

# Land West of Chichester

## Ecological Baseline

Prepared by:  
**The Environmental  
Dimension  
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On behalf of:  
**Linden Homes and  
Miller Strategic Land**

February 2014  
Report Reference  
**EDP129\_23b**



THE  
ENVIRONMENTAL  
DIMENSION  
PARTNERSHIP

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## Plans

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- Plan EDP 19** Reptile Survey Results 2012-2013: Grass Snake  
(EDP129/101a 24 January 2014 TB/JW)

**For EDP use**

Report no.	C_EDP129_23b
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Proof Date	24 February 2014

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## Section 1 Introduction

- 1.1 This report has been prepared by The Environmental Dimension Partnership (EDP) on behalf of Linden Homes and Miller Strategic Land. It sets out the results of an assessment of existing (baseline) ecological conditions relevant to the consideration of the development potential of land to the west of Chichester (hereafter referred to as 'the site'). The site is centred approximately at Ordnance Survey Grid Reference (OSGR) SU 847 058.
- 1.2 The site is proposed for predominantly residential development with associated infrastructure and community facilities; including a new Country Park. The development proposals for the site are yet to be determined in detail; however, the findings of this report will inform masterplanning with respect to ecological matters and update the findings of preliminary ecological investigations undertaken in 2008. Hence the aims of the report were to:
- (i) Identify any actual or potential habitat or species constraints related to the proposed development of the site and to identify how the proposed development can avoid, mitigate and, if necessary, compensate for impacts on these actual or potential constraints;
  - (ii) Identify potential opportunities for the proposed development to enhance and add to the biodiversity resource within the site in line with planning policy, such as National Planning Policy Framework (NPPF); and
  - (iii) Form the basis of an Ecological Impact Assessment (EclA) of the development proposals in support of any future planning application(s) for development on the site.
- 1.3 The remainder of this report is structured as follows:
- (i) **Section 2** describes the methodologies employed in collecting the ecology baseline information, which included;
    - Desk study;
    - Extended Phase 1 survey;
    - Hedgerow survey;
    - Detailed botanical surveys of semi-improved grassland and woodland;
    - Bat roost assessments – trees and buildings;

- Bat activity surveys – transect surveys and automatic detector surveys;
  - Breeding bird survey;
  - Dormouse survey;
  - Badger survey;
  - Water vole survey;
  - Great crested newt survey;
  - Reptile survey; and
  - Invertebrate scoping assessment.
- (ii) **Section 3** sets out the findings of these investigations; and
- (iii) **Section 4** summarises the key legislative, planning policy and biodiversity action planning considerations for the proposed redevelopment and makes provisional recommendations in line with the aims of this report as set out above.

## Section 2 Methodology

- 2.1 This section describes the methodologies employed when undertaking the baseline ecological investigations at the site.

### Desk Study

- 2.2 The desk study is an important element of undertaking an initial ecological appraisal of a site proposed for development, since it enables the collation and review of contextual information such as designated sites together with known records of protected and priority species.
- 2.3 A desk study was originally undertaken in 2008, with updates completed in 2012 and in 2013. The desk study involved collating information from both statutory and non-statutory bodies, including:
- (i) Sussex Biodiversity Records Centre (SBRC); and
  - (ii) Multi-Agency Geographic Information for the Countryside (MAGIC<sup>1</sup>).
- 2.4 Biodiversity information was requested on 2 December 2013 for an area of 5km radius for sites of European importance, a 2km radius for sites of national and local importance and protected and notable species records within a 2km radius of the central grid reference SU846057. These search areas are considered sufficient to cover the potential zone of influence<sup>2</sup> of potential development in relation to nationally important sites (or less), habitats and species.
- 2.5 An update review of data held on the MAGIC was also undertaken on 22 November 2013 to confirm statutory designations within 2km for UK sites and 5km for European sites, and protected species or habitats within 2km of the site to supplement the data received from SBRC.
- 2.6 Any pertinent information received as a result of the desk study has been included as **Appendix EDP 1** and specifically referenced within **Section 3**.

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<sup>1</sup> MAGIC Partners. Interactive Map. [online] Available at: [www.magic.gov.uk](http://www.magic.gov.uk). Accessed 22 November 2013

<sup>2</sup> Zone of Influence – the areas and resources that may be affected by the proposed development

### **Extended Phase 1 Survey**

- 2.7 The survey technique adopted for the habitat assessment was at a level intermediate between a standard Phase 1 survey technique<sup>3</sup>, based on habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. The survey technique is commonly known as an '*Extended Phase 1 Survey*'.
- 2.8 The level of survey involves identifying and mapping the principal habitat types, and identifying the dominant plant species present in each. In addition, any actual or potential protected or priority species constraints were identified and scoped.
- 2.9 The survey was first undertaken on 9 and 10 April 2008, and updated on 17 April 2012. The weather conditions during the survey were clear, dry and sunny. Seasonal or climatic factors are not considered to have significantly limited the findings of the survey undertaken. Detailed surveys undertaken in 2012 and 2013 provided an opportunity to keep the Phase 1 information up to date.

### **Detailed Surveys**

- 2.10 Following the results of the desk study and updated extended Phase 1 survey, a number of actual or potential ecological constraints were confirmed as requiring further investigation to inform the layout of a future development and support a planning application.
- 2.11 The following Phase 2 surveys were undertaken in respect of the northern portion of the site (north of Newlands Lane and west of Old Broyle Road) during 2012, and in the southern portion of the site (south of Newlands Lane and east of Old Broyle Road) during 2013:
- Hedgerow survey;
  - Detailed botanical surveys;
  - Bat roost assessments – trees and buildings;
  - Bat activity surveys – transect surveys and automatic detector surveys;
  - Breeding bird survey;
  - Dormouse survey;

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<sup>3</sup> Joint Nature Conservation Council (2007) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (reprinted with minor corrections for original Nature Conservancy Council publication).



- Badger survey;
- Water vole survey;
- Great crested newt survey;
- Reptile survey; and
- Invertebrate scoping assessment.

2.12 The detailed methodologies of each of the Phase 2 surveys are set out below. Where referred to, field (F) and woodland (W) numbers should be cross-referenced with those given in **Plan EDP 1**.

### **Hedgerow Survey**

2.13 The Extended Phase 1 survey identified a number of hedgerows on site that may qualify as ecologically 'Important' under the Hedgerows Regulations 1997, and recommended that if hedgerows are to be affected these should be assessed following the Hedgerow Regulations 1997 criteria.

2.14 Whilst unlikely that all hedgerows would be affected, in the absence of a masterplan, the ecological importance of all hedgerows within the northern portion of the site (north of Newlands Lane and west of Old Broyle Road) was assessed by experienced EDP Ecologists on 10 July 2012, and within the southern portion of the site (south of Newlands Lane and east of Old Broyle Road) on 26 June 2013.

2.15 The Wildlife criteria provided in Part II of Schedule 1 of the Hedgerows Regulations 1997 was followed to determine the ecological importance of the site's hedgerows. The Hedgerows Regulations 1997 serve the purpose of ensuring the retention of important countryside hedgerows; their removal only being approved by the relevant local authority.

2.16 The aims of the hedgerow assessment were to:

- (i) Identify hedgerows that are classified as 'important' under the ecological criteria of the Hedgerows Regulations (1997); and
- (ii) Identify hedgerows that, although not deemed 'important' under the ecological criteria of the Hedgerows Regulations (1997), have ecological value in terms of species diversity, or as potential wildlife corridors.

2.17 A total of 30 hedgerows located within the site were surveyed, as shown on **Plan EDP 2**. Hedgerows qualify for assessment by exceeding 20m in length or by being connected at both ends to another hedgerow of any length. The middle 30m of all

hedgerows up to 100m in length were surveyed, whilst two 30m sections were surveyed for hedgerows up to 200m in length where access was possible. For hedgerows exceeding 200m in length, three 30m sections were surveyed. Hedgerows surveyed were assigned points dependent upon the number of qualifying 'features' as defined by the Hedgerows Regulations, with total scores per hedgerow determining their status.

2.18 Qualifying as an 'important' hedgerow requires the hedgerow assessed to be greater than 30 years of age and contain species listed in Schedule 5 (animals) and 8 (plants) of the Wildlife and Countryside Act 1981 (as amended), birds categorised as declining breeders (Category 3) within the 'Red Data Birds in Britain' (Batten 1990), or any species categorised as 'endangered', 'extinct', 'rare' or 'vulnerable' by any of the British Red Data Books.

2.19 Hedgerows are also considered important should they satisfy any of the following criteria:

- That the hedgerow is referred to in a record held by a biological records centre as containing protected plants (within 10 years) or birds and animals (within 5 years); or
- That the hedgerow contains one of the following criteria per average 30m section surveyed:
  - seven Schedule 3 species; or
  - six Schedule 3 species and three listed features (see below); or
  - six Schedule 3 species, including one of the following: black poplar, large-leaved lime, small-leaved lime or wild service-tree; or
  - five Schedule 3 species and four listed features; or
  - four Schedule 3 species, two listed features and lying adjacent to a bridleway or footpath; with
  - Listed features to include:
    - A bank or wall which supports the hedgerow along at least half of its length;
    - Gaps which together do not exceed 10% of the length of the hedgerow;
    - At least one standard tree per 50m of hedge;
    - At least three Schedule 2 woodland species within the hedgerow;

- A ditch along at least one half of the length of the hedgerow;
  - Connections scoring 4 points or more (1 point per connection of the hedgerow with another, 2 points per connection of the hedgerow to a pond or broad-leaved woodland; and
  - A parallel hedge within 15m of the hedgerow.
- 2.20 Where a hedgerow did not meet the 'important' hedgerow criteria, it was considered whether this boundary feature had ecological value, in terms of species diversity, or as potential wildlife corridors.

### **Detailed Botanical Surveys**

- 2.21 A detailed botanical survey was undertaken of grasslands within fields F2 to F6 and F8, and within woodlands W1 to W5, as illustrated on **Plan EDP 1**. The aims of the botanical surveys were to determine the current floristic value of the habitats and to consider the likely impact of any potential development within those habitats.
- 2.22 The botanical surveys were completed on 8 August 2013 by an experienced botanist. The survey was completed during warm and sunny weather conditions.
- 2.23 The abundance of each plant species was given according to the DAFOR scale<sup>4</sup>. Habitats were mapped and described in accordance with the standard protocol contained within JNCC (2007)<sup>5</sup> and distinct plant communities within the fields were approximated to an Natural Vegetation Classification (NVC) community/sub-community based on an informed, yet subjective assessment reliant on professional judgement.

#### *Limitations*

- 2.24 The survey was limited to recording plant species present in both vegetative and floristic forms at the time of survey. The lack of any species record from this survey can therefore not be taken to automatically infer that species' absence from the site. With regards to recording grassland species, the timing of the survey was optimal, as late May through to August is considered the best time for undertaking botanical surveys over grasslands, including rush pastures. Some early-flowering herbs and grasses may no longer be present or apparent in early August, but sufficient other species will be readily identifiable and quantifiable in these habitats in late summer to accurately determine the floristic value of the grassland.

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<sup>4</sup> DAFOR botanical survey technique – **D**ominant, **A**bundant, **F**requent, **O**ccasional, **R**are

<sup>5</sup> Joint Nature Conservation Council (2007) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (reprinted with minor corrections for original Nature Conservancy Council publication)

- 2.25 The marshy grassland within fields F6 and F8 were recently mown prior to the botanical survey being undertaken which may have resulted in species going un-recorded and the NVC community/sub-community may have been misjudged as a result. In any case, the current successional state of the grassland makes designating a NVC community/sub-community more difficult also.
- 2.26 With respect to the woodland survey, the timing of this survey was slightly sub-optimal as many of the vernal ground flora species such as, goldilocks buttercup (*Ranunculus auricomus*) and wood anemone (*Anemone nemorosa*) will no longer be apparent or easily observed at such a relatively late date in the survey season. However, it is considered that a sufficient level of detail was recorded to accurately determine the overall botanical value of the woodland, and that sufficient indicator plant species were present to accurately identify the woodland NVC community/sub-community.
- 2.27 The NVC community assessments are subjective judgements reliant upon the surveyor's extensive experience of NVC survey across many habitats and communities throughout the United Kingdom. No NVC quadrat data was gathered and as such it is not possible to quantify the suggested NVC assignments for the woodland and grassland communities here.

## **Bats**

- 2.28 During the Extended Phase 1 survey, areas of woodland, semi-improved grassland, scattered scrub, hedgerows and aquatic habitats were identified as having the potential to support foraging and commuting bats. In addition, a number of mature trees present within, or immediately adjacent to the site boundary were considered to have the potential to support tree roosting bat species.
- 2.29 The following surveys for bats were therefore undertaken, with reference to national best practice guidelines<sup>6</sup>, including investigations of:

### **1. Bat Roosting:**

- (a) Daytime inspections of mature trees for bat roosting potential; and
- (b) Daytime inspections of buildings for potential to support roosting bats.

### **2. Bat foraging/commuting activity:**

- (a) Manual transect surveys; and
- (b) Automatic detector surveys.

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<sup>6</sup> Bat Conservation Trust (2007). *Bat Surveys: Good Practice Guidelines*. Bat Conservation Trust, London

## Investigations of Bat Roosting

### *Trees*

2.30 An assessment of all suitable trees on site to determine their potential to support roosting bats was undertaken over several daytime inspections undertaken on 9 and 10 July 2012 in the central and north west parts of the site (north of Newlands Lane and west of Old Broyle Road), and on 25 September 2013 in the southern part of the site (south of Newlands Lane and north of Old Broyle Road). Surveys were undertaken by a Natural England bat licensed worker or experienced bat surveyor with reference to best practice guidelines. Trees of sufficient maturity to support roosting bats were individually examined from ground level on all aspects (where possible) using binoculars where appropriate, for the presence of potential bat roosting features, including:

- Natural holes;
- Woodpecker holes;
- Cracks/splits in limbs;
- Dense epicormic growth;
- Loose/peeling/fissured bark;
- Thick-stemmed ivy (>5cm diameter); and
- Hollows/cavities/decay pockets.

2.31 The following categories for the trees were used during the assessment:

#### *Negligible Potential*

Trees that:

- (i) Were not sufficiently mature to have developed potential bat roost features; or
- (ii) Could be comprehensively surveyed and lacked any such suitable features.

#### *Low Potential*

Trees where:

- (i) No potential roost features were identified but which could not be examined completely and were of sufficient maturity to support such features in locations not visible from the ground;

- (ii) No suitable features were identified but a large proportion of the tree was covered by ivy (not in itself acting as a potential feature) which could obscure any suitable features; or
- (iii) Such features appeared to be extremely limited, offering minimal roosting potential.

*Medium Potential*

Trees exhibiting:

- (i) Only a small number of potential roost features; or
- (ii) Features in a very limited range of locations or orientations.

*High potential*

Trees Supporting:

- (i) At least one roost feature that showed probable evidence of past use by bats;
- (ii) One type of well-developed potential roost feature in a wide range of locations or orientations;
- (iii) Several types of well-developed potential roost features; or
- (iv) Some combination of (i) – (iii).

*Confirmed Bat Roost*

Trees with:

- (i) Direct evidence of bat use (including oily stains around entrance holes, droppings or urine stains on bark below entrance holes, audible squeaking from within a suitable feature; or
- (ii) Historical evidence of bat use (i.e. desk study records, results of previous surveys).

2.32 At the time of survey no topographic survey data or arboricultural assessment were available; the locations of trees with bat roost potential should therefore only be considered as indicative and may require further investigations to confirm their precise location during the detailed design stages.

### *Limitations*

- 2.33 This type of assessment is based on features visible from ground level and is not considered a definitive survey for roosting bats. Due to the limitations of this type of survey the age, structure and overall condition of the tree are also used to guide the assessment and a precautionary approach adopted. Should any trees of sufficient potential be subject to proposals for felling/tree surgery, additional survey work would be required to establish if any bats are roosting within the trees and if present, species, numbers and type of roost.
- 2.34 Given that the assessment was undertaken when the trees were in leaf, trees that were of a suitable size or age to support roosting bats and that were not wholly visible from the ground owing to leaf cover were classified as having low potential, even where no specific features were visible. It is considered that this precaution ensures that the surveys undertaken were sufficiently robust to achieve the aims identified and correctly ascertain the likelihood of a tree supporting bat roosts.
- 2.35 A small number of trees could not be fully assessed due to their location outside of the site boundary or through being amongst other dense vegetation within woodland compartment W5. These areas are not considered to be within the construction footprint.

### ***Buildings***

- 2.36 The site supports three distinct clusters of buildings, namely a small number of residential dwellings located within the Whitehouse Farm complex, derelict agricultural buildings located within the south east corner of field F11 and a row of six semi-detached houses adjacent to Newlands Lane. It is understood that none of these buildings will be subject to development/redevelopment as a result of the West of Chichester urban extension proposals. The potential for buildings on site to support roosting bats was investigated through a daytime external visual inspection undertaken during the 2008 Extended Phase 1 survey.
- 2.37 All external features visible from the exterior of the buildings considered potentially suitable to bats were assessed. Such features include cracks, crevices, missing/raised roof tiles, loose flashing and gaps within the brickwork and/or behind fascia which may provide suitable points of entry for bats. Signs of bat activity such as roosting individuals, corpses, droppings, feeding remains and urine staining were also searched for within all accessible areas. Potential points of egress into buildings were assessed from the ground using binoculars. On this basis, the potential suitability of the buildings assessed was assigned a bat potential rating of low to high.
- 2.38 An update assessment in respect of the farm buildings in the corner of field F11 was completed on 5 November 2013 which comprised an internal and external inspection.

2.39 The derelict farm buildings located in the corner of field F11 were also assessed for evidence of use by barn owls during the 2013 update bat roost assessment, by searching for signs of use such as droppings, feathers and pellets or for the presence of roosting/nesting birds. The results of this assessment are presented under the breeding bird results.

## Investigations of Bat Foraging/Commuting Activity

### Manual Transect Surveys

2.40 Manual transect surveys were undertaken across the site to identify areas of bat foraging activity and commuting routes used by bats during 2012 and 2013. In accordance with best practice guidelines<sup>7</sup>, surveys were spread over the course of the active bat season and completed within the optimal survey months of April to September inclusive.

2.41 Full details including the survey type, date, timing, and weather conditions during each of the transect surveys undertaken during 2012 and 2013 is given in **Table EDP 2.1**. Weather conditions on each visit were optimum for bat surveys, being relatively warm with light to medium winds and little rain. The surveys are therefore not considered to be seasonally or climatically constrained.

**Table EDP 2.1:** Date, timing and weather conditions of bat activity surveys

Survey date	Dusk/dawn	Survey time	Sunrise/sunset time	Weather conditions			
				Temp (°C)	Cloud (%)	Rain	Wind (Beaufort scale)
<b>2012</b>							
28/05/12	Dusk	21:00 – 00:00	21:14	24	0	None	2 - 0
30/07/12	Dusk	20:40 – 23:20	20:51	16.0 - 17.0	95 - 100	None	2 - 4
31/07/12	Dawn	03:30 – 05:30	05:30	14.1- 14.4	100	Very light rain at start/end	2 - 5
03/09/12	Dusk	19:29 – 21:45	19:44	16.2 - 19.4	40 - 70	None	1 - 0
<b>2013</b>							
29/05/13	Dusk	20:45 – 22:54	21:05	12.0 - 14	80 - 100	None	2 - 3
29/07/13	Dusk	20:45 – 23:00	20:55	16.2 - 17.3	10 - 60	None	2 - 4

<sup>7</sup> Hundt L (2012). *Bat Surveys: Good Practice Guidelines, 2nd Edition*, Bat Conservation Trust



Survey date	Dusk/dawn	Survey time	Sunrise/sunset time	Weather conditions			
				Temp (°C)	Cloud (%)	Rain	Wind (Beaufort scale)
30/07/13	Dawn	03:56 – 05:26	05:26	16.4 - 16.6	95 - 100	Short shower prior to survey	2 - 3
24/09/13	Dusk	18:45 - 21:09	18:58	15.1 - 18.1	30 - 100	None	0

2.42 Manual transect surveys were completed by experienced bat surveyors across five transect survey routes ranging from 2.5 - 4.5km in length. Transect routes were designed to cover all woodland, trees, hedgerows and other potential foraging or commuting habitat on site as illustrated on **Plan EDP 3**. Transect routes were walked at a slow and steady pace with between ten and twelve 'listening stops', lasting approximately five to six minutes each. All bats were recorded and their behaviour marked on survey maps in order characterise the value of the site and its component habitats to foraging and commuting bats.

2.43 Activity surveys were conducted using BatBox Duet or Pettersson D240x bat detectors connected to Edirol Digital recorders, or Wildlife Acoustics EM3 detectors. Observations of the time, location, and activity of all bats seen or heard were noted. Bats were identified on the basis of their characteristic echolocation calls, which were recorded and analysed using computer sonogram analysis (Batsound 4.03 and Analook 3.8v) to confirm species identification. Species of myotis bat and long-eared bat are difficult to tell apart solely from their echolocation calls and were therefore grouped as such.

### ***Automatic Detector Surveys***

2.44 To supplement the bat transect survey data, bat activity within the site was also sampled using static bat detectors which automatically trigger and record bat echolocation calls. This survey method was used during the months of June and August 2012 and June and August 2013 providing a total of four anabat recording periods.

2.45 Anabat SD2 Bat Detectors were deployed in twenty different locations over the site, as shown on **Plan EDP 3**. The Anabats were fixed in secure locations, with an external microphone attached 1-2.5m above ground, and directed away from the tree to maximise detection sensitivity. **Table EDP 2.2** gives the sampling dates and location details for the Anabats deployed during the four recording periods. Minimum night time temperatures were recorded by weather data loggers attached to one of the Anabats.

**Table EDP 2.2:** Anabat sampling dates and location details. \* Anabat failed after two nights of recording. \*\* Anabat failed – no data recorded

ID	Location	Dates	Adjacent/Nearby Habitat	Microphone			Min temp (°C)
				Ht (m)	Direction	Sensitivity	
<b>2012</b>							
1*	F12 west boundary	22/06/12-24/06/12	Arable and woodland with mature trees	1.5	North	8	8.1
2	F15 east boundary	22/06/12-27/06/12	Arable, woodland with mature trees and rough grassland	1	South	4	8.1
3	F11 east boundary	22/06/12-27/06/12	Arable and hedgerow	1.25	North	2	8.1
4	F8 west boundary	22/06/12-27/06/12	Rough grassland, hedgerow, woodland	1.5	South east	4	8.1
5	F10 west boundary	22/06/12-27/06/12	Arable, hedgerow with mature Oaks	2	South	4	8.1
6	F14 east boundary	22/06/12-27/06/12	Arable and hedgerow	2.25	North west	4	8.1
7**	F12 north boundary	13/08/12-20/08/12	Arable and woodland with mature trees	2	South	7	13.9
8	F15 south boundary	13/08/12-20/08/12	Arable and woodland with mature trees	2	East	5	13.9
9	F11 south boundary	13/08/12-20/08/12	Arable, hedgerow, woodland and rough grassland	2	North east	8	13.9
10	F8 west boundary	13/08/12-20/08/12	Arable, hedgerow with mature trees and rough grassland	1.5	South west	7	13.9
11	F9 north boundary	13/08/12-20/08/12	Arable and hedgerow with mature trees	2	North	7	13.9
12	F14 east boundary	13/08/12-20/08/12	Arable and hedgerow	1.75	West	6	13.9
<b>2013</b>							
13	F18 east boundary	25/06/13-01/07/13	Arable with treeline	2.1	North	5	5.1
14	F6 west boundary	25/06/13-01/07/13	Arable and woodland with mature trees	2.5	North east	7	5.1
15	F1 south boundary	25/06/13-01/07/13	Arable and woodland with mature trees	2	North	6.5	5.1
16	F2 south boundary	25/06/13-01/07/13	Grassland with mature treeline	2.5	North	7	5.1
17	F18 east boundary	05/08/13-12/08/13	Arable with treeline	2	North	7	6.6
18	F1 west boundary	05/08/13-12/08/13	Arable with treeline	2.5	South west	7	6.6

ID	Location	Dates	Adjacent/Nearby Habitat	Microphone			Min temp (°C)
				Ht (m)	Direction	Sensitivity	
19	F2 west boundary	05/08/13-12/08/13	Grassland with treeline	2	South	8	6.6
20	F3 west boundary	05/08/13-12/08/13	Grassland with treeline	2.5	North	7	6.6

2.46 The echolocation calls recorded by the Anabats were filtered for noise files (i.e. sound files created when noise triggers the anabat to record) and then specifically for each of the UK's bat species using Analook software filter function. The parameters for the noise filter are based on that proposed by Chris Corben and Kim Livengood<sup>8</sup> and are provided in **Table EDP 2.3**. All files passing the various filters were checked manually using sonogram analysis (Analook 3.8v) in accordance with published parameters<sup>9</sup> to confirm the species identification of each bat call.

**Table EDP 2.3** Filtration values used by Analook software to remove noise files

Filter	Smoothness	Frequency (Fc (kHz))		Duration (ms)	
		Min	Max	Min	Max
Noise filter	50	15	120	2	50

#### *Limitations*

2.47 None of the automatic detector surveys completed during 2012 and 2013 are considered to have been constrained by unseasonably cold conditions; although the particularly wet summer experienced during 2012 may have suppressed levels of bat activity during this year.

2.48 Due to climatic and environmental factors in the immediate vicinity of each of the Anabat locations, the sensitivity of each Anabat had to be adjusted and was therefore not consistent across all locations. This can affect the number of bat calls recorded by each detector and has been taken into account when describing bat activity levels in the results section.

2.49 In addition, the identification of calls and species using Analook software is dependent upon the quality of the recording made which can be influenced by the following factors, which may limit levels of activity and species recorded:

- Weather conditions – rainfall and wind;

<sup>8</sup> Taken from Making an Antinoise Filter presentation from 2010 Annual Bat Conference

<sup>9</sup> Russ (2012). *British Bat Calls, a guide to species identification*. Pelagic Publishing, Exeter

- Distance of bat from Anabat;
  - Presence of obstructions through which the noise must pass i.e. trees; and
  - Proximity of other noise sources such as roads.
- 2.50 Finally, owing to a technical fault with Anabats nos. 1 and 7 during the 2012 survey period, data was only recorded for two nights by Anabat no. 1 on 22 June 2012, and no data was recorded by Anabat no. 7 deployed on 13 August 2012. Both anabats were located within the north west portion of the site and as such activity levels within these areas may have been underestimated. Nevertheless, the use of manual transect surveys along this route during each of the transects undertaken in 2012 is considered to provide sufficient data to accurately assess the usage of this area by foraging/commuting bats.

### **Breeding Birds**

- 2.51 The Extended Phase 1 habitat survey identified a number of habitats on site considered to offer some potential to breeding birds. In order to determine whether a valuable assemblage of birds is present, or whether the site supports any scarce or protected species of birds, a breeding bird survey (BBS) was undertaken. This survey will be used to inform the development proposals, including the mitigation and enhancement measures for the site, in addition to determining appropriate management regimes for the areas of biodiversity enhancement.
- 2.52 Bird survey methods are tailored to the bird community present in the locality, the species whose impacts are to be investigated, and the nature of the potential impacts. Standing Advice from Natural England<sup>10</sup> refers surveyors to the '*Common Bird Census*' (CBC) and '*Breeding Bird Survey*' methodologies, stating that the exact methodologies employed should be dependent upon the nature of the habitats present and the species likely to be encountered. As such, the adopted survey methodology comprises an adaptation of the CBC territory mapping approach<sup>11,12</sup>, involving the completion of three visits to the site between mid-April and mid-July; i.e. the height of the bird breeding bird season for lowland Britain. Potential limitations associated with this survey method are detailed at the end of this survey methodology.
- 2.53 The BBS detailed below were undertaken over two successive years; 2012 and 2013. With reference to **Plan EDP 4**, the central portion of the site, 'BBS Section 1' (located north of Newlands Lane and west of Old Broyle Road) was surveyed during 2012. The

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<sup>10</sup> Natural England *Standing Advice Species Sheet: Breeding Birds (including barn owls)*  
[http://www.naturalengland.org.uk/Images/BreedingBirds\\_tcm6-21703.pdf](http://www.naturalengland.org.uk/Images/BreedingBirds_tcm6-21703.pdf) [Accessed 13/11/2013]

<sup>11</sup> Scottish Natural Heritage (SNH) (revised 2010) *Survey Methods for use in assessing the Impacts of Onshore Windfarms on Bird Communities* (Unpublished Guidance Note)

<sup>12</sup> Gilbert, G., Gibbons, D.W., and Evans, J. (RSPB) (1998) *Bird Monitoring Methods: A Manual of Techniques for Key UK Species*. Pelagic Publishing

north western portion of the site, 'BBS Section 2' (located north east of Old Broyle Road), and the southern portion of the site, 'BBS Section 3' (located south of Newlands Lane), were both surveyed during 2013.

- 2.54 With regard to BBS Section 1, survey visits were spaced approximately three weeks apart, between early May and late June 2012. The first survey consisted of two visits to the site on subsequent days, whilst the second and third surveys each consisted of a single site visit.
- 2.55 The dates of the three survey visits to BBS Section 1, timings and the weather conditions encountered are summarised in **Table EDP 2.4**.

**Table EDP 2.4:** Dates, timings and weather conditions of the BBS visits at BBS Section 1

Survey	Date	Time	Cloud	Rain	Wind	Temp	Visibility
1	08.05.12	0530-0915	100%	Occasional drizzle	Still	Cool	Good
	09.05.12	0520-0830	100%	Occasional drizzle	Light breeze	Cool	Moderate (misty)
2	29.05.12	0515-1045	0%	Nil	Still	Warm, becoming hot	Good
3	19.06.12	0530-1045	50%	Nil	Still	Mild	Good

- 2.56 BBS Section 2 and BBS Section 3 were surveyed during 2013. Survey visits were spaced approximately four weeks apart, between late April and late June 2013. The survey dates, timings and weather conditions encountered, are summarised in **Table EDP 2.5**. On each BBS visit, both BBS Sections 2 and 3 were surveyed on the same day.

**Table EDP 2.5:** Dates, timings and weather conditions of the BBS visits at BBS Section 2 and BBS Section 3

Survey	Date	Time	Cloud	Rain	Wind (beaufort scale)	Temp.	Visibility
1	30.04.13	0530 - 0945	Start: 10% End: 25%	Dry	0 - 3	Start: 2°C End: 5°C	Good
2	01.06.13	0500 - 0830	Start 50% End: 10%	Dry	2 - 3	Start: 10°C End: 11°C	Good
3	24.06.13	0500 - 0900	Start: 50% End: 100%	Dry	0 - 2	Start: 12°C End: 11°C	Good

- 2.57 The surveys were undertaken by an experienced surveyor at an appropriate time of year. They were also undertaken during suitable weather conditions (i.e. days/periods with strong winds and heavy or persistent rain were avoided). Following best practice, the survey visits were timed to start approximately one hour after sunrise (Gilbert *et al.*, 1998). It is therefore considered that the results provide a representative overview of the breeding bird interest at the site.
- 2.58 In common with the CBC, the survey methodology involved walking to within 50m of all suitable habitats for breeding birds, including ground nesting species. This ensured that the survey identified all birds using the margins of the site, as well as those using the interior of the site. All bird species present, and their activity status, were recorded using standard BTO species codes<sup>13</sup>. A particular emphasis was placed upon those elements considered to relate to, or be indicative of, breeding.
- 2.59 Following the completion of the surveys, the breeding status of each bird species observed at the site was determined according to the nature and frequency of the elements recorded, as set out in **Table EDP 2.6**. The assessment of breeding status broadly follows the definitions set out in the CBC instructions<sup>14</sup>.

**Table EDP 2.6:** Summary of field evidence used to determine breeding bird status

Status	Definition	Examples
Confirmed	Definitive evidence of breeding recorded on at least one visit, or territorial behaviour suggestive of breeding recorded in the same location on two or more visits	Distraction display Nest building Nest with eggs Nest with young Used nest Recently fledged young Adult carrying faecal sac/food
Possible	Territorial behaviour suggestive of breeding recorded in the same location on only one visit	Male in song Adult giving alarm call
Non-breeder	No territorial behaviour suggestive of breeding recorded	Feeding birds only Birds flying over only

- 2.60 An assessment of the bird species recorded at the site, as well as the overall assemblage, has been made with reference to their national conservation status, as taken from the *Birds of Conservation Concern Report*<sup>15</sup>. This report provides 'population trends' for bird species at the national level.

<sup>13</sup> British Trust for Ornithology (2009). *BTO Species Codes*  
[http://www.bto.org/sites/default/files/u16/downloads/forms\\_instructions/bto\\_bird\\_species\\_codes.pdf](http://www.bto.org/sites/default/files/u16/downloads/forms_instructions/bto_bird_species_codes.pdf)  
 [accessed 10/04/2012]

<sup>14</sup> Marchant, J.H. (1983). *Common Birds Census instructions*. BTO, Tring

<sup>15</sup> Eaton M.A., Brown A.F., Noble D.G., Musgrove A.J., Hearn R., Aebischer N.J., Gibbons D.W., Evans A. And Gregory R.D. (2009). *Birds of Conservation Concern 3*. RSPB

- 2.61 Appropriate consideration has also been given to the conservation status of each bird species at the local level. Accordingly, the Sussex Ornithological Society's publication *The Sussex Bird Report*<sup>16</sup> and the *Sussex Bird Atlas 2007-11: The Maps*<sup>17</sup> have been consulted to provide information on the status of key species within Sussex as a whole. The Sussex Ornithological Society's figures relate to both East Sussex and West Sussex combined.
- 2.62 It should be noted that no specific dusk or night-time surveys were undertaken, so crepuscular or nocturnal species, such as species of owl, can be under-recorded by the BBS methodology. Indeed, signs (such as owl pellets) may be recorded incidentally; however, if birds utilise the site solely for foraging, such signs may not be present.

### **Barn Owls**

- 2.63 In order to account for barn owls which may be nesting on the site, a day time inspection of all mature trees on site to check for evidence of nesting owls was undertaken in conjunction with the day time visual assessments of mature trees for potential bat roosts as detailed in **Paragraph 2.30**. In addition, and at the request of Chichester District Council Officers, the interior of all the derelict farm buildings located within the south east corner of field F11 was inspected for evidence of nesting barn owls on 5 November 2013 during the day time inspection of the building for evidence of bat roosts. The above surveys comprised a search for evidence of barn owls including pellets, droppings and feathers in and around the base of all mature trees on site and within the interior and immediate surroundings of those derelict farm buildings mentioned above.

### *Limitations*

- 2.64 It is considered that the level of survey undertaken provides a detailed account of the breeding bird community within the site, together with an indication of the breeding abundances of each species. However, it should be noted that this level of survey will typically not provide exact breeding population figures for each species on site.
- 2.65 Due to the relatively low number of survey visits compared to the relatively detailed field evidence required to confirm breeding, the results may offer a range in the breeding population of certain species that is relatively large. This can be particularly true for cryptic or skulking species, or species that inhabit areas that are difficult to access, such as dunnock (*Prunella modularis*) breeding within dense scrub.
- 2.66 Furthermore, breeders affected by changes in habitat, such as skylark (*Alauda arvensis*) nesting within a silage field, may also result in a relatively large population range, as only a single account of breeding behaviour may be recorded before the habitat is altered (e.g. a silage cut has been taken).

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<sup>16</sup> Sussex Ornithological Society (2012). *The Sussex Bird Report No.64 2011*. Sussex Ornithological Society

<sup>17</sup> Sussex Ornithological Society (2013). *Sussex Bird Atlas 2007-11: The Maps [CD]*. Sussex Ornithological Society

- 2.67 It is considered that the atypical and prolonged cold weather during the spring of 2013 resulted in a slightly delayed start to the 2013 breeding season for many bird species. To mitigate for this, the first bird survey visit was delayed until the end of April 2013.
- 2.68 The results of the BBS set out the combined findings of the 2012 survey (BBS Section 1) and the 2013 survey (BBS Sections 2 and 3). This allows for the assessment of the breeding bird interest of the site as a whole, rather than discrete sections of the site. To ensure detail is not lost, full details of the breeding status, population and distribution of each species within each survey section is provided at **Appendix EDP 2**.

### ***Dormice***

- 2.69 A nest tube survey to determine the presence/likely absence of dormouse (*Muscardinus avellanarius*) from habitats within the site was undertaken during 2012 and 2013. As shown on **Plan EDP 5** the survey area comprised a representative area of hedgerows and broad-leaved woodland on site.
- 2.70 A total of 204 standard nest tubes, each comprising a wooden tray and nesting tube made from plastic tree guard material<sup>18</sup>, were deployed throughout the northern portion of the site, at approximately 20m intervals, on 28 May 2012. Nest tubes were erected at between 1m and 2m heights above ground and tied to suitable horizontal branches located within the hedgerows or lower branches of trees. Tubes were left *in situ* and checked monthly for evidence of use by dormice on six separate occasions in suitable weather conditions between June and November 2012. Tubes deployed in 2013 totalled 139, which were placed in situ within the southern and north eastern extent of the site on 10 April 2013 and subsequently checked monthly on 6 occasions for evidence of dormice.
- 2.71 In accordance with best practice guidance<sup>19</sup>, whereby the index of probability in detecting dormice presence within nest tubes is calculated according to set scores given for each of the different months, during which a minimum of fifty nest tubes are deployed (as illustrated in **Table EDP 2.7**), the survey effort employed for the site is considered to be sufficient to assume presence or absence. As illustrated in **Table EDP 2.7** the combined survey effort score for 2012, and 2013, (calculated to be 20 and 22 respectively) meets the minimum survey effort score recommended by Chanin & Woods (2003) for a thorough dormouse survey, through which absence may be assumed if no evidence of dormice is found.

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<sup>18</sup> Specifications as per Mammal Society nest tube product

<sup>19</sup> Bright, P. M., Morris, P. & Mitchell-Jones, T. (2006) The Dormouse Conservation Handbook. English Nature



**Table EDP 2.7:** Index of probability of finding dormice present in nest tubes in any one month, as extracted from Bright *et al.* (2006)

Month	Index of Probability	Nest tubes checked in 2012	Nest tubes checked in 2013
April	1		<i>Tubes deployed</i>
May	4	<i>Tubes deployed</i>	✓
June	2	✓	✓
July	2	✓	✓
August	5	✓	✓
September	7	✓	✓
October	2	✓	
November	2	✓	✓
<b>Total survey effort score</b>		<b>20</b>	<b>22</b>

2.72 Evidence such as the presence of individuals, nests and/or food caches was recorded during each of the surveys. Incidental sightings or evidence of woodmice (*Apodemus sylvaticus*) were also recorded during the surveys, during which all tubes were emptied of wood mouse nests and individuals, cleaned and re-hung.

#### *Limitations*

2.73 May to November is considered to be within the optimum time period for carrying out nest tube surveys, the results of which are therefore not considered to be seasonally constrained. However, given the periodic flooding experienced throughout the site and indeed much of the UK during the spring and summer of 2012, it was considered that the potential to detect dormice through nest tube surveys may have been limited through reduced breeding success and poor suitability of nest tubes for nest-building caused by the heavy rainfall.

2.74 However, as discussed previously, the minimum survey effort recommended for detecting dormice has been applied throughout the site, in well connected habitats, in both 2012 and 2013. As such, it is considered that a reasonable survey effort has been applied.

#### **Badgers**

2.75 The site was considered to offer suitable foraging and sett building opportunities for badgers (*Meles meles*) and a detailed walkover survey was undertaken to determine the presence and distribution of badgers and their setts, across the site.

2.76 The site was subject to a badger walkover survey by an experienced EDP ecologist covering all areas of suitable habitat in respect of the northern portion of the site (north of Newlands Lane and west of Old Broyle Road) on 22 October and 26 November 2012. An update walkover survey, which additionally extended into areas of suitable habitat in the southern part of the site (south of Newlands Lane and east of Old Broyle Road), was completed on 24 September 2013.

2.77 During the surveys any signs of badger activity such as holes, latrines, trails, snuffle holes and hairs on fencing or vegetation were recorded. Where holes of a size and shape consistent with badgers were identified, the following signs of badger activity were searched for in order to determine whether they were currently in active use:

- Fresh spoil outside entrances;
- Old bedding material (typically dried grass) outside entrances;
- Holes being cleared of leaf litter;
- Badger guard hairs; and
- Fresh tracks leading to/from the holes.

#### *Limitations*

2.78 Given that badgers are mobile animals and that suitable foraging and sett building opportunities exist across the site, it is possible that the site could support additional badger setts in the future, which may not have been recorded during the 2012 to 2013 walkover surveys.

#### **Water Voles**

2.79 Aquatic habitats on site considered suitable for water vole include the network of seasonally wet ditches which extends throughout the site, as discussed later in the report. In places, the ditch network supports well vegetated banks and at certain times of the year, sufficient water depth and low flow rate to facilitate upstream movement of water voles from the Chichester harbour area to the south of the site where water vole populations are known to occur (see desk study records provided in **Appendix EDP 1**).

2.80 A detailed walkover survey of suitable ditches within the site which held water at the time of survey was therefore undertaken by an experienced mammalogist and riparian mammal surveyor on 17 and 18 September 2013 to establish the presence, or likely absence of the species from the site. The survey was undertaken in accordance with standard guidance<sup>20</sup> and involved a visual inspection of the watercourses for characteristic signs of water voles, such as droppings and latrines, burrows, footprints, feeding remains and feeding stations. If any of the above field signs were encountered the number of each type was recorded. Evidence of other riparian mammals, such as brown rat and field vole, the field signs of which can resemble that of water vole, was also noted. The location of those sections of the ditch network which were surveyed is illustrated on **Plan EDP 6**. Based on their distinctiveness from each other, in terms of habitat suitability, four sections of the ditch network were identified.

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<sup>20</sup> Strachan, R *et al.* (2011) Water Vole Conservation Handbook - Third Edition. Wildlife Conservation Research Unit, Oxford

- 2.81 In addition to the inspection of onsite capabilities for water voles, an assessment of the connectivity of the ditches on site to Chichester Harbour and the small waterbodies flowing into it where water vole populations are known to occur, was undertaken through visual inspections of underground culverts, where access permitted.

#### *Limitations*

- 2.82 The timing of the water vole survey slightly hampered the discovery of water vole field signs owing to the dense vegetation which had accumulated along sections of the ditch network. In particular, dense vegetation was recorded in the lower part of the site (Section C). In comparison, some sections of the ditch network had been heavily flailed (Section A), significantly improving the discovery of burrows within these areas, but affecting the ability to detect feeding remains.
- 2.83 In order to undertake a representative sample of the ditch network in places where vegetation was very dense and with restricted access, an intensive search for field signs was undertaken at intervals of 5-10m; at these search points a minimum of 1m of ditch bank was surveyed. This method has proven successful in similar walkover surveys of similar sized ditches where water vole signs were found at 40% of 1m sections surveyed at another site, and in 25 ditches of comparable size vole signs were found in approximately two thirds of the sections surveyed. Therefore, where water voles are present it is considered that this method provides a reliable method of detecting water vole field signs. It is therefore considered that the presence of dense vegetation did not prevent the presence of water voles being detected.

#### **Great Crested Newts**

- 2.84 The site supports a single pond located in field F17, and a further seven ponds are present within approximately 250m of the site boundary (as illustrated in **Plan EDP 7**), which were considered to have potential to support great crested newts (*Triturus cristatus*).

#### *Great Crested Newt Surveys*

- 2.85 Given the suitability of the ponds and their close proximity to one another, all ponds were subject to more detailed surveys to establish the presence or likely absence of great crested newts. The surveys were conducted during the optimal months of April and May 2011 and updated during April and May 2013.
- 2.86 Survey visits were undertaken with reference to the survey methodology set out in the English Nature Guidelines<sup>21</sup> by a holder of a Natural England great crested newt survey licence. In accordance with the guidelines, the following three preferred survey

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<sup>21</sup> English Nature (2001). Great Crested Newt Mitigation Guidelines, English Nature, Peterborough

techniques were employed to determine the presence/absence of great crested newts on site:

- Torching: This involves searching water bodies by torchlight between dusk and midnight and is an effective means of detecting adult newts. Each surveyor used a 1,000,000 candle power torch during this part of the survey;
- Bottle Trapping: This involves the use of funnel traps (made from 2-litre plastic bottles) that are inserted into the water along the margin of the water bodies during the evening and checked the following morning. Access permitting, the traps are spaced at roughly 2m intervals around the margins of the ponds; and
- Egg Searching: A search of any suitable aquatic vegetation to check for great crested newt eggs.

2.87 A fourth method (netting) was also used as a last resort where the other survey techniques were unsuitable due to the nature of the water bodies and the unnecessary disturbance it could potentially cause to these ecosystems.

2.88 The standard survey procedure involves a minimum of four survey visits to each pond to confirm the presence/likely absence of great crested newts. If during any of these four visits evidence is found of great crested newts then a further two survey visits are required to allow for an estimate of population size. The dates of the survey visits and the conditions during the surveys are summarised in **Table EDP 2.8**.

**Table EDP 2.8:** Dates, timings and conditions for the great crested newt surveys

Visit No.	Date	Overnight air temp. (°C)		Overnight water temp. (°C)	
		Max	Min	Max	Min
<b>2011</b>					
1	19/04/11	13.5	7.9	14.8	11.8
2	04/05/11	11.8	9.6	12.6	11.7
3	12/05/11	11.1	4.1	14.5	11.5
4	09/06/11	10.0	7.0	14.6	11.7
<b>2013</b>					
1	15/04/13	<i>Equipment failure</i>		11.3	9.8
2	22/04/13	31.9	10.1	11.9	10.9
3	13/05/13	11.0	6.8	12.7	10.3
4	28/05/13	<i>Equipment failure</i>		11.3	9.3

- 2.89 The timing and conditions during the surveys are in line with those set out in the English Nature Great Crested Newt Mitigation Guidelines and as such, it is not considered that they were limited by seasonal or climatic factors.
- 2.90 As no great crested newts were recorded after four survey visits to each pond, no further surveys were undertaken
- 2.91 Although no evidence of great crested newts was recorded within any of the ponds surveyed, a further assessment of the suitability of the ponds as habitats for great crested newts was undertaken as discussed below.

*Habitat Suitability Assessment*

- 2.92 A Habitat Suitability Index (HSI) assessment, as developed by Oldham *et al.* (2000)<sup>22</sup>, was completed to assess each of the water bodies identified on or near the site. The survey was completed on 13 June 2013. The HSI assessment follows a standardised assessment criteria using habitat components such as water quality, fish/waterfowl presence and surrounding terrestrial habitat quality to derive a suitability score, or 'index'. Water bodies with high scores are considered more likely to support great crested newts compared to those with lower scores. HSI scores and the inferred suitability of the pond assessed to support great crested newt are described within **Table EDP 2.9**.

**Table EDP 2.9:** HSI scores and inferred pond suitability

HSI Score	Pond suitability to support great crested newts
<0.5	Poor suitability
0.5 – 0.59	Below average suitability
0.6 – 0.69	Average suitability
0.7 – 0.79	Good suitability
> 0.8	Excellent suitability

- 2.93 During the assessment, pond 7 was completely dry and the area covered by dense scrub preventing access to the pond to survey. The remaining seven ponds were all assessed for their suitability to support great crested newt.

*Limitations*

- 2.94 High turbidity and/or vegetation limited visibility in some water bodies during the torchlight surveys and may have resulted in great crested newts being undetected; however, the survey design, which includes other survey techniques, is specifically intended to reduce the significance of this limitation.
- 2.95 During 2011, permission to survey ponds 6 to 8 was not obtained and pond 5 was dry. During 2013, pond 7 was dry and entirely scrubbed over and therefore not surveyed,

<sup>22</sup>Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155

and permission to survey pond 8 could not be obtained. It has therefore not been possible to confirm the presence or likely absence of great crested newts from ponds 7 and 8, although pond 7 is now entirely dry and hence considered unsuitable for great crested newts. Furthermore, poor quality terrestrial habitat and lack of aquatic habitat on site are considered sufficient to prevent great crested newts migrating onto the site should they be present in this pond. Furthermore, the lack of evidence of great crested newts recorded within those ponds surveyed suggests great crested newts are absent in the immediate vicinity of the site.

- 2.96 The ditch network running throughout the site was deemed unsuitable for breeding great crested newts owing to the seasonal drought conditions experienced in the ditches, along with the opposing conditions of high flow during periods of heavy rainfall. As such, no surveys for great crested newts were completed within the site's ditches.

### **Reptiles**

- 2.97 The site is considered to support habitats of varying suitability for reptiles; large areas of the site are considered of negligible value owing to their intensive agricultural land use, whilst the site also supports areas of rough, semi-improved grassland which provide significant potential for reptiles.
- 2.98 To confirm the presence, or likely absence, of reptiles from the site detailed refugia based reptile surveys, following best practice guidance<sup>23</sup>, were undertaken throughout the site. Surveys were undertaken between August and September 2012 and between May and September 2013, with the study area divided into survey compartments A-Q as illustrated on **Plan EDP 8**.
- 2.99 During the 2012 surveys, a total of two hundred artificial reptile refugia comprising roofing felt sheets measuring approximately 1m x 0.5m were deployed in suitable reptile habitat within survey compartments A-F on 30 July 2012; some refugia were replaced on site on 20 August 2012 after being damaged during land management works. For the 2013 surveys, a total of 359 mats of the same specification as above were deployed. Refugia within survey compartments K, L and O to Q were deployed on 10 and 23 April 2013, in survey compartments M and N on 14 May 2013 and in survey compartments G to J on 13 June 2013.
- 2.100 Reptile refugia were left undisturbed *in situ* for a period of at least ten days prior to the commencement of reptile surveys. A total of five reptile survey visits were completed at the site in 2012, covering survey compartments A-F. The 2013 surveys included a total of eight reptile survey visits. To account for the staggered deployment of reptile refugia across multiple dates, as discussed at **Paragraph 2.99**, 8 reptile survey visits were

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<sup>23</sup> Froglife (1999) Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10, Froglife, Halesworth; DMRB (2005) *Nature conservation advice in relation to reptiles and roads. Volume 10, Section 4, Part 7, HA/116/05*. DMRB

completed in 2013 to ensure that all refugia within each survey compartment was afforded a minimum of seven survey visits. Detailed weather conditions recorded during each survey visit undertaken throughout 2012 and 2013 are summarised in **Table EDP 2.10**.

**Table EDP 2.10:** Date, timing and weather conditions of reptile survey visits undertaken on land West of Chichester during 2012 and 2013

Date	Visit No.	Start time	Cloud cover (%)	Air temp. range (°C)	Refugia temp. range (°C)	Wind speed (Beaufort)	Precipitation (during survey)	Recent weather (last 48 hrs)
<b>2012</b>								
30.08.12	1	14:49	70	19.3-21.6	19.5-25.0	4	Nil	Sunny spells and showers
03.09.12	2	10:45	100-10	15.6-19.7	18.0-29.2	2	Nil	Sunny intervals
10.09.12	3	13:00	60	20.2-21.8	20.3-25.9	4	Nil	Bright, sunny 20-28°C, rain 0.5-1 hr before survey
20.09.12	4	16:00	95	15.8-16.9	17.6-18.1	0	Nil	Not recorded
27.09.12	5	14:22	50	17.3-18.9	23.8-26.2	1	Nil	Long sunny spells, some rain
<b>2013</b>								
29.05.13	1	12:38	95	13.4-22.6	13.2-23.5	0	Survey postponed for 45 minutes at 2pm during heavy rain, light rain until 15:30	Mixed heavy rainfall and warm, sunny periods
25.06.13	2	12:10	95	18.0-23.0	20.0-27.3	1-3	Nil	Warm
10.07.13	3	08:00	1	19.8-26.7	17.1-42.0	1	Nil	Very hot (25+), clear

Date	Visit No.	Start time	Cloud cover (%)	Air temp. range (°C)	Refugia temp. range (°C)	Wind speed (Beaufort)	Precipitation (during survey)	Recent weather (last 48 hrs)
24.07.13	4	08:55	100-10	18.2-24.8	18.9-38.5	2	Nil	Hot, dry and sunny for several weeks. Rainy showers and thunderstorm in past 24 hours
22.08.13	5	11:45	40	22.5-26.1	23.5-45.2	1	Nil	Hot and sunny, cloudy intervals
11.09.13	6	11:45	50	18.6-20.4	22.4-29.3	3	Nil	Rainfall overnight and previous day.
18.09.13	7	11:30	50	16.0-24.0	15.6-23.8	0	Nil	Rain in last 24 hours
25.09.13	8	09:15	50	16.0-21.0	17.1-28.5	1	Nil	Sunny intervals

2.101 During each survey visit, artificial refugia were individually checked by an experienced EDP Ecologist with any reptiles observed recorded, along with notes on their life stage (adult/juvenile) and sex where possible. A peak count of the total number of individuals of a particular species was recorded for each survey compartment. Peak counts were then used to estimate approximate population size for each reptile species recorded in each compartment. Estimates of population size followed the approach given in the withdrawn draft reptile mitigation guidelines<sup>24</sup>; and are summarised with respect to widespread reptiles in **Table EDP 2.11**.

**Table EDP 2.11:** Population size class estimates

Species	Population Size Class Category		
	Small	Medium	Large
Slow-worm	< 10	10 - 40	> 40
Common lizard	< 5	5 - 20	> 20
Grass snake	< 5	5 - 10	> 10
Adder	< 5	5 - 10	> 10

*Limitations*

<sup>24</sup> Natural England (2011) *Natural England Technical Information Note TIN102 Reptile Mitigation Guidelines*.  
WITHDRAWN



- 2.102 Although all reptile surveys undertaken at the site were done so in suitable weather conditions and within recognised optimal months for reptile surveys, surveys undertaken in 2012 were not completed throughout the full active season for reptiles. Surveys were completed entirely within the months of August and September in 2012, which cannot fully account for the absence of mobile reptile species such as adders which display large seasonal movement patterns, and are capable of dispersal over several kilometres between spring breeding areas, summer foraging grounds and hibernating sites<sup>25</sup>, and may only use part of a site for a period of time within a survey season. Surveys undertaken in 2013 were, however, undertaken throughout the course of the survey season with survey visits ranging from end of May through until the end of September, and are considered far more likely to have captured seasonal movement patterns within those areas surveyed.
- 2.103 Furthermore, owing to the inconspicuous nature and inherent low detectability of reptiles, the peak counts recorded will only reflect a small proportion of the total population present. In addition, the survey design does not allow for a truly accurate estimate of population size class due to the low number of survey visits completed (population size class estimates typically require at least 20 survey visits<sup>26</sup>), and as such population sizes should be treated as suggestive only.
- 2.104 The detection of reptiles may have also been hindered by the high levels of both public and dog disturbance to artificial reptile refugia, with surveyors reporting on a number of occasions that reptile refugia had been interfered with, and in the case of survey compartment L, nearly all of the reptile refugia were removed from the study area. This will have significantly affected the detection rate of reptiles within this area, resulting in the population size class being underestimated. Nevertheless, it is considered that a sufficient level of survey effort has been applied within other survey compartments nearby and as such, this limitation is not considered to have significantly affected the overall assessment of the site.

### ***Invertebrate Scoping Assessment***

- 2.105 A walkover survey of the habitats north of Newlands Lane and south west of Old Broyle Road was undertaken on 24 July 2012 by an experienced ecologist and entomologist to assess their potential to support important invertebrate species assemblages. The weather on the day of survey was warm (26°C), clear (0% cloud), dry and still, conditions considered ideal for observing insects and other invertebrates. The survey comprised an assessment of all habitats within the survey area in respect to their importance for insects and other invertebrates, with particular attention to potential protected, rare or notable species present on site. Grassland habitats were assessed in

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<sup>25</sup> Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth

<sup>26</sup> Froglife (1999) Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth  
Natural England (2011) *Natural England Technical Information Note TIN102 Reptile Mitigation Guidelines*  
WITHDRAWN

terms of their plant species richness, sward height and presence of other important features such as bare ground and ephemeral waterbodies which are of value to invertebrates. Specific observations of day-flying Lepidoptera (butterflies and moths) were recorded also.

## Section 3 Results

- 3.1 This section sets out the findings of the desk study, updated extended Phase 1 survey and detailed Phase 2 survey work undertaken at the site during 2012 to 2013. The following should be read in conjunction with the related plans and appendices referenced throughout. The field, woodland, pond and hedgerow numbers used throughout this section refers to those illustrated on the '*Habitat Features Plan 2013*' (**Plan EDP 1**).

### Site Context

- 3.2 The site is located to the west of Chichester, with urban Chichester immediately to the south and east together with lower density urban development and open countryside to the north and west. The eastern boundary of the site is defined by Centurian Way, which is understood to be the former course of a now disused railway currently used as a public footpath and traffic free cycle route. The southern boundary of the site is defined by the West Coastway railway line which runs from Brighton to Southampton. The site is crossed by two minor roads: the B2178 'Old Broyle Road' which runs north-west to south-east through the north eastern portion of the site; and Newlands Lane leading to Salthill Lane, and a public footpath, which runs east to west through the lower central section of the site.
- 3.3 The site consists of predominantly large arable fields contained by hedgerows and woodland copses, some of which are ancient woodland remnants, with some smaller fields of semi-improved grassland. Seasonally wet ditches run parallel to a number of the hedgerows/woodland copses. More significant areas of woodland lie adjacent to the northern and western boundaries of the site, including Brandy Hole Copse. The site contains a small number of residential and agricultural buildings, namely Whitehouse Farm and associated buildings, New Cottages along Newlands Lane and the disused grain storage barns within field F11.

### Designated Sites

#### *Statutory Designations*

- 3.4 International statutory designated sites include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites. National designations include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs).
- 3.5 The site is not covered by or adjacent to any international statutory designation; however, there are three such designations within the 5km search area, namely:

- (i) Chichester and Langstone Harbours SPA and Ramsar Site, which also includes the Solent Maritime SAC. These designations lie approximately 0.7km to the south of the site at their closest point. The SPA and Ramsar Site are designated for their ornithological interest for breeding and overwintering species; and
  - (ii) Kingley Vale SAC, which lies approximately 4.2km to the north west at its closest point to the site. This SAC is designated for its yew (*Taxus baccata*) woods and semi-natural grassland and scrubland facies on calcareous substrates.
- 3.6 The site is not covered by, or adjacent to, any national statutory designations. However, there is one such designation within 2km of the site, namely Chichester Harbour SSSI, which shares similar designation boundaries to the Chichester Harbour SPA/Ramsar and Solent Maritime SAC set out above.

### ***Non-Statutory Designations***

- 3.7 Non-statutory designations in Sussex are known as Sites of Nature Conservation Importance (SNCIs). In addition to SNCIs, there are other non-statutory designations which may be pertinent in the locality. These include Local Nature Reserves (LNRs) and Ancient Woodland. Summary data on non-statutory designations within 2km of the site and a map showing their distribution, as supplied by SBRC, are provided in **Appendix EDP 1**. The following should be read in conjunction with this appendix.
- 3.8 There is one non-statutory designation located within the site boundary;
- (i) An area of Ancient and Semi-Natural Woodland (1.01hectare (ha) located to the south of Newlands Lane.
- 3.9 In addition, three further designations lie immediately adjacent to parts of the site boundary, namely:
- (i) Brandy Hole Copse LNR, designated in 2001, which bounds the section of the site to the north of Old Broyle Road. A Management Plan (MP) has been prepared for the LNR, which covers the period 2008 to 2013. The MP describes the copse as:  
  
*"...an area of managed woodland, which up until 1989, had been coppiced continuously since the 18th Century. It is 6.5 hectares in total and includes three small ponds"*.
  - (ii) An area of Ancient and Semi-Natural Woodland (2ha), thought to be called Upper Rouse Copse, which adjoins the western boundary of the site; and
  - (iii) An area of Ancient and Semi-Natural Woodland (6.22ha), called East Broyle Copse located around the north eastern boundary of the site.

- 3.10 In addition to the LNR and Ancient Woodlands referred to above, there are three other SNCI designations within approximately 2km of the site, namely:
- (i) Fishbourne Meadows SNCI (C32) which lies approximately 0.5km to the south of the site and is described as consisting of "*...several meadows lying adjacent to Chichester Harbour SSSI. Although this permanent pasture appears to have been semi-improved with fertilisers there are some botanically interesting areas with it. Several locally uncommon plants are found. The site includes a chalk spring and derelict watercress beds*". It appears that the surface drainage ditch network within the site flows through this SNCI;
  - (ii) River Lavant Marsh SNCI (C103) which lies approximately 1.2km to the south of the site and is described as consisting of "*...an embanked grazing marsh in the former estuary of the River Lavant...*" and "*...includes a small reedbed and grazed marshy grassland...of great botanical and ornithological importance*"; and
  - (iii) Chichester Canal SNCI (C30), which lies approximately 1.6km to the south east of the site and is described as supporting a "*...rich wildlife associated with its mosaic of open water, marginal vegetation, banks and bordering hedgerows. The reedbeds are of great importance, notably for birds*".

## Habitats

### ***Extended Phase 1 Survey***

- 3.11 The Extended Phase 1 survey of the site identified a range of habitats within the site of varying interest to biodiversity. The site consists predominantly of large arable fields contained by species-rich hedgerows and woodland copses (some of which are ancient woodland remnants), with some smaller fields of semi-improved grassland containing scattered scrub and areas of marshy grassland. Seasonally wet ditches run parallel to a number of the hedgerows/woodland copses. More significant areas of broadleaved woodland lie adjacent to the northern and western site boundaries as discussed at **Paragraph 3.31**. The site supports one pond located within field F17, and several others lie within the vicinity of the site. Habitats are described in full in the relevant sections following and should be read in conjunction with **Plan EDP 1**, which illustrates the layout of habitats on the site and details the field, woodland, hedgerow and pond numbers as referred to throughout. Illustrative site photographs are provided in **Appendix EDP 3**.

### ***Broadleaved Woodland***

- 3.12 The site supports a number of areas of broadleaved woodland including a woodland belt running along the southern boundary of field F1 (W1), connected to a narrow linear strip of woodland along the western boundary of field F1 (W2) and an area of ancient

woodland along the eastern boundary of field F7 (W3) in the southern half of the site, a small woodland copse (W4) located in the north eastern extent of the site and another thin woodland belt running along the eastern boundary of field F15 (W5). The location of woodlands within the site and its immediate vicinity, is illustrated on **Plan EDP 1**.

- 3.13 All areas of woodland (W1 to W5) were subject to a detailed botanical walkover survey, the results of which are discussed in detail below in relation to each respective woodland. The following should be read in conjunction with the detailed plant lists recorded during the woodland botanical surveys as presented in **Appendix EDP 4**. References to Ancient Woodland Indicator plants (AWIs) are taken from the list presented within Rose (2006)<sup>27</sup>, as collated by K. Kirkby, English Nature (2004), and include only those plants considered to be indicative of ancient woodlands in the South-east of the UK (including Kent, Surrey, Sussex, London and Hertfordshire).

#### *Woodland W1*

- 3.14 Woodland W1 is a linear broad-leaved woodland feature forming the southern boundary of field F1. The woodland is slightly wider in the eastern extent where it comprises a large inner bank with seasonally wet ditches on both northern and southern sides (shallow to dry at the time of survey). On the southern edge of the southernmost ditch there are trees and scrub with a relict post and wire fence forming the boundary of the woodland.
- 3.15 The canopy within woodland W1 is dominated by mature pedunculate oak (*Quercus robur*) with the understorey dominated by holly (*Ilex aquifolium*) and hawthorn (*Crataegus monogyna*) with smaller quantities of hazel (*Corylus avellana*), dogwood (*Cornus sanguinea*), wild privet (*Ligustrum vulgare*) and grey willow (*Salix cinerea*). The field layer is dominated by ivy (*Hedera helix*) and bluebell (*Hyacinthoides non-scripta*) but wood melick (*Melica uniflora*) (an Ancient Woodland Indicator (AWI) plant in Sussex) is also locally dominant. Of further note are small populations of spurge laurel (*Daphne laureola*), wood millet (*Milium effusum*) and hairy wood-rush (*Luzula pilosa*) (AWIs in Sussex), and greater stitchwort (*Stellaria holostea*), a species of long-established broadleaved woodland communities but not considered indicative of ancient woodlands in Sussex. Small quantities of butcher's broom (*Ruscus aculeatus*), a native of dry woodlands in southern England and an AWI in Sussex, are also present in woodland W1. Honeysuckle (*Lonicera periclymenum*) is locally common throughout this woodland.
- 3.16 With respect to the NVC community present, woodland W1 has a strong affinity with the 'W10c *Quercus robur*-*Pteridium aquilinum*-*Rubus fruticosus* woodland *Hedera helix* sub-community'; an NVC community typical of broadleaved woodlands over dry acidic substrates.

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<sup>27</sup> Rose, F. (2006) *The Wild Flower Key – How to identify wild flowers trees and shrubs in Britain and Ireland*. (Revised Edition). London, England

### Woodland W2

- 3.17 Running north from the centre of woodland W1, woodland W2 is a narrower belt of broadleaved woodland occupying a broad inner bank with small outer ditches on either side – that on the east supports a very small south-flowing stream. Hybrid oak (*Quercus x rosacea*) is dominant in the canopy but pedunculate oak and sessile oak (*Quercus petraea*) (an AWI) are present also, the latter particularly towards the north. The understorey is species rich, dominated by holly, hazel, hawthorn and grey willow, also with some blackthorn (*Prunus spinosa*), field maple (*Acer campestre*), and hybrid willow (*Salix x reichardtii*). Sweet chestnut (*Castanea sativa*), aspen (*Populus tremula*) (an AWI in Sussex), rowan (*Sorbus aucuparia*) and wild cherry (*Prunus avium*) occur as both occasional canopy trees and understorey species. Bramble is common and honeysuckle is frequent throughout.
- 3.18 The field layer in the southern quarter of this woodland is similar to that of woodland W1; however, towards the north it is more open and grasses are more frequent, particularly species of dry acidic habitats such as wavy hair-grass (*Deschampsia flexuosa*) and brown bent (*Agrostis vinealis*). The distinctive moss bank haircap (*Polytrichum formosum*) is also occasional here. Wood sage (*Teucrium scorodonia*), a plant preferring dry acidic woodlands or scrub, is quite frequent in woodland W2.
- 3.19 Herbs that require dry acidic substrates are notable features here, particularly common cow-wheat (*Melampyrum pratense*) (locally abundant; an AWI plant in Sussex), hairy wood-rush (locally frequent), betony (*Stachys officinalis*) (scarce; an AWI in Sussex) and broom (*Cytisus scoparia*) (locally frequent; an AWI in Sussex). Low numbers of goldenrod (*Solidago virgaurea*), another notable herb which can occur on either acidic or calcareous dry substrates and an AWI in Sussex, were recorded in woodland W2.
- 3.20 The southern quarter of woodland W2 has much in common with woodland W1 and is thus also a good approximation of a W10c *Quercus robur*-*Pteridium aquilinum*-*Rubus fruticosus* woodland *Hedera helix* sub-community. The remainder of the woodland however combines elements of the W10c community with elements of a W16 *Quercus* spp.-*Betula* spp.-*Deschampsia flexuosa* woodland which becomes increasingly more pronounced in the north of this woodland.

### Woodland W3

- 3.21 Forming the eastern boundary of field F7, woodland W3 is a complex belt of broadleaved woodland, formally designated as 'Ancient Woodland,' which comprises three distinct components.
- 3.22 Firstly, forming the western edge of the woodland is a narrow woodbank with a small but deep outer ditch (dry at the time of survey). The woodbank supports a narrow band of canopy trees dominated by hybrid and English oaks, an understorey dominated by holly and hawthorn and with much bluebell and ivy in the field layer. As such, it is a

good approximation to the 'W10c *Quercus robur*-*Pteridium aquilinum*-*Rubus fruticosus* woodland *Hedera helix* sub-community'.

- 3.23 Secondly, in the northern half of the woodland, and found only on its eastern side, is a band of mature blackthorn-dominated scrub with scattered bramble and a species-poor field layer where ivy is the most common species. This is a typical 'W22a *Prunus spinosa*-*Rubus fruticosus* scrub community *Hedera helix*-*Silene dioica* sub-community'.
- 3.24 Finally, the remainder of woodland W3 (approximately one half of the total area) is dominated by out-grown sweet chestnut (*Castanea sativa*) coppice with an abundance of bracken (*Pteridium aquilinum*). Although a distinctive community, this is relatively species-poor and approximates relatively well to the 'W16a (*Quercus* spp.-*Betula* spp.-*Deschampsia flexuosa*) woodland (*Deschampsia flexuosa*) sub-community'.

#### Woodland W4

- 3.25 Woodland W4 is a deciduous woodland copse surrounded by large intensive arable fields. Mature sessile oak is dominant in the canopy, although mature ash (*Fraxinus excelsior*) and hybrid oak are found in the canopy on the southern edge of the woodland. The understorey is relatively sparse although large out-grown stools of hazel are common and semi-mature hawthorn is frequent.
- 3.26 The woodland contains remnants of pheasant rearing/release pens; woodlands used for this purpose typically have very poor field layers (caused by historic concentrations of high numbers of pheasants) and rather sparse understories (caused by gamekeepers requiring more open understorey to facilitate the construction of the pens and to reduce potential entry points for predators).
- 3.27 The field layer is very poor within this woodland, considered likely due to its historic use for pheasant rearing, and ivy is the most common species here (although only occasional or locally frequent in its abundance). The woodland is dark and shady, with limited light reaching the woodland flora. Enchanter's nightshade (*Circaea lutetiana*) is frequent across the woodland floor and bramble is locally dominant in the north-western part of the wood. Woodland W4 has an affinity with the 'W11 (*Quercus petraea*-*Betula pubescens*-*Oxalis acetosella*) woodland'.

#### Woodland W5

- 3.28 Woodland W5 is a narrow strip of mature broadleaved plantation woodland that in part forms a section of verge of a public highway. The woodland is widest in the north where it occupies a low broad bank with a shallow ditch on either side. The bank becomes somewhat narrower and steeper towards the south.
- 3.29 Mature beech (*Fagus sylvatica*), sessile oak, ash and hybrid oak predominate in the canopy here although there are also occasional specimens of mature turkey oak (*Quercus cerris*), holm oak (*Quercus ilex*), and wild cherry. A number of elms, considered



to be field elm (*Ulmus minor*), are also present as semi-mature canopy trees. Several dead silver birch (*Betula pendula*) are also present here. The understorey is quite dense and comprises holly, hazel, hawthorn, elder (*Sambucus nigra*) and bramble. The field layer is dominated by ivy although butcher's broom, greater stitchwort, ground ivy (*Glechoma hederacea*), bluebell and nettle are all common. Wood melick is locally common in the south, and stinking iris *Iris foetidissima* is rare. Honeysuckle is occasional throughout.

- 3.30 Woodland W5, despite its likely plantation origin, has a strong affinity with the 'W14 (*Fagus sylvatica*-*Rubus fruticosus*) woodland'.

#### *Off-site Woodland*

- 3.31 In addition to those woodlands located within the site, a number of large woodland blocks are located immediately adjacent to the western and northern boundary of the site and owing to their proximity to the site require consideration, including:

- Brandy Hole Copse (LNR), an area of managed ancient woodland comprising predominantly sweet chestnut coppice which bounds the north eastern portion of the site;
- An area of ancient woodland known as 'Upper Rouse Copse' which adjoins the western boundary of the site, adjacent to field F11. The woodland comprises a block of semi-natural broadleaved woodland on a gentle west-facing slope. Sycamore (*Acer pseudoplatanus*) is the most abundant canopy species here although, ash is frequent and can be locally abundant; sweet chestnut is frequent, hybrid oak and wild cherry are both rare, whilst occasional specimens of poplar (*Populus x Canadensis*) Serotina and silver birch are also present in the canopy. The understorey is dominated by mature hazel with much hawthorn and occasional holly and elder; bramble is also frequent. The field layer is dominated by ivy, but bluebell is also abundant, enchanter's nightshade and nettle frequent and ground ivy, wood sedge (*Carex sylvatica*), herb benet *Geum urbanum*, male fern (*Dryopteris filix-mas*), and pendulous sedge are all occasional. Broad buckler fern (*Dryopteris dilatata*), soft shield fern (*Polystichum setiferum*) and primrose (*Primula vulgaris*) are also present but rare. The woodland has an affinity with the 'W8e *Fraxinus excelsior*-*Acer campestre*-*Mercurialis perennis* woodland *Geranium robertianum* sub-community';
- An area of broadleaved woodland known as 'The Slab' which comprises mature oak, sweet chestnut, silver birch, ash and hornbeam, with a poorly developed shrub layer comprising infrequent hazel coppice stools, holly and elder. The ground flora is sparse, dominated by ivy and nettle. The Slab adjoins the site at the north western boundary of field F12.

