016	SU9401	Shripney flood relief pool	1 Present
		02/01/2014	SU9502	Flansham Hoe Farm	1 Present
<i>Branta canadensis</i>	Canada Goose	18/04/2009	SZ9399	Bognor Hotham Park	3 Present
<i>Branta leucopsis</i>	Barnacle Goose	01/03/2015	SU9402	Lidsey Lodge	1 Present
<i>Chrysolophus pictus</i>	Golden Pheasant	13/03/2015	SU9603	Yapton Drove Lane Farm	4 Present
<i>Cygnus atratus</i>	Black Swan	13/02/2015	SU9402	Lidsey Lodge	1 Present
		30/01/2011	SU9502	Barnham Lidsey Rife	1 Present
		29/01/2011	SU90L	Lidsey Sewage Works	1 Present
		29/01/2011	SU9502	Flansham Hoe Farm	1 Present
		27/01/2011	SU953025	Flansham Hoe Farm	1 Present
<i>Psittacula krameri</i>	Ring-necked Parakeet	24/09/2000	SU944000	Bognor Regis	1 Present
		03/08/1999	SU952014	Bognor Regis Golf Course	1 Present
		10/06/1996	SU9400	Aldingbourne Rife	1 Present
		08/05/1995	SU944003	Aldingbourne Rife	1 Present
Higher Plants - Ferns					
<i>Azolla filiculoides</i>	Water Fern	29/07/2005	SU90F	Shripney & S.Bersted	Present
Higher Plants - Flowering Plants					
<i>Allium triquetrum</i>	Three-cornered Garlic	08/05/2016	SZ99J	Bognor Regis	Present
		28/02/2012	SU971003	Middleton-on-Sea	Present
		28/02/2012	SZ958998	Felpham	Present
		01/01/2008 - 31/12/2008	SZ99U	Middleton on Sea	Present
		2007	SU9575400517	Felpham, New Barn Lane	Present
<i>Centranthus ruber</i>	Red valerian	14/05/2016	SU90F	St. Mary Magdalene churchyard, South Bersted	Present
		08/05/2016	SZ99J	Bognor Regis	Present
		07/10/2015	SU90R	Yapton	Present
		30/05/2013	SU90F	Rowan Way, Bognor Regis	Present

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Taxon name	Common name	Date	Grid reference	Location name	Abundance
		23/05/2009	SU90F	Bersted	Present
		16/05/2009	SU90K	Flansham East	Present
		01/01/2008 - 31/12/2008	SU90R	Yapton	Present
		18/06/2008	SZ99J	West Bognor	Present
		10/09/2006	SU90G	Shripney	Present
		10/10/2005	SZ99P	Felpham	Present
		21/08/2005	SU90L	S of Barnham	Present
		31/07/2005	SU90Q	Flansham / Middleton area	Present
		29/07/2005	SU90F	Shripney & S.Bersted	Present
		29/07/2005	SZ99U	S.Felpham/Middleton area	Present
		Aug-04	SZ99P	Felpham	Present
<i>Cortaderia selloana</i>	Pampas-grass	21/09/2014	SU9494000819	Felpham	Present
		28/02/2012	SZ9699399754	Middleton-on-Sea	Present
		17/09/2010	SZ9699299749	Middleton on Sea CP, Middleton-on-sea	Present
<i>Cotoneaster horizontalis</i>	Wall Cotoneaster	08/05/2016	SZ99J	Bognor Regis	Present
		12/08/2011	SU90G	Shripney area	Present
		21/08/2008	SZ9512599812	Felpham	Present
		2007	SU90R	Yapton,	Present
		02/07/2006	SZ99J	Bognor	Present
		29/07/2005	SZ99U	S.Felpham/Middleton area	Present
<i>Cotoneaster integrifolius</i>	Small-leaved cotoneaster	1990	SU90R		Present
<i>Crassula helmsii</i>	New Zealand Pigmyweed	23/05/2009	SU90F	Bersted	Present
<i>Crocasmia pottsii</i> x <i>aurea</i> = <i>C. x crocosmiiflora</i>	Montbretia	25/07/2011	SU90Q	Felpham N.E.	Present
		07/06/2011	SZ99J	Middleton on Sea	Present
		07/06/2011	SZ99U	Middleton on Sea	Present
		16/05/2009	SU90K	Flansham East	Present
		2007	SU90R	Yapton,	Present
		31/07/2005	SU90Q	Flansham / Middleton area	Present
<i>Elodea nuttallii</i>	Nuttall's Waterweed	03/09/2015	SU90F	Bognor Regis: North Bersted	Present
		26/07/2013	SU90L	South of Barnham	Present
		23/05/2009	SU90F	Bersted	Present
		30/03/2008	SU90G	W of Lidsey	Present
<i>Fallopia japonica</i>	Japanese Knotweed	30/10/2008	SZ941996	Bognor Regis, University of Chichester - Bognor Regis campus. Northern boundary.	Present

Taxon name	Common name	Date	Grid reference	Location name	Abundance
		10/09/2006	SU90G	Shripney	Present
		2005	SU90R	Yapton,	Present
		Aug-04	SZ99P	Felpham	Present
<i>Heracleum mantegazzianum</i>	Giant Hogweed	01/09/2015	SU90F	Bognor Regis: North Bersted	Present
		02/12/2006	SU90Q	Comet Corner	Present
<i>Hyacinthoides non-scripta</i> x <i>hispanica</i> = <i>H. x massartiana</i>	Hybrid bluebell	14/05/2016	SU90F	St. Mary Magdalene churchyard, South Bersted	Present
		08/05/2016	SZ99J	Bognor Regis	Present
		30/05/2013	SU90F	Rowan Way, Bognor Regis	Present
		24/04/2010	SZ99U	Felpham	Present
		09/05/2009	SU90L	Barnham South	Present
		30/04/2009	SZ99P	East Bognor Regis	Present
		12/02/2009	SU90F	North Bersted	Present
		30/03/2008	SU90G	W of Lidsey	Present
		2006	SU90K	NW Felpham	Present
		2006	SU90Q	Middleton on Sea	Present
		18/07/2006	SZ99J	Bognor	Present
		2005	SU90R	Yapton,	Present
<i>Impatiens glandulifera</i>	Indian Balsam	01/01/2010 - 31/12/2010	SU90Q	Felpham/Middleton	Present
		10/09/2006	SU90G	Shripney	Present
<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>	Yellow Archangel	07/10/2015	SU90R	Yapton	Present
		19/05/2009	SZ99J	Bognor Regis	Present
		2007	SU90R	Yapton,	Present
		31/07/2005	SU90Q	Flansham / Middleton area	Present
<i>Lemna minuta</i>	Least Duckweed	2014	SZ99P	Felpham [south]	Present
		2014	SZ99P	Felpham[south]	Present
		2013	SU90K	Felpham	Present
		01/01/2010 - 31/12/2010	SU90R	Yapton	Present
		23/05/2009	SU90F	Bersted	Present
		30/03/2008	SU90G	W of Lidsey	Present
		2005	SU962012	Flansham	Present
		21/08/2005	SU90L	S of Barnham	Present
<i>Myriophyllum aquaticum</i>	Parrot's-feather	23/05/2009	SU90F	Bersted	Present
		16/05/2009	SU90K	Flansham East	Present