### *Evaluation*

- 3.32 Generally the woodland areas on site are considered of ecological importance owing to the presence of a diversity of native broadleaved tree species and notable ground flora. Woodland W3 is the only woodland within the site to be formally designated as Ancient Woodland<sup>28</sup>; although it is considered that all woodland areas on site, particularly woodland W1 and W2, are of similar ecological value due to the presence of a high number of ancient woodland indicator plants. Indeed, within woodland W3, 13 AWIs were recorded; 14 AWIs were recorded in woodland W1, 13 AWIs in W2, 10 AWIs in woodland W4 and 7 AWIs in woodland W5.
- 3.33 All woodland areas on site were considered of ecological value by providing suitable habitats for protected species, as discussed in detail in the relevant species sections below. However, the value of woodlands on site is limited by their predominantly linear nature resulting in significant edge effects and greater vulnerability to disturbance and fertiliser spray drift from surrounding arable fields.
- 3.34 'Lowland Mixed Deciduous Woodland' has declined dramatically throughout the UK over recent decades and as such is subject to a UK Biodiversity Action Plan (UK BAP). In addition, this woodland type is afforded a local Biodiversity Action Plan (local BAP) in Sussex. Based on the above, the woodlands are collectively of value at a district level.

### **Mature Trees**

- 3.35 The site supports several lines of mature trees acting as tree corridors along field boundaries. **Plan EDP 1** shows the indicative location of significant tree lines within the site which include, but is not limited to, along the northern boundary of fields F14 and F10 and along the northern and eastern boundary of field F11. These rows of trees generally support large, mature oak trees, many with significant dead and decaying wood in the canopy.
- 3.36 Mature trees can be of significant ecological value in their own right due to their potential to support protected species such as foraging and roosting bats (discussed further at **Paragraph 3.82**), nesting birds (**Paragraph 3.123**) and a significant invertebrate species assemblage (**Paragraph 3.274**). Mature trees are also of importance in connecting areas of habitat throughout the site and providing habitat linkages to allow the movement of wildlife across the landscape. In combination with the areas of broadleaved woodland, they are considered one of most important ecological resources within the site, along with the areas of broadleaved woodland, as discussed above. In addition, mature trees hold an intrinsic value owing to their size, shape and structure and value within the landscape. **Plan EDP 1** does not show all of the mature trees on site due to the complexity in mapping these without accurate

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<sup>28</sup> Land that has had a continuous woodland cover since at least 1600 AD

topographical survey data. With regards to the above, mature trees on site are considered of district importance.

## Hedgerows

- 3.37 The network of hedgerows on site is predominantly mature, intact and species-rich. Many of the hedgerows support semi mature and mature trees. Hedgerows with or without trees, along with species rich and species poor hedgerows and defunct hedgerows, are distinguished on **Plan EDP 2** which shows the distribution of hedgerows within the site. The most commonly recorded woody species present within the species-rich hedgerows include pedunculate oak, hawthorn, blackthorn (*Prunus spinosa*), holly, rose (*Rosa sp.*) and willow (*Salix sp.*) with butcher's broom, hazel, wild privet and elder (*Sambucus nigra*) also occurring frequently. Woodland species recorded in the ground flora include lord's-and-ladies (*Arum maculatum*), false brome (*Brachypodium sylvaticum*), male-fern, herb-robert (*Geranium robertianum*), wood avens (*Geum urbanum*), common cow-wheat (*Melampyrum pratense*) and wood sage (*Teucrium scorodonia*).
- 3.38 A number of the hedgerows on site are considered to be of ecological value, particularly where they provide connectivity to other features of ecological interest. such as woodland or rough grassland, across an otherwise agriculturally dominated landscape. Hedgerows are considered important foraging/commuting features for bats, whilst also offering nesting opportunities for birds and foraging, commuting and sheltering places for mammals; as discussed in greater detail in relevant species sections below.
- 3.39 In accordance with the ecological criteria of the Hedgerows Regulations (as described in **Section 2**) the hedgerow survey identified 13 'important' hedgerows within the site. Of those hedgerows which do not qualify as 'important' under the Hedgerow Regulations 1997, a further 5 hedgerows were classified as being of 'medium' importance on the basis that they contained a moderate diversity of canopy species (mean count from 30m samples  $\geq 4$ ), but were up to two points short in terms of the required 'additional features' recognised under the Hedgerow Regulations. The remaining hedgerows on site were classified as 'not important' based on the survey findings; however, this takes no account of potential protected species which might be reliant on these hedgerows and would require further detailed survey as discussed below. The hedgerow survey findings are illustrated on **Plan EDP 2** and full detailed results presented in **Appendix EDP 5**.
- 3.40 Hedgerows are afforded both a UK and local BAP, and owing to the presence of a high number of ecologically valuable, species rich hedgerows within the site, the hedgerow network is collectively considered of local importance.

## Semi-improved Grassland

- 3.41 The site supports a number of semi-improved grassland fields generally supporting a species-poor species assemblage including dominant species such as cock's foot, couch grass, yorkshire fog (*Holcus lanatus*), creeping bent, annual meadow grass, creeping thistle, great willowherb, low-growing bramble, broadleaved dock and common nettle. The grassland communities within fields F2 to F6 and field F8 were surveyed in a detailed botanical survey to investigate their botanical value. The relevant findings are discussed below for each respective field. A full species list of plant species recorded within each field is presented in **Appendix EDP 6**.

### Field F2

- 3.42 The sward in field F2 is tall (up to two metres in height), rank and generally species-poor. The drier and less ruderal parts of the sward are dominated by false oat-grass (*Arrhenatherum elatius*) and yorkshire fog. Herb diversity is low in this drier area. In drier parts of the field, seedlings, whips and saplings of ash (*Fraxinus excelsior*) are locally frequent. Docks, in particular clustered dock (*Rumex conglomeratus*), are common in the south-east of the field. Along the southern edge of field F2 there are two small areas of tall ruderal vegetation dominated by tall grass species with low herb diversity.
- 3.43 Small colonies of southern marsh orchid present throughout the field, but particularly abundant in the southern and eastern parts of the field, are of botanical interest. Of note also is a large clump of the relatively infrequent grass wood small-reed (*Calamagrostis epigejos*), situated in the western centre of the field.
- 3.44 With regards to assigning an NVC community to the grassland with field F2, the drier parts of the field have an approximation to the 'MG1c *Arrhenatherum elatius* grassland *Filipendula ulmaria* grassland' even though meadowsweet (*Filipendula ulmaria*) is rarely recorded here. The areas of willow scrub would appear to be a young 'W1 *Salix cinerea*-*Galium palustre* woodland': a lowland scrub community which often develops over abandoned land with a high water table.
- 3.45 Field F2 supports small patches of marshy grassland in the north and east of the field, in areas of slightly lower ground; fleabane (*Pulicaria dysenterica*) is very common and creeping bent (*Agrostis stolonifera*) is one of the most common grass species. Willow scrub (mainly grey willow (*Salix cinerea*) and (*Salix x reichardtii*) - its hybrid with goat willow (*Salix caprea*) has also established. The marshy grassland is considered transitional between the 'MG1c' and 'MG10b *Holcus lanatus*-*Juncus effusus* rush-pasture *Juncus inflexus* sub-community'.

### **Field F3**

- 3.46 Field F3 is dominated by coarse grass species and few herbs; the sward has affinities to the 'MG1e *Arrhenatherum elatius* grassland *Centaurea nigra* sub-community' although that sub-community is typically more species rich than the one encountered here.
- 3.47 In the western third of the field bramble (*Rubus fruticosus* agg). is very common and the sward here more similar to an 'MG1c *Arrhenatherum elatius* grassland *Filipendula ulmaria* sub-community' although meadowsweet is not recorded here.

### **Field F4**

- 3.48 Field F4 supports a similar assemblage to field F3 and is again most closely associated with an 'MG1c *Arrhenatherum elatius* grassland *Filipendula ulmaria* sub-community' although meadowsweet is not recorded here either. In the south of the field there is an area of dense ash sapling and whip growth; no NVC community/sub-community approximation is possible in that area although the rest of the vegetation associated with the ash is similar to the general MG1c found across the rest of the field.

### **Field F5**

- 3.49 Most of the sward in field F5 has an approximation to the 'MG1c *Arrhenatherum elatius* grassland *Filipendula ulmaria* grassland sub-community' even though meadowsweet is rarely recorded here. However in the south-east of the field there is a dense growth of young ash whips and associated tall ruderal species. Of botanical interest in this field was a single clump of the wetland species purple loosestrife (*Lythrum salicaria*).

### **Field F6**

- 3.50 This field is known to have supported woodland until at least 1932 as shown on the relevant Ordnance Survey (OS) map extract provided in **Appendix EDP 7**. Accurate species identification, species abundance records and approximate NVC community assignments were rendered more difficult in this field due to the recent cropping of the field immediately prior to the survey.
- 3.51 The majority of the field demonstrated a degree of waterlogging and appears to have characteristics of both the 'MG10a *Holcus lantana*-*Juncus effusus* rush-pasture typical sub-community and the 'MG1c *Arrhenatherum elatius* grassland *Filipendula ulmaria* sub-community'. It is possible that a mosaic of these two communities is present here although recent management limited the potential to confirm this.
- 3.52 Throughout the sward there is abundant grey and hybrid willow, although never in sufficient concentration to delineate a 'W1 *Salix cinerea*-*Galium palustre* woodland scrub community'. Heath speedwell (*Veronica officinalis*) is occasional here. This part of the field demonstrates early stage development of relatively complex plant communities, but with no satisfactory NVC community assignments possible.

- 3.53 The field supports an area of poor semi-improved grassland within the western third of the field, where the sward is less waterlogged and less species-diverse. In this portion of the field willows and rushes are less common and the area is grass-dominated with relatively low herb species diversity. It has an approximation to the 'MG1e *Arrhenatherum elatius* grassland *Centaurea nigra* sub-community'.

#### **Field F8**

- 3.54 Situated on the western centre of the site, this field supported woodland until as late as at least 1932, as shown in **Appendix EDP 7**. The field had been subject to cropping immediately prior to the survey, resulting in difficulties in assigning accurate species identification and abundance scores.
- 3.55 The field is subject to a degree of waterlogging throughout much of the field and as such supports a marshy grassland community. There is an abundance of young willows, although too scattered to present an area that could be satisfactorily identified as W1 willow scrub. It is apparent that rushes are occasional or locally frequent here. The slightly waterlogged western two thirds of the field seemed to suggest a mosaic of the 'MG10a *Holcus lantaus-Juncus effusus* rush-pasture typical sub-community' and the 'MG1c *Arrhenatherum elatius* grassland *Filipendula ulmaria* sub-community', albeit with a significant component of grey and hybrid willow scrub. Heath speedwell is occasional here.
- 3.56 The north-eastern third of the field is relatively free-draining and supports species poor semi improved grassland which has an approximation to the 'MG1e *Arrhenatherum elatius* grassland *Centaurea nigra* sub-community'.

#### *Evaluation*

- 3.57 In summary, semi improved grassland fields on site are considered of little botanical interest. Generally, the grasslands on site show evidence of limited management and consequently, a succession to scrub. Left in their current state, it is considered that the grassland fields will succeed to willow scrub, resulting in further reduction in botanical diversity.
- 3.58 Generally the areas of marshy grassland supported greater botanical diversity and contributed positively to the overall value of the grasslands. Some uncommon or notable plant species such as southern marsh orchid (*Dactylorhiza majalis*), purple loosestrife (*Lythrum salicaria*) and wood small reed (*Calamagrostis epigejos*) were occasionally recorded in fields F2, F5, F6 and F8, but none of the fields surveyed were found to support any UK or local BAP species or habitats. The grassland communities on site are collectively considered to be of no more than local value.

## Arable

- 3.59 The majority of the site constitutes arable land, with a number of large open arable fields sown with a range of crops including oil seed rape (*Brassica napus*), maize and wheat. Crops are generally sown to the edge of the fields with little or no field margin, characterised, where present, by a small number of common species such as nettle (*Urtica dioica*), cock's-foot (*Dactylis glomerata*) and broadleaved dock (*Rumex obtusifolius*).
- 3.60 Overall, due to the intensive management of these arable fields, they are considered to provide only limited habitat for most wildlife species. However, the results of breeding bird surveys undertaken on the site, as discussed at **Paragraph 3.121**, have confirmed the presence of the following breeding and 'possible breeding' bird species of conservation concern including grey partridge, skylark, house sparrow, linnet, yellow hammer and reed bunting. Additionally badgers, and to an extent bats, may use arable fields for foraging and commuting. Further considerations owing to protected species within arable fields are discussed in relevant species sections below. Despite the appreciation of arable fields for certain protected species, as discussed above, arable fields are numerous in the local area of the site and within the district/county as a whole. As such, it is considered that arable fields within the site are of no greater than site level importance.

## Amenity Grassland

- 3.61 Small areas of amenity grassland, comprising low species diversity and little to no interest to protected species, are present within the site in the form of residential gardens. Areas of amenity grassland are not considered to be affected by the proposed development. As such, amenity grassland is considered of negligible value.

## Seasonally Wet Ditches

- 3.62 The site supports a network of seasonally wet ditches, spring fed by a location to the immediate north of woodland W4. The ditch here flows south through woodland W4, along the western boundary of field F14, before turning west along Newlands Lane. From Newlands Lane the ditch continues west, but also diverges to the south at two locations, running along the western edge of woodland W3 and along the eastern edge of woodland W2. The ditch continues through woodland W1 and south through field F2, leaving the site at a location along the southern boundary via a culvert under the railway line.
- 3.63 The ditches vary in width and depth, with approximate widths between 0.5 to 2.0m, and depths of 0 to 1m, and generally only hold water seasonally during periods of heavy rainfall. Indeed at certain times of the year, depending on recent weather conditions,

the ditch network on site is entirely dry. During periods of heavy rainfall the water level rises such that there is a distinct southwards flow to the stream.

- 3.64 The ditches support relatively steep banks which are generally well vegetated along much of their length. Those ditch banks overshadowed by trees, including those along the eastern boundary of woodland W2 and of field F10 and within woodland W1, generally support a less well developed vegetation layer and comprise predominantly aggressive shade tolerant plant species, whereas the stretch of ditch running through field F2, which is free from overshadowing trees, support a greater diversity of plant species along densely vegetated banks.
- 3.65 Plant species frequently recorded along the ditch network include reed canary grass (*Phalaris arundinacea*), meadowsweet, tufted hair-grass (*Deschampsia caespitosa*) common nettle, great willowherb (*Epilobium hirsutum*), fools water-cress (*Apium nodiflorum*), hedge bindweed (*Calystegia sepium*) and hemlock water-dropwort (*Oenanthe crocata*) with hoary willowherb, pendulous sedge (*Carex pendula*), remote sedge (*Carex remota*) and soft rush (*Juncus effuses*) also recorded in places and the fern black spleenwort (*Asplenium adiantum-nigrum*) recorded on a single occasion. During the botanical grassland survey of field F2 the plant community along the ditch in this field was also assessed and approximated as a relatively good example of the S28b *Phalaris arundinacea* tall-herb fen *Epilobium hirsutum-Urtica dioica* sub-community.
- 3.66 The seasonal presence of water within the ditches renders them unsuitable for supporting breeding populations of water voles, although it is considered that the ditches provide suitable foraging opportunities for water voles and may support dispersing individuals during periods of high water retention. The value of the ditch network for water voles is discussed in greater detail within the relevant species section below.

### **Evaluation**

- 3.67 The ditch network is considered to be an important contributor to the diversity of habitats present on site providing an important aquatic resource of a temporary nature. Seasonally wet ditches within the site are considered to play an important role to local wildlife and provide dispersal opportunities for water voles. It is therefore considered that seasonally wet ditches are of no more than local importance.

### **Ponds**

- 3.68 The site supports a single pond located within field F17 which has a poor diversity of macrophytes and poor water quality with low invertebrate diversity and few submerged plants. The pond is located near to good terrestrial habitat being surrounded by rough semi-improved grassland, and being close to areas of off-site broadleaved woodland around the site boundary. There are an additional 7 ponds located within approximately 250m of the site boundary, as illustrated on **Plan EDP 1**. These ponds were considered



to have potential to support great crested newts and were subject to detailed surveys which did not record any evidence of this species, as discussed in the relevant species section.

- 3.69 Ponds are considered a UK and local BAP priority habitat. The single pond on site is considered of site importance only.

### **Buildings**

- 3.70 The site supports a small number of residential properties including the Whitehouse Farm house (and associated farm buildings) and a row of six detached cottages along Newlands Lane. In addition, there is a collection of derelict agricultural grain storage barns located in the south east corner of field F11. Descriptions of the buildings are given below, along with consideration of their value to protected species.
- 3.71 The buildings located in the south east corner of field F11 comprise a collection of 3 large, derelict agricultural grain storage buildings with steel frame and breeze block or brick built lower sections. The upper walls and roof are clad in a corrugated asbestos sheet. The buildings are in a current state of disuse and subject to vandalism and graffiti. The ground in the immediate vicinity of the buildings is dominated by rough grass and tall ruderal species including perennial rye grass (*Lolium perenne*), nettle, dock and couch grass. The barns are considered to provide negligible opportunities for roosting bats due to their design, structure and fabric, although they may be used as a shelter, or night roost. Immediately to the south of the buildings is a telecommunications mast compound. The value of this building to roosting bats is provided in detail at **Paragraph 3.84** which discusses the findings of the internal building inspection undertaken.
- 3.72 The buildings within the Whitehouse Farm complex include a small number of residential dwellings, including the farm house and various former agricultural buildings. The buildings are of various design, structure and fabric and provide variable opportunities for roosting bats. It is considered that the buildings with the greatest potential for bats are likely to be the older, predominantly brick-built buildings of Whitehouse Farm. However, it is understood that none of the buildings within the Whitehouse Farm complex will be subject to development/redevelopment (i.e. they will remain in-situ).
- 3.73 The third complex of buildings consists of a row of six semi-detached houses adjacent to Newlands Lane. All the dwellings are two storey with pitched roofs, chimney stacks and partially clad with wooden boarding. Whilst opportunities for roosting bats may exist within these buildings, it is understood that the current proposals do not include for the removal or renovation of the buildings.
- 3.74 The buildings on site are considered of negligible importance in their own right, but require consideration in respect of bats and birds (as discussed later).

### **Habitat Evaluation**

3.75 The ecological value of habitats within the site is summarised within **Table EDP 3.1**.

**Table EDP 3.1:** Summary of habitats within the site and level of value

<b>Habitat</b>	<b>Description &amp; Distribution of Habitat</b>	<b>Level of Intrinsic Value</b>
Broadleaved Woodland	Species rich woodland communities, some of which are indicative of ancient woodland, with several large mature trees and valuable ground flora.	District
Mature trees	Rows of mature trees, mostly oak, located along eastern boundary of field F11 and along northern boundary of field F10 and F14.	District
Hedgerows	Numerous species rich hedgerows many supporting trees located along field boundaries throughout the site.	Local
Semi-improved grassland	Species poor semi improved grassland dominated by tall grass species with low herb diversity, but comprising areas of marshy grassland with relatively greater botanical interest. Large concentration within the southern portion of the site.	Local
Seasonally wet ditches	Network of ditches throughout the site, generally running from north to south, with well vegetated banks in sections not subject to heavy shading.	Local
Ponds	A single field pond located within field F17 of low ecological value.	Site
Arable	Large, open arable fields with negligible ecological interest. Widely distributed throughout the site as the dominant land use.	Site
Buildings	Includes residential properties associated with the Whitehouse Farm complex and a row of cottages along Newlands Lane, all not considered to be affected by the proposals. Derelict farm buildings located in the south east corner of field F11 with negligible potential to support roosting bats.	Negligible
Amenity grassland	Species-poor grassland located within the gardens of residential properties surrounding Whitehouse Farm.	Negligible

3.76 The site supports a number of habitats of site value or lower, however, the woodland, mature trees, hedgerows, semi-improved grassland and seasonally wet ditches are all considered to be of local importance or greater, and as such, would be Valued Ecological Receptors (VERs) within a formal Ecological Impact Assessment (EclA).

### **Species**

3.77 The following descriptions of populations of protected/notable species supported by the site is based on a combination of records received from the desk study (as provided in

**Appendix EDP 1**), the findings of targeted Phase 2 surveys and incidental observations of species noted while undertaking unrelated field surveys.

## Bats

### Desk study records

- 3.78 SBRC returned three records of Annex II bat species within the 5km search area of the site; a single record of greater horseshoe bat (*Rhinolophus ferrumequinum*) dated 2002 approximately 4.25km to the northeast of the site, a single record of Bechstein's Bat (*Myotis bechsteinii*) dated 2006 from approximately 2.2km west of the site and a single record for barbastelle (*Barbastella barbastellus*) from 2010 located approximately 1.9km north of the site.
- 3.79 The Sussex Bat Inventory Report compiled by Sussex Bat Group, supplied with the SBRC report, included numerous records of bats within 2km of the site, as summarised in **Table EDP 3.2**.

**Table EDP 3.2:** Summary table of bat records returned by SBRC during the 2012 desk study; key to record indicators as follows H – Hibernaculum, FR – Feeding roost, MR – Maternity roost, UR – Unspecified roost, D – Droppings

Common name	Latin name	No. of records	Record Indicator				
			H	FR	MR	UR	D
Bat sp.	<i>Chiroptera</i>	21	•			•	•
Bechstein's Bat	<i>Myotis bechsteinii</i>	1					
Brown Long-eared Bat	<i>Plecotus auritus</i>	12		•	•	•	•
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	28	•		•		
Daubenton's Bat	<i>Myotis daubentonii</i>	7					
Grey Long-eared Bat	<i>Plecotus austriacus</i>	1				•	
Lesser Noctule	<i>Nyctalus leisleri</i>	3					
Long-eared sp.	<i>Plecotus</i>	1				•	•
Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	4					
Natterer's Bat	<i>Myotis nattereri</i>	3					
Noctule Bat	<i>Nyctalus noctula</i>	22			•	•	
Pipstrelle sp.	<i>Pipistrellus</i>	39	•			•	•
Serotine	<i>Eptesicus serotinus</i>	19			•	•	•
Soprano Pipstrelle	<i>Pipistrellus pygmaeus</i>	76				•	
Unidentified Bat	<i>Myotis sp.</i>	6	•				•
Whiskered Bat	<i>Myotis mystacinus</i>	2					

Common name	Latin name	No. of records	Record Indicator			
Whiskered/Brandt's Bat	<i>Myotis mystacinus/brandtii</i>	1				

- 3.80 Numerous records of other bat species within 2km of the site, along with a brown long eared roost recorded in 2011 within the Whitehouse Farm buildings, were returned as detailed in **Appendix EDP 1**.

### Investigations of Bat Roosting

#### Trees

- 3.81 The daytime assessments of mature trees within and immediately adjacent to the site identified a total of 109 individual trees as having the potential to support roosting bats. The distribution of these trees, and their level of bat roost potential, is illustrated on **Plan EDP 9** and detailed descriptions of these trees are provided in **Appendix EDP 8**.
- 3.82 Of the trees that occur within and immediately adjacent to the site, 76 were identified as having low potential to support roosting bats, 32 were identified as having medium potential and one was identified as having high potential. Trees with bat roost potential were well distributed throughout the site, with nearly all hedgerows, areas of broadleaved woodland and scattered trees supporting trees which contained features with some potential. In particular, there was a notably high density of trees with bat roost potential within woodlands W1 and W5, and along the eastern boundary of field F17 where a number of which were of medium potential. The only high potential tree encountered was located within the woodland belt along the western boundary of F12.
- 3.83 No conclusive evidence of roosting bats was encountered in any of the trees during the daytime assessments, nor during any of the activity surveys.

#### Buildings

- 3.84 The buildings located in the corner of field F11 are a series of approximately three large, modern agricultural buildings which have a steel frame and breeze block or brick built lower sections, and the upper walls and roof are clad in corrugated asbestos sheet. The buildings are generally lined for storage of grain, although there is no evidence of recent use for this purpose. The buildings show evidence of graffiti, fly tipping and squatting. The ground in the immediate vicinity of the buildings is dominated by rough grass and tall ruderal species including perennial rye grass (*Lolium perenne*), bramble, nettle, dock and couch grass. Immediately to the south of the buildings is a telecommunications mast compound. One of the buildings located on the west side of the large derelict grain store buildings has a dense covering of ivy over the western extent of the building.

The buildings are considered to provide negligible opportunities for day roosting bats due to their design, structure and fabric.

- 3.85 The buildings within the Whitehouse Farm complex include a small number of residential dwellings together with various former agricultural buildings. The buildings are of various design, structure and fabric and provide variable opportunities for roosting bats. It is considered that the buildings with the greatest potential for bats are likely to be the older, predominantly brick-built buildings of Whitehouse Farm.
- 3.86 The third complex of buildings consists of a row of six semi-detached houses adjacent to Newlands Lane. All the dwellings are two storey with pitched roofs, chimney stacks and partially clad with wooden boarding. Suitable features are present within this row of houses which could support roosting bats.

#### *Bat Foraging/Commuting Activity*

- 3.87 Bat foraging and commuting activity recorded during the course of both transect and Anabat surveys undertaken between May and September 2012 and May and September 2013 is summarised by species/genus below. The full results of the transect and Anabat surveys are provided in **Appendix EDP 9** and **Appendix EDP 10** respectively. The following should be read in conjunction with **Plans EDP 10 - 15**, which illustrate the distribution of those species recorded during the bat activity surveys.
- 3.88 Nine species of bat (myotis species were not identified to species level) were confirmed to be present foraging and/or commuting on site during the course of the surveys. Moderate to high levels of foraging and commuting activity were recorded across the site, mostly by relatively common and widespread species (nationally) including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), myotis (*Myotis sp.*) and long eared bats (*Plecotus sp.*), and by uncommon and scarce species (nationally) including nathusius pipistrelle (*Pipistrellus nathusii*), noctule (*Nyctalus noctula*), leisler's bats (*Nyctalus leisleri*) and serotine (*Eptesicus serotinus*). Low numbers of barbastelle (*Barbastella barbastellus*), are considered widespread, but rare nationally recordings were also made.
- 3.89 The highest levels of foraging and commuting activity recorded during the surveys were mainly along boundary features of the arable fields, particularly around the margins of fields F1 (west and south boundaries), and F6 - F12, which comprise broad-leaved woodland and hedgerows, located in the mid-south and west of the site. Lower levels of activity were recorded around the margins of larger arable fields F13, F14 and F18.

#### Common and Soprano Pipistrelle

- 3.90 Common pipistrelles were abundant throughout the site but recorded most frequently in the southern portion and around fields F11-F12, along areas of broadleaved woodland. Common pipistrelles were recorded more frequently than soprano pipistrelles, which were also encountered regularly throughout the site.

- 3.91 The highest levels of soprano pipistrelle activity were observed in the southern sector of the site which is characterised by smaller arable fields surrounded by a well-connected network of species rich hedgerows and semi-mature and mature standard trees.
- 3.92 Common and soprano pipistrelle bats are considered to be widespread and common throughout the UK, although soprano pipistrelle has suffered significant population declines over recent years leading to its' inclusion as a UK BAP. The populations supported by the site are not considered to be of national importance, but, given the number of individuals recorded, may be of local importance.

#### Nathusius' Pipistrelle

- 3.93 During the August 2012 period of Anabat sampling, two recordings of Nathusius' pipistrelle were made, both at Anabat 11 located in close proximity to the derelict farm building at the south east corner of field F11. During 2013, seven recordings were made on Anabats 14, 17 and 19 located by woodland W3, on the north east site boundary and along the south west site boundary respectively. This species was also recorded once during the transect surveys in September 2013, also located by woodland W3.
- 3.94 Nathusius' pipistrelle are considered scarce and widespread in Sussex and the UK, but are not a BAP species. The population of Nathusius pipistrelle recorded on the site is considered of no more than local value.

#### Long-eared Species

- 3.95 During the 2012 Anabat surveys a single recording was made of a long-eared bat (*Plecotus sp.*) in the August sampling period. The recording was made by Anabat 11 located in close proximity to the derelict farm building at the southeast corner of field F11. During the 2012 transect surveys a single recording was made in July along the north eastern boundary of field F15. None were recorded during 2013.
- 3.96 The paucity of recordings is likely due to recognised difficulties in recording their presence on bat detectors owing to the quietness with which they echolocate. It is considered likely that long-eared bats are more widely distributed across the site than recorded during the surveys.
- 3.97 Brown long-eared bats are widespread throughout the UK but have suffered significant recent declines and as such, are subject to a UK BAP and Local BAP in Sussex. In comparison, grey long-eared bats are considered to be one of the UK's rarest species, with a distribution primarily confined to the southern most of the British Isles<sup>29</sup>. As it is not possible to distinguish between the two species based on the recorded echolocation

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<sup>29</sup> Bat Conservation Trust. *Grey long-eared bat*. [http://www.bats.org.uk/pages/grey\\_long-eared\\_bat.html](http://www.bats.org.uk/pages/grey_long-eared_bat.html). Date accessed 03/01/13

calls, the population of long eared bats recorded on the site is precautionary considered to be of district value.

#### Serotine

- 3.98 Serotine bats were occasionally recorded commuting and/or foraging within the site, predominantly in close proximity to wooded areas, along woodland edges and lines of mature trees or hedgerows. Areas of the site which are more open and lacking woody habitats were largely without serotine recordings.
- 3.99 Serotine bats are restricted to southern England where they are widespread but scarce. Within Sussex, serotine bats are considered widespread and uncommon<sup>30</sup>. The population recorded at the site is therefore considered to be of district value.

#### Noctule

- 3.100 Noctule bats were occasionally recorded widely across the site during the course of the activity surveys. The widespread distribution of recordings made is considered likely to reflect the species tendency to fly long distances directly to feeding sites and feed at height.
- 3.101 Within the UK noctule bats are declining, leading to their inclusion as a UK BAP species. Within Sussex they are uncommon but widespread and afforded a local BAP. The population recorded foraging and/or commuting over the site is considered to be of local importance.

#### Leisler's Bat

- 3.102 Similar in behaviour and appearance to noctules, Leisler's bats were not encountered during the manual transect surveys undertaken in 2012 and were only recorded twice during the 2013 transect surveys. Additionally, they were rarely recorded during the automatic detector surveys; the only recordings made in 2012 were during the August sampling period, with the greatest number of recordings made by Anabat 12, located in the north east of field F14. This location is close to Old Broyle Road which is a B road lined with mixed species hedgerows; Leisler's bats may be attracted to this area to forage on insects around street lights. During 2013 Leisler's bat were mostly recorded in the southern section of the site.
- 3.103 Leisler's bats are scarce in the UK and rarely recorded in Sussex. Despite the relatively small numbers of individuals recorded, the population confirmed present on site is considered to be of local importance.

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<sup>30</sup> Sussex Bat Group. <http://www.sussexbatgroup.org.uk/batsinsussex>. Date accessed 22/01/13

### Barbastelle

- 3.104 During 2012 two recordings of barbastelle bat were made during the August sampling period; with single records located at Anabat 11 on the north boundary of field F9 and Anabat 12 on the north east boundary of field F14.
- 3.105 During 2013 three barbastelle calls were recorded during the Anabat surveys; one on Anabat 14 (wooded west boundary of field F6) during June and two on Anabat 18 (east boundary of F1) during August. Additionally, three barbastelle calls were recorded during the 2013 September transect survey; all located along the northern boundary of field F2.
- 3.106 The evidence gathered suggests that the network of ancient woodland, mature trees and species rich hedgerows surrounding areas of semi-improved grassland located within the central portion of the site (centred on Newlands Lane) is an important habitat resource for foraging/commuting barbastelle bats.
- 3.107 Similarly to long-eared species, the paucity of recordings could in part be due to recognised difficulties in recording their presence on bat detectors owing to the characteristics of their echolocation calls.
- 3.108 Barbastelle bats are a UK and local BAP species in Sussex, although relatively widespread, the species is considered rare in Sussex and across the UK. The recordings of barbastelle on site are therefore deemed to be of county-level significance.

### Myotis

- 3.109 Myotid species of bat were frequently recorded foraging and/or commuting along hedgerows, tree lines and areas of broadleaved woodland across the site. The highest levels of activity recorded during surveys were generally in fields within the western half of the site where there is a well-connected network of broadleaved woodland, mature trees and hedgerows. Owing to similarities in appearance, behaviour and echolocation calls myotid bats were not analysed to species level.
- 3.110 The status and distribution of myotid species varies across the UK. Within Sussex, Bechstein's bat are considered very rare, Brandt's, whiskered and Natterer's scarce but widespread, and Daubenton's fairly abundant and widespread<sup>31</sup>. Bechstein's bats are subject to both a UK BAP and local BAP in Sussex. The site supports a significant population of one or more myotid species and is therefore considered likely to be of local to district importance.

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<sup>31</sup> Sussex Bat Group. *Bats in Sussex*. <http://www.sussexbatgroup.org.uk/batsinsussex>. [Date accessed 24/01/13]



*Evaluation*

3.111 A summary of the evaluation of bat populations found to be present roosting and/or foraging within the site is provided in **Table EDP 3.3**. This evaluation takes account of certain limitations to the interpretation of bat activity surveys, namely:

- Certain species of bat can be over or under recorded owing to their foraging and commuting behaviour, the ability to detect their echolocation on standard bat detectors and/or discern it from other species; and
- Bat species in Sussex are likely under-recorded and therefore, current records do not necessarily represent their true range and distribution.

**Table EDP 3.3:** Summary of the bat populations present on site and their value

<b>Species of Bat</b>	<b>Presence on Site</b>	<b>Level of Value</b>
Barbastelle	Rarely recorded, mostly in the southern section of the site near areas of woodland	County
Long-eared sp.	Two recordings	District
Serotine	Occasionally recorded, widespread	District
Myotid sp.	Frequently recorded throughout the site particularly along areas of woodland and tree lines	Local to district (species dependent)
Common and soprano pipistrelle	Widespread and common	Local
Nathusius's pipistrelle	Infrequently recorded	Local
Noctule	Occasionally recorded, widespread	Local
Leisler's bat	Rarely recorded mostly in south of site, with a concentration also near Old Broyle Road	Local

3.112 Foraging/commuting bat populations supported by the site are distinguished by three categories in terms of their ecological value, barbastelle bats (county value), long-eared sp., myotid sp. and serotine (district value), and general bat populations, including common and soprano pipistrelle, nathusius' pipistrelle, noctule and leisler's bats (local value).

**Breeding Birds**

*Desk Study*

3.113 A desk based study, including a review of *The Sussex Bird Report* (SOS, 2012), together with consideration of those habitats of significant potential to support scarce and/or protected species of breeding bird, identified the possible range of species that would be recorded within the site.

3.114 Numerous records of bird species were retrieved during the desk study. Many of the species of significance relate to wetland habitats within the vicinity of the site. These

species include a wide range of waterbirds, many of which are winter visitors and passage migrants, and with reference to the search area, are predominantly observed within the Fishbourne Channel.

- 3.115 Those species considered pertinent to the site, with respect to those habitats supported by the site, include the Schedule 1 listed species, hobby (*Falco subbuteo*). A number of records (including breeding records) for this species were returned from across the search area, including from the 1km grid square (SU8404) that covers a small portion of the southern section of the site. A number of barn owl (*Tyto alba*) records were also received, some of which were recorded within 1km grid squares that cover part of the site (SU8404, SU8506).
- 3.116 Records of Red List species pertinent to those habitats supported by the site include the following species: breeding grey partridge (*Perdix perdix*), breeding lapwing (*Vanellus vanellus*), breeding turtle dove (*Streptopelia turtur*), common cuckoo (*Cuculus canorus*), skylark (*Alauda arvensis*), yellow wagtail (*Motacilla flava*), song thrush (*Turdus philomelos*), willow tit (*Poecile montanus*), starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), linnet (*Carduelis cannabina*), yellowhammer (*Emberiza citrinella*) and corn bunting (*Emberiza calandra*).
- 3.117 Records of Amber List species pertinent to those habitats supported by the site include red kite (*Milvus milvus*), kestrel (*Falco tinnunculus*), common snipe (*Gallinago gallinago*), stock dove (*Columba oenas*), green woodpecker (*Picus viridis*), meadow pipit (*Anthus pratensis*), dunnoek (*Prunella modularis*), mistle thrush (*Turdus viscivorus*), common whitethroat (*Sylvia communis*), willow warbler (*Phylloscopus trochilus*), bullfinch (*Pyrrhula pyrrhula*) and reed bunting (*Emberiza schoeniclus*).
- 3.118 Of these Red and Amber List species, those considered to be 'Sussex Notable' birds include grey partridge, red kite, lapwing, turtle dove, yellow wagtail, willow tit and corn bunting. The *Sussex Notable Bird Report*<sup>32</sup> is based on a list of birds that are particularly scarce or vulnerable to development in Sussex.
- 3.119 Barn owl is the only bird species to have a 'Sussex Biodiversity Action Plan', however, skylark, song thrush and swift each have a 'Species Statement' for Sussex.
- 3.120 Extracts from *The Sussex Bird Report* (SOS, 2012), with specific reference to the county status of each species recorded over the course of the breeding bird survey, in addition to information on those that receive legal protection under Schedule 1 of the Wildlife and Countryside Act (1981), and those that are of conservation concern (in terms of either being listed as a UK BAP Priority Species, a Listed Species of Conservation Concern, and/or a Sussex Notable Bird species), is detailed within **Appendix EDP 11**.

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<sup>32</sup> Sussex Biodiversity Records Centre (date unknown). *Sussex Notable Bird List* <<http://sxbrc.org.uk/data-requests/notable-bird-species-list.pdf>> [accessed 02/01/14]

### *Breeding Bird Survey Results*

- 3.121 The breeding bird survey (BBS) results, detailed below, set out the combined findings of both the 2012 survey (BBS Section 1) and 2013 survey (BBS Sections 2 and 3), as illustrated on **Plan EDP 4**. Full details of the breeding status, population and distribution of each species within each survey section, are provided at **Appendix EDP 2**.
- 3.122 With reference to the objectives of the BBS, namely to determine whether a valuable assemblage is present on site and whether the site supports any scarce or protected species of birds, the results detailed below combine the findings from 2012 and 2013 BBS. However, given the size of the site, and the spatially distinct sections that were surveyed, the distribution of each species of conservation concern is provided in detail, and should be read in conjunction with **Plan EDP 1**.
- 3.123 The site comprises a variety of habitats suitable for a range of both foraging and breeding birds. The majority of the site is made up of arable farmland. Field parcels are typically bound by mature species rich hedgerows, whilst a number of woodland copses and belts are located within and adjacent to the site. With regard to breeding birds, other habitats of note include 'Centurion Way' (the disused railway line that bounds the east of the site), the scattered grassland habitats, mature trees, and the buildings: notably the Whitehouse Farm complex and the buildings located within the corner of field F11.
- 3.124 A total of 51 species of bird were recorded during the combined 2012 and 2013 BBS visits. Of those, 28 species (i.e. 55%) were confirmed as breeding, whilst a further 16 species (i.e. 31%) were recorded as possible breeders (as detailed in **Appendix EDP 2**). The remaining seven species (i.e. 14%) were regarded as non-breeders because they were not observed to display any territorial behaviour and/or because there was a lack of appropriate breeding habitat for these species within the boundary of the site.
- 3.125 In terms of abundance, nine breeding species (i.e. 18%) were found to have confirmed on-site breeding pairs recorded in double-figures. Those species predominantly comprised common or abundant resident passerines, which are typical of urban-edge and farmland habitats throughout lowland Britain: blue tit; great tit (*Parus major*); wren (*Troglodytes troglodytes*); blackbird (*Turdus merula*); robin (*Erithacus rubecula*); dunnock; chaffinch (*Fringilla coelebs*). However, in exception to this, the open arable farmland habitat also supported between 20 to 35 breeding pairs of skylark.
- 3.126 Another breeding species with confirmed on-site breeding pairs recorded in double-figures was a (typically) migrant passerine: blackcap (*Sylvia atricapilla*). Further migrant passerines were found in moderate to good numbers, typically within the mature boundary habitats and woodland belts. These species included between three and eight breeding pairs of chiffchaff (*Phylloscopus collybita*), a single possible breeding pair of garden warbler (*Sylvia borin*), a single possible breeding pair of lesser whitethroat (*Sylvia curruca*) and between nine and 23 pairs of common whitethroat (*Sylvia communis*).

- 3.127 The distribution of breeding birds within the site largely mirrors the distribution of habitats, so that the interiors of the large arable fields (namely F1, F7, F12, F13, and F14) support fewer birds other than skylark. Indeed, fields F7, F13 and F18 were planted with maize over the course of the survey season and as a result, the cultivations and the (typically) late establishment of this crop resulted in a paucity of ground cover (the maize was sparse, with a height of approximately 10cm on the final BBS visits). Few breeding bird species were recorded within these fields.
- 3.128 In comparison, the network of mature boundaries and associated woodland belts were found to support a greater assemblage of bird species in higher densities. However, the distribution of birds throughout the hedgerow network was also rather heterogeneous. The greatest concentrations of birds, both in terms of assemblage and frequency, were noted within:
- a) The hedgerows associated with the track at the southern edge of fields F15 and the centre of field F13;
  - b) The broad hedgerows that bound field F8; and
  - c) The woodland belts (W1, W2, W3, W4 and W5).
- 3.129 The adjacent woodland habitat of Brandy Hole Copse, located to the north of fields F17 and F18 and beyond the site boundary, and the linear scrub habitat associated with the disused railway (Centurion Way) located to the east of the site, were also recorded to support a good diversity and density of breeding bird species. Where any species of conservation significance were recorded within these habitats and located adjacent to the site, it is noted within the species analysis, below.
- 3.130 The boundaries of many fields within the site were observed to be well used for recreation, particularly dog walking, a factor of relevance to the evaluation of results below. Ground nesting bird species, such as skylark, have been reported to be disturbed by dogs, particularly where the dogs are 'off-lead'. Indeed, in a study by Taylor *et al.* (2005)<sup>33</sup> anecdotal evidence was received that where dog walking was removed from apparently suitable sites, skylarks nested where they had not done so before. Furthermore, the study states that, "*for breeding birds (and in particular ground nesting birds) there is clear evidence that disturbance can expose the eggs or young to a greater risk of loss to opportunistic predators, especially corvids*".
- 3.131 It was noted that both the informal and formal access routes were frequented by people exercising dogs both on and off the lead. Indeed, dogs were recorded entering the interiors of the grassland fields located within the south of the site. It is therefore

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<sup>33</sup> Taylor, K., Andreson, P., Taylor, R., Longden, K. and Fisher, P. (2005). *Dogs, access and nature conservation*. English Nature Research Reports. Number 649. English Nature

considered that the distribution of ground nesting species within the site may also be a function of the public access across the site as discussed below.

- 3.132 The following paragraphs evaluate the importance of 'breeding' and 'potentially breeding' species of conservation concern, together with the overall bird assemblage of the site. The current UK and county conservation status of the birds recorded during the survey is detailed at **Appendix EDP 11**, whilst details regarding their on-site breeding status and distribution, is detailed in **Appendix EDP 2**.

### **Schedule 1 Species**

- 3.133 No bird species that receive legal protection under Schedule 1 of the Wildlife and Countryside Act 1981 were recorded during the BBS.

### ***Barn Owl***

- 3.134 In relation to the survey work undertaken for barn owls, no direct evidence of barn owls nesting on site was recorded during the daytime assessments of mature trees and the derelict farm buildings.
- 3.135 The derelict farm buildings located within the corner of field F11 were large open sided, very bright and draughty. The buildings show signs of graffiti, vandalism and frequent trespass/anti-social behaviour. Furthermore, the buildings are in a state of disrepair and the fabric of the building is deteriorating rapidly. The apex corrugated roof(s) of the buildings means there are limited level surfaces on which barn owls could lay their eggs. The conditions in the buildings were generally considered to be of low value to nesting barn owls and no evidence of nesting was recorded during the daytime inspections.
- 3.136 With regard to nesting sites in trees, no direct evidence of barn owl nesting was recorded within any of the mature trees on site. However, due to their age and structure, many of the mature trees on site, including those trees identified as having potential to support roosting bats, also have the potential to support nesting barn owls. The site is also considered to support foraging opportunities for barn owls, particularly within the large grassland field (field F2) which is likely to support a good abundance of small mammals.
- 3.137 In summary, the site does support foraging habitats for barn owls, and there is potential for the species to roost in the derelict farm buildings and to nest within mature oaks. However, no direct evidence of barn owls nesting on the site has been recorded and the species should not pose a constraint to the proposals.

### **Red List Species**

- 3.138 A total of four Red List bird species (Eaton *et al.*, 2009) were recorded as breeding within the site. These were skylark, song thrush, house sparrow and yellowhammer. All four species are also UK BAP species.

### ***Breeding Species***

#### *Skylark*

- 3.139 Skylark is Red List for the 'severe' decline (greater than 50%) in its UK breeding population size over the past 25 years (Eaton *et al.*, 2009). It is also a 'Species of European Conservation Concern'. At a county level, SOS (2012) considers this species to be a '*widespread species in Sussex*' that is a '*very common but declining resident*'. SOS (2012) describe '*very common*' as between 5,001 and 30,000 breeding pairs within Sussex.
- 3.140 Between 20 and 35 breeding pairs of skylark were recorded within fields F1, F2, F7, F8, F9, F11, F13, and F14. The greatest density of breeding was recorded within field F9.
- 3.141 It is considered that the distribution of skylark is partially explained by recreational pressure (as discussed at **Paragraph 3.131**) but also by vegetation structure. Indeed, it is considered that the latter plays an important role in determining breeding densities<sup>34</sup>. In relation to arable land, breeding densities are highest on spring-sown cereals and set-aside, such as F9, whilst densities are lowest in autumn-sown crops, especially in oilseed rape. Indeed, field F1 and F14 consisted of an autumn-sown cereal crop whilst field F12 was autumn-sown oilseed rape. Fields F7, F13 and F18 had only very recently been drilled with maize, hence these fields consisted of bare, flat soil that provides little in the way of vegetation cover.
- 3.142 With regard to the potential on-site population of 35 pairs, and the SOS (2012) estimate of the Sussex breeding population, it is considered that the potential on-site population represents approximately 0.7% of the county total. It is therefore considered that the breeding population of skylark at the site is evaluated as being of no greater importance than at the local level.

#### *Song Thrush*

- 3.143 Song thrush is Red List for its long-term 'severe' decline in the UK breeding population (Eaton *et al.*, 2009). At a county level, the Sussex Ornithological Society summarise the song thrush to be a '*very common but decreasing resident and partial migrant*' (SOS, 2012).
- 3.144 Tetrad distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) give a picture of a species that is well distributed throughout the county, with

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<sup>34</sup> RSPB, 2005. *A management guide to birds of lowland farmland*. Royal Society for the Protection of Birds. Information Press

song thrush recorded as 'confirmed breeding' within 37% of the county's tetrads, 'probably breeding' within 28% and 'possibly breeding' within 29% ('confirmed', 'probably' and 'possibly' represent the varying degrees of breeding evidence recorded).

- 3.145 Song thrush typically breed within a tree or shrub, favouring habitats such as gardens, parks, coniferous and deciduous woodlands and hedgerows (Holden and Cleeves, 2002). Indeed, with regard to this species on site, between two and ten pairs of song thrush were recorded, typically associated with the mature hedgerow boundaries and woodland copse.
- 3.146 In relation to the potential on-site population of 10 pairs, and the SOS (2012) estimate of the Sussex breeding population numbering between 5,001 and 30,000 pairs, it is considered that the potential on-site population represents no more than 0.2% of the county total. It is therefore considered that the breeding population of song thrush on site is evaluated as being of no greater importance than at the site level.

#### *House Sparrow*

- 3.147 This species is Red List for its 'severe' decline (greater than 50%) in the UK breeding population over both the last 25 years, and also over the 'long-term' (since 1969) (Eaton *et al.*, 2009). It is also a 'Species of European Conservation Concern'. In relation to this species at a county level, SOS (2012) conclude that house sparrow is a, '*very common but possibly declining resident*'.
- 3.148 Tetrad distribution maps from the breeding component of the *Bird Atlas 2007-11* give a picture of a species that is widely distributed throughout the county, with house sparrow recorded as 'confirmed breeding' within 61% of the county's tetrads, 'probably breeding' within 21% and 'possibly breeding' within 10% (SOS, 2013).
- 3.149 Historically, house sparrow has been associated with human activity, using buildings as nest sites, although it will also nest within a tree or a bush. It is a social species, often nesting in colonies and feeding in flocks throughout the year (Holden and Cleeves, 2002). Three distinct colonies of house sparrow were recorded either within and/or adjacent to the site. Further occasional pairs and individuals were also recorded. These are detailed below.
- 3.150 A population of house sparrow were recorded within New Cottages, adjacent to Newlands Lane. Along the length of this terrace, between one and seven breeding pairs were recorded within the hedgerow boundary between the gardens and field F14. Off-site, in excess of 12 further birds were recorded displaying behaviour characteristic of breeding around the cottages themselves, apparently nesting within the roofs of these properties.
- 3.151 Four pairs of house sparrow were confirmed breeding adjacent to the south western boundary of the site (fields F2 and F5), with further birds recorded within the adjoining

estate. A single pair of house sparrow were also recorded adjacent to the eastern side of the Whitehouse Farm buildings.

- 3.152 In summary, this species is recognised as a confirmed breeder, with between six and 13 breeding pairs recorded. In relation to the SOS (2012) estimate of the Sussex breeding population numbering between 5,001 and 30,000 pairs, it is considered that the potential on-site population represents less than 0.3% of the county total. It is therefore considered that the breeding population of house sparrow on site is evaluated as being of no greater importance than at the site level.
- 3.153 Incidentally, good populations of house sparrow were recorded along the disused railway line cutting on the eastern edge of the site. As a result of direct observation, it is considered that these birds were breeding in relatively good numbers within parts of the residential development immediately to the east of the disused railway line.

#### *Yellowhammer*

- 3.154 Yellowhammer is Red List for its 'severe' decline (greater than 50%) in its UK breeding population over both the last 25 years, and also over the 'long-term' (since 1969) (Eaton *et al.*, 2009).
- 3.155 According to the Sussex Ornithological Society, this species is regarded as a '*fairly common resident*' (SOS, 2012). In relation to breeding pair numbers, SOS (2012) describe '*fairly common*' as between 101 and 1,000 breeding pairs.
- 3.156 Tetrad distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) give a picture of a species that is fairly well, albeit sparsely, distributed throughout the county, with yellowhammer recorded as confirmed breeding within 11% of the county's tetrads, probably breeding within 34% and possibly breeding within 27%.
- 3.157 Yellowhammer are particularly common within lowland arable and mixed farmland, nesting within scrub and hedgerows, with the highest breeding densities found in areas that have a high proportion of cereal area, mixed arable cropping and a high density of hedgerow boundaries (RSPB, 2005).
- 3.158 Between five and eight pairs were recorded within the site, with breeding activity recorded adjacent to Newlands Lane, within fields F8 and F9, and along the track that intersects field F13. With regards to the potential on-site breeding population of 8 pairs, and the estimated Sussex breeding population, it is considered that the site potentially represents between 0.8 – 7.9% of the Sussex total.
- 3.159 In this light, it is considered that the breeding population of yellowhammer on site is assessed as being of importance at a local, and potentially district level.



### ***'Possible Breeders'***

- 3.160 Two Red List 'possible breeding' species were recorded on site: grey partridge and linnet.

#### *Grey Partridge*

- 3.161 Grey partridge, a UK BAP species, is Red List for its 'severe' decline (greater than 50%) in its UK breeding population over both the last 25 years, and also over the 'long-term' (since 1969) (Eaton *et al.*, 2009). It is also a 'Species of European Conservation Concern'.
- 3.162 At a county level, the Sussex Ornithological Society summarise grey partridge to be a '*scarce resident; much declined but benefiting locally through conservation effort*' (SOS, 2012). SOS (2012) consider the term '*scarce*' to have a corresponding numerical range of 11 to 100 breeding pairs. A total of 82 records of grey partridge were received by SOS during the breeding season for the county of Sussex.
- 3.163 Tetrad distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) give a picture of a species that is scarce with a very patchy distribution across the county. Grey partridge were recorded as confirmed breeding within 1% of the county's tetrads, probably breeding within 4% and possibly breeding within 2%. Grey partridge are also a '*Sussex Notable Bird Species*' based on the criteria of '*positive breeding status*' and/or '*March – August records*'.
- 3.164 Grey partridge are typically most numerous where there is a mosaic of pasture and cereal fields with mature hedgerows, with uncultivated field margins and stubbles in winter (Holden and Cleaves, 2002). A single grey partridge was recorded within field F1 during the first BBS visit (2013). Owing to the suitability of the farmland habitat for this species, and the rather cryptic nature of this species whilst breeding, it is considered that this species could have bred on site. As a result, it is considered to be a 'possible breeder'.
- 3.165 In relation to the possible on-site population of one pair, and the SOS (2012) estimate of the Sussex breeding population, it is considered that, taking a precautionary approach, the possible breeding population of grey partridge on site is of no greater importance than at the local level.

#### *Linnet*

- 3.166 Linnet, a UK BAP species, is Red List for its long-term 'severe' decline in the UK breeding population. It is also a 'Species of European Conservation Concern'. At a county level, SOS (2012) state that linnet is a '*common but decreasing resident*', with '*common*' assessed as between 1,001 and 5,000 breeding pairs within Sussex.

- 3.167 Tetrads distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) give a picture of a species that is unevenly distributed across the county. Linnet were recorded as 'confirmed breeding' within 14% of the county's tetrads, 'probably breeding' within 35% and 'possibly breeding' within 17%.
- 3.168 Suitable breeding habitat for this species includes gorse-covered commons, rough ground where there are low bushes and scrub, bushy places on farmland, hedges, young plantations and rural gardens (Holden and Cleaves, 2002). In relation to these habitat preferences, it is considered that the site offers discrete areas of suitable habitat for this species. However, only a single potential pair of linnet was recorded on site, with a single male recorded singing within the hedgerow between fields F13.
- 3.169 With regard to the on-site breeding population of a single 'possible' pair, and the estimated Sussex breeding population of this species, it is considered that, taking the precautionary approach, the population on site would represent no more than 0.1% of the Sussex total. In this light, it is considered that the possible breeding population of linnet on site is of no greater importance than at site level.

#### **Amber List Species**

- 3.170 Ten species that were recorded as being confirmed or possible breeders during the surveys are currently placed on the Amber List of Birds of Conservation Concern (**Appendix EDP 11**).
- 3.171 Those Amber List species considered to be confirmed breeders within the site during 2013 include: green woodpecker, swallow (*Hirundo rustica*), common whitethroat and dunnock. Six Amber List species are considered to be possible breeders: mallard (*Anas platyrhynchos*), kestrel, stock dove, mistle thrush, bullfinch and reed bunting.

#### **Breeding Species**

##### *Green Woodpecker*

- 3.172 This species is Amber List due to being a 'Species of European Conservation Concern'. However, it is not considered to be of conservation concern within the UK and, on a regional level, SOS (2012) describe this species as a, 'fairly common or common resident'. SOS (2012) consider fairly common to represent between 101 and 1,000 breeding pairs within Sussex, with 'common' assessed as between 1,001 and 5,000 breeding pairs.
- 3.173 Tetrads distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) give a picture of a species that is fairly well distributed across the county. Green woodpecker were recorded as 'confirmed breeding' within 19% of the county's tetrads, 'probably breeding' within 23% and 'possibly breeding' within 43%.

- 3.174 Green woodpecker is a lowland species, typically breeding within open deciduous woodland, parkland, orchards, farmlands and heaths, and often recorded feeding within grassland (Holden and Cleaves, 2002). As such, it is considered that the site provides areas of suitable habitat for this species.
- 3.175 The on-site breeding population of green woodpecker was considered to be between one and six pairs. Birds displaying breeding behaviour were recorded within the woodland of W2 and W4, within the boundaries adjacent to the south west corner of field F8, the boundary to the south of field F11, and the boundaries of field F7.
- 3.176 In relation to the potential on-site population of six pairs, and the SOS (2012) estimate of the Sussex breeding population numbering somewhere in the region of 1,000 pairs, it is considered that the potential on-site population could represent up to 0.6% of the county total. Mindful of this species' status within the UK, it is therefore considered that the breeding population of green woodpecker on site is of no greater importance than at the site level.

#### *Swallow*

- 3.177 Swallow is Amber List as a result of being a 'Species of European Conservation Concern' (Eaton *et al.*, 2009). At a county perspective, it is described by SOS (2012) to be a, '*common summer visitor and abundant passage migrant*'. Swallow is also a '*Sussex Notable Bird Species*' based on the criteria of '*confirmed and probably breeding records*'.
- 3.178 This species appears to be well distributed within Sussex, with tetrad distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) recording swallow as 'confirmed breeding' within 38% of the county's tetrads, 'probably breeding' within 27% and 'possibly breeding' within 18%.
- 3.179 Swallow show a preference for rural areas with an abundance of insects for food, and buildings such as barns and outhouses for nesting. Indeed, it is considered that there is a small on-site breeding population of swallow within the buildings associated with Whitehouse Farm (the population was not quantified due to lack of access). In light of this, and set within the regional context, it is considered that the site supports a population of no greater than local importance.

#### *Common Whitethroat*

- 3.180 Common whitethroat is Amber List for its 'moderate' decline (between 25-50%) in the UK breeding population over both the last 25 years, and also over the 'long-term' (since 1969) (Eaton *et al.*, 2009). Within Sussex, it is considered to be a '*very common summer visitor and passage migrant*' (SOS, 2012).
- 3.181 Distribution within Sussex appears to be good, with tetrad distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) recording this species as

'confirmed breeding' within 34% of the county's tetrads, 'probably breeding' within 35% and 'possibly breeding' within 21%.

- 3.182 It is considered that the site offers suitable breeding habitat for this species, namely with regards to the thick and mature hedgerows, and the woodland belts (Holden and Cleeves, 2002). Indeed, between nine and 23 breeding pairs were recorded across the site.
- 3.183 In relation to the potential on-site population of 23 pairs of common whitethroat, and the SOS (2012) estimate of the Sussex breeding population numbering between 5,001 and 30,000 pairs, it is considered that the potential on-site population represents less than 0.5% of the county total. It is therefore considered that the breeding population of common whitethroat on site is of no greater importance than at the site level.

#### *Dunnock*

- 3.184 Dunnock, a UK BAP species, has been placed on the Amber List because it has experienced a moderate (between 25-50%) decline in the UK breeding population over the 'long-term' (Eaton *et al.*, 2009). With regard to the dunnock's population status within Sussex, SOS (2012) maintain the species to be a '*very common resident*'.
- 3.185 Tetrad distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) demonstrate a wide distribution within Sussex, with this species recorded as 'confirmed breeding' within 28% of the county's tetrads, 'probably breeding' within 36% and 'possibly breeding' within 31%.
- 3.186 It is again considered that the site offers good breeding habitat for dunnock, particularly with regard to the number of dense, mature hedgerows and occasional scrub. The on-site breeding population was considered to be between 10 and 27 pairs.
- 3.187 Set within the context of the population status of dunnock within Sussex, and the potential on-site breeding population of 27 pairs, it is considered that the potential on-site population represents no greater than approximately 0.5% of the county total. It is therefore considered that the breeding population of this species on site is of no greater importance than at the site level.

#### **'Possible Breeders'**

##### *Mallard*

- 3.188 Mallard is Amber List for its 'moderate' decline (between 25-50%) in its UK non-breeding population size (i.e. wintering population) over both the last 25 years and also over the 'long-term' (since 1969) (Eaton *et al.*, 2009). SOS (2012) describe mallard as a '*common resident and winter visitor*'.

- 3.189 Owing to the nature of this survey (i.e. breeding bird survey), the findings are not applicable to be used to assess the 'non-breeding population' of mallard within the site.

*Kestrel*

- 3.190 Kestrel is Amber List as a result of being a 'Species of European Conservation Concern' (Eaton *et al.*, 2009). At a county perspective, it is described by SOS (2012) to be a '*fairly common resident and passage migrant*' with tetrad distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) demonstrating a rather patchy distribution.
- 3.191 Although no breeding behaviour was recorded, Kestrel was recorded on five occasions over the course of the BBS visits; hunting over fields F2, F6 and F8, and also observed within the vicinity of the Whitehouse Farm buildings. It is considered that the site represents suitable breeding habitat for this species, and hence, taking a precautionary approach, it is considered to be a possible breeder.
- 3.192 Set within the context of the population status of kestrel within Sussex, and the potential for this species to breed in low numbers within the site, it is considered that the site potentially supports a population of no greater than site importance.

*Stock Dove*

- 3.193 Stock dove is Amber List as a result of at least 20% of the European breeding population being found in the UK (Eaton *et al.*, 2009). At a county level, SOS (2012) consider this species to be a '*common resident and possible winter visitor*' although tetrad distribution maps from the breeding component of *Bird Atlas 2007-11* (SOS, 2013) demonstrate a rather patchy distribution.
- 3.194 Stock dove was recorded on three occasions over the course of the BBS visits (fields F2, F6 and F18), although no breeding behaviour was recorded. It is, however, considered that the site represents suitable breeding habitat for this species, and hence, taking a precautionary approach, it is considered that stock dove are a possible breeder.
- 3.195 Set within the context of the population status of stock dove within Sussex, and the potential for this species to breed, albeit in low numbers, within the site, it is considered that the site potentially supports a population of no greater than site importance.

*Mistle Thrush*

- 3.196 Mistle thrush is Amber List for its 'moderate' decline (between 25-50%) in the UK breeding population over both the last 25 years, and also over the 'long-term' (since 1969) (Eaton *et al.*, 2009). At a county level, this species is considered to be a '*common resident and partial migrant*' although the *Bird Atlas 2007-11* (SOS, 2013) demonstrates a patchy breeding distribution.

- 3.197 Mistle thrush requires open woodland and other places where there are tall trees for nesting and for song posts, but also requires areas of short grass for feeding (Holden and Cleeves, 2002). It is considered that habitats within the site are suitable for this species to breed, although only two individuals were recorded over the course of the BBS visits with no breeding behaviour observed (fields F10 and F13).
- 3.198 Again, taking a precautionary approach, and mindful of the areas of suitable habitat for this species within the site boundary, mistle thrush are therefore considered to be a possible breeder.
- 3.199 With regard to the wider population status of mistle thrush, and the potential for this species to breed in low numbers within the site, it is considered that the site supports a population of no greater than site level importance.

#### *Bullfinch*

- 3.200 Bullfinch is Amber List for its 'moderate' decline (between 25-50%) in its UK breeding population over both the last 25 years, and also over the 'long-term' (since 1969) (Eaton *et al.*, 2009).
- 3.201 Set within a county context, SOS (2012) consider the species to be a, '*fairly common or common resident*' although the *Bird Atlas 2007-11* (SOS, 2013) demonstrates a patchy breeding distribution with a low incidence of 'confirmed breeding'.
- 3.202 With reference to the mature hedgerow and woodland belt habitats, it is considered that the site offers suitable habitat for breeding bullfinch. Indeed, up to three breeding pairs were recorded over the course of the BBS. With regard to the wider population status of bullfinch, and the low breeding population within the site, it is considered that the site supports a population of site level importance.

#### *Reed Bunting*

- 3.203 Reed bunting is Amber List as a result of a long-term 'moderate' decline (of between 25-50%) in the UK breeding population size (Eaton *et al.*, 2007). At a county perspective, this species is considered to be a '*fairly common resident, passage migrant and winter visitor*' (SOS, 2012) with the *Bird Atlas 2007-11* (SOS, 2013) showing a patchy distribution which is largely limited to river valleys.
- 3.204 Reed bunting was traditionally a bird of wet places but has colonised drier habitats such as ditches, young plantations and some arable crops. It is considered that the site provides some limited suitable habitat for this species, with a single reed bunting recorded singing within the south western corner of field F7 during the first BBS visit (2013).

- 3.205 With regard to the UK and county status of reed bunting, and taking a precautionary approach, the on-site 'possible' breeding population of this species is considered to be of no greater importance than at a site level.

### **Non-breeding Species of Conservation Concern**

- 3.206 Species recorded within the survey areas, but not considered to be breeding within it, include little egret (*Egretta garzetta*), grey heron (*Ardea cinerea*), black-headed gull (*Chroicocephalus ridibundus*), lesser black-backed gull (*Larus fuscus*), herring gull (*Larus argentatus*), swift (*Apus apus*) and starling. With regard to these non-breeding species, summaries of each, and considerations in relation to their non-breeding statuses, are provided at **Appendix EDP 2**. Non-breeding species of conservation concern (Eaton *et al.*, 2009) are discussed in further detail, below.

#### **Red List Species**

##### *Starling*

- 3.207 The Red List and UK BAP starling was recorded within the disused railway line cutting on the eastern edge of the site, with the greatest densities recorded north of Newlands Lane. Behaviour characteristic of breeding, in addition to juvenile birds, was recorded, however, based on observations, it was considered that this species was solely breeding off-site within the residential development immediately to the east of the disused railway line.

##### *Herring Gull*

- 3.208 The other gull species recorded feeding in small numbers within the site is the Red List and UK BAP herring gull. This species utilises a variety of habitats for nesting including cliffs, beaches, shingle islands, moorland and buildings (Holden and Cleaves, 2002). Within Sussex, this species is considered to be a 'very common resident' with the great majority of nest sites being located within urban areas along the coast (SOS, 2012). In light of the lack of any suitable nesting opportunities for this species within the site boundary, herring gull is considered to be a 'non-breeder'.

#### **Amber List Species**

##### *Little Egret*

- 3.209 Little egret, an Amber List bird species, was recorded flying over the northern edge of field F14 on a single occasion. It is considered that, due to the location of reservoirs in close proximity to Chichester, and the estuaries to the south, this species was potentially commuting between waterbodies. With regard to the habitats present within the site, and those immediately adjacent to it, it is considered that the site represents unsuitable

breeding habitat for this species. As such, little egret is considered to be a 'non-breeder'.

#### *Black-headed Gull*

- 3.210 The Amber List black-headed gull was recorded flying over the site. This species breeds both inland and near the sea, with breeding sites varying from coastal marshes and sand dunes to freshwater marshes, lakes, flooded gravel pits, reservoirs and moorland pools<sup>35</sup>. SOS (2012) describe it as a '*common breeding species*' within Sussex, with nesting recorded adjacent to lakes and estuary habitat. With regard to the lack of suitable breeding habitat on site for this species, black-headed gull is considered to be a 'non-breeder'.

#### *Black-backed Gull*

- 3.211 The Amber List lesser black-backed gull was recorded feeding within the site boundary. This species breeds on sand dunes and shingle islands around the coast, as well as on upland moors (Holden and Cleeves, 2002). SOS (2012) considers it to be a '*scarce breeder*' within Sussex, with nesting predominantly recorded at coastal sites. With regard to the lack of suitable breeding habitat on site for this species, lesser black-backed gull is considered to be a 'non-breeder'.

#### *Swift*

- 3.212 With regard to the Amber Listed swift, four birds were recorded foraging over field F7 on a single occasion; no signs of breeding behaviour were recorded. Swift typically nest under the eaves of a building or within a building that provides a suitable cavity (Holden and Cleeves, 2002). In this regard, it is considered that the buildings on site offer the only suitable nesting habitat for this species. However, survey of the buildings during the 2012 BBS visits considered that swift is a 'non-breeding' species within the site boundary. Indeed, it is considered that the low number of foraging swifts recorded also indicates that either the habitat is sub-optimal for foraging and/or there are few suitable nesting sites for this species within the immediate vicinity of the site.
- 3.213 Whilst it might be argued that the site does offer suitable foraging opportunities to support breeding populations of the above 'non-breeding' species located in the surrounding area, it must be borne in mind that only very low numbers (with the exception of starling) were typically recorded during the BBS visits. This suggests that the contribution made by the site to their local populations is limited, despite its size and extent.

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<sup>35</sup> Holden, P. and Cleeves, T. (2002) RSPB Handbook of British Birds. London: Christopher Helm



### **The Overall Assemblage**

- 3.214 The assemblage of breeding bird species recorded at the site is considered to be typical for the range and quality of habitats present, and for its geographic and topographic location. The assemblage predominantly comprises common resident passerines, with a good range of farmland species encountered in suitable habitats. These are augmented by a number of trans-Saharan migrants favouring the hedgerow and woodland habitats.
- 3.215 With regard to many of the farmland bird species recorded, it should be noted that the abundance and distribution of farmland bird species on a specific arable field, and its associated boundaries, will vary greatly over the seasons and years. Indeed, arable farming inherently creates dynamic habitats. It is therefore considered that the bare soil that covered F7, F13 and F18 over the course of the survey (having recently been drilled with maize), and that resultantly supported little in the way of breeding bird species, might be a cereal crop or a weedy fallow area during the following year that will in turn support a much greater and more diverse abundance of species. Conversely, the parcel of fallow (field F9) that supported good numbers of skylark and yellowhammer during the 2012 breeding season, may be planted with a maize crop in a following season.
- 3.216 With regard to the above considerations, the distribution and abundance of specific species should therefore not be considered in isolation of the arable rotation. It could be assumed, however, that based on a 'whole farm approach', the various proportions of each land use over the total area could remain relatively stable (i.e. the total area of maize could remain approximately the same between years, but it may be grown in a different field each year). As a result, it could be considered that the farm is likely to support a similar overall abundance and diversity of farmland bird species from year to year, albeit at differing distributions. In summary, just because an area supported a good population of farmland birds in any single year, it does not mean that that specific area of farmland is inherently 'better' for farmland birds.
- 3.217 With regard to the above considerations regarding farmland birds, recommendations regarding these species are predominantly based on the quantitative (rather than spatial) findings of this BBS.
- 3.218 There are no unusual species, either resident or migrant, within the site. Set within that context, the bird assemblage as a whole is considered to be of no more than local value.

### **Dormice**

#### ***Desk Study Records***

- 3.219 The desk study revealed a single record of a dormouse dated 2010, located within woodland to the north of the site, adjacent to Old Broyle Road. Discussions with the recorder confirmed that the record was of a dead dormouse brought to the recorder's property by a cat, and as such the dormouse could have been brought from any location within the vicinity of the site.

### *Field Surveys*

- 3.220 Habitats on site considered suitable for dormice include hedgerows and areas of broadleaved woodland which offer suitable nesting and hibernation sites, as well as a variety of foraging opportunities throughout the year. These habitats form part of a network of long established woodland parcels and copses linked by mature hedgerows. Furthermore, there is good connectivity to areas of broad-leaved woodland along the western and northern boundaries of the site.
- 3.221 The detailed dormouse surveys undertaken throughout 2012 to 2013 found no evidence of dormice within the site. Several recordings of wood mice, their nests and food caches were made within a number of the tubes located across the site. Full results are illustrated on **Plan EDP 5**.
- 3.222 Whilst the site supports areas of suitable woody habitats to support dormice, it is considered that the lack of their presence within the site could be due to the availability of woodland habitats of greater value within the local area. Based on the lack of direct evidence of dormice on site, the species would be scoped out of an EclA as a Valuable Ecological Receptor (VER), but would require further consideration in light of the potential habitat creation/enhancement opportunities which could encourage dormice to use the site.

## **Badgers**

### ***Desk Study Records***

- 3.223 Records returned by the West Sussex Badger Group during the 2008 desk study confirmed the presence of badgers (*Meles meles*) within 1km of the site.

### *Field Surveys*

- 3.224 The badger walkover survey of the site undertaken in 2013 did not record any evidence of 'active' badger setts within the site, although a number of disused 'inactive' setts were recorded, as illustrated on **Plan EDP 16**. One of the 'inactive' setts noted during the 2013 walkover survey had previously been recorded as active during a walkover survey of the site in October 2012. This sett was located within the thin strip of woodland along the northern boundary of field F11, and it was recorded that the sett had discarded bedding outside the sett entrance, as well as a number of badger guard hairs.
- 3.225 The site supports areas of woodland and hedgerows which are considered suitable for badger-sett building and new badger setts appearing within the site cannot be ruled out.

- 3.226 The site also offers ample foraging opportunities for badgers within semi-improved grassland fields, arable fields (and associated field margins), woodlands and hedgerows. Indeed, a number of signs of badger foraging were noted during the course of other phase II ecology surveys undertaken on the site, such as the remains of discarded maize which is known to be a good food source for badgers.
- 3.227 As such, it is considered that the site supports both foraging and commuting badgers, and is highly likely to be within established badger territories, but it does not currently support any active badger setts. Based on the lack of direct evidence of active badger setts on site, badgers would be scoped out of an EclA as a VER, but would require further consideration in light of their potential to establish setts on the site in future.

## **Water Vole**

### ***Desk Study Records***

- 3.228 SBRC returned 14 records of water voles within 2km of the site dated between 1971 and 2013. Those records are predominantly associated with the Chichester Harbour SPA and the surrounding network of ditches flowing into it, with records mostly extending to the south and south-west of the site beyond the A27, circa 0.5km from the site. Two records, both dated 2013, exist within the site boundary; one within the ditch immediately to the north of Newlands Lane, and a second at the northern end of the ditch running through field F2.