Taxon name	Common name	Date	Grid reference	Location name	Abundance
<i>Parthenocissus inserta</i>	False virginia creeper	07/10/2015	SU90R	Yapton	Present
<i>Petasites fragrans</i>	Winter Heliotrope	08/05/2016	SZ99J	Bognor Regis	Present
		07/10/2015	SU90R	Yapton	Present
		17/02/2015	SZ99P	Felpham	Present
		13/06/2010	SZ99U	Middleton on Sea	Present
		09/05/2009	SU90L	Barnham South	Present
		2006	SU90R	Barnham/Yapton area	Present
		10/09/2006	SU90G	Shripney	Present
		18/07/2006	SZ99J	Bognor	Present
		2005	SU90Q	Felpham area	Present
		17/12/2005	SU90K	Flansham	Present
		10/10/2005	SZ99P	Felpham	Present
		29/07/2005	SU90F	Shripney & S.Bersted	Present
		Aug-04	SZ99P	Felpham	Present
<i>Prunus laurocerasus</i>	Cherry Laurel	11/09/2008	SZ942995	College Wood,	LA DAFOR
<i>Quercus ilex</i>	Evergreen Oak	08/05/2016	SZ99J	Bognor Regis	Present
		07/10/2015	SU90R	Yapton	Present
		29/03/2014	SZ99U	Felpham,SE	Present
		01/01/2010 - 31/12/2010	SU90K	NW Felpham	Present
		30/04/2009	SZ99P	East Bognor Regis	Present
		30/10/2008	SZ941996	Bognor Regis, University of Chichester - Bognor Regis campus. Scattered trees.	O DAFOR
		10/09/2006	SU90G	Shripney	Present
		02/07/2006	SZ99J	Bognor	Present
		11/09/2005	SU90R	Bilsham/Yapton area	Present
		21/08/2005	SU90L	S of Barnham	Present
		29/07/2005	SU90F	Shripney & S.Bersted	Present
<i>Rhododendron ponticum</i>	A Flowering Plant	11/09/2008	SZ941996	College Copse,	A DAFOR
<i>Robinia pseudoacacia</i>	False-acacia	21/08/2008	SZ9510299788	Felpham	Present
Invertebrates - Beetles					
<i>Harmonia axyridis</i>	Harlequin Ladybird	02/11/2013	SZ9409099738	Unspecified Location Within Bognor Regis CP	Present Adult
Mammals - Terrestrial (excl. bats)					
<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	01/03/2005	SU961012	Flansham	1 Present
		06/12/2003	SZ949999	Felpham	1 Present

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Taxon name	Common name	Date	Grid reference	Location name	Abundance
		21/11/2003	SU949001	A259 Bognor	2 Present
		15/09/2003	SU972003	Middleton Pond	1 Present
		20/10/2000	SZ945996	A259 Felpham	1 Present

Map Citation Sheets

Any citations currently available for designated sites within the search area can be seen on the following pages.

SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

Site Name: Felpham
County: West Sussex
District: Arun
Local Planning Authority: Arun District Council
Size: 1.9 hectares (4.7 acres)
National Grid Ref: SZ948993
Date Notified (Under 1949 Act): - **Date of last revision:** -
Date Notified (Under 1981 Act): 1988 **Date of last revision:** -
Other Information: This new site will be listed in 'A Geological Conservation Review.'

Reason for Notification

A new Palaeocene aged flora, one of only three known in the country, has recently been discovered in the Reading Beds at this site. This assemblage of seeds and fruits is the most diverse known from these Palaeocene strata. Four new genera, unique in the world's Tertiary deposits, and sixteen new species have yet to be described from Felpham. In addition to seeds and fruits, fern fronds, palm stems and leaf fragments also occur. An outstanding site unusual for its variety of preservational states and unique floral assemblage.

SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

Operations likely to damage the special interest

Site name: Felpham (OLD1003487)

Ref. No.	Type of operation
-----------------	--------------------------

- | | |
|------------|---|
| 7. | Dumping, spreading or discharge of any materials. |
| 17. | Reclamation of land from sea, estuary or marsh. |
| 19. | Erection of sea defences or coast protection works, including cliff or landslip drainage or stabilisation measures. |
| 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. |
| 23. | Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling. |
| 26. | Use of vehicles or craft likely to damage or disturb features of interest. |
| 27. | Recreational or other activities likely to damage or disturb features of interest. |

LOCAL WILDLIFE SITE (LWS)

West Sussex

Site Name:	Middleton Shingle		
Site Ref:	Ar19	Owner:	Private
District:	Arun	Size (ha):	1.1
Parish:	Middleton-on-Sea	Date:	Identified Dec 2003
National Grid Ref:	SZ971998	Author:	Simon Curson
Habitat:	Vegetated shingle		

Summary

The site consists of a strip of vegetated shingle along the seafront at Middleton-on-Sea with a large population of Sea Radish *Raphanus raphanistrum* ssp. *Maritimus*, a plant that occurs in only three other sites in Sussex. The strip of vegetated shingle is backed by regularly mown grass and then housing.

Site description

The vegetated shingle is sandwiched between the bare shingle of the beach and a strip of regularly cut grassland at the back of housing. The vegetated shingle is widest in the middle and thins out at either end. The site has been subject to planting of native shingle flora to speed up the process of colonisation, however some species have colonised naturally and all species planted are of local provenance.

Species occurring in the shingle flora closest to the beach include Spear-leaved Orache *Atriplex prostrata*, Field Bindweed *Convolvulus arvensis*, Sea Kale *Crambe maritima*, Sea Couch *Elytrigia atherica*, Sea Sandwort *Honckenia peploides*, Hoary Cress *Lepidium draba*, Curled Dock *Rumex crispus*, Great Mullein *Verbascum thapsus*, Perennial Sow-thistle *Sonchus arvensis* and Sea Mayweed *Tripleurospermum maritimum*.

There is a transition zone between the vegetated shingle and the closely mown greensward. This zone has a good stand of Duke of Argyll's Teaplat *Lycium barbarum*, a few mature Tree Mallow *Lavatera arborea* and most of the Sea Radish. These plants are fairly high growing and so give the middle of the area a slightly more luxuriant, well-vegetated appearance than the vegetated shingle nearer the beach.

The population of Sea Radish is of importance as it only occurs in three other places in West Sussex and it appears that this population is substantially larger than the others.

The closely mown greensward by the houses has common species such as Red and White Clover *Trifolium pratense* and *T. repens*. Disturbance by contractor's vehicles has allowed several species to colonise including Common Swinecress *Coronopus didymus* and Smooth Sow-thistle *Sonchus oleraceus*. Other bare ground has been colonised by Hard Grass *Parapholis strigosa*. A relic of an old rife, which has now been culverted, is indicated by the presence of Great Willowherb *Epilobium hirsutum* and Common Reed *Phragmites australis*.

Management recommendations

Main threats to the vegetated shingle are from householders' garden waste/bonfires and from any future coastal defence work. Although some coastal defence work might be required in the future, this should be done with sensitivity towards the ecological interest. Local residents should be informed of the importance of the site so that dumping and burning of garden waste on the beach does not begin.

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: sxbrcc@sussexwt.org.uk Website: www.sxbrcc.org.uk

1. Site Information							
Site Name & LGS ID		Felpham Foreshore SU90/55					
Site Type		EC		Grid Reference		SZ949921	
Date of Visit		07/10/2010		Local Authority			
Surveyor		Peter Anderton		Landowner			
1:50,000 BGS Sheet no.		317/332		1:25,000 OS Sheet no.		121	
LGS designation	Scientific	X	Educational	X	Aesthetic		Historical
Interest Feature(s): Foreshore exposures of the Tertiary Reading Formation with abundant plant fossils. Stratigraphy: Reading Formation, Lambeth group, late Paleocene in age. Sedimentology: Basal sandy clay with flints resting on eroded Chalk surface. Soft silty and lignitic clays and orange and red mottled clays, deposited in flood plain and swamp environments. Clays and sandy clays deposited in a fluvial channel. Sedimentary structures: some of the deposits occupy a penecontemporaneous channel. Palaeontology: diverse and well preserved flora found in the lignitic clay, including seeds, fruits, fern fronds, palm stems, leaf fragments, large logs and in situ palm stumps. Also yields rare reptile and insect material. Some plant and fish remains have been found in the channel deposits.							
Previous management and dates (if any)							

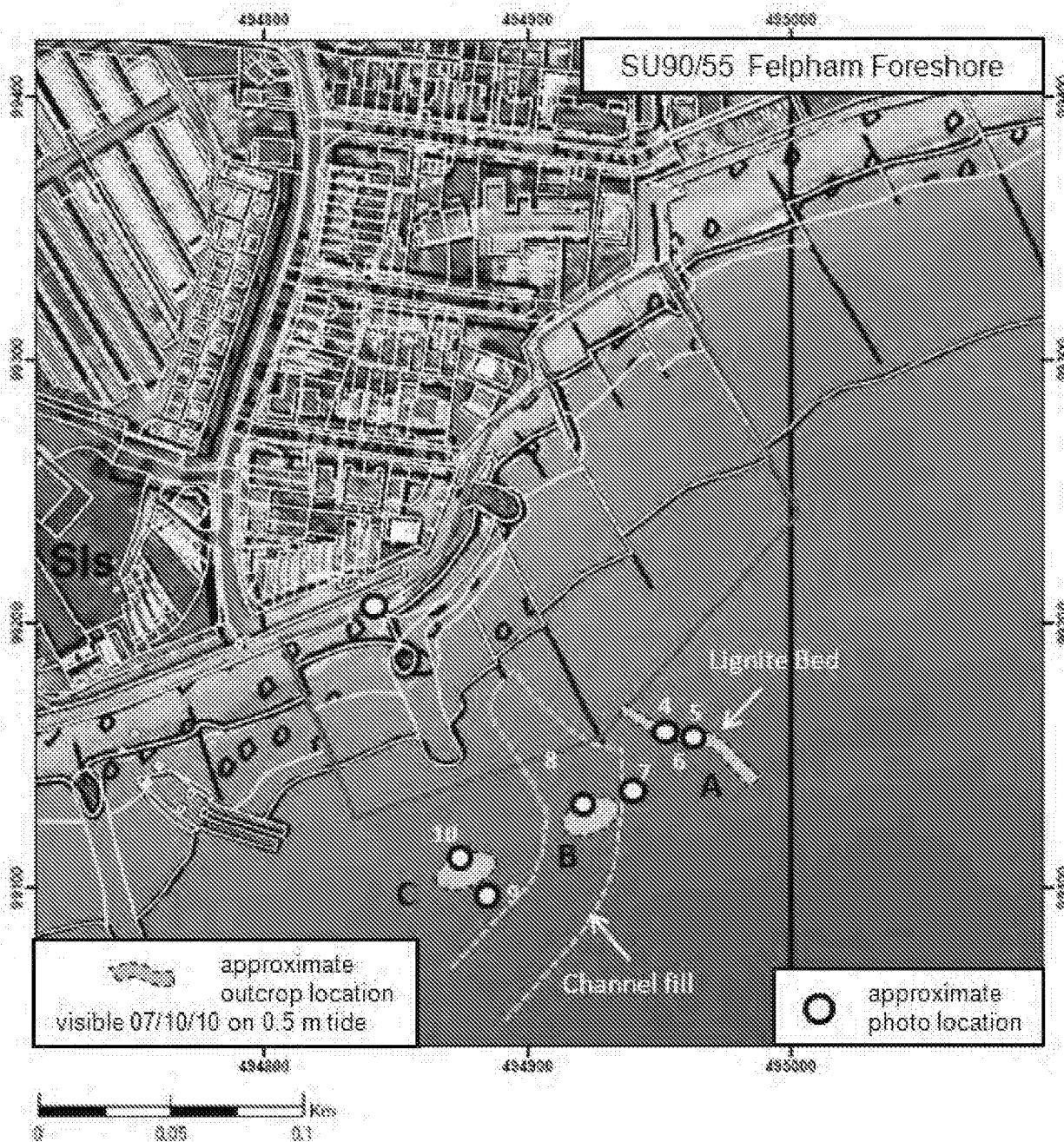
2. Primary Factors					
Bedrock feature	Is (are) the feature(s) exposed?	Y		If No, can it (they) practically be re-exposed?	
	Is (are) the feature(s) being affected by the following factors?				
	Factor	Y/N	Comments		
	Vegetation	N			
	Scree/Mass Movement	N			
	Flooding	N			
	Dumping/Landfill	N			
	Quarrying/Engineering Works	N			
	Development (housing/industrial)	N			
	Others (please define) – Coastal erosion and sedimentation	Y	The coastline is protected by a sea wall and erosion of the foreshore is occurring. The deposits are usually covered by shingle, sand and water and infrequently exposed, often in small patches. Excavation can provide greater access to the deposits.		
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	N	
	Landowner permissions	N	
	Protected species/habitats	N	
	Other (please define) Tides	Y	The foreshore exposures are only visible at very low tides and their full extent is only seen at extreme low tides (0.2 m). Even then an onshore wind can raise sea level enough to restrict access.
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)		