### *Field Surveys*

- 3.229 The results of the detailed walkover survey of the site's ditches including the habitat suitability assessment and inspections of off-site connections are presented below. Reference is made to the four ditch sections sampled as illustrated on **Plan EDP 6**.

### Section A

- 3.230 Throughout section A the water course was less than 150mm deep (mainly no more than 50mm deep and 0.5 - 1m wide). No part of the stream was deeper than 300mm at the time of survey and ditches running into the main body of the stream were dry at the time of survey. In addition, although there are some places where the banks are easily dug by voles, for much of its length, the banks have a substantial layer of flint or chert with a narrow belt of soil above, reducing their suitability for burrowing mammals.
- 3.231 Occasional burrows were found in section A, including some which were clearly field vole (or other small mammal) burrows and four which were the right size for water voles (c. 50mm in diameter). None of the latter were in current use and there was insufficient evidence to determine whether they had been dug by brown rats or water voles. The proximity of houses, the farm and arable crops means that the presence of

brown rats cannot be discounted. No water vole feeding stations, faeces or latrines were recorded.

#### Section B

- 3.232 Section B of the ditch network was a little deeper than most of section A, approximately 150mm deep in places, but the ditch is heavily overhung by trees and supports very sparse riparian vegetation. Consequently, there is little food and no dense cover at ground level, both of which are unfavourable conditions to water voles.
- 3.233 No evidence of water voles was recorded within section B.

#### Section C

- 3.234 Section C of the ditch network supports well vegetated banks which are more favourable to water voles, although this bankside vegetation extends only up to c. 1m from the ditch edge due to the presence of informal footpaths either side of the ditch which are heavily used by dog-walkers and other members of the public. The limited extent of the bankside vegetation is considered unfavourable to water voles which prefer 'sites with wide swathes of riparian vegetation'<sup>36</sup>.
- 3.235 In two places along section C recent (green) feeding remains c. 100mm in length were found, which is a size typical of water voles; although single specimens are not considered conclusive evidence owing to the considerable degree of overlap in size between the feeding remains of water voles and field voles. No water vole feeding stations, faeces or latrines were recorded.
- 3.236 At the northern end of section C four burrow entrances were found, two on the east bank and two on the west bank. In each case the two burrows were close to each other (300-400mm apart). The two on the west side had not been recently used and were well above the water level at the time of survey, making them inaccessible to water voles at the time. The burrows were likely dug when water levels were high. Those on the west side were lower and would be accessible to voles at the time of survey but evidence of use was inconclusive. These appear to be water vole burrows but no conclusive evidence to confirm this was found.

#### Section D

- 3.237 The ditch within section D is of a similar characteristic to that of section B, being heavily shaded by overhanging trees and supporting minimal ground vegetation cover along the ditch banks. The ditch also supported no greater than 150mm water depth at the time of the survey.

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<sup>36</sup> Strachan, R *et al.* (2011) Water Vole Conservation Handbook - Third Edition. Wildlife Conservation Research Unit, Oxford

3.238 No evidence of water voles was recorded within section D.

*Assessment of Off-site Connectivity and the Wider Area*

3.239 At the southern point of section D the ditch passes under the railway line via a pipe culvert c. 450mm in diameter, which is considered a deterrent, but not an impediment to water vole movements.

3.240 Additionally, entrances to culverts beneath Fishbourne Road East, Fishbourne Road West and the Chichester A27 bypass were inspected and did not suggest a barrier to dispersal upstream at the time of survey, when water levels are low.

3.241 Most of the distribution records supplied by SBRC come from the area to the south of the A27 at the head of the Fishbourne Channel. In addition, the Chichester Ship Canal was viewed from road bridges or footpaths at three locations between the harbour and Hunston and appears to offer good quality habitat for water voles with good potential as a breeding area.

*Evaluation*

3.242 In summary, a small number of potential water vole burrows have been recorded in seasonally wet ditches located at section A and section C of the site. No conclusive evidence of the presence of water voles on site has been recorded.

3.243 The habitat suitability assessment of the ditch network has concluded that the watercourse running through the site is of poor quality for water voles. The ditches are heavily choked in places, particularly along section C which is dominated by foals watercress (*Nasturtium officinale*) and hemlock water dropwort, to such an extent that the movement of water vole would be restricted during periods of low water. The ditches are known to hold water only seasonally, and at certain times of the year to be subject to complete drought conditions. As such, the watercourse is not suitable to support a breeding population of water voles.

3.244 The burrows recorded within section A and at the north end of section C suggest that water voles may have used that part of the site, however, there is no evidence of a breeding colony, nor conclusive evidence that they were present at the time of survey. This is consistent with the poor quality of the habitat for water voles on the site.

3.245 The assessment of the ditches' connection to off-site water courses located to the south of the site and in the vicinity of the Chichester Harbour SPA found no obvious impediment to water vole dispersal upstream. It was considered that during periods of sufficient water depth and flow rate water voles may disperse upstream onto the site, and as such, their ongoing seasonal presence on the site cannot be ruled out.

3.246 Water voles are subject to both a UK BAP and local BAP within Sussex owing to significant population decline. The dispersing population of water voles potentially using the site is considered of local importance.

## Great Crested Newts

### Desk Study Records

3.247 The desk study returned three records of great crested newts within 2km of the site; two located approximately 1.3km to the north east, and another located 1.4km south west of the site. All records were made in 2002. Additionally, SBRC also holds records for smooth newt (*Lissotriton vulgaris*), palmate newt (*Lissotriton helveticus*), common frog (*Rana temporaria*) and common toad (*Bufo bufo*) within 2km of the site boundary.

### Field Surveys

3.248 The site itself supports little aquatic habitat, which is of below average quality for great crested newts, and a small amount of suitable terrestrial habitat confined to field boundaries and woodland belts.

### Habitat Suitability Assessment of Water Bodies

3.249 The results of the habitat assessment of the seven ponds surveyed for their suitability to support populations of great crested newt are summarised within **Table EDP 3.4** and the full results are provided within **Appendix EDP 12**.

**Table EDP 3.4:** Suitability of ponds assessed for their potential to support great crested newts using the standard Habitat Suitability Index

Pond number	HSI score	Inferred pond suitability for great crested newts
P1	0.53	Below average
P2	0.49	Poor
P3	0.57	Below average
P4	0.45	Poor
P5	0.22	Poor
P6	0.27	Poor
P7	-	Dry - unsuitable
P8	0.55	Below average

### Great Crested Newt Survey

3.250 The seven ponds subject to an HSI survey were further surveyed for great crested newts, as shown on **Plan EDP 7**. An HSI assessment was compiled for pond P8; however, access for further presence/absence surveys was not permitted. The HSI score for this

pond is detailed in **Appendix EDP 12** and shows that the pond supports 'below average' habitat for great crested newts.

- 3.251 No evidence of great crested newts was found in any of the ponds surveyed during 2011 and 2013. Smooth and palmate newts were recorded in all ponds apart from pond P6 (which dried up after two surveys) and pond P5 (in which a single newt which could have been either species was briefly seen). Additionally, large numbers of common frogs and toads were recorded breeding in ponds P1 and P2. A complete record of the amphibian survey findings, including the number of bottle traps deployed, is provided in **Appendix EDP 13**.

#### *Evaluation*

- 3.252 The site supports some (albeit low potential) habitat in areas of broadleaved woodland and hedgerows which may have potential to support great crested newts or other amphibians during their terrestrial and migratory phases, however, these habitats are isolated within an otherwise unsuitable and largely unsuitable arable landscape.
- 3.253 Given the absence of great crested newts recorded during the surveys and the paucity of suitable habitats on site, this species is not considered to pose a constraint to the development proposals and is scoped out as a VER in an EclA. However, small numbers of both smooth newt and palmate newt were recorded within pond P3 on site and the amphibian population is considered to be of site value.

## **Reptiles**

### ***Desk Study Records***

- 3.254 The desk study returned numerous records of slow-worm (*Anguis fragilis*), common lizard (*Zootoca vivipara*) and grass snake (*Natrix natrix*), including a number of recent records (2012) and a single record of adder (*Vipera berus*) within 2km of the site.

### *Field Surveys*

- 3.255 Reptile surveys completed throughout the site confirmed the presence of widespread reptile species including grass snake, slow-worm and common lizard. Full details of the number of individuals of each reptile species recorded within survey compartments are given in **Appendix EDP 14**. A summary of the reptile species recorded, and the estimated population size class based on peak survey counts, is presented in **Table EDP 3.5**.

**Table EDP 3.5:** Estimated population size classes for widespread reptile species recorded.

Survey Compartment	Species	Peak Survey Count	Population Size Class Estimate
A	Slow worm	18	Medium
	Grass snake	4	Small
B	Slow worm	2	Small
C	Slow worm	10	Medium
D	Slow worm	15	Medium
	Grass snake	8	Medium
	Common lizard	2	Small
E	Slow worm	18	Medium
	Grass snake	6	Medium
F	Slow worm	14	Medium
	Grass snake	3	Small
G	Common lizard	15	Medium
	Slow worm	12	Medium
	Grass snake	4	Small
H	Common lizard	6	Medium
	Slow worm	12	Medium
I	Common lizard	2	Small
	Slow worm	19	Medium
J	Common lizard	1	Small
	Slow worm	13	Medium
K	Common lizard	8	Medium
	Slow worm	14	Medium
	Grass snake	1	Small
L	Common lizard	3	Small
M	Common lizard	13	Medium
	Slow worm	19	Medium
N	Common lizard	5	Medium
	Slow worm	8	Small
	Grass snake	2	Small
O	Common lizard	25	Large
	Slow worm	53	Large
	Grass snake	1	Small
P	Common lizard	5	Medium
	Slow worm	17	Medium
Q	Common lizard	10	Medium
	Slow worm	11	Medium
	Grass snake	1	Small



- 3.256 The distribution and abundance of the reptiles recorded are discussed in detail below, and should be read in conjunction with **Plan EDP 8** which illustrates survey compartments and **Plan EDP 1** which shows field numbers as referred to throughout.

*Slow-worm*

- 3.257 Slow worms were widely distributed across the site being recorded within every survey compartment with the exception of compartment L, and were the most abundant reptile species encountered during surveys. In nearly all survey compartments, a medium population of slow-worms (between 10 and 40 individuals) was recorded. The distribution of slow worms throughout the site along with the estimated population size class based on peak survey counts is illustrated on **Plan EDP 17**.
- 3.258 The greatest number of slow worms was recorded within survey compartment O (field F5) which supported a peak count of 53 slow-worms; a 'medium population'. This field is characterised by a small enclosed rough grassland field with a well-developed 'thatch' layer from previous year's fallen growth. Importantly, the field is subject to little or no human or dog disturbance due to the lack of suitable footpaths and limited access into the field. Of significance also is that the field is open along its southern boundary to the railway line which adjoins the southern boundary of the site, which allows a significant degree of sunlight to penetrate the field along the south facing aspect.
- 3.259 The lowest numbers of slow worms were recorded within compartments B and N (fields F13 and F2 respectively) which is considered due to their inappropriate management for reptiles. Field F13 is a large intensive arable field, whilst field F2 is a large hay meadow, both characterised by tall growing plant species, within a homogenous, poorly structured landscape, which significantly reduce the degree of sunlight reaching the ground floor and thus provide reduced basking opportunities for reptiles.
- 3.260 All remaining survey compartments supported a medium population of slow-worm with peak survey counts ranging from 10 to 19 individuals. There are subtle differences in the vegetation structure and invertebrate fauna within these compartments and the resulting reptile species assemblage, but generally those areas surveyed were found to be important habitats for slow-worms and provide a number of foraging, basking and refuge opportunities.

*Common Lizard*

- 3.261 Common lizards were also found to be well distributed in the majority of suitable habitats throughout the site and in relatively high densities, although their distribution and abundance was generally not as great as slow worms. The distribution of common lizards throughout the site along with the estimated population size class based on peak survey counts is illustrated on **Plan EDP 18**. The greatest abundance of common lizards was found in survey compartment O (field F5), which was also the field which supported the greatest density of slow-worms. It is again considered that the abundance within

this field is due to the lack of disturbance and from the rich invertebrate fauna likely present within the thatch layer of this field, which would provide ample prey items.

- 3.262 Of particular importance also to common lizards were compartments G and Q (fields F17 and F3 respectively) which had peak survey counts of 15 and 10 respectively (medium populations). These areas of the site are favourable to common lizards due to their openness and short sward height, which significantly increases UV penetration to the ground layer, thus favouring basking and foraging reptiles.
- 3.263 There were a number of areas of the site which supported no common lizards, including compartments A to C, E and F (fields F11, F13, F16, F9 and F10). With the exception of compartment C (field F16; which is a narrow field of rough, semi-improved grassland) all these compartments constitute parts of the site which are directly connected to intensive, arable fields.
- 3.264 The remaining compartments which did support common lizards as per **Table EDP 3.5** supported mostly medium sized populations with peak counts ranging between 5 and 15 individuals. The lower densities of common lizards recorded compared with those for slow worms is considered due to intrinsic differences in population sizes of the two species, and not entirely due to habitat differences.

#### *Grass Snakes*

- 3.265 Grass snakes were widely distributed in suitable habitats throughout the site, although not recorded in every survey compartment across the site which is expected owing to the mobility and large home range of this species (grass snakes may move over several kilometres over the course of the active season<sup>37</sup>). The distribution of grass snakes throughout the site along with the estimated population size class based on peak survey counts is illustrated on **Plan EDP 19**. The species was recorded in the greatest densities in compartments D and E (fields F8 and F9), with peak counts of 8 and 6 respectively. These peak counts were obtained during surveys undertaken in mid to late September 2012 and included a high proportion of juveniles which suggests that grass snakes breeding sites are located close by, although no obvious egg-laying sites were uncovered during surveys. The habitats present within these compartments include a tree lined bank along the northern boundary of a semi-improved/marshy grassland field (field F8) and an arable field (F9). Due to the presence of damp, marshy areas within field F8 and nearby seasonally wet ditches, as illustrated on **Plan EDP 1**, which would favour amphibian species such as common frogs, it is considered that there is a relatively good food source available to grass snakes here.
- 3.266 Survey compartment G (field F17) is also considered to be valuable to grass snakes and a medium population (peak survey count 4) was recorded here. The open nature of the

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<sup>37</sup> Edgar, P., Foster, J. & Baker, J. (2010) *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth

sward in this field (as discussed in **Paragraph 3.262**) is again of importance to increasing light levels. Also, of significance within this field is a large log pile and spoil heap which is well covered with overgrowing grasses and surrounding vegetation and is considered to provide an important reptile refuge, foraging, and potential breeding and hibernation site. A high proportion of the grass snakes encountered during surveys, which included a number of mature adults, were in the vicinity of this refuge pile. In addition, the field is well connected to surrounding ponds, and in particular to pond P2 which based on the observations made during detailed amphibian surveys was found to support a high number of common frogs and common toads (**Paragraph 3.251**) thus providing ample prey items for grass snakes. The field is considered an important reptile foraging, hibernating and basking area.

- 3.267 Of the remaining compartments, grass snakes were recorded in low numbers and it is concluded that due to the high degree of seasonal movement of grass snakes, that they could occupy a number of the fields within the site at a given time of the year, depending on site and climatic conditions.

#### *Evaluation*

- 3.268 The population size class estimates discussed above are derived from peak survey counts from each individual survey compartment (as detailed in **Table EDP 3.5**). However, it is expected that such populations form part of a much wider metapopulation occurring across and beyond the site. Taking this view, it is considered that the site in fact supports a large population of slow worms, common lizard and grass snakes. All widespread reptile species are afforded a Local BAP, and as such, populations of slow worm, grass snake and common lizard recorded throughout the site are considered to be of district level importance.

#### ***Invertebrates***

##### *Desk Study Records*

- 3.269 A number of records of notable invertebrate species were returned by SBRC within 2km of the site, as included in full in **Appendix EDP 1**.

##### *Habitat Scoping Assessment*

- 3.270 The site was largely considered to offer negligible value to invertebrates as a result of current agricultural land uses/practices which result in regular ground disturbance, heavy spraying of pesticides and herbicides (which reduces botanical abundance and diversity) and the mono-crop nature of arable farming. Although flowering crops can provide extensive areas of foraging habitat for pollen and nectar-feeding insects, arable fields are generally considered to be very poor habitats for invertebrates and are of negligible value to most species, particularly those of conservation importance.

- 3.271 However, the following habitat types within the site may be of greater value to invertebrates, namely semi-improved grassland, hedgerows with standard trees, broadleaved woodland and seasonally wet ditches, as discussed individually below.

#### *Hedgerows*

- 3.272 Hedgerows within the site were considered to be of value to invertebrates, forming habitat connections throughout the site and linking areas of grassland and woodland. The high botanical diversity recorded within many of the site's hedgerows, as discussed previously, is likely to be reflected in the invertebrate diversity on site, particularly with regard to species of moths, the larvae of which often feed on a variety of different shrub and tree species.
- 3.273 No direct evidence of BAP priority species of invertebrates was uncovered during the invertebrate scoping assessment.
- 3.274 Hedgerows within the site support a number of mature standard oak and beech trees which, particularly oak, are considered to support a significant diversity of invertebrate species. Additionally, dead or decaying wood is of significant value to invertebrates, particularly rarer species of wood-boring beetle and other UK BAP species, and this habitat is likely to be supported by mature trees within hedgerows on site. The presence of mature and over-mature trees within hedgerows on site is therefore considered to be of high ecological value with regards to invertebrates.

#### *Broadleaved Woodland*

- 3.275 In accordance with the considerations discussed above in relation to mature trees within hedgerows, woodland areas on site are considered to be of high ecological value due to the diversity of invertebrate species they are likely to support, particularly moths and beetles which may again include a number of BAP species.

#### *Seasonally Wet Ditches*

- 3.276 Seasonally wet ditches on site are considered to be of significance to aquatic invertebrates, although unlikely to support a diverse or rare assemblage given their context alongside intensive arable land.

#### *Semi-improved Grassland*

- 3.277 Whilst areas of semi-improved grassland within fields F4, F8 and F9 and along the eastern edge of field F2 may support some plants capable of producing sufficient nectar to support certain species of insect, the habitat is considered to be relatively poor for rare or uncommon invertebrate species, largely due to the habitat's lack of structural complexity and insufficient nectar sources.

- 3.278 Butterfly species recorded during the survey include gatekeeper (*Pyronia tithonus*), ringlet (*Aphantopus hyperantus*), meadow brown (*Maniola jurtina*), small skipper (*Thymelicus sylvestris*), small white (*Pieris rapae*), red admiral (*Vanessa atalanta*), large white (*Pieris brassicae*), comma (*Polygonia c-album*) and peacock (*Inachis io*); common and widespread species typical of tall grasslands. It was considered that the grassland habitats are likely to support crickets and grasshoppers. Only a small number of bumblebees were seen during the survey.
- 3.279 Semi-improved grasslands on site are therefore considered to be of moderate value to invertebrate species, and are unlikely to support a rare and uncommon assemblage.

#### *Evaluation*

- 3.280 Whilst no comprehensive list of the invertebrate species present on site has been compiled, it is considered that the site provides a number of suitable habitats particularly those areas of broadleaved woodland, hedgerows and mature trees. Given the value of habitats with the site as summarised in **Paragraph 3.75**, the invertebrate species assemblage likely supported by the site is considered to be of no greater than local-district value.

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## Section 4 Discussion and Recommendations

- 4.1 This section discusses the findings of the baseline ecological investigations undertaken to in relation to the legislative, planning policy and BAP context. The remainder of this report aims to:
- (i) Identify the Valued Ecological Receptors (VERs) which would require full consideration within a formal Ecological Impact Assessment (EclA);
  - (ii) Set out general principles for consideration during the masterplanning process to ensure that adverse impacts upon these features are avoided and/or minimised; and
  - (iii) Identify opportunities for the proposed development to mitigate impacts, enhance existing features or provide opportunities for positive ecological gain.

### Details of Proposed Development

- 4.2 In accordance with the aspirations of the emerging Chichester Local Plan<sup>38</sup>, the site is subject to proposals for an urban extension principally comprising new housing, employment and associated infrastructure and community facilities. The site has also been earmarked to provide a new Country Park, the rationale for which has been driven by the need to address potential recreational impacts on the Chichester and Langstone Harbours SPA. Although yet to be devised in detail, it is understood that the site will be able to accommodate the proposed level of housing set out within the emerging local plan whilst also making a significant provision for green infrastructure. The opportunity for a large area of interconnected and multifunctional green spaces has formed part of the historic consideration of the development potential of the site; the recommendations as discussed below are therefore intended to inform detailed masterplanning for the site and influence the design, layout and implementation of the proposals.

### Designated Sites

#### *Statutory Designations*

- 4.3 Statutory designations receive legal protection under various national and international legislative instruments. This protection is also reflected in the National Planning Policy

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<sup>38</sup> Chichester Local Plan: Key Policies Pre-Submission 2014 - 2029

Framework (NPPF) – Chapter 11: *Conserving and Enhancing the Natural Environment*<sup>39</sup>. In addition, saved Policy RE7 (*Nature Conservation – Designated Sites*) of the Chichester District Council Local Plan 1999 provides local policy protection for statutory designations.

- 4.4 As detailed in **Section 3**, there are two areas within 5km of the site which are covered by statutory protection at a European level, namely:
- (i) Chichester and Langstone Harbours SPA and Ramsar Site, which also includes the Solent Maritime SAC and Chichester Harbour SSSI; and
  - (ii) Kingley Vale SAC.
- 4.5 At a strategic housing provision level, Chichester District Council has undertaken a Habitats Regulations Assessment (HRA) to ensure that the proposals in the Local Plan do not have a negative impact on any European Sites.
- 4.6 In relation to (i) above, studies compiled by the Solent Disturbance and Mitigation Project indicate that bird species in Chichester and Langstone Harbours SPA are being adversely affected by 'disturbance with human activity a major influence'. This matter, and with specific regard to the West of Chichester site, has been the subject of extensive consultation with Natural England.
- 4.7 The significant body of baseline information and consideration of indirect effects on the SPA is not considered here, but are summarised in recent representations to the Chichester Local Plan, included at **Appendix EDP 15**.
- 4.8 It is understood that Natural England have confirmed that conclusions of the Solent Disturbance and Mitigation Project: that it would be possible to mitigate the effects of development West of Chichester through the provision of a package of on-site measures to off-set recreational disturbance (including a Country Park), and a financial contribution to address a wider range of impacts at the harbour.
- 4.9 In order for development on land West of Chichester to be permitted, it will need to satisfy the tests set out in the Conservation (Natural Habitats c.) Regulations, 1994.
- 4.10 In relation to (ii), it is considered unlikely that the proposals will result in a significant adverse impact on the designated interests of this site due to their distance from the proposed development.

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<sup>39</sup> Department for Communities and Local Government, (March 2012), *National Planning Policy Framework*



### ***Non-Statutory Designations***

- 4.11 Non-statutory designations do not receive any formal legal protection. However, they do receive planning policy protection, as reflected in paragraph 117 of NPPF and saved Policy RE8 (*Nature Conservation – Non-designated Sites*) of the Chichester Local Plan. Such policies are of material consideration during the planning application process.
- 4.12 Furthermore, through Policy 49 (Biodiversity) of the emerging Chichester District Local Plan<sup>40</sup> new developments are required to demonstrate that:
- *“The District’s network of ecology, biodiversity and geological sites, including the international, national and local designated sites (statutory and non-statutory)” is protected, managed and enhanced; and*
  - *Demonstrable harm to habitats (or species) which are protected or which are of importance to biodiversity is avoided and mitigated”.*
- 4.13 As set out in **Section 3**, there is one non-statutory designated site located within the site boundary; approximately 1ha of ancient and semi-natural woodland located to the south of Newlands Lane. In addition, the proposed development lies adjacent to a further two non-statutory ancient and semi-natural woodland designations including:
- (i) Upper Rouse Copse: and
  - (ii) Brandy Hole Copse/East Broyle Copse.
- 4.14 Further to the above, within 2km of the site, there are three SNCI designations, namely:
- (i) Fishbourne Meadows SNCI;
  - (ii) River Lavant Marsh SNCI; and
  - (iii) Chichester Canal SNCI.
- 4.15 In relation to those ancient and semi-natural woodland designated sites discussed at **Paragraphs 3.8-3.9**, it is considered that, in the absence of mitigation, the development proposals could result in the damage or disturbance of designated sites. It is therefore recommended that the following principles are followed:

#### *Design Measures*

- (i) The ancient and semi-natural non-statutory designation within the site should be retained where possible, and a sufficient natural/naturalised buffer from any

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<sup>40</sup> Chichester Local Plan: Key Policies Pre-Submission 2014 - 2029

hard development (including domestic curtilage) provided within the open space provision of the site;

- (ii) The development proposals should avoid contributing adversely to the recreational pressure on the designated area insofar as this might, through the provision of sufficient open space within the site;
- (iii) Design measures are a consideration of masterplanning, which could potentially be achieved through the creation of a new Country Park;

#### *Pre-Construction Measures*

- (iv) Designated sites should be protected through the provision of Ecological Protection Zones (EPZs) as prescribed within an Ecological Construction Method Statement (ECMS);
- (v) During construction, measures should be adopted to avoid any accidental incursion by construction personnel or vehicles and/or depositing of building material/waste/potential sources of pollution within the designated area;

#### *Enhancement and Management Measures*

- (vi) New planting of trees and shrubs should be incorporated into the landscape scheme in order to increase the resource of woody habitats on the site, and increase connectivity between existing woodland in and around the site; and
- (vii) All areas of open space within the site should be subject to detailed establishment and long-term management procedures as delivered through a Green Infrastructure Management Strategy (GIMS).

4.16 As detailed in **Paragraph 3.10 (i)**, it appears that the surface drainage ditch network within the site connects to Fishbourne Meadows SNCI further downstream. Hence, it is recommended that measures should be implemented to avoid any appreciable adverse changes in water quality and flow within the drainage network which would cause a significant adverse impact to the designated interests of Fishbourne Meadows SNCI. Watercourses within the site should be subject to appropriate buffering from the construction footprint, with construction activities adopting Environment Agency Pollution Prevention guidelines when working near water courses.

4.17 It is not considered likely that the proposed development will adversely affect any of the other non-statutory designations within 2km of the site due to their spatial separation.

## Habitats

- 4.18 There are several mechanisms through which habitats receive protection without the statutory and non-statutory designated site frameworks. For instance:
- i Certain habitats are identified in policies within NPPF and attached Office of the Deputy Prime Minister (ODPM) circular 06/05. Furthermore, paragraph 118 of the NPPF states that *“When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:*
    - *If significant harm resulting from a development cannot be avoided (through locating on alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
    - *Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted; and*
    - *Opportunities to incorporate biodiversity in and around developments should be encouraged”.*
  - ii Through being identified as priority habitats under Section 74 of the Countryside and Rights of Way (CRoW) Act 2000, as reflected by their Biodiversity Action Plan (BAP) status;
  - iii Through Saved Policy BE14 (*Wildlife Habitat, Trees, Hedges and Other Landscape Features*) of the Chichester District Council Local Plan 1999 which requires new developments to *“make a contribution to the stock of wildlife habitats through the retention of areas, corridors or features of value within the site.”*; and
  - iv Within targets set for specific habitats within the Sussex Biodiversity Action Plans which contains Habitat Action Plans for semi-natural habitats such as lowland calcareous grassland, woodland, ponds and traditional orchards<sup>41</sup>.
  - v Through emerging policies of the Chichester District Local Plan including Policy 49<sup>42</sup> (Biodiversity) which requires that new development demonstrate that the following criteria have been met:
    1. *“The biodiversity value of the site is safeguarded;*
    2. *Demonstrable harm to habitats (or species) which are protected or which are of importance to biodiversity is avoided and mitigated;*

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<sup>41</sup> Sussex Biodiversity Partnership. *Habitats*. <http://www.biodiversitysussex.org.uk/habitats/>. Accessed 29/01/13

<sup>42</sup> Chichester Local Plan: Key Policies Pre-Submission 2014 - 2029

3. *The proposal has incorporated features that enhance biodiversity as part of good design and sustainable development”.*

4.19 Habitats within the site have been assessed through an Extended Phase 1 survey, detailed botanical surveys of woodlands, hedgerows and grasslands and through related investigations into the potential presence of protected species within these habitats. The habitat VERs identified through this assessment are set out in **Table EDP 4.1**.

**Table EDP 4.1:** Habitat VERs for Ecological Impact Assessment

<b>Evaluation</b>	<b>Habitat VER</b>
District	Broadleaved woodland
	Mature trees
Local	Hedgerows
	Semi-improved grassland
	Seasonally wet ditches

4.20 The following recommendations are provided to mitigate impacts to those valued habitats given above and provide enhancement and opportunities for biodiversity. All design measures are to be delivered through appropriate and ecologically sensitive masterplanning of the site, with pre-construction measures delivered through the ECMS and enhancement and management measures ensured through the GIMS.

*Design Measures*

- Retention, where possible, of those valued habitats on site including broadleaved woodland, mature trees, hedgerows, semi-improved grassland and seasonally wet ditches, and allow for appropriate buffering/screening;
- With regards to hedgerows, priority for retention should be given to those ‘important’ hedgerows identified following Hedgerow Regulations Assessment and thereafter hedgerows of ‘medium importance’;
- Any losses of valued habitats should be compensated for with new habitat creation elsewhere on site to deliver a net gain across the site;
- A suitable Sustainable Urban Drainage Systems (SUDS) strategy should be incorporated into the design scheme to provide new aquatic habitats for biodiversity, some of which should seek to retain water year round to benefit potentially breeding water voles, and to ensure that water courses are not polluted as a result of surface runoff; and
- Areas of open space within the site should incorporate a significant area of rough, undisturbed grassland, ideally located adjacent to places of shelter such as hedgerows and woodland habitats, to provide foraging, breeding and dispersal opportunities for bats, badgers and reptiles.

### *Pre-Construction Measures*

- Valuable habitats to be retained on the site should be protected during construction through the establishment of Ecological Protection Zones (EPZs) using appropriate protective fencing and signage (where appropriate); and
- Adoption of Environment Agency Pollution Prevention guidelines in relation to all construction working practices to avoid pollution of habitats on site.

### *Enhancement and Management Measures*

- All new planting must comprise a rich diversity of species of local provenance including a variety of fruit and nut bearing tree and shrub species, and nectar and pollen producing grasses and wildflowers;
- A proportion of the area of woodlands W2 and W3 should be subject to restricted public access to minimize the trampling and disturbance of valuable ground flora;
- The planting scheme for the site should allow for the provision of 'parkland' habitats whereby individual tree standards can be transplanted/planted and provided sufficient space to grow, free of significant competition from nearby trees/public nuisance issues, to attain their full maturity and growth;
- The existing hedgerow network should be strengthened and enriched where opportunities exist through selective trimming/laying, selective mixed species native planting and through increasing connectivity with existing habitats. Hedgerows are to be managed on rotation, with no more than one side of the hedgerow trimmed during any one season;
- Woodlands on site should be subject to selective tree thinning/coppicing where appropriate to increase light penetration to the woodland floor to benefit woodland ground flora;
- Grasslands within the open space provision should collectively include areas of varying species composition and structure with areas of wildflower rich meadow, seasonally wet grassland, with areas managed as a 'wildlife area' with public access excluded, the sward in this area should be allowed to develop into tussocky grassland with a well-developed thatch layer;
- Suitable management of grassland is likely to include annual cutting or light grazing on a rotational basis. Management regimes should be based around a traditional summer hay cutting technique where possible to facilitate the establishment of appropriate species diversity and structure; and

- The existing pond on site has considerable potential for enhancement through appropriate planting to increase macrophyte cover, and integration with other newly created ponds/SUDS features where possible.

4.21 Subject to the above it is considered that development within the site would not contravene any legislation or planning policies relating to habitats. Further consideration of habitats in relation to supporting protected species is discussed below.

### **Protected and/or Notable Species**

4.22 Certain species receive legal protection in the United Kingdom and are commonly known as '*protected species*'. In reality, the level of protection for different species varies considerably, from protection solely against '*killing and injury*' to full protection of the species and their places of refuge. Where pertinent, details of legal protection afforded to species/species-groups are provided below.

4.23 In addition to protected species, there are other species/species-groups that do not receive legal protection, but which are notable owing to their conservation status. These include UK Biodiversity Action Plan (BAP) Priority species, which planning authorities in England have a duty to have regard to, under the Natural Environment and Rural Communities (NERC) Act 2006. With respect to planning policy, protected and notable species are afforded policy protection at a national level by paragraph 18 of the NPPF. Emerging policy 49 (Biodiversity) of the Chichester District Local Plan requires that new development demonstrates that harm to "*species which are protected or which are of importance to biodiversity is avoided and mitigated*".

4.24 Protected/notable species populations occurring within the site have been investigated through a wide range of detailed surveys. These investigations have identified the following notable and/or protected species/groups which require consideration in the context of the development proposals:

- Bats;
- Birds;
- Badgers;
- Water vole;
- Reptiles; and
- Invertebrates.

- 4.25 The individual species VERs are discussed in turn below. Those species groups not discussed below are scoped out as VERs from the EclA on the basis of their confirmed absence from the site and the lack of suitable habitats to encourage dispersal into the site.

### **Bats**

- 4.26 All species of British bat are listed as a European Protected Species (EPS) on Schedule 2 of the Conservation Regulations (Annex IV(a) to the Habitats Directive), thereby receiving strict protection under the Conservation of Habitats and Species Regulations 2010.
- 4.27 Additional protection for bats is also afforded under the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place. In addition, six of the sixteen species of bat resident in the UK (greater horseshoe, lesser horseshoe, barbastelle, Bechstein's, soprano pipistrelle and noctule) are also listed as Priority Species on the UK Biodiversity Action Plan (BAP). The following species are afforded a Local BAP within Sussex<sup>43</sup>: greater horseshoe bat, barbastelle, Bechstein's bat, noctule, soprano pipistrelle and brown long-eared bat.

### *Bat Roosting*

### Trees

- 4.28 A number of mature trees within the site have been assessed as having low to medium bat roost potential, with a single tree with high bat roost potential located outside of the site boundary, based on external inspections undertaken from the ground. Assessment of tree loss with respect to bats will be required once the development masterplan is fixed.
- 4.29 Regarding those trees considered to have potential to support roosting bats, it is recommended that such trees are retained as far as possible. However, should the proposed development require works to those trees identified as being of medium or high potential to support roosting bats (such as limb felling, crown reduction, or felling), then these trees should be subject to a tree climbing inspection by a bat licenced ecologist and/or emergence and re-entry surveys immediately prior to any tree works to determine the presence or absence of bat roosts. Should any trees of low potential require removal as part of the proposals, these trees should be felled cautiously, and in the event that bats are found, works should cease until a suitable mitigation strategy has been agreed with a suitably qualified ecologist.

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<sup>43</sup> Sussex Biodiversity Record Centre. *Sussex BAP Species 2008*. Accessed via <http://sxbrc.org.uk/biodiversity/speciesinventories/bapsi.php>. Date accessed 24/01/13

- 4.30 An appropriate working methodology would also need to be in place to ensure no impacts upon bats would arise, with works recommended to be undertaken between December to January inclusive to reduce the probability of encountering summer-roosting and transitional-roosting bats which may be present, and to avoid the main breeding bird season, as discussed further below. Such measures could be delivered through an Ecological Construction Method Statement.
- 4.31 Should a bat roost be confirmed present within trees which are to be felled, or should development impacts result in significant levels of disturbance upon bat roosts within adjacent buildings, then a licence will be required in line with Conservation of Habitats and Species Regulations 2010 prior to any disturbance or removal. Such a licence can take up to 30 working days to be granted, and will only be issued once full, detailed planning permission has been granted and all associated conditions discharged.
- 4.32 A licence for any proposed development works will only be approved if it can be demonstrated that the following three tests (as required under the Habitats Directive) can be met:
- (i) That there is no satisfactory alternative;
  - (ii) That there is no detriment to maintaining the favourable conservation status of the species; and
  - (iii) That the development is in the interest of public health and public safety, or of other reasons of overriding public interest (including those of a social or economic nature and beneficial consequences of primary importance for the environment).

#### Buildings

- 4.33 With regards to potential roost sites in buildings on site, the daytime internal inspection of the derelict farm buildings in the south east corner of field F11 revealed no evidence of roosting bats. Due to their design, structure and fabric the buildings are considered to provide negligible opportunities for roosting bats.
- 4.34 As a precautionary measure, the dense ivy coverage over the western extent of the small subsidiary building west of the 3 large agricultural grain store buildings should be removed by hand under supervision by a licenced bat worker to ensure that no adverse harm is caused to bats. Should any bats be discovered works should cease until a suitable mitigation strategy has been agreed with a suitably qualified ecologist.
- 4.35 In addition to the above, more general recommendations are made with respect to roosting bats, as follows:



- (i) All noisy construction activities on site close to potential roosts in residential properties should be limited to daylight hours and avoid working within an hour of dusk or dawn during the summer roosting period (typically May to September);
- (ii) Artificial roost sites such as bat boxes should be placed on suitable mature tree standards and/or buildings across the site to further enhance roosting opportunities on site; the number and locations of these to be determined upon fixing of the masterplan, once the extent of tree loss is known; and
- (iii) In order to increase the provision of roosting opportunities within buildings, bat boxes and other roosting features for bats such as ridge roost tiles, bat access tiles, bat bricks and roosting tubes should be incorporated into the design of new buildings. The installation of bat boxes and other features for bats incorporated into buildings should be included within an Ecological Construction Method Statement and their appropriate long-term maintenance and management ensured through measures detailed within a Green Infrastructure Management Strategy.

#### *Bat Foraging/Commuting*

- 4.36 Detailed investigations of bat activity have confirmed the presence of common and widespread bat species commuting and/or foraging across the site. Occasional recordings were made of serotine and noctule bats with Myotis species frequently recorded throughout the site. Recordings of barbastelle, Nathusius' pipistrelle and Leisler's bats were rare across the site.
- 4.37 The southern extent of the site in particular supported high levels of bat activity and this is considered a key foraging/commuting area for bats. This area of the site supports smaller fields of semi-improved grassland, with fewer intensive arable fields and a well-connected network of hedgerows and woody habitats; all features considered to be favourable to bats. Areas of broadleaved woodland edge, particularly along areas of ancient woodland (W2 and W3), and lines of mature trees such as along the northern boundaries of fields F8 to F10, were found to support high levels of bat activity. Species-rich hedgerows were also found to provide an important foraging/commuting resource, particularly in areas of poor foraging habitats including large, open arable fields.
- 4.38 Several locations on site were found to support records of barbastelle (including at Anabats located within fields F1, F6, F9 and F14 which are located within the central and eastern parts of the site), and particularly with regards to fields F1, F6 and F10 within relatively close proximity to areas of ancient woodland. In addition, Anabats within fields F6 and F9 made recordings of Nathusius' pipistrelle. Hence, the network of ancient woodland, species-rich hedgerows with trees and lines of mature trees located within the central portion of the site are considered habitats of high value to foraging and commuting bats.
- 4.39 Foraging and commuting habitats are not subject to the same strict legal protection as roosting habitats. Those recommendations pertaining to the retention, recreation and

enhancement of valued habitats on site as discussed at **Paragraph 4.20** are considered sufficient to minimise the potential impacts on commuting and foraging bats through maintaining permeability through the site and connectivity to off-site roosting and foraging habitats. In addition, it is recommended that the spillage of artificial lighting (during construction and operation) on retained hedgerows, woodland and mature trees should be minimised through the adoption of a sensitive lighting strategy. Such recommendations should be ensured through their inclusion with an Ecological Construction Method Statement. The long term management of retained/recreated habits should be ensured through the delivery of a Green Infrastructure Management Strategy.

### ***Birds***

- 4.40 All wild birds, their nests and eggs are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:
- (i) Intentionally kill, injure or take any wild bird;
  - (ii) Take, damage or destroy the nest of any wild bird while it is in use or being built;
  - (iii) Take, damage or destroy the eggs of any wild bird; or
  - (iv) To have in one's possession, or control, any wild bird (dead or alive) or egg or any part of a wild bird or egg.
- 4.41 In addition, further protection is afforded to those wild bird species listed on Schedule 1, prohibiting any intentional or reckless disturbance to these species while it is nest building, or at a nest containing eggs or young, or to recklessly disturb the dependent young of such a bird. In addition to, or in the absence of, legal protection, some species are also of conservation concern and may also be subject to specific Biodiversity Action Plan measures.
- 4.42 Detailed surveys confirmed breeding of a number of bird species considered to be of 'conservation concern' at either the national or the local level. The majority of breeding birds recorded during the BBS were observed within the boundary, and more specifically, hedgerow habitats. Furthermore, a number of the Red and Amber List species recorded on site were observed utilising the woodland habitats for nesting and foraging. The BBS recorded a number of 'breeding' and 'possible breeding' species of conservation concern within arable fields within the site which were considered to predominantly utilise arable habitats for breeding and/or foraging. Whilst the BBS recorded no breeding activity within the interior of all semi-improved grassland fields, it is considered that many of the Red and Amber List species recorded as either 'breeders' and 'possible breeders' would utilise this habitat for foraging.

- 4.43 In the absence of mitigation it is considered that the proposed development would likely result in a decrease in the breeding population of a number of birds of conservation concern through loss or disturbance to those valued habitats discussed above. It is considered that the recommendations for the retention, recreation and enhancement of habitats on site as discussed previously in **Paragraph 4.20** provide a significant degree of mitigation to compensate for the potential decreases in breeding bird populations.
- 4.44 Owing to the nature of the proposals which require the loss of a significant area of arable land, it is considered that the proposed development would result in the loss of some bird species associated with arable habitats such as skylark and grey partridge which require open farmland with low levels of disturbance. Owing to the specific habitat requirements of yellowhammer and linnet, it is considered that the majority of the breeding (and 'possible breeding') pairs would be lost from the site. In summary, it is considered that, based on the maximum breeding bird survey counts, the development of the site would result in the probable loss of one pair of grey partridge, 35 pairs of skylark, a single pair of linnet, eight pairs of yellowhammer and a single pair of reed bunting.
- 4.45 Although it is not considered possible to mitigate for grey partridge, skylark, linnet and yellowhammer directly, it is considered that proportionate, targeted and effective mitigation could be incorporated into the masterplanning to result in a likely net gain of other species of conservation concern. Much of the requirements to achieve effective mitigation for other bird species of conservation concern can be delivered through the habitat recommendations discussed previously. In addition, the following recommendations are considered to provide potential net gains in populations of other Red/Amber Listed and UK BAP species on site:
- (i) Woodcrete bird boxes, comprising a range of designs to accommodate a range of species and suited to the breeding bird assemblage recorded on site should be erected upon suitable mature trees on site; and
  - (ii) Bird nest boxes designed to accommodate a range of species appropriate to the bird species recorded on site should be incorporated into the fabric of the buildings to ensure that mitigation is permanent.
- 4.46 The delivery of the above nesting provisions for birds should be ensured through the delivery of the Ecological Construction Method Statement and their appropriate long-term maintenance and management ensured through measures detailed within a Green Infrastructure Management Strategy.
- 4.47 In addition to the above, the following pre-construction measures are provided to prevent the damage or disturbance of protected species during the construction phase of the development

### *Pre-Construction Measures*

#### Barn Owls

- 4.48 As discussed at **Paragraph 3.134**, no direct evidence of barn owls nesting on site was uncovered during the course of the daytime inspections of mature trees and derelict farm buildings on site, although it was recognised that mature trees do have the potential to support barn owl nests in the future, and that derelict farm buildings offer some roosting opportunities.
- 4.49 As such, it is recommended that an update survey of all mature trees on site be conducted prior to the commencement of any construction works requiring tree felling, clearance or surgery to check for the presence of nesting barn owls. This should be implemented in conjunction with the update inspection of mature trees for bat roosts as recommended within **Paragraph 4.29**. Furthermore, it is considered that along with the recommendations related to soft felling techniques employed for trees with bat roosts, and the recommendation to remove vegetation outside of the bird breeding season (**Paragraph 4.51**), these are sufficient in ensuring that no direct harm is caused to nesting barn owls as a result of the development. In addition, in the event that barn owls are flushed out of trees during tree felling, clearance or surgery works, works should cease immediately and an aerial inspection of the tree undertaken by a suitably qualified ecologist.
- 4.50 An update inspection of the derelict farm buildings located in the south east corner of field F11 should also be undertaken by a suitably qualified ecologist immediately prior to these buildings being demolished in order to check for the presence of nesting barn owls. To avoid the potential risk of harm to any nesting birds which may use such buildings it is recommended that demolition works are undertaken outside of the bird breeding season.

#### *Disturbance*

- 4.51 Given the protection afforded to all breeding birds, their nests, eggs and young, any removal of or disturbance to any vegetation or buildings on site considered to offer potential nesting habitat for breeding birds (including areas of arable farmland), should be undertaken between October and February, inclusive, outside of the main bird breeding season. Any felling or tree surgery operations to mature trees, should also be undertaken outside of the bird breeding season to avoid risk of disturbance to potentially nesting barn owls.
- 4.52 Should this seasonal constraint prove not to be practicable, then suitable surveys for nests should be undertaken of any area which is to be cleared during the nesting bird season (March to August inclusive). These surveys should be undertaken by a suitably qualified ecologist immediately prior to the start of any works. If any active nest or nest under construction is found, then a buffer zone should be created around the nest and maintained until all chicks have fledged. The size of the buffer zone would be

dependent upon species and location, however, it should be noted that for a number of farmland species, such as skylark, this would represent a relatively large area. Once the fledglings are no longer dependent upon the nest, works can then re-commence.

### **Conclusion**

- 4.53 It is considered that the likely impact of the proposed development of the site, in relation to the breeding bird assemblage and distribution, is predominantly dependent upon the nature and scale of the proposals, and specifically the habitats within the site that would be impacted.
- 4.54 It is considered that the total loss of arable habitat would likely result in a significant and negative impact on Red and Amber List species on site, namely grey partridge, skylark, linnet, yellowhammer and reed bunting.
- 4.55 Although it is recognised that they are not 'like-for-like', it is considered that provided sufficient suitable mitigation is undertaken, the overall frequency of bird species of conservation concern could be maintained. Furthermore, provided proportionate mitigation, in terms of high quality habitats, are delivered through the proposed new County Park, and elsewhere on site, the overall resource of nesting and foraging habitats for birds could be significantly increased and as such, there is potential for considerable gains in the abundance of some species of breeding birds. Nevertheless, the diversity of species of conservation concern will likely decrease as a result of the likely loss of those bird species associated with arable farmland.
- 4.56 In relation to species supported by other habitats within the site, namely the grassland, woodland and hedgerow habitats, it is considered that with targeted mitigation and enhancement, suitable proposals could result in no net loss to the breeding Red and Amber List species that utilise these habitats. Indeed, it is likely that the creation of adequate areas of suitable habitat, particularly with regard to nesting habitat, could result in a greater density and distribution of specific Red List species, such as house sparrow.
- 4.57 It is considered that the creation of suitable nesting opportunities for species such as starling, swift and house martin could result in further species of conservation concern becoming 'breeders' on site, whilst the creation of suitable wetland habitats within the site, as part of the Country Park proposals, could result in further bird species breeding on site.

### **Badgers**

- 4.58 Badgers and their setts receive protection under the Protection of Badgers Act 1992 which protects badgers from deliberate harm and injury. The protection afforded to badgers is primarily due to animal welfare issues and not due to concern over their unfavourable nature conservation status. Restrictions under this act which apply to development include any killing, injuring, possession or cruel treatment to badgers, any

interference to a sett through damage or destruction, any obstruction of access to any entrance of a sett, or any disturbance to a badger whilst it is occupying a sett.

- 4.59 No evidence of active badger setts were recorded on the site during the 2013 walkover survey, although an inactive sett located along the northern boundary of field F11 had shown evidence of being active during the 2012 walkover survey and a number of field signs indicating the presence of foraging badgers were incidentally recorded during the course of other Phase 2 ecology surveys. The site is therefore considered to lie within an established badger territory and due to the potential for badger setts to quickly establish, badgers would require further consideration to ensure relevant protective legislation is not breached during the construction of the development.
- 4.60 It is therefore recommended that a walkover survey of the site by a suitably qualified ecologist is completed to check for the presence of badger setts on site immediately prior to the commencement of construction, including site clearance. In addition, the retention of woody habitats within the site as recommended elsewhere is recommended to provide potential future sites for badger setts.

### ***Water Voles***

- 4.61 Water voles and their burrows receive protection under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally kill, injure or take (capture) a water vole, to intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection, or to intentionally or recklessly disturb water voles while they are using such a place. Water voles are also listed as a Priority Species under the UK and Sussex BAP.
- 4.62 The 2013 walkover survey of the site revealed a small number of potential water vole burrows on the site, although no conclusive evidence of their presence was recorded. The local area surrounding the site is known to support a number of water vole records as returned by SBRC and the habitats on site are considered to offer some potential opportunities for water voles during periods of the year when ditches hold sufficient water depth and flow, although habitats onsite are generally of low value. Furthermore, off-site inspections of connectivity to the wider network of small streams and ditches leading into Chichester Harbour SPA, where water vole populations are known to occur, have confirmed that there appears to be no impediment to water vole dispersal onto the site.
- 4.63 There is no evidence of a breeding population of water voles occurring on the site. The current site conditions, which include a lack of water year round within ditches and lack of wide swathes of riparian vegetation, suggest that the site is not suited to supporting a viable breeding population.

- 4.64 Due to the suitability of the site's habitats for water voles and the mobility of water vole populations, which are known to react quickly to even slight changes in habitat suitability and water depth/flow<sup>44</sup>, it is considered that the site has capacity to continue to support dispersal and seasonal use by water voles. The species is therefore considered a VER of local value requiring further consideration within the Ecological Impact Assessment to ensure no significant effects arise during and after construction.
- 4.65 To ensure that no direct risk of harm is caused to water voles during the construction of the proposed development, it is recommended that a suitable 5m buffer to be unaffected by development is included along the length of the ditch network. In the instance that the development requires construction within 5m from the top of the ditch bank, including severance of, or work within, the ditch itself, the following mitigation is recommended:
- A pre-commencement survey of all water bodies to update current usage of the site by water voles, including the extent and use of water vole burrows along the ditch network, should be undertaken;
  - Water voles potentially on site should be passively relocated from sections of the ditch network within the construction footprint by means of *displacement* following the methods below:
    - (i) Vegetation is to be trimmed to bare earth along the working width of the ditch section to be affected and including a buffer of 5m either side of the ditch;
    - (ii) All arisings are to be raked off and removed from site;
    - (iii) Vegetation clearance is to be undertaken between late February to early April inclusive, during the early part of the breeding season;
    - (iv) Vegetation clearance should only be undertaken during mild weather conditions (and never following hard frosts or snow), and when sufficient foraging material is available elsewhere to support displaced individuals;
    - (v) Burrow entrances should be checked by a suitably qualified ecologist to check that burrow entrances have not become blocked;
    - (vi) The trimmed area should be monitored daily by a suitably qualified ecologist for a period of 3 days following vegetation cutting to check for field signs of water voles;

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<sup>44</sup> Strachan, R *et al.* (2011) Water Vole Conservation Handbook - Third Edition. Wildlife Conservation Research Unit, Oxford

- (vii) A destructive search of the ditch bank should be undertaken after a period of 3 days following strimming *if* works are required to directly affect the ditch bank; and
- (viii) The above recommendations are to be completed under supervision by a suitably qualified ecologist.

4.66 In accordance with best practice guidance<sup>45</sup>, the following prescriptions pertaining to the management of the existing ditch network are recommended to improve the current value and condition of seasonally wet ditches for water voles:

- De-silting of ditches to aid water retention should seek to minimize disturbance and interference of the ditch banks;
- Works should be undertaken from one bank only and progress upstream, working only short sections of the ditch at a time;
- Gaps of 10-20m of ditch bank should be left as untouched refuge areas;
- In all instances, at least 30% of the ditch should remain unaffected by management works;
- Vegetation along ditch banks should be cut along different ditch lengths on a minimum 3 to 5 year rotation, with cutting occurring in late summer (typically mid-July to mid-September) to a height of no less than 15cm; and
- Dense, over-shading vegetation cover should be kept at minimum along ditch lengths to encourage development of grassland communities.

#### *Enhancement Opportunities*

4.67 In addition to the above, there are likely opportunities to improve the water vole habitat in tandem with the design of the Sustainable Urban Drainage Systems (SUDS) within the proposed development. Provided that SUDS features are suitably created and planted in a manner favourable to water voles, these have the potential to improve the value of the site overall. Furthermore, it is recommended that potential drainage or onsite sewage treatment options for the site, which may result in the retention of water year round within the ditches, could potentially provide suitable conditions for the site to support a breeding population of water voles; particularly if permanent water depths for water voles of over 1m<sup>46</sup> can be achieved.

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<sup>45</sup> Strachan, R *et al.* (2011) Water Vole Conservation Handbook - Third Edition. Wildlife Conservation Research Unit, Oxford

<sup>46</sup> Strachan, R *et al.* (2011) Water Vole Conservation Handbook - Third Edition. Wildlife Conservation Research Unit, Oxford



## **Reptiles**

- 4.68 All species of common reptile (including common lizard, slow-worm, grass snake and adder) receive at least limited protection from harm under the Wildlife and Countryside Act, 1981 (as amended) and it is an offence to cause the intentional killing and injuring of these species. In addition, these species are also listed as Priority Species on the UK BAP, highlighting them as species of conservation concern. A local BAP is also afforded to all widespread reptile species within Sussex.
- 4.69 The reptile survey confirmed the presence of slow worm, grass snake and common lizard throughout the site. Large populations of common lizard and slow-worm were recorded within field F5, located along the southern boundary of the site. In addition, the adjoining fields F4 and F3 were also found to support medium populations of common lizard and slow-worm. The presence of good numbers of reptiles within this area of the site is attributed to the reduced amount of physical disturbance, and the presence of a well-established invertebrate rich grass 'thatch' layer.
- 4.70 Areas of semi-improved grassland within the site including within fields F2, F6, F17 and along the northern boundaries of fields F8 to F10 were also found to be important areas within the site for widespread reptile species.
- 4.71 Large areas of the site under intensive arable management are considered of negligible value to reptiles owing to the lack of suitable foraging, basking and sheltering opportunities.
- 4.72 The reptile populations recorded are considered to form part of a metapopulation occurring across the site, with a large population of each of the widespread reptile species recorded (grass snake, common lizard and slow-worm) being supported by rough grassland on the site.
- 4.73 Where possible, the development design should aim to retain habitats found to support widespread reptile populations *in situ* and hence avoid risk of harm to those individuals within these habitats. Where loss of such habitat is required, it will be necessary to exclude reptiles from such areas and create or identify suitable receptor habitats, preferably within the application site, into which reptiles can be captured and translocated.
- 4.74 A detailed mitigation strategy for the translocation of reptiles from areas of habitats to be lost, and the enhancement of existing and newly created habitats, should be incorporated within a Reptile Mitigation Strategy, delivered via the Ecological Construction Method Statement and Green Infrastructure Management Strategy, based around the following broad principles:

*Receptor Site Selection:*

- (i) Reptiles should be translocated to a site in situ, unless suitable habitat opportunities cannot be provided and as such, reptiles should be translocated off-site;
- (ii) The selection of a suitable reptile receptor site should be agreed with the local planning authority;
- (iii) The area of the receptor site should be no smaller than the area of habitat to be lost, and ideally should be greater than that to be lost, and should connect with existing areas of semi-natural habitat of equivalent value to reptiles;
- (iv) The receptor site should comprise areas of habitats rich in invertebrate fauna in order to provide sufficient prey items for translocated reptiles to feed on;

*Phased Vegetation Clearance*

- (v) Suitable vegetation within the development footprint should be subject to a phased vegetation clearance under ecological supervision in suitable weather conditions during the active reptile period (namely March – October) to encourage reptiles to move away from the habitats within the construction zone and to aid in the translocation of reptiles from these areas;
- (vi) Potential reptile refugia and hibernacula within the construction zone should be subject to a sensitive phased clearance, by hand where necessary, under ecological supervision;

*Exclusion Fencing*

- (vii) Prior to capture and translocation of reptiles, an exclusion fence will be erected around the perimeter of the construction zone, in order to prevent reptiles from entering/re-entering this area during construction. Semi-permanent perimeter fencing which is to remain in place throughout the construction period should be installed;
- (viii) Internal Temporary Amphibian Fencing (TAF) should be used in conjunction with perimeter fencing to aid in the capture and translocation of reptiles;
- (ix) Fence installation should be conducted under ecological supervision;

*Capture and Translocation*

- (x) Capture should be undertaken during the period March - October (inclusive) to avoid disturbing reptiles during hibernation;

- (xi) Artificial refugia, comprising 0.5m x 1m tiles of bitumen roofing felt, placed at high density (minimum 500/ha) will be distributed across all areas of suitable habitat and checked at least daily for the presence of reptiles;
- (xii) Any reptiles encountered should be caught and relocated to the receptor site(s);
- (xiii) Capture and translocation should continue until there has been substantial depletion of the population; following 5 days with no reptile captures or observations under suitable weather conditions a destructive search of any remaining reptile refugia/hibernacula can be undertaken;
- (xiv) Capture will be undertaken during the period March - October (inclusive) to avoid disturbing reptiles during hibernation;

#### *Habitat Creation/Enhancement*

- (xv) Prior to the capture and subsequent release of reptiles into a receptor site, the area should be subject to a habitat suitability assessment to ensure that the site supports sufficient habitat features to support at least an equivalent population to that which is to be translocated into the receptor site;
- (xvi) Habitat enhancement works as required to improve the habitat suitability, and carrying capacity, of the receptor site should be completed by a minimum of 1 season (being the active reptile season, namely March to October) prior to the commencement of a translocation;
- (xvii) Opportunities for reptiles should also be enhanced through the provision of log pile refuges and hibernacula in areas deemed suitable by a suitably qualified ecologist, and should be completed well in advance of releasing reptiles and should seek to provide foraging, basking and hibernating sites for reptiles based on individual species requirements; and
- (xviii) Key areas (such as field F5) should be managed exclusively for wildlife; with a bias for reptiles and with public access excluded. The sward in these areas should be allowed to develop into tussocky grassland with a well-developed thatch layer from the previous year's growth in order to facilitate the establishment of invertebrate communities. The grassland in this area should be kept open through the control of scrub encroachment and prevention of tree and shrub growth which shade out the grassland. Grassland areas should be enclosed by surrounding habitats such as hedgerows, or scrub, which act to shelter the grassland from prevailing weather conditions.

#### ***Invertebrates***

- 4.75 The site is considered to support a number of habitats of ecological value to invertebrates. In particular, woody habitats including hedgerows, broadleaved woodland

and mature trees, and semi-improved grassland which provides foraging resources for invertebrates, are considered of value to invertebrate species. In addition to the retention/recreation of such habitats (as discussed at **Paragraph 4.20**), dead wood habitats should also be retained in situ where possible to protect important habitats for invertebrates.

### **Summary of Recommendations:**

#### ***Design Measures***

- Retention, where possible, of those valued habitats on site including broadleaved woodland, mature trees, hedgerows, semi-improved grassland and seasonally wet ditches, and allow for appropriate buffering/screening;
- Any losses of valuable habitats should be compensated for with new habitat creation elsewhere on site to deliver a net gain across the site;
- A suitable SUDS strategy should be incorporated into the design scheme to provide new aquatic habitats for biodiversity, some of which should seek to retain water year round to benefit potentially breeding water voles, and to ensure that water courses are not polluted as a result of surface runoff; and
- Areas of open space within the site should incorporate a significant area of rough, undisturbed grassland, ideally located adjacent to places of shelter such as hedgerows and woodland habitats, to provide foraging, breeding and dispersal opportunities for bats, badgers and reptiles.

#### ***Pre-construction Measures***

- Completion of tree emergence/re-entry surveys, or aerial surveys, to check for evidence of roosting bats within those mature trees to be lost;
- Update inspection of all mature trees on site for evidence of nesting barn owls to be completed in conjunction with the tree assessment for roosting bats as above;
- Update inspection of derelict farm buildings located within the south east corner of field F11 immediately prior to the commencement of demolition works;
- Carryout update badger surveys prior to construction work commencing. Works which would disturb or damage a badger sett would require a Natural England badger licence, which would in turn require further detailed surveys to inform mitigation proposals;
- Pre-commencement survey of all waterbodies on site to update current usage of the site by water voles;

- Translocation of reptiles where habitats likely to support this species falls within the proposed development footprint. A detailed mitigation strategy for widespread reptile species should be provided within a Reptile Mitigation Strategy delivered via the Ecological Construction Method Statement and Green Infrastructure Management Strategy;
- Ensure that all habitats to be cleared during the pre-construction phase are done so in a sensitive manner at an appropriate time of year, through the provision of an Ecological Construction Method Statement; and
- Adoption of Environment Agency Pollution Prevention guidelines in relation to all construction working practices to avoid pollution of habitats on site.

### ***Enhancement and Management Measures***

- All new planting must comprise a rich diversity of species of local provenance including a variety of fruit and nut bearing tree and shrub species, and nectar and pollen producing grasses and wildflowers;
- Strengthen and enrich the hedgerow network where opportunities exist through selective trimming/laying and selective mixed species planting;
- Create rough grassland buffer strips around areas of public open space and along boundary features to provide foraging and dispersal corridors for bats, badgers and reptiles;
- Erect a variety of bat and bird boxes within mature trees and buildings within the proposed development;
- Incorporate a bat sensitive lighting strategy as part of the proposals; and
- Ensure that all existing and new habitat features and species of ecological value are appropriately managed over the longer term through the provision of a Green Infrastructure Management Strategy for the site.

### **Conclusions**

- 4.76 Subject to the implementation of the measures recommended above, significant adverse effects on ecological receptors would be avoided, mitigated or compensated. Furthermore, it would be possible to achieve net gains for biodiversity. Thus, the proposed development is capable of being delivered fully in accordance with relevant legislation and planning policy.

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## **Appendix EDP 1 SBRC Data Return**

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# Desktop Biodiversity Report

Land at Whitehouse Farm, Chichester + 2km radius

ESD/13/644

Prepared for James Bird (The Environmental Dimension Partnership)

2nd December 2013



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

**Sussex Biodiversity Record Centre**  
**report regarding**  
**land at Whitehouse Farm, Chichester +**  
**2km radius**  
**02/12/2013**

**Prepared for James Bird**  
**The Environmental Dimension Partnership**  
**ESD/13/644**

**The following information is enclosed within this report:**

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

**SNCI**

C32 - Fishbourne Meadows; C103 - River Lavant Marsh.

**SSSI**

Chichester Harbour.

**Other Designations/Ownership**

Area of Outstanding Natural Beauty; Environmental Stewardship Agreement; Local Nature Reserve; Notable Road Verge; Ramsar Site; Special Area of Conservation; Special Protection Area.

**Habitats**

Ancient tree; Ancient woodland; Chalk stream; Coastal and floodplain grazing marsh; Coastal saltmarsh; Intertidal mudflat; Lowland fen; Lowland heathland; Reedbed.

## Important information regarding this report

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

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

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

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

### Copyright

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

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

### Data usage

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

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

### Ordnance Survey maps

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

### Impartiality

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

### Supplying records

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

# Confidential Records

## Badgers

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



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

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

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

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

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

## Otters

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



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

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

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

## Wood White and Duke of Burgundy butterflies

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

## Other confidential records

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

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

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## Birds

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

## MAPS

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

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

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

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

### Abbreviations

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

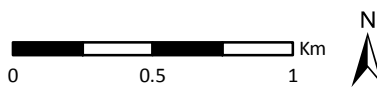
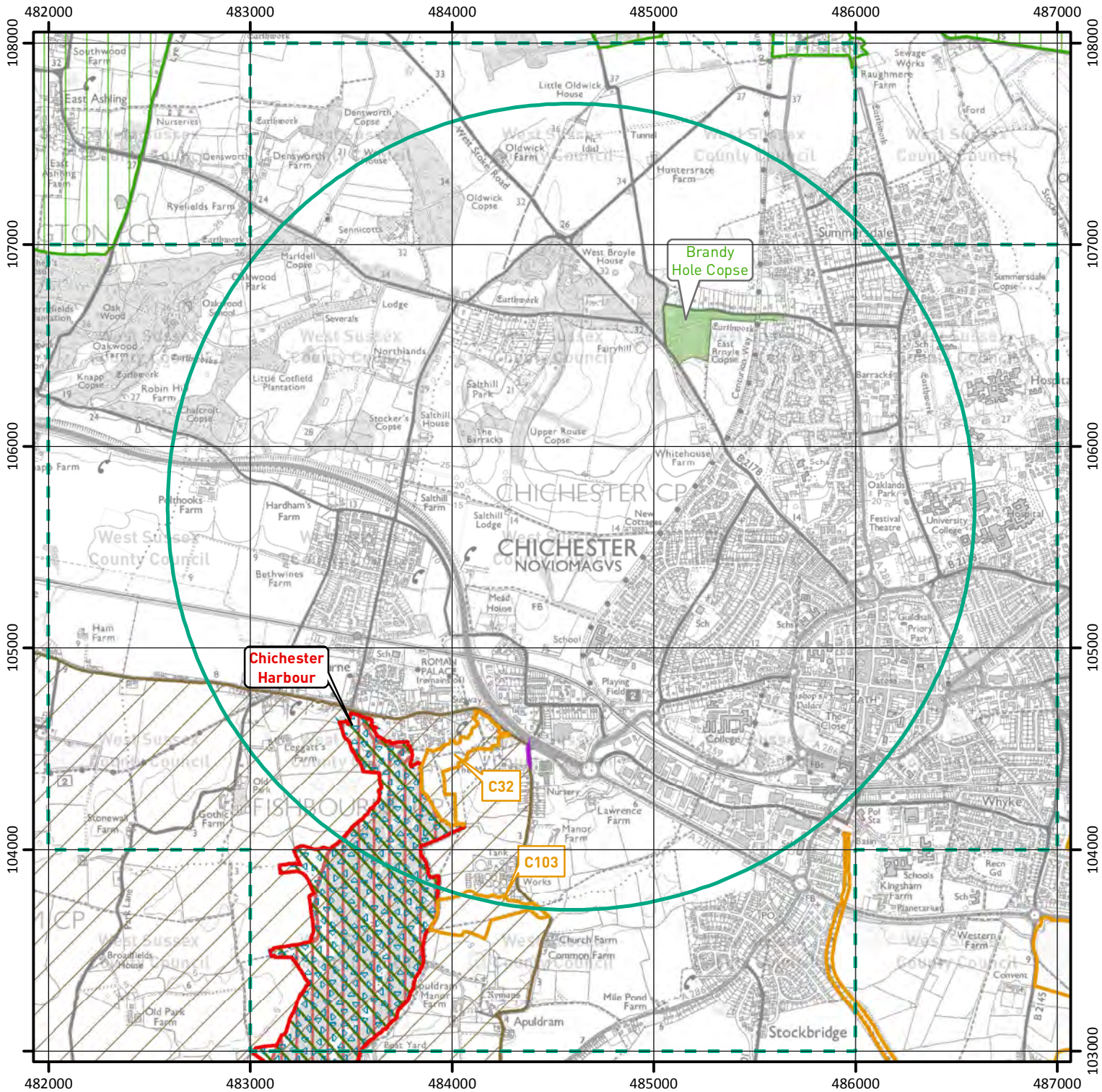
### Natural England datasets

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











# Designated Site Map (ESD/13/644)

## Land at Whitehouse Farm, Chichester + 2km radius

Prepared for James Bird (The Environmental Dimension Partnership) - 28/11/2013



### Key to Map:

-  Enquiry area
-  Species search area
-  AONB
-  LNR
-  National Park
-  Notable road verge
-  Ramsar
-  SAC
-  SNCI
-  SPA
-  SSSI

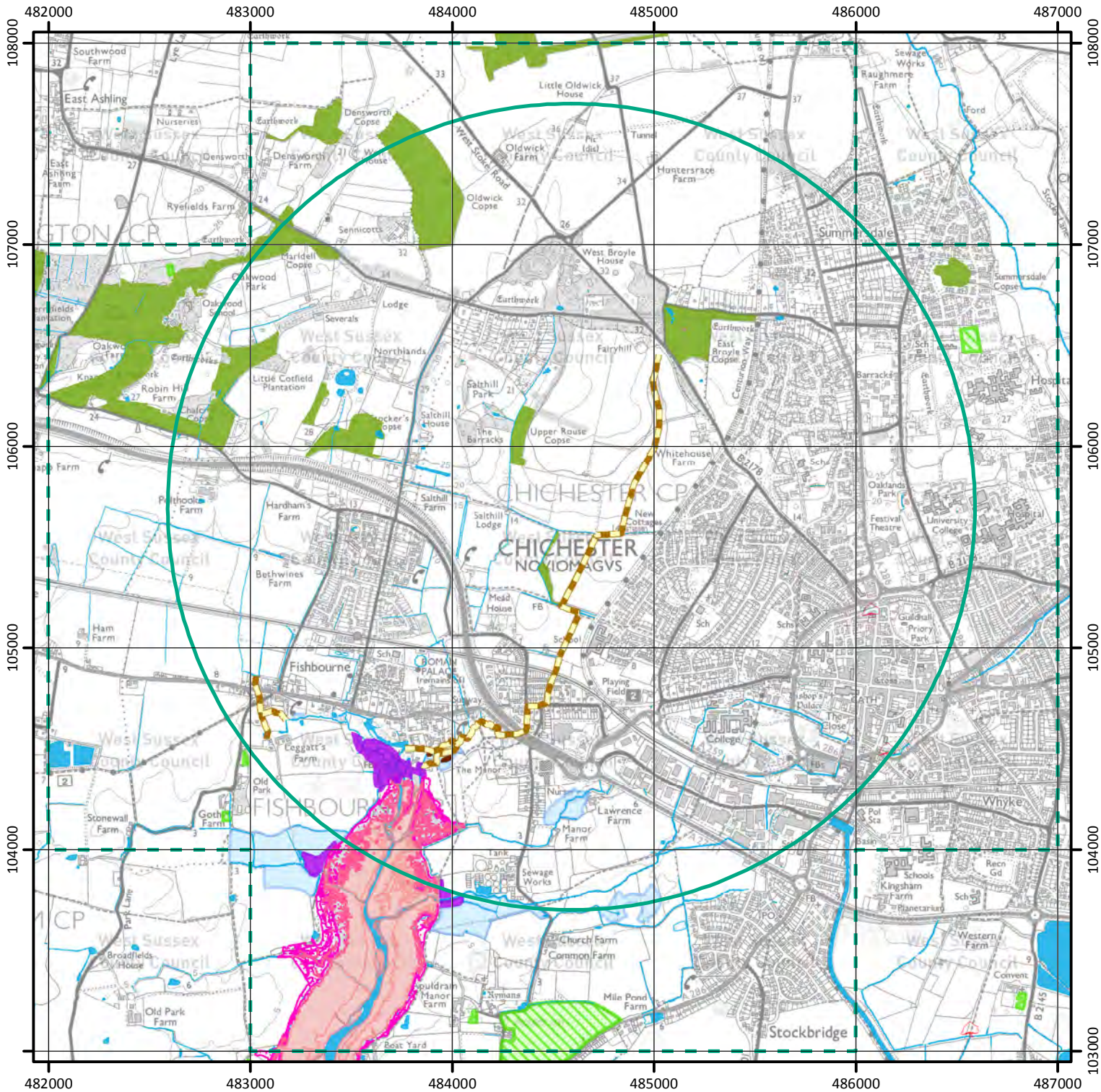
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RAMSAR, Special Area of Conservation (SAC), Special Protection Area (SPA), National Park, Area of Outstanding Natural Beauty (AONB), National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI), Local Nature Reserve (LNR) and Country Park data reproduced with permission of Natural England. Site of Nature Conservation Importance (SNCI) data provided by East and West Sussex County Councils, and Brighton & Hove City Council. Notable Road Verge data supplied by East and West Sussex County Councils. Local Geological Site (LGS) data created by Sxbrc in partnership with Sussex Geodiversity Group. © Crown Copyright. All rights reserved 2013.














# Habitat Map (ESD/13/644)

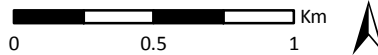
## Land at Whitehouse Farm, Chichester + 2km radius

Prepared for James Bird (The Environmental Dimension Partnership) - 28/11/2013



### Key to Map:

-  Enquiry area
-  Species search area
-  Ancient/veteran tree
-  Ancient woodland
-  Chalk Stream
-  Coastal & floodplain grazing marsh
-  Coastal saltmarsh
-  Intertidal mudflat
-  Lowland fen
-  Lowland heathland
-  Open Water
-  Reedbed
-  Traditional orchard



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Ancient woodland, traditional orchards, 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 2013.

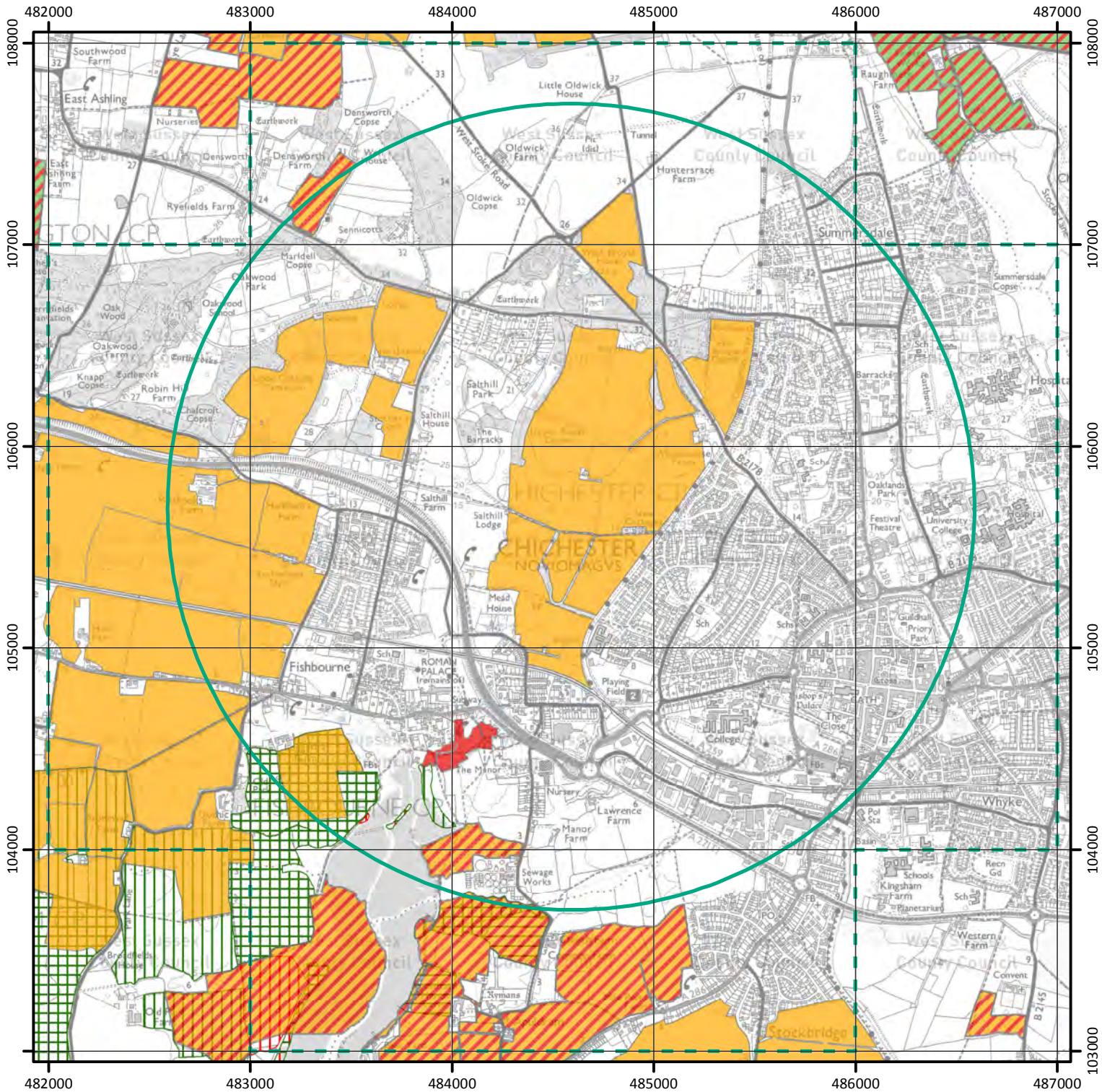
This map contains ancient woodland data revised under the Weald and Downs Ancient Woodland Program (2010) on behalf of Natural England. Whilst every effort has been made to make this revision as accurate as possible, the inventories contain limitations and remain provisional. Further revisions are also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



# Ownership & Management Map (ESD/13/644)

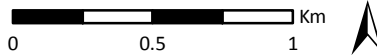
Land at Whitehouse Farm, Chichester + 2km radius

Prepared for James Bird (The Environmental Dimension Partnership) - 28/11/2013



**Key to Map:**

-  Enquiry area
-  Species search area
- Environmental Stewardship Agreements:**
-  Higher Level Stewardship (HLS)
-  Entry Level Stewardship (ELS)
-  Organic ELS
-  Organic ELS plus HLS
-  ELS plus HLS
-  Brent Goose site - important
-  Brent Goose Site - uncertain usage
-  Wader site - important
-  Wader site - uncertain usage



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Environmental Stewardship Agreement data reproduced with permission of Natural England. Other datasets reproduced respectively with permission of the Woodland Trust, National Trust, Sussex Wildlife Trust and Royal Society for the Protection of Birds. © Crown Copyright. All rights reserved 2013.

# SUSSEX PROTECTED SPECIES REGISTER

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

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

## **Please note the following limitations to the PSR:**

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

## **Wildlife Protection Legislation in England**

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

### **European law**

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

### **National law**

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

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

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

### **Schedule 5: Protected animals (other than birds)**

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

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

- Section 9(2)** Protection limited to possessing and controlling.
- Section 9(4a)** Protection limited to damaging, destroying or obstructing access to any structure or place used by the animal for shelter or protection.
- Section 9(4b)** Protection limited to disturbing the animal while it is occupying any structure or place which it uses for shelter or protection.
- Section 9(5a)** Protection limited to selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative).
- Section 9(5b)** Protection limited to advertising for buying or selling such things.

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

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

**Schedule 8: Protected plants and fungi**

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

**Legislation protecting bats**

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

**Legislation protecting badgers and otters**

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

## SUSSEX PROTECTED SPECIES REGISTER REPORT

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

### Land at Whitehouse Farm, Chichester + 2km radius

02 December 2013    ESD/13/644    **Search Area:** SU8204 to SU8606; SU8307 to SU8507; SU8303 to SU8503  
James Bird (The Environmental Dimension Partnership)

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### *Alkmaria romijni*

### Tentacled Lagoon-Worm

#### annelid

Sussex Protected Species Register Species; Sussex Rare Species Inventory Species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.1 killing/injuring; 9.1 taking; 9.2; 9.4a; 9.4b; 9.5a; 9.5b; Schedule 5)

Grid Reference	Recorder	Date	Locality
SU837043	EMU	03/09/2002	E-W transect across head, Fishbourne Channel (Ch)

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### *Triturus cristatus*

### Great Crested Newt

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

#### amphibian

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

Grid Reference	Recorder	Date	Locality
SU829048	Neil Proctor	March 2002	The Willows, Main Road, Fishbourne, Chichester, West Sussex (VC13)

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***Arvicola amphibius*****European Water Vole**

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

**terrestrial mammal**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8305	K Fleming	1971	VC13 West Sussex, West Sussex (VC13)
SU833054	Anon	01/05/2004	Field backing on to Bethwines farm, Fishbourne channel
SU837064	Mark Elliott	1998	Fishbourne meadows & mill pond, West Sussex (VC13)
SU839045	Steve Sutton	25/08/2006	Fishbourne Meadows
SU840045	Steve Sutton	03/09/2006	Fishbourne Meadows
SU8405	K Fleming	1971	VC13 West Sussex, West Sussex (VC13)
SU841041	Rob Strachan	2001	Stream west of Appledram Lane, West Sussex (VC13)
SU843032	Mr Marland	26/07/2002	Manor Farm, Apuldram, West Sussex (VC13)
SU8439503996	Andrew Tittensor; Anne De Potier	July 1997	Fishbourne Meadows
SU8460605580	Sarah Hughes; Liz Rogers	06/08/2013	Ditch to the north of New Lands Lane, Chichester
SU8462305160	Sarah Hughes; Liz Rogers	06/08/2013	Ditch to the north of 17 Clay Lane, Chichester
SU850032	Sally Quinn	25/02/2002	Mile Pond Farm, Stockbridge
SU855047	Recorder @ WildCall	23/05/2012	Chichester College, West Sussex (VC13)
SU859033	Recorder @ MWHG	09/10/2009	Chichester canal, WVSSite 22, Stockbridge

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***Muscardinus avellanarius*****Hazel Dormouse**

A nocturnal species of woodland and overgrown hedgerows. Dormice spend much of their time climbing among branches in search of fruit, nuts, insects and other food. They sleep in nests during the day in hollow trees, unoccupied bird or bat boxes and similar places and hibernate in winter. Dormice occur mainly in southern England in this country and are widespread in suitable habitats in Sussex.

**terrestrial mammal**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU849065	Christian Heyman	07/08/2010	Woods of Fairyhill, Old Broyle Road, Chichester, West Sussex (VC13)

## *Anguis fragilis*

## Slow-worm

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

### reptile

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU831048	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/08/1997	1, Blackboy Lane, Fishbourne, West Sussex (VC13)
SU837053	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/01/1995	9, Deeside Avenue, Chichester, West Sussex (VC13)
SU844065	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU8503	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/03/1993	63 Graydon Avenue, Chichester, West Sussex (VC13)
SU8506	SARG Sussex Amphibian & Reptile Grp	20/06/1998	Worcester Road, Chichester, West Sussex (VC13)
SU851065	Anon @ Chichester NHS	1999 - 2006	Brandy Hole Copse LNR
SU856034	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU856072	Recorder @ Lizard Landscape Design	30/09/2010	Hunters Rest, Lavant Road, Chichester, West Sussex (VC13)
SU858030	Recorder @ Aluco Ecology	November 2012	Land at Southfields close, Stockbridge, Donnington Parish, Chichester, Stockbridge area, S of Chichester
SU858035	Mike Perry	03/09/2002	Western bank of Chichester Canal, West Sussex (VC13)
SU858038	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/01/1991	Kings Avenue, Chichester, West Sussex (VC13)
SU858063	SARG 2002 Leaflet	2002	13 Broyle Close, Chichester, West Sussex (VC13)
SU858066	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU862062	Recorder @ Corylus Ecology	22/09/2010	Graylingwell Hospital, Chichester, West Sussex (VC13)
SU864045	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU865052	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU867043	Paul Whitby	May 2011	Whyke Lane, Chichester
SU868044	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)

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***Natrix natrix*****Grass Snake**

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

**reptile**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU831048	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/08/1997	1, Blackboy Lane, Fishbourne, West Sussex (VC13)
SU844065	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU858030	Recorder @ Aluco Ecology	November 2012	Land at Southfields close, Stockbridge, Donnington Parish, Chichester, Stockbridge area, S of Chichester
SU8606	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	05/06/1999	Summersdale Road, Chichester, West Sussex (VC13)

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***Zootoca vivipara*****Common Lizard**

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

**reptile**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8304	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	12/04/1995	Botany Bay, Main Road, Fishbourne, West Sussex (VC13)
SU858063	SARG 2002 Leaflet	2002	13 Broyle Close, Chichester, West Sussex (VC13)
SU858066	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU862062	Recorder @ Corylus Ecology	15/09/2010	Graylingwell Hospital, Chichester, West Sussex (VC13)
SU868044	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)

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

## Bat species

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

*Barbastella barbastellus* **Barbastelle**

*Eptesicus serotinus* **Serotine**

*Myotis alcathoe* **Alcathoe**

*Myotis bechsteinii* **Bechstein's**

*Myotis brandtii* **Brandt's**

*Myotis daubentonii* **Daubenton's**

*Myotis myotis* **Greater mouse-eared**

*Myotis mystacinus* **Whiskered**

*Myotis nattereri* **Natterer's**

*Nyctalus leisleri* **Leisler's**

*Nyctalus noctula* **Noctule**

*Pipistrellus nathusii* **Nathusius's pipistrelle**

*Pipistrellus pipistrellus* **Common pipistrelle**

*Pipistrellus pygmaeus* **Soprano pipistrelle**

*Plecotus auritus* **Brown long-eared**

*Plecotus austriacus* **Grey long-eared**

*Rhinolophus ferrumequinum* **Greater horseshoe**

*Rhinolophus hipposideros* **Lesser horseshoe**

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

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

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

## Background

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

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

## Current status and threats

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

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

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

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

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



## Bats and the law

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

### You could be committing a criminal offence if you:

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

### It is not illegal to:

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

## Licensing

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

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

### Further advice and information:

#### Bat Conservation Trust

The national charity working for bat conservation.

Website: [www.bats.org.uk](http://www.bats.org.uk)

Bat helpline: 0845 1300 228

Email: [enquiries@bats.org.uk](mailto:enquiries@bats.org.uk)

#### Natural England

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

Website: [www.naturalengland.org.uk/ourwork/regulation/wildlife/species/bats.aspx](http://www.naturalengland.org.uk/ourwork/regulation/wildlife/species/bats.aspx)

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

#### Sussex Bat Group

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

Website: [www.sussexbatgroup.org.uk](http://www.sussexbatgroup.org.uk)

Email: [contact@sussexbatgroup.org.uk](mailto:contact@sussexbatgroup.org.uk)

## SUSSEX BAT INVENTORY REPORT SUMMARY

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

### You could be committing a criminal offence if you :

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

### Key to Indicators

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

### Land at Whitehouse Farm, Chichester + 2km radius

02 December 2013

ESD/13/644

Search Area: SU8204 to SU8606; SU8307 to SU8507; SU8303 to SU8503

James Bird (The Environmental Dimension Partnership)

Common Name	Latin Name	No of Records	Indicators						
			M/S	H	FR	MR	UR	D	
Bat sp.	<i>Chiroptera</i>	21	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Bechstein's Bat	<i>Myotis bechsteini</i>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brown Long-eared Bat	<i>Plecotus auritus</i>	12	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Common Pipistrelle (45 kHz)	<i>Pipistrellus pipistrellus</i>	28	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Daubenton's Bat	<i>Myotis daubentonii</i>	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grey Long-eared Bat	<i>Plecotus austriacus</i>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Lesser Noctule	<i>Nyctalus leisleri</i>	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Long-eared sp.	<i>Plecotus</i>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Natterer's Bat	<i>Myotis nattereri</i>	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Noctule Bat	<i>Nyctalus noctula</i>	22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pipistrelle sp.	<i>Pipistrellus</i>	39	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Serotine	<i>Eptesicus serotinus</i>	19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Soprano Pipistrelle (55 kHz)	<i>Pipistrellus pygmaeus</i>	76	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Unidentified Bat	<i>Myotis</i>	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Whiskered Bat	<i>Myotis mystacinus</i>	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Whiskered/Brandt's	<i>Myotis mystacinus/brandtii</i>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## SUSSEX BAT INVENTORY REPORT

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

### You could be committing a criminal offence if you :

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

### Key to Indicators

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

### Land at Whitehouse Farm, Chichester + 2km radius

02 December 2013      ESD/13/644      **Search Area:**      SU8204 to SU8606; SU8307 to SU8507; SU8303 to SU8503

James Bird (The Environmental Dimension Partnership)

### *Chiroptera*

### **Bat sp.**

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

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
04/05/2013	8 Sherborne Road, Chichester	SU8507104906	Paula Chatfield	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Bat(s)	Feeding above gardens from 8.50pm to approx. 9.15pm
23/05/2012	North Lodge, Blomfield Drive, Chichester, West Sussex (VC13)	SU862063	Amanda Bond	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4 Adult	4 or 5 bats seen flying from disused buildings in Roussillon Barracks through broken windows. Feeding in surrounding mature gardens.

28/11/2011	Private property, Salthill Road, Chichester	SU838063	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		
03/08/2011	Hunters Rest, Lavant Road, West Sussex (VC13)	SU856072	Recorder @ Lizard Landscape Design	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	1 Present	Bat seen emerging from south-west elevation of house. Not echolocating but flight speed, nearby habitat and medium sized droppings in roof void suggest Plecotus auritus.
10/10/2010	Little Oldwick Barn, Lavant, West Sussex (VC13)	SU846076	Recorder @ Sue Harris Bat Svys	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Taxon Present	Suggestive of Serotine. Three passes recorded from east and west end of barn, and from track to west side, during a dawn return survey.
06/04/2010 - 12/04/2010	White House Farm Barns, Old Broyle Road, Chichester, West Sussex (VC13)	SU852060	Recorder @ Sue Harris Bat Svys	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Taxon Present	A small number of old medium sized droppings recorded in two sections of the building indicating bats visting over a short period of time. No evidence of roost or feeding.
24/07/2007 - 25/07/2007	East of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU855077	Recorder @ SLR	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	Two unconfirmed, but considered likely, barbastelle passes recorded.
15/07/2007	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
09/06/2005	14 Brandy Hole Lane, Chichester, West Sussex (VC13)	SU854067	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	3 Present	
05/06/2005	5 Elsay Court, Cawley Road, Chichester, West Sussex (VC13)	SU861043	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	20 Present	
30/07/2004	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
11/07/2004	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
04/07/2002	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
01/07/2002 - 30/09/2002	1 Sherborne Road, Chichester, West Sussex (VC13)	SU850049	J Brenchley	Unspecified	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2 In flight	
07/07/1999	Chichester, West Sussex (VC13)	SU8505	BCT Surveyor	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	

05/07/1993	12 Bristol Gardens, Chichester, West Sussex (VC13)	SU855065	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	60+ Present	Owners report them under soffit.
01/03/1993	1 East Wing, West Broyle House, West Stoke Road, Chichester, West Sussex (VC13)	SU846067	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		
27/10/1987	Heronwood, Pine Grove, West Broyle, Chichester, West Sussex (VC13)	SU845063	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		Owner wants to move them to a bat box to re-roof house.
13/07/1987	Sarum, Salt Hill Road, Fishbourne, Chichester, West Sussex (VC13)	SU835047	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	57 Present	
01/01/1987 - 31/12/1987	14 Brandy Hole Lane, Chichester, West Sussex (VC13)	SU854067	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3 Present	Possibly a Long-eared winter roost.
01/01/1983 - 31/12/1983	5 Elsway Court, Cawley Road, Chichester, West Sussex (VC13)	SU861043	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	20 Present	Sometimes roosting in hollow walls of 20+ year old block of flats.

*Eptesicus serotinus***Serotine**

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

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
12/09/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Heard not seen. Estimated from emergence survey
22/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	John Poland	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Heard not seen. Estimated from emergence survey
16/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Estimated from emergence survey
10/08/2012	Chichester Canal, Stockbridge	SU859035	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	NBMP Waterways survey 110100 Spot 7
31/07/2011	Creek End, Fishbourne, PO1903JS, West Sussex (VC13)	SU836047	Nik Knight	Ringed or tagged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7 Female	Suburban. 7 serotines ringed and sampled by C Moussy (6 adults and 1 juvenile). Estimated colony size about 20.
06/06/2011	Creek End, Fishbourne, PO1903JS, West Sussex (VC13)	SU836047	Nik Knight	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5 Bat(s)	Suburban garden.
13/08/2010	Private property, Creek End, Fishbourne	SU837048	NE Bat Worker	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
26/07/2010	Private property, Creek End, Fishbourne	SU837048	NE Bat Worker	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15 Bat(s)	
14/08/2007	Rushmere, Creek End, Fishbourne, PO19 3JS, West Sussex (VC13)	SU836047	NE Bat Worker	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	14 Present	
29/07/2007	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bats Present	
25/07/2007 - 26/07/2007	West of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU835077	Recorder @ SLR	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	taxon Present	Recorded passing.

01/12/2006	Rushmere, Creek End, Fishbourne, West Sussex (VC13)	SU836047	Martin Love	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	20 Present
13/07/2005	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present
11/07/2004	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present
09/07/2003	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present
07/07/1999	Chichester, West Sussex (VC13)	SU8505	BCT Surveyor	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present
01/01/1999 - 31/12/1999	Brandy Hole Copse, Comp W2, West Sussex (VC13)	SU852065	Martin Love	Unspecified	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Occasional Present

*Myotis***Unidentified Bat**

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
16/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Heard not seen. Estimated from emergence survey
09/07/2011	Land at Southfields Close, Stockbridge	SU859032	Recorder @ Aluco Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	regular foraging by this species along the canal (located off site). Equipment included Batbox Duet, Petterson D-240X, Edirol R1 recorder, Batscan v9.6, Anabat SD1.
10/10/2010	Little Oldwick Barn, Lavant, West Sussex (VC13)	SU846076	Recorder @ Sue Harris Bat Svys	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Present	Suggestive of Natterer's. Recorded passing west and south end of the barn during a dawn return survey.
12/05/2010 - 11/06/2010	Roussillon Barracks, Chichester, West Sussex (VC13)	SU860064	Recorder @ Betts Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	Most likely Brandt's/whiskered. Recorded foraging and commuting but not roosting. The survey also included return at dawn observations.
12/01/2010 - 18/01/2010	Little Oldwick Barn, Lavant, West Sussex (VC13)	SU846076	Recorder @ Sue Harris Bat Svys	Building Inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2 Present	Two bats seen roosting in mortice and tenon joint. Either Whiskered or Brandts. Medium sized droppings.
25/07/2007 - 26/07/2007	West of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU835077	Recorder @ SLR	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	taxon Present	Recorded flying south along Chapel Lane track 14 minutes after sunset; futher passes recorded, and likely natterer gleaning insects from a tree and then flying north.



*Myotis bechsteinii***Bechstein's Bat****BAP**

A medium-sized bat with long ears, favouring wooded, low-lying countryside. In summer it roosts in tree holes, bat boxes and, less commonly, in buildings. It hibernates in tree holes and occasionally in cellars, mine tunnels and caves. It is the rarest British *Myotis* species and is virtually restricted to southern England. Most records held by SxBRC are from West Sussex, but it has been recorded from East Sussex.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
17/07/2006	Oakwood, Knapp Copse, West Sussex (VC13)	SU822063	Frank Greenaway	Trapped	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Male	

*Myotis daubentonii***Daubenton's Bat**

A medium-sized to small bat of woodland, usually near water (this species was sometimes known as the 'water bat'). It feeds largely on chironomid midges, caddis flies and mayflies. Summer roosts are in tree holes, semi-underground sites and occasionally buildings. During winter it hibernates in caves, mine tunnels, cellars and similar places. Widespread in Britain and apparently increasing in parts of its range and recorded throughout Sussex.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
09/07/2011	Land at Southfields Close, Stockbridge	SU859032	Recorder @ Aluco Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	regular foraging by this species along the canal (located off site). Equipment included Batbox Duet, Petterson D-240X, Edirol R1 recorder, Batscan v9.6, Anabat SD1.
12/05/2010 - 11/06/2010	Roussillon Barracks, Chichester, West Sussex (VC13)	SU860064	Recorder @ Betts Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	Recorded foraging and commuting but not roosting. The survey also included return at dawn observations.
17/10/2007	28 & 29 Kings Avenue, Chichester, West Sussex (VC13)	SU859038	Recorder @ 4Woods Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Present	Recorded flying along adjacent canal during an evening emergence survey of two bungalows. No bats recorded emerging from properties.
17/07/2006	Oakwood, Knapp Copse, West Sussex (VC13)	SU822063	Frank Greenaway	Trapped	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Male	
08/07/2003	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4 Present	
06/07/2002	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bat(s) Present	
01/01/1999 - 31/12/1999	Brandy Hole Copse, Pond 2, West Sussex (VC13)	SU851067	Martin Love	Unspecified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Frequent Present	

*Myotis mystacinus***Whiskered Bat**

Very similar to Brandt's bat (*Myotis brandtii*) and only separated from that species in 1970. On average slightly smaller and with small anatomical differences. Summer roosts are mainly in buildings and trees, while winter roosts are often in tunnels and caves. Generally more common and widespread than Brandt's bat, the whiskered bat is found throughout the British Isles to the southern parts of Scotland. Widely distributed in both West Sussex and East Sussex.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
17/07/2006	Oakwood, Knapp Copse, West Sussex (VC13)	SU822063	Frank Greenaway	Trapped	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Female	
01/01/1999 - 31/12/1999	Brandy Hole Copse, Comps C2 & C3, and Pond 1, West Sussex (VC13)	SU853067	Martin Love	Unspecified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Occasional Present	

*Myotis mystacinus/brandtii***Whiskered/Brandt's**

Whiskered and Brandt's bats were separated into different species in 1970. On average the Whiskered bat is slightly smaller than the Brandt's bat and has small anatomical differences. For both species summer roosts are mainly in buildings and trees, while winter roosts are often in tunnels and caves. Both species are widespread in the British Isles to southern Scotland.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
06/07/2002	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bat(s) Present	

*Myotis nattereri***Natterer's Bat**

A medium-sized bat with long ears inhabiting woodland and mixed farmland, often flying near water. In summer it roosts in old buildings, barns and hollow trees and it hibernates in caves, mines and other underground places. Found throughout much of the British Isles, but generally scarce. The UK population of Natterer's bats may be of international importance and it is widespread in Sussex.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
08/07/2003	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Present	
06/07/2002	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bat(s) Present	
01/01/1999 - 31/12/1999	Brandy Hole Copse, Pond 2, West Sussex (VC13)	SU851067	Martin Love	Unspecified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rare Present	

*Nyctalus leisleri***Lesser Noctule**

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
12/05/2010 - 11/06/2010	Roussillon Barracks, Chichester, West Sussex (VC13)	SU860064	Recorder @ Betts Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	Recorded foraging and commuting but not roosting. The survey also included return at dawn observations.
25/07/2007 - 26/07/2007	West of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU835077	Recorder @ SLR	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	taxon Present	Two brief passes recorded, but considered to have originated from bats in flight above or in adjacent fields.
24/07/2007 - 25/07/2007	East of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU851070	Recorder @ SLR	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	taxon Present	One or more recorded foraging.

*Nyctalus noctula***Noctule Bat****BAP**

A large bat of woodlands and wetland that sometimes occurs in towns. Summer roosts are usually in trees, where it can also hibernate. Other hibernation sites can be in rock fissures, bat boxes and sometimes buildings. Widespread, but declining in Sussex and in both England and Wales generally.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
12/09/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	
22/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	John Poland	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Adult	
16/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Adult	Heard not seen. Estimated from emergence survey
24/06/2012	Rushmere, Creek End, Fishbourne, south garden	SU836047	Nik Knight	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Time expansion recording analysed. Observation during NBMP Serotine Colony Count, site 1030134
09/07/2011	Land at Southfields Close, Stockbridge	SU859032	Recorder @ Aluco Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Noctule recorded from 21:40 foraging along canal tree belt with 1 pass 21:45 diagonally across the site. Equipment included Batbox Duet, Petterson D-240X, Ediol R1 recorder, Batscan v9.6, Anabat SD1.
09/10/2010	Little Oldwick Barn, Lavant, West Sussex (VC13)	SU846076	Recorder @ Sue Harris Bat Svys	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Present	Passed over the site during an evening emergence survey of a barn.
12/05/2010 - 11/06/2010	Roussillon Barracks, Chichester, West Sussex (VC13)	SU860064	Recorder @ Betts Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	Recorded foraging and commuting but not roosting. The survey also included return at dawn observations.
26/07/2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Survey duration: 70 minutes. Bat detector used.
13/07/2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Survey duration: 65 minutes. Bat detector used.
16/06/2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Survey duration: 75 minutes. Bat detector used.
06/06/2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Survey duration: 55 minutes. Bat detector used.

2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	
05/09/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	4 pass/commuting recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.
14/08/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	2 passes/commuting recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.
29/07/2007	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
30/07/2006	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
17/07/2006	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
09/07/2003	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
08/07/2003	Fishbourne Meadows, West Sussex (VC13)	SU840040	Martin Love	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2 Present	
01/01/1999 - 31/12/1999	Brandy Hole Copse, Comps C2 & C3, Chichester, West Sussex (VC13)	SU853067	Martin Love	Unspecified	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Occasional Present	

*Pipistrellus***Pipistrelle sp.**

There are three species of Pipistrelle bat found in the UK; common (*Pipistrellus pipistrellus*), soprano (*P. pygmaeus*) and Nathusius (*P. Nathusii*). Common and soprano pipistrelles were previously recorded as one species, but they are now recognised as separate species, with a peak frequency echolocation at 45 kHz and 55 kHz respectively. The following records refer to an aggregate of the two species, where the audio frequency or specific species is undetermined. Little is known about the Nathusius pipistrelle, but the other two species are found in all types of countryside (except very exposed areas) as well as in towns and suburbs. Summer roosts are usually in buildings, though tree holes and bat boxes are also used. Hibernation sites are in buildings and tree holes. Both common and soprano pipistrelles are widespread in Sussex, while Nathusius' is much rarer.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
06/05/2013	Near 20 Carleton Road, Chichester	SU8522405718	Paula Chatfield	Grounded Bat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Injured bat taken to Brent Lodge and identified as a pipistrelle (hole in wing, should mend).
12/09/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Heard not seen. Estimated from emergence survey
13/08/2010	Private property, Creek End, Fishbourne	SU837048	NE Bat Worker	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
25/05/2010	29 Kings Avenue, Chichester, West Sussex (VC13)	SU859038	Recorder @ 4Woods Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	Recorded twice foraging over southern area of garden during an evening emergence survey. No bats recorded emerging from the property.
24/05/2010	28 Kings Avenue, Chichester, West Sussex (VC13)	SU859038	Recorder @ 4Woods Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	Recorded flying east to west from the river, and in the vicinity during an evening emergence survey. No bats recorded emerging from the property.
27/04/2010	28 & 29 Kings Avenue, Chichester, West Sussex (VC13)	SU859038	Recorder @ 4Woods Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	Recorded three times over front garden of no.29 during a evening emergence survey. No bats recorded emerging from properties.
26/04/2010	28 & 29 Kings Avenue, Chichester, West Sussex (VC13)	SU859038	Recorder @ 4Woods Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	One recorded flying from north along west boundary of no.28, and another heard during an evening emergence survey. No bats recorded emerging from properties.

12/01/2010 - 18/01/2010	Little Oldwick Barn, Lavant, West Sussex (VC13)	SU846076	Recorder @ Sue Harris Bat Svys	Building Inspection	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1 Present	One bat seen roosting in a joint on the northern side of the eastern end. Medium sized droppings.
04/09/2008	Chichester	SU859048	Anon	Grounded Bat	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Juvenile Female	Dead bat submitted to VLA Passive Surveillance Programme
23/07/2008	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
17/10/2007	28 & 29 Kings Avenue, Chichester, West Sussex (VC13)	SU859038	Recorder @ 4Woods Ecology	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Present	Recorded from north west of no,29 towards no.28 and canal, during an evening emergence survey. No bats recorded emerging from properties.
05/09/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	1 pass/commuting recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.
04/09/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	9 passes/commuting and feeding recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.
29/07/2007	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
25/07/2007 - 26/07/2007	West of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU839077	Recorder @ SLR	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Present	Solitary bat recorded flying north.
15/07/2007	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
17/07/2006	Oakwood, Knapp Copse, West Sussex (VC13)	SU822063	Frank Greenaway	Trapped	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Juvenile Male	
30/07/2005	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Waterway transect	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
13/07/2005	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
30/07/2004	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	



11/07/2004	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
24/07/2003	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
08/07/2003	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	4 Present	
08/07/2003	Fishbourne Meadows, West Sussex (VC13)	SU840040	Martin Love	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5 Present	
22/07/2002	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
06/07/2002	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bat(s) Present	
04/07/2002	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
01/01/1999 - 31/12/1999	Brandy Hole Copse, Comp W2 (also Comps C2 & C3, Ponds 1 & 2), West Sussex (VC13)	SU852065	Martin Love	Unspecified	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Frequent Present	
30/07/1998	Chichester, West Sussex (VC13)	SU8505	BCT Surveyor	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
1995	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Present Bat(s)	
1994	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Present Bat(s)	
15/06/1992	Rushmere, Creek End, Fishbourne, West Sussex (VC13)	SU8304	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	3 Present	Identified by fresh and old droppings found in roof apex at gable end. Estimated to be three bats present.
01/06/1992 - 30/06/1992	Rushmere, Creek End, Fishbourne, Chichester, West Sussex (VC13)	SU837048	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	3 Present	
02/06/1990	St Richards Church, Cawley Road, Chichester, West Sussex (VC13)	SU862044	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	138 Present	Bats behind bargeboard of modern church. Colony known for 3 years. May be up to 200 present.
13/05/1990	5 Ellshaw Court, Cawley Road, Chichester, West Sussex (VC13)	SU862043	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	161 Present	Colony known for several years in cavity wall of flats with up to 400 estimated in previous years. Access to be disturbed by fitting of double glazing.

29/12/1988	near The Tannery, Fishbourne Road, Chichester, West Sussex (VC13)	SU8404	NE Bat Worker	Visual	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Dead	
12/07/1983	Pallant House Art Gallery, North Pallant, Chichester, West Sussex (VC13)	SU861047	NE Bat Worker	Visual	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	5 Present	Roosting between tiles and under felt.
1954	Chichester, West Sussex (VC13)	SU8505	Unknown	Unspecified	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bat(s) Present	

## *Pipistrellus nathusii*

## Nathusius's Pipistrelle

Slightly larger than the common pipistrelle and with longer fur, this is a migrant bat from mainland Europe first recorded in Britain in 1969. Since 1992 there have been several (c.15) records of individuals examined in the hand from Sussex, including a summer colony identified in a building near Chichester. There is also a number of bat detector records.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
22/08/2012	Chichester canal, Stockbridge	SU859039	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Time expansion recording analysed. Observation during NBMP Waterways survey, site 110100, spot 9
22/08/2012	Chichester Canal, Stockbridge	SU859040	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Time expansion recording analysed. Observation during NBMP Waterways survey, site 110100, spot 10
22/08/2012	Chichester Canal basin	SU859041	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Time expansion recording analysed. Observation during NBMP Waterways survey, site 110100
10/08/2012	Chichester Canal, Stockbridge	SU859033	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Time expansion recording analysed. Observation during NBMP Waterways survey, site 110100, between spots 4 and 5

*Pipistrellus pipistrellus***Common Pipistrelle (45 kHz)**

The common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*P. pygmaeus*) were previously recorded as one species. They are now recognised as separate species, with a peak frequency echolocation at 45 kHz and 55 kHz respectively. Pipistrelles are the most common bat in the British Isles and are found in all types of countryside (except very exposed areas) as well as in towns and suburbs. Summer roosts are usually in buildings, though tree holes and bat boxes are also used. Winter roosts are in buildings and tree holes.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
12/09/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Heard not seen. Estimated from emergence survey
22/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	John Poland	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Heard not seen. Estimated from emergence survey
16/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Adult	Heard not seen. Estimated from emergence survey
10/08/2012	Chichester Canal, Stockbridge	SU859033	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	NBMP Waterways survey 110100 Spot 4
10/08/2012	Chichester Canal, Stockbridge	SU859037	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	NBMP Waterways survey 110100 between Spots 8 and 9
24/06/2012	Rushmere, Creek End, Fishbourne, south garden	SU836047	Nik Knight	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14 Bat(s)	Time expansion recording analysed. Observation during NBMP Serotine Colony Count, site 1030134
12/06/2012	Rushmere, Creek End, Fishbourne, south garden	SU836047	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Time expansion recording analysed. Observation during NBMP Serotine Colony Count, site 1030134
27/08/2011	Chichester Canal (Stockbridge), NBMP route point 10, West Sussex (VC13)	SU859040	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Path beside canal, with gardens and playing fields. NBMP Waterway survey route: site 110100
27/07/2011 - 10/08/2011	Hunters Rest, Lavant Road, West Sussex (VC13)	SU856072	Recorder @ Lizard Landscape Design	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taxon Present	Recorded foraging nearby during a bat activity survey. Not recorded emerging from building on site.
09/07/2011	Land at Southfields Close, Stockbridge	SU859032	Recorder @ Aluco Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	regular foraging by this species along the canal (located off site). Equipment included Batbox Duet, Petterson D-240X, Edirol R1 recorder, Batscan v9.6, Anabat SD1.

01/11/2010	The Heritage, Chichester, West Sussex (VC13)	SU868047	Recorder @ Middlemarch Environmental Ltd	Building Inspection	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Taxon Present	Less than 3 recorded hibernating in Building 6 within the soffit box during a second survey for bats of buildings planned for demolition.
10/10/2010	Little Oldwick Barn, Lavant, West Sussex (VC13)	SU846076	Recorder @ Sue Harris Bat Svys	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Taxon Present	Recorded passing west end of barn 10 times, eastern end of barn 4 times, circling the north side, and feeding over the roof for 4 minutes. No bats seen to return to barn.
09/10/2010	Little Oldwick Barn, Lavant, West Sussex (VC13)	SU846076	Recorder @ Sue Harris Bat Svys	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3 Present	One probably emerging from northeast corner of the barn. Three seen and heard feeding along track from west to barn; others heard feeding around eastern end of barn, and passing western end of barn. No bats recorded on detector or film inside barn.
07/10/2010	The Heritage, Chichester, West Sussex (VC13)	SU868047	Recorder @ Middlemarch Environmental Ltd	Building Inspection	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Present	Recorded hibernating under felt in the south elevation of Building 6.
12/05/2010 - 11/06/2010	Roussillon Barracks, Chichester, West Sussex (VC13)	SU860064	Recorder @ Betts Ecology	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3 Bat(s)	One recorded emerging from a roost in the roof on the eastern side of bungalow D1; two from the base of the chimney on the north-west side of bungalow D1. Recorded foraging and commuting. The survey also included return at dawn observations.
23/07/2008	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
04/09/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	5 passes/commuting and feeding recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.
14/08/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	13 passes/commuting recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.

25/07/2007 - 26/07/2007	West of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU835077	Recorder @ SLR	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10 Present	Recorded flying north from 20 minutes after sunset, and other intermittent passes and feeding activity recorded during the survey.
24/07/2007 - 25/07/2007	East of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU853071	Recorder @ SLR	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	Rapidly gathered 23 minutes after sunset along Centurion Way, and foraging along tree line and under bridge; 10-15 pipistrelle bats at peak activity. Seem to have arrived from north and dispersed west along Hunter's Race.
30/07/2005	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Waterway transect	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
09/07/2003	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
22/07/2002	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
04/07/2002	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
07/07/1999	Chichester, West Sussex (VC13)	SU8505	BCT Surveyor	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	

*Pipistrellus pygmaeus***Soprano Pipstrelle (55 kHz)****BAP**

For a while considered as a variant of the common pipistrelle, the soprano pipistrelle is now recognised as a separate species. Pipistrelles are the most common bat in the British Isles and are found in all types of countryside (except very exposed areas) as well as in towns and suburbs. This species has a stronger association with water than common pipistrelle. Summer roosts are usually in buildings, though tree holes and bat boxes are also used. Winter roosts are in buildings and tree holes.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
22/09/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Adult	Heard not seen. Estimated from emergence survey
22/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	John Poland	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Heard not seen. Estimated from emergence survey
22/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	John Poland	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult	Emerging
22/08/2012	Chichester Canal, Stockbridge	SU859040	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	NBMP Waterways survey 110100 Spot 10
22/08/2012	Chichester Canal basin	SU859041	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	NBMP Waterways survey 110100 Spot 10
16/08/2012	White Eaves, Chestnut Avenue, Chichester	SU858071	Victoria Russell	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Adult	Estimated from emergence survey
10/08/2012	Chichester Canal, Stockbridge	SU859033	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	NBMP Waterways survey 110100 Spot 4
10/08/2012	Chichester Canal, Stockbridge	SU859037	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	NBMP Waterways survey 110100 between Spots 8 and 9
20/09/2011	29 Hannah Square, Chichester	SU849053	Amanda Millar	Grounded Bat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult Female	
27/08/2011	Chichester Canal (Stockbridge), NBMP route point 4, West Sussex (VC13)	SU859033	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Path beside canal, with tree lines, housing estate and fields. NBMP Waterway survey route: site 110100
27/08/2011	Chichester Canal (Stockbridge), NBMP route point 5, West Sussex (VC13)	SU859034	Nik Knight	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Path beside canal, with wooded embankment, housing estate and fields. NBMP Waterway survey route: site 110100

27/08/2011	Chichester Canal (Stockbridge), NBMP route point 6, West Sussex (VC13)	SU859035	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with wooded embankment, housing estate and fields. NBMP Waterway survey route: site 110100
27/08/2011	Chichester Canal (Stockbridge), NBMP route point 7, West Sussex (VC13)	SU859036	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with wooded embankment, housing estate and fields. NBMP Waterway survey route: site 110100
27/08/2011	Chichester Canal (Stockbridge), NBMP route point 8, West Sussex (VC13)	SU859037	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with wooded embankment, housing estate and fields. NBMP Waterway survey route: site 110100
27/08/2011	Chichester Canal (Stockbridge), NBMP route point 9, West Sussex (VC13)	SU859039	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with gardens and playing fields. NBMP Waterway survey route: site 110100
27/08/2011	Chichester Canal (Stockbridge), NBMP route point 10, West Sussex (VC13)	SU859040	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with gardens and playing fields. NBMP Waterway survey route: site 110100
13/08/2011	Chichester Canal (Stockbridge), NBMP route point 4, West Sussex (VC13)	SU859033	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with tree lines, housing estate and fields. NBMP Waterway survey route: site 110100
13/08/2011	Chichester Canal (Stockbridge), NBMP route point 5, West Sussex (VC13)	SU859034	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with wooded embankment, housing estate and fields. NBMP Waterway survey route: site 110100
13/08/2011	Chichester Canal (Stockbridge), NBMP route point 6, West Sussex (VC13)	SU859035	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with wooded embankment, housing estate and fields. NBMP Waterway survey route: site 110100
13/08/2011	Chichester Canal (Stockbridge), NBMP route point 9, West Sussex (VC13)	SU859039	Nik Knight	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Path beside canal, with gardens and playing fields. NBMP Waterway survey route: site 110100
18/07/2011	Land at Southfields Close, Stockbridge	SU859032	Recorder @ Aluco Ecology	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Bat(s)	Entered site from east along canal from 21:24 with foraging concentrated in North east corner and along canal. Equipment included Batbox Duet, Petterson D-240X, Edirol R1 recorder, Batscan v9.6, Anabat SD1.

09/07/2011	Land at Southfields Close, Stockbridge	SU859032	Recorder @ Aluco Ecology	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10 Bat(s)	c. 10 Soprano Pipistrelle foraging along canal wood edge. Equipment included Batbox Duet, Petterson D-240X, Edirol R1 recorder, Batscan v9.6, Anabat SD1.
26/06/2011	Land at Southfields Close, Stockbridge	SU859032	Recorder @ Aluco Ecology	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5 Bat(s)	5 soprano pipistrelles foraging in north west corner of field, commuting in from the west. Equipment included Batbox Duet, Petterson D-240X, Edirol R1 recorder, Batscan v9.6, Anabat SD1.
10/10/2010	Little Oldwick Barn, Lavant, West Sussex (VC13)	SU846076	Recorder @ Sue Harris Bat Svys	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Present	Heard to pass west end of barn during a dawn return survey.
22/06/2010	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	144 Bat(s)	
09/06/2010	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	147 Bat(s)	
12/05/2010 - 11/06/2010	Roussillon Barracks, Chichester, West Sussex (VC13)	SU860064	Recorder @ Betts Ecology	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Taxon Present	Recorded foraging and commuting but not roosting. The survey also included return at dawn observations.
26/07/2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	100 Bat(s)	Survey duration: 70 minutes. Bat detector used.
13/07/2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	156 Bat(s)	Survey duration: 65 minutes. Bat detector used.
16/06/2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	106 Bat(s)	Survey duration: 75 minutes. Bat detector used.
06/06/2009	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	146 Bat(s)	Survey duration: 55 minutes. Bat detector used.
14/06/2008	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	130 Bat(s)	
06/06/2008	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	130 Bat(s)	
05/09/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	1 pass/commuting recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.



04/09/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	5 passes/commuting and feeding recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.
14/08/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	2 passes/commuting recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.
30/07/2007	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	25 Bat(s)	
29/07/2007	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
25/07/2007 - 26/07/2007	West of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU835077	Recorder @ SLR	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	Intermittent passes and feeding activity recorded during the survey.
24/07/2007 - 25/07/2007	East of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU853071	Recorder @ SLR	Aural bat detector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	taxon Present	Rapidly gathered 23 minutes after sunset along Centurion Way, and foraging along tree line and under bridge; 10-15 pipistrelle bats at peak activity. Seem to have arrived from north and dispersed west along Hunter's Race.
15/07/2007	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
14/07/2007	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	165 Bat(s)	
18/06/2007	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	120 Bat(s)	
06/06/2007	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	90 Bat(s)	
30/07/2006	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	
17/07/2006	Oakwood, Knapp Copse, West Sussex (VC13)	SU822063	Frank Greenaway	Trapped	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 Male	
17/07/2006	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bats Present	

18/06/2006	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	113 Bat(s)
07/06/2006	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	169 Bat(s)
30/07/2005	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bats Present
18/06/2005	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	127 Bat(s)
08/06/2005	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	175 Bat(s)
11/07/2004	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bats Present
17/06/2004	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5 Bat(s)
06/06/2004	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	123 Bat(s)
09/07/2003	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bats Present
08/07/2003	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Present
24/06/2003	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	142 Bat(s)
08/06/2003	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	157 Bat(s)
22/07/2002	Chichester, West Sussex (VC13)	SU8505	Peter Etheridge	Field Transect Svy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bats Present
06/07/2002	Fishbourne Mill Pond, West Sussex (VC13)	SU836045	Martin Love	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bat(s) Present
20/06/2002	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	126 Bat(s)
09/06/2002	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	137 Bat(s)
15/06/2001	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	158 Bat(s)
11/06/2000	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	142 Bat(s)
20/06/1998	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	86 Bat(s)

16/06/1998	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	97 Bat(s)
11/06/1998	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	102 Bat(s)
17/06/1997	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	96 Bat(s)
11/06/1997	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	74 Bat(s)
15/06/1996	Chichester, East Sussex (VC14)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	65 Bat(s)
15/06/1993	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	275 Bat(s)
15/06/1992	Chichester, West Sussex (VC13)	SU862044	Peter Etheridge	Roost Exit Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	201 Bat(s)

## *Plecotus*

### Long-eared sp.

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

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
15/01/2011	Private property, Brandy Hole Lane, Chichester	SU853067	NE Bat Worker	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

*Plecotus auritus***Brown Long-eared Bat****BAP**

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

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
19/11/2011	Private property, Whitehouse Farm, Chichester	SU852061	NE Bat Worker	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
27/07/2011 - 02/08/2011	Hunters Rest, Lavant Road, West Sussex (VC13)	SU856072	Recorder @ Lizard Landscape Design	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Taxon Present	Droppings recorded indicative of maternity colony or male roost used for many years.
12/05/2010 - 11/06/2010	Roussillon Barracks, Chichester, West Sussex (VC13)	SU860064	Recorder @ Betts Ecology	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bat(s)	Open bay storage area/ barns at the rear of building E8 as a night or feeding roost
06/08/2009	Chichester	SU854054	Anon	Grounded Bat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Adult Female	Dead bat submitted to VLA Passive Surveillance Programme
14/08/2007	79, 81 and 89 Spitalfield Lane, Chichester, West Sussex (VC13)	SU868053	Recorder @ Thomson Ecology	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	taxon Present	1 pass/commuting recorded. No signs of bats in buildings. No bats recorded leaving or returning to roost during two dusk emergence and two dawn return surveys.
24/07/2007 - 25/07/2007	East of Site, Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU853071	Recorder @ SLR	Aural bat detector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	taxon Present	Two passes recorded along Centurion's Way, and further passes along Hunter's Race
01/07/2007	Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU8485207569	Recorder @ SLR	Field Observation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	taxon Present	Habitat inspection. Bolted corrugated metal tunnel in E-W direction, large spoil heap at west end blocking all but top 1m, east end blocked except 30cm diameter hole. One dropping recorded, likely more but used for sheltering livestock which would have trampled signs into floor.

01/07/2007	Proposed Lavant Quarry, Chichester, West Sussex (VC13)	SU8522807609	Recorder @ SLR	Field Observation	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	taxon Present	Habitat inspection. Bolted corrugated metal tunnel in N-S direction, north end blocked, south end grilled and gated. Two small piles of droppings and moth wings, and a few in a line under a corroded light fitting, found in northern half of tunnel.
22/06/2006	12 Fishbourne Road East, Chichester, West Sussex (VC13)	SU845048	Martin Love	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	taxon Present	Droppings found below ridge beam throughout the roof void, and indicating a medium size maternity roost of 15-20 individuals. Recorded during a building inspection in relation to a planning application for building demolition.
26/10/2001	Apuldram Manor Farm, West Sussex (VC13)	SU84100334	Martin Love	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bat(s) Present	
15/02/1995	34 Brandy Hole Lane, Chichester, West Sussex (VC13)	SU853067	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		
12/03/1993	1 East Wing, West Broyle House, West Broyle, Chichester, West Sussex (VC13)	SU846070	NE Bat Worker	Building Inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		No bats seen, droppings found.

### *Plecotus austriacus*

### Grey Long-eared Bat

A rare species found mainly near the coast, from Sussex to south west England. It can be difficult to distinguish from the much more common brown long-eared bat (*Plecotus auritus*) and was first recognised in Britain in 1963. It is recorded from several Sussex localities, especially in West Sussex.

Date	Location	Grid Reference	Recorder	Sampling Method	M/S	H	FR	MR	UR	D	Abundance	Notes
30/01/1996	Rymans, Appledram Lane, Apuldram, Chichester, West Sussex (VC13)	SU842032	NE Bat Worker	Building Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Present	

# SUSSEX NOTABLE BIRD REPORT



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

## Icons used in the Notable Bird Report:



### Schedule 1 birds

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

### **BAP** Biodiversity Action Plan Species (UK BAP)

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

### **N** Natural Environment & Rural Communities (NERC) Act

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

### Birds of Conservation Concern 3 (2009)

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



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



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

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

This information has been obtained from '**Birds of Conservation Concern 3' (BoCC3)** which can be downloaded from the [RSPB website](#).

## Other bird legislation and conservation measures:

### Wildlife and Countryside Act (WCA) 1981

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

## Hedgerow removal and birds

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

## Birds in roofs

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

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

## Environmental Stewardship Target Species

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

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

## EU Birds Directive

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

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

### Annex 1:

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

### Annex 2:

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

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

## IUCN Red List

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

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

## SUSSEX NOTABLE BIRD LIST

Species	Search criteria 1	Search criteria 2	Designations			
Eurasian Wigeon	Positive breeding status	Late May- early July records	A			
Gadwall	Positive breeding status	Late May- early July records	A			
Pintail	Positive breeding status	Late May- early July records	A			
Garganey	Positive breeding status	Late May- early July records	A	!		
Common Pochard	Positive breeding status	Late May- early July records	A			
Grey Partridge	Positive breeding status	March - August records	R		BAP	N
Common Quail	Positive breeding status	March - August records	A	!		
Eurasian Bittern	All records	March - August records	R	!	BAP	N
Little Egret	Confirmed breeding records + recognised roosts	May and June records	A			
Grey Heron	Confirmed breeding records	March - May records				
Honey-buzzard	March - August records		A	!		
Red Kite	Positive breeding status + recognised roosts	March -August records	A	!		
Marsh Harrier	Positive breeding status + recognised roosts	Mid May-July records	A	!		
Hen Harrier	Winter roosts	3 or more birds	R	!		N
Montagu's Harrier	Mid May-July records		A	!		
Goshawk	January - August records	All records		!		
Osprey	Mid May-July records		A	!		
Hobby	Positive breeding status	April - August records		!		
Peregrine Falcon	Positive breeding status	March - August records		!		
Spotted Crake	Positive breeding status	March - August records	A	!		
Avocet	Positive breeding status	April - July records	A	!		
Stone-curlew	March - August records		A	!	BAP	N
Little Ringed Plover	Positive breeding status	March - July records		!		
Northern Lapwing	Positive breeding status	April -June records	R		BAP	N
Common Snipe	Positive breeding status	April - July records	A			
Black-tailed Godwit	Positive breeding status	late May-June	R	!		
Eurasian Curlew	Positive breeding status	April - July records	A		BAP	N
Common Redshank	Positive breeding status	April -June records	A			
Kittiwake	Positive breeding status		A			
Mediterranean Gull	Positive breeding status	May-June records	A	!		
Little Tern	Positive breeding status		A	!		
Common Tern	Positive breeding status		A			
Turtle Dove	Positive breeding status		R		BAP	N
Barn Owl	All records		A	!		
Long-eared Owl	Positive breeding status + recognised roosts	March - August records				
Common Swift	Confirmed & probably breeding records		A			
Barn Swallow	Confirmed & probably breeding records		A			



House Martin	Confirmed & probably breeding records		A			
Common Kingfisher	Positive breeding status	March - August records	A	!		
Lesser Spotted Woodpecker	All records		R		BAP	N
Raven	Positive breeding status	February - July records				
Firecrest	Positive breeding status	March - August records	A	!		
Willow Tit	All records		R			
Bearded Tit	Positive breeding status	March - August records	A	!		
Wood Lark	Positive breeding status	March - August records	A	!	BAP	N
Cetti's Warbler	Positive breeding status	March - August records		!		
Wood Warbler	Positive breeding status	April - August records	R		BAP	N
Dartford Warbler	Positive breeding status	March - August records	A	!		
Savi's Warbler	Positive breeding status	April - August records	R	!	BAP	N
Marsh Warbler	Positive breeding status	April - August records	R	!	BAP	N
Black Redstart	May-July		A	!		
Tree Sparrow	All records		R		BAP	N
Yellow Wagtail	Positive breeding status + recognised roosts	May-June records	R		BAP	N
Common Crossbill	Positive breeding status	February - July records		!		
Hawfinch	All records				BAP	N
Corn Bunting	All records		R		BAP	N

**Key to symbols (see main explanation sheet for detail on these designations):**

- ! Schedule 1
- R BoCC Red List Species
- A BoCC Amber List Species
- BAP Biodiversity Action Plan Species
- N Natural Environment & Rural Communities (NERC) Act Species

**Selection based on:**

**Positive Breeding** = where a bird has been confirmed as breeding, or there are signs that there is probable breeding.

**Date** = a date range which represents each species' breeding season, this criteria will be used where breeding has not been confirmed. Please note that this criteria will also bring up non-breeding records which may not be relevant to the data user.

**Roost** = where a species has been recorded as being in a recognised roost or a winter roost.

**All Records** = where all records for a species are flagged up.

## SUSSEX BIRD INVENTORY REPORT SUMMARY

### Land at Whitehouse Farm, Chichester + 2km radius

02 December 2013 ESD/13/644 Search Area: SU8204 to SU8606; SU8307 to SU8507; SU8303 to SU8503

James Bird (The Environmental Dimension Partnership)

Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Northern Pintail	<i>Anas acuta</i>	05/01/1990	27/11/2011	23	643	109
Northern Shoveler	<i>Anas clypeata</i>	11/03/2006	03/02/2011	3	9	7
Eurasian Teal	<i>Anas crecca</i>	17/06/1992	22/03/2011	18	101	50
Eurasian Wigeon	<i>Anas penelope</i>	11/04/1990	27/11/2011	59	5392	702
Mallard	<i>Anas platyrhynchos</i>	23/05/2001	19/07/2011	84	400	58
Chiloë Wigeon	<i>Anas sibilatrix</i>	25/01/2005	-	1	1	1
Gadwall	<i>Anas strepera</i>	11/04/1990	22/03/2011	21	156	50
Greater White-fronted Goose	<i>Anser albifrons</i>	30/07/1997	-	1	1	1
Greylag Goose	<i>Anser anser</i>	06/02/2010	-	1	0	0
Bar-headed Goose	<i>Anser indicus</i>	29/05/2002	31/12/2005	4	12	4
Common Pochard	<i>Aythya ferina</i>	25/10/2010	08/02/2011	4	4	1
Tufted Duck	<i>Aythya fuligula</i>	18/02/2009	03/02/2011	4	11	6
Greater Scaup	<i>Aythya marila</i>	09/02/1991	-	2	2	1
Brent Goose	<i>Branta bernicla</i>	10/05/1990	27/11/2011	109	7739	1800
Black Brant	<i>Branta bernicla subsp. nigricans</i>	27/01/2009	01/03/2011	11	11	1
Greater Canada Goose	<i>Branta canadensis</i>	11/08/1991	16/08/2011	12	420	101
Barnacle Goose	<i>Branta leucopsis</i>	31/01/2010	02/02/2010	4	2	1
Common Goldeneye	<i>Bucephala clangula</i>	18/01/1990	27/11/2011	112	1764	75

Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Long-tailed Duck	<i>Clangula hyemalis</i>	06/01/1992	-	1	1	1
Swan	<i>Cygnus</i>	10/09/2002	-	1	0	0
Black Swan	<i>Cygnus atratus</i>	28/01/1998	25/10/2010	3	1	1
Tundra Swan	<i>Cygnus columbianus subsp. bewickii</i>	03/01/1993	17/01/2010	3	8	5
Mute Swan	<i>Cygnus olor</i>	25/07/1990	27/11/2011	110	6221	167
Smew	<i>Mergellus albellus</i>	28/11/1993	24/01/1997	4	10	7
Goosander	<i>Mergus merganser</i>	04/12/1990	06/12/2006	2	6	5
Red-breasted Merganser	<i>Mergus serrator</i>	22/06/1995	27/11/2011	34	130	30
Ruddy Duck	<i>Oxyura jamaicensis</i>	13/01/1996	-	1	2	2
Ruddy Shelduck	<i>Tadorna ferruginea</i>	20/04/1995	-	2	2	1
Common Shelduck	<i>Tadorna tadorna</i>	31/01/1990	27/11/2011	64	951	80
Common Swift	<i>Apus apus</i>	18/04/1993	09/08/2011	89	1326	700
Common Guillemot	<i>Uria aalge</i>	19/01/2007	-	1	1	1
Little Plover	<i>Charadrius dubius</i>	06/03/1990	-	1	1	1
Ringed Plover	<i>Charadrius hiaticula</i>	05/11/1990	27/11/2011	16	172	50
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>	11/08/1992	27/11/2011	37	1476	1198
European Golden Plover	<i>Pluvialis apricaria</i>	20/01/1991	28/11/2010	5	664	400
American Golden Plover	<i>Pluvialis dominica</i>	16/09/2010	-	2	2	1
Grey Plover	<i>Pluvialis squatarola</i>	29/05/1991	27/11/2011	44	1182	200
Northern Lapwing	<i>Vanellus vanellus</i>	05/11/1990	27/11/2011	43	4187	600
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	13/01/1999	18/12/2011	68	6836	1000
Little Gull	<i>Hydrocoloeus minutus</i>	23/01/1993	08/05/2001	3	3	1
Herring Gull	<i>Larus argentatus</i>	08/05/1997	27/11/2011	69	329	90
Mew Gull	<i>Larus canus</i>	05/07/1996	27/11/2011	28	603	180
Lesser Black-backed Gull	<i>Larus fuscus</i>	17/03/1991	29/08/2011	32	76	11
Great Black-backed Gull	<i>Larus marinus</i>	15/09/2004	27/11/2011	18	31	5
Mediterranean Gull	<i>Larus melanocephalus</i>	29/03/1991	08/09/2011	46	1680	453
Yellow-legged Gull	<i>Larus michahellis</i>	05/09/1999	22/09/2011	25	37	3
Herring Gull	<i>Larus michahellis subsp. michahellis</i>	08/09/1990	30/07/1997	15	85	26
Black-legged Kittiwake	<i>Rissa tridactyla</i>	06/09/1991	-	1	1	1
Little Tern	<i>Sternula albifrons</i>	28/04/2002	03/09/2003	3	6	4
Pied Avocet	<i>Recurvirostra avosetta</i>	30/01/1993	05/01/2008	4	4	1
Common Sandpiper	<i>Actitis hypoleucos</i>	24/07/1990	21/07/2011	22	51	8
Ruddy Turnstone	<i>Arenaria interpres</i>	11/04/1990	27/11/2011	23	449	150
Sanderling	<i>Calidris alba</i>	22/12/1996	-	1	10	10
Dunlin	<i>Calidris alpina</i>	10/05/1990	27/11/2011	46	4300	1000
Red Knot	<i>Calidris canutus</i>	29/05/1991	29/08/2011	23	104	23
Curlew Sandpiper	<i>Calidris ferruginea</i>	08/09/1990	30/09/2010	21	130	17
Little Stint	<i>Calidris minuta</i>	18/09/1993	27/11/2011	50	84	46

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Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Common Snipe	<i>Gallinago gallinago</i>	25/08/1990	27/11/2011	32	141	15
Bar-tailed Godwit	<i>Limosa lapponica</i>	25/11/1990	11/09/2010	17	364	125
Black-tailed Godwit	<i>Limosa limosa</i>	15/03/1990	27/11/2011	170	20504	967
Jack Snipe	<i>Lymnocyptes minimus</i>	01/03/1990	27/11/2011	36	50	8
Eurasian Curlew	<i>Numenius arquata</i>	31/01/1990	27/11/2011	55	1685	150
Whimbrel	<i>Numenius phaeopus</i>	01/03/1990	27/11/2011	111	230	16
Ruff	<i>Philomachus pugnax</i>	05/04/1990	22/03/2011	20	46	8
Eurasian Woodcock	<i>Scolopax rusticola</i>	18/11/2008	21/01/2011	4	3	1
Spotted Redshank	<i>Tringa erythropus</i>	03/01/1990	22/11/2011	88	109	8
Wood Sandpiper	<i>Tringa glareola</i>	07/06/1990	27/07/1990	4	8	3
Common Greenshank	<i>Tringa nebularia</i>	04/05/1990	22/11/2011	182	555	15
Green Sandpiper	<i>Tringa ochropus</i>	08/03/1990	22/11/2011	38	50	7
Common Redshank	<i>Tringa totanus</i>	23/07/1990	27/11/2011	53	2317	500
Black Tern	<i>Chlidonias niger</i>	13/09/1993	16/09/1993	2	10	5
Common Tern	<i>Sterna hirundo</i>	04/05/1992	19/07/2011	5	9	3
Sandwich Tern	<i>Sterna sandvicensis</i>	17/05/1992	10/10/2008	3	21	18
Grey Heron	<i>Ardea cinerea</i>	21/08/1992	27/11/2011	51	101	19
Little Egret	<i>Egretta garzetta</i>	25/07/1990	27/11/2011	109	655	65
Rock Pigeon	<i>Columba livia</i>	03/09/2003	26/07/2011	33	185	21
Stock Pigeon	<i>Columba oenas</i>	22/09/1991	19/07/2011	17	33	5
Common Wood Pigeon	<i>Columba palumbus</i>	23/05/2001	18/12/2011	91	464	34
Eurasian Collared Dove	<i>Streptopelia decaocto</i>	09/01/1997	26/07/2011	70	385	84
European Turtle Dove	<i>Streptopelia turtur</i>	04/05/1991	19/05/2009	10	18	4
Rose-ringed Parakeet	<i>Psittacula krameri</i>	02/03/1996	20/12/2011	3	3	1
Common Kingfisher	<i>Alcedo atthis</i>	16/02/1990	22/11/2011	138	161	3
Common Cuckoo	<i>Cuculus canorus</i>	27/07/1991	17/05/2011	8	9	2
Eurasian Sparrowhawk	<i>Accipiter nisus</i>	03/01/1990	22/03/2012	78	78	3
Common Buzzard	<i>Buteo buteo</i>	29/07/1991	12/04/2012	41	51	3
Eurasian Marsh Harrier	<i>Circus aeruginosus</i>	09/03/1999	06/02/2010	3	3	1
Hen Harrier	<i>Circus cyaneus</i>	25/11/2010	08/01/2011	2	2	1
Red Kite	<i>Milvus milvus</i>	25/11/2010	-	1	1	1
Osprey	<i>Pandion haliaetus</i>	08/05/2001	28/08/2011	4	4	1
Merlin	<i>Falco columbarius</i>	19/04/1990	18/12/2011	11	11	1
Peregrine Falcon	<i>Falco peregrinus</i>	05/11/1991	09/11/2011	70	90	3
Eurasian Hobby	<i>Falco subbuteo</i>	30/09/1995	07/10/2010	2	3	2
Common Kestrel	<i>Falco tinnunculus</i>	04/01/1990	27/11/2011	44	45	3
Red-legged Partridge	<i>Alectoris rufa</i>	16/06/1998	17/05/2011	3	41	37
Common Quail	<i>Coturnix coturnix</i>	10/07/1994	-	1	1	1
Grey Partridge	<i>Perdix perdix</i>	05/11/1990	19/10/2011	14	64	12

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Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Common Pheasant	<i>Phasianus colchicus</i>	14/03/2005	27/05/2011	37	52	6
Red-throated Diver	<i>Gavia stellata</i>	20/02/1997	-	1	1	1
Common Coot	<i>Fulica atra</i>	31/01/1990	27/11/2011	29	409	70
Common Moorhen	<i>Gallinula chloropus</i>	31/01/1990	27/05/2011	72	223	50
Water Rail	<i>Rallus aquaticus</i>	22/12/1990	08/11/2011	44	96	8
Long-tailed Tit	<i>Aegithalos caudatus</i>	29/08/1990	18/12/2011	53	234	26
Sky Lark	<i>Alauda arvensis</i>	09/01/1997	19/07/2011	11	46	25
Wood Lark	<i>Lullula arborea</i>	02/01/2011	-	2	2	1
Bohemian Waxwing	<i>Bombycilla garrulus</i>	28/11/2010	28/03/2011	10	85	16
Eurasian Treecreeper	<i>Certhia familiaris</i>	14/11/1991	17/10/2010	8	7	1
Common Raven	<i>Corvus corax</i>	31/12/2008	23/12/2010	2	2	1
Carrion Crow	<i>Corvus corone</i>	23/05/2001	18/12/2011	88	221	40
Rook	<i>Corvus frugilegus</i>	11/08/1991	21/06/2011	83	675	64
Eurasian Jackdaw	<i>Corvus monedula</i>	30/06/1991	27/11/2011	59	159	14
Eurasian Jay	<i>Garrulus glandarius</i>	25/04/1997	14/09/2011	13	16	2
Black-billed Magpie	<i>Pica pica</i>	23/05/2001	18/12/2011	87	187	11
Corn Bunting	<i>Emberiza calandra</i>	02/02/1993	01/11/2007	11	219	93
Yellowhammer	<i>Emberiza citrinella</i>	17/12/1996	30/11/2012	35	193	26
Reed Bunting	<i>Emberiza schoeniclus</i>	19/12/1995	19/07/2011	23	375	82
Snow Bunting	<i>Plectrophenax nivalis</i>	22/12/1996	-	1	4	4
Lesser Redpoll	<i>Carduelis cabaret</i>	30/04/2008	-	2	2	1
Common Linnet	<i>Carduelis cannabina</i>	23/05/2001	30/11/2012	13	127	100
European Goldfinch	<i>Carduelis carduelis</i>	25/09/1990	21/06/2011	114	910	60
European Greenfinch	<i>Carduelis chloris</i>	26/10/1991	26/07/2011	76	567	100
Eurasian Siskin	<i>Carduelis spinus</i>	07/01/1995	22/11/2011	11	70	28
Chaffinch	<i>Fringilla coelebs</i>	17/12/1996	18/12/2011	78	393	45
Brambling	<i>Fringilla montifringilla</i>	26/10/1991	12/10/2010	13	15	2
Common Crossbill	<i>Loxia curvirostra</i>	19/07/1997	-	1	2	2
Common Bullfinch	<i>Pyrrhula pyrrhula</i>	15/12/1990	25/12/2011	24	40	5
House Martin	<i>Delichon urbicum</i>	07/09/1991	23/08/2011	25	1176	1000
Barn Swallow	<i>Hirundo rustica</i>	09/08/1990	23/08/2011	26	2174	2000
Sand Martin	<i>Riparia riparia</i>	27/07/1991	26/05/2011	6	97	50
Rock Pipit	<i>Anthus petrosus</i>	05/01/1990	27/11/2011	73	575	20
Meadow Pipit	<i>Anthus pratensis</i>	12/10/1990	22/03/2011	9	81	40
Water Pipit	<i>Anthus spinoletta</i>	06/12/1990	02/03/2009	28	40	4
Pied Wagtail	<i>Motacilla alba</i>	12/10/1990	15/10/2011	49	5008	1080
Pied Wagtail	<i>Motacilla alba subsp. yarrellii</i>	04/01/2007	28/02/2009	6	11	4
Grey Wagtail	<i>Motacilla cinerea</i>	16/02/1990	02/06/2011	127	270	8
Yellow Wagtail	<i>Motacilla flava</i>	22/09/1991	16/09/2010	7	30	20

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Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Pied Flycatcher	<i>Ficedula hypoleuca</i>	25/04/1998	23/08/2011	2	2	1
Spotted Flycatcher	<i>Muscicapa striata</i>	22/05/1990	10/05/2011	15	24	10
Northern Wheatear	<i>Oenanthe oenanthe</i>	27/04/1999	12/10/2010	7	8	2
Eurasian Golden Oriole	<i>Oriolus oriolus</i>	06/07/1990	-	1	1	1
Blue Tit	<i>Cyanistes caeruleus</i>	13/01/1999	30/11/2012	89	175	17
Great Tit	<i>Parus major</i>	13/01/1999	30/11/2012	64	95	9
Coal Tit	<i>Pariparus ater</i>	01/01/2007	25/12/2011	61	66	2
Willow Tit	<i>Poecile montanus</i>	31/12/2007	-	1	0	0
House Sparrow	<i>Passer domesticus</i>	23/05/2001	18/12/2011	58	239	20
Hedge Accentor	<i>Prunella modularis</i>	02/12/2004	30/11/2012	71	124	8
Firecrest	<i>Regulus ignicapilla</i>	04/02/1999	22/11/2011	20	28	3
Goldcrest	<i>Regulus regulus</i>	29/10/1990	09/12/2011	28	36	2
European Robin	<i>Erithacus rubecula</i>	23/05/2001	30/11/2012	80	155	20
Black Redstart	<i>Phoenicurus ochruros</i>	31/12/2002	05/03/2011	5	5	1
Common Redstart	<i>Phoenicurus phoenicurus</i>	22/07/1992	16/04/2013	8	10	2
Whinchat	<i>Saxicola rubetra</i>	01/05/1990	22/09/2011	8	23	11
Stonechat	<i>Saxicola torquata</i>	06/10/1990	13/05/2010	39	77	6
Wood Nuthatch	<i>Sitta europaea</i>	29/01/2007	13/10/2010	16	14	1
Starlings	<i>Sturnidae</i>	11/06/2010	-	1	0	0
Common Starling	<i>Sturnus vulgaris</i>	18/06/1997	27/11/2011	72	2777	1200
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	26/04/1991	17/05/2011	11	31	6
Eurasian Reed Warbler	<i>Acrocephalus scirpaceus</i>	15/04/1993	19/07/2011	9	22	9
Cetti's Warbler	<i>Cettia cetti</i>	06/12/2001	17/05/2011	42	50	4
Bearded Tit	<i>Panurus biarmicus</i>	16/10/1996	29/10/2009	2	5	4
Common Chiffchaff	<i>Phylloscopus collybita</i>	14/03/1990	30/11/2012	65	83	5
Willow Warbler	<i>Phylloscopus trochilus</i>	11/04/1996	26/07/2011	8	13	3
Blackcap	<i>Sylvia atricapilla</i>	25/11/1990	30/11/2012	44	42	2
Garden Warbler	<i>Sylvia borin</i>	19/06/2001	23/08/2011	4	5	2
Common Whitethroat	<i>Sylvia communis</i>	26/04/1991	26/07/2011	20	31	5
Lesser Whitethroat	<i>Sylvia curruca</i>	10/05/1994	23/07/2009	10	14	4
Winter Wren	<i>Troglodytes troglodytes</i>	23/05/2001	31/08/2012	54	71	6
Redwing	<i>Turdus iliacus</i>	29/12/1990	24/02/2011	14	858	450
Common Blackbird	<i>Turdus merula</i>	13/01/1999	30/11/2012	88	309	45
Song Thrush	<i>Turdus philomelos</i>	13/01/1999	30/11/2012	82	104	18
Fieldfare	<i>Turdus pilaris</i>	22/12/1990	28/11/2010	8	788	200
Ring Ouzel	<i>Turdus torquatus</i>	28/09/2010	-	1	1	1
Mistle Thrush	<i>Turdus viscivorus</i>	21/04/2006	22/11/2011	11	12	3
Great Cormorant	<i>Phalacrocorax carbo</i>	27/02/1995	27/11/2011	24	38	5
Great Spotted Woodpecker	<i>Dendrocopos major</i>	15/12/1990	26/07/2011	52	53	2

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Common Name	Latin Name	First Date	Last Date	No. of Rec's	Total Abundance	Max. Abundance
Green Woodpecker	<i>Picus viridis</i>	26/05/1990	12/04/2012	73	72	3
Slavonian Grebe	<i>Podiceps auritus</i>	15/12/1993	05/02/2011	3	3	1
Great Crested Grebe	<i>Podiceps cristatus</i>	14/08/1991	17/12/2010	11	41	12
Little Grebe	<i>Tachybaptus ruficollis</i>	16/01/1990	27/11/2011	31	108	22
Little Owl	<i>Athene noctua</i>	08/03/1990	11/06/2010	13	12	1
Tawny Owl	<i>Strix aluco</i>	30/01/1996	27/09/2011	26	26	2
Barn Owl	<i>Tyto alba</i>	04/01/1990	18/02/2010	13	15	2

## SUSSEX NOTABLE BIRD REPORT

### Land at Whitehouse Farm, Chichester + 2km radius

02 December 2013    ESD/13/644    **Search Area:** SU8204 to SU8606; SU8307 to SU8507; SU8303 to SU8503  
James Bird (The Environmental Dimension Partnership)

#### *Anas acuta*

#### Northern Pintail

A duck that is a fairly common winter visitor to coastal estuaries and lagoons in Sussex. It has also been recorded in summer, as a passage migrant and it has bred in our area. The Pintail is slim, elegant and so-called because of its elongated tail feathers. It feeds on a variety of small invertebrates and plants.