7. Site Status	
Overall, is the site in a desirable condition for use(s) of the feature(s) identified?	<u>Yes</u> / No / Uncertain
If Yes - what management is required (if any) for the feature(s) to maintain a desirable condition: Coastal erosion will determine how long the deposits are accessible and no management seems possible. Further engineering work could affect accessibility but might provide new excavation possibilities.	
For the above, is the management: <i>Being undertaken / Going to be undertaken / Not going to be undertaken / Not possible</i>	
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: <i>Being undertaken / Going to be undertaken / Not going to be undertaken / Not possible</i>	
Are there any secondary factors that need further management?	Yes / <u>No</u> / Not applicable
Suggested management in order for the feature(s) to reach/maintain a desirable condition: 	

8. Supplementary Information - Natural England																																							
Felpham is designated as an SSSI by Natural England. The citation is for its geological value and it is classified by Natural England as a geological site. Most of the SSSI is in Unit 2. The boundary between Units 1 and 2 is probably coincident with a fault in the bedrock. The latest condition assessment was in 2008 and a summary is shown below.																																							
Team - South East - Eastern Area - SSSI name - Felpham - Staff member responsible for site - Elaine Webster <table border="1"> <thead> <tr> <th>County</th> <th>District</th> <th>Main habitat</th> <th>Staff member responsible for unit</th> <th>Unit no</th> <th>Unit ID</th> <th>Unit area (ha)</th> <th>Latest assessment date</th> <th>Assessment description</th> <th>Condition assessment comment</th> </tr> </thead> <tbody> <tr> <td>West Sussex</td> <td>Arun</td> <td>Earth heritage</td> <td>Elaine Webster</td> <td>1</td> <td>1008454</td> <td>0.21</td> <td>12 Sep 2008</td> <td>Favourable</td> <td>Surveyed by Martin Munt on 3 January 2008. No problems identified.</td> </tr> <tr> <td>West Sussex</td> <td>Arun</td> <td>Earth heritage</td> <td>Elaine Webster</td> <td>2</td> <td>1008455</td> <td>1.03</td> <td>12 Sep 2008</td> <td>Favourable</td> <td>Surveyed by Martin Munt on 3 January 2008. No problems identified</td> </tr> </tbody> </table>										County	District	Main habitat	Staff member responsible for unit	Unit no	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	West Sussex	Arun	Earth heritage	Elaine Webster	1	1008454	0.21	12 Sep 2008	Favourable	Surveyed by Martin Munt on 3 January 2008. No problems identified.	West Sussex	Arun	Earth heritage	Elaine Webster	2	1008455	1.03	12 Sep 2008	Favourable	Surveyed by Martin Munt on 3 January 2008. No problems identified
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Key to Map:

 RIGS Site





1. Western end of site at low 0.5m tide. Mottled red and orange clays outcrop on the foreshore (Area C). Grid ref. SU94849911. Direction SSE.



2. Central part of site at low 0.5m tide. Grey clays outcrop on the foreshore at centre (Area B) and may be part of the channel deposits. Grid ref. SU94849911. Direction SE.



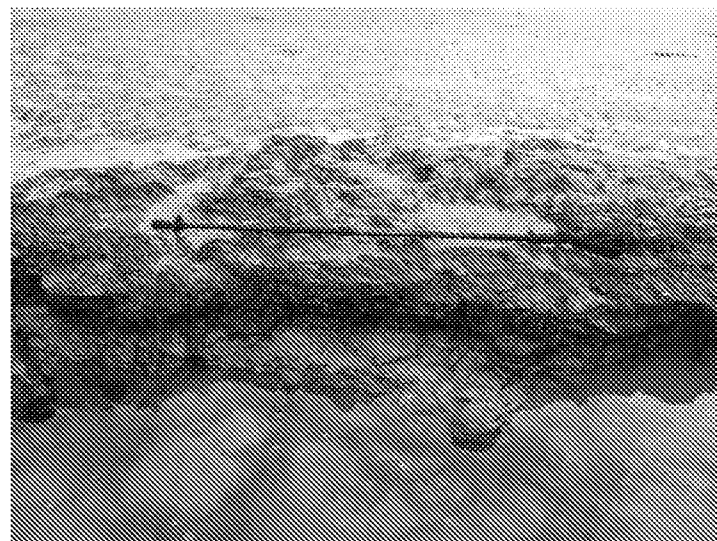
3. Eastern end of site at low 0.5 m tide. The lignite bed forms a dark sinuous outcrop on the foreshore (Area A). Grid ref. SU94849911. Direction ESE.



4. Area A. Eroded edge of the lignite in the lower part of the Lignite Bed forming a sinuous reef on the foreshore. Grid ref. SU94959916. Direction NW.



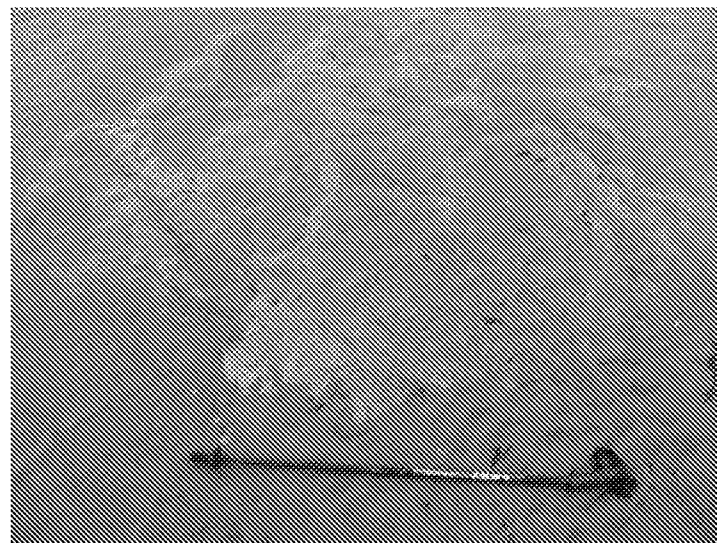
5. Area A. Eroded edge of the lignite in the lower part of the Lignite Bed forming a sinuous reef on the foreshore. Plant fossils and eroded remains of tree stumps can be found here. Grid ref. SU94969916. Direction SE.



6. Area A. Detail of the lignite layer at the edge of the reef. 1m pole for scale. Grid ref. SU94969916. Direction SW.



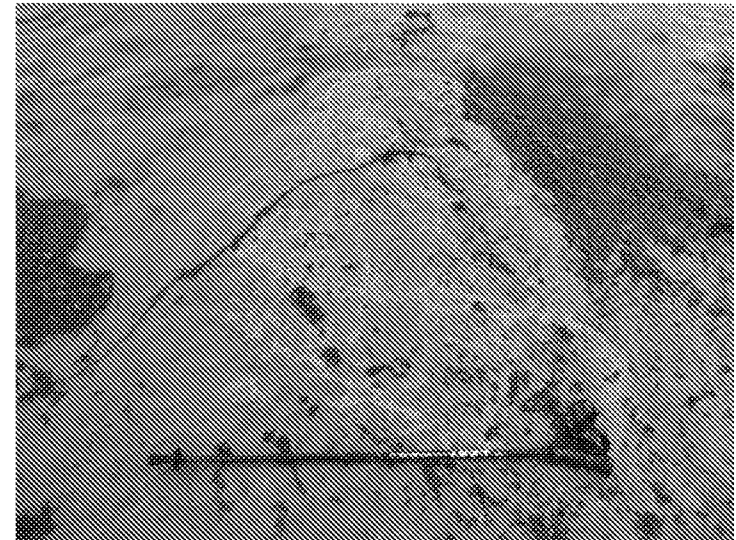
7. Area B. Exposed patch of grey and brownish clay, possibly part of the channel infill. 1m pole for scale. Grid ref. SU94949914. Direction SW.