Bird Population Status - amber; Birds Directive Annex 2.1; Convention on Migratory Species; Appendix 2; EC CITES Annex C; Wildlife and Countryside Act 1981 (Schedule 1 Part 2)

Grid Reference	Recorder	Date	Locality	Abundance	Selection Based On
SU8303	Anon @ Chichester Harbour Conservancy	16/06/1995	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	28/06/1995	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	04/07/1995	Fishbourne Channel (Ch)	1 Present	Date



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***Anas penelope*****Eurasian Wigeon**

A common winter visitor and passage migrant. Males show a distinct white wing patch and cream-buff forehead and crown. This medium-sized duck favours estuaries and coastal marshes, but also found on reservoirs and gravel pits. It feeds on aquatic plants, grasses and roots.

Birds Directive Annex 2.1; Convention on Migratory Species; Appendix 2; EC CITES Annex C

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Anon @ Chichester Harbour Conservancy	28/05/1990	Fishbourne Channel (Ch)	2 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	13/06/1990	Fishbourne Channel (Ch)	1 Female; 2 Male	Date
SU8303	Anon @ Chichester Harbour Conservancy	13/06/1990	Fishbourne Channel (Ch)	3 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	02/06/1991 - 02/06/1991	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	06/06/1993	Fishbourne Channel (Ch)	1 Female; 1 Male	Date
SU8303	Anon @ Chichester Harbour Conservancy	19/06/1996	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Sussex Ornithological Society	20/05/2010	Fishbourne Channel (Ch)	2 Present	Date

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***Anas strepera*****Gadwall**

A grey-coloured dabbling duck which is a scarce breeder, fairly common winter visitor and passage migrant. Breeds in small numbers throughout south and south east England and East Anglia on still inland waters such as reservoirs and flooded gravel pits. Feeds on stems, leaves and seeds.

Bird Population Status - amber; Birds Directive Annex 2.1; Convention on Migratory Species; Appendix 2

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Sussex Ornithological Society	16/06/2010	Fishbourne Channel (Ch)	4 Present	Date
SU8304	Sussex Ornithological Society	03/03/2009	Fishbourne Mill Pond	4 Present	Positive Breeding

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***Apus apus*****Common Swift**

A well-known common summer visitor and passage migrant, widely distributed in Sussex. This sickle-shaped medium-sized dark aerial bird only stops flying when at the nest, it even sleeps on the wing! Many towns and villages have breeding populations. Very large migration movements are sometimes recorded with many thousands of birds involved. Can be seen in large screaming parties speeding around rooftops. They feed on flying insects and airborne spiders.

Bird Population Status - amber

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8305	National Biodiversit (Gateway)	01/06/2009	Fishbourne	1 Present	Positive Breeding
SU8407	National Biodiversit (Gateway)	01/06/2009	Chichester Oldwick Farm	1 Present	Positive Breeding
SU8504	Sussex Ornithological Society	08/05/2006	Chichester CP	2 Present	Positive Breeding
SU8504	Sussex Ornithological Society	03/05/2007	Chichester CP	2 Present	Positive Breeding
SU8504	Sussex Ornithological Society	26/05/2007	Chichester CP	4 Present	Positive Breeding
SU8504	Sussex Ornithological Society	24/06/2008	Chichester CP	2 Present	Positive Breeding
SU8504	Sussex Ornithological Society	02/07/2009	Chichester CP	2 Present	Positive Breeding
SU859046	Sussex Ornithological Society	03/07/2006	Chichester CP	4 Present	Positive Breeding
SU859047	Sussex Ornithological Society	23/06/2003	Chichester CP	6 Present	Positive Breeding
SU859047	Sussex Ornithological Society	08/07/2005	Chichester CP	4 Present	Positive Breeding
SU859047	Sussex Ornithological Society	24/06/2008	Chichester CP	4 Present	Positive Breeding
SU859050	Sussex Ornithological Society	06/07/2004	Chichester CP	16 Present	Positive Breeding
SU859050	Sussex Ornithological Society	13/07/2005	Chichester CP	12 Present	Positive Breeding
SU859050	Sussex Ornithological Society	09/06/2008	Chichester CP	4 Present	Positive Breeding
SU859050	Sussex Ornithological Society	25/06/2009	Chichester CP	12 Present	Positive Breeding
SU859050	Sussex Ornithological Society	30/06/2009	Chichester CP	18 Present	Positive Breeding
SU860047	Sussex Ornithological Society	29/04/2005	Chichester CP	12 Present	Positive Breeding
SU860050	Sussex Ornithological Society	02/07/2009	Chichester CP	4 Present	Positive Breeding
SU8605	National Biodiversit (Gateway)	01/06/2009	Chichester CP	1 Present	Positive Breeding
SU862049	Sussex Ornithological Society	30/06/2009	Chichester CP	4 Present	Positive Breeding

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***Charadrius dubius***

## Little Plover

A small wader which is a scarce breeding summer visitor and passage migrant. A species that started to colonise Britain in 1938 and which first bred in Sussex in 1949, regularly since 1970. Widespread in Sussex in suitable habitats such as shingle banks and gravel pits, where it feeds on insects.

Bern Convention Appendix 2; Bird Population Status - amber; Convention on Migratory Species; Appendix 2; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Anon @ Chichester Harbour Conservancy	06/03/1990	Fishbourne Channel (Ch)	1 Present	Date

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***Vanellus vanellus***

## Northern Lapwing

A large wader which is a familiar farmland and wetland bird, is a scarce breeder and very common winter visitor that is widespread in Sussex. The bird declined markedly in South East England at the end of the last century. The favoured breeding habitat is mixed farmland and suitable habitats have been in short supply. Its diet consists of worms and insects.

Bird Population Status - red; Birds Directive Annex 2.2; Convention on Migratory Species; Appendix 2; Environmental Stewardship Target Species (Pevensey Levels); Environmental Stewardship Target Species (Romney Marsh); Environmental Stewardship Target Species (South Downs); Environmental Stewardship Target Species (Wealden Greensand); Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; UK Biodiversity Action Plan priority species)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	BTO Birdtrack data	25/04/2009	Fishbourne Channel (Ch)	1 Present	Date
SU8304	Anon @ Chichester Harbour Conservancy	24/04/2008	Fishbourne	3 Present	Positive Breeding
SU8304	BTO Birdtrack data	22/05/2008	Fishbourne	1 Present	Date
SU837042	Anon @ Chichester Harbour Conservancy	23/06/2005	Fishbourne Channel (Ch)	4 Present	Positive Breeding

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***Larus melanocephalus*****Mediterranean Gull**

Fairly common throughout the year and increasing globally. Has bred annually since 1994, with an established breeding colony at Rye Harbour. This gull is slightly larger than a Black-headed Gull, with a bright red beak; it feeds on insects, fish, offal and carrion.

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8304	Sussex Ornithological Society	25/06/2006	Fishbourne	2 Present	Date
SU8304	BTO Birdtrack data	17/05/2011	Fishbourne	2 Present	Date
SU840045	Simon Curson	08/06/2005	Fishbourne Meadows, Fishbourne	present Taxon	Date

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***Gallinago gallinago*****Common Snipe**

Now a very scarce breeder and fairly common winter visitor favouring poorly drained pasture. The UK population of Snipe has undergone particularly steep declines in lowland wet grassland in the past twenty-five years. It is a plump medium-sized wader with short legs and a long bill used to probe for small invertebrates, including worms and insect larvae. Males display by flying high in the air and then dropping steeply producing a noise by vibrating their tail feathers.

Bird Population Status - amber; Birds Directive Annex 2.1; Convention on Migratory Species; Appendix 2

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU839038	Sussex Ornithological Society	29/04/2001	Apuldram	2 Present	Date

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***Limosa limosa*****Black-tailed Godwit**

This large wader has long legs and a very long, straight bill. It is a fairly common winter visitor and passage migrant, but a very scarce summering species. In our area it is recorded mainly from the Chichester and Pagham Harbour areas. It has suffered a large decline of its breeding populations in northern Europe and is now a rare breeder there. It can be found on estuaries and coastal lagoons where it feeds on insects, worms and snails.

Bird Population Status - red; Birds Directive Annex 2.2; Convention on Migratory Species; Appendix 2; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Sussex Ornithological Society	29/05/1990	Fishbourne Channel (Ch)	20 Present	Date
SU8304	BTO Birdtrack data	22/05/2008	Fishbourne	1 Present	Date
SU8404	Sussex Ornithological Society	29/05/1990	Fishbourne	20 Present	Date

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***Numenius arquata*****Eurasian Curlew**

Formerly a very scarce breeder; this large wader is a common passage migrant and winter visitor. Mainly recorded from marshes, mudflats and saltmarsh, but sometimes elsewhere. Easily recognisable by its long down-curved bill which it uses to catch worms, shellfish and shrimps, and its distinctive bubbling call.

Bird Population Status - amber; Birds Directive Annex 2.2; Convention on Migratory Species; Appendix 2; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; UK Biodiversity Action Plan priority species)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Anon @ Chichester Harbour Conservancy	13/07/1995	Fishbourne Channel (Ch)	87 Present	Date
SU8303	BTO Birdtrack data	21/04/2006	Fishbourne Channel (Ch)	1 Present	Date
SU8303	BTO Birdtrack data	25/04/2009	Fishbourne Channel (Ch)	14 Present	Date
SU8303	Sussex Ornithological Society	30/07/2009	Fishbourne Channel (Ch)	91 Present	Date
SU8303	BTO Birdtrack data	19/07/2011	Fishbourne Channel (Ch)	1 Present	Date
SU8303	BTO Birdtrack data	26/07/2011	Apuldram	111 Present	Date
SU8304	BTO Birdtrack data	05/04/2011	Fishbourne	3 Present	Date
SU8504	Sussex Ornithological Society	11/06/2005	Chichester CP	1 Present	Date

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***Tringa totanus*****Common Redshank**

A medium-sized wader with a long red bill and long red legs. It is a scarce resident in wetlands close to rivers, and a fairly common winter visitor and passage migrant. Its preferred habitats are wet grassland, estuaries and saltmarshes where it can feed on insects, earthworms, molluscs and crustaceans. Most breeding sites in Sussex are within protected areas, such as nature reserves, which employ specific management for breeding waders.

Bird Population Status - amber; Birds Directive Annex 2.2; Convention on Migratory Species; Appendix 2; Environmental Stewardship Target Species (Pevensy Levels); Environmental Stewardship Target Species (Romney Marsh); Environmental Stewardship Target Species (South Downs)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Anon @ Chichester Harbour Conservancy	18/04/1995	Fishbourne Channel (Ch)	55 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	16/05/1995	Fishbourne Channel (Ch)	27 Present	Date
SU8303	Sussex Ornithological Society	23/05/2001	Fishbourne Channel (Ch)	20 Present	Date
SU8303	BTO Birdtrack data	21/04/2006	Fishbourne Channel (Ch)	1 Present	Date
SU8303	BTO Birdtrack data	19/05/2011	Fishbourne Channel (Ch)	1 Present	Date
SU8304	Anon @ Chichester Harbour Conservancy	17/06/1992 - 17/06/1992	Fishbourne Channel (Ch)	3 Present	Date
SU8304	BTO Birdtrack data	22/05/2008	Fishbourne	1 Present	Date
SU8304	BTO Birdtrack data	05/04/2011	Fishbourne	1 Present	Date
SU8304	BTO Birdtrack data	17/05/2011	Fishbourne	1 Present	Date
SU839038	Sussex Ornithological Society	07/04/2002	Fishbourne Channel (Ch)	100 Present	Date

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***Ardea cinerea***

## Grey Heron

A fairly common resident, the Grey Heron is increasing in numbers and can be found in most wetland areas standing silently at the water's edge waiting for fish prey. Breeds colonially in tall trees near to plentiful fish supplies.

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	BTO Birdtrack data	21/04/2006	Fishbourne Channel (Ch)	3 Present	Date
SU8303	BTO Birdtrack data	16/03/2011	Apuldram	1 Present	Date
SU8303	BTO Birdtrack data	16/03/2011	Fishbourne Channel (Ch)	1 Present	Date
SU8304	BTO Birdtrack data	02/03/2010	Fishbourne	2 Present	Date
SU8304	BTO Birdtrack data	22/03/2011	Fishbourne	1 Present	Date
SU8304	BTO Birdtrack data	17/05/2011	Fishbourne	2 Present	Date
SU8305	Anon @ BTO Garden Bird Watch	02/04/2007	Fishbourne	1 Present	Date
SU8406	Anon @ BTO Garden Bird Watch	05/03/2007	Chichester CP	1 Present	Date
SU8406	Anon @ BTO Garden Bird Watch	02/04/2007 - 09/04/2007	Chichester CP	1 Present	Date
SU8506	Sussex Ornithological Society	31/03/2008	Chichester Summersdale	1 Present	Date

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***Egretta garzetta***

## Little Egret

A medium-sized white heron with characteristic bright yellow feet which is formerly rare but now breeds and is a fairly common autumn and winter visitor. It overwinters in Britain primarily on estuaries in the south and west and it has been breeding at a few southern sites since 1996. The Little Egret has been recorded from many places along Sussex coasts and estuaries and Chichester and Langstone Harbours are one of the best British locations. It feeds on fish.

Bern Convention Appendix 2; Bird Population Status - amber; Birds Directive Annex 1; EC CITES Annex A

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU80T	BTO Birdtrack data	26/05/2011	Chichester Summersdale	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	16/06/1995	Fishbourne Channel (Ch)	8 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	22/06/1995	Fishbourne Channel (Ch)	11 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	24/06/1998	Fishbourne Channel (Ch)	2 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	02/08/1999	Fishbourne	13 Present	roost
SU8303	BTO Birdtrack data	19/05/2011	Fishbourne Channel (Ch)	1 Present	Date
SU8304	Sussex Ornithological Society	13/01/2005	Fishbourne	18 Present	roost
SU8304	Sussex Ornithological Society	25/06/2006	Fishbourne	5 Present	Date
SU8304	BTO Birdtrack data	22/05/2008	Fishbourne	3 Present	Date
SU8304	BTO Birdtrack data	17/05/2011	Fishbourne	2 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	21/03/1995	Thorney Deeps	65 Present	roost
SU8404	Anon @ Chichester Harbour Conservancy	30/03/1995	Thorney Deeps	57 Present	roost
SU8404	Sussex Ornithological Society	07/02/2006	Fishbourne	8 Present	roost
SU8404	Sussex Ornithological Society	16/02/2006	Fishbourne	8 Present	roost



***Alcedo atthis*****Common Kingfisher**

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

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Anon @ Chichester Harbour Conservancy	20/07/1990	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Sussex Ornithological Society	09/08/1990	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	22/08/1990	Fishbourne Channel (Ch)	2 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	29/08/1990	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	24/08/1991 - 24/08/1991	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	08/03/1992 - 08/03/1992	Apuldram	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	30/05/1992 - 30/05/1992	Apuldram	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	11/07/1992 - 11/07/1992	Apuldram	1 Present	Date
SU8303	Sussex Ornithological Society	02/04/1996	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	25/07/1996	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Sussex Ornithological Society	27/08/1998	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	07/03/2002	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Sussex Ornithological Society	14/03/2006	Fishbourne Channel (Ch)	2 Present	Date

SU8304	Anon @ Chichester Harbour Conservancy	01/03/1991 - 01/03/1991	Fishbourne Channel (Ch)	3 Present	Date
SU8304	Anon @ Chichester Harbour Conservancy	28/08/1991 - 28/08/1991	Fishbourne Channel (Ch)	1 Present	Date
SU8304	Anon @ Chichester Harbour Conservancy	17/08/1992 - 17/08/1992	Fishbourne Channel (Ch)	2 Present	Date
SU8403	Anon @ Chichester Harbour Conservancy	08/06/1992 - 08/06/1992	Apuldram	1 Present	Date
SU8403	Anon @ Chichester Harbour Conservancy	15/07/1992 - 15/07/1992	Apuldram	1 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	01/03/1992 - 01/03/1992	Fishbourne	1 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	04/08/1995	Fishbourne	2 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	07/08/1998	Fishbourne	2 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	15/08/2002	Fishbourne	1 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	18/06/2008	Fishbourne	1 Present	Date
SU8404	Sussex Ornithological Society	13/08/2009	Fishbourne	1 Present	Date

## *Milvus milvus*

## Red Kite

This unmistakable large bird of prey is a very scarce breeding resident and scarce visitor. Red kites were almost extinct in the UK by the early 1900s but in the last two decades, they have been re-introduced to England and Scotland, with magnificent results. It is easily recognised by its red colour and forked tail. It feeds on carrion, worms and small mammals.

Bird Population Status - amber; Birds Directive Annex 1; Convention on Migratory Species; Appendix 2; EC CITES Annex A; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

Grid Reference	Recorder	Date	Locality	Abundance	Selection Based On
SU8206	Sussex Ornithological Society	12/05/2009	East Ashling Oakwood Hse	1 Present	Date
SU8303	Sussex Ornithological Society	07/04/2004	Apuldram	1 Present	Date
SU8604	BTO Birdtrack data	11/05/2008	Chichester CP	1 Present	Date

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***Falco peregrinus***

## Peregrine Falcon

Scarce breeding resident, passage migrant and winter visitor usually nesting on cliffs. This large and powerful falcon is well-known for its propensity to roost on tall buildings and has been widely recorded in Sussex. Takes medium-sized birds, such as wading birds, pigeons and small ducks.

Bern Convention Appendix 2; Birds Directive Annex 1; Convention on Migratory Species; Appendix 2; EC CITES Annex A; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU80M	BTO Birdtrack data	10/04/2011	Chichester West	1 Present	Date
SU8303	Anon @ Chichester Harbour Conservancy	12/05/1993	Pilsey Sands (Ch)	1 Present	Date
SU8303	Sussex Ornithological Society	07/04/2004	Apuldram	1 Present	Date
SU8303	BTO Birdtrack data	14/03/2005	Fishbourne Channel (Ch)	1 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	11/04/1996	Fishbourne	1 Female	Date
SU8404	BTO Birdtrack data	05/06/2008	Fishbourne	1 Present	Date

SU8504	Sussex Ornithological Society	23/03/1999	Chichester CP	1 Present	Date
SU8504	Sussex Ornithological Society	23/03/2000	Chichester CP	1 Present	Date
SU8504	Sussex Ornithological Society	26/04/2000	Chichester CP	1 Present	Positive Breeding
SU8504	Sussex Ornithological Society	22/03/2002	Chichester CP	3 Present	Date
SU8504	Sussex Ornithological Society	19/04/2002	Chichester CP	1 Present	Date
SU8504	Sussex Ornithological Society	08/05/2002	Chichester CP	2 Present	Date
SU8504	Sussex Ornithological Society	30/05/2002	Chichester CP	2 Present	Positive Breeding
SU8504	Sussex Ornithological Society	01/06/2002	Chichester CP	2 Present	Positive Breeding
SU8504	Sussex Ornithological Society	03/06/2002	Chichester CP	3 Present	Date
SU8504	Sussex Ornithological Society	17/06/2002	Chichester CP	3 Present	Positive Breeding
SU8504	Sussex Ornithological Society	20/06/2002	Chichester CP	6 Present	Positive Breeding
SU8504	Sussex Ornithological Society	30/06/2002	Chichester CP	6 Present	Positive Breeding
SU8504	Sussex Ornithological Society	22/08/2002	Chichester CP	1 Present	Date
SU8504	Anon @ SOS Website	06/03/2003	Chichester CP	1 Male; 1 Present	Positive Breeding
SU8504	Sussex Ornithological Society	10/03/2003	Chichester CP	2 Present	Date
SU8504	Anon @ SOS Website	24/03/2003	Chichester CP	1 Present	Positive Breeding
SU8504	Anon @ SOS Website	31/03/2003	Chichester CP	2 Present	Positive Breeding
SU8504	Sussex Ornithological Society	31/03/2003	Chichester CP	1 Present	Positive Breeding
SU8504	Sussex Ornithological Society	30/04/2003	Chichester CP	1 Present	Date
SU8504	Anon @ SOS Website	11/05/2003	Chichester CP	6 Present	Positive Breeding
SU8504	Sussex Ornithological Society	09/07/2003	Chichester CP	2 Present	Date
SU8504	Anon @ SOS Website	23/03/2005	Chichester CP	2 Present	Date
SU8504	BTO Birdtrack data	12/05/2007	Chichester CP	5 Present	Date
SU8504	BTO Birdtrack data	03/05/2009 - 16/05/2009	Chichester CP	1 Present	Positive Breeding
SU8504	BTO Birdtrack data	16/05/2009	Chichester CP	2 Present	Positive Breeding
SU8504	BTO Birdtrack data	25/05/2011	Chichester CP	1 Present	Date
SU8506	Sussex Ornithological Society	31/05/2010	Chichester Summersdale	2 Present	Date
SU8506	Sussex Ornithological Society	30/06/2010	Chichester Summersdale	1 Present	Date
SU859046	Sussex Ornithological Society	22/03/2002	Chichester CP	2 Present	Date

SU859047	Sussex Ornithological Society	15/03/2001	Chichester CP	1 Present	Date
SU859047	Sussex Ornithological Society	19/03/2001	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	23/03/2001	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	28/03/2001	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	30/03/2001	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	04/04/2001	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	17/04/2001	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	01/05/2001	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	14/05/2001	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	21/05/2001	Chichester CP	3 Present	Positive Breeding
SU859047	Sussex Ornithological Society	11/06/2001	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	23/08/2001	Chichester CP	1 Present	Date
SU859047	Sussex Ornithological Society	07/03/2003	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	18/03/2003	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	24/03/2003	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	26/03/2003	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	28/03/2003	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	31/03/2003	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	22/05/2003	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	05/06/2003	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	12/06/2003	Chichester CP	6 Present	Positive Breeding
SU859047	Sussex Ornithological Society	20/06/2003	Chichester CP	6 Present	Positive Breeding
SU859047	Sussex Ornithological Society	26/03/2004	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	27/03/2004	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	29/03/2004	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	31/03/2004	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	05/04/2004	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	06/04/2004	Chichester CP	3 Present	Date
SU859047	Sussex Ornithological Society	04/05/2004	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	05/05/2004	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	27/05/2004	Chichester CP	2 Present	Positive Breeding

SU859047	Sussex Ornithological Society	17/06/2004	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	22/03/2005	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	26/03/2005	Chichester CP	3 Present	Date
SU859047	Sussex Ornithological Society	28/03/2005	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	30/03/2005	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	01/04/2005	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	01/04/2005	Chichester CP	3 Present	Date
SU859047	Sussex Ornithological Society	04/04/2005	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	05/05/2005	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	27/05/2005	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	14/06/2005	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	03/04/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	06/04/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	08/04/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	10/04/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	11/05/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	12/05/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	14/05/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	18/05/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	01/06/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	23/06/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	25/06/2006	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	23/03/2007	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	25/03/2007	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	27/03/2007	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	30/03/2007	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	01/05/2007	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	03/05/2007	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	23/05/2007	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	11/06/2007	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	13/06/2007	Chichester CP	2 Present	Positive Breeding

SU859047	Sussex Ornithological Society	19/03/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	21/03/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	23/03/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	26/03/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	27/04/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	28/04/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	20/05/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	08/06/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	09/06/2008	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	18/03/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	19/03/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	20/03/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	23/03/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	23/04/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	24/04/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	25/04/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	13/05/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	05/06/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	09/06/2009	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	20/03/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	22/03/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	25/03/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	27/03/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	27/04/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	28/04/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	17/05/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	07/06/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	09/06/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	12/06/2010	Chichester CP	2 Present	Positive Breeding
SU859047	Sussex Ornithological Society	14/06/2010	Chichester CP	6 Present	Positive Breeding
SU859047	Sussex Ornithological Society	21/03/2011	Chichester CP	2 Present	Date

SU859047	Sussex Ornithological Society	23/03/2011	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	24/03/2011	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	26/03/2011	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	26/04/2011	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	27/04/2011	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	28/04/2011	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	17/05/2011	Chichester CP	2 Present	Date
SU859047	Sussex Ornithological Society	07/06/2011	Chichester CP	3 Present	Date
SU859047	Sussex Ornithological Society	08/06/2011	Chichester CP	4 Present	Date
SU859047	Sussex Ornithological Society	09/06/2011	Chichester CP	5 Present	Date
SU859047	Sussex Ornithological Society	13/06/2011	Chichester CP	6 Present	Date
SU859048	Anon @ SOS Website	19/03/2004	Chichester CP	1 Male; 1 Present	Date
SU860047	Sussex Ornithological Society	22/06/2000	Chichester CP	1 Present	Positive Breeding
SU860047	Sussex Ornithological Society	06/07/2000	Chichester CP	1 Present	Positive Breeding
SU860047	Sussex Ornithological Society	13/07/2000	Chichester CP	2 Present	Positive Breeding
SU860048	Sussex Ornithological Society	09/06/2002	Chichester CP	6 Present	Positive Breeding
SU860048	Sussex Ornithological Society	03/07/2002	Chichester CP	3 Present	Positive Breeding
SU860048	Sussex Ornithological Society	04/08/2002	Chichester CP	1 Male	Date
SU8604	Sussex Ornithological Society	11/03/1997	Chichester CP	2 Present	Date
SU8604	BTO Birdtrack data	13/05/2008	Chichester CP	2 Present	Positive Breeding
SU8606	Sussex Ornithological Society	16/05/2008	Chichester CP	1 Present	Date
SU861047	Sussex Ornithological Society	19/03/2001	Chichester CP	2 Present	Date
SU861047	Sussex Ornithological Society	03/04/2001	Chichester CP	2 Present	Positive Breeding
SU861047	Sussex Ornithological Society	24/04/2001	Chichester CP	2 Present	Positive Breeding
SU861047	Sussex Ornithological Society	21/06/2001	Chichester CP	1 Present	Positive Breeding



***Falco subbuteo*****Eurasian Hobby**

Scarce breeding summer visitor and regular passage migrant. An agile species which feeds on insects and small birds, associated with heathlands that is now also found on farmland with pine clumps and woodland. Widely recorded in Sussex.

Bern Convention Appendix 2; Convention on Migratory Species; Appendix 2; EC CITES Annex A; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Sussex Ornithological Society	28/04/2000	Fishbourne Channel (Ch)	1 Present	Positive Breeding
SU8303	Sussex Ornithological Society	28/04/2000	Fishbourne	1 Present	Positive Breeding
SU8303	Anon @ Chichester Harbour Conservancy	30/05/2002	Apuldram	1 Present	Date
SU8303	BTO Birdtrack data	18/08/2006	Fishbourne Channel (Ch)	1 Present	Date
SU8303	Sussex Ornithological Society	21/07/2011	Fishbourne Channel (Ch)	1 Present	Date
SU8304	Anon @ Chichester Harbour Conservancy	10/07/1992 - 10/07/1992	Fishbourne	1 Present	Date
SU8304	Anon @ Chichester Harbour Conservancy	15/05/1996	Fishbourne	1 Present	Date
SU839038	Sussex Ornithological Society	22/06/2002	Fishbourne Channel (Ch)	1 Present	Positive Breeding
SU8404	Anon @ Chichester Harbour Conservancy	10/07/1992 - 10/07/1992	Fishbourne	1 Present	Date
SU8504	Sussex Ornithological Society	14/08/1991	Chichester CP	1 Present	Date
SU8504	Sussex Ornithological Society	27/05/2002	Chichester CP	1 Present	Positive Breeding
SU8504	Sussex Ornithological Society	26/05/2010	Chichester CP	1 Present	Date
SU8505	Sussex Ornithological Society	12/05/2009	Chichester CP	1 Present	Date
SU854042	Sussex Ornithological Society	23/08/1999	Chichester CP	1 Present	Date

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***Coturnix coturnix*****Common Quail**

This small migratory gamebird is a scarce summer visitor; recorded in variable numbers from year to year. Most records are along the Downs from Beachy Head to central West Sussex in grass or cereal fields, where it feeds on insects and seeds. Quails are rarely seen, but have a distinctive call which can be heard at night. Formerly occasional in winter.

Bird Population Status - amber; Birds Directive Annex 2.2; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8304	Sussex Ornithological Society	01/07/1994 - 10/07/1994	Thorney Deepes	1 Present	Date

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***Perdix perdix*****Grey Partridge**

A medium-sized gamebird with a distinctive orange face, which is a scarce and decreasing resident species that has suffered a major decline nationally. It was formerly widespread on the South Downs but is now very scarce there. Found in arable areas where it feeds on leaves, seeds and insects. However, it continues to be recorded in larger numbers in the far East of the county around Rye Bay.

Bird Population Status - red; Birds Directive Annex 2.1; Environmental Stewardship Target Species (High Weald); Environmental Stewardship Target Species (Low Weald); Environmental Stewardship Target Species (Pevensey Levels); Environmental Stewardship Target Species (Romney Marsh); Environmental Stewardship Target Species (South Downs); Environmental Stewardship Target Species (Wealden Greensand); Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; UK Biodiversity Action Plan priority species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Sussex Ornithological Society	13/05/2009	Fishbourne Channel (Ch)	2 Present	Positive Breeding
SU8304	Sussex Ornithological Society	05/08/1994	Fishbourne	6 Present	Date
SU8304	BTO Birdtrack data	22/05/2008	Fishbourne	2 Present	Date
SU8403	Sussex Ornithological Society	19/03/2005	Fishbourne Sewage Works	2 Present	Date
SU8403	Anon @ Chichester Harbour Conservancy	17/05/2010	Apuldram	2 Present	Date

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***Corvus corax*****Common Raven**

This massive black bird with a large bill and diamond shape tail is a scarce resident. It is usually recorded from the coast, especially where there are cliffs, but is sometimes seen inland too. It feeds on carrion.

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8506	Sussex Ornithological Society	31/07/2008	Chichester Summersdale	1 Present	Date

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***Emberiza calandra*****Corn Bunting**

A non-descript brown bunting that is a fairly common but decreasing resident with most records from the Downs and the east of East Sussex. One of the few UK bird species largely dependent on cropped land and it seems particularly to like barley. It feeds on seeds and insects. It can also be found on heathland and open countryside. It has had a dramatic population decline in the UK.

Bird Population Status - red; Environmental Stewardship Target Species (Romney Marsh); UK Biodiversity Action Plan priority species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8204	Anon @ Corn Bunting Survey 93-94	01/06/1993	Fishbourne	1 Present	All records
SU8303	Anon @ Corn Bunting Survey 93-94	01/06/1993	Apuldram Manor Farm	1 Present	All records
SU8303	Anon @ Chichester Harbour Conservancy	24/01/1996	Apuldram	8 Present	All records
SU8303	Anon @ Chichester Harbour Conservancy	17/12/1996	Apuldram	5 Present	All records
SU8304	Anon @ Chichester Harbour Conservancy	02/02/1993	Fishbourne	80 Present	All records
SU8304	Anon @ Chichester Harbour Conservancy	19/12/1995	Fishbourne	5 Present	All records
SU8304	Anon @ Chichester Harbour Conservancy	10/01/1996	Fishbourne	12 Present	All records
SU8304	Anon @ Chichester Harbour Conservancy	07/02/1996	Fishbourne	93 Present	All records
SU8403	Anon @ Corn Bunting Survey 93-94	01/06/1993	Apuldram	1 Present	All records
SU8403	BTO Birdtrack data	01/11/2007	Apuldram	11 Present	All records
SU8404	Anon @ Chichester Harbour Conservancy	16/01/1996	Fishbourne	2 Present	All records

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***Loxia curvirostra*****Common Crossbill**

A chunky finch with a large head and bill, it is a scarce visitor occurring in large numbers in irruption years. Feeds almost exclusively on seeds in conifer woodlands. Breeds occasionally and can be seen flying in family groups or larger flocks.

Bern Convention Appendix 2; Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8504	Sussex Ornithological Society	19/07/1997	Chichester CP	2 Present	Date

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***Delichon urbicum***

## House Martin

A distinctive hirundine with a forked tail and white rump, it is a common summer visitor and abundant passage migrant. It is more abundant in urban areas than in the countryside because of the availability of suitable nesting sites in the eaves of buildings, but it will feed on around insects that it finds on agricultural land and around water.

Bern Convention Appendix 2; Bird Population Status - amber

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8504	Sussex Ornithological Society	28/07/2004	Chichester CP	24 Present	Positive Breeding
SU8504	Sussex Ornithological Society	02/07/2009	Chichester CP	16 Present	Positive Breeding
SU8604	Sussex Ornithological Society	07/09/2000	Chichester CP	28 Present	Positive Breeding
SU864048	Sussex Ornithological Society	07/09/1991	Chichester CP	15 Present	Positive Breeding
SU867045	Sussex Ornithological Society	07/05/2004	Chichester CP	2 Present	Positive Breeding
SU867045	Sussex Ornithological Society	30/04/2005	Chichester CP	2 Present	Positive Breeding
SU867045	Sussex Ornithological Society	18/06/2005	Chichester CP	2 Present	Positive Breeding

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***Motacilla flava***

## Yellow Wagtail

This small elegant yellow bird is a scarce and very localised summer visitor and fairly common autumn passage migrant. It is primarily a bird of coastal levels, mainly in East Sussex, and also areas of short grass. Its diet consists of small insects, including flies and beetles; it is often seen associating with cattle to find insects. It appears to have been in decline since at least the 1980s, most likely due to loss of habitat for nesting and feeding.

Bern Convention Appendix 2; Bird Population Status - red; Environmental Stewardship Target Species (Romney Marsh); UK Biodiversity Action Plan priority species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Sussex Ornithological Society	05/05/2005	Fishbourne Channel (Ch)	1 Male	Date

---

***Poecile montanus***

## Willow Tit

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

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU851065	Anon @ Chichester NHS	2002 - 2007	Brandy Hole Copse LNR	Taxon Present	All records

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***Regulus ignicapilla***

## Firecrest

Scarce breeder; passage migrant and winter visitor. A bird that shows a preference for the edges of mature spruce plantations. This tiny beautiful bird is recorded from only a few scattered locations in our area.

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8304	BTO Birdtrack data	29/08/2011	Fishbourne	1 Present	Date
SU834036	Anon via Ralph Hollins	09/03/1999	Apuldram	1 Present	Date
SU8403	Sussex Ornithological Society	23/07/2009	Apuldram	1 Present	Positive Breeding
SU8403	Sussex Ornithological Society	30/07/2009	Apuldram	2 Present	Positive Breeding
SU858046	Sussex Ornithological Society	15/03/2005	Chichester CP	1 Present	Date

***Cettia cetti*****Cetti's Warbler**

A small, but loud, skulking bird that is a scarce but increasing resident; passage migrant and winter visitor. First recorded from Sussex in 1962 and slowly increasing. Most records are from coastal locations where it's favoured habitat of thick, damp overgrown vegetation is most common.

Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU8303	Sussex Ornithological Society	14/03/2006	Apuldram	1 Present	Date
SU8303	Sussex Ornithological Society	17/04/2007	Apuldram	1 Present	Date
SU8303	BTO Birdtrack data	28/04/2009	Fishbourne Channel (Ch)	1 Present	Positive Breeding
SU8303	Sussex Ornithological Society	04/05/2010	Fishbourne Channel (Ch)	1 Present	Positive Breeding
SU8304	Sussex Ornithological Society	25/06/2006	Fishbourne	1 Present	Date
SU8304	Sussex Ornithological Society	23/04/2007	Fishbourne Mill Pond	1 Present	Date
SU8304	BTO Birdtrack data	08/03/2011 - 22/03/2011	Fishbourne	1 Present	Date
SU8304	BTO Birdtrack data	22/03/2011	Fishbourne	2 Present	Date
SU8304	BTO Birdtrack data	05/04/2011	Fishbourne	2 Present	Date
SU8304	BTO Birdtrack data	17/05/2011	Fishbourne	2 Present	Date
SU838044	Anon @ Chichester Harbour Conservancy	13/04/2006	Fishbourne	1 Present	Date
SU838044	Anon @ Chichester Harbour Conservancy	28/04/2006	Fishbourne	1 Present	Date
SU839044	Anon @ Chichester Harbour Conservancy	05/05/2006	Fishbourne	1 Present	Date
SU840045	Sussex Ornithological Society	13/05/2008	Fishbourne	1 Present	Date

SU8404	Sussex Ornithological Society	14/03/2006	Fishbourne	1 Present	Date
SU8404	Sussex Ornithological Society	11/04/2007	Fishbourne	1 Present	Date
SU8404	Sussex Ornithological Society	19/04/2007	Fishbourne	1 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	16/04/2008	Fishbourne	1 Present	Date
SU8404	Anon @ Chichester Harbour Conservancy	07/05/2010	Fishbourne	1 Present	Positive Breeding
SU8404	Anon @ Chichester Harbour Conservancy	13/05/2010	Fishbourne	1 Present	Date
SU843039	Donald Baker	16/05/2008	Fishbourne Meadows	1 Adult	Date

***Tyto alba*****Barn Owl**

A distinctive and much loved bird of the countryside, this scarce breeding resident declined substantially during the last century mainly due to loss of habitat, particularly areas of rough grassland where it hunts for mice, voles and shrews. The position has been improving recently with many nest boxes being erected, although the conversion of barns in Sussex has had a negative impact on potential breeding sites.

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>	<b>Abundance</b>	<b>Selection Based On</b>
SU822055	Sussex Ornithological Society	02/10/1990	Chichester CP	1 Present	All records
SU826054	Sussex Ornithological Society	04/01/1990	Chichester CP	2 Present	All records
SU828048	Sussex Ornithological Society	01/01/2005	Fishbourne	1 Present	All records
SU8303	Anon @ Chichester Harbour Conservancy	11/04/1992 - 11/04/1992	Fishbourne	1 Present	All records
SU8304	Anon @ Chichester Harbour Conservancy	11/08/1992 - 11/08/1992	Fishbourne	1 Present	All records
SU8304	Anon @ Chichester Harbour Conservancy	17/08/1992 - 17/08/1992	Fishbourne	1 Present	All records
SU8304	Anon @ Chichester Harbour Conservancy	17/08/1992 - 17/08/1992	Fishbourne	1 Present	All records
SU8305	Sussex Ornithological Society	17/04/1991	Fishbourne	1 Present	All records
SU8305	Sussex Ornithological Society	15/02/2004	Fishbourne	2 Present	All records
SU8305	Sussex Ornithological Society	15/03/2008	Fishbourne	1 Present	All records
SU831053	Sussex Ornithological Society	30/04/1990	Chichester CP	1 Present	All records
SU834058	Sussex Ornithological Society	17/02/2005	Fishbourne	1 Present	All records
SU8404	Sussex Ornithological Society	09/08/1994	Fishbourne	1 Present	All records
SU8404	Anon @ Chichester Harbour Conservancy	02/01/1995	Thorney Deepes	1 Present	All records
SU847076	Sue Harris	12/01/2010 - 18/01/2010	Lavant	2 Pellet	All records
SU847076	Sue Harris	10/07/2010	Lavant	1 Circling	All records
SU8503	BTO Birdtrack data	07/01/2008	Chichester Stockbridge	1 Present	All records
SU8503	BTO Birdtrack data	18/02/2010	Chichester Stockbridge	1 Present	All records
SU8504	BTO Birdtrack data	26/01/2007	Chichester CP	1 Present	All records



SU8506	Sussex Ornithological Society	31/10/2008	Chichester Summersdale	1 Present	All records
SU855070	Recorder @ SLR	24/07/2007	Chichester	1 Foraging	All records
SU857045	Sussex Ornithological Society	03/11/1997	Chichester CP	1 Present	All records
SU869062	Tracey Jones	2002	Chichester District	Present	All records

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# BIODIVERSITY ACTION PLAN SPECIES INVENTORY

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

## The background

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

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

## At the local level

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

## BAP species within this report

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

## \* Natural Environment & Rural Communities (NERC) Act

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

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

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

## UK BIODIVERSITY ACTION PLAN SPECIES INVENTORY REPORT

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

### Land at Whitehouse Farm, Chichester + 2km radius

02 December 2013 ESD/13/644 **Search Area:** SU8204 to SU8606; SU8307 to SU8507; SU8303 to SU8503

James Bird (The Environmental Dimension Partnership)

### *Carex divisa*

### Divided Sedge

N

Native. This sedge of brackish meadows and tidal river banks can be locally frequent in Sussex. It appears to be surviving well.

#### flowering plant

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species

Grid Reference	Recorder	Date	Locality
SU80H	SPASU	1868 - 1978	West Sussex (VC13)
SU80S	SPASU	1868 - 1989	West Sussex (VC13)
SU83680431	R Williamson	May 1966	Fishbourne
SU839036	Frances Abraham	03/07/2001	Apuldram, West Sussex (VC13)
SU8391304388	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	Fishbourne Marsh, West Sussex (VC13)
SU840045	Neil Sanderson	17/09/1996	Northern Fields, Fishbourne Meadows, Fishbourne
SU8404	Anon @ Sussex Bot. Rec. Soc.; Hilary Englefield	1986 - 2000	Chichester, Chichester District
SU84050411	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	Fishbourne and Fishbourne Marsh, West Sussex (VC13)
SU84180367	Neil Sanderson	23/08/1994	River Lavant Marsh, Apuldram
SU84390399	Howard Matcham; Neil Sanderson; Rod Stern	September 1997	N of sewage works, Fishbourne Meadows, Fishbourne
SU8439503996	Howard Matcham; Frank Penfold; J Barton; Neil Sanderson; Rod Stern; Ruth Tittensor	September 1997	Fishbourne Meadows

### *Carex vulpina*

### True Fox-sedge

N

This nationally rare native sedge of southern lowland England grows on river banks, ditch sides and damp meadows on heavy clay soils which are sometimes flooded in winter. It is currently confined to West Sussex in our area. Separation from false fox-sedge, *Carex otrubae*, is difficult

#### flowering plant

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species

Grid Reference	Recorder	Date	Locality
SU80H	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	Fishbourne, West Sussex (VC13)

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***Puccinellia fasciculata***

## Borrer's Saltmarsh-grass

N

A grass of bare places by the sea, in grazing marshes around cattle-poached pools and depressions and on earthen sea walls. This species was once widespread along the Sussex coast but has declined considerably. Currently known from seven sites along the East and West Sussex coast.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

Grid Reference	Recorder	Date	Locality
SU841037	Neil Sanderson	23/08/1994	River Lavant Marsh, Apuldram
SU84180367	Neil Sanderson	23/08/1994	River Lavant

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***Hordeum marinum***

## Sea Barley

N

An annual grass of brackish places by the sea, tidal river banks and saltmarsh margins. Not seen in West Sussex since 1958 and confined to the Ouse Valley and the Rye Bay area in East Sussex.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

Grid Reference	Recorder	Date	Locality
SU83680431	Richard Williamson	May 1966	Fishbourne Meadows, Fishbourne

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***Melittis melissophyllum***

## Bastard Balm

N

A declining perennial of woodland, wood-borders, hedge banks and scrub and mainly confined to the West Country. Its most easterly site in the British Isles is near Horsham, West Sussex and it was recorded as a casual in Chichester in 1986.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

Grid Reference	Recorder	Date	Locality
SU8404	Anon @ Sussex Bot. Rec. Soc.;D Donovan	1986 - 2001	Chichester, Chichester District
SU8604	Anon @ Sussex Bot. Rec. Soc.;D Donovan	1986 - 2001	Chichester, Chichester District

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***Scandix pecten-veneris***

## Shepherd's-needle

N

A long-established annual of arable fields and rarely on waste ground, coastal cliffs and in gardens. Has declined dramatically since the advent of modern agriculture, but still has five recent records in West Sussex and three in East Sussex.

**flowering plant**

IUCN (2001) - Critically endangered; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

Grid Reference	Recorder	Date	Locality
SU823043	Anon @ Monks Wood	1954	West Sussex (VC13)

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***Bupleurum tenuissimum***

## Slender Hare's-ear

N

Grows in brackish pastures, the landward edges of saltmarshes and on sea-walls. A declining plant still found in a number of locations along the East and West Sussex coasts.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU83930381	Nick Sturt;Elizabeth Sturt	06/09/2005	Just N of Apuldram Sluice, West Sussex (VC13)

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**Lucanus cervus****Stag Beetle****N**

A beetle of broadleaved woodland, parks, other pasture woodland and gardens. The larvae live in the decaying wood of deciduous trees, often in roots and stumps. Widely recorded from West Sussex but rare in East Sussex and apparently absent from much of the vice-county.

**insect - beetle (Coleoptera)**

Habitats Directive Annex 2 - non-priority species; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.5a; 9.5b)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU834052	Recorder @ Chi Nat His Soc	23/06/2011	Barker Close, Fishbourne, West Sussex (VC13)
SU838046	Recorder @ Chi Nat His Soc	21/05/2011	Mill Lane, Fishbourne, West Sussex (VC13)
SU850049	Recorder @ Chi Nat His Soc	02/07/2011	Sherborne Road, Chichester, West Sussex (VC13)
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR
SU853067	Mike Perry	1999	Brandy Hole Copse, Comps C1 & C2, West Sussex (VC13)
SU854034	Recorder @ Chi Nat His Soc	13/07/2011	Stockbridge Gardens, Chichester, West Sussex (VC13)
SU854057	Recorder @ Chi Nat His Soc	15/07/2011	Wiston Avenue, Chichester, West Sussex (VC13)
SU856036	Recorder @ Chi Nat His Soc	24/07/2011	Stockbridge Road, Chichester, West Sussex (VC13)
SU857051	Recorder @ Chi Nat His Soc	07/06/2011	St Pauls Road, Parklands, West Sussex (VC13)
SU857053	Recorder @ Chi Nat His Soc	27/06/2011	Lancastrian School, Orchard Avenue, Chichester, West Sussex (VC13)
SU858050	Graham Roberts; Simon Curson	12/07/2002	County Hall, Chichester District
SU858067	Recorder @ Chi Nat His Soc	16/07/2011	Lavant Road, Chichester, West Sussex (VC13)
SU858073	Recorder @ Chi Nat His Soc	24/05/2011	The Drive, Summersdale, West Sussex (VC13)
SU85850507	Margaret Enstone	26/05/2011	West Sussex County Council County Hall
SU862045	Recorder @ Chi Nat His Soc	26/06/2011	Cawley Road car park, West Sussex (VC13)
SU862053	Recorder @ Chi Nat His Soc	14/06/2011	Oaklands Way, Chichester, West Sussex (VC13)
SU863051	Tim Randall	21/06/2000	Park beside New Park Road, Chichester District
SU863054	Jim O'Reilly	21/06/2000	Woodland path in City, Chichester District
SU864051	Mrs Purchase	July 2011	New Park Road, Chichester
SU865042	Recorder @ Chi Nat His Soc	05/06/2011	Kingsham Road, Chichester, West Sussex (VC13)
SU865057	Recorder @ Chi Nat His Soc	18/05/2011	Cattle Market car park, Chichester, West Sussex (VC13)
SU866043	Recorder @ Chi Nat His Soc	20/06/2011	Grove Road, Chichester, West Sussex (VC13)
SU866052	Recorder @ Chi Nat His Soc	12/06/2011	Melbourne Road, Chichester, West Sussex (VC13)
SU867045	Recorder @ Chi Nat His Soc	07/07/2011	Whyke Lane, Chichester, West Sussex (VC13)
SU869049	Recorder @ Chi Nat His Soc	04/07/2011	Guilden Road, Chichester, West Sussex (VC13)

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***Eucera (Eucera) longicornis***

## Long-horned Bee

N

A mining bee that nests gregariously in warm, sandy soil areas. The species is confined to southern England and Wales and has been recorded from only a very few sites in our area, mainly in East Sussex.

**insect - hymenopteran**

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

Grid Reference	Recorder	Date	Locality
SU8507	Recorder @ BWARS	09/06/1906	Lavant

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***Odynerus (Odynerus) melanocephalus***

## Black-headed Mason Wasp

N

A solitary wasp associated with open habitats such as clifflands, heaths, dry grassland and scrub. In Sussex recorded only Lavant in the west and Hastings Country Park in the east.

**insect - hymenopteran**

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

Grid Reference	Recorder	Date	Locality
SU855077	Recorder @ BWARS	16/06/1984	Lavant

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***Arctia caja***

## Garden Tiger

N

A dramatically coloured large moth with woolly bear larvae that eat a wide variety of plants. Widespread across Sussex, though often absent from some areas.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2006	11 Wiston Avenue

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***Spilosoma lubricipeda***

## White Ermine

N

A white moth with black speckles. Flies in the summer months and 'woolly bear' larvae feed on low-growing plants. Widespread across Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	13/06/2004	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Mike Perry;Robin Storkey	29/04/2007	Brandy Hole Copse LNR
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Spilosoma luteum***

## Buff Ermine

N

A yellowish-buff summer-flying moth normally with black speckles. Larvae feed on low-growing plants as well as trees and shrubs. Widespread and often common in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Tyria jacobaeae***

## Cinnabar

N

A red and black day-flying moth whose orange and black ringed larvae feed on ragwort and related plants. Common across Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU847054	Bob Dexter	02/06/2009	West Sussex (VC13)
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Mike Perry;Robin Storkey	07/06/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Watsonalla binaria***

## Oak Hook-tip

N

A widespread moth of woods and parks, though said to be rapidly declining. Relatively common in Sussex, but numbers are inclined to fluctuate.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	05/09/2004	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Mike Perry;Robin Storkey	29/04/2007	Brandy Hole Copse LNR
SU854037	Mike Perry	2010	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Chiasmia clathrata***

## Latticed Heath

N

A moth that flies both by day and by night on downland, commons, open woodland and similar habitats. Widespread but local in Sussex. Some records of this species are under the nominate subspecies *Semiothisa clathrata clathrata*.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)



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***Cyclophora porata***

## False Mocha

N

A geometrid moth which frequents woodland and heathland. The larva feeds on oak. Local in southern England, Wales, and parts of the Midlands. Rather few Sussex records.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Ecliptopera silaceata***

## Small Phoenix

N

A common moth in England and Wales and, though widespread in Scotland, it is less common there. It lives in a variety of habitats including open woodland, downland, commons, gardens and waste ground. Generally common in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	06/08/2004	Brandy Hole Copse LNR
SU854037	Mike Perry	2010	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Ennomos fuscantaria***

## Dusky Thorn

N

A moth of woods and parks flying from late July to October. Larvae live on ash (*Fraxinus excelsior*). Scattered across Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	J.I. Perry;M.C. Perry	23/09/2006	Brandy Hole Copse LNR, West Sussex (VC13)
SU854037	Mike Perry	2009	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Eulithis mellinata***

## Spinach

N

Found in commons and open woodland and also gardens where its foodplants grow. Larvae on red and black currants. Widespread and moderately common in England and Wales, very local in Scotland. Rather scarce in Sussex with scattered records.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2010	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Hemistola chrysoptera***

## Small Emerald

N

A moth of downland, hedgerows and edges of woods, mainly found on chalk. Larva on Clematis. Widely distributed in the southern half of Britain, less frequent from the Midlands northwards to Lincolnshire and Westmorland. Widespread in Sussex, mainly from the coast and the Downs.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Lycia hirtaria***

## Brindled Beauty

N

A March and April flying moth of woods and gardens. The female has very reduced wings and is unable to fly. Larvae on a wide range of trees and shrubs. Scattered records across Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Melanthia procellata***

## Pretty Chalk Carpet

N

Hedgerows, edges of woods and bushy places on calcareous soils. Larva on Clematis. Southern England ranging northwards to Lincolnshire and Caernarvonshire. In our area mainly recorded from the West Sussex Downs.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Isobel Perry;Mike Perry;Robin Storkey	09/08/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	2004	11 Wiston Avenue

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***Scopula marginepunctata***

## Mullein Wave

N

A mostly coastal moth, the larva feeding on low plants. Southern England and Wales, also noted from Cumbria, Yorkshire and a few localities in Scotland. Most Sussex records are from the Rye Harbour area in East Sussex, or Pagham Harbour in West Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2003	11 Wiston Avenue

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***Timandra comae*****Blood-Vein****N**

A widespread and moderately common moth in southern Britain with records from across Sussex. It is regarded as being in rapid decline.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	05/09/2004	Brandy Hole Copse LNR
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Xanthorhoe ferrugata*****Dark-barred Twin-spot Carpet****N**

A widespread species in Sussex commoner in some years than in others. Found in gardens, scrubland and often on the coast. The larvae feed on a variety of low growing plants. This species is declining generally across the country as a whole.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Mike Perry;Robin Storkey	29/04/2007	Brandy Hole Copse LNR
SU854037	Mike Perry	2010	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Malacosoma neustria*****Lackey****N**

The larvae of this moth feed on a variety of trees and shrubs, living in a communal tent. Distributed throughout the southern half of England becoming very local further north. The species is vulnerable to flail cutting of hedges in winter and may be declining.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2009	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Acronicta rumicis*****Knot Grass****N**

A widely distributed moth in in the southern half of the British Isles, but one that is marked decline. Widely recorded in Sussex.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Agrochola litura***

## Brown-spot Pinion

N

A chestnut-coloured noctuid moth that flies in autumn. The larvae live initially on low-growing plants and later on trees and shrubs. Widely distributed across Sussex, but liable to population fluctuations and scarce in the east.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2006	11 Wiston Avenue

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***Agrochola lychnidis***

## Beaded Chestnut

N

A brown noctuid moth flying in September and October. Larvae feed on low plants and later on the leaves of trees and shrubs. Widespread in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2009	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Allophyes oxyacanthae***

## Green-brindled Crescent

N

An autumn-flying noctuid moth with a metallic sheen. Frequents woodlands, hedgerows and gardens. Larvae on a variety of trees and bushes. Widespread in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Amphipoea oculea***

## Ear Moth

N

A widespread moth in the British Isles that prefers marshy and damp places. It is in marked decline. Widely recorded in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Amphipyra tragopoginis***

## Mouse Moth

N

A widespread moth in the British Isles, but one that is in marked decline. Very widely recorded in Sussex.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Isobel Perry;Mike Perry;Robin Storkey	09/08/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	2008	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Apamea anceps***

## Large Nutmeg

N

Although a widespread species in the UK, it is in marked decline and is very thinly distributed across Sussex. Larvae feed on various grasses.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Apamea remissa***

## Dusky Brocade

N

A generally distributed moth of open woodland, marshes, downland, commons and other grassy places that is in marked decline. Larvae live on grasses. Widely recorded in Sussex.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Atethmia centrago***

## Centre-barred Sallow

N

An orange and brown noctuid moth of woodlands and hedgerows on the wing in late summer and early autumn. Larvae feed on ash. Widespread in Sussex.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2009	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Brachylomia viminalis***

## Minor Shoulder-knot

N

A greyish, rather variable noctuid moth of damp woodlands flying in July and August, heath and fen. The larvae feed on willows. Widespread in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2004	11 Wiston Avenue

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***Caradrina morpheus***

## Mottled Rustic

N

A common noctuid moth whose larvae feed on nettle, dandelion and other low-growing plants. It is in marked decline in the UK, but has been very widely recorded in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Isobel Perry;Mike Perry;Robin Storkey	09/08/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Celaena leucostigma***

## Crescent

N

A local species of wetlands throughout Britain. In Sussex it is widespread in wetlands near the coast and a few areas inland. Caterpillars feed on Yellow Flag Iris and Great Fen Sedge.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2003	11 Wiston Avenue

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***Diarsia rubi***

## Small Square-spot

N

A brown noctuid moth which flies in early and again in late summer. Larvae eat a wide variety of low-growing plants. Widespread and often abundant in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Diloba caeruleocephala***

## Figure of Eight

N

An autumn-flying moth of woodlands, hedges and commons. Larvae on a variety of trees. Widespread but rather scarce in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	01/01/2002 - 31/12/2002	11 Wiston Avenue, Chichester, 11 Wiston Avenue

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***Graphiphora augur***

## Double Dart

N

A nationally common species of woods and hedgerows throughout UK. In Sussex it is irregularly recorded from widely scattered sites all over the county suggesting low population density or immigration. Caterpillars feed on various shrubs.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2010	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Hoplodrina blanda***

## Rustic

N

A noctuid moth of gardens, grasslands and heath with larvae that feed on a variety of low-growing plants. Very widely recorded in Sussex, but in marked decline in the UK generally.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	24/07/2004	Brandy Hole Copse LNR
SU852066	Isobel Perry;Mike Perry;Robin Storkey	28/06/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Hydraecia micacea***

## Rosy Rustic

N

A widespread noctuid moth, but one that is in marked decline in the British Isles. Larvae feed in the larger roots of a variety of plants such as docks. Very widely recorded in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Melanchra persicariae***

## Dot Moth

N

A dark noctuid moth with a distinctive white wing spot. Larvae feed on a wide variety of low-growing plants and trees. Widely recorded in Sussex.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2010	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Melanchra pisi***

## Broom Moth

N

A mid-brown, variable noctuid moth associated with open woodland and heathland. The distinctive caterpillar with longitudinal yellow stripes feeds on broom, bracken and other plants. Recorded from across Sussex, but not common.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	01/01/1999 - 31/12/1999	11 Wiston Avenue, Chichester, 11 Wiston Avenue

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***Mesoligia literosa***

## Rosy Minor

N

A noctuid moth with its strongholds on or near the coast, but also widely distributed inland in Sussex, though now in marked decline in the UK. The caterpillars feed on grasses.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Mythimna comma***

## Shoulder-striped Wainscot

N

One of the more strongly patterned wainscot moths flying in midsummer. The larvae are found on various grasses.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2011	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)



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***Orthosia gracilis***

## Powdered Quaker

N

An early-flying noctuid moth attracted to sallow blossom and other flowers in April and May. Larvae usually on sallow in southern Britain. Widespread in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2012	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Shargacucullia lychnitis***

## Striped Lychnis

N

This nationally scarce (a) species occurs in central southern England mostly on the chalk. In Sussex it only occurs in the western half of West Sussex, usually on the Downs west of Cocking, but sometimes near Chichester. Caterpillars feed on the flowers of Dark Mullein.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2008	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Tholera decimalis***

## Feathered Gothic

N

A brown noctuid moth or rough grasslands in late summer and autumn with white feathering on the forewings. Larvae on grass. Widespread in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	05/09/2004	Brandy Hole Copse LNR
SU854037	Mike Perry	2007	11 Wiston Avenue

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***Xanthia gilvago***

## Dusky-lemon Sallow

N

This nationally local species is widely distributed throughout Britain. In Sussex it has declined greatly and is now only recorded from two very well recorded spots in Peacehaven and Walberton. It may still be widely distributed, but in very low numbers. Caterpillars feed on Elms.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2003	11 Wiston Avenue

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***Xanthia icteritia***

## Sallow

N

An attractive yellow and brown autumn-flying noctuid. The larvae feed first on sallow catkins then on low-growing plants. Widespread in Sussex.

**insect - moth**

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2010	11 Wiston Avenue, Chichester, PO19 8RJ, West Sussex (VC13)

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***Coenonympha pamphilus***

## Small Heath

N

A small grassland butterfly that is fairly widespread in Sussex, especially on the Downs. The species has become much less common than it used to be in many areas in recent decades.

**insect - butterfly**

IUCN (2001) - Lower risk - near threatened; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; UK Biodiversity Action Plan priority species)

Grid Reference	Recorder	Date	Locality
SU837046	Anon @ M&S Big Butterfly Count	28/07/2010	Fishbourne, West Sussex (VC13)
SU842045	Mike Perry	30/07/2008	Fishbourne Manor

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***Limenitis camilla***

## White Admiral

N

A fairly widespread woodland butterfly that has increased a little in numbers and range in Sussex in recent decades. The larvae are found on honeysuckle.

**insect - butterfly**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; UK Biodiversity Action Plan priority species)

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS	2002 - 2007	Brandy Hole Copse LNR
SU851066	Mike Perry	05/07/2008	Brandy Hole Copse, Chichester
SU851067	Mike Perry	02/07/2004	Brandy Hole Copse, Chichester, Brandy Hole Copse LNR
SU852066	Mike Perry	29/06/2006	Brandy Hole Copse
SU852067	Mike Perry	25/07/2004	Brandy Hole Copse, Chichester, Brandy Hole Copse LNR

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***Anguilla anguilla***

## European Eel

N

Eels breed in the sea and migrate to freshwater to grow before returning to the sea to spawn. This unusual fish is in sharp decline, though the reasons are not fully understood. However, it is generally thought that habitat degradation is a major factor. It has been found across the British Isles and very widely in Sussex.

**bony fish (Actinopterygii)**

IUCN (2001) - Critically endangered; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; UK Biodiversity Action Plan priority species)

Grid Reference	Recorder	Date	Locality
SU8370204462	EMU	23/08/2002	Northern Channel, Fishbourne Channel (Ch)
SU8439503996	Andrew Tittensor; Anne De Potier	July 1997	Fishbourne Meadows

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***Bufo bufo***

## Common Toad

N

Still a widespread species in Sussex but declining due to loss of habitat and other factors. Toads tend to have large populations centred on particular breeding sites and they may become locally extinct if these are damaged or destroyed. Common toads are legally protected against sale.

**amphibian**

Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.5a; 9.5b)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8504	SARG Sussex Amphibian & Reptile Grp	01/01/1992	Bishops Palace Gardens, Chichester, West Sussex (VC13)
SU851065	Anon @ Chichester NHS	1999 - 2006	Brandy Hole Copse LNR
SU851066	SARG recorder	21/03/2000	Brandy Hole Copse, Chichester, Brandy Hole Copse LNR
SU852049	SARG 2002 Leaflet	2002	35 Beech Avenue, Chichester, West Sussex (VC13)
SU856034	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU856072	Recorder @ Lizard Landscape Design	20/09/2010	Hunters Rest, Lavant Road, Chichester, West Sussex (VC13)
SU858053	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU858066	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU862065	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)

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***Triturus cristatus***

## Great Crested Newt

N

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

**amphibian**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU829048	Neil Proctor	March 2002	The Willows, Main Road, Fishbourne, Chichester, West Sussex (VC13)

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***Erinaceus europaeus*****West European Hedgehog****N**

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

**terrestrial mammal**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8304	W G Teagle	17/06/1968	Old Fishbourne, West Sussex (VC13)
SU835053	Gabrielle Dent	October 1999	30 Barker Close, Fishbourne, West Sussex (VC13)
SU8505	W G Teagle	19/06/1968	Chichester, West Sussex (VC13)
SU853033	Neil Mitchell	02/08/2002	A286 Stockbridge, West Sussex (VC13)
SU860064	Recorder @ Betts Ecology	12/05/2010 - 11/06/2010	Roussillon Barracks, Chichester, West Sussex (VC13)
SU8604	Recorder @ WildCall	21/06/2013	Garden of 53 Cambrai Avenue, Chichester, West Sussex (VC13)

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***Arvicola amphibius*****European Water Vole****N**

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

**terrestrial mammal**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8305	K Fleming	1971	VC13 West Sussex, West Sussex (VC13)
SU833054	Anon	01/05/2004	Field backing on to Bethwines farm, Fishbourne channel
SU837064	Mark Elliott	1998	Fishbourne meadows & mill pond, West Sussex (VC13)
SU839045	Steve Sutton	25/08/2006	Fishbourne Meadows
SU840045	Steve Sutton	03/09/2006	Fishbourne Meadows
SU8405	K Fleming	1971	VC13 West Sussex, West Sussex (VC13)
SU841041	Rob Strachan	2001	Stream west of Appledram Lane, West Sussex (VC13)
SU843032	Mr Marland	26/07/2002	Manor Farm, Apuldram, West Sussex (VC13)
SU8439503996	Andrew Tittensor; Anne De Potier	July 1997	Fishbourne Meadows
SU8460605580	Sarah Hughes; Liz Rogers	06/08/2013	Ditch to the north of New Lands Lane, Chichester
SU8462305160	Sarah Hughes; Liz Rogers	06/08/2013	Ditch to the north of 17 Clay Lane, Chichester
SU850032	Sally Quinn	25/02/2002	Mile Pond Farm, Stockbridge
SU855047	Recorder @ WildCall	23/05/2012	Chichester College, West Sussex (VC13)
SU859033	Recorder @ MWHG	09/10/2009	Chichester canal, WVSSite 22, Stockbridge

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***Muscardinus avellanarius*****Hazel Dormouse****N**

A nocturnal species of woodland and overgrown hedgerows. Dormice spend much of their time climbing among branches in search of fruit, nuts, insects and other food. They sleep in nests during the day in hollow trees, unoccupied bird or bat boxes and similar places and hibernate in winter. Dormice occur mainly in southern England in this country and are widespread in suitable habitats in Sussex.

**terrestrial mammal**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU849065	Christian Heyman	07/08/2010	Woods of Fairyhill, Old Broyle Road, Chichester, West Sussex (VC13)

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***Anguis fragilis*****Slow-worm****N**

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

**reptile**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU831048	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/08/1997	1, Blackboy Lane, Fishbourne, West Sussex (VC13)
SU837053	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/01/1995	9, Deeside Avenue, Chichester, West Sussex (VC13)
SU844065	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU8503	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/03/1993	63 Graydon Avenue, Chichester, West Sussex (VC13)
SU8506	SARG Sussex Amphibian & Reptile Grp	20/06/1998	Worcester Road, Chichester, West Sussex (VC13)
SU851065	Anon @ Chichester NHS	1999 - 2006	Brandy Hole Copse LNR
SU856034	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU856072	Recorder @ Lizard Landscape Design	30/09/2010	Hunters Rest, Lavant Road, Chichester, West Sussex (VC13)
SU858030	Recorder @ Aluco Ecology	November 2012	Land at Southfields close, Stockbridge, Donnington Parish, Chichester, Stockbridge area, S of Chichester
SU858035	Mike Perry	03/09/2002	Western bank of Chichester Canal, West Sussex (VC13)
SU858038	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/01/1991	Kings Avenue, Chichester, West Sussex (VC13)
SU858063	SARG 2002 Leaflet	2002	13 Broyle Close, Chichester, West Sussex (VC13)
SU858066	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU862062	Recorder @ Corylus Ecology	22/09/2010	Graylingwell Hospital, Chichester, West Sussex (VC13)
SU864045	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU865052	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU867043	Paul Whitby	May 2011	Whyke Lane, Chichester
SU868044	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)

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***Natrix natrix***

## Grass Snake

N

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

**reptile**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU831048	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	01/08/1997	1, Blackboy Lane, Fishbourne, West Sussex (VC13)
SU844065	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU858030	Recorder @ Aluco Ecology	November 2012	Land at Southfields close, Stockbridge, Donnington Parish, Chichester, Stockbridge area, S of Chichester
SU8606	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	05/06/1999	Summersdale Road, Chichester, West Sussex (VC13)

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***Zootoca vivipara***

## Common Lizard

N

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

**reptile**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8304	SARG Sussex Amphibian & Reptile Grp;Dennis Dey	12/04/1995	Botany Bay, Main Road, Fishbourne, West Sussex (VC13)
SU858063	SARG 2002 Leaflet	2002	13 Broyle Close, Chichester, West Sussex (VC13)
SU858066	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)
SU862062	Recorder @ Corylus Ecology	15/09/2010	Graylingwell Hospital, Chichester, West Sussex (VC13)
SU868044	SARG 2002 Leaflet	2002	West Sussex, West Sussex (VC13)

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***Vertigo (Vertigo) moulinsiana***

## Desmoulin's Whorl Snail

N

This species was formerly considered threatened on a global scale but new records suggest that this is not the case. In the UK, it is known from a series of sites in England stretching from Dorset to Norfolk. It is restricted to long-established calcareous wetlands. Recorded in our area from several sites in West Sussex. 1979-2003.

**mollusc**

Habitats Directive Annex 2 - non-priority species; IUCN (1994) - Lower risk - conservation dependent; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8350204657	EMU	August 2002	Fishbourne Channel (Ch)
SU8350704598	EMU	August 2002	Fishbourne Channel (Ch)
SU8357904596	EMU	August 2002	Fishbourne Channel (Ch)
SU8358604579	EMU	August 2002	Fishbourne Channel (Ch)
SU836045	Martin Willing	1868 - 2003	3 sites,including 836046, Fishbourne Meadows, Fishbourne

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

# SUSSEX RARE SPECIES INVENTORY

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

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

**The criteria for selection of species are listed below:**

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

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

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

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

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

## IUCN Categories of Rarity

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

### Extinct (EX)

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

### Extinct in the Wild (EW)

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



**Critically Endangered (CR)**

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

**Endangered (EN)**

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

**Vulnerable (VU)**

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

**Near Threatened (NT)**

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

**Least Concern (LC)**

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

**Data Deficient (DD)**

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

**Not Evaluated (NE)**

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

**Regionally Scarce (NR)**

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

## SUSSEX RARE SPECIES INVENTORY REPORT

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

### Land at Whitehouse Farm, Chichester + 2km radius

02 December 2013      ESD/13/644      **Search Area:** SU8204 to SU8606; SU8307 to SU8507; SU8303 to SU8503  
James Bird (The Environmental Dimension Partnership)

### *Arthopyrenia punctiformis*

An early colonising lichen of smooth bark of many trees and shrubs found throughout the British Isles. Recorded from only four sites in our area, three in West Sussex and one in East Sussex.

#### fungus

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Sx Lichen Recording Grp; Andrew Branson	2002	Brandy Hole Copse LNR

### *Cladonia cervicornis subsp. cervicornis*

#### lichen

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU85730460	Isobel Perry; Jacqui Middleton	27/07/2004	Chichester - prebendal school

### *Phaeophyscia nigricans*

A lichen that grows on calcareous stonework and asbestos cement particularly bird-perching sites and, more occasionally, dusty tree bases in open situations. Widespread and common, mainly in eastern Britain though the only SxBRC records are from Bexhill and Hastings in East Sussex and Waltham Brooks and Hove in West Sussex. 1950-1989.

#### lichen

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU858047	Francis Rose	11/10/1969	Chichester Cathedral and Bell Tower

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### ***Porpidia soledizodes***

A lichen of rocks, stonework and pebbles sometimes confused with *Porpidia tuberculos*, *P. glaucophaea* and others of the genus. Widespread in the British Isles and recorded in our area from The Crumbles near Eastbourne, East Sussex and the Pagham Harbour area and Apuldram churchyard in West Sussex. 1989-2003.

lichen

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU841033	Simon Davey	27/04/2002	West Sussex (VC13)

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### ***Buellia stellulata***

A lichen found particularly near the sea on acid stonework and shingle beaches. Often confused with *Buellia aethalea*. In Sussex known only from Fairlight Glen and Eridge Park in East Sussex and one unspecified location in West Sussex. 1950-1972

lichen

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8507	Francis Rose	03/05/1984	Raughmere, Lavant

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### ***Fuscidea lightfootii***

A variable lichen of horizontal boughs and twigs, especially of ash and willow, overhanging streams and rivers and in boggy places. Frequent, mainly in the north and west of the British Isles. In our area recorded from Buckhurst Park, Wiligh Park, Dallington Forest and Sheffield Park in East Sussex and Parham Park and North Marden Down in West Sussex. 1968-1991.

lichen

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU842044	Sussex Lichen Recording Group	07/09/2008	Fishbourne Church

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### ***Agaricus xanthodermus***

Yellow Stainer

fungus

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU860067	Mike Goodchild	December 1991	Chichester
SU864068	Mike Goodchild	October 1988	Chichester

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### ***Lepiota aspera***

Freckled Dapperling

fungus

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Mike Goodchild	October 2004 - November 2004	Brandy Hole Copse LNR
SU859051	Mike Goodchild	November 1987	Chichester

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## *Pholiota adiposa*

### fungus

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Mike Goodchild	October 2004 - November 2004	Brandy Hole Copse LNR

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## *Nitella mucronata*

## Pointed Stonewort

A stonewort seldom recorded in Sussex and last seen at Amberley Wild Brooks, West Sussex in 1951. Not recorded in East Sussex since 1937.

### stonewort

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU855035	Robin Crawshaw	2001	West Sussex (VC13)

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## *Syntrichia papillosa*

## Marble Screw-moss

A lowland moss of the bark of mature trees and, very rarely, rocks and walls. Formerly known as *Tortula papillosa*. A declining species in the British Isles. A rare moss of tree trunks and bases in our area with a scatter of records from East Sussex, mainly near the coast.

### moss

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Rod Stern	January 2000 - February 2000	Brandy Hole Copse LNR

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## *Orthotrichum tenellum*

## Slender Bristle-moss

A moss that forms small dark green tufts on the bark of trees and shrubs in open situations. A rare and declining species in lowland Britain, though possibly overlooked in some places. Frequent in north Wales. Recorded from three sites in West Sussex and one in East Sussex since 1950.

### moss

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851067	Tom Ottley	25/12/2011	West Sussex (VC13)

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## *Ulota coarctata*

## Club Pincushion

A lowland moss that grows on shrubs and small trees in sheltered situations by streams and in wet places. Rare to occasional in the north of Britain, very rare elsewhere. Only known in our area from a pre-1900 record from East Sussex and now regarded as extinct.

### moss

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU850066	Howard Matcham	19/12/2011	Chichester
SU851067	Tom Ottley	25/12/2011	West Sussex (VC13)

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***Bryum pallescens***

## Tall-clustered Thread-moss

moss

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU832054	SAMLL	1989	West Sussex (VC13)

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***Adiantum capillus-veneris***

## Maidenhair Fern

This fern is at the northern extent of its range in Britain, and must be considered an introduction in Sussex. It favours warm damp masonry. The largest colony occurs at Ashburnham Place, near Battle in East Sussex. In West Sussex it is still to be found in the grotto of Highdown Gardens.

fern

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU80M	SPASU	1975	West Sussex (VC13)

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***Polypodium cambricum***

## Southern Polypody

A fern of limestone cliffs, old quarry faces, castle walls, and on old mortared walls. There are a few colonies on suitable wall sites in both East and West Sussex, but the species is always vulnerable to masonry destruction, restoration and cleaning.

fern

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU80N	Anon @ Sussex Bot. Rec. Soc.	1986 - 2003	West Sussex (VC13)

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***Arum italicum subsp. neglectum***

## Arum

flowering plant

IUCN (2001) - Lower risk - near threatened; Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU857044	Judy Wilson;Nick Sturt;Elizabeth Sturt	11/05/2005	West Sussex (VC13)
SU858045	Nick Sturt;Elizabeth Sturt	22/12/2004	Chichester CP
SU858047	Anon @ Sussex Bot. Rec. Soc.;D Donovan	1997	Chichester District

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***Hydrocharis morsus-ranae***

## Frogbit

An aquatic plant with floating rosettes that is decreasing nationally. In Sussex it is still locally common especially in the ditches of the Brooks in the Arun Valley in West Sussex, those of Pevensey Levels in East Sussex and some other areas.

flowering plant

IUCN (2001) - Vulnerable; Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU85080666	M. Shaw	29/06/2011	West Sussex (VC13)
SU851065	Anon @ Chichester NHS;Sussex Botanical Recording Soc	1999 - 2007	Brandy Hole Copse LNR
SU851067	Elizabeth Sturt	May 1999 - June 1999	West Sussex (VC13)

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***Stratiotes aloides***

## Water-soldier

**flowering plant**

IUCN (2001) - Lower risk - near threatened; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Sussex Botanical Recording Soc	1999 - 2007	Brandy Hole Copse LNR

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***Elodea callitrichoides***

## South American Waterweed

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU850042	Anon @ Sussex Bot. Rec. Soc.;George Forster	1993	Chichester District
SU859041	Anon @ Sussex Bot. Rec. Soc.;Paul Harmes	1996	Chichester District

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***Ornithogalum pyrenaicum***

## Spiked Star-of-Bethlehem

A native plant of woodland, hedgerows, road verges and rough grassy banks on calcareous soil, especially in parts of the Cotswold area. Recorded from three sites in West Sussex, where it is probably a garden escape.

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU842044	W J Palmer	25/06/1995	Fishbourne
SU843044	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU843045	Alan Knapp;Rod Stern	21/06/2004	Apuldram
SU843046	Mrs Rowe	June 2000	West Sussex (VC13)
SU84370451	A. Spiers	27/06/2005	West Sussex (VC13)
SU8437404528	D. Nelson	26/06/2010	West Sussex (VC13)
SU84380450	A. Spiers	27/06/2005	West Sussex (VC13)
SU84380451	Anne De Potier	27/05/2003	Fishbourne
SU84390445	A. Spiers	27/06/2005	West Sussex (VC13)
SU84390447	A. Spiers	27/06/2005	West Sussex (VC13)
SU844045	Simon Curson	08/06/2004	West Sussex (VC13)

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***Juncus articulatus x acutiflorus = J. x surrejanus***

## Rush

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU838044	Sussex Botanical Recording Soc	31/08/2002	Fishbourne

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***Juncus maritimus***

## Sea Rush

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU833035	Frances Abraham	20/07/2001	West Sussex (VC13)
SU8335203494	Neil Sanderson	17/09/1996	Fishbourne Saltmarsh
SU83390356	Nick Sturt;Elizabeth Sturt	12/08/2005	West Sussex (VC13)
SU835041	Sussex Botanical Recording Soc	31/08/2002	Fishbourne

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***Juncus subnodulosus***

## Blunt-flowered Rush

A strong-growing rush of fens, marshes, wet meadows and ditches, usually in more base-rich conditions. There are three recent records in our area, all from West Sussex. In East Sussex it was last seen on Pevensy Levels.

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8397304484	EMU	23/08/2002	Fishbourne Meadows, Fishbourne
SU840045	Anon @ Sussex Bot. Rec. Soc.;Nick Sturt;Elizabeth Sturt	09/08/1998	West Sussex (VC13)
SU8439503996	Howard Matcham;Frank Penfold;J Barton;Neil Sanderson;Rod Stern;Ruth Tittensor	September 1997	Fishbourne Meadows

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***Cyperus longus***

## Galingale

A rare and local perennial of marshes, pondsides and ditches. Probably native in West Sussex near the coast, planted and established elsewhere.

**flowering plant**

IUCN (2001) - Lower risk - near threatened; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU835041	Sussex Botanical Recording Soc	31/08/2002	Fishbourne
SU836045	Anon @ Sussex Bot. Rec. Soc.	1986 - 2000	West Sussex (VC13)
SU8377304502	Rod Stern;V. Stern	July 2006	West Sussex (VC13)
SU83810451	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU8397304484	EMU	23/08/2002	Fishbourne Meadows, Fishbourne
SU83980447	Alan Knapp;Arthur Hoare	30/07/2005	West Sussex (VC13)
SU851065	Anon @ Chichester NHS;Sussex Botanical Recording Soc	1999 - 2007	Brandy Hole Copse LNR
SU851067	Rod Stern	31/07/2005	West Sussex (VC13)

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***Carex divisa*****Divided Sedge**

Native. This sedge of brackish meadows and tidal river banks can be locally frequent in Sussex. It appears to be surviving well.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU80H	SPASU	1868 - 1978	West Sussex (VC13)
SU80S	SPASU	1868 - 1989	West Sussex (VC13)
SU83680431	R Williamson	May 1966	Fishbourne
SU839036	Frances Abraham	03/07/2001	West Sussex (VC13)
SU8391304388	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU840045	Neil Sanderson	17/09/1996	Fishbourne Meadows, Fishbourne
SU8404	Anon @ Sussex Bot. Rec. Soc.; Hilary Englefield	1986 - 2000	Chichester District
SU84050411	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU84180367	Neil Sanderson	23/08/1994	River Lavant Marsh, Apuldram
SU84390399	Howard Matcham; Neil Sanderson; Rod Stern	September 1997	Fishbourne Meadows, Fishbourne
SU8439503996	Howard Matcham; Frank Penfold; J Barton; Neil Sanderson; Rod Stern; Ruth Tittensor	September 1997	Fishbourne Meadows

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***Carex vulpina*****True Fox-sedge**

This nationally rare native sedge of southern lowland England grows on river banks, ditch sides and damp meadows on heavy clay soils which are sometimes flooded in winter. It is currently confined to West Sussex in our area. Separation from false fox-sedge, *Carex otrubae*, is difficult

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU80H	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)

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***Puccinellia fasciculata*****Borrer's Saltmarsh-grass**

A grass of bare places by the sea, in grazing marshes around cattle-poached pools and depressions and on earthen sea walls. This species was once widespread along the Sussex coast but has declined considerably. Currently known from seven sites along the East and West Sussex coast.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU841037	Neil Sanderson	23/08/1994	River Lavant Marsh, Apuldram
SU84180367	Neil Sanderson	23/08/1994	River Lavant



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## *Puccinellia rupestris*

## Stiff Saltmarsh-grass

A coastal grass of bare saline soils above the tidal limit, behind sea walls and sometimes on firm muddy shingle and in rock crevices. Once declining, it appears to have recovered slightly recently and has been recorded from a number of locations in East and West Sussex.

### flowering plant

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU80H	SPASU	1868 - 1978	West Sussex (VC13)
SU841037	Neil Sanderson	23/08/1994	River Lavant Marsh, Apuldram
SU84180367	Neil Sanderson	23/08/1994	River Lavant
SU84420449	A. Spiers	27/06/2005	West Sussex (VC13)

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## *Poa infirma*

## Early Meadow-grass

An annual grass growing near the sea in open, trampled turf, on cliff-top paths, picnic sites, lawns and car parks and in stabilised dunes and other sandy places. Until quite recently thought to be restricted to west Cornwall, the Isles of Scilly and the Channel Islands, the species is rapidly expanding eastwards and now seems well-established in East and West Sussex.

### flowering plant

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU8567204412	A. Spiers	14/03/2007	Chichester CP
SU8570704435	A. Spiers	14/03/2007	Chichester CP

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## *Catabrosa aquatica*

## Whorl-grass

A rare native perennial of muddy pond margins, cattle-poached ditches, canals and sluggish streams. Once fairly common, though now much less so as its habitats have dried out. A few records from both East and West Sussex.

### flowering plant

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU8304	Anon @ Sussex Bot. Rec. Soc.	1986 - 2003	West Sussex (VC13)
SU839045	Rod Stern;V. Stern	July 2006	West Sussex (VC13)
SU8392404484	Nigel Holmes	01/01/2010	Fishbourne - 2b
SU840045	Neil Sanderson	17/09/1996	Fishbourne Meadows, Fishbourne
SU84390399	Neil Sanderson;Rod Stern	September 1997	Fishbourne Meadows, Fishbourne
SU8439503996	Howard Matcham;Frank Penfold;J Barton;Neil Sanderson;Rod Stern;Ruth Tittensor	September 1997	Fishbourne Meadows

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## *Calamagrostis epigejos*

## Wood Small-reed

A perennial grass, this species has always had its stronghold in the far west of the county. Favouring wet woods, ditches and marshes, it has only very limited populations in East Sussex.

### flowering plant

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU835045	EMU	August 2002	Fishbourne Channel (Ch)
SU8355204560	EMU	23/08/2002	Fishbourne Channel (Ch)
SU8392804422	Rod Stern;V. Stern	July 2006	West Sussex (VC13)

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***Apera spica-venti***

## Loose Silky-bent

This grass which can grow to at least 1m, is possibly native in Sussex but has always been uncommon. A plant of sandy arable and waste ground, it appears to have declined during the last sixty years though it has been found recently in several new locations.

**flowering plant**

IUCN (2001) - Lower risk - near threatened; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU856037	Anon @ Sussex Bot. Rec. Soc.; Hilary Englefield	1997	Chichester District

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***Alopecurus bulbosus***

## Bulbous Foxtail

A rare grass in Sussex, this species is a plant of brackish meadows near the sea and of tidal river banks. Recorded from nine sites across the two counties since 1986.

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU838043	Anne De Potier	2002	Fishbourne Meadows, Fishbourne
SU838044	Sussex Botanical Recording Soc	31/08/2002	Fishbourne
SU839036	Frances Abraham	03/07/2001	West Sussex (VC13)
SU8399704157	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU840037	Anon @ Sussex Bot. Rec. Soc.	1986 - 2000	West Sussex (VC13)
SU840041	Anon @ Monks Wood	1987	West Sussex (VC13)
SU84180367	Neil Sanderson	23/08/1994	River Lavant Marsh, Apuldram

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***Alopecurus geniculatus x bulbosus = A. x plettkei***

## Foxtail

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU841037	Neil Sanderson	23/08/1994	River Lavant Marsh, Apuldram
SU84180367	Neil Sanderson	23/08/1994	River Lavant

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***Bromus secalinus***

## Rye Brome

An introduced grass of cereal fields, which is also found as a casual on waste ground, and occasionally in improved leys. Now very rare in our area and possible gone from West Sussex.

**flowering plant**

Farm Environment Plan Guidance 007- Table 3; IUCN (2001) - Vulnerable; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU83000549	Nick Sturt; Elizabeth Sturt	22/07/2008	West Sussex (VC13)

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***Hordeum marinum***

## Sea Barley

An annual grass of brackish places by the sea, tidal river banks and saltmarsh margins. Not seen in West Sussex since 1958 and confined to the Ouse Valley and the Rye Bay area in East Sussex.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species

Grid Reference	Recorder	Date	Locality
SU83680431	Richard Williamson	May 1966	Fishbourne Meadows, Fishbourne

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***Helleborus foetidus***

## Stinking Hellebore

A short-lived perennial of shallow calcareous soils often in woodland glades or open scrub. Always rare in East Sussex, where it is doubtfully native; the only recent records are of garden escapes. In West Sussex most recent records are also of garden origin, but it still occurs as a presumed native in a few chalky woodland areas especially around Arundel and Houghton.

**flowering plant**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU8606	Anon @ Sussex Bot. Rec. Soc.;D Donovan	1986 - 2001	Chichester District

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***Buxus sempervirens***

## Box

Mostly planted, but possibly native on some sites in the West Sussex South Downs.

**flowering plant**

IUCN (2001) - Data Deficient; Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Victoria Hume	13/05/2008	Brandy Hole Copse
SU861055	Anon @ Ecology Consultancy Ltd	23/08/2011 - 26/08/2011	West Sussex (VC13)
SU864068	Victoria Hume	03/06/2008	Summersdale Copse

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***Myriophyllum verticillatum***

## Whorled Water-milfoil

A perennial of still or slowly flowing calcareous water in lakes, streams, canals and ditches. Very scarce in ponds and ditches across Sussex, although occasionally locally abundant, as at Beeding Brooks.

**flowering plant**

IUCN (2001) - Vulnerable; Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Anon @ Chichester NHS;Sussex Botanical Recording Soc	1999 - 2007	Brandy Hole Copse LNR
SU851067	Elizabeth Sturt	May 1999 - June 1999	West Sussex (VC13)

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***Lathyrus tuberosus***

## Tuberous Pea

**flowering plant**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU80S	SPASU	1960	West Sussex (VC13)

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***Trifolium squamosum***

## Sea Clover

An annual found in the dry, uppermost parts of saltmarshes, brackish meadows and by tidal rivers and creeks. Now scattered very sparingly around Chichester Harbour and the Selsey peninsula in West Sussex. In East Sussex there are isolated records for the estuaries of the Ouse and Cuckmere with an outlier at Camber.

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU80H	SPASU	1987	West Sussex (VC13)
SU80M	SPASU	1987	West Sussex (VC13)
SU840040	Anon @ Sussex Bot. Rec. Soc.; Sylvia Simkin	1994	West Sussex (VC13)

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***Geum rivale***

## Water Avens

A perennial of marshy areas in shaded or open habitats. This plant is local in southern England and is currently known only from one site in West Sussex and as a rare garden escape in East Sussex.

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8204	Mary Briggs	1988	West Sussex (VC13)
SU84390399	Neil Sanderson; Rod Stern	September 1997	Fishbourne Meadows, Fishbourne
SU8439503996	Howard Matcham; Frank Penfold; J Barton; Neil Sanderson; Rod Stern; Ruth Tittensor	September 1997	Fishbourne Meadows

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***Hippophae rhamnoides***

## Sea-buckthorn

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8604	Anon @ Sussex Bot. Rec. Soc.; D Donovan	1986 - 2001	Chichester District

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***Populus nigra subsp. betulifolia***

## Black Poplar

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU84050452	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)

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***Erodium moschatum*****Musk Stork's-bill**

An introduced plant of grassy places, usually near the sea, at one time considered to be very rare. It has been found in recent years in several urban locations in West Sussex. Long extinct in East Sussex.

**flowering plant**

Farm Environment Plan Guidance 007- Table 3; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU850042	Anon @ Sussex Bot. Rec. Soc.; Hilary Englefield	1986 - 2000	Chichester District
SU85450345	Nick Sturt; Elizabeth Sturt	25/05/2005	West Sussex (VC13)
SU8576204430	A. Spiers	14/03/2007	Chichester CP
SU858041	Judy Wilson; Nick Sturt; Elizabeth Sturt	11/05/2005	West Sussex (VC13)
SU86080439	Judy Wilson; Nick Sturt; Elizabeth Sturt	18/05/2005	West Sussex (VC13)
SU861045	Anon @ Sussex Bot. Rec. Soc.; Hilary Englefield	1986 - 2000	Chichester District
SU86770541	A.C. Leslie; Paul Green	28/01/2005	Chichester CP
SU869053	Anon @ Sussex Bot. Rec. Soc.; Rod Stern	1999	Chichester District

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***Lepidium latifolium*****Dittander**

A perennial of creek-sides, ditches, sea-walls, open brackish grassland and the upper fringes of estuarine saltmarshes. Also naturalised in disturbed areas inland. There are several sites in West Sussex but probably never more than casual in East Sussex.

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU835035	Judy Wilson	25/06/2005	West Sussex (VC13)
SU83780441	Anne De Potier	2000	Fishbourne Meadows, Fishbourne
SU8378604412	Anne De Potier	July 2000	Fishbourne
SU838033	Frances Abraham	03/07/2001	West Sussex (VC13)
SU838043	Anon @ Sussex Bot. Rec. Soc.	1986 - 2000	West Sussex (VC13)
SU838044	Sussex Botanical Recording Soc	31/08/2002	Fishbourne
SU83860433	M. Shaw	22/07/2010	West Sussex (VC13)
SU83890428	Anon @ Sussex Bot. Rec. Soc.	31/08/2002	Fishbourne Meadows, Fishbourne
SU8389604389	Rod Stern; V. Stern	July 2006	West Sussex (VC13)
SU839037	Frances Abraham	03/07/2001	West Sussex (VC13)
SU839043	Anon @ Sussex Bot. Rec. Soc.; Nick Sturt	1995	West Sussex (VC13)
SU83930375	Nick Sturt; Elizabeth Sturt	06/09/2005	West Sussex (VC13)
SU83930376	Alan Knapp	11/07/2003	Apuldram
SU83980416	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU84020414	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU843037	Frances Abraham	03/07/2001	West Sussex (VC13)

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## *Cochlearia anglica*

## English Scurvygrass

A rare plant in West Sussex, confined in the county to Chichester Harbour where it is locally frequent and Pagham Harbour where we have one record. Long extinct in East Sussex.

### flowering plant

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU8204	Anon @ Sussex Bot. Rec. Soc.;George Forster	1986 - 2000	West Sussex (VC13)
SU8304	Anne De Potier	2002	West Sussex (VC13)
SU83680431	R Williamson	May 1966	Fishbourne
SU83890387	Anon @ Sussex Bot. Rec. Soc.	16/05/2008	West Sussex (VC13)
SU839041	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU8403004133	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU841045	Graeme Lyons;Dave Green;Tony Davis;Penny Green	06/04/2012	Chichester District

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## *Limonium humile*

## Lax-flowered Sea-lavender

A perennial of ungrazed or lightly grazed muddy estuarine saltmarshes, often growing in close proximity to its commoner relative, *L. vulgare*, but replacing it in some areas. Its only current site in Sussex is the Chichester Harbour area.

### flowering plant

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU833035	Frances Abraham	20/07/2001	West Sussex (VC13)
SU8335203494	Neil Sanderson	17/09/1996	Fishbourne Saltmarsh
SU83390356	Nick Sturt;Elizabeth Sturt	12/08/2005	West Sussex (VC13)
SU835041	Sussex Botanical Recording Soc	31/08/2002	Fishbourne
SU83760321	Anon @ Sussex Bot. Rec. Soc.	10/08/2005	West Sussex (VC13)

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## *Polygonum rurivagum*

## Cornfield Knotgrass

A long-established annual of arable fields and more rarely of ruderal habitats, especially on light chalky soils and calcareous clays. Recorded recently from a few sites in West Sussex and one in East. The true distribution is difficult to ascertain as it is easily confused with the ubiquitous *Polygonum aviculare*.

### flowering plant

Farm Environment Plan Guidance 007- Table 3; Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU866047	Mike Goodchild	04/09/2000	West Sussex (VC13)

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## *Sarcocornia perennis*

## Perennial Glasswort

A subshrub of saltmarshes, especially in bare or sparsely vegetated areas on firm, muddy sand and gravel. Locally frequent around Chichester Harbour, but very rare elsewhere in Sussex, the only other recent records being from Shoreham and Cuckmere Haven.

### flowering plant

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU838041	Anne De Potier	31/08/2002	Fishbourne Meadows, Fishbourne
SU83840339	Anon @ Sussex Bot. Rec. Soc.	10/08/2005	West Sussex (VC13)

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***Salicornia dolichostachya***

## Long-spiked Glasswort

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU835041	Sussex Botanical Recording Soc	31/08/2002	Fishbourne

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***Veronica anagallis-aquatica x catenata = V. x lackschewitzii***

## Water Speedwell

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8304104769	Nigel Holmes	01/01/2010	Blackboy Lane - 1b
SU8392404484	Nigel Holmes	01/01/2010	Fishbourne - 2b
SU8397304484	EMU	23/08/2002	Fishbourne Meadows, Fishbourne

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***Scrophularia vernalis***

## Yellow Figwort

A long-established introduction of woodland clearings, plantations, hedge banks and rough waste ground, usually in shade. Known in our area only from one site at Henfield, West Sussex where its appearance is erratic.

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU858047	Rod Stern	15/04/2009	Chichester CP

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***Melittis melissophyllum***

## Bastard Balm

A declining perennial of woodland, wood-borders, hedge banks and scrub and mainly confined to the West Country. Its most easterly site in the British Isles is near Horsham, West Sussex and it was recorded as a casual in Chichester in 1986.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species)

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8404	Anon @ Sussex Bot. Rec. Soc.;D Donovan	1986 - 2001	Chichester District
SU8604	Anon @ Sussex Bot. Rec. Soc.;D Donovan	1986 - 2001	Chichester District

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***Hieracium lepidulum***

## Hawkweed

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Sussex Botanical Recording Soc	1999 - 2007	Brandy Hole Copse LNR
SU853067	Nick Sturt;Elizabeth Sturt	May 1999 - June 1999	West Sussex (VC13)

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***Dipsacus pilosus***

## Small Teasel

A biennial herb plant of woodland edges, stream and river banks and other habitats, usually on damp, calcareous soils. Rather rare in Sussex but increasing in some parts of the west of our area, mainly around Arundel and Little Bognor.

**flowering plant**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Sussex Botanical Recording Soc	1999 - 2007	Brandy Hole Copse LNR

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***Scandix pecten-veneris***

## Shepherd's-needle

A long-established annual of arable fields and rarely on waste ground, coastal cliffs and in gardens. Has declined dramatically since the advent of modern agriculture, but still has five recent records in West Sussex and three in East Sussex.

**flowering plant**

IUCN (2001) - Critically endangered; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU823043	Anon @ Monks Wood	1954	West Sussex (VC13)

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***Bupleurum tenuissimum***

## Slender Hare's-ear

Grows in brackish pastures, the landward edges of saltmarshes and on sea-walls. A declining plant still found in a number of locations along the East and West Sussex coasts.

**flowering plant**

IUCN (2001) - Vulnerable; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU83930381	Nick Sturt;Elizabeth Sturt	06/09/2005	West Sussex (VC13)

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***Petroselinum segetum***

## Corn Parsley

**flowering plant**

Farm Environment Plan Guidance 007- Table 3; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU833040	Frances Abraham	20/07/2001	West Sussex (VC13)
SU83480407	Anne De Potier	31/08/2002	Fishbourne Meadows, Fishbourne
SU835035	Judy Wilson	25/06/2005	West Sussex (VC13)
SU835041	Sussex Botanical Recording Soc	31/08/2002	Fishbourne
SU83760319	Anon @ Sussex Bot. Rec. Soc.	10/08/2005	West Sussex (VC13)
SU838034	Frances Abraham	03/07/2001	West Sussex (VC13)
SU838044	Sussex Botanical Recording Soc	31/08/2002	Fishbourne
SU839041	Sussex Botanical Recording Soc	31/08/2002	Fishbourne
SU83920404	Anne De Potier	2002	West Sussex (VC13)
SU83930380	Nick Sturt;Elizabeth Sturt	06/09/2005	West Sussex (VC13)
SU83930405	Nick Sturt;Elizabeth Sturt	06/09/2005	West Sussex (VC13)
SU840041	Alan Knapp	11/07/2003	West Sussex (VC13)
SU8404604132	Anon @ Sussex Bot. Rec. Soc.	17/05/2008	West Sussex (VC13)
SU84060411	Nick Sturt;Elizabeth Sturt	06/09/2005	West Sussex (VC13)



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## *Alkmaria romijni*

## Tentacled Lagoon-Worm

annelid

Sussex Protected Species Register Species; Sussex Rare Species Inventory Species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.1 killing/injuring; 9.1 taking; 9.2; 9.4a; 9.4b; 9.5a; 9.5b; Schedule 5)

Grid Reference	Recorder	Date	Locality
SU837043	EMU	03/09/2002	Fishbourne Channel (Ch)

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## *Argiope bruennichi*

spider (Araneae)

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU839040	Steve Sutton	06/08/2006	Fishbourne
SU869047	Mike Goodchild	September 1999	West Sussex (VC13)

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## *Asaphidion flavipes*

A small ground beetle usually found among grass tussocks and litter near fresh water . The taxon was split into three species in 1985 and records before that need to be redetermined or listed as *Asaphidion flavipes* agg. The three taxa of the split are *A. flavipes sensu stricto*, *A. curtum* and *A. stierlini*. *A. flavipes* s.s. has been recorded only in East Sussex from Hastings, Sedlescombe and an unknown site. Widespread in England and Wales.

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Chlaenius nigricornis*

A ground beetle of damp grassland and marsh, often near the sea. Widespread across East and West Sussex and across England, Wales and Northern Ireland.

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Notiophilus quadripunctatus*

A beetle of sandy heaths and cliffs with areas of bare ground. Recorded from several sites in East Sussex. This county and Kent are the main British strongholds of the species but there is a scatter of British records northwards.

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Leptura aurulenta*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Cassida nobilis*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8303	Roger Booth	28/09/1992	West Sussex (VC13)

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## *Longitarsus dorsalis*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Longitarsus parvulus*

Flax Flea Beetle

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Phyllotreta vittula*

Barley Flea Beetle

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Atomaria (Anchicera) peltata*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Atomaria (Anchicera) rhenana*

**insect - beetle (Coleoptera)**

Nationally Notable; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8304	Peter Hodge	23/04/1992	West Sussex (VC13)

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### *Atomaria (Anchicera) scutellaris*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU8303	Roger Booth	28/09/1992	West Sussex (VC13)
SU8304	John Owen	28/09/1992	West Sussex (VC13)

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### *Atomaria (Atomaria) umbrina*

**insect - beetle (Coleoptera)**

Nationally Notable; Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### *Caenopsis fissirostris*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### *Ceutorhynchus assimilis*

Cabbage Gall Weevil

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### *Magdalis (Porrothus) cerasi*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU8206	Peter Hodge	24/05/1977	West Sussex (VC13)

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### *Microplontus campestris*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Sitona (Sitona) puncticollis*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Xyleborinus saxesenii*

## Ambrosia Beetle

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Agabus*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU85200465	EA - Environment Agency	23/05/2001	River Lavant, Chichester - u/s college bridge

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## *Agabus (Gaurodytes) biguttatus*

A dysticid water beetle of chalk and limestone streams often living in semi-subterranean situations. Recorded in our area only from Crowborough (1795) and Chichester (1868). Both records require confirmation.

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU80S	Anon	1868 - 1950	West Sussex (VC13)

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## *Agriontes sordidus*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8304	Peter Hodge	1992	West Sussex (VC13)

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## *Hydraena testacea*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### *Limnebius nitidus*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### *Ochthebius (Asiobates) auriculatus*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8303	Roger Booth	28/09/1992	West Sussex (VC13)

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### *Cercyon (Dicyrtocercyon) ustulatus*

A scavenger water beetle found among wet plant litter in marshes and at the edge of still water. Many records across East Sussex, fewer from West Sussex. Widespread but local elsewhere.

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### *Helochares lividus*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### *Agathidium (Cyphocele) nigrinum*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### *Colon (Myloechus) brunneum*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Leiodes ciliaris*

### **insect - beetle (Coleoptera)**

Nationally Notable; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Lucanus cervus*

## Stag Beetle

A beetle of broadleaved woodland, parks, other pasture woodland and gardens. The larvae live in the decaying wood of deciduous trees, often in roots and stumps. Widely recorded from West Sussex but rare in East Sussex and apparently absent from much of the vice-county.

### **insect - beetle (Coleoptera)**

Habitats Directive Annex 2 - non-priority species; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England [sec; Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species; Wildlife and Countryside Act 1981 Schedule 5 Sections (9.5a; 9.5b)]

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU834052	Recorder @ Chi Nat His Soc	23/06/2011	West Sussex (VC13)
SU838046	Recorder @ Chi Nat His Soc	21/05/2011	West Sussex (VC13)
SU850049	Recorder @ Chi Nat His Soc	02/07/2011	West Sussex (VC13)
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR
SU853067	Mike Perry	1999	West Sussex (VC13)
SU854034	Recorder @ Chi Nat His Soc	13/07/2011	West Sussex (VC13)
SU854057	Recorder @ Chi Nat His Soc	15/07/2011	West Sussex (VC13)
SU856036	Recorder @ Chi Nat His Soc	24/07/2011	West Sussex (VC13)
SU857051	Recorder @ Chi Nat His Soc	07/06/2011	West Sussex (VC13)
SU857053	Recorder @ Chi Nat His Soc	27/06/2011	West Sussex (VC13)
SU858050	Graham Roberts;Simon Curson	12/07/2002	Chichester District
SU858067	Recorder @ Chi Nat His Soc	16/07/2011	West Sussex (VC13)
SU858073	Recorder @ Chi Nat His Soc	24/05/2011	West Sussex (VC13)
SU85850507	Margaret Enstone	26/05/2011	West Sussex County Council County Hall
SU862045	Recorder @ Chi Nat His Soc	26/06/2011	West Sussex (VC13)
SU862053	Recorder @ Chi Nat His Soc	14/06/2011	West Sussex (VC13)
SU863051	Tim Randall	21/06/2000	Chichester District
SU863054	Jim O'Reilly	21/06/2000	Chichester District
SU864051	Mrs Purchase	July 2011	Chichester
SU865042	Recorder @ Chi Nat His Soc	05/06/2011	West Sussex (VC13)
SU865057	Recorder @ Chi Nat His Soc	18/05/2011	West Sussex (VC13)
SU866043	Recorder @ Chi Nat His Soc	20/06/2011	West Sussex (VC13)
SU866052	Recorder @ Chi Nat His Soc	12/06/2011	West Sussex (VC13)
SU867045	Recorder @ Chi Nat His Soc	07/07/2011	West Sussex (VC13)
SU869049	Recorder @ Chi Nat His Soc	04/07/2011	West Sussex (VC13)

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## *Rhizophagus (Rhizophagus) nitidulus*

### **insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Cryptarcha strigata*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Nitidula rufipes*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Cyphon pubescens*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Bledius (Bledius) limicola*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8303	Roger Booth	28/09/1992	West Sussex (VC13)

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## *Cypha discoidea*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Dinothenarus pubescens*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Halobrecta flavipes*

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8303	Roger Booth	28/09/1992	West Sussex (VC13)

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### ***Mycetoporus longicornis***

**insect - beetle (Coleoptera)**

Nationally Notable; Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### ***Sepedophilus bipunctatus***

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### ***Tachyporus tersus***

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### ***Pycnomerus fuliginosus***

**insect - beetle (Coleoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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### ***Andrena (Poliandrena) florea***

**insect - hymenopteran**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU867065	Recorder @ BWARS	22/06/2008	Graylingwell Hospital site 2, Chichester

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### ***Andrena (Simandrena) congruens***

**insect - hymenopteran**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU855077	Recorder @ BWARS	25/07/1975	Lavant



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***Ceratina (Euceratina) cyanea***

## Blue Carpenter Bee

insect - hymenopteran

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU820068	Recorder @ BWARS	11/05/1980	West Ashling
SU855077	Recorder @ BWARS	16/06/1984	Lavant
SU866066	Recorder @ BWARS	13/05/2008	Graylingwell Hospital site 3, Chichester
SU867065	Recorder @ BWARS	13/05/2008	Graylingwell Hospital site 2, Chichester

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***Eucera (Eucera) longicornis***

## Long-horned Bee

A mining bee that nests gregariously in warm, sandy soil areas. The species is confined to southern England and Wales and has been recorded from only a very few sites in our area, mainly in East Sussex.

insect - hymenopteran

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

Grid Reference	Recorder	Date	Locality
SU8507	Recorder @ BWARS	09/06/1906	Lavant

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***Lasioglossum (Evylaeus) pauxillum***

insect - hymenopteran

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU838047	Recorder @ BWARS	05/07/2008	Fishbourne Palace
SU866064	Recorder @ BWARS	04/04/2008	Graylingwell Hospital site 1, Chichester
SU866066	Recorder @ BWARS	13/05/2008	Graylingwell Hospital site 3, Chichester

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***Lasioglossum (Evylaeus) semilucens***

insect - hymenopteran

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU866064	Recorder @ BWARS	04/04/2008	Graylingwell Hospital site 1, Chichester

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***Osmia (Chalcosmia) leaiana***

insect - hymenopteran

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU855077	Recorder @ BWARS	16/06/1984	Lavant

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***Sphecodes reticulatus***

insect - hymenopteran

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU855077	Recorder @ BWARS	16/06/1987	Lavant

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## *Lestiphorus bicinctus*

**insect - hymenopteran**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU838047	Recorder @ BWARS	05/07/2008	Fishbourne Palace

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## *Auplopus carbonarius*

**insect - hymenopteran**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU867065	Recorder @ BWARS	22/06/2008	Graylingwell Hospital site 2, Chichester

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## *Monosapyga clavicornis*

**insect - hymenopteran**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU855077	Recorder @ BWARS	16/06/1984	Lavant

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## *Tiphia minuta*

## Small Tiphia

**insect - hymenopteran**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU869063	Recorder @ BWARS	22/06/2008	Graylingwell Hospital site 4, Chichester

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## *Eilema sororcula*

## Orange Footman

A pretty nationally local species found in woods in southern UK. It has recently expanded its range. In Sussex it is now scattered over the county and can be quite common in woods. Caterpillars feed on lichens growing on trees.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	13/06/2004	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Mike Perry;Robin Storkey	07/06/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	2012	West Sussex (VC13)

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***Euplagia quadripunctaria***

## Jersey Tiger

This nationally scarce (b) species occurs in rough ground on the coast of south Devon. In Sussex there are several records of migrants, but it may have formed a breeding colony at Rye in the late 1990s. Caterpillars feed on many low growing flowers.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2011	West Sussex (VC13)

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***Tetheella fluctuosa***

## Satin Lutestring

This nationally local species occurs in mature woodlands in south east England, Wales, northern England and the great Glen in Scotland. In Sussex it is widespread and sometimes common in mature woods and wooded heaths throughout the county. Caterpillars feed on Birch.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Isobel Perry;Mike Perry;Robin Storkey	28/06/2006	Brandy Hole Copse LNR

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***Catarhoe rubidata***

## Ruddy Carpet

This nationally scarce (b) species occurs in very scattered localities in differing habitats throughout southern England. In Sussex the records suggest that it is present in low numbers in much of the county with most records being from Kings Park Wood near Haslemere and Walberton near Arundel.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2005	11 Wiston Avenue

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***Cepphis advenaria***

## Little Thorn

This small yellow species is nationally scarce (b) and only occurs in two areas of southern Britain. In Sussex it is restricted to the heathy woods at the western end of West Sussex, predominantly west of Arundel and Billingshurst. In this area it is scarce, but fairly widespread. Caterpillars feed on Bilberry.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Mike Perry;Robin Storkey	07/06/2006	Brandy Hole Copse LNR

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***Chloroclysta siterata*****Red-green Carpet**

This woodland species is common in the north and west of Britain and scarce, but increasing elsewhere. In Sussex it is now widespread in the Wealden and greensand woodlands. Caterpillars feed on the leaves of various trees.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	01/01/2002 - 31/12/2002	11 Wiston Avenue

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***Cyclophora annularia*****Mocha**

This pretty nationally scarce (b) species occurs in woodlands in parts of southern England. In Sussex it is widespread in West Sussex, but in East Sussex only occurs regularly in the Brede Valley and the Hastings area. Caterpillars feed on Field Maple.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2009	West Sussex (VC13)

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***Ennomos autumnaria*****Large Thorn**

This nationally scarce (b) species occurs in woods and scrub in south east England. In Sussex it occurs on the wooded downs between Newhaven and Arundel, at Pagham, Chichester, Bognor and the area around Rye and Beckley Woods. Caterpillars feed on various trees.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2009	West Sussex (VC13)

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***Eupithecia indigata*****Ochreous Pug**

This small species is common nationally in areas with Pine trees, but in Sussex it is uncommon and is mostly found on pines growing on the heathlands of the Ashdown Forest and the West Sussex heaths. Caterpillars feed on pine trees.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	26/04/2004	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Mike Perry;Robin Storkey	07/06/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	01/01/1998 - 31/12/1998	11 Wiston Avenue

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***Eupithecia inturbata***

## Maple Pug

This nationally scarce (b) species is found predominantly in south east England favouring woods and scrub on the chalk. In Sussex it is found in sites scattered throughout the county and is quite widespread, but never common. Caterpillars feed on the flowers of Field Maple, but only on large trees.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2011	West Sussex (VC13)

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***Eupithecia plumbeolata***

## Lead-coloured Pug

A small nationally scarce (b) species of open woods throughout England and Wales. In Sussex it is rare and recently it has only been found in Flatropers Wood near Rye, Stansted Forest near the Hampshire border and Kings Park Wood near the Surrey border. Caterpillars feed on the flowers of Common Cow-wheat.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	1995 - 1997	West Sussex (VC13)

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***Hypomecis roboraria***

## Great Oak Beauty

This nationally scarce (b) species occurs in ancient woodlands in central southern England. In Sussex it occurs in many of the mature woodlands, but is only regularly found in the mature woods around Petworth. Caterpillars feed on Oak.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Isobel Perry;Mike Perry;Robin Storkey	28/06/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	1995 - 1997	11 Wiston Avenue

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***Thera cupressata***

## Cypress Carpet

A nationally scarce species that only colonised UK in 1984. It occurs on the south coast from Cornwall to Kent in urban areas. In Sussex it has a colony around Arundel, but may be spreading eastwards. Caterpillars feed on Cypresses.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Isobel Perry;Mike Perry;Robin Storkey	09/08/2006	Brandy Hole Copse LNR
SU854037	Mike Perry	2011	West Sussex (VC13)

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***Apoda limacodes***

## Festoon

A nationally scarce (b) species of the older woodlands in south and east England. In Sussex it is widespread in most areas except the central parts. Ashdown Forest is the best site. Caterpillars feed on Oak.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2007	11 Wiston Avenue

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***Agrotis cinerea***

## Light Feathered Rustic

A nationally scarce (b) species of calcareous grassland throughout England and Wales, but commonest in the south. In Sussex it is found in low numbers all over the downs, but is only common on the downs above Storrington at Kithurst Hill. Caterpillars feed on Wild Thyme.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	01/01/1999 - 31/12/1999	11 Wiston Avenue

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***Archanara sparganii***

## Webb's Wainscot

A nationally scarce (b) species found in wetlands along the south and east coast of England. In Sussex it is very local and is found around the coastal wetlands at Rye, Pevensey, the Ouse valley, Amberley, Pagham Harbour and Chichester Harbour. Caterpillars feed on Bulrush and other tall wetland plants.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2008	West Sussex (VC13)

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***Celaena leucostigma***

## Crescent

A local species of wetlands throughout Britain. In Sussex it is widespread in wetlands near the coast and a few areas inland. Caterpillars feed on Yellow Flag Iris and Great Fen Sedge.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2003	11 Wiston Avenue

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***Chilodes maritimus***

## Silky Wainscot

A nationally local species found in reedbeds in south east England, East Anglia, south Wales and south Scotland. In Sussex it is widespread along the East Sussex coast and in parts of West Sussex including Chichester and Pagham Harbours. Caterpillars feed on Common Reed.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2005	11 Wiston Avenue

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***Conistra rubiginea***

## Dotted Chestnut

This nationally scarce (b) species is found in most of southern England and south Wales in heathland, woodland and hedgerows. In Sussex it is fairly widespread west of Storrington, but has not been recorded in East Sussex. Caterpillars feed on Apple and probably other trees.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2012	West Sussex (VC13)

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***Cucullia asteris***

## Star-wort

A nationally scarce (b) species of woods and salt marshes in south and east England. In Sussex it is widespread in East Sussex and the west of West Sussex with regular records coming from Rye Harbour, Plashett and Vert Woods and around Pagham Harbour. Caterpillars feed on Sea Aster in salt marshes and Goldenrod in woods.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2006	11 Wiston Avenue

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***Elaphria venustula***

## Rosy Marbled

A nationally scarce (b) species of heathy woodlands in south east England. In Sussex it has increased and is now very widespread in woodlands throughout the county. Caterpillars are thought to feed on the flowers of Tormentil and Creeping Cinquefoil.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2010	West Sussex (VC13)

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***Graphiphora augur***

## Double Dart

A nationally common species of woods and hedgerows throughout UK. In Sussex it is irregularly recorded from widely scattered sites all over the county suggesting low population density or immigration. Caterpillars feed on various shrubs.

**insect - moth**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2010	West Sussex (VC13)

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***Hadena compta***

## Varied Coronet

This garden species colonised Britain in 1948 and has since spread to become common over much of England. In Sussex it is widespread in East Sussex, but in the west only occurs around Arundel. Caterpillars feed on the seeds of Sweet William.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2007	11 Wiston Avenue

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***Lacanobia suasa*****Dog's Tooth**

This nationally local species occurs mostly in damp grassy places in southern England. In Sussex it is found along all of the coast, but mostly in the area between Worthing and Chichester Harbour. Caterpillars feed on various low growing plants.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2006	11 Wiston Avenue

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***Mythimna l-album*****L-album Wainscot**

This nationally scarce (b) species breeds in rough grassland by the sea along the south coast. In Sussex it has colonised since 1980 and is now found in most open grassland areas at and near the whole coast. Caterpillars feed on Marram and other grasses.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2011	West Sussex (VC13)

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***Mythimna litoralis*****Shore Wainscot****insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2003	11 Wiston Avenue

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***Mythimna obsoleta*****Obscure Wainscot**

This nationally local species occurs in reedbeds in south and east England. In Sussex it is found in reedbeds and reedy ditches along the lower river valleys and coastal marshes. Caterpillars feed on Common Reed.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2011	West Sussex (VC13)

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***Orthosia miniosa*****Blossom Underwing**

This species is local nationally and occurs in Oak woodlands and old Oaks in hedgerows. In Sussex it is widespread in West Sussex, but rare in East Sussex with recent records coming from a few scattered sites.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU852066	Kay Bridger;Mike Bridger;Mike Perry;Robin Storkey	29/04/2007	Brandy Hole Copse LNR
SU854037	Mike Perry	2007	11 Wiston Avenue



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***Polymixis lichenea subsp. lichenea***

## Feathered Ranunculus

insect - moth

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	01/01/2002 - 31/12/2002	11 Wiston Avenue

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***Shargacucullia lychnitis***

## Striped Lychnis

This nationally scarce (a) species occurs in central southern England mostly on the chalk. In Sussex it only occurs in the western half of West Sussex, usually on the Downs west of Cocking, but sometimes near Chichester. Caterpillars feed on the flowers of Dark Mullein.

insect - moth

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2008	West Sussex (VC13)

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***Sideridis albicolon***

## White Colon

A nationally scarce (b) species occurring on sandy coasts around Britain. In Sussex it is found in all of the sand dune areas. Caterpillars feed on various coastal plants such as Oraches and Sea Bindweed.

insect - moth

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	01/01/2000 - 31/12/2000	11 Wiston Avenue

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***Xanthia gilvago***

## Dusky-lemon Sallow

This nationally local species is widely distributed throughout Britain. In Sussex it has declined greatly and is now only recorded from two very well recorded spots in Peacehaven and Walberton. It may still be widely distributed, but in very low numbers. Caterpillars feed on Elms.

insect - moth

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

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2003	11 Wiston Avenue

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***Earias clorana***

## Cream-bordered Green Pea

A nationally scarce (b) species of wet habitats throughout England. In Sussex it is found at Rye and probably in the Cuckmere and Pevensey Levels in East Sussex. In West Sussex there have only been a few records from different sites. Caterpillars feed on Sallows and Willows.

insect - moth

Sussex Rare Species Inventory Species

Grid Reference	Recorder	Date	Locality
SU854037	Mike Perry	2010	West Sussex (VC13)

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***Meganola albula*****Kent Black Arches**

This nationally scarce (b) species occurs in open habitats on and near the coast in the southern half of England. In Sussex it is fairly widespread within 5 or 6 miles of the coast. Caterpillars feed on Dewberry.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU854037	Mike Perry	2010	West Sussex (VC13)

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***Ptilodon cucullina*****Maple Prominent**

A nationally local species of woods, mostly on the chalk. It is found mostly in southern and eastern England, but is expanding its range. In Sussex it is found in woods on the Downs west of Arundel and in woods between Battle and Rye in the east of East Sussex. Caterpillars feed on Field Maple.

**insect - moth**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Anon @ Chichester NHS;Recorder @ Sussex Moth Group	1999 - 2003	Brandy Hole Copse LNR
SU851067	Isobel Perry;John Knight;Mike Perry;Robin Storkey	06/08/2004	Brandy Hole Copse LNR
SU854037	Mike Perry	2010	West Sussex (VC13)

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***Apatura iris*****Purple Emperor**

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

**insect - butterfly**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8606	David Chainey	16/07/2010	West Sussex (VC13)

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***Conocephalus fuscus*****Long-winged Cone-head****insect - orthopteran**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU851065	Katharine Grove	2002 - 2005	Brandy Hole Copse LNR

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## *Agapetus fuscipes*

Several records from rivers and streams in the west of West Sussex and the only Glossomatid caddis fly to be recorded in Sussex. Widespread elsewhere in Britain.

### **insect - caddis fly (Trichoptera)**

Sussex Rare Species Inventory Species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8359004494	EMU	23/08/2002	Fishbourne Channel (Ch)
SU8365604477	EMU	23/08/2002	Fishbourne Channel (Ch)
SU8373404454	EMU	10/09/2002	Fishbourne Mill Pond
SU8373604471	EMU	10/09/2002	Fishbourne Mill Pond
SU85200465	EA - Environment Agency	23/05/2001	River Lavant, Chichester - u/s college bridge

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## *Arvicola amphibius*

## European Water Vole

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

### **terrestrial mammal**

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

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8305	K Fleming	1971	West Sussex (VC13)
SU833054	Anon	01/05/2004	Field backing on to Bethwines farm, Fishbourne channel
SU837064	Mark Elliott	1998	West Sussex (VC13)
SU839045	Steve Sutton	25/08/2006	Fishbourne Meadows
SU840045	Steve Sutton	03/09/2006	Fishbourne Meadows
SU8405	K Fleming	1971	West Sussex (VC13)
SU841041	Rob Strachan	2001	West Sussex (VC13)
SU843032	Mr Marland	26/07/2002	West Sussex (VC13)
SU8439503996	Andrew Tittensor; Anne De Potier	July 1997	Fishbourne Meadows
SU8460605580	Sarah Hughes; Liz Rogers	06/08/2013	Ditch to the north of New Lands Lane, Chichester
SU8462305160	Sarah Hughes; Liz Rogers	06/08/2013	Ditch to the north of 17 Clay Lane, Chichester
SU850032	Sally Quinn	25/02/2002	Stockbridge
SU855047	Recorder @ WildCall	23/05/2012	West Sussex (VC13)
SU859033	Recorder @ MWHG	09/10/2009	Stockbridge

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***Vertigo (Vertigo) moulinsiana*****Desmoulin's Whorl Snail**

This species was formerly considered threatened on a global scale but new records suggest that this is not the case. In the UK, it is known from a series of sites in England stretching from Dorset to Norfolk. It is restricted to long-established calcareous wetlands. Recorded in our area from several sites in West Sussex. 1979-2003.

**mollusc**

Habitats Directive Annex 2 - non-priority species; IUCN (1994) - Lower risk - conservation dependent; Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (sec); Sussex Biodiversity Action Plan Species; Sussex Rare Species Inventory Species; UK Biodiversity Action Plan priority species

<b>Grid Reference</b>	<b>Recorder</b>	<b>Date</b>	<b>Locality</b>
SU8350204657	EMU	August 2002	Fishbourne Channel (Ch)
SU8350704598	EMU	August 2002	Fishbourne Channel (Ch)
SU8357904596	EMU	August 2002	Fishbourne Channel (Ch)
SU8358604579	EMU	August 2002	Fishbourne Channel (Ch)
SU836045	Martin Willing	1868 - 2003	Fishbourne Meadows, Fishbourne

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

## SPECIES LIST (Excluding Birds)

### Land at Whitehouse Farm, Chichester + 2km radius

02 December 2013 ESD/13/644 Search Area: SU8204 to SU8606; SU8307 to SU8507; SU8303 to SU8503

James Bird (The Environmental Dimension Partnership)

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Calliteara pudibunda f. concolor</i>	Pale Tussock form concolor		07/06/2006	29/04/2007	6
<i>Phormidium</i>		bacterium	01/01/2010	-	2
<i>Fucus</i>		chromist	31/08/2002	-	1
<i>Fucus spiralis</i>	Flat Wrack	chromist	03/09/2002	-	1
<i>Vaucheria</i>		chromist	01/01/2010	-	1
<i>Albugo candida</i>		chromist	30/04/1993	-	1
<i>Bacillariophyta</i>	Diatom Sp.	diatom	01/01/2010	-	1
<i>Lycogala epidendrum</i>		slime mould	30/11/2004	-	1
<i>Lycogala terrestre</i>		slime mould	30/11/2004	-	1
<i>Arcyria denudata</i>		slime mould	30/11/2004	-	1
<i>Arthonia radiata</i>		lichen	31/12/2002	-	1
<i>Dirina massiliensis forma soredata</i>		lichen	31/01/1992	14/06/1993	3
<i>Opegrapha rupestris</i>		fungus	07/09/2008	-	1
<i>Opegrapha vulgata</i>		lichen	31/12/2002	-	1
<i>Mycosphaerella punctiformis</i>		fungus	30/11/2004	-	1
<i>Mycosphaerella superflua</i>		fungus	30/11/2004	-	1
<i>Mycosphaerella tulasnei</i>		fungus	31/08/1991	-	1
<i>Ramularia primulae</i>		fungus	30/11/2004	-	1
<i>Ramularia scrophulariae</i>		fungus	30/11/2004	-	1
<i>Microthyrium ilicinum</i>		fungus	30/11/1988	-	1
<i>Arthopyrenia punctiformis</i>		fungus	31/12/2002	-	1
<i>Paraphaeosphaeria glaucopunctata</i>		fungus	30/11/2004	-	1
<i>Dendryphion comosum</i>		fungus	31/10/1994	-	1
<i>Acrocordia gemmata</i>		lichen	26/12/1969	-	1
<i>Acrocordia salweyi</i>		lichen	03/05/1984	-	1
<i>Verrucaria</i>		lichen	01/01/2010	-	1
<i>Verrucaria baldensis</i>		lichen	16/06/1992	07/09/2008	2
<i>Verrucaria hochstetteri</i>		lichen	16/06/1992	07/09/2008	2

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Verrucaria macrostoma</i>		lichen	14/06/1993	-	1
<i>Verrucaria macrostoma forma furfuracea</i>		lichen	16/06/1992	-	1
<i>Verrucaria muralis</i>		lichen	31/01/1992	14/06/1993	3
<i>Verrucaria nigrescens</i>		lichen	11/10/1969	07/09/2008	6
<i>Verrucaria viridula</i>		lichen	11/10/1969	31/12/2002	5
<i>Trapeliopsis flexuosa</i>		lichen	07/09/2008	-	1
<i>Trapeliopsis granulosa</i>		lichen	07/09/2008	-	1
<i>Placynthiella icmalea</i>		lichen	27/07/2004	07/09/2008	2
<i>Candelariella aurella</i>		lichen	14/06/1993	-	1
<i>Candelariella medians</i>		lichen	11/10/1969	14/06/1993	3
<i>Candelariella reflexa</i>		lichen	27/07/2004	-	1
<i>Candelariella vitellina</i>		lichen	03/05/1984	07/09/2008	4
<i>Cladonia cervicornis subsp. cervicornis</i>		lichen	27/07/2004	-	1
<i>Cladonia chlorophaea</i>		fungus	31/12/2002	-	1
<i>Cladonia coniocraea</i>		lichen	31/12/2002	-	1
<i>Cladonia pyxidata</i>		lichen	03/05/1984	14/06/1993	2
<i>Cladonia squamosa var. subsquamosa</i>		lichen	31/12/2002	-	1
<i>Lecanora albescens</i>		lichen	31/01/1992	07/09/2008	4
<i>Lecanora campestris</i>		lichen	03/05/1984	07/09/2008	6
<i>Lecanora chlarotera</i>		lichen	31/12/2002	07/09/2008	2
<i>Lecanora confusa</i>		lichen	07/09/2008	-	1
<i>Lecanora conizaeoides</i>		lichen	31/01/1992	07/09/2008	4
<i>Lecanora crenulata</i>		lichen	03/05/1984	07/09/2008	5
<i>Lecanora dispersa</i>		lichen	11/10/1969	16/06/1992	3
<i>Lecanora expallens</i>		lichen	31/12/2002	07/09/2008	3
<i>Lecanora muralis</i>		lichen	03/05/1984	07/09/2008	3
<i>Lecanora orosthea</i>		lichen	16/06/1992	-	1
<i>Lecanora polytropa</i>		lichen	16/06/1992	-	1
<i>Lecanora sulphurea</i>		lichen	03/05/1984	-	1
<i>Lecidella elaeochroma</i>		lichen	26/12/1969	07/09/2008	2
<i>Lecidella scabra</i>		lichen	27/07/2004	-	1
<i>Lecidella stigmatea</i>		lichen	03/05/1984	27/07/2004	4
<i>Evernia prunastri</i>	Oak Moss	lichen	09/10/1968	07/09/2008	3
<i>Flavoparmelia caperata</i>		lichen	09/10/1968	07/09/2008	8
<i>Flavoparmelia soredians</i>		lichen	27/07/2004	07/09/2008	2
<i>Hypogymnia physodes</i>	Dark Crottle	lichen	09/10/1968	07/09/2008	5
<i>Hypotrachyna revoluta</i>		lichen	31/12/2002	-	1
<i>Melanelia subaurifera</i>		lichen	31/12/2002	27/07/2004	2
<i>Melanelixia fuliginosa subsp. fuliginosa</i>		lichen	31/01/1992	07/09/2008	3
<i>Melanelixia fuliginosa subsp. glabratula</i>		lichen	09/10/1968	07/09/2008	4
<i>Neofuscelia verruculifera</i>		lichen	03/05/1984	16/06/1992	2
<i>Parmelia saxatilis</i>		lichen	31/12/2002	27/07/2004	2
<i>Parmelia sulcata</i>	Netted Shield Lichen	lichen	09/10/1968	07/09/2008	5
<i>Parmelina pastillifera</i>		lichen	31/12/2002	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Parmotrema perlatum</i>		lichen	31/12/2002	-	1
<i>Punctelia borreri</i>		lichen	27/07/2004	-	1
<i>Punctelia reddenda</i>		lichen	31/12/2002	-	1
<i>Punctelia subrudecta</i>		lichen	03/05/1984	07/09/2008	3
<i>Xanthoparmelia mougeotii</i>		lichen	16/06/1992	07/09/2008	2
<i>Hyperphyscia adglutinata</i>		lichen	07/09/2008	-	1
<i>Phaeophyscia nigricans</i>		lichen	11/10/1969	-	1
<i>Phaeophyscia orbicularis</i>		lichen	11/10/1969	07/09/2008	4
<i>Physcia adscendens</i>		lichen	31/01/1992	07/09/2008	6
<i>Physcia aipolia</i>		lichen	27/07/2004	-	1
<i>Physcia caesia</i>		lichen	16/06/1992	14/06/1993	2
<i>Physcia dubia</i>		lichen	16/06/1992	-	1
<i>Physcia tenella</i>		lichen	03/05/1984	07/09/2008	4
<i>Physcia tribacia</i>		lichen	03/05/1984	16/06/1992	2
<i>Physconia distorta</i>		lichen	27/07/2004	-	1
<i>Physconia grisea</i>		lichen	11/10/1969	07/09/2008	6
<i>Rinodina gennarii</i>		lichen	03/05/1984	16/06/1992	2
<i>Micarea erratica</i>		lichen	31/12/2002	-	1
<i>Protoblastenia rupestris</i>		lichen	03/05/1984	07/09/2008	3
<i>Cliostomum griffithii</i>		lichen	31/12/2002	07/09/2008	2
<i>Ramalina fastigiata</i>		lichen	27/07/2004	-	1
<i>Ramalina lacera</i>		lichen	16/06/1992	-	1
<i>Lepraria incana</i>		lichen	31/12/2002	-	1
<i>Lepraria lobificans</i>		lichen	31/12/2002	-	1
<i>Lepraria membranacea</i>		lichen	03/05/1984	-	1
<i>Lepraria vouauxii</i>		lichen	14/06/1993	31/12/2002	2
<i>Caloplaca citrina</i>		lichen	03/05/1984	07/09/2008	7
<i>Caloplaca dalmatica</i>		lichen	31/01/1992	14/06/1993	3
<i>Caloplaca flavescens</i>		lichen	11/10/1969	07/09/2008	8
<i>Caloplaca holocarpa</i>		lichen	07/09/2008	-	1
<i>Caloplaca ochracea</i>		lichen	07/09/2008	-	1
<i>Caloplaca saxicola</i>		lichen	03/05/1984	14/06/1993	4
<i>Caloplaca teicholyta</i>		lichen	11/10/1969	14/06/1993	5
<i>Leproplaca xantholyta</i>		lichen	03/05/1984	-	1
<i>Xanthoria calcicola</i>		lichen	31/01/1992	16/06/1992	2
<i>Xanthoria candelaria</i>		lichen	31/01/1992	07/09/2008	3
<i>Xanthoria parietina</i>		lichen	03/05/1984	07/09/2008	8
<i>Tephromela atra</i>	Black Shields	lichen	31/01/1992	07/09/2008	4
<i>Lecania erysibe</i>		lichen	03/05/1984	-	1
<i>Psilolechia lucida</i>		lichen	31/01/1992	07/09/2008	4
<i>Scoliciosporum umbrinum</i>		lichen	03/05/1984	16/06/1992	2
<i>Clauzadea monticola</i>		lichen	03/05/1984	-	1
<i>Porpidia soledizodes</i>		lichen	27/04/2002	-	1
<i>Porpidia tuberculosa</i>		lichen	07/09/2008	-	1

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<i>Dimerella pineti</i>		lichen	31/12/2002	-	1
<i>Graphis scripta</i>	Script Lichen	lichen	31/12/2002	-	1
<i>Belonia nidarosiensis</i>		lichen	31/01/1992	16/06/1992	2
<i>Gyalecta jenensis</i>		lichen	31/12/2002	-	1
<i>Collema tenax</i>		lichen	03/05/1984	-	1
<i>Aspicilia calcarea</i>		lichen	03/05/1984	07/09/2008	4
<i>Aspicilia contorta</i>		lichen	16/06/1992	-	1
<i>Ochrolechia parella</i>	Crabs Eye Lichen	lichen	16/06/1992	07/09/2008	2
<i>Ochrolechia turneri</i>		lichen	16/06/1992	-	1
<i>Pertusaria albescens</i>		lichen	31/12/2002	-	1
<i>Pertusaria amara</i>		lichen	31/01/1992	07/09/2008	4
<i>Pertusaria pertusa</i>		lichen	31/12/2002	-	1
<i>Catillaria lenticularis</i>		lichen	03/05/1984	-	1
<i>Toninia aromatica</i>		lichen	16/06/1992	14/06/1993	2
<i>Rhizocarpon lavatum</i>		lichen	03/05/1984	07/09/2008	2
<i>Amandinea punctata</i>		lichen	26/12/1969	31/12/2002	3
<i>Buellia aethalea</i>		lichen	31/01/1992	27/07/2004	3
<i>Buellia ocellata</i>		lichen	16/06/1992	27/07/2004	2
<i>Buellia stellulata</i>		lichen	03/05/1984	-	1
<i>Diploicia canescens</i>		lichen	11/10/1969	07/09/2008	8
<i>Diplotomma alboatrum</i>		lichen	16/06/1992	-	1
<i>Fuscidea lightfootii</i>		lichen	07/09/2008	-	1
<i>Hypocenomyce scalaris</i>		lichen	31/01/1992	27/07/2004	2
<i>Erysiphe alphitoides</i>	Oak Mildew	fungus	31/10/1994	30/11/2004	2
<i>Erysiphe cruciferarum</i>		fungus	31/08/1991	-	1
<i>Erysiphe heraclei</i>		fungus	31/12/1988	31/12/1991	2
<i>Erysiphe polygoni</i>		fungus	31/08/1991	-	1
<i>Erysiphe sordida</i>		fungus	31/10/1994	-	1
<i>Erysiphe trifolii</i>		fungus	31/08/1991	-	1
<i>Oidium</i>		fungus	31/10/1994	-	1
<i>Sawadaea bicornis</i>		fungus	30/11/2004	-	1
<i>Drepanopeziza salicis</i>		fungus	30/11/2004	-	1
<i>Cudoniella acicularis</i>	Oak Pin	fungus	30/11/2004	-	1
<i>Dematioscypha dematiicola</i>		fungus	30/11/2004	-	1
<i>Lachnum virgineum</i>	Snowy Disco	fungus	30/11/2004	-	1
<i>Ascocoryne sarcoides</i>	Purple Jellydisc	fungus	30/11/2004	-	1
<i>Trochila ilicina</i>	Holly Speckle	fungus	31/10/1994	-	1
<i>Rhytisma acerinum</i>	Sycamore Tarspot	fungus	31/12/1994	30/11/2004	2
<i>Venturia rumicis</i>		fungus	30/11/2004	-	1
<i>Peziza cerea</i>	Cellar Cup	fungus	31/03/1989	-	1
<i>Peziza micropus</i>		fungus	30/11/2004	-	1
<i>Aleuria aurantia</i>	Orange Peel Fungus	fungus	31/12/1991	-	1
<i>Anthracobia melaloma</i>		fungus	30/11/2004	-	1
<i>Nectria cinnabarina</i>	Coral Spot	fungus	30/11/1988	-	1



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<i>Eutypa spinosa</i>		fungus	30/11/2004	-	1
<i>Daldinia concentrica</i>	King Alfred's Cakes	fungus	30/09/1988	-	1
<i>Hypoxylon fragiforme</i>	Beech Woodwart	fungus	30/11/2004	-	1
<i>Hypoxylon fuscum</i>	Hazel Woodwart	fungus	30/11/1994	-	1
<i>Hypoxylon multiforme</i>	Birch Woodwart	fungus	30/11/2004	-	1
<i>Nemania serpens var. serpens</i>		fungus	30/11/2004	-	1
<i>Xylaria hypoxylon</i>	Candlesnuff Fungus	fungus	31/12/1994	-	1
<i>Taphrina betulae</i>	Birch Besom	fungus	30/11/2004	-	1
<i>Taphrina betulina</i>	Birch Besom	fungus	30/11/2004	-	1
<i>Ectostroma iridis</i>		fungus	30/11/2004	-	1
<i>Agaricus augustus</i>	The Prince	fungus	30/11/2004	-	1
<i>Agaricus bernardii</i>		fungus	31/10/1988	-	1
<i>Agaricus campestris</i>	Field Mushroom	fungus	30/09/1988	-	1
<i>Agaricus osecanus</i>		fungus	31/10/1988	-	1
<i>Agaricus silvicola</i>	Wood Mushroom	fungus	30/11/2004	-	1
<i>Agaricus xanthodermus</i>	Yellow Stainer	fungus	31/10/1988	31/12/1991	2
<i>Coprinus comatus</i>	Shaggy Inkcap	fungus	30/09/1988	31/10/1988	2
<i>Handkea excipuliformis</i>	Pestle Puffball	fungus	30/11/2004	-	1
<i>Lepiota aspera</i>	Freckled Dapperling	fungus	30/11/1987	30/11/2004	2
<i>Lepiota cristata</i>	Stinking Dapperling	fungus	30/11/1988	-	1
<i>Lycoperdon perlatum</i>	Common Puffball	fungus	31/12/1985	30/11/2004	3
<i>Macrolepiota konradii</i>		fungus	30/11/2004	-	1
<i>Clavulinopsis corniculata</i>	Meadow Coral	fungus	01/10/2000	-	1
<i>Clavulinopsis helvola</i>	Yellow Club	fungus	30/11/2004	-	1
<i>Cortinarius flexipes</i>		fungus	30/11/2004	-	1
<i>Cortinarius uliginosus</i>		fungus	30/11/2004	-	1
<i>Chondrostereum purpureum</i>	Silverleaf Fungus	fungus	31/12/1991	-	1
<i>Clitopilus prunulus</i>	The Miller	fungus	31/12/1998	31/12/1999	2
<i>Fistulina hepatica</i>	Beefsteak Fungus	fungus	30/09/1988	-	1
<i>Laccaria laccata</i>	Deceiver	fungus	30/11/2004	-	1
<i>Hygrocybe psittacina var. psittacina</i>	Parrot Waxcap	fungus	01/10/2000	-	1
<i>Crepidotus cesatii</i>		fungus	30/11/2004	-	1
<i>Crepidotus variabilis</i>	Variable Oysterling	fungus	30/11/2004	-	1
<i>Marasmiellus ramealis</i>	Twig Parachute	fungus	30/11/2004	-	1
<i>Marasmius calopus</i>		fungus	30/11/2004	-	1
<i>Marasmius oreades</i>	Fairy Ring Champignon	fungus	31/10/1988	30/09/1994	6
<i>Megacollybia platyphylla</i>	Whitelaced Shank	fungus	30/11/2004	-	1
<i>Rhodocollybia maculata var. maculata</i>	Spotted Toughshank	fungus	30/11/2004	-	1
<i>Mycena alcalina</i>		fungus	30/11/2004	-	1
<i>Mycena galericulata</i>	Common Bonnet	fungus	30/11/1994	30/11/2004	2
<i>Mycena galopus</i>	Milking Bonnet	fungus	30/11/2004	-	1
<i>Mycena haematopus</i>	Burgundydrop Bonnet	fungus	30/11/2004	-	1
<i>Mycena inclinata</i>	Clustered Bonnet	fungus	30/11/2004	-	1
<i>Mycena olivaceomarginata</i>	Brownedge Bonnet	fungus	30/11/1988	-	1

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<i>Mycena polygramma</i>	Grooved Bonnet	fungus	30/11/2004	-	1
<i>Mycena pura</i>	Lilac Bonnet	fungus	30/11/2004	-	1
<i>Mycena vitilis</i>	Snapping Bonnet	fungus	30/11/2004	-	1
<i>Armillaria mellea</i>	Honey Fungus	fungus	30/11/1987	30/11/2004	5
<i>Flammulina velutipes</i>	Velvet Shank	fungus	30/11/1987	-	1
<i>Pluteus cervinus</i>	Deer Shield	fungus	31/10/1988	-	1
<i>Pluteus salicinus</i>	Willow Shield	fungus	30/11/2004	-	1
<i>Coprinellus disseminatus</i>	Fairy Inkcap	fungus	30/11/1994	-	1
<i>Coprinellus micaceus</i>	Glistening Inkcap	fungus	30/11/1988	30/11/2004	4
<i>Coprinopsis atramentaria</i>	Common Inkcap	fungus	31/10/1988	-	1
<i>Lacrymaria lacrymabunda</i>	Weeping Widow	fungus	30/09/1988	30/11/1994	2
<i>Psathyrella candolleana</i>	Pale Brittlestem	fungus	30/11/2004	-	1
<i>Galerina laevis</i>		fungus	31/10/1988	30/11/1988	2
<i>Hebeloma mesophaeum</i>	Veiled Poisonpie	fungus	30/11/2004	-	1
<i>Hypholoma fasciculare</i>	Sulphur Tuft	fungus	31/12/1987	30/11/2004	9
<i>Hypholoma lateritium</i>	Brick Tuft	fungus	30/11/2004	-	1
<i>Pholiota adiposa</i>		fungus	30/11/2004	-	1
<i>Pholiota gummosa</i>	Sticky Scalycap	fungus	30/11/2004	-	1
<i>Pholiota squarrosa</i>	Shaggy Scalycap	fungus	30/11/1988	30/09/1993	4
<i>Clitocybe fragrans</i>	Fragrant Funnel	fungus	30/11/2004	-	1
<i>Clitocybe nebularis</i>	Clouded Funnel	fungus	30/11/2004	-	1
<i>Clitocybe vibecina</i>	Mealy Funnel	fungus	30/11/2004	-	1
<i>Collybia butyracea</i>	Greasy Tough-Shank	fungus	30/11/2004	-	1
<i>Collybia peronata</i>	Wood Woollyfoot	fungus	30/11/2004	-	1
<i>Lepista nuda</i>	Wood Blewit	fungus	30/11/2004	-	1
<i>Lepista sordida</i>		fungus	31/10/1988	31/12/1991	2
<i>Leucopaxillus giganteus</i>	Giant Funnel	fungus	30/11/2004	-	1
<i>Tricholoma argyraceum</i>		fungus	30/09/1987	-	1
<i>Tricholoma lascivum</i>	Aromatic Knight	fungus	30/11/2004	-	1
<i>Auricularia auricula-judae</i>	Jelly Ear	fungus	30/09/1988	30/11/2004	3
<i>Auricularia mesenterica</i>	Tripe Fungus	fungus	31/12/1988	-	1
<i>Exidia glandulosa</i>	Witches' Butter	fungus	30/11/2004	-	1
<i>Exidia nucleata</i>	Crystal Brain	fungus	30/11/2004	-	1
<i>Boletus</i>		fungus	30/09/1988	-	1
<i>Boletus chrysenteron</i>	Red Cracking Bolete	fungus	30/11/2004	-	1
<i>Boletus luridus</i>	Lurid Bolete	fungus	30/09/1987	-	1
<i>Coniophora arida</i>		fungus	30/11/2004	-	1
<i>Coniophora puteana</i>	Wet Rot	fungus	30/11/2004	-	1
<i>Paxillus involutus</i>	Brown Rollrim	fungus	30/11/2004	-	1
<i>Scleroderma areolatum</i>	Leopard Earthball	fungus	30/11/2004	-	1
<i>Scleroderma citrinum</i>	Common Earthball	fungus	30/11/2004	-	1
<i>Scleroderma verrucosum</i>	Scaly Earthball	fungus	30/09/1994	-	1
<i>Botryobasidium aureum</i>		fungus	30/11/2004	-	1
<i>Hymenochaete corrugata</i>	Glue Crust	fungus	30/11/2004	-	1