8. Area B. Detail of patch of grey mottled clay, possibly part of the channel infill. 1m pole for scale. Grid ref. SU94929913. Direction SE.



9. Area C. Patches of mottled orange and red clays typical of the Reading Formation. Grid ref. SU94889910. Direction NNW.



10. Area C. Detail of patch of orange and red mottled clay. 1m pole for scale. Grid ref. SU94879911. Direction SE.

Useful Contacts

Please use the following contacts for further advice or interpretation of the data in this report.

Local Wildlife Sites

Organisation	Sussex Biodiversity Record Centre
Email	
Telephone	

Habitat data

Organisation	Sussex Biodiversity Record Centre
Email	
Telephone	

Geological Designations

Organisation	Sussex Geodiversity Partnership
Website	www.geodiversitysussex.org.uk

Statutory site advice

Organisation	Natural England – Sussex and Kent Area Team
Email	
Telephone	
Website	www.gov.uk/government/organisations/natural-england

General conservation advice

Organisation	Sussex Wildlife Trust
Email	
Telephone	
Website	www.sussexwildlifetrust.org.uk/discover/wildlife-advice

County Species Recorders

Visit www.sxbrc.org.uk/biodiversity/countyrecorders/ for contact details of local experts covering most taxonomic groups.

Supplying records

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 but recommend the use of [iRecord](#).

Please contact the Record Centre for further information:



The Sussex Biodiversity Record Centre must be acknowledged whenever data is cited from this report.

Annex – Supporting Information

Statutory site designations

Non-statutory site designations

Species designations

Sussex invasive non-native report

Statutory site designations

Site of Special Scientific Interest (SSSI)

Sites of Special Scientific Interest 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.

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.

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.

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 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.

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 it came into being on 1st April 2010.

The Sussex Biodiversity Record Centre must be acknowledged whenever data is cited from this report.

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 the High Weald. Each has an associated body concerned with the area's conservation.

Marine Conservation Zone (MCZ)

Marine Conservation Zones can be established to protect nationally important marine wildlife, habitats, geology and geomorphology and can be designated anywhere in English and Welsh inshore and UK offshore waters. They are established under the Marine and Coastal Access Act (2009). MCZs will be one of six designations contributing to an ecologically coherent network of marine protected areas.

Local Nature Reserve (LNR)

Local Nature Reserves may be declared by local authorities under the National Parks and Access to the Countryside Act 1949. LNRs are declared and managed for nature conservation, and provide opportunities for research and education, or simply enjoying and having contact with nature. Some LNRs are also SSSIs. There are 36 LNRs in Sussex.

Country Park

Country Parks are statutorily declared and managed by local authorities in England and Wales under the Countryside Act 1968. They are primarily intended for recreation and leisure opportunities close to population centres and do not necessarily have any nature conservation importance. However, many are in areas of semi-natural habitat and so form a valuable network of locations at which informal recreation and the natural environment coexist. There are 11 Country Parks in Sussex, the details of which can be obtained from the local authorities.

Non-statutory site designations

Local Wildlife Site (LWS)

Formerly known as Sites of Nature Conservation Importance (SNCI), Local Wildlife Sites 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.

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 Local Wildlife Sites. The aim of this project 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** should recognise the importance of safeguarding important urban wildlife sites, to link all significant greenspaces and to ensure that people in towns have easy access to wildlife areas.

After extensive survey work, the selection of LWS was made 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 LWS 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 LWS selection is steered by the SxBRC, whereas in East Sussex it is steered by East Sussex County Council in partnership with the district and borough councils. Currently there are over 600 LWS in Sussex.

Although LWS 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.

LWS citations 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.

Local Geological Site (LGS)

Previously known as Regionally Important Geological/Geomorphological Sites (RIGGS), Local Geological Sites 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

The Sussex Biodiversity Record Centre must be acknowledged whenever data is cited from this report.

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](#).

Notable Road Verge (NRV)

Notable Road Verges (NRVs) are areas of roadside verge that have been designated for their special wildlife interest. They can hold spectacular displays of wild flowers, including rare orchids and other plant species indicative of old meadows, and can be of great importance to invertebrates and fungi. There is no statutory protection for road verges, but they can be found within both non-statutory and statutory designations.

As linear features, road verges naturally traverse a wide range of habitat types, soils and geology. The species composition of NRVs can therefore be varied. Swathes of cow parsley, cuckoo flower, primroses and orchids can be found. Downland herbs, meadow flowers and heathers support a range of insects, as do the areas of bare ground which are used by nesting bees and wasps. Reptiles, amphibians and mammals can find shelter along these verges and use them as valuable green corridors.

As the Highway Authorities, the County Councils are responsible for the cutting and management of roadside verges, and they also have a responsibility to conserve biodiversity. Where health and safety measures allow, this is achieved by restricting cutting to certain times of the year (usually when wild flowers have set seed in late summer) and using different techniques to standard verge cutting.

The initiatives for designating and managing NRVs differ between East and West Sussex. NRVs in West Sussex are identified by short oak posts with red discs. In East Sussex they are marked by posts with yellow metal flowers.

In West Sussex, the following guidelines are used to help identify NRVs:

- 1) Site supports locally rare, notable or protected species of flora or fauna** e.g. the plant coralroot. This type of bittercress is only found in two localised areas of the UK; the Sussex Weald and the Chilterns.
- 2) Site is a good example of an uncommon, remnant or declining habitat** e.g. species of sandy grassland along Rock Road in the Parish of Washington.
- 3) Site has good overall species diversity** e.g. Mallions Lane near Cuckfield.
- 4) The assemblage of wild flowers has high aesthetic value** e.g. Franklyn Road outside Haywards Heath hospital with a wonderful display of common spotted orchids in early summer.
- 5) Site has wildlife value that is regarded as important by the local community** e.g. Barnham Road at Eastergate.

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. 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.

Species designations

International legislation

Birds Directive

The European Union meets its obligations for bird species under the Bern Convention and Bonn Convention and more generally by means of Directive 2009/147/EC (Birds Directive) on the conservation of wild birds. The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe.