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<i>Hymenochaete rubiginosa</i>	Oak Curtain Crust	fungus	30/11/2004	-	1
<i>Inonotus dryadeus</i>	Oak Bracket	fungus	31/10/1994	30/11/2004	2
<i>Phellinus</i>		fungus	31/12/1988	-	1
<i>Phellinus ferreus</i>	Cinnamon Porecrust	fungus	30/11/2004	-	1
<i>Phellinus pomaceus</i>	Cushion Bracket	fungus	31/12/1991	-	1
<i>Hyphodontia sambuci</i>	Elder Whitewash	fungus	30/11/2004	-	1
<i>Phallus impudicus</i>	Common Stinkhorn	fungus	30/11/2004	-	1
<i>Piptoporus betulinus</i>	Birch Polypore	fungus	28/02/1990	30/11/2004	2
<i>Postia subcaesia</i>	Blueing Bracket	fungus	30/11/2004	-	1
<i>Ganoderma</i>		fungus	30/06/1986	31/10/1994	5
<i>Ganoderma australe</i>	Southern Bracket	fungus	30/11/2004	-	1
<i>Bjerkandera adusta</i>	Smoky Bracket	fungus	31/12/1991	30/11/2004	2
<i>Hypochnicium vellereum</i>		fungus	30/11/2004	-	1
<i>Phlebia radiata</i>	Wrinkled Crust	fungus	30/11/2004	-	1
<i>Phlebia tremellosa</i>	Jelly Rot	fungus	30/11/2004	-	1
<i>Daedaleopsis confragosa</i>	Blushing Bracket	fungus	30/11/1988	-	1
<i>Fomes fomentarius</i>	Tinder Bracket	fungus	29/02/2012	-	1
<i>Polyporus squamosus</i>	Dryad's Saddle	fungus	30/04/1993	31/07/1994	3
<i>Skeletocutis lenis</i>		fungus	30/11/2004	-	1
<i>Trametes gibbosa</i>	Lumpy Bracket	fungus	30/11/1994	-	1
<i>Trametes versicolor</i>	Turkeytail	fungus	30/04/1993	30/11/2004	3
<i>Peniophora cinerea</i>		fungus	30/11/2004	-	1
<i>Peniophora lycii</i>		fungus	30/11/2004	-	1
<i>Lactarius quietus</i>	Oakbug Milkcap	fungus	30/11/2004	-	1
<i>Russula atropurpurea</i>	Purple Brittlegill	fungus	30/11/2004	-	1
<i>Russula nigricans</i>	Blackening Brittlegill	fungus	30/11/2004	-	1
<i>Russula ochroleuca</i>	Ochre Brittlegill	fungus	30/11/2004	-	1
<i>Russula parazurea</i>	Powdery Brittlegill	fungus	30/11/2004	-	1
<i>Stereum gausapatum</i>	Bleeding Oak Crust	fungus	30/11/2004	-	1
<i>Stereum hirsutum</i>	Hairy Curtain Crust	fungus	30/11/1994	30/11/2004	2
<i>Stereum rameale</i>		fungus	30/11/2004	-	1
<i>Stereum subtomentosum</i>	Yellowing Curtain Crust	fungus	30/11/2004	-	1
<i>Tomentella bryophila</i>		fungus	30/11/2004	-	1
<i>Tomentella subilacina</i>		fungus	30/11/2004	-	1
<i>Calocera pallidospathulata</i>	Pale Stagshorn	fungus	30/11/2004	-	2
<i>Dacrymyces stillatus</i>	Common Jellyspot	fungus	30/11/1994	30/11/2004	2
<i>Melampsora hypericorum</i>		fungus	30/04/1993	30/11/1994	2
<i>Phragmidium violaceum</i>	Violet Bramble Rust	fungus	30/11/2004	-	1
<i>Puccinia annularis</i>		fungus	30/11/2004	-	1
<i>Puccinia caricina</i>		fungus	30/11/2004	-	1
<i>Puccinia malvacearum</i>	Hollyhock Rust	fungus	31/05/1987	31/12/1994	5
<i>Puccinia menthae</i>		fungus	30/11/2004	-	1
<i>Puccinia punctiformis</i>		fungus	31/05/1986	-	1
<i>Puccinia sessilis</i>		fungus	31/05/1991	-	1

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<i>Melampsorium betulinum</i>	Birch Rust	fungus	30/11/2004	-	1
<i>Pucciniastrum epilobii</i>		fungus	30/11/2004	-	1
<i>Nitella mucronata</i>	Pointed Stonewort	stonewort	31/12/2001	-	1
<i>Spirogyra</i>		alga	01/01/2010	-	2
<i>Eudorina</i>		alga	31/12/2002	-	1
<i>Enteromorpha</i>		alga	23/08/2002	10/09/2002	4
<i>Marchantia polymorpha</i>	Common Liverwort	liverwort	29/02/2000	-	1
<i>Conocephalum conicum</i>	Great Scented Liverwort	liverwort	01/01/2010	-	1
<i>Pellia endiviifolia</i>	Endive Pellia	liverwort	01/01/2010	-	2
<i>Metzgeria furcata</i>	Forked Veilwort	liverwort	26/12/1969	29/02/2000	2
<i>Frullania dilatata</i>	Dilated Scalewort	liverwort	29/02/2000	-	1
<i>Lophocolea bidentata</i>	Bifid Crestwort	liverwort	29/02/2000	-	1
<i>Lophocolea heterophylla</i>	Variable-leaved Crestwort	liverwort	29/02/2000	-	1
<i>Cephalozia bicuspidata</i>	Two-horned Pincerwort	liverwort	29/02/2000	-	1
<i>Diplophyllum albicans</i>	White Earwort	liverwort	29/02/2000	-	1
<i>Scapania nemorea</i>	Grove Earwort	liverwort	29/02/2000	-	1
<i>Calyptogeia fissa</i>	Common Pouchwort	liverwort	29/02/2000	-	1
<i>Atrichum undulatum</i>	Common Smoothcap	moss	29/02/2000	-	1
<i>Polytrichum formosum</i>	Bank Haircap	moss	29/02/2000	-	1
<i>Polytrichum juniperinum</i>	Juniper Haircap	moss	29/02/2000	-	1
<i>Polytrichum longisetum</i>	Slender Haircap	moss	29/02/2000	-	1
<i>Funaria hygrometrica</i>	Common Cord-moss	moss	29/02/2000	-	1
<i>Grimmia pulvinata</i>	Grey-cushioned Grimmia	moss	03/05/1984	14/06/1993	2
<i>Fissidens bryoides</i>	Lesser Pocket-moss	moss	29/02/2000	-	1
<i>Ceratodon purpureus</i>	Redshank	moss	29/02/2000	-	1
<i>Dicranoweisia cirrata</i>	Common Pincushion	moss	09/10/1968	29/02/2000	2
<i>Dicranella heteromalla</i>	Silky Forklet-moss	moss	29/02/2000	-	1
<i>Dicranum scoparium</i>	Broom Fork-moss	moss	03/05/1984	29/02/2000	2
<i>Campylopus introflexus</i>	Heath Star Moss	moss	29/02/2000	-	1
<i>Campylopus pyriformis</i>	Dwarf Swan-neck Moss	moss	29/02/2000	-	1
<i>Barbula convoluta</i>	Lesser Bird's-claw Beard-moss	moss	29/02/2000	-	1
<i>Barbula unguiculata</i>	Bird's-claw Beard-moss	moss	29/02/2000	-	1
<i>Didymodon insulanus</i>	Cylindric Beard-moss	moss	03/05/1984	-	1
<i>Didymodon vinealis</i>	Soft-tufted Beard-moss	moss	03/05/1984	14/06/1993	2
<i>Tortula muralis</i>	Wall Screw-moss	moss	03/05/1984	14/06/1993	2
<i>Syntrichia intermedia</i>	Intermediate Screw-moss	moss	03/05/1984	-	1
<i>Syntrichia laevipila</i>	Small Hairy Screw-moss	moss	26/12/1969	25/12/2011	2
<i>Syntrichia papillosa</i>	Marble Screw-moss	moss	29/02/2000	-	1
<i>Zygodon viridissimus</i>	Green Yoke-moss	moss	26/12/1969	03/05/1984	2
<i>Orthotrichum affine</i>	Wood Bristle-moss	moss	29/02/2000	25/12/2011	2
<i>Orthotrichum diaphanum</i>	White-tipped Bristle-moss	moss	14/06/1993	25/12/2011	3
<i>Orthotrichum lyellii</i>	Lyell's Bristle-moss	moss	25/12/2011	-	1
<i>Orthotrichum tenellum</i>	Slender Bristle-moss	moss	25/12/2011	-	1
<i>Ulota bruchii</i>	Bruch's Pincushion	moss	29/02/2000	-	1

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<i>Ulota coarctata</i>	Club Pincushion	moss	19/12/2011	25/12/2011	2
<i>Ulota phyllantha</i>	Frizzled Pincushion	moss	31/12/2010	-	1
<i>Bryum capillare</i>	Capillary Thread-moss	moss	26/12/1969	29/02/2000	3
<i>Bryum pallescens</i>	Tall-clustered Thread-moss	moss	31/12/1989	-	1
<i>Bryum rubens</i>	Crimson-tuber Thread-moss	moss	29/02/2000	-	1
<i>Bryum rudemale</i>	Pea Bryum	moss	29/02/2000	-	1
<i>Mnium hornum</i>	Swan's-neck Thyme-moss	moss	29/02/2000	01/01/2010	3
<i>Aulacomnium androgynum</i>	Bud-headed Groove-moss	moss	29/02/2000	-	1
<i>Orthodontium lineare</i>	Cape Thread-moss	moss	29/02/2000	-	1
<i>Fontinalis antipyretica</i>	Greater Water-moss	moss	29/02/2000	-	1
<i>Cratoneuron filicinum</i>		moss	01/01/2010	-	2
<i>Amblystegium fluviatile</i>	Brook-side Feather-moss	moss	01/01/2010	-	2
<i>Amblystegium serpens</i>	Creeping Feather-moss	moss	29/02/2000	-	1
<i>Leptodictyum riparium</i>	Kneiff's Feather-moss	moss	01/01/2010	-	1
<i>Eurhynchium praelongum</i>	Common Feather-moss	moss	29/02/2000	30/03/2010	2
<i>Rhynchostegium confertum</i>	Clustered Feather-moss	moss	29/02/2000	-	1
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss	moss	29/02/2000	27/01/2010	6
<i>Homalothecium sericeum</i>	Silky Wall Feather-moss	moss	26/12/1969	03/05/1984	2
<i>Calliergonella cuspidata</i>	Pointed Spear-moss	moss	29/02/2000	30/03/2010	3
<i>Hypnum cupressiforme</i>		moss	29/02/2000	-	1
<i>Hypnum andoi</i>	Mamillate Plait-moss	moss	29/02/2000	-	1
<i>Hypnum jutlandicum</i>	Heath Plait-moss	moss	29/02/2000	-	1
<i>Rhytiadelphus squarrosus</i>	Springy Turf-moss	moss	30/03/2010	-	1
<i>Plagiothecium curvifolium</i>	Curved Silk-moss	moss	29/02/2000	-	1
<i>Plagiothecium nemorale</i>	Woodsy Silk-moss	moss	29/02/2000	-	1
<i>Pseudotaxiphyllum elegans</i>	Elegant Silk-moss	moss	29/02/2000	-	1
<i>Isothecium myosuroides</i>	Slender Mouse-tail Moss	moss	29/02/2000	-	1
<i>Pteridium aquilinum</i>	Bracken	fern	18/05/2005	02/09/2010	15
<i>Adiantum capillus-veneris</i>	Maidenhair Fern	fern	31/12/1975	-	1
<i>Phyllitis scolopendrium</i>	Hart's-tongue	fern	31/05/1966	19/06/2011	14
<i>Asplenium adiantum-nigrum</i>	Black Spleenwort	fern	31/12/2000	06/12/2006	3
<i>Asplenium ruta-muraria</i>	Wall-rue	fern	28/01/2005	14/08/2006	5
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort	fern	18/05/2005	-	1
<i>Ceterach officinarum</i>	Rustyback	fern	25/05/2005	-	1
<i>Athyrium filix-femina</i>	Lady-fern	fern	04/06/2005	30/06/2005	2
<i>Blechnum spicant</i>	Hard-fern	fern	13/05/2008	-	1
<i>Polystichum aculeatum</i>	Hard Shield-fern	fern	03/06/2008	21/08/2009	4
<i>Polystichum setiferum</i>	Soft Shield-fern	fern	30/06/2005	30/03/2010	4
<i>Dryopteris affinis</i>	Scaly Male-fern	fern	13/05/2008	-	1
<i>Dryopteris carthusiana</i>	Narrow Buckler-fern	fern	30/04/2008	-	1
<i>Dryopteris dilatata</i>	Broad Buckler-fern	fern	04/06/2005	22/07/2008	9
<i>Dryopteris filix-mas</i>	Male-fern	fern	18/05/2005	27/01/2010	13
<i>Polypodium</i>		fern	31/12/2007	-	1
<i>Polypodium vulgare</i>	Polypody	fern	28/01/2005	22/07/2008	3

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<i>Polypodium cambricum</i>	Southern Polypody	fern	31/12/2003	-	1
<i>Polypodium interjectum</i>	Intermediate Polypody	fern	31/12/2001	28/01/2005	2
<i>Equisetum arvense</i>	Field Horsetail	horsetail	15/09/1987	01/01/2010	12
<i>Equisetum fluviatile</i>	Water Horsetail	horsetail	20/06/1989	17/05/2008	5
<i>Equisetum palustre</i>	Marsh Horsetail	horsetail	31/05/1966	30/09/1997	4
<i>Equisetum telmateia</i>	Great Horsetail	horsetail	11/11/2009	-	4
<i>Abies grandis</i>	Giant Fir	conifer	30/06/2005	-	1
<i>Pseudotsuga menziesii</i>	Douglas Fir	conifer	02/09/2010	-	1
<i>Pinus nigra</i>	Corsican Pine	conifer	21/08/2009	-	1
<i>Pinus sylvestris</i>	Scots Pine	conifer	31/05/1966	31/12/2006	5
<i>Taxus baccata</i>	Yew	conifer	31/12/1999	19/06/2011	19
<i>Cupressus</i>		conifer	02/09/2010	-	1
<i>Xanthocyparis nootkatensis</i>	Nootka Cypress	conifer	30/03/2010	-	1
<i>Chamaecyparis</i>		conifer	30/03/2010	-	1
<i>Chamaecyparis lawsoniana</i>	Lawson's Cypress	conifer	15/12/2011	-	1
<i>Juniperus</i>		conifer	27/01/2010	-	1
<i>Nymphaea alba</i>	White Water-lily	flowering plant	31/12/2007	-	1
<i>Laurus nobilis</i>	Bay	flowering plant	31/12/1999	30/03/2010	5
<i>Arum italicum</i>	Italian Lords-and-Ladies	flowering plant	04/12/1997	-	1
<i>Arum italicum subsp. italicum</i>	Arum	flowering plant	31/12/1996	25/05/2005	2
<i>Arum italicum subsp. neglectum</i>	Arum	flowering plant	31/12/1997	11/05/2005	3
<i>Arum maculatum</i>	Lords-and-Ladies	flowering plant	31/05/1966	26/08/2011	34
<i>Lemna minor</i>	Common Duckweed	flowering plant	31/05/1966	01/01/2010	11
<i>Lemna minuta</i>	Least Duckweed	flowering plant	31/07/2005	01/01/2010	2
<i>Lemna trisulca</i>	Ivy-leaved Duckweed	flowering plant	31/12/2007	-	1
<i>Sagittaria sagittifolia</i>	Arrowhead	flowering plant	31/12/2007	-	1
<i>Alisma lanceolatum</i>	Narrow-leaved Water-plantain	flowering plant	31/12/2007	-	1
<i>Alisma plantago-aquatica</i>	Water-plantain	flowering plant	31/12/2007	29/06/2011	2
<i>Hydrocharis morsus-ranae</i>	Frogbit	flowering plant	30/06/1999	29/06/2011	3
<i>Stratiotes aloides</i>	Water-soldier	flowering plant	31/12/2007	-	1
<i>Elodea callitrichoides</i>	South American Waterweed	flowering plant	31/12/1986	31/12/1996	3
<i>Elodea canadensis</i>	Canadian Waterweed	flowering plant	31/05/1966	31/12/2007	2
<i>Lagarosiphon major</i>	Curly Waterweed	flowering plant	13/08/2008	-	2
<i>Triglochin maritimum</i>	Sea Arrowgrass	flowering plant	31/05/1966	17/05/2008	22
<i>Triglochin palustre</i>	Marsh Arrowgrass	flowering plant	31/05/1966	30/09/1997	4
<i>Potamogeton crispus</i>	Curled Pondweed	flowering plant	31/12/2007	-	1
<i>Potamogeton pusillus</i>	Lesser Pondweed	flowering plant	31/08/2002	-	1
<i>Dioscorea communis</i>	Black Bryony	flowering plant	31/08/2002	21/08/2009	12
<i>Spiranthes spiralis</i>	Autumn Lady's-tresses	flowering plant	31/08/2005	14/08/2008	2
<i>Dactylorhiza fuchsii</i>	Common Spotted-orchid	flowering plant	30/06/2005	15/06/2013	4
<i>Dactylorhiza fuchsii x praetermissa = D. x gra</i>	Marsh-Orchid	flowering plant	16/06/2008	-	1
<i>Dactylorhiza praetermissa</i>	Southern Marsh-orchid	flowering plant	31/05/1966	15/06/2013	11
<i>Orchis morio</i>	Green-winged Orchid	flowering plant	31/12/2010	-	1
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid	flowering plant	14/06/1993	-	1

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<i>Ophrys apifera</i>	Bee Orchid	flowering plant	17/05/2008	-	1
<i>Iris</i>		flowering plant	30/04/2008	13/05/2008	2
<i>Iris foetidissima</i>	Stinking Iris	flowering plant	31/12/2005	02/09/2010	5
<i>Iris pseudacorus</i>	Yellow Iris	flowering plant	31/05/1966	30/03/2010	15
<i>Crocus</i>		flowering plant	30/03/2010	-	1
<i>Crocus tommasinianus</i>	Early Crocus	flowering plant	26/01/2008	-	1
<i>Gladiolus communis</i>	Eastern Gladiolus	flowering plant	07/06/2009	-	1
<i>Gladiolus communis subsp. byzantinus</i>	Gladiolus	flowering plant	07/06/2009	-	1
<i>Crocosmia pottsii x aurea = C. x crocosmiiflor</i>	Montbretia	flowering plant	10/05/2006	-	2
<i>Allium triquetrum</i>	Three-cornered Garlic	flowering plant	25/05/2005	17/05/2008	4
<i>Allium vineale</i>	Wild Onion	flowering plant	28/01/2005	17/05/2008	3
<i>Leucojum aestivum</i>	Summer Snowflake	flowering plant	13/04/2001	31/12/2001	2
<i>Galanthus nivalis</i>	Snowdrop	flowering plant	03/02/2008	23/02/2011	8
<i>Narcissus</i>	daffodils	flowering plant	30/09/1997	30/03/2010	6
<i>Narcissus pseudonarcissus</i>	Daffodil	flowering plant	30/04/2008	-	1
<i>Convallaria majalis</i>	Lily-of-the-valley	flowering plant	13/05/2008	-	1
<i>Polygonatum multiflorum</i>	Solomon's-seal	flowering plant	13/05/2008	-	1
<i>Polygonatum multiflorum x odoratum = P. x h</i>	Garden Solomon's-seal	flowering plant	25/05/2005	31/12/2007	2
<i>Ornithogalum angustifolium</i>	Star-of-Bethlehem	flowering plant	04/06/2005	11/06/2006	3
<i>Ornithogalum pyrenaicum</i>	Spiked Star-of-Bethlehem	flowering plant	31/12/1991	26/06/2010	15
<i>Scilla bifolia</i>	Alpine Squill	flowering plant	19/02/2011	04/03/2011	2
<i>Hyacinthoides</i>		flowering plant	30/03/2010	-	1
<i>Hyacinthoides hispanica</i>	Spanish Bluebell	flowering plant	31/12/2007	-	1
<i>Hyacinthoides non-scripta</i>	Bluebell	flowering plant	04/06/2005	26/08/2011	27
<i>Hyacinthoides non-scripta x hispanica = H. x</i>	Hybrid bluebell	flowering plant	11/05/2005	17/05/2008	11
<i>Muscari armeniacum</i>	Garden Grape-hyacinth	flowering plant	10/05/2006	20/04/2010	3
<i>Asparagus officinalis</i>	Garden Asparagus	flowering plant	13/08/2008	-	1
<i>Ruscus aculeatus</i>	Butcher's-broom	flowering plant	30/06/2005	02/09/2010	18
<i>Yucca</i>		flowering plant	30/03/2010	-	1
<i>Pontederia cordata</i>	Pickeralweed	flowering plant	23/09/2001	31/12/2007	3
<i>Sparganium emersum</i>	Unbranched Bur-reed	flowering plant	01/01/2010	-	2
<i>Sparganium erectum</i>	Branched Bur-reed	flowering plant	23/08/2002	01/01/2010	5
<i>Typha angustifolia</i>	Lesser Bulrush	flowering plant	20/06/1989	30/09/1997	3
<i>Typha latifolia</i>	Bulrush	flowering plant	31/05/1966	01/01/2010	9
<i>Juncus</i>	Rush	flowering plant	20/04/2004	03/06/2008	3
<i>Juncus bufonius agg.</i>	Toad Rush agg.	flowering plant	20/06/1989	01/01/2010	5
<i>Juncus acutiflorus</i>	Sharp-flowered Rush	flowering plant	20/06/1989	22/07/2010	5
<i>Juncus articulatus</i>	Jointed Rush	flowering plant	31/05/1966	15/09/1987	5
<i>Juncus articulatus x acutiflorus = J. x surrejan</i>	Rush	flowering plant	31/08/2002	-	1
<i>Juncus bufonius</i>	Toad Rush	flowering plant	31/05/1966	30/09/1997	3
<i>Juncus bulbosus</i>	Bulbous Rush	flowering plant	30/06/2005	-	1
<i>Juncus conglomeratus</i>	Compact Rush	flowering plant	31/05/1966	31/07/2006	8
<i>Juncus effusus</i>	Soft-rush	flowering plant	31/05/1966	01/01/2010	19
<i>Juncus gerardii</i>	Saltmarsh Rush	flowering plant	31/05/1966	31/07/2006	9

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<i>Juncus inflexus</i>	Hard Rush	flowering plant	31/05/1966	01/01/2010	25
<i>Juncus maritimus</i>	Sea Rush	flowering plant	17/09/1996	12/08/2005	5
<i>Juncus subnodulosus</i>	Blunt-flowered Rush	flowering plant	30/09/1997	23/08/2002	3
<i>Juncus tenuis</i>	Slender Rush	flowering plant	31/07/2005	31/12/2007	2
<i>Luzula</i>	Wood-Rush	flowering plant	20/04/2004	-	1
<i>Luzula campestris</i>	Field Wood-rush	flowering plant	03/05/2006	17/05/2008	5
<i>Luzula forsteri</i>	Southern Wood-rush	flowering plant	30/06/2005	-	1
<i>Luzula multiflora</i>	Heath Wood-rush	flowering plant	31/12/2007	-	1
<i>Luzula pilosa</i>	Hairy Wood-rush	flowering plant	31/12/2007	03/06/2008	2
<i>Luzula sylvatica</i>	Great Wood-rush	flowering plant	13/05/2008	-	1
<i>Bolboschoenus maritimus</i>	Sea Club-rush	flowering plant	31/05/1966	11/11/2009	17
<i>Schoenoplectus tabernaemontani</i>	Grey Club-rush	flowering plant	23/08/1994	-	3
<i>Eleocharis palustris</i>	Common Spike-rush	flowering plant	31/05/1966	04/05/2009	3
<i>Cyperus eragrostis</i>	Pale Galingale	flowering plant	31/12/1995	-	1
<i>Cyperus involucratus</i>		flowering plant	30/03/2010	-	1
<i>Cyperus longus</i>	Galingale	flowering plant	31/12/1988	17/05/2008	10
<i>Carex</i>	Sedge	flowering plant	31/08/2002	30/04/2008	5
<i>Carex acuta</i>	Slender Tufted-sedge	flowering plant	29/06/2011	-	1
<i>Carex acutiformis</i>	Lesser Pond-sedge	flowering plant	31/05/1966	11/11/2009	15
<i>Carex acutiformis x riparia = C. x sooi</i>		flowering plant	23/08/2002	-	1
<i>Carex caryophylllea</i>	Spring-sedge	flowering plant	18/05/2005	-	1
<i>Carex distans</i>	Distant Sedge	flowering plant	15/05/2009	-	1
<i>Carex disticha</i>	Brown Sedge	flowering plant	20/06/1989	17/05/2008	6
<i>Carex divisa</i>	Divided Sedge	flowering plant	31/05/1966	17/05/2008	19
<i>Carex divulsa</i>	Grey Sedge	flowering plant	23/08/1994	31/08/2002	2
<i>Carex divulsa subsp. divulsa</i>	Grey Sedge	flowering plant	18/05/2005	17/05/2008	9
<i>Carex flacca</i>	Glaucous Sedge	flowering plant	31/05/1966	18/05/2005	5
<i>Carex hirta</i>	Hairy Sedge	flowering plant	31/05/1966	17/05/2008	13
<i>Carex nigra</i>	Common Sedge	flowering plant	20/06/1989	30/06/2005	4
<i>Carex otrubae</i>	False Fox-sedge	flowering plant	31/05/1966	30/09/1997	9
<i>Carex ovalis</i>	Oval Sedge	flowering plant	04/06/2005	04/05/2009	3
<i>Carex panicea</i>	Carnation Sedge	flowering plant	31/05/1966	-	1
<i>Carex paniculata</i>	Greater Tussock-sedge	flowering plant	10/09/2002	01/01/2010	3
<i>Carex pendula</i>	Pendulous Sedge	flowering plant	11/05/2005	26/06/2010	18
<i>Carex pilulifera</i>	Pill Sedge	flowering plant	04/06/2005	31/12/2007	2
<i>Carex pseudocyperus</i>	Cyperus Sedge	flowering plant	12/08/2005	21/06/2011	3
<i>Carex remota</i>	Remote Sedge	flowering plant	31/05/1966	01/01/2010	12
<i>Carex riparia</i>	Greater Pond-sedge	flowering plant	31/05/1966	01/01/2010	16
<i>Carex sylvatica</i>	Wood-sedge	flowering plant	04/06/2005	21/08/2009	10
<i>Carex viridula subsp. oedocarpa</i>	Common Yellow-sedge	flowering plant	31/12/2007	-	1
<i>Carex vulpina</i>	True Fox-sedge	flowering plant	17/05/2008	-	1
<i>Milium effusum</i>	Wood Millet	flowering plant	03/06/2008	-	1
<i>Lolium multiflorum</i>	Italian Rye-grass	flowering plant	17/05/2008	-	1
<i>Lolium perenne</i>	Perennial Rye-grass	flowering plant	31/05/1966	26/08/2011	45



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<i>Festuca ovina</i> agg.	Sheep's Fescue agg.	flowering plant	31/05/1966	-	1
<i>Festuca rubra</i> agg.	Red Fescue	flowering plant	17/09/1996	31/12/2006	6
<i>Festuca arundinacea</i>	Tall Fescue	flowering plant	31/05/1966	04/05/2009	11
<i>Festuca gigantea</i>	Giant Fescue	flowering plant	14/08/2006	15/08/2006	2
<i>Festuca pratensis</i>	Meadow Fescue	flowering plant	31/05/1966	17/05/2008	7
<i>Festuca rubra</i>	Red Fescue	flowering plant	15/09/1987	06/04/2012	24
<i>Vulpia bromoides</i>	Squirreltail Fescue	flowering plant	22/07/2008	-	1
<i>Vulpia myuros</i>	Rat's-tail Fescue	flowering plant	14/06/2008	-	1
<i>Cynosurus cristatus</i>	Crested Dog's-tail	flowering plant	31/05/1966	11/11/2009	14
<i>Puccinellia distans</i>	Reflexed Saltmarsh-Grass	flowering plant	31/05/1966	27/06/2005	4
<i>Puccinellia fasciculata</i>	Borrer's Saltmarsh-grass	flowering plant	23/08/1994	-	3
<i>Puccinellia maritima</i>	Common Saltmarsh-grass	flowering plant	23/08/1994	06/04/2012	11
<i>Puccinellia rupestris</i>	Stiff Saltmarsh-grass	flowering plant	31/12/1978	27/06/2005	5
<i>Poa angustifolia</i>	Narrow-leaved Meadow-grass	flowering plant	03/05/1984	-	1
<i>Poa annua</i>	Annual Meadow-grass	flowering plant	20/06/1989	26/08/2011	23
<i>Poa compressa</i>	Flattened Meadow-grass	flowering plant	31/12/1995	31/12/2001	2
<i>Poa infirma</i>	Early Meadow-grass	flowering plant	14/03/2007	-	2
<i>Poa nemoralis</i>	Wood Meadow-grass	flowering plant	30/06/2005	29/06/2011	5
<i>Poa pratensis</i>	Smooth Meadow-grass	flowering plant	11/05/2005	01/07/2008	7
<i>Poa trivialis</i>	Rough Meadow-grass	flowering plant	31/05/1966	30/03/2010	25
<i>Dactylis glomerata</i>	Cock's-foot	flowering plant	31/05/1966	02/09/2010	31
<i>Catabrosa aquatica</i>	Whorl-grass	flowering plant	20/06/1989	01/01/2010	9
<i>Catapodium rigidum</i>	Fern-grass	flowering plant	03/05/1984	01/08/2011	6
<i>Parapholis strigosa</i>	Hard-grass	flowering plant	17/09/1996	27/06/2005	2
<i>Helictotrichon pratense</i>	Meadow Oat-grass	flowering plant	15/09/1987	30/09/1997	3
<i>Helictotrichon pubescens</i>	Downy Oat-grass	flowering plant	17/05/2006	-	1
<i>Arrhenatherum elatius</i>	False Oat-grass	flowering plant	31/05/1966	31/12/2012	25
<i>Avena fatua</i>	Wild-oat	flowering plant	14/08/2006	25/09/2009	5
<i>Avena sativa</i>	Oat	flowering plant	30/06/2005	-	1
<i>Trisetum flavescens</i>	Yellow Oat-grass	flowering plant	31/05/1966	31/08/2002	2
<i>Deschampsia cespitosa</i>	Tufted Hair-Grass	flowering plant	15/09/1987	01/08/2008	4
<i>Deschampsia flexuosa</i>	Wavy Hair-grass	flowering plant	31/12/2007	-	1
<i>Holcus lanatus</i>	Yorkshire-fog	flowering plant	15/09/1987	02/09/2010	33
<i>Holcus mollis</i>	Creeping Soft-grass	flowering plant	31/05/1966	31/12/2007	2
<i>Aira praecox</i>	Early Hair-grass	flowering plant	31/12/2007	-	1
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	flowering plant	31/05/1966	17/05/2008	13
<i>Phalaris arundinacea</i>	Reed Canary-grass	flowering plant	20/06/1989	06/04/2012	14
<i>Phalaris canariensis</i>	Canary-grass	flowering plant	13/08/2008	-	1
<i>Agrostis</i>	Bent Grass	flowering plant	31/12/2007	-	1
<i>Agrostis canina</i>	Velvet Bent	flowering plant	29/08/2008	-	1
<i>Agrostis capillaris</i>	Common Bent	flowering plant	15/09/1987	22/09/2011	6
<i>Agrostis gigantea</i>	Black Bent	flowering plant	31/07/2006	29/08/2008	3
<i>Agrostis stolonifera</i>	Creeping Bent	flowering plant	15/09/1987	22/09/2011	35
<i>Agrostis vinealis</i>	Brown Bent	flowering plant	21/06/2011	-	1

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<i>Calamagrostis epigejos</i>	Wood Small-reed	flowering plant	23/08/2002	31/07/2006	3
<i>Apera spica-venti</i>	Loose Silky-bent	flowering plant	31/12/1997	-	1
<i>Polypogon viridis</i>	Water Bent	flowering plant	31/12/1995	23/12/2001	2
<i>Alopecurus bulbosus</i>	Bulbous Foxtail	flowering plant	31/12/1987	17/05/2008	12
<i>Alopecurus geniculatus</i>	Marsh Foxtail	flowering plant	20/06/1989	17/05/2008	9
<i>Alopecurus geniculatus x bulbosus = A. x plett</i>	Foxtail	flowering plant	23/08/1994	-	3
<i>Alopecurus pratensis</i>	Meadow Foxtail	flowering plant	31/05/1966	17/05/2008	9
<i>Phleum pratense</i>	Timothy	flowering plant	31/08/2002	-	1
<i>Phleum bertolonii</i>	Smaller Cat's-tail	flowering plant	15/09/1987	22/07/2008	9
<i>Phleum pratense</i>	Timothy	flowering plant	31/05/1966	26/06/2010	19
<i>Glyceria</i>	Sweet-Grass	flowering plant	20/04/2004	-	1
<i>Glyceria fluitans</i>	Floating Sweet-grass	flowering plant	17/09/1996	29/06/2011	4
<i>Glyceria fluitans x notata = G. x pedicellata</i>	Hybrid Sweet-grass	flowering plant	31/12/2000	01/01/2010	3
<i>Glyceria maxima</i>	Reed Sweet-grass	flowering plant	31/12/2007	13/08/2008	2
<i>Glyceria notata</i>	Plicate Sweet-grass	flowering plant	20/06/1989	30/09/1997	3
<i>Melica uniflora</i>	Wood Melick	flowering plant	30/06/2005	21/08/2009	8
<i>Bromus hordeaceus</i>	Lesser Soft-Brome	flowering plant	20/06/1989	17/05/2006	3
<i>Bromus hordeaceus subsp. hordeaceus</i>	Common Soft-brome	flowering plant	31/05/1966	01/07/2008	13
<i>Bromus secalinus</i>	Rye Brome	flowering plant	22/07/2008	-	1
<i>Bromus sterilis</i>	Barren Brome	flowering plant	31/05/1966	26/06/2010	16
<i>Bromopsis ramosa</i>	Hairy-brome	flowering plant	30/06/2005	17/05/2008	6
<i>Ceratochloa carinata</i>	California Brome	flowering plant	31/12/1997	-	1
<i>Ceratochloa cathartica</i>	Rescue Brome	flowering plant	13/08/2008	-	1
<i>Brachypodium sylvaticum</i>	False-brome	flowering plant	18/05/2005	21/08/2009	10
<i>Elytrigia atherica</i>	Sea Couch	flowering plant	31/05/1966	06/04/2012	20
<i>Elytrigia repens</i>	Common Couch	flowering plant	31/05/1966	31/12/2012	10
<i>Elytrigia repens x juncea = E. x laxa</i>	Couch	flowering plant	31/05/1966	-	1
<i>Hordeum marinum</i>	Sea Barley	flowering plant	31/05/1966	-	2
<i>Hordeum murinum</i>	Wall Barley	flowering plant	23/08/1994	26/08/2011	14
<i>Hordeum secalinum</i>	Meadow Barley	flowering plant	31/05/1966	31/07/2006	12
<i>Triticum aestivum</i>	Bread Wheat	flowering plant	31/07/2006	25/09/2009	5
<i>Phragmites australis</i>	Common Reed	flowering plant	31/05/1966	01/01/2010	32
<i>Spartina anglica</i>	Common Cord-grass	flowering plant	17/09/1996	06/04/2012	5
<i>Spartina maritima x alterniflora = S. x townse</i>	Townsend's Cord-grass	flowering plant	31/05/1966	31/08/2002	3
<i>Setaria verticillata</i>	Rough Bristle-grass	flowering plant	12/08/2001	-	1
<i>Ceratophyllum demersum</i>	Rigid Hornwort	flowering plant	31/12/2007	-	1
<i>Papaver dubium subsp. dubium</i>	Long-headed Poppy	flowering plant	15/08/2006	06/12/2006	2
<i>Papaver dubium subsp. lecoqii</i>	Yellow-juiced Poppy	flowering plant	17/05/2008	-	1
<i>Papaver rhoeas</i>	Common Poppy	flowering plant	31/05/1966	31/12/2012	9
<i>Papaver somniferum</i>	Opium Poppy	flowering plant	11/05/2005	01/07/2008	5
<i>Chelidonium majus</i>	Greater Celandine	flowering plant	28/01/2005	17/05/2008	6
<i>Pseudofumaria lutea</i>	Yellow Corydalis	flowering plant	28/01/2005	17/05/2008	6
<i>Fumaria muralis</i>	Common Ramping-fumitory	flowering plant	04/06/2005	-	1
<i>Fumaria officinalis</i>	Common Fumitory	flowering plant	04/10/2003	31/12/2012	6

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<i>Berberis</i>		flowering plant	27/01/2010	26/08/2011	3
<i>Berberis darwinii</i>	Darwin's Barberry	flowering plant	31/12/1999	17/05/2008	4
<i>Mahonia</i>	Oregon Grape	flowering plant	31/12/1999	-	1
<i>Mahonia aquifolium</i>	Oregon-grape	flowering plant	31/12/2001	26/08/2011	4
<i>Caltha palustris</i>	Marsh-marigold	flowering plant	31/05/1966	30/03/2010	7
<i>Helleborus foetidus</i>	Stinking Hellebore	flowering plant	31/12/2001	-	1
<i>Helleborus niger</i>	Christmas Rose	flowering plant	30/03/2010	-	1
<i>Nigella damascena</i>	Love-in-a-mist	flowering plant	30/05/2005	13/08/2008	4
<i>Anemone hupehensis x vitifolia = A. x hybrida</i>	Japanese Anemone	flowering plant	26/08/2011	-	1
<i>Anemone nemorosa</i>	Wood Anemone	flowering plant	04/06/2005	03/06/2008	12
<i>Clematis</i>		flowering plant	30/03/2010	-	1
<i>Clematis vitalba</i>	Traveller's-joy	flowering plant	31/05/1966	27/01/2010	12
<i>Ranunculus acris</i>	Meadow Buttercup	flowering plant	31/05/1966	17/05/2008	18
<i>Ranunculus auricomus</i>	Goldilocks Buttercup	flowering plant	16/04/2005	-	1
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	flowering plant	31/05/1966	01/07/2008	10
<i>Ranunculus ficaria</i>	Lesser Celandine	flowering plant	28/04/1999	17/05/2008	14
<i>Ranunculus ficaria subsp. bulbifer</i>	Lesser Celandine	flowering plant	04/06/2005	03/05/2006	2
<i>Ranunculus ficaria subsp. ficaria</i>	Lesser Celandine	flowering plant	04/06/2005	17/05/2008	3
<i>Ranunculus flammula</i>	Lesser Spearwort	flowering plant	31/05/1966	12/06/2011	10
<i>Ranunculus lingua</i>	Greater Spearwort	flowering plant	31/12/2007	-	1
<i>Ranunculus peltatus</i>	Pond Water-crowfoot	flowering plant	11/05/2005	-	1
<i>Ranunculus repens</i>	Creeping Buttercup	flowering plant	15/09/1987	26/08/2011	39
<i>Ranunculus sardous</i>	Hairy Buttercup	flowering plant	22/07/2008	-	1
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup	flowering plant	31/05/1966	12/06/2011	13
<i>Ranunculus trichophyllus</i>	Thread-leaved Water-crowfoot	flowering plant	31/12/2007	-	1
<i>Aquilegia vulgaris</i>	Columbine	flowering plant	25/05/2005	13/08/2008	4
<i>Thalictrum minus</i>	Lesser Meadow-rue	flowering plant	31/12/1979	-	1
<i>Buxus</i>		flowering plant	30/03/2010	-	1
<i>Buxus sempervirens</i>	Box	flowering plant	13/05/2008	26/08/2011	3
<i>Ribes nigrum</i>	Black Currant	flowering plant	31/12/1999	-	1
<i>Ribes rubrum</i>	Red Currant	flowering plant	31/12/1999	13/05/2008	5
<i>Ribes sanguineum</i>	Flowering Currant	flowering plant	31/12/2001	10/05/2006	3
<i>Ribes uva-crispa</i>	Gooseberry	flowering plant	30/06/2005	30/04/2008	2
<i>Bergenia cordifolia</i>	Heart-leaved Bergenia	flowering plant	30/03/2010	-	1
<i>Saxifraga tridactylites</i>	Rue-leaved Saxifrage	flowering plant	03/05/1984	18/05/2005	3
<i>Tellima grandiflora</i>	Fringecups	flowering plant	04/06/2005	10/05/2006	2
<i>Crassula helmsii</i>	New Zealand Pigmyweed	flowering plant	31/12/1999	31/12/2007	4
<i>Sedum acre</i>	Biting Stonecrop	flowering plant	18/05/2005	12/06/2011	2
<i>Sedum forsterianum</i>	Rock Stonecrop	flowering plant	31/12/1990	-	1
<i>Sedum spectabile</i>	Butterfly Stonecrop	flowering plant	17/05/2008	-	1
<i>Myriophyllum aquaticum</i>	Parrot's-feather	flowering plant	31/07/2005	31/12/2007	2
<i>Myriophyllum verticillatum</i>	Whorled Water-milfoil	flowering plant	30/06/1999	31/12/2007	2
<i>Parthenocissus quinquefolia</i>	Virginia creeper	flowering plant	31/07/2006	-	1
<i>Robinia pseudoacacia</i>	False-acacia	flowering plant	31/12/2000	01/07/2008	2

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<i>Onobrychis viciifolia</i>	Sainfoin	flowering plant	10/05/2006	-	1
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	flowering plant	31/05/1966	19/06/2011	10
<i>Lotus pedunculatus</i>	Greater Bird's-foot-trefoil	flowering plant	31/05/1966	11/11/2009	11
<i>Vicia cracca</i>	Tufted Vetch	flowering plant	31/07/2006	01/07/2008	2
<i>Vicia hirsuta</i>	Hairy Tare	flowering plant	31/05/1966	31/12/2007	3
<i>Vicia sativa</i>	Common Vetch	flowering plant	31/05/1966	-	1
<i>Vicia sativa subsp. nigra</i>	Narrow-leaved Vetch	flowering plant	01/07/2008	29/08/2008	2
<i>Vicia sativa subsp. segetalis</i>	Common Vetch	flowering plant	11/05/2005	04/05/2009	6
<i>Vicia sepium</i>	Bush Vetch	flowering plant	23/05/2005	03/05/2006	3
<i>Vicia tetrasperma</i>	Smooth Tare	flowering plant	22/07/2008	-	1
<i>Lathyrus latifolius</i>	Broad-leaved Everlasting-pea	flowering plant	01/08/2011	-	2
<i>Lathyrus pratensis</i>	Meadow Vetchling	flowering plant	31/05/1966	17/05/2008	7
<i>Lathyrus tuberosus</i>	Tuberous Pea	flowering plant	31/12/1960	-	1
<i>Ononis repens</i>	Common Restharrow	flowering plant	31/05/1966	-	1
<i>Ononis spinosa</i>	Spiny Restharrow	flowering plant	31/05/1966	31/08/2008	3
<i>Medicago arabica</i>	Spotted Medick	flowering plant	31/05/1966	22/07/2008	10
<i>Medicago lupulina</i>	Black Medick	flowering plant	31/05/1966	01/07/2008	10
<i>Trifolium</i>	Clover	flowering plant	18/11/2008	31/12/2012	2
<i>Trifolium arvense</i>	Hare's-foot Clover	flowering plant	20/06/1989	30/09/1997	3
<i>Trifolium campestre</i>	Hop Trefoil	flowering plant	14/06/2008	29/08/2008	2
<i>Trifolium dubium</i>	Lesser Trefoil	flowering plant	31/05/1966	22/07/2008	9
<i>Trifolium fragiferum</i>	Strawberry Clover	flowering plant	17/09/1996	31/08/2002	2
<i>Trifolium incarnatum</i>	Crimson Clover	flowering plant	31/12/2012	-	1
<i>Trifolium micranthum</i>	Slender Trefoil	flowering plant	17/05/2008	04/05/2009	2
<i>Trifolium pratense</i>	Red Clover	flowering plant	31/05/1966	01/07/2008	17
<i>Trifolium repens</i>	White Clover	flowering plant	31/05/1966	31/12/2012	26
<i>Trifolium squamosum</i>	Sea Clover	flowering plant	31/12/1987	31/12/1994	3
<i>Laburnum anagyroides</i>	Laburnum	flowering plant	31/12/2001	19/06/2011	3
<i>Cytisus scoparius</i>	Broom	flowering plant	31/12/1999	29/08/2008	3
<i>Ulex europaeus</i>	Gorse	flowering plant	31/12/1999	04/05/2009	10
<i>Ulex minor</i>	Dwarf Gorse	flowering plant	10/05/2006	-	1
<i>Prunus</i>	Planted Cherry	flowering plant	29/02/2008	19/06/2011	4
<i>Prunus avium</i>	Wild Cherry	flowering plant	31/12/1999	02/09/2010	14
<i>Prunus cerasifera</i>	Cherry Plum	flowering plant	06/03/2005	24/03/2009	5
<i>Prunus domestica</i>	Wild Plum	flowering plant	22/07/2008	-	1
<i>Prunus laurocerasus</i>	Cherry Laurel	flowering plant	31/12/1999	26/08/2011	14
<i>Prunus lusitanica</i>	Portugal Laurel	flowering plant	31/12/1999	04/06/2005	2
<i>Prunus padus</i>	Bird Cherry	flowering plant	19/04/2009	-	1
<i>Prunus spinosa</i>	Blackthorn	flowering plant	17/09/1996	31/12/2012	16
<i>Pyrus communis</i>	Pear	flowering plant	22/07/2008	-	1
<i>Malus</i>	Apple	flowering plant	26/08/2011	-	1
<i>Malus pumila</i>	Apple	flowering plant	30/06/2005	22/07/2008	2
<i>Malus sylvestris</i>	Crab Apple	flowering plant	31/12/1999	30/04/2008	2
<i>Sorbus</i>	Whitebeam	flowering plant	31/12/2012	-	1

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<i>Sorbus aria</i>	Common Whitebeam	flowering plant	31/12/2006	-	1
<i>Sorbus aucuparia</i>	Rowan	flowering plant	31/12/1999	26/08/2011	8
<i>Cotoneaster</i>		flowering plant	18/11/2008	19/06/2011	2
<i>Cotoneaster bullatus</i>	Hollyberry cotoneaster	flowering plant	21/06/2011	-	2
<i>Cotoneaster frigidus x salicifolius = C. x water</i>	Waterer's Cotoneaster	flowering plant	31/12/2000	-	1
<i>Cotoneaster horizontalis</i>	Wall Cotoneaster	flowering plant	28/01/2005	13/08/2008	2
<i>Cotoneaster simonsii</i>	Himalayan cotoneaster	flowering plant	31/12/2001	-	1
<i>Crataegus laevigata</i>	Midland Hawthorn	flowering plant	10/09/2002	09/04/2011	2
<i>Crataegus monogyna</i>	Hawthorn	flowering plant	31/05/1966	31/12/2012	34
<i>Crataegus monogyna x laevigata = C. x media</i>		flowering plant	29/12/2007	-	1
<i>Crataegus persimilis</i>	Broad-leaved Cockspurthorn	flowering plant	13/08/2008	-	1
<i>Filipendula ulmaria</i>	Meadowsweet	flowering plant	31/05/1966	06/04/2012	17
<i>Rubus fruticosus agg.</i>	Bramble	flowering plant	20/06/1989	26/08/2011	46
<i>Rubus caesius</i>	Dewberry	flowering plant	13/08/2008	-	1
<i>Rubus idaeus</i>	Raspberry	flowering plant	03/05/2006	21/06/2011	4
<i>Rubus armeniacus</i>	Bramble	flowering plant	31/12/2000	21/06/2011	4
<i>Rubus armipotens</i>	Bramble	flowering plant	29/06/2010	21/06/2011	4
<i>Rubus asperidens</i>	Bramble	flowering plant	29/06/2010	21/06/2011	4
<i>Rubus bercheriensis</i>	Bramble	flowering plant	29/06/2010	-	1
<i>Rubus boudiccaae</i>	Bramble	flowering plant	29/06/2010	-	1
<i>Rubus britannicus</i>	Bramble	flowering plant	29/06/2010	21/06/2011	2
<i>Rubus cardiophyllus</i>	Bramble	flowering plant	29/06/2010	21/06/2011	3
<i>Rubus cinerosiformis</i>	Bramble	flowering plant	21/06/2011	-	1
<i>Rubus cissburiensis</i>	Bramble	flowering plant	29/06/2010	21/06/2011	2
<i>Rubus conspersus</i>	Bramble	flowering plant	29/06/2010	21/06/2011	2
<i>Rubus dasyphyllus</i>	Bramble	flowering plant	29/06/2010	-	1
<i>Rubus erythrops</i>	Bramble	flowering plant	21/06/2011	-	1
<i>Rubus flexuosus</i>	Bramble	flowering plant	29/06/2010	21/06/2011	3
<i>Rubus glareosus</i>	Bramble	flowering plant	29/06/2010	21/06/2011	3
<i>Rubus hylophilus</i>	Bramble	flowering plant	29/06/2010	21/06/2011	3
<i>Rubus insectifolius</i>	Bramble	flowering plant	29/06/2010	21/06/2011	2
<i>Rubus laciniatus</i>	Bramble	flowering plant	31/12/2000	09/07/2010	2
<i>Rubus leucandriformis</i>	Bramble	flowering plant	29/06/2010	-	1
<i>Rubus leucostachys</i>	Bramble	flowering plant	29/06/2010	-	1
<i>Rubus lindleianus</i>	Bramble	flowering plant	21/06/2011	-	1
<i>Rubus moylei</i>	Bramble	flowering plant	21/06/2011	-	2
<i>Rubus nemoralis</i>	Bramble	flowering plant	29/06/2010	21/06/2011	3
<i>Rubus polyanthemus</i>	Bramble	flowering plant	21/06/2011	-	1
<i>Rubus prolongatus</i>	Bramble	flowering plant	21/06/2011	-	1
<i>Rubus pruinatus</i>	Bramble	flowering plant	29/06/2010	21/06/2011	3
<i>Rubus rufescens</i>	Bramble	flowering plant	29/06/2010	21/06/2011	3
<i>Rubus septentrionalis</i>	Bramble	flowering plant	29/06/2010	-	1
<i>Rubus subinermoides</i>	Bramble	flowering plant	21/06/2011	-	1
<i>Rubus tamaricensis</i>	Bramble	flowering plant	29/06/2010	21/06/2011	2

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<i>Rubus ulmifolius</i>	Bramble	flowering plant	13/08/2008	21/06/2011	4
<i>Rubus vestitus</i>	Bramble	flowering plant	21/06/2011	-	1
<i>Potentilla</i>	Cinquefoil	flowering plant	30/04/2008	-	1
<i>Potentilla anserina</i>	Silverweed	flowering plant	31/05/1966	11/11/2009	23
<i>Potentilla erecta</i>	Tormentil	flowering plant	30/06/2005	15/08/2005	3
<i>Potentilla reptans</i>	Creeping Cinquefoil	flowering plant	31/05/1966	11/11/2009	17
<i>Potentilla sterilis</i>	Barren Strawberry	flowering plant	18/05/2005	10/05/2006	3
<i>Fragaria vesca</i>	Wild Strawberry	flowering plant	04/06/2005	03/06/2008	2
<i>Geum rivale</i>	Water Avens	flowering plant	31/12/1988	30/09/1997	3
<i>Geum urbanum</i>	Wood Avens	flowering plant	28/01/2005	03/06/2008	14
<i>Agrimonia eupatoria</i>	Agrimony	flowering plant	31/07/2005	04/05/2009	8
<i>Sanguisorba minor</i>	Salad Burnet	flowering plant	18/11/2008	-	1
<i>Sanguisorba minor subsp. minor</i>	Salad Burnet	flowering plant	23/05/2005	-	1
<i>Sanguisorba minor subsp. muricata</i>	Fodder Burnet	flowering plant	31/12/1990	10/05/2006	2
<i>Alchemilla mollis</i>	Garden Lady's-mantle	flowering plant	31/12/2000	21/06/2011	3
<i>Aphanes arvensis agg.</i>	Parsley Piert	flowering plant	30/05/2005	17/05/2006	3
<i>Aphanes arvensis</i>	Parsley-piert	flowering plant	30/06/2005	-	1
<i>Rosa</i>	Rose	flowering plant	15/08/2005	19/06/2011	7
<i>Rosa canina agg.</i>	Dog Rose	flowering plant	20/06/1989	31/12/2007	9
<i>Rosa arvensis</i>	Field-rose	flowering plant	20/06/1989	04/05/2009	10
<i>Rosa canina</i>	Dog-rose	flowering plant	31/07/2006	27/01/2010	5
<i>Rosa sempervirens</i>	Evergreen Rose	flowering plant	30/05/2005	-	1
<i>Rosa stylosa</i>	Short-styled Field-rose	flowering plant	10/08/2005	-	1
<i>Duchesnea indica</i>	Yellow-flowered Strawberry	flowering plant	31/12/1993	18/05/2005	3
<i>Hippophae rhamnoides</i>	Sea-buckthorn	flowering plant	31/12/2001	-	1
<i>Ulmus</i>	Elm	flowering plant	11/05/2005	26/08/2011	7
<i>Ulmus aggregate</i>		flowering plant	26/06/2010	-	1
<i>Ulmus glabra</i>	Wych Elm	flowering plant	31/12/1999	30/06/2005	2
<i>Ulmus procera</i>	English Elm	flowering plant	31/12/1999	31/12/2006	6
<i>Humulus lupulus</i>	Hop	flowering plant	15/08/2005	04/05/2009	2
<i>Morus nigra</i>	Black Mulberry	flowering plant	26/08/2011	-	1
<i>Ficus</i>		flowering plant	02/09/2010	-	1
<i>Urtica dioica</i>	Common Nettle	flowering plant	31/05/1966	19/06/2011	54
<i>Urtica urens</i>	Small Nettle	flowering plant	01/07/2008	22/09/2011	3
<i>Parietaria judaica</i>	Pellitory-of-the-wall	flowering plant	20/06/1989	03/05/2012	7
<i>Soleirolia soleirolii</i>	Mind-your-own-business	flowering plant	28/01/2005	17/05/2008	2
<i>Fagus sylvatica</i>	Beech	flowering plant	31/05/1966	26/08/2011	16
<i>Fagus sylvatica 'Purpurea'</i>	Copper Beech	flowering plant	31/12/1999	-	1
<i>Castanea sativa</i>	Sweet Chestnut	flowering plant	31/12/1999	21/08/2009	13
<i>Quercus</i>	Oak	flowering plant	10/09/2002	30/03/2010	2
<i>Quercus cerris</i>	Turkey Oak	flowering plant	30/06/2005	03/06/2008	4
<i>Quercus ilex</i>	Evergreen Oak	flowering plant	31/12/1999	01/07/2008	9
<i>Quercus palustris</i>	Pin Oak	flowering plant	26/08/2011	-	1
<i>Quercus petraea</i>	Sessile Oak	flowering plant	31/12/1999	04/06/2005	2

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<i>Quercus petraea x robur = Q. x rosacea</i>	Hybrid Oak	flowering plant	04/06/2005	-	1
<i>Quercus robur</i>	Pedunculate Oak	flowering plant	17/09/1996	26/08/2011	28
<i>Juglans regia</i>	Walnut	flowering plant	10/05/2006	24/09/2009	3
<i>Betula jacquemontii</i>	Jacquemont's Birch	flowering plant	30/03/2010	-	1
<i>Betula pendula</i>	Silver Birch	flowering plant	31/12/1999	26/08/2011	9
<i>Betula pubescens</i>	Downy Birch	flowering plant	31/12/1999	13/05/2008	5
<i>Alnus glutinosa</i>	Alder	flowering plant	31/12/1999	31/12/2008	8
<i>Alnus incana</i>	Grey Alder	flowering plant	14/07/2000	-	1
<i>Carpinus betulus</i>	Hornbeam	flowering plant	31/12/1999	25/09/2009	6
<i>Corylus avellana</i>	Hazel	flowering plant	31/05/1966	31/12/2012	24
<i>Bryonia dioica</i>	White Bryony	flowering plant	31/05/1966	22/07/2008	13
<i>Euonymus europaeus</i>	Spindle	flowering plant	31/05/1966	31/12/2012	8
<i>Oxalis articulata</i>	Pink-sorrel	flowering plant	17/05/2008	26/06/2010	4
<i>Oxalis corniculata</i>	Procumbent Yellow-sorrel	flowering plant	28/01/2005	22/09/2011	5
<i>Oxalis debilis</i>	Large-flowered Pink-sorrel	flowering plant	31/12/2000	-	1
<i>Oxalis incarnata</i>	Pale Pink-sorrel	flowering plant	31/12/2000	01/08/2011	3
<i>Mercurialis annua</i>	Annual Mercury	flowering plant	31/08/2002	17/05/2008	8
<i>Mercurialis perennis</i>	Dog's Mercury	flowering plant	04/06/2005	17/05/2008	6
<i>Euphorbia</i>	Spurge	flowering plant	13/05/2008	30/03/2010	2
<i>Euphorbia amygdaloides</i>	Wood Spurge	flowering plant	30/06/2005	21/08/2009	2
<i>Euphorbia amygdaloides subsp. robbiae</i>	Spurge	flowering plant	18/05/2005	-	1
<i>Euphorbia exigua</i>	Dwarf Spurge	flowering plant	31/05/1966	-	1
<i>Euphorbia helioscopia</i>	Sun Spurge	flowering plant	04/10/2003	31/12/2012	7
<i>Euphorbia lathyris</i>	Caper Spurge	flowering plant	04/06/2005	-	1
<i>Euphorbia peplus</i>	Petty Spurge	flowering plant	28/01/2005	26/08/2011	7
<i>Populus</i>	Poplar	flowering plant	20/04/2004	-	1
<i>Populus nigra</i>	Black-poplar	flowering plant	31/12/1999	20/04/2004	5
<i>Populus nigra subsp. betulifolia</i>	Black Poplar	flowering plant	17/05/2008	-	1
<i>Populus nigra x deltoides = P. x canadensis</i>	Hybrid Black-poplar	flowering plant	10/05/2006	25/09/2009	2
<i>Populus tremula</i>	Aspen	flowering plant	17/05/2006	02/09/2010	3
<i>Salix</i>	Willow	flowering plant	23/08/2002	31/12/2012	13
<i>Salix alba</i>	White Willow	flowering plant	31/05/1966	31/12/2008	7
<i>Salix alba 'Britzensis'</i>	Willow	flowering plant	31/12/1999	-	1
<i>Salix caprea</i>	Goat Willow	flowering plant	31/12/1999	02/09/2010	9
<i>Salix cinerea</i>	Common Sallow	flowering plant	20/06/1989	01/07/2008	4
<i>Salix cinerea subsp. oleifolia</i>	Rusty Willow	flowering plant	10/09/2002	22/07/2010	6
<i>Salix fragilis</i>	Crack-willow	flowering plant	31/05/1966	12/06/2011	14
<i>Salix viminalis</i>	Osier	flowering plant	20/06/1989	04/05/2009	6
<i>Viola arvensis</i>	Field Pansy	flowering plant	30/05/2005	14/08/2006	4
<i>Viola hirta</i>	Hairy Violet	flowering plant	10/05/2006	-	1
<i>Viola odorata</i>	Sweet Violet	flowering plant	28/01/2005	17/05/2008	6
<i>Viola reichenbachiana</i>	Early Dog-violet	flowering plant	30/05/2005	13/05/2008	3
<i>Viola riviniana</i>	Common Dog-violet	flowering plant	10/05/2006	30/03/2010	4
<i>Linum usitatissimum</i>	Flax	flowering plant	31/12/2000	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Hypericum</i>	St. John's-Wort	flowering plant	30/03/2010	-	1
<i>Hypericum androsaemum</i>	Tutsan	flowering plant	28/01/2005	30/04/2008	3
<i>Hypericum calycinum</i>	Rose-of-Sharon	flowering plant	31/12/2001	-	1
<i>Hypericum humifusum</i>	Trailing St John's-wort	flowering plant	31/12/2007	-	1
<i>Hypericum perforatum</i>	Perforate St John's-wort	flowering plant	15/09/1987	25/09/2009	11
<i>Hypericum pulchrum</i>	Slender St John's-wort	flowering plant	04/06/2005	31/12/2007	2
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort	flowering plant	20/06/1989	11/11/2009	7
<i>Geranium</i>	Crane's-Bill	flowering plant	20/04/2004	18/11/2008	2
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	flowering plant	20/06/1989	31/12/2012	16
<i>Geranium endressii</i>	French Crane's-bill	flowering plant	25/05/2005	30/03/2010	3
<i>Geranium endressii x versicolor = G. x oxonian</i>	Druce's Crane's-bill	flowering plant	12/08/2001	13/08/2008	2
<i>Geranium molle</i>	Dove's-foot Crane's-bill	flowering plant	15/09/1987	31/12/2012	8
<i>Geranium pusillum</i>	Small-flowered Crane's-bill	flowering plant	31/12/2000	-	1
<i>Geranium pyrenaicum</i>	Hedgerow Crane's-bill	flowering plant	11/05/2005	17/05/2006	3
<i>Geranium robertianum</i>	Herb-Robert	flowering plant	31/05/1966	31/12/2008	15
<i>Geranium rotundifolium</i>	Round-leaved Crane's-bill	flowering plant	28/01/2005	01/07/2005	3
<i>Geranium sanguineum</i>	Bloody Crane's-bill	flowering plant	11/05/2008	-	1
<i>Erodium cicutarium</i>	Common Stork's-bill	flowering plant	18/05/2005	21/11/2011	2
<i>Erodium moschatum</i>	Musk Stork's-bill	flowering plant	31/12/1999	14/03/2007	8
<i>Epilobium</i>	Willowherb	flowering plant	23/08/2002	27/01/2010	2
<i>Epilobium ciliatum</i>	American Willowherb	flowering plant	20/06/1989	14/06/2008	8
<i>Epilobium hirsutum</i>	Great Willowherb	flowering plant	31/05/1966	01/01/2010	29
<i>Epilobium montanum</i>	Broad-leaved Willowherb	flowering plant	31/05/1966	04/05/2009	7
<i>Epilobium obscurum</i>	Short-fruited Willowherb	flowering plant	17/05/2008	13/08/2008	2
<i>Epilobium parviflorum</i>	Hoary Willowherb	flowering plant	31/07/2005	01/08/2008	8
<i>Epilobium tetragonum</i>	Square-stalked Willowherb	flowering plant	20/06/1989	22/07/2008	6
<i>Chamerion angustifolium</i>	Rosebay Willowherb	flowering plant	04/06/2005	31/12/2007	6
<i>Fuchsia</i>		flowering plant	18/11/2008	-	1
<i>Circaea lutetiana</i>	Enchanter's-nightshade	flowering plant	18/05/2005	01/08/2011	9
<i>Koeleruteria paniculata</i>	Pride-of-India	flowering plant	31/12/1997	-	1
<i>Aesculus hippocastanum</i>	Horse-chestnut	flowering plant	31/05/1966	26/08/2011	11
<i>Acer campestre</i>	Field Maple	flowering plant	31/05/1966	31/12/2012	22
<i>Acer platanoides</i>	Norway Maple	flowering plant	30/06/2005	26/08/2011	6
<i>Acer pseudoplatanus</i>	Sycamore	flowering plant	31/05/1966	02/09/2010	31
<i>Ruta graveolens</i>	Rue	flowering plant	31/07/2006	-	1
<i>Ailanthus altissima</i>	Tree-of-heaven	flowering plant	31/12/2000	-	1
<i>Malva moschata</i>	Musk-mallow	flowering plant	10/05/2006	15/08/2006	2
<i>Malva sylvestris</i>	Common Mallow	flowering plant	31/08/2002	01/07/2008	13
<i>Lavatera thuringiaca</i>	Hyeres Tree-Mallow	flowering plant	31/12/1997	-	1
<i>Sidalcea hendersonii</i>	Mallow	flowering plant	31/12/1999	31/12/2001	3
<i>Tilia</i>	Lime	flowering plant	30/03/2010	26/08/2011	3
<i>Tilia cordata</i>	Small-leaved Lime	flowering plant	04/06/2005	-	1
<i>Tilia platyphyllos x cordata = T. x europaea</i>	Lime	flowering plant	31/05/1966	13/05/2008	6
<i>Reseda luteola</i>	Weld	flowering plant	10/05/2006	31/12/2006	2



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<i>Erysimum cheiranthoides</i>	Treacle-mustard	flowering plant	04/10/2003	-	1
<i>Erysimum cheiri</i>	Wallflower	flowering plant	28/01/2005	13/08/2008	2
<i>Arabidopsis thaliana</i>	Thale Cress	flowering plant	03/05/1984	17/05/2008	7
<i>Capsella bursa-pastoris</i>	Shepherd's-purse	flowering plant	31/05/1966	31/12/2012	17
<i>Capsella rubella</i>	Pink Shepherd's-purse	flowering plant	31/12/2000	11/05/2005	2
<i>Barbarea vulgaris</i>	Winter-cress	flowering plant	31/05/1966	17/05/2008	7
<i>Rorippa nasturtium-aquaticum agg.</i>	Water Cress	flowering plant	31/05/1966	01/01/2010	12
<i>Rorippa nasturtium-aquaticum</i>	Water-cress	flowering plant	15/09/1987	22/07/2010	13
<i>Rorippa sylvestris</i>	Creeping Yellow-cress	flowering plant	04/07/2009	-	1
<i>Armoracia rusticana</i>	Horse-radish	flowering plant	03/05/2006	13/08/2008	3
<i>Cardamine flexuosa</i>	Wavy Bitter-cress	flowering plant	11/05/2005	30/03/2010	6
<i>Cardamine hirsuta</i>	Hairy Bitter-cress	flowering plant	18/05/2005	17/05/2008	5
<i>Cardamine pratensis</i>	Cuckooflower	flowering plant	15/09/1987	17/05/2008	8
<i>Lepidium coronopus</i>	Swine-cress	flowering plant	31/05/1966	04/05/2009	7
<i>Lepidium didymum</i>	Lesser Swine-cress	flowering plant	31/05/1966	17/05/2008	8
<i>Lepidium draba</i>	Hoary Cress	flowering plant	11/05/2005	04/05/2009	5
<i>Lepidium latifolium</i>	Dittander	flowering plant	31/12/1988	22/07/2010	19
<i>Lepidium ruderale</i>	Narrow-leaved Pepperwort	flowering plant	31/12/1999	17/05/2008	5
<i>Lunaria annua</i>	Honesty	flowering plant	11/05/2005	30/03/2010	6
<i>Lobularia maritima</i>	Sweet Alison	flowering plant	31/12/2000	17/05/2008	2
<i>Aubrieta deltoidea</i>	Aubretia	flowering plant	31/12/2000	17/05/2008	4
<i>Erophila verna</i>	Common Whitlowgrass	flowering plant	11/05/2005	28/03/2010	5
<i>Erophila verna</i>	Common Whitlowgrass	flowering plant	28/03/2010	-	1
<i>Diplotaxis muralis</i>	Annual Wall-rocket	flowering plant	29/08/2008	-	1
<i>Diplotaxis tenuifolia</i>	Perennial Wall-rocket	flowering plant	29/09/2007	-	1
<i>Brassica napus</i>	Rape	flowering plant	23/05/2005	29/08/2008	4
<i>Sinapis arvensis</i>	Charlock	flowering plant	31/05/1966	31/12/2006	8
<i>Crambe cordifolia</i>	Greater Sea-kale	flowering plant	25/06/2005	10/08/2005	2
<i>Raphanus raphanistrum subsp. raphanistrum</i>	Wild Radish	flowering plant	04/10/2003	-	1
<i>Sisymbrium officinale</i>	Hedge Mustard	flowering plant	20/06/1989	17/05/2008	13
<i>Alliaria petiolata</i>	Garlic Mustard	flowering plant	20/04/2004	26/06/2010	18
<i>Thlaspi arvense</i>	Field Penny-crese	flowering plant	04/10/2003	14/08/2006	2
<i>Hesperis matronalis</i>	Dame's-violet	flowering plant	23/05/2005	30/06/2005	2
<i>Cochlearia anglica</i>	English Scurvygrass	flowering plant	31/05/1966	06/04/2012	7
<i>Cochlearia danica</i>	Danish Scurvygrass	flowering plant	28/01/2005	04/05/2009	5
<i>Viscum album</i>	Mistletoe	flowering plant	10/03/2009	25/01/2011	9
<i>Tamarix gallica</i>	Tamarisk	flowering plant	24/09/2009	-	1
<i>Limonium humile</i>	Lax-flowered Sea-lavender	flowering plant	17/09/1996	12/08/2005	6
<i>Limonium vulgare</i>	Common Sea-lavender	flowering plant	17/09/1996	10/08/2005	4
<i>Armeria maritima</i>	Sea Pink	flowering plant	17/09/1996	-	2
<i>Persicaria amphibia</i>	Amphibious Bistort	flowering plant	20/06/1989	01/01/2010	18
<i>Persicaria bistorta</i>	Common Bistort	flowering plant	15/09/1987	30/09/1997	4
<i>Persicaria capitata</i>	Pink-headed Persicaria	flowering plant	31/12/1997	28/01/2005	2
<i>Persicaria hydropiper</i>	Water-pepper	flowering plant	04/06/2005	11/11/2009	7

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<i>Persicaria lapathifolia</i>	Pale Persicaria	flowering plant	04/10/2003	22/07/2008	2
<i>Persicaria maculosa</i>	Redshank	flowering plant	15/09/1987	13/08/2008	14
<i>Polygonum aviculare</i> agg.	Knotgrass agg.	flowering plant	28/01/2005	27/06/2005	4
<i>Polygonum arenastrum</i>	Equal-leaved Knotgrass	flowering plant	28/06/2005	31/12/2006	5
<i>Polygonum aviculare</i>	Knotgrass	flowering plant	17/09/1996	31/12/2012	10
<i>Polygonum rurivagum</i>	Cornfield Knotgrass	flowering plant	04/09/2000	-	1
<i>Fallopia baldschuanica</i>	Russian-vine	flowering plant	25/09/2009	-	1
<i>Fallopia convolvulus</i>	Black-bindweed	flowering plant	14/08/2006	31/12/2006	4
<i>Fallopia japonica</i>	Japanese Knotweed	flowering plant	29/05/2005	31/12/2006	3
<i>Rumex</i>	Dock	flowering plant	28/04/1999	29/02/2008	3
<i>Rumex acetosa</i>	Common Sorrel	flowering plant	31/05/1966	11/11/2009	19
<i>Rumex acetosa</i> subsp. <i>acetosa</i>	Common Sorrel	flowering plant	20/04/2004	-	1
<i>Rumex acetosella</i>	Sheep's Sorrel	flowering plant	31/07/2005	17/05/2008	2
<i>Rumex conglomeratus</i>	Clustered Dock	flowering plant	20/06/1989	25/09/2009	13
<i>Rumex crispus</i>	Curled Dock	flowering plant	15/09/1987	26/06/2010	31
<i>Rumex crispus</i> subsp. <i>littoreus</i>	Curled Dock	flowering plant	31/08/2002	-	1
<i>Rumex obtusifolius</i>	Broad-leaved Dock	flowering plant	15/09/1987	27/01/2010	23
<i>Rumex pulcher</i>	Fiddle Dock	flowering plant	03/05/2006	31/07/2006	2
<i>Rumex sanguineus</i>	Wood Dock	flowering plant	30/09/1997	13/08/2008	14
<i>Arenaria serpyllifolia</i>	Thyme-Leaved Sandwort	flowering plant	31/05/1966	18/05/2005	3
<i>Arenaria serpyllifolia</i> subsp. <i>leptoclados</i>	Slender Sandwort	flowering plant	28/01/2005	01/08/2011	2
<i>Moehringia trinervia</i>	Three-nerved Sandwort	flowering plant	04/06/2005	03/06/2008	4
<i>Stellaria alsine</i>	Bog Stitchwort	flowering plant	20/06/1989	12/06/2011	4
<i>Stellaria graminea</i>	Lesser Stitchwort	flowering plant	15/09/1987	17/05/2008	10
<i>Stellaria holostea</i>	Greater Stitchwort	flowering plant	28/04/1999	01/07/2008	11
<i>Stellaria media</i>	Common Chickweed	flowering plant	31/05/1966	26/08/2011	22
<i>Cerastium arvense</i>	Field Mouse-ear	flowering plant	31/05/1966	-	1
<i>Cerastium fontanum</i>	Common Mouse-ear	flowering plant	31/05/1966	30/03/2010	22
<i>Cerastium glomeratum</i>	Sticky Mouse-ear	flowering plant	03/05/1984	17/05/2008	9
<i>Cerastium tomentosum</i>	Snow-in-summer	flowering plant	23/05/2005	-	1
<i>Sagina apetala</i>	Annual Pearlwort	flowering plant	11/05/2005	17/05/2008	3
<i>Sagina apetala</i> subsp. <i>erecta</i>	Fringed Pearlwort	flowering plant	11/05/2005	17/05/2008	5
<i>Sagina maritima</i>	Sea Pearlwort	flowering plant	27/06/2005	-	1
<i>Sagina procumbens</i>	Procumbent Pearlwort	flowering plant	28/01/2005	04/05/2009	8
<i>Spergularia marina</i>	Lesser Sea-spurrey	flowering plant	23/08/1994	22/09/2011	17
<i>Spergularia media</i>	Greater Sea-spurrey	flowering plant	23/08/1994	17/05/2008	6
<i>Silene dioica</i>	Red Champion	flowering plant	31/05/1966	22/07/2008	9
<i>Silene latifolia</i>	White Champion	flowering plant	31/05/1966	13/08/2008	12
<i>Silene latifolia</i> x <i>dioica</i> = <i>S. x hampeana</i>	Hybrid Champion	flowering plant	30/05/2005	22/07/2008	5
<i>Silene vulgaris</i>	Bladder Champion	flowering plant	28/06/2005	01/07/2008	2
<i>Lychnis flos-cuculi</i>	Ragged-Robin	flowering plant	31/05/1966	15/06/2013	10
<i>Chenopodium album</i> agg.	Fat Hen	flowering plant	31/08/2002	-	1
<i>Chenopodium album</i>	Fat-hen	flowering plant	04/10/2003	31/12/2012	9
<i>Chenopodium ficifolium</i>	Fig-leaved Goosefoot	flowering plant	24/09/2009	-	1