Annex 1

Birds which are in danger of extinction; vulnerable to specific changes in their habitat; considered rare because of small populations or restricted local distribution; requiring particular attention for reasons of the specific nature of habitat. Their most suitable territories are protected by the designation of Special Protection Areas (SPA).

Habitats Directive

Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora, known as the Habitats Directive, was adopted in 1992. The Directive is the means by which the European Union meets its obligations under the Bern Convention. The Directive is transposed into UK law through the The Conservation of Habitats and Species Regulations 2010 (see below).

Annex 2

Species considered to be most in need of conservation at a European level (excluding birds). Special Areas of Conservation (SACs) are strictly protected sites designated under the Habitats Directive and provide a network of important high-quality conservation sites that will make a significant contribution to conserving Annex 2 species.

Priority species - Species which are endangered, the conservation of which the European Community has a particular responsibility in view of the proportion of their natural range which falls within the territory of the Community.

Non-priority species - Species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) whose conservation requires the designation of special areas of conservation.

Annex 4

Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) in need of strict protection. They are protected from killing, disturbance or the destruction of them or their habitat.

National legislation

The Conservation of Habitats and Species Regulations 2010

This is a transposition of the Habitats Directive into UK legislation. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites. Under the Regulations, government departments and public bodies have a general duty, in the exercise of any of their functions, to have regard to the Habitats Directive.

Schedule 2 lists European protected species of animals

Schedule 5 lists European protected species of plants

Wildlife & Countryside Act 1981

The Wildlife and Countryside Act 1981 (WCA) remains one of the most important pieces of wildlife legislation in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats (the 'Bern Convention') and the European Union Directives on the Conservation of Wild Birds (79/409/EEC) and Natural Habitats and Wild Fauna and Flora (92/43/EEC) are implemented. The Act is divided into four parts; Part I is concerned with the protection of wildlife and is split into 27 Sections. Schedules of species relevant to the planning process are detailed as follows:

Schedule 1 Part 1	Birds protected by special penalties at all times.
Schedule 5 Section 9.1 (killing/injuring)	Animals which are protected from intentional killing or injuring.
Schedule 5 Section 9.1 (taking)	Animals which are protected from taking.
Schedule 5 Section 9.4a	Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.
Schedule 5 Section 9.4b	Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
Schedule 8	Plants which are protected from intentional picking, uprooting or destruction (Section 13 Part 1a); selling, offering for sale, possessing or transporting for the purpose of sale, any plant (live or dead, part or derivative) (Section 13 Part 2a); advertising (any of these) for buying or selling (Section 13 Part 2b).
Natural Environment & Rural Communities (NERC) Act Section 41 Species Also known as 'Species of Principle Importance in England' and the 'England Biodiversity List', this list was developed to meet the requirements of Section 40 of the NERC Act (2006). The list is derived from the 2007 revised list of UK BAP Priority Species. It is used to guide decision-makers, such as public bodies, in implementing their duty under Section 40 of the Act 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.	
Section 41	Lists species " <i>of principal importance for the purpose of conserving biodiversity</i> ".

Other species designations

IUCN Red List of Threatened Species

The IUCN Red List categories are intended to be an easily and widely understood system for classifying species at high risk of global extinction. The list is divided into nine categories, of which the following are used in this report:

Extinct	A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.
Extinct in the wild	A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.
Critically endangered	A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered, and it is therefore considered to be facing an extremely high risk of extinction in the wild.
Endangered	A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered, and it is therefore considered to be facing a very high risk of extinction in the wild.
Vulnerable	A taxon is Vulnerable when the best available evidence indicates that it meets any of

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	the criteria A to E for Vulnerable, and it is therefore considered to be facing a high risk of extinction in the wild.
Near threatened	A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.
Least concern	A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.
Data deficient	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a taxon is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified.
Nationally rare/scarse species	
Nationally rare	Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
Nationally rare marine	Occurring in eight or fewer 10km x 10km grid squares containing sea (or water of marine saline influence) within the three mile territorial limit.
Nationally scarce	Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria. This category replaces Notable, Notable A and Notable B.
Nationally scarce marine	Occurring in nine to 55 10km x 10km grid squares containing sea (or water of marine saline influence) within the three mile territorial limit.
Nationally Notable A	Taxa which do not fall within Red Data Book categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less-well recorded groups, within seven or fewer vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
Nationally Notable B	Taxa which do not fall within Red Data Book categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups, between eight and twenty vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
Nationally Notable	Species which are estimated to occur within the range of 16 to 100 10km squares. (subdivision into Notable A and Notable B is not always possible because there may be insufficient information available). Superseded by Nationally Scarce, and therefore no longer in use.
Birds of Conservation Concern 4: Red list	Birds that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery
Birds of Conservation Concern 4: Amber list	Birds with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined

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	historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
UK Biodiversity Action Plan Priority Species	The UK List of Priority Species contains 1150 species that have been listed as priorities for conservation action under the UK Biodiversity Action Plan (UK BAP).
Local inventories	
Sussex Rare Species Inventory	The Sussex Rare Species Inventory contains over 3,400 species. These species are selected according to strict criteria of rarity associated with their occurrence in Sussex. It includes species which fall into the above categories of rarity as well as county rarities.
Sussex Notable Bird List	The Sussex Notable Bird List consists of species that are particularly scarce or vulnerable to development. See next page for full details.

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Sussex Notable Bird List

The Sussex Notable Bird List consists of species that are particularly scarce or vulnerable to development. It includes species which are either on the Birds of Conservation Concern Red and Amber lists or Schedule 1 species known to have bred in Sussex, or have been recorded in summer and may breed in the future. Table 6 of the report will show records of these species based on selection criteria decided on by the Sussex Ornithological Society (SOS).

These records are not available to the general public due to the sensitivity of the data. The SOS has kindly shared these records with us, with the view that better planning decisions can be made with their availability.

Below is the list of species and the date ranges/criteria for their inclusion:

Species	Record type treated as notable in Sussex
Mute Swan	Confirmed or probable breeding or late May - early July records
Common Shelduck	Confirmed or probable breeding or late May - early July records
Eurasian Wigeon	Confirmed or probable breeding or late May - early July records
Gadwall	Confirmed or probable breeding or late May - early July records
Eurasian Teal	Confirmed or probable breeding or late May - early July records
Mallard	Confirmed or probable breeding or late May - early July records
Pintail	Confirmed or probable breeding or late May - early July records
Garganey	Confirmed or probable breeding or late May - early July records
Shoveler	Confirmed or probable breeding or late May - early July records
Common Pochard	Confirmed or probable breeding or late May - early July records
Tufted Duck	Confirmed or probable breeding or late May - early July records
Quail	Confirmed or probable breeding or March - August records
Grey Partridge	Confirmed or probable breeding or March - August records
Fulmar	Confirmed or probable breeding records
Eurasian Bittern	All records
Little Egret	Confirmed or probable breeding records + roost
Little Grebe	Confirmed or probable breeding or late May - early August records
Honey-buzzard	Information provided in summary only
Red Kite	Confirmed or probable breeding or March - August records + roost
Marsh Harrier	Information provided in summary only
Hen Harrier	Roost
Montagu's Harrier	Information provided in summary only
Goshawk	Information provided in summary only
Osprey	Mid-May to July records
Spotted Crane	Information provided in summary only
Stone-curlew	Information provided in summary only
Black-winged Stilt	April to August records
Avocet	Confirmed or probable breeding or March - July records
Oystercatcher	Confirmed or probable breeding or late May - early July records
Ringed Plover	Confirmed or probable breeding or late May - early July records
Little Ringed Plover	Confirmed or probable breeding or April - July records
Lapwing	Confirmed or probable breeding or April - June records
Curlew	Confirmed or probable breeding or April - July records
Common Sandpiper	Confirmed or probable breeding or late May - early July records
Common Redshank	Confirmed or probable breeding or April - July records
Woodcock	Confirmed or probable breeding or March - August records
Common Snipe	Confirmed or probable breeding or April - July records
Little Tern	Confirmed or probable breeding records
Sandwich Tern	Confirmed or probable breeding records
Common Tern	Confirmed or probable breeding records
Kittiwake	Confirmed or probable breeding records
Black-headed Gull	Confirmed or probable breeding records
Mediterranean Gull	Confirmed or probable breeding records
Common Gull	Confirmed or probable breeding records

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Lesser Black-backed Gull	Confirmed or probable breeding records
Herring Gull	Confirmed or probable breeding records
Yellow-legged Gull	Confirmed or probable breeding or April - June records
Great Black-backed Gull	Confirmed or probable breeding records
Stock Dove	Confirmed or probable breeding or May - July records
Turtle Dove	Confirmed or probable breeding or May - July records
Common Cuckoo	Confirmed or probable breeding or May - July records
Barn Owl	All records
Tawny Owl	Confirmed or probable breeding or May - July records
Long-eared Owl	Confirmed or probable breeding or March - July records + roost
Short-eared Owl	Confirmed or probable breeding or May - July records
Nightjar	Confirmed or probable breeding or May - July records
Common Swift	Confirmed or probable breeding records
Hoopoe	Confirmed or probable breeding or May - July records
Bee-eater	Confirmed or probable breeding or May - July records
Kingfisher	Confirmed or probable breeding or March - August records
Wryneck	Confirmed or probable breeding or May - July records
Green Woodpecker	Confirmed or probable breeding records
Lesser Spotted Woodpecker	All records
Kestrel	Confirmed or probable breeding or May - July records
Hobby	Confirmed or probable breeding or April - August records
Peregrine	Information provided in summary only
Red-backed Shrike	Information provided in summary only
Firecrest	Confirmed or probable breeding or May - August records
Willow Tit	All records
Marsh Tit	Confirmed or probable breeding or April - July records
Bearded Tit	Confirmed or probable breeding or March - August records
Woodlark	Confirmed or probable breeding or February - August records
Skylark	Confirmed or probable breeding or April - July records
Sand Martin	Confirmed or probable breeding records
Barn Swallow	Confirmed or probable breeding records
House Martin	Confirmed or probable breeding records
Cetti's Warbler	Confirmed or probable breeding or March - August records
Wood Warbler	Confirmed or probable breeding or April - August records
Willow Warbler	Confirmed or probable breeding records
Common Whitethroat	Confirmed or probable breeding records
Dartford Warbler	Confirmed or probable breeding or March - August records
Grasshopper Warbler	Confirmed or probable breeding or May - July records
Savi's Warbler	Information provided in summary only
Marsh Warbler	Information provided in summary only
Common Starling	Confirmed or probable breeding records
Song Thrush	Confirmed or probable breeding records
Mistle Thrush	Confirmed or probable breeding records
Spotted Flycatcher	Confirmed or probable breeding records
Common Nightingale	Confirmed or probable breeding records
Pied Flycatcher	Confirmed or probable breeding or May - July records
Black Redstart	May – July records
Common Redstart	Confirmed or probable breeding or April - July records
Whinchat	Confirmed or probable breeding or May - July records
Northern Wheatear	Confirmed or probable breeding or May - July records
Duncock	Confirmed or probable breeding records
House Sparrow	Confirmed or probable breeding records
Tree Sparrow	All records
Yellow Wagtail	Confirmed or probable breeding or May - June records
Blue-headed Wagtail	Confirmed or probable breeding or May - June records
Grey Wagtail	Confirmed or probable breeding or May - June records
Tree Pipit	Confirmed or probable breeding or May - July records
Meadow Pipit	Confirmed or probable breeding or May - July records

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Hawfinch	All records
Bullfinch	Confirmed or probable breeding records
Linnet	Confirmed or probable breeding records
Lesser Redpoll	Confirmed or probable breeding or May - July records
Common Crossbill	Confirmed or probable breeding or February - June records
Serin	All records
Corn Bunting	All records
Cirl Bunting	All records
Yellowhammer	Confirmed or probable breeding records
Reed Bunting	Confirmed or probable breeding records

Sussex Invasive Non-Native Species (INNS)

The Sussex invasive non-native species (INNS) report is produced in order to help minimise the threat posed by invasive species in Sussex. An invasive non-native species is defined as a species whose introduction and/or spread threatens biological diversity. The INNS table includes records of non-native species listed in Schedule 9 of the Wildlife & Countryside Act 1981 (WCA) and 26 other species not in this Schedule but which pose a particular risk in Sussex. These additional species are:

Scientific name	Common name
<i>Pseudorasbora parva</i>	Topmouth Gudgeon
<i>Leucaspis delineates</i>	Sunbleak
<i>Amsinckia micrantha</i>	Common Fiddleneck
<i>Centranthus ruber</i>	Red Valerian
<i>Gaultheria shallon</i>	Shallon
<i>Hyacinthoides hispanica</i>	Spanish Bluebell
<i>Nymphoides peltata</i>	Fringed Water-lily
<i>Petasites fragrans</i>	Winter Heliotrope
<i>Prunus laurocerasus</i>	Cherry Laurel
<i>Hyacinthoides non-scripta</i> x <i>hispanica</i> = <i>H. x massartiana</i>	Hybrid Bluebell
<i>Lemna minuta</i>	Least Duckweed
<i>Acaena novae-zelandiae</i>	Pirri-pirri-bur
<i>Lysichiton americanus</i>	American Skunk Cabbage
<i>Cortaderia selloana</i>	Pampas Grass
<i>Quercus ilex</i>	Evergreen Oak
<i>Harmonia axyridis</i>	Harlequin Ladybird
<i>Lilioceris lili</i>	Lily Beetle
<i>Cameraria ohridella</i>	Horse-Chestnut Leaf-miner
<i>Campylopus introflexus</i>	Heath Star Moss
<i>Trachemys scripta</i>	Red-eared Terrapin
<i>Lithobates catesbeianus</i>	American Bullfrog
<i>Styela clava</i>	Leathery Sea Squirt
<i>Dreissena polymorpha</i>	Zebra Mussel
<i>Dreissena rostriformis bugensis</i>	Quagga Mussel
<i>Lymantria dispar</i>	Gypsy Moth
<i>Thaumetopoea processionea</i>	Oak Processionary Moth

What's the problem

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

Legislation

Section 14 of the Wildlife and Countryside Act 1981 (WCA) is the principal legislation dealing with non-native species. Schedule 9 lists plant and animal species to which Section 14 applies.

Section 14 makes it illegal to release or allow to escape into the wild any animal which is not ordinarily resident in Great Britain and is not a regular visitor to Great Britain in a wild state, or is listed in Schedule 9 to the Act. It is also illegal to plant or otherwise cause to grow in the wild any plant listed in Schedule 9 to the Act.

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

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

If there is an invasive non-native species at your site that is not in this report please email us at info@sxbrc.org.uk or call 01273 497570 so that we can update our database.

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Sussex Biodiversity Record Centre

Woods Mill

Henfield

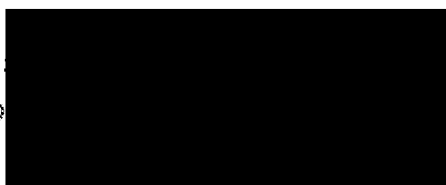
West Sussex

BN5 9SD

Tel: 01273 497521

Em

Web



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

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VAT Registration No. 191 3059 69
Registered Office: Woods Mill, Henfield, West Sussex BN5 9SD



Sussex
Wildlife Trust

Appendix 3. eDNA results.

Folio No: E2150
Report No: 1
Order No: 001
Client: ECOSUPPORT LTD
Contact: Sophie Hughes
Contact Details: sophie@ecosupport.co.uk
Date: 18/04/2018

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS

Date sample received at Laboratory: 17/04/2018
Date Reported: 18/04/2018
Matters Affecting Results: None

RESULTS

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
0771	Felpham Pond 4	-	Pass	Pass	Pass	Negative	0
0773	Felpham Pond 6	-	Pass	Pass	Pass	Negative	0
0777	Felpham Pond 1	-	Pass	Pass	Pass	Negative	0
0778	Felpham Pond 2	-	Pass	Pass	Pass	Negative	0

Folio No: E2354
Report No: 1
Order No: 005
Client: ECOSUPPORT LTD
Contact: Sophie Hughes
Contact Details: sophie@ecosupport.co.uk
Date: 26/04/2018

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS

Date sample received at Laboratory: 24/04/2018
Date Reported: 26/04/2018
Matters Affecting Results: None

RESULTS

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
0779	Felpham Golf Course	495117101112	Pass	Pass	Pass	Negative	0

SUMMARY

When Great Crested Newts (GCN); *Triturus cristatus* inhabit a pond, they deposit traces of their DNA in the water as evidence of their presence. By sampling the water, we can analyse these small environmental DNA (eDNA) traces to confirm GCN habitation, or establish GCN absence.

The water samples detailed below were submitted for eDNA analysis to the protocol stated in DEFRA WC1067 (Latest Amendments). Details on the sample submission form were used as the unique sample identity.

RESULTS INTERPRETATION

Lab Sample No.- When a kit is made it is given a unique sample number. When the pond samples have been taken and the kit has been received back in to the laboratory, this sample number is tracked throughout the laboratory.

Site Name- Information on the pond.

O/S Reference – Location/co-ordinates of pond.

SIC- Sample Integrity Check. Refers to quality of packaging, absence of tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to results errors. Inspection upon receipt of sample at the laboratory. To check if the Sample is of adequate integrity when received. Pass or Fail.

DC- Degradation Check. Analysis of the spiked DNA marker to see if there has been degradation of the kit since made in the laboratory to sampling to analysis. Pass or Fail.

IC- Inhibition Check- PCR inhibitors can cause false results. Inhibitors are analysed to check the quality of the result. Every effort is made to clean the sample pre-analysis however some inhibitors cannot be extracted. An unacceptable inhibition check will cause an indeterminate sample and must be sampled again.

Result- NEGATIVE means that GCN eDNA was not detected or is below the threshold detection level and the test result should be considered as no evidence of GCN presence. POSITIVE means that GCN eDNA was found at or above the threshold level and the presence of GCN at this location at the time of sampling or in the recent past is confirmed. Positive or Negative.

Positive Replicates- To generate the results all of the tubes from each pond are combined to produce one eDNA extract. Then twelve separate analyses are undertaken. If one or more of these analyses are positive the pond is declared positive for the presence of GCN. It may be assumed that small fractions of positive analyses suggest low level presence but this cannot currently be used for population studies. In accordance with Natural England protocol, even a score of 1/12 is declared positive.

METHODOLOGY

The laboratory testing adheres to strict guidelines laid down in WC1067 Analytical and Methodological Development for Improved Surveillance of The Great Crested Newt, Version 1.1

The analysis is conducted in two phases. The sample first goes through an extraction process where all six tubes are pooled together to acquire as much eDNA as possible. The pooled sample is then tested via real time PCR (also called q-PCR). This process amplifies select part of DNA allowing it to be detected and measured in 'real time' as the analytical process develops. qPCR combines PCR amplification and detection into a single step. This eliminates the need to detect products using gel electrophoresis. With qPCR, fluorescent dyes specific to the target sequence are used to label PCR products during thermal cycling. The accumulation of fluorescent signals during the exponential phase of the reaction is measured for fast and objective data analysis. The point at which amplification begins (the Ct value) is an indicator of the quality of the sample. True positive controls, negatives and blanks as well as spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared so they act as additional quality control measures.

The primers used in this process are specific to a part of mitochondrial DNA only found in GCN ensuring no DNA from other species present in the water is amplified. The unique sequence appropriate for GCN analysis is quoted in DEFRA WC 1067 and means there should be no detection of closely related species. We have tested our system exhaustively to ensure this is the case in our laboratory. We can offer eDNA analysis for most other species including other newts.

Analysis of eDNA requires scrupulous attention to detail to prevent risk of contamination. Kits are manufactured by SureScreen Scientifics to strict quality procedures in a separate building and with separate staff, adopting best practice from WC1067 and WC1067 Appendix 5. Kits contain a 'spiked' DNA marker used as a quality control tracer (SureScreen patent pending) to ensure any DNA contained in the sampled water has not deteriorated in transit. Stages of the DNA analysis are also conducted in

different buildings at our premises for added

SureScreen Scientifics Ltd also participate in Natural England's proficiency testing scheme and we also carry out inter-laboratory checks on accuracy of results as part of our quality procedures.

Reported by: Derry Hickman

Approved by: Troy Whyte

End Of Report

Appendix 4. Ecological fencing protective signage.