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<i>Chenopodium polyspermum</i>	Many-seeded Goosefoot	flowering plant	04/10/2003	31/12/2006	5
<i>Chenopodium rubrum</i>	Red Goosefoot	flowering plant	23/08/1994	22/07/2008	4
<i>Atriplex</i>	Orache	flowering plant	31/08/2002	-	1
<i>Atriplex littoralis</i>	Grass-leaved Orache	flowering plant	17/09/1996	17/05/2008	6
<i>Atriplex patula</i>	Common Orache	flowering plant	27/06/2005	31/12/2006	4
<i>Atriplex portulacoides</i>	Sea-purslane	flowering plant	31/05/1966	17/05/2008	11
<i>Atriplex prostrata</i>	Spear-leaved Orache	flowering plant	20/06/1989	13/08/2008	22
<i>Atriplex prostrata x longipes = A. x gustafssonii</i>	Kattegat Orache	flowering plant	31/08/2002	-	2
<i>Beta vulgaris</i>	Beet	flowering plant	17/09/1996	-	2
<i>Beta vulgaris subsp. maritima</i>	Sea Beet	flowering plant	31/05/1966	13/08/2008	6
<i>Sarcocornia perennis</i>	Perennial Glasswort	flowering plant	31/08/2002	10/08/2005	2
<i>Salicornia europaea agg.</i>	Glasswort	flowering plant	17/09/1996	-	2
<i>Salicornia dolichostachya</i>	Long-spiked Glasswort	flowering plant	31/08/2002	-	1
<i>Salicornia ramosissima</i>	Purple Glasswort	flowering plant	31/08/2002	-	1
<i>Suaeda maritima</i>	Annual Sea-blite	flowering plant	17/09/1996	17/05/2008	7
<i>Amaranthus retroflexus</i>	Common Amaranth	flowering plant	31/08/2009	-	1
<i>Cornus alba</i>	White Dogwood	flowering plant	19/06/2011	-	1
<i>Cornus sanguinea</i>	Dogwood	flowering plant	31/05/1966	27/01/2010	5
<i>Philadelphus coronarius</i>	Mock-orange	flowering plant	31/12/2001	26/08/2011	2
<i>Impatiens glandulifera</i>	Indian Balsam	flowering plant	31/12/2007	-	1
<i>Glaux maritima</i>	Sea-milkwort	flowering plant	31/05/1966	17/05/2008	13
<i>Primula veris</i>	Cowslip	flowering plant	18/05/2005	04/05/2009	3
<i>Primula vulgaris</i>	Primrose	flowering plant	18/05/2005	30/03/2010	7
<i>Lysimachia nummularia</i>	Creeping-Jenny	flowering plant	30/06/2005	11/11/2009	5
<i>Lysimachia punctata</i>	Dotted Loosestrife	flowering plant	29/06/2011	-	1
<i>Anagallis arvensis</i>	Scarlet Pimpernel	flowering plant	31/05/1966	31/12/2012	11
<i>Anagallis arvensis subsp. arvensis</i>	Scarlet Pimpernel	flowering plant	31/12/2007	-	1
<i>Cyclamen coum</i>	Eastern Sowbread	flowering plant	23/02/2011	-	2
<i>Cyclamen hederifolium</i>	Sowbread	flowering plant	13/08/2008	10/03/2009	3
<i>Samolus valerandi</i>	Brookweed	flowering plant	23/08/2002	12/06/2011	2
<i>Rhododendron ponticum</i>	Rhododendron	flowering plant	30/04/2008	-	1
<i>Calluna vulgaris</i>	Heather	flowering plant	31/12/1999	21/06/2011	2
<i>Aucuba japonica</i>	Spotted-laurel	flowering plant	30/03/2010	26/08/2011	2
<i>Sherardia arvensis</i>	Field Madder	flowering plant	30/06/2005	25/09/2009	8
<i>Galium aparine</i>	Cleavers	flowering plant	31/05/1966	26/06/2010	30
<i>Galium mollugo</i>	Hedge Bedstraw	flowering plant	20/06/1989	31/12/2012	13
<i>Galium palustre</i>	Marsh-bedstraw	flowering plant	20/06/1989	11/11/2009	10
<i>Galium saxatile</i>	Heath Bedstraw	flowering plant	31/07/2005	31/12/2007	2
<i>Galium verum</i>	Lady's Bedstraw	flowering plant	18/05/2005	31/07/2006	3
<i>Centaurium erythraea</i>	Common Centaury	flowering plant	01/07/2008	22/07/2008	2
<i>Blackstonia perfoliata</i>	Yellow-wort	flowering plant	22/07/2008	-	1
<i>Vinca major</i>	Greater Periwinkle	flowering plant	11/05/2005	22/09/2011	4
<i>Convolvulus arvensis</i>	Field Bindweed	flowering plant	31/05/1966	01/07/2008	17
<i>Calystegia pulchra</i>	Hairy Bindweed	flowering plant	31/12/2000	26/06/2010	3

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<i>Calystegia sepium</i>	Hedge Bindweed	flowering plant	15/09/1987	26/08/2011	19
<i>Calystegia silvatica</i>	Large Bindweed	flowering plant	28/06/2005	22/09/2011	5
<i>Lycium barbarum</i>	Duke of Argyll's Teaplant	flowering plant	25/06/2005	-	1
<i>Atropa belladonna</i>	Deadly Nightshade	flowering plant	18/05/2005	-	1
<i>Nicandra physalodes</i>	Apple-of-Peru	flowering plant	10/09/2010	-	1
<i>Datura stramonium</i>	Thorn-apple	flowering plant	31/12/2000	31/12/2010	3
<i>Solanum dulcamara</i>	Bittersweet	flowering plant	31/05/1966	26/08/2011	29
<i>Solanum nigrum</i>	Black Nightshade	flowering plant	23/08/1994	22/07/2008	11
<i>Nicotiana glauca</i> = <i>N. x sanderae</i>	Tobacco	flowering plant	04/10/2003	-	1
<i>Petunia axillaris</i> x <i>integrifolia</i> = <i>P. x hybrida</i>	Petunia	flowering plant	12/08/2001	-	1
<i>Forsythia</i>		flowering plant	30/03/2010	-	1
<i>Forsythia suspensa</i> x <i>viridissima</i> = <i>F. x interm</i>	Forsythia	flowering plant	04/04/2008	-	1
<i>Fraxinus excelsior</i>	Ash	flowering plant	31/05/1966	26/08/2011	26
<i>Fraxinus ornus</i>	Manna Ash	flowering plant	12/05/2010	26/08/2011	3
<i>Ligustrum</i>	Privet	flowering plant	31/12/2012	-	1
<i>Ligustrum lucidum</i>	Tree Privet	flowering plant	18/11/2008	-	1
<i>Ligustrum ovalifolium</i>	Garden Privet	flowering plant	31/12/1999	26/08/2011	2
<i>Ligustrum vulgare</i>	Wild Privet	flowering plant	31/12/1999	01/07/2008	16
<i>Digitalis</i>		flowering plant	19/06/2011	-	1
<i>Digitalis purpurea</i>	Foxglove	flowering plant	15/09/1987	03/06/2008	10
<i>Veronica anagallis-aquatica</i>	Blue Water-Speedwell	flowering plant	31/05/1966	11/06/2009	6
<i>Veronica anagallis-aquatica</i> x <i>catenata</i> = <i>V. x l</i>	Water Speedwell	flowering plant	23/08/2002	01/01/2010	3
<i>Veronica arvensis</i>	Wall Speedwell	flowering plant	31/05/1966	01/07/2008	10
<i>Veronica beccabunga</i>	Brooklime	flowering plant	31/05/1966	12/06/2011	13
<i>Veronica chamaedrys</i>	Germander Speedwell	flowering plant	31/05/1966	02/09/2010	14
<i>Veronica filiformis</i>	Slender Speedwell	flowering plant	18/05/2005	17/05/2008	4
<i>Veronica hederifolia</i>	Ivy-leaved Speedwell	flowering plant	31/05/1966	17/05/2008	9
<i>Veronica hederifolia</i> subsp. <i>hederifolia</i>	Ivy-Leaved Speedwell	flowering plant	30/05/2005	17/05/2008	7
<i>Veronica hederifolia</i> subsp. <i>lucorum</i>	Ivy-Leaved Speedwell	flowering plant	10/05/2006	17/05/2008	2
<i>Veronica montana</i>	Wood Speedwell	flowering plant	03/05/1984	13/05/2008	3
<i>Veronica officinalis</i>	Heath Speedwell	flowering plant	10/05/2006	31/12/2007	2
<i>Veronica persica</i>	Common Field-speedwell	flowering plant	31/05/1966	31/12/2012	12
<i>Veronica polita</i>	Grey Field-speedwell	flowering plant	03/05/2006	22/07/2008	2
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	flowering plant	28/01/2005	02/09/2010	9
<i>Veronica serpyllifolia</i> subsp. <i>serpyllifolia</i>	Thyme-Leaved Speedwell	flowering plant	28/01/2005	-	1
<i>Antirrhinum majus</i>	Snapdragon	flowering plant	23/05/2005	22/09/2011	4
<i>Cymbalaria muralis</i>	Ivy-leaved Toadflax	flowering plant	28/01/2005	17/05/2008	6
<i>Kickxia elatine</i>	Sharp-leaved Fluellen	flowering plant	14/08/2006	06/12/2006	3
<i>Kickxia spuria</i>	Round-leaved Fluellen	flowering plant	14/08/2006	25/09/2009	4
<i>Linaria purpurea</i>	Purple Toadflax	flowering plant	29/05/2005	22/09/2011	6
<i>Linaria vulgaris</i>	Common Toadflax	flowering plant	23/05/2005	22/08/2006	6
<i>Plantago coronopus</i>	Buck's-horn Plantain	flowering plant	31/05/1966	22/09/2011	7
<i>Plantago lanceolata</i>	Ribwort Plantain	flowering plant	31/05/1966	31/12/2012	25
<i>Plantago major</i>	Greater Plantain	flowering plant	31/05/1966	26/08/2011	26

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<i>Plantago maritima</i>	Sea Plantain	flowering plant	31/05/1966	17/05/2008	10
<i>Plantago media</i>	Hoary Plantain	flowering plant	28/06/2005	-	1
<i>Hippuris vulgaris</i>	Mare's-tail	flowering plant	31/05/1966	17/05/2008	4
<i>Callitriche</i>	Water-starwort	flowering plant	20/06/1989	01/01/2010	12
<i>Callitriche stagnalis</i>	Common Water-Starwort	flowering plant	30/06/2005	-	2
<i>Callitriche obtusangula</i>	Blunt-fruited Water-starwort	flowering plant	01/01/2010	12/06/2011	3
<i>Callitriche platycarpa</i>	Various-leaved Water-starwort	flowering plant	17/05/2008	-	1
<i>Callitriche stagnalis</i>	Common Water-starwort	flowering plant	23/08/2002	-	2
<i>Verbascum nigrum</i>	Dark Mullein	flowering plant	04/10/2003	04/05/2009	2
<i>Verbascum thapsus</i>	Great Mullein	flowering plant	11/05/2005	14/08/2006	3
<i>Scrophularia auriculata</i>	Water Figwort	flowering plant	31/05/1966	06/04/2012	22
<i>Scrophularia nodosa</i>	Common Figwort	flowering plant	15/09/1987	13/05/2008	7
<i>Scrophularia vernalis</i>	Yellow Figwort	flowering plant	15/04/2009	-	1
<i>Buddleja davidii</i>	Butterfly-bush	flowering plant	31/12/1999	26/08/2011	9
<i>Buddleja globosa</i>	Orange-ball-tree	flowering plant	31/12/1999	-	1
<i>Stachys arvensis</i>	Field Woundwort	flowering plant	01/08/2008	-	1
<i>Stachys officinalis</i>	Betony	flowering plant	15/08/2006	-	1
<i>Stachys palustris</i>	Marsh Woundwort	flowering plant	31/08/2002	01/08/2011	8
<i>Stachys sylvatica</i>	Hedge Woundwort	flowering plant	31/05/1966	26/06/2010	15
<i>Stachys sylvatica x palustris = S. x ambigua</i>	Hybrid Woundwort	flowering plant	31/12/1997	23/07/2004	2
<i>Ballota nigra</i>	Black Horehound	flowering plant	04/10/2003	17/05/2008	6
<i>Lamium album</i>	White Dead-nettle	flowering plant	31/05/1966	31/12/2008	17
<i>Lamium galeobdolon</i>	Yellow Archangel	flowering plant	15/08/2005	03/06/2008	4
<i>Lamium galeobdolon subsp. argentatum</i>	Yellow Archangel	flowering plant	04/06/2005	24/10/2011	5
<i>Lamium galeobdolon subsp. montanum</i>	Yellow Archangel	flowering plant	04/05/2009	-	2
<i>Lamium purpureum</i>	Red Dead-nettle	flowering plant	31/05/1966	31/12/2012	14
<i>Galeopsis tetrahit</i>	Common Hemp-nettle	flowering plant	15/08/2006	-	1
<i>Melittis melissophyllum</i>	Bastard Balm	flowering plant	31/12/2001	-	2
<i>Teucrium scorodonia</i>	Wood Sage	flowering plant	04/06/2005	21/08/2009	10
<i>Ajuga reptans</i>	Bugle	flowering plant	23/05/2005	26/08/2011	4
<i>Glechoma hederacea</i>	Ground-ivy	flowering plant	30/09/1997	26/06/2010	23
<i>Prunella vulgaris</i>	Selfheal	flowering plant	31/05/1966	19/06/2011	18
<i>Melissa officinalis</i>	Balm	flowering plant	11/05/2005	13/08/2008	3
<i>Clinopodium vulgare</i>	Wild Basil	flowering plant	28/06/2005	29/08/2008	3
<i>Origanum vulgare</i>	Wild Marjoram	flowering plant	10/05/2006	22/07/2008	2
<i>Lycopus europaeus</i>	Gypsywort	flowering plant	31/05/1966	01/01/2010	13
<i>Mentha aquatica</i>	Water Mint	flowering plant	31/05/1966	01/01/2010	25
<i>Mentha arvensis</i>	Corn Mint	flowering plant	15/09/1987	30/09/1997	3
<i>Mentha spicata</i>	Spear Mint	flowering plant	31/12/2000	-	1
<i>Lavandula</i>		flowering plant	18/11/2008	-	1
<i>Lavandula angustifolia x latifolia = L. x interm</i>	Hybrid Lavender	flowering plant	28/01/2005	-	1
<i>Rosmarinus officinalis</i>	Rosemary	flowering plant	18/11/2008	26/08/2011	3
<i>Melampyrum pratense</i>	Common Cow-wheat	flowering plant	03/06/2008	01/08/2008	2
<i>Euphrasia</i>	Eyebright	flowering plant	28/09/2006	-	1

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<i>Euphrasia nemorosa</i>	Eyebright	flowering plant	15/08/2005	-	1
<i>Odontites vernus</i>	Red Bartsia	flowering plant	31/05/1966	22/07/2008	2
<i>Orobanche minor</i>	Common Broomrape	flowering plant	31/05/1966	-	1
<i>Verbena bonariensis</i>	Argentinian Vervain	flowering plant	31/07/2006	04/08/2008	2
<i>Verbena officinalis</i>	Vervain	flowering plant	04/05/2009	-	1
<i>Ilex</i>		flowering plant	10/09/2002	-	1
<i>Ilex aquifolium</i>	Holly	flowering plant	31/05/1966	19/06/2011	28
<i>Campanula portenschlagiana</i>	Adria Bellflower	flowering plant	31/12/2000	18/05/2005	3
<i>Campanula poscharskyana</i>	Trailing Bellflower	flowering plant	17/05/2008	21/11/2011	2
<i>Campanula trachelium</i>	Nettle-leaved Bellflower	flowering plant	18/05/2005	-	1
<i>Lobelia erinus</i>	Garden Lobelia	flowering plant	31/12/1996	-	1
<i>Menyanthes trifoliata</i>	Bogbean	flowering plant	31/07/2005	31/12/2007	2
<i>Nymphoides peltata</i>	Fringed Water-lily	flowering plant	30/06/1999	31/12/2007	3
<i>Echinops bannaticus</i>	Blue Globe-thistle	flowering plant	31/12/1998	-	1
<i>Arctium lappa</i>	Greater Burdock	flowering plant	31/07/2006	-	1
<i>Arctium minus</i>	Lesser Burdock	flowering plant	20/04/2004	13/08/2008	13
<i>Carduus crispus</i>	Wetted Thistle	flowering plant	11/05/2005	17/05/2006	4
<i>Cirsium arvense</i>	Creeping thistle	flowering plant	15/09/1987	31/12/2012	54
<i>Cirsium palustre</i>	Marsh Thistle	flowering plant	20/06/1989	31/12/2007	6
<i>Cirsium vulgare</i>	Spear thistle	flowering plant	31/05/1966	31/12/2012	34
<i>Centaurea montana</i>	Perennial Cornflower	flowering plant	04/06/2005	24/05/2006	2
<i>Centaurea nigra</i>	Common Knapweed	flowering plant	31/05/1966	31/12/2012	20
<i>Lapsana communis</i>	Nipplewort	flowering plant	31/05/1966	13/08/2008	10
<i>Hypochaeris radicata</i>	Cat's-ear	flowering plant	31/08/2002	27/01/2010	12
<i>Leontodon autumnalis</i>	Autumn Hawkbit	flowering plant	15/08/2006	30/03/2010	5
<i>Leontodon hispidus</i>	Rough Hawkbit	flowering plant	12/06/2011	-	1
<i>Leontodon saxatilis</i>	Lesser Hawkbit	flowering plant	27/06/2005	25/09/2009	3
<i>Picris echioides</i>	Bristly Oxtongue	flowering plant	31/08/2002	27/01/2010	14
<i>Picris hieracioides</i>	Hawkweed Oxtongue	flowering plant	15/08/2006	13/08/2008	5
<i>Tragopogon pratensis</i>	Goat's-beard	flowering plant	18/05/2005	14/06/2008	3
<i>Sonchus arvensis</i>	Perennial Sow-thistle	flowering plant	15/09/1987	17/05/2008	11
<i>Sonchus asper</i>	Prickly Sow-thistle	flowering plant	31/05/1966	26/08/2011	18
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	flowering plant	15/09/1987	24/05/2012	15
<i>Lactuca serriola</i>	Prickly Lettuce	flowering plant	31/08/2002	26/08/2011	7
<i>Cicerbita macrophylla</i>	Common Blue-sow-thistle	flowering plant	31/12/2000	11/05/2005	2
<i>Mycelis muralis</i>	Wall Lettuce	flowering plant	28/01/2005	31/12/2007	3
<i>Taraxacum</i>	Dandelion Agg.	flowering plant	20/06/1989	17/05/2008	6
<i>Taraxacum sect. Ruderalia</i>		flowering plant	27/01/2010	-	1
<i>Taraxacum aggregate</i>		flowering plant	11/05/2005	31/07/2006	5
<i>Taraxacum officinale agg.</i>	Dandelion	flowering plant	15/09/1987	19/06/2011	17
<i>Crepis</i>		flowering plant	29/02/2008	-	1
<i>Crepis capillaris</i>	Smooth Hawk's-beard	flowering plant	15/09/1987	27/01/2010	13
<i>Crepis vesicaria</i>	Beaked Hawk's-beard	flowering plant	31/05/1966	15/12/2011	7
<i>Pilosella officinarum</i>	Mouse-ear-hawkweed	flowering plant	31/05/1966	18/05/2005	2

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<i>Hieracium</i>	Hawkweed	flowering plant	01/07/2008	-	1
<i>Hieracium aggregatum</i>	Hawkweed	flowering plant	31/07/2005	01/08/2008	3
<i>Hieracium lepidulum</i>	Hawkweed	flowering plant	30/06/1999	31/12/2007	2
<i>Hieracium pollichiae</i>	Hawkweed	flowering plant	31/12/2000	31/12/2011	5
<i>Hieracium sabaudum</i>	Sharp-toothed Hawkweed	flowering plant	31/07/2005	29/08/2008	3
<i>Hieracium trichocaulon</i>	Hawkweed	flowering plant	31/07/2005	31/12/2007	2
<i>Gnaphalium uliginosum</i>	Marsh Cudweed	flowering plant	29/08/2008	-	2
<i>Inula conyzae</i>	Ploughman's-spikenard	flowering plant	10/05/2006	-	1
<i>Pulicaria dysenterica</i>	Common Fleabane	flowering plant	20/06/1989	01/01/2010	24
<i>Solidago canadensis</i>	Canadian Goldenrod	flowering plant	13/08/2008	-	1
<i>Aster laevis x novi-belgii = A. x versicolor</i>	Late Michaelmas-daisy	flowering plant	25/09/2009	-	1
<i>Aster tripolium</i>	Sea Aster	flowering plant	31/05/1966	17/05/2008	16
<i>Erigeron glaucus</i>	Seaside Daisy	flowering plant	17/05/2008	-	1
<i>Erigeron karvinskianus</i>	Mexican Fleabane	flowering plant	28/01/2005	-	1
<i>Conyza bilbaoana</i>	Bilbao Fleabane	flowering plant	13/08/2008	08/08/2010	4
<i>Conyza canadensis</i>	Canadian Fleabane	flowering plant	22/08/2006	26/08/2011	2
<i>Conyza sumatrensis</i>	Guernsey Fleabane	flowering plant	13/08/2008	25/09/2009	2
<i>Bellis perennis</i>	Daisy	flowering plant	31/05/1966	26/08/2011	21
<i>Tanacetum parthenium</i>	Feverfew	flowering plant	03/05/2006	17/05/2008	4
<i>Tanacetum vulgare</i>	Tansy	flowering plant	04/05/2009	-	1
<i>Seriphidium maritimum</i>	Sea Wormwood	flowering plant	31/05/1966	12/08/2005	5
<i>Artemisia vulgaris</i>	Mugwort	flowering plant	04/10/2003	17/05/2008	9
<i>Achillea millefolium</i>	Yarrow	flowering plant	31/05/1966	26/08/2011	28
<i>Anthemis cotula</i>	Stinking Chamomile	flowering plant	31/12/2000	-	1
<i>Leucanthemum vulgare</i>	Oxeye Daisy	flowering plant	01/06/2005	31/12/2012	10
<i>Matricaria discoidea</i>	Pineappleweed	flowering plant	31/05/1966	31/12/2012	17
<i>Matricaria recutita</i>	Scented Mayweed	flowering plant	30/05/2005	13/08/2008	6
<i>Tripleurospermum maritimum</i>	Scentless Mayweed agg.	flowering plant	15/09/1987	-	1
<i>Tripleurospermum inodorum</i>	Scentless Mayweed	flowering plant	20/06/1989	31/12/2012	12
<i>Tripleurospermum maritimum</i>	Sea Mayweed	flowering plant	31/05/1966	17/09/1996	5
<i>Tripleurospermum maritimum subsp. mariti</i>	Scentless Mayweed	flowering plant	31/08/2002	-	2
<i>Senecio aquaticus</i>	Marsh Ragwort	flowering plant	20/06/1989	01/08/2008	7
<i>Senecio erucifolius</i>	Hoary Ragwort	flowering plant	31/08/2002	25/09/2009	5
<i>Senecio jacobaea</i>	Ragwort	flowering plant	15/09/1987	26/08/2011	39
<i>Senecio squalidus</i>	Oxford Ragwort	flowering plant	15/09/1987	21/11/2011	10
<i>Senecio viscosus</i>	Sticky Groundsel	flowering plant	01/08/2011	-	2
<i>Senecio vulgaris</i>	Groundsel	flowering plant	31/05/1966	31/12/2012	14
<i>Doronicum pardalianches</i>	Leopard's-bane	flowering plant	11/06/2006	-	1
<i>Tussilago farfara</i>	Colt's-foot	flowering plant	16/04/2005	03/05/2006	4
<i>Petasites fragrans</i>	Winter Heliotrope	flowering plant	07/01/2005	31/12/2007	9
<i>Calendula officinalis</i>	Pot Marigold	flowering plant	31/12/2000	17/05/2006	3
<i>Eupatorium cannabinum</i>	Hemp-agrimony	flowering plant	23/08/2002	10/09/2010	10
<i>Escallonia macrantha</i>	Escallonia	flowering plant	13/08/2008	26/08/2011	2
<i>Sambucus nigra</i>	Elder	flowering plant	31/05/1966	26/08/2011	36

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<i>Viburnum</i>		flowering plant	31/12/1999	-	1
<i>Viburnum lantana</i>	Wayfaring-tree	flowering plant	23/05/2005	-	1
<i>Viburnum opulus</i>	Guelder-rose	flowering plant	31/12/1999	13/08/2008	5
<i>Symphoricarpos</i>		flowering plant	26/08/2011	-	1
<i>Symphoricarpos albus</i>	Snowberry	flowering plant	03/05/2006	13/08/2008	6
<i>Leycesteria formosa</i>	Himalayan Honeysuckle	flowering plant	31/12/1999	10/05/2006	7
<i>Lonicera japonica</i>	Japanese Honeysuckle	flowering plant	31/12/1993	13/08/2008	3
<i>Lonicera nitida</i>	Wilson's Honeysuckle	flowering plant	31/12/2005	19/06/2011	3
<i>Lonicera periclymenum</i>	Honeysuckle	flowering plant	31/12/1999	02/09/2010	12
<i>Valerianella carinata</i>	Keeted-fruited Cornsalad	flowering plant	31/12/1993	17/05/2008	6
<i>Valerianella locusta</i>	Common Cornsalad	flowering plant	13/04/2012	-	1
<i>Centranthus ruber</i>	Red valerian	flowering plant	28/01/2005	17/05/2008	5
<i>Dipsacus fullonum</i>	Wild Teasel	flowering plant	31/05/1966	01/01/2010	14
<i>Dipsacus fullonum</i>	Wild Teasel	flowering plant	20/04/2004	04/05/2009	5
<i>Dipsacus pilosus</i>	Small Teasel	flowering plant	31/12/2007	-	1
<i>Knautia arvensis</i>	Field Scabious	flowering plant	10/05/2006	-	1
<i>Succisa pratensis</i>	Devil's-bit Scabious	flowering plant	30/06/2005	-	1
<i>Hedera</i>		flowering plant	31/08/2002	-	1
<i>Hedera helix</i>	Ivy	flowering plant	31/05/1966	31/12/2012	41
<i>Hydrocotyle ranunculooides</i>	Floating Pennywort	flowering plant	31/07/2005	-	1
<i>Chaerophyllum temulum</i>	Rough Chervil	flowering plant	28/06/2005	31/12/2006	3
<i>Anthriscus caucalis</i>	Bur Chervil	flowering plant	17/05/2008	-	1
<i>Anthriscus sylvestris</i>	Cow Parsley	flowering plant	31/05/1966	03/06/2008	16
<i>Scandix pecten-veneris</i>	Shepherd's-needle	flowering plant	31/12/1954	-	2
<i>Smyrniolum olusatrum</i>	Alexanders	flowering plant	15/09/1987	29/03/2009	5
<i>Conopodium majus</i>	Pignut	flowering plant	30/06/2005	-	1
<i>Pimpinella saxifraga</i>	Burnet-saxifrage	flowering plant	18/05/2005	-	1
<i>Aegopodium podagraria</i>	Ground-elder	flowering plant	31/05/1966	26/06/2010	15
<i>Berula erecta</i>	Lesser Water-parsnip	flowering plant	29/02/2008	-	1
<i>Oenanthe aquatica</i>	Fine-leaved Water-dropwort	flowering plant	20/06/1989	-	1
<i>Oenanthe crocata</i>	Hemlock Water-dropwort	flowering plant	31/05/1966	06/04/2012	26
<i>Oenanthe lachenalii</i>	Parsley Water-dropwort	flowering plant	20/07/2001	31/08/2002	2
<i>Oenanthe pimpinelloides</i>	Corky-fruited Water-dropwort	flowering plant	22/07/2008	-	1
<i>Aethusa cynapium</i>	Fool's Parsley	flowering plant	31/05/1966	31/12/2007	6
<i>Foeniculum vulgare</i>	Fennel	flowering plant	01/06/2005	07/06/2009	3
<i>Silaum silaus</i>	Pepper-saxifrage	flowering plant	31/05/1966	30/09/1997	7
<i>Conium maculatum</i>	Hemlock	flowering plant	31/05/1966	30/06/2005	8
<i>Bupleurum tenuissimum</i>	Slender Hare's-ear	flowering plant	06/09/2005	-	1
<i>Apium graveolens</i>	Wild Celery	flowering plant	31/05/1966	17/05/2008	9
<i>Apium nodiflorum</i>	Fool's-water-cress	flowering plant	31/05/1966	01/01/2010	29
<i>Petroselinum segetum</i>	Corn Parsley	flowering plant	03/07/2001	17/05/2008	15
<i>Sison amomum</i>	Stone Parsley	flowering plant	18/05/2005	17/05/2008	4
<i>Angelica sylvestris</i>	Wild Angelica	flowering plant	20/06/1989	17/05/2008	5
<i>Pastinaca sativa</i>	Wild Parsnip	flowering plant	23/05/2005	10/05/2006	2



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<i>Heracleum sphondylium</i>	Hogweed	flowering plant	31/05/1966	26/06/2010	22
<i>Torilis japonica</i>	Upright Hedge-parsley	flowering plant	27/06/2005	01/08/2011	7
<i>Torilis nodosa</i>	Knotted Hedge-parsley	flowering plant	13/06/1996	17/05/2008	8
<i>Daucus carota</i>	Carrot	flowering plant	31/05/1966	13/08/2008	7
<i>Daucus carota subsp. carota</i>	Wild Carrot	flowering plant	22/07/2008	04/05/2009	3
<i>Pulmonaria</i>		flowering plant	30/03/2010	-	1
<i>Symphytum</i>	Indet. Comfrey	flowering plant	30/03/2010	-	1
<i>Symphytum grandiflorum</i>	Creeping Comfrey	flowering plant	31/12/1993	15/04/2009	2
<i>Symphytum officinale</i>	Common Comfrey	flowering plant	27/06/2005	15/08/2005	3
<i>Symphytum officinale x asperum = S. x upland</i>	Russian Comfrey	flowering plant	04/06/2005	31/12/2007	3
<i>Symphytum orientale</i>	White Comfrey	flowering plant	11/05/2005	31/12/2007	3
<i>Pentaglottis sempervirens</i>	Green Alkanet	flowering plant	28/01/2005	26/08/2011	9
<i>Borago officinalis</i>	Borage	flowering plant	04/10/2003	-	1
<i>Myosotis</i>	Forget-Me-Not	flowering plant	28/09/2006	11/11/2009	3
<i>Myosotis arvensis</i>	Field Forget-me-not	flowering plant	31/05/1966	01/07/2008	11
<i>Myosotis discolor</i>	Changing Forget-me-not	flowering plant	31/05/1966	17/05/2008	5
<i>Myosotis laxa</i>	Tufted Forget-me-not	flowering plant	31/05/1966	12/06/2011	6
<i>Myosotis laxa subsp. caespitosa</i>		flowering plant	31/12/2007	-	1
<i>Myosotis ramosissima</i>	Early Forget-me-not	flowering plant	11/05/2005	31/12/2007	2
<i>Myosotis scorpioides</i>	Water Forget-me-not	flowering plant	31/05/1966	01/01/2010	12
<i>Myosotis sylvatica</i>	Wood Forget-me-not	flowering plant	04/06/2005	30/06/2005	2
<i>Pleurococcus</i>		alga	31/12/2002	-	1
<i>Erpobdella octoculata</i>	leeches	annelid	23/05/2001	10/09/2002	3
<i>Trocheta subviridis</i>		annelid	23/08/2002	-	1
<i>Glossiphonia complanata</i>		annelid	23/08/2002	-	2
<i>Helobdella stagnalis</i>		annelid	23/08/2002	10/09/2002	2
<i>Piscicola geometra</i>	fish leech	annelid	23/08/2002	10/09/2002	2
<i>Enchytraeidae</i>	Whiteworm	annelid	03/09/2002	-	1
<i>Tubificidae</i>	Tubificid Worm Sp.	annelid	23/08/2002	10/09/2002	6
<i>Heterochaeta costata</i>		annelid	03/09/2002	-	1
<i>Nais elinguis</i>		annelid	03/09/2002	-	1
<i>Paranais litoralis</i>		annelid	03/09/2002	-	2
<i>Lumbriculus variegatus</i>		annelid	29/02/2000	-	1
<i>Nephtys</i>		annelid	03/09/2002	-	1
<i>Nereididae</i>		annelid	03/09/2002	-	1
<i>Hediste diversicolor</i>	Estuary Ragworm	annelid	03/09/2002	-	1
<i>Nereis</i>		annelid	03/09/2002	-	1
<i>Manayunkia aestuarina</i>		annelid	03/09/2002	-	1
<i>Streblospio shrubsolii</i>		annelid	03/09/2002	-	1
<i>Alkmaria romijni</i>	Tentacled Lagoon-Worm	annelid	03/09/2002	-	1
<i>Cirratulidae</i>		annelid	03/09/2002	-	1
<i>Tharyx sp.</i>		annelid	03/09/2002	-	1
<i>Araneus diadematus</i>	Garden Orb-Web Spider	spider (Araneae)	31/12/2006	-	1
<i>Argiope bruennichi</i>		spider (Araneae)	30/09/1999	06/08/2006	2

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Segestria florentina</i>		spider (Araneae)	23/04/2011	-	1
<i>Misumena vatia</i>		spider (Araneae)	31/12/2006	-	1
<i>Aceria aceriscampestris</i>		acarine (Acari)	10/09/2011	-	1
<i>Crustacea</i>	Invertebrates (Crustaceans)	crustacean	03/09/2002	-	1
<i>Daphnia</i>		crustacean	31/12/2006	-	1
<i>Amphilochoidea</i>		crustacean	03/09/2002	-	1
<i>Caprella equilibra</i>		crustacean	03/09/2002	-	1
<i>Chelicorophium curvispinum</i>		crustacean	23/08/2002	-	1
<i>Corophium</i>		crustacean	03/09/2002	-	1
<i>Corophium volutator</i>		crustacean	03/09/2002	-	1
<i>Crangonyx pseudogracilis</i>		crustacean	23/08/2002	10/09/2002	2
<i>Gammarus</i>	Freshwater Shrimp (Gammarus)	crustacean	03/09/2002	-	1
<i>Gammarus duebeni</i>		crustacean	04/07/2011	-	1
<i>Gammarus pulex</i>		crustacean	23/05/2001	31/12/2006	4
<i>Gammarus salinus</i>		crustacean	03/09/2002	-	1
<i>Gammarus zaddachi</i>		crustacean	23/08/2002	10/09/2002	9
<i>Allomelita pellucida</i>		crustacean	03/09/2002	-	1
<i>Niphargus aquilex</i>		crustacean	03/09/2002	-	1
<i>Phoxocephalidae</i>		crustacean	03/09/2002	-	1
<i>Portunidae</i>		crustacean	03/09/2002	-	1
<i>Carcinus maenas</i>	Green Shore Crab	crustacean	03/09/2002	-	1
<i>Cyathura carinata</i>		crustacean	03/09/2002	-	1
<i>Asellus aquaticus</i>	Water hog lice/slaters	crustacean	23/05/2001	31/12/2006	5
<i>Proasellus meridianus</i>		crustacean	23/08/2002	10/09/2002	5
<i>Jaera</i>		crustacean	03/09/2002	-	1
<i>Jaera albifrons</i>		crustacean	03/09/2002	-	1
<i>Jaera ischiostosa</i>		crustacean	03/09/2002	-	1
<i>Sphaeroma rugicauda</i>		crustacean	03/09/2002	-	1
<i>Neomysis integer</i>		crustacean	23/08/2002	-	2
<i>Apseudes talpa</i>		crustacean	03/09/2002	-	1
<i>Calanoida</i>		crustacean	31/12/2006	-	1
<i>Cyclops</i>		crustacean	31/12/2006	-	1
<i>Cypris</i>		crustacean	31/12/2006	-	1
<i>Herpetocypris reptans</i>		crustacean	10/09/2002	-	1
<i>Stegocephaloidea</i>		crustacean	03/09/2002	-	1
<i>Anthicus antherinus</i>		insect - beetle (Coleoptera)	28/09/1992	31/12/2005	2
<i>Aphodius (Agrilinus) ater</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Aphodius (Melinopterus) prodromus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Ceratapion (Ceratapion) carduorum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Oxystoma pomonae</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Protapion fulvipes</i>	White Clover Seed Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Protapion trifolii</i>	Clover Seed Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Chaetophora</i>		insect - beetle (Coleoptera)	31/12/2002	-	1
<i>Cytilus sericeus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Simplocaria semistriata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Malthinus flaveolus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rhagonycha fulva</i>	Common Red Soldier Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Abax parallelepipedus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Acupalpus dubius</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Acupalpus parvulus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Agonum (Europhilus) gracile</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Agonum moestum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Amara (Amara) aenea</i>	Common Sun Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Amara (Amara) ovata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Amara (Amara) similata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Amara (Zezea) plebeja</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Asaphidion flavipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Bembidionetolitzkya) atrocaerule</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Diplocampa) assimile</i>		insect - beetle (Coleoptera)	28/09/1992	31/12/2005	2
<i>Bembidion (Eupetedromus) dentellum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Metallina) lampros</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Nepha) illigeri</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Ocydromus) tetracolum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Philochthus) biguttatum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Philochthus) guttula</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Philochthus) lunulatum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bembidion (Phyla) obtusum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Calathus (Amphigynus) rotundicollis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Calathus (Calathus) micropterus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Calathus (Calathus) mollis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Carabus (Megodontus) violaceus</i>	Violet Ground Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Chlaenius nigricornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Demetrias (Demetrias) atricapillus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Dicheirotichus gustavii</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Harpalus (Harpalus) affinis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Harpalus (Pseudoophonus) rufipes</i>	Turnip Mud Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Leistus (Leistophorus) fulvibarbis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Loricera pilicornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Nebria (Nebria) brevicollis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Notiophilus biguttatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Notiophilus quadripunctatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Paradromius linearis</i>		insect - beetle (Coleoptera)	28/09/1992	31/12/2005	2
<i>Paranchus albipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Philorhizus melanocephalus</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Poecilus cupreus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Pterostichus (Argutor) strenuus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Pterostichus (Pseudomaseus) minor</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Pterostichus (Pseudomaseus) nigrita</i>		insect - beetle (Coleoptera)	31/12/2005	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Pterostichus (Steropus) madidus</i>	Rain-Clock	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Stomis pumicatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Syntomus obscuroguttatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Synuchus vivalis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Trechus (Trechus) obtusus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Trechus (Trechus) quadristriatus</i>		insect - beetle (Coleoptera)	28/09/1992	31/12/2005	3
<i>Leptura aurulenta</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rutpela maculata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Altica palustris</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Aphthona euphorbiae</i>	Large Flax Flea Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Aphthona nonstriata</i>	Iris Flea Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cassida nobilis</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Chaetocnema arida</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Chaetocnema concinna</i>	Mangold Flea Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Chaetocnema hortensis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Chrysolina banksi</i>		insect - beetle (Coleoptera)	06/04/2012	-	1
<i>Chrysolina polita</i>	Knotgrass Leaf Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Chrysolina staphylaea</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Crepidodera aurea</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptocephalus labiatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptocephalus pusillus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Epitrix pubescens</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Longitarsus dorsalis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Longitarsus gracilis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Longitarsus melanocephalus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Longitarsus parvulus</i>	Flax Flea Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Longitarsus plantagomaritimus</i>		insect - beetle (Coleoptera)	28/09/1992	-	2
<i>Oulema melanopus</i>	Cereal Leaf Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Phyllotreta atra</i>	Turnip Fly	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Phyllotreta nigripes</i>	Turnip Flea Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Phyllotreta undulata</i>	Small Striped Flea Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Phyllotreta vittula</i>	Barley Flea Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Psylliodes napi</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cis boleti</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Calyptomerus dubius</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Adalia decempunctata</i>	10-spot Ladybird	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Calvia quattuordecimguttata</i>	Cream-spot Ladybird	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Coccidula rufa</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Coccinella septempunctata</i>	7-spot Ladybird	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Coccinella undecimpunctata</i>	11-spot Ladybird	insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Exochomus quadripustulatus</i>	Pine Ladybird	insect - beetle (Coleoptera)	15/03/2012	-	1
<i>Halyzia sedecimguttata</i>	Orange Ladybird	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Harmonia axyridis</i>	Harlequin Ladybird	insect - beetle (Coleoptera)	06/10/2007	12/04/2012	4
<i>Propylea quattuordecimpunctata</i>	14-spot Ladybird	insect - beetle (Coleoptera)	31/12/2005	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Psyllobora vigintiduopunctata</i>	22-spot Ladybird	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rhyzobius litura</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Tytthaspis sedecimpunctata</i>	16-spot Ladybird	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Corylophus sublaevipennis</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Sericoderus lateralis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Atomaria (Anchicera) nitidula</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Atomaria (Anchicera) peltata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Atomaria (Anchicera) rhenana</i>		insect - beetle (Coleoptera)	23/04/1992	-	1
<i>Atomaria (Anchicera) scutellaris</i>		insect - beetle (Coleoptera)	28/09/1992	-	3
<i>Atomaria (Anchicera) testacea</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Atomaria (Atomaria) linearis</i>	Pygmy Mangel Beetle	insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Atomaria (Atomaria) umbrina</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptophagus (Cryptophagus) dentatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptophagus (Cryptophagus) lycoperdi</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptophagus (Cryptophagus) pallidus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptophagus (Cryptophagus) pilosus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptophagus (Cryptophagus) saginatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptophagus (Cryptophagus) scanicus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Ephistemus globulus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Telmatophilus caricis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Acalles misellus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Barypeithes (Exomias) araneiformis</i>	Spider Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Barypeithes (Exomias) pellucidus</i>	Hairy Spider Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Caenopsis fissirostris</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Ceutorhynchus assimilis</i>	Cabbage Gall Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Ceutorhynchus erysimi</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cionus alauda</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cleopus pulchellus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Curculio glandium</i>	Acorn Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Curculio nucum</i>	Nut Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Curculio venosus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Euophryum confine</i>	Wood-Boring Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Hypera (Eririnomorpha) pollux</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Magdalis (Porrothus) cerasi</i>		insect - beetle (Coleoptera)	24/05/1977	-	1
<i>Mecinus collaris</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Microplontus campestris</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Orchestes (Salius) fagi</i>	Beech Leaf-Mining Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Otiorhynchus (Dorymerus) sulcatus</i>	Vine Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Phyllobius (Parnemoicus) roboretanus</i>	Small Green Nettle Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rhinoncus pericarpus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Sitona (Sitona) hispidulus</i>	Clover-root Weevil	insect - beetle (Coleoptera)	28/09/1992	31/12/2005	2
<i>Sitona (Sitona) lepidus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Sitona (Sitona) lineatus</i>	Pea-leaf Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Sitona (Sitona) puncticollis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Strophosoma melanogrammum</i>	Nut Leaf Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tychius picirostris</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Xyleborinus saxesenii</i>	Ambrosia Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Agabus</i>		insect - beetle (Coleoptera)	23/05/2001	-	1
<i>Agabus (Gaurodytes) biguttatus</i>		insect - beetle (Coleoptera)	31/12/1950	-	1
<i>Agabus (Gaurodytes) bipustulatus</i>		insect - beetle (Coleoptera)	23/08/2002	-	1
<i>Agabus (Gaurodytes) paludosus</i>		insect - beetle (Coleoptera)	23/08/2002	-	1
<i>Dytiscus</i>		insect - beetle (Coleoptera)	23/08/2002	10/09/2002	2
<i>Hydroporus palustris</i>		insect - beetle (Coleoptera)	23/08/2002	31/12/2005	3
<i>Hydroporus planus</i>		insect - beetle (Coleoptera)	23/08/2002	-	1
<i>Hydroporus tessellatus</i>		insect - beetle (Coleoptera)	23/08/2002	-	1
<i>Liopterus haemorrhoidalis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Stictotarsus duodecimpustulatus</i>		insect - beetle (Coleoptera)	23/08/2002	-	1
<i>Agriotes acuminatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Agriotes pallidulus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Agriotes sordidus</i>		insect - beetle (Coleoptera)	31/12/1992	-	1
<i>Athous (Athous) haemorrhoidalis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Elmis aenea</i>		insect - beetle (Coleoptera)	23/08/2002	-	3
<i>Tanysphyrus lemnae</i>	Duckweed Weevil	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Gyrinus</i>	Whirligig Beetle	insect - beetle (Coleoptera)	23/08/2002	-	1
<i>Halipilus (Haliplinus) ruficollis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Halipilus (Haliplinus) sibiricus</i>		insect - beetle (Coleoptera)	23/08/2002	10/09/2002	2
<i>Acritus nigricornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Gnathoncus rotundatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Paromalus flavicornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Hydraena testacea</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Limnebius nitidus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Ochthebius (Asiobates) auriculatus</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Ochthebius (Asiobates) dilatatus</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Anacaena globulus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Anacaena limbata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cercyon (Cercyon) pygmaeus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cercyon (Dicyrtocercyon) ustulatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Helochares lividus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Helophorus (Atracthelophorus) brevipalpis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Helophorus (Megahelophorus) grandis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Hydrobius fuscipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Megasternum concinnum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Brachypterus glaber</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Brachypterus urticae</i>	Nettle Pollen Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cartodere (Aridius) bifasciata</i>		insect - beetle (Coleoptera)	28/09/1992	31/12/2005	2
<i>Cartodere (Aridius) nodifer</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Corticaria impressa</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Corticarina fuscula</i>		insect - beetle (Coleoptera)	28/09/1992	31/12/2005	2

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Corticaria gibbosa</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Enicmus transversus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Latridius minutus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Agathidium (Cyphocheble) nigrinum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Catops fuliginosus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Choleva (Choleva) agilis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Colon (Myloechus) brunneum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Leiodes ciliaris</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Nargus (Nargus) wilkinii</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Ptomaphagus subvillosus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Sciodrepoides watsoni</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Dorcus parallelipipedus</i>	Lesser Stag Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Lucanus cervus</i>	Stag Beetle	insect - beetle (Coleoptera)	31/12/1999	31/07/2011	81
<i>Malachius bipustulatus</i>	Malachite Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Melolontha hippocastani</i>	Northern Cockchafer	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rhizophagus (Rhizophagus) dispar</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rhizophagus (Rhizophagus) ferrugineus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rhizophagus (Rhizophagus) nitidulus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rhizophagus (Rhizophagus) picipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cryptarcha strigata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Epuraea (Epuraea) aestiva</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Epuraea (Epuraea) biguttata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Meligethes aeneus</i>	Common Pollen Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Meligethes obscurus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Nitidula rufipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Pria dulcamarae</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Soronia punctatissima</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Oedemera (Oedemera) nobilis</i>	Swollen-thighed Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Olibrus aeneus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Acrotichis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Ptenidium (Ptenidium) pusillum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cyphon coarctatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cyphon padi</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cyphon pubescens</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cyphon variabilis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Microcara testacea</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Anaspis (Anaspis) frontalis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Anaspis (Anaspis) garneysi</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cephennium gallicum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Nicrophorus humator</i>	Black Sexton Beetle	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Nicrophorus vespilloides</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Aleochara (Aleochara) curtula</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Aleochara (Xenochara) sparsa</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Amischa analis</i>		insect - beetle (Coleoptera)	28/09/1992	-	1

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Anotylus inustus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Anotylus rugosus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Anotylus sculpturatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Anotylus tetracarinatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Anthobium atrocephalum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Anthobium unicolor</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Atrecus affinis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Autalia impressa</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Biblopectus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bisnius fimetarius</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bledius (Bledius) limicola</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Brachygluta helferi</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Bryaxis curtisii</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Bythinus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Carpelimus bilineatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Carpelimus corticinus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Carpelimus elongatulus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cypha discoidea</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Cypha longicornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Deinopsis erosa</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Dinothenarus pubescens</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Drusilla canaliculata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Gabrius breviventer</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Geostiba circellaris</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Gyrophaena</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Habrocerus capillaricornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Halobrecta flavipes</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Hygronoma dimidiata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Lathrobium (Lathrobium) brunnipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Leptusa ruficollis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Lesteva sicula subsp. heeri</i>		insect - beetle (Coleoptera)	28/09/1992	31/12/2005	2
<i>Lordithon trinotatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Metopsia clypeata</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Mocyta ampicollis</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Mycetoporus clavicornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Mycetoporus lepidus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Mycetoporus longicornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Mycetoporus rufescens</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Mycetoporus splendidus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Ocypus (Ocypus) olens</i>	Devil's Coach-horse	insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Oligota parva</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Oligota pusillima</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Olophrum piceum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Omalium caesum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1



Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Omalium italicum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Omalium rivulare</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Othius punctulatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Othius subuliformis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Oxyroda induta</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Parocytus longitarsis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Philonthus addendus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Philonthus cognatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Philonthus decorus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Philonthus laminatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Philonthus longicornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Phloeonomus punctipennis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Phloeostiba plana</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Platydacus stercorarius</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Proteinus brachypterus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Proteinus ovalis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Microsaurus) mesomelinus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Quedius) fuliginosus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Quedius) levicollis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Quedius) simplicifrons</i>		insect - beetle (Coleoptera)	28/09/1992	-	1
<i>Quedius (Raphirus) fumatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Raphirus) nigriceps</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Raphirus) nitipennis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Raphirus) picipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Raphirus) semiaeneus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Quedius (Raphirus) semiobscurus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Rybaxis longicornis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Sepedophilus bipunctatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Sepedophilus immaculatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Sepedophilus marshami</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Stenus (Hypostenus) cicindeloides</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Stenus (Stenus) bimaculatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Stenus (Stenus) brunnipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachinus pallipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachinus rufipes</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachinus subterraneus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachyporus atriceps</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachyporus chrysomelinus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachyporus hypnorum</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachyporus nitidulus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachyporus pallidus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tachyporus tersus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Tasgius (Rayacheila) morsitans</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Thinobaena vestita</i>		insect - beetle (Coleoptera)	28/09/1992	-	2

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Xantholinus (Xantholinus) linearis</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Nalassus laevioctostriatus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Trixaqus carinifrons</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Pycnomerus fuliginosus</i>		insect - beetle (Coleoptera)	31/12/2005	-	1
<i>Agromyza frontella</i>		insect - true fly (Diptera)	10/09/2011	-	1
<i>Agromyza nana</i>		insect - true fly (Diptera)	10/09/2011	-	1
<i>Bibio marci</i>	St Marks Fly	insect - true fly (Diptera)	31/12/2005	-	1
<i>Bombylius major</i>	Dark-edged Bee-fly	insect - true fly (Diptera)	31/12/2005	12/04/2012	4
<i>Chaoborus</i>		insect - true fly (Diptera)	31/12/2005	-	1
<i>Chironomidae</i>	Non-biting midge	insect - true fly (Diptera)	23/08/2002	10/09/2002	8
<i>Chironomus plumosus</i>		insect - true fly (Diptera)	31/12/2005	-	1
<i>Dixa</i>		insect - true fly (Diptera)	31/12/2005	-	1
<i>Scathophaga stercoraria</i>		insect - true fly (Diptera)	03/04/2012	-	1
<i>Episyrphus balteatus</i>	Marmalade Hoverfly	insect - true fly (Diptera)	06/04/2012	-	2
<i>Eristalis</i>		insect - true fly (Diptera)	31/12/2005	-	1
<i>Urophora cardui</i>		insect - true fly (Diptera)	06/04/2012	-	1
<i>Tipulidae</i>	Cranefly	insect - true fly (Diptera)	03/09/2002	-	1
<i>Nephrotoma appendiculata</i>		insect - true fly (Diptera)	31/12/2005	-	1
<i>Baetis rhodani</i>		insect - mayfly (Ephemeroptera)	23/05/2001	23/08/2002	2
<i>Cloeon dipterum</i>		insect - mayfly (Ephemeroptera)	29/02/2000	23/08/2002	2
<i>Serratella ignita</i>	Blue-winged Olive	insect - mayfly (Ephemeroptera)	23/05/2001	23/08/2002	2
<i>Elasmotherus interstinctus</i>	Birch Shieldbug	insect - true bug (Hemiptera)	12/04/2012	-	1
<i>Philaenus spumarius</i>	Cuckoo-Spit Insect	insect - true bug (Hemiptera)	10/09/2011	-	1
<i>Corixa</i>		insect - true bug (Hemiptera)	23/08/2002	10/09/2002	2
<i>Corixa punctata</i>	Punctate Corixa	insect - true bug (Hemiptera)	29/02/2000	-	1
<i>Hesperocorixa sahlbergi</i>		insect - true bug (Hemiptera)	10/09/2002	-	1
<i>Sigara (Subsigara) distincta</i>		insect - true bug (Hemiptera)	10/09/2002	-	1
<i>Sigara (Subsigara) falleni</i>		insect - true bug (Hemiptera)	10/09/2002	-	1
<i>Gerris</i>	Pondskater	insect - true bug (Hemiptera)	29/02/2000	-	1
<i>Gerris (Gerriselloides) lateralis</i>	Pondskaters	insect - true bug (Hemiptera)	10/09/2002	-	1
<i>Ilyocoris cimicoides</i>	Saucer Bug	insect - true bug (Hemiptera)	29/02/2000	-	1
<i>Nepa cinerea</i>	Water Scorpion	insect - true bug (Hemiptera)	29/02/2000	-	1
<i>Notonecta</i>	Water boatmen	insect - true bug (Hemiptera)	23/08/2002	10/09/2002	2
<i>Notonecta (Notonecta) glauca</i>	Common Backswimmer	insect - true bug (Hemiptera)	29/02/2000	-	1
<i>Palomena prasina</i>	Green Shieldbug	insect - true bug (Hemiptera)	12/04/2012	-	1
<i>Velia (Plesiovelia) caprai</i>	Water Cricket	insect - true bug (Hemiptera)	23/08/2002	-	1
<i>Andrena (Andrena) fucata</i>		insect - hymenopteran	11/05/1980	-	2
<i>Andrena (Euandrena) bicolor</i>	Gwynne's Mining Bee	insect - hymenopteran	27/04/1975	25/07/1975	4
<i>Andrena (Hoplendrena) scotica</i>		insect - hymenopteran	27/04/1975	13/05/2008	6
<i>Andrena (Melandrena) nigroaenea</i>		insect - hymenopteran	27/04/1975	13/05/2008	11
<i>Andrena (Melandrena) nitida</i>		insect - hymenopteran	12/05/1978	13/05/2008	7
<i>Andrena (Micrandrena) minutula</i>		insect - hymenopteran	27/04/1975	15/04/2008	7
<i>Andrena (Micrandrena) semilaevis</i>		insect - hymenopteran	29/05/1975	22/06/2008	4
<i>Andrena (Micrandrena) subopaca</i>		insect - hymenopteran	05/07/1980	05/07/2008	5

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<i>Andrena (Poliandrena) florea</i>		insect - hymenopteran	22/06/2008	-	1
<i>Andrena (Simandrena) congruens</i>		insect - hymenopteran	25/07/1975	-	2
<i>Andrena (Simandrena) dorsata</i>		insect - hymenopteran	04/04/2008	05/07/2008	6
<i>Andrena (Taeniandrena) wilkella</i>		insect - hymenopteran	13/05/2008	-	1
<i>Andrena (Trachandrena) haemorrhoea</i>	Early Mining Bee	insect - hymenopteran	27/04/1975	12/04/2012	9
<i>Andrena (Zonandrena) flavipes</i>	Yellow Legged Mining Bee	insect - hymenopteran	29/05/1975	15/04/2008	10
<i>Anthophora (Anthophora) plumipes</i>	Hairy Footed Flower Bee	insect - hymenopteran	04/04/2008	-	1
<i>Bombus (Bombus) lucorum</i>	White-Tailed Bumble Bee	insect - hymenopteran	31/12/2005	-	1
<i>Bombus (Bombus) terrestris</i>	Buff-Tailed Bumble Bee	insect - hymenopteran	27/04/1975	12/04/2012	10
<i>Bombus (Megabombus) hortorum</i>	Small Garden Bumble Bee	insect - hymenopteran	31/12/2005	22/06/2008	8
<i>Bombus (Melanobombus) lapidarius</i>	Large Red Tailed Bumble Bee	insect - hymenopteran	27/04/1975	12/04/2012	13
<i>Bombus (Psithyrus) sylvestris</i>	Four Coloured Cuckoo Bee	insect - hymenopteran	12/06/1978	-	1
<i>Bombus (Psithyrus) vestalis</i>	Vestal Cuckoo Bee	insect - hymenopteran	12/06/1978	22/06/2008	5
<i>Bombus (Pyrobombus) pratorum</i>	Early Bumble Bee	insect - hymenopteran	27/04/1975	22/06/2008	2
<i>Bombus (Thoracobombus) pascuorum</i>	Common Carder Bee	insect - hymenopteran	27/04/1975	12/04/2012	10
<i>Ceratina (Euceratina) cyanea</i>	Blue Carpenter Bee	insect - hymenopteran	11/05/1980	13/05/2008	6
<i>Colletes (Colletes) daviesanus</i>		insect - hymenopteran	22/06/2008	-	1
<i>Colletes (Colletes) similis</i>		insect - hymenopteran	29/07/1975	-	1
<i>Eucera (Eucera) longicornis</i>	Long-horned Bee	insect - hymenopteran	09/06/1906	-	1
<i>Halictus (Halictus) rubicundus</i>		insect - hymenopteran	25/07/1975	-	1
<i>Halictus (Seladonia) tumulorum</i>		insect - hymenopteran	29/05/1975	13/05/2008	5
<i>Hylaeus (Hylaeus) communis</i>	Common Yellow Face Bee	insect - hymenopteran	25/07/1975	22/06/2008	6
<i>Hylaeus (Lamdopsis) dilatatus</i>		insect - hymenopteran	16/07/1984	22/06/2008	2
<i>Hylaeus (Prosopis) confusus</i>		insect - hymenopteran	12/06/1978	05/07/1980	2
<i>Hylaeus (Spatulariella) hyalinatus</i>		insect - hymenopteran	25/07/1975	22/06/2008	4
<i>Lasioglossum (Dialictus) leucopus</i>		insect - hymenopteran	27/04/1975	04/04/2008	3
<i>Lasioglossum (Dialictus) morio</i>	Brassy Mining Bee	insect - hymenopteran	29/05/1975	05/07/2008	9
<i>Lasioglossum (Dialictus) smeathmanellum</i>		insect - hymenopteran	12/08/1975	05/07/2008	6
<i>Lasioglossum (Evylaeus) albipes</i>		insect - hymenopteran	11/05/1980	13/05/2008	2
<i>Lasioglossum (Evylaeus) calceatum</i>	Slender Mining Bee	insect - hymenopteran	27/04/1974	13/05/2008	3
<i>Lasioglossum (Evylaeus) fulvicorne</i>		insect - hymenopteran	25/07/1975	13/05/2008	2
<i>Lasioglossum (Evylaeus) minutissimum</i>	Least Mining Bee	insect - hymenopteran	27/04/1975	25/07/1975	3
<i>Lasioglossum (Evylaeus) parvulum</i>		insect - hymenopteran	27/04/1975	05/07/1980	2
<i>Lasioglossum (Evylaeus) pauxillum</i>		insect - hymenopteran	04/04/2008	05/07/2008	3
<i>Lasioglossum (Evylaeus) semilucens</i>		insect - hymenopteran	04/04/2008	-	1
<i>Lasioglossum (Evylaeus) villosulum</i>	Shaggy Mining Bee	insect - hymenopteran	27/04/1975	12/06/1978	3
<i>Lasioglossum (Lasioglossum) laevigatum</i>		insect - hymenopteran	01/01/1915	-	1
<i>Lasioglossum (Lasioglossum) lativentre</i>		insect - hymenopteran	28/05/1990	-	1
<i>Lasioglossum (Lasioglossum) leucozonium</i>		insect - hymenopteran	13/05/2008	-	2
<i>Megachile (Delomegachile) willughbiella</i>	Willughby's Leaf-Cutter Bee	insect - hymenopteran	16/07/1984	05/07/2008	2
<i>Megachile (Megachile) centuncularis</i>	Patchwork Leaf-Cutter Bee	insect - hymenopteran	05/07/2008	-	1
<i>Megachile (Megachile) versicolor</i>		insect - hymenopteran	16/07/1984	28/05/1990	2
<i>Melitta haemorrhoidalis</i>		insect - hymenopteran	16/07/1984	-	1
<i>Nomada fabriciana</i>	Fabricius' Nomad Bee	insect - hymenopteran	05/07/1980	-	1

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<i>Nomada flava</i>		insect - hymenopteran	11/05/1980	13/05/2008	3
<i>Nomada flavoguttata</i>		insect - hymenopteran	27/04/1975	13/05/2008	5
<i>Nomada goodeniana</i>	Gooden's Nomad Bee	insect - hymenopteran	29/05/1975	13/05/2008	4
<i>Nomada panzeri</i>		insect - hymenopteran	11/05/1980	-	1
<i>Osmia (Chalcosmia) caerulescens</i>	Blue Mason Bee	insect - hymenopteran	13/05/2008	22/06/2008	4
<i>Osmia (Chalcosmia) leaiana</i>		insect - hymenopteran	16/06/1984	-	1
<i>Osmia (Osmia) rufa</i>	Red Mason Bee	insect - hymenopteran	08/06/1986	13/04/2012	7
<i>Sphecodes ephippius</i>		insect - hymenopteran	16/06/1984	04/04/2008	2
<i>Sphecodes gibbus</i>		insect - hymenopteran	29/05/1975	22/06/2008	2
<i>Sphecodes monilicornis</i>		insect - hymenopteran	25/07/1975	-	1
<i>Sphecodes puncticeps</i>		insect - hymenopteran	29/05/1975	16/06/1984	2
<i>Sphecodes reticulatus</i>		insect - hymenopteran	16/06/1987	-	1
<i>Sphecodes spinulosus</i>		insect - hymenopteran	01/01/1919	-	1
<i>Chrysis angustula</i>		insect - hymenopteran	16/06/1984	-	1
<i>Cimbex connatus</i>		insect - hymenopteran	03/10/2011	-	1
<i>Cerceris arenaria</i>	Sand Tailed Digger Wasp	insect - hymenopteran	22/06/2008	-	1
<i>Cerceris rybyensis</i>	Ornate Tailed Digger Wasp	insect - hymenopteran	22/06/2008	-	1
<i>Crossocerus (Ablepharipus) podagricus</i>		insect - hymenopteran	05/07/1980	-	1
<i>Crossocerus (Crossocerus) distinguendus</i>		insect - hymenopteran	22/06/2008	05/07/2008	2
<i>Crossocerus (Crossocerus) elongatulus</i>	Slender Digger Wasp	insect - hymenopteran	16/07/1984	-	1
<i>Crossocerus (Crossocerus) tarsatus</i>		insect - hymenopteran	29/05/1975	16/06/1984	2
<i>Diodontus luperus</i>		insect - hymenopteran	25/07/1975	22/06/2008	2
<i>Ectemnius (Ectemnius) dives</i>		insect - hymenopteran	16/06/1984	-	1
<i>Ectemnius (Hypocrabro) continuus</i>		insect - hymenopteran	13/05/2008	22/06/2008	3
<i>Ectemnius (Hypocrabro) rubicola</i>		insect - hymenopteran	16/07/1981	-	1
<i>Ectemnius (Metacrabro) lituratus</i>		insect - hymenopteran	12/08/1975	22/06/2008	3
<i>Entomognathus brevis</i>		insect - hymenopteran	22/06/2008	-	1
<i>Lestiphorus bicinctus</i>		insect - hymenopteran	05/07/2008	-	1
<i>Lindenius albilabris</i>		insect - hymenopteran	16/07/1984	22/06/2008	2
<i>Passaloecus corniger</i>	Horned Black Wasp	insect - hymenopteran	05/07/1980	-	1
<i>Passaloecus gracilis</i>		insect - hymenopteran	05/07/1980	-	1
<i>Passaloecus singularis</i>		insect - hymenopteran	16/06/1984	-	1
<i>Pemphredon (Cemonus) inornata</i>	Shuckard's Wasp	insect - hymenopteran	25/07/1975	12/08/1975	2
<i>Trypoxylon clavicerum</i>	Club Horned Wood Borer Wasp	insect - hymenopteran	05/07/1980	-	1
<i>Trypoxylon medium</i>		insect - hymenopteran	13/06/1975	25/07/1975	2
<i>Formica cunicularia</i>		insect - hymenopteran	16/07/1984	-	1
<i>Formica fusca</i>	Negro Ant	insect - hymenopteran	11/05/1980	15/04/2008	2
<i>Lasius fuliginosus</i>	Jet Ant	insect - hymenopteran	04/04/2008	-	1
<i>Lasius niger</i>	Small Black Ant	insect - hymenopteran	04/04/2008	13/05/2008	6
<i>Leptothorax acervorum</i>	Slender Ant	insect - hymenopteran	05/07/1980	-	1
<i>Myrmica rubra</i>	Red Ant	insect - hymenopteran	04/04/2008	13/05/2008	2
<i>Myrmica ruginodis</i>		insect - hymenopteran	13/05/2008	-	1
<i>Myrmica scabrinodis</i>		insect - hymenopteran	11/05/1980	13/05/2008	4
<i>Myrmica atra</i>	Black Headed Velvet Ant	insect - hymenopteran	22/06/2008	-	1

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<i>Anoplius (Anoplius) nigerrimus</i>		insect - hymenopteran	14/06/1975	13/05/2008	5
<i>Arachnospila (Ammosphex) anceps</i>		insect - hymenopteran	19/05/1975	-	1
<i>Auplopus carbonarius</i>		insect - hymenopteran	22/06/2008	-	1
<i>Priocnemis (Priocnemis) exaltata</i>		insect - hymenopteran	25/07/1975	-	1
<i>Monosapyga clavicornis</i>		insect - hymenopteran	16/06/1984	-	1
<i>Sapyga quinquepunctata</i>		insect - hymenopteran	13/05/2008	-	1
<i>Tiphia minuta</i>	Small Tiphia	insect - hymenopteran	22/06/2008	-	1
<i>Ancistrocerus gazella</i>		insect - hymenopteran	05/07/1980	22/06/2008	2
<i>Ancistrocerus trifasciatus</i>		insect - hymenopteran	14/07/1984	-	1
<i>Odynerus (Odynerus) melanocephalus</i>	Black-headed Mason Wasp	insect - hymenopteran	16/06/1984	-	1
<i>Vespa crabro</i>	Hornet	insect - hymenopteran	31/12/2005	-	1
<i>Vespula (Paravespula) germanica</i>	German Wasp	insect - hymenopteran	25/07/1975	10/06/1984	3
<i>Vespula (Paravespula) vulgaris</i>	Common Wasp	insect - hymenopteran	12/07/1983	04/04/2008	6
<i>Arctia caja</i>	Garden Tiger	insect - moth	31/12/1997	31/12/2006	7
<i>Arctia villica</i>	Cream-spot Tiger	insect - moth	31/12/1997	31/12/2009	2
<i>Cybosia mesomella</i>	Four-dotted Footman	insect - moth	31/12/2006	-	1
<i>Diaphora mendica</i>	Muslin Moth	insect - moth	31/12/1997	31/12/2012	15
<i>Eilema complana</i>	Scarce Footman	insect - moth	31/12/1998	31/12/2012	18
<i>Eilema depressa</i>	Buff Footman	insect - moth	31/12/2000	31/12/2010	11
<i>Eilema griseola</i>	Dingy Footman	insect - moth	31/12/2003	31/12/2012	14
<i>Eilema lurideola</i>	Common Footman	insect - moth	31/12/1997	31/12/2012	20
<i>Eilema sororcula</i>	Orange Footman	insect - moth	31/12/1999	31/12/2012	14
<i>Euplagia quadripunctaria</i>	Jersey Tiger	insect - moth	31/12/2011	-	1
<i>Lithosia quadra</i>	Four-spotted Footman	insect - moth	31/12/2011	-	1
<i>Miltochrista miniata</i>	Rosy Footman	insect - moth	31/12/1999	31/12/2012	17
<i>Phragmatobia fuliginosa</i>	Ruby Tiger	insect - moth	31/12/1997	31/12/2007	13
<i>Phragmatobia fuliginosa subsp. fuliginosa</i>	Ruby Tiger	insect - moth	31/12/2008	31/12/2012	5
<i>Spilosoma lubricipeda</i>	White Ermine	insect - moth	31/12/1997	31/12/2012	21
<i>Spilosoma luteum</i>	Buff Ermine	insect - moth	31/12/1997	31/12/2012	17
<i>Tyria jacobaeae</i>	Cinnabar	insect - moth	31/12/1997	31/12/2012	18
<i>Bucculatrix maritima</i>	Saltern Bent-wing	insect - moth	10/09/2011	-	1
<i>Bucculatrix ulmella</i>	Oak Bent-wing	insect - moth	28/11/2001	04/11/2002	2
<i>Coleophora flavipennella</i>	Tipped Oak Case-bearer	insect - moth	28/11/2001	-	1
<i>Coleophora kuehnella</i>	White Oak Case-bearer	insect - moth	10/09/2011	-	1
<i>Coleophora lutipennella</i>	Common Oak Case-bearer	insect - moth	28/11/2001	04/11/2002	2
<i>Coleophora maritimella</i>	Sea-rush Case-bearer	insect - moth	04/11/2002	-	1
<i>Zeuzera pyrina</i>	Leopard Moth	insect - moth	31/12/1998	31/12/2009	11
<i>Acentria ephemerella</i>	Water Veneer	insect - moth	27/08/1999	31/12/2003	2
<i>Agriphila geniculea</i>	Elbow-stripe Grass-veneer	insect - moth	31/12/2003	18/09/2005	3
<i>Agriphila latistria</i>	White-streak Grass-veneer	insect - moth	31/12/2003	09/08/2006	2
<i>Agriphila straminella</i>	Straw Grass-veneer	insect - moth	31/12/2003	09/08/2006	2
<i>Agriphila tristella</i>	Common Grass-veneer	insect - moth	31/12/2003	-	1
<i>Cataclysta lemnata</i>	Small China-mark	insect - moth	31/12/2003	05/09/2004	3
<i>Catoptria pinella</i>	Pearl Grass-veneer	insect - moth	31/12/2003	06/08/2004	3

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<i>Chrysoeuchia culmella</i>	Garden Grass-veneer	insect - moth	31/12/2003	28/06/2006	5
<i>Crambus pascuella</i>	Inlaid Grass-veneer	insect - moth	31/12/2003	24/07/2004	2
<i>Eudonia angustea</i>	Narrow-winged Grey	insect - moth	18/09/2005	-	1
<i>Eurrhyncha hortulata</i>	Small Magpie	insect - moth	31/12/2003	24/07/2004	2
<i>Parapoynx stratiotata</i>	Ringed China-mark	insect - moth	31/12/2003	-	1
<i>Perinephela lancealis</i>	Long-winged Pearl	insect - moth	31/12/2003	06/08/2004	2
<i>Pleuroptera ruralis</i>	Mother of Pearl	insect - moth	31/12/2003	05/09/2004	4
<i>Scoparia ambigualis</i>	Common Grey	insect - moth	31/12/2003	13/06/2004	2
<i>Udea ferrugalis</i>	Rusty Dot	insect - moth	31/12/2003	23/09/2006	3
<i>Udea prunalis</i>	Dusky Pearl	insect - moth	10/06/2012	-	1
<i>Cilix glaucata</i>	Chinese Character	insect - moth	31/12/1997	31/12/2012	19
<i>Drepana falcataria</i>	Pebble Hook-tip	insect - moth	31/12/2003	31/12/2012	13
<i>Falcaria lacertinaria</i>	Scalloped Hook-tip	insect - moth	31/12/1999	31/12/2012	9
<i>Habrosyne pyritoides</i>	Buff Arches	insect - moth	31/12/1997	31/12/2011	17
<i>Ochropacha duplaris</i>	Common Lutestring	insect - moth	31/12/1998	24/07/2004	7
<i>Tethea ocularis</i>	Figure of Eighty	insect - moth	31/12/1997	31/12/2010	8
<i>Tethea or</i>	Poplar Lutestring	insect - moth	31/12/2000	-	1
<i>Tetheella fluctuosa</i>	Satin Lutestring	insect - moth	31/12/2003	28/06/2006	3
<i>Thyatira batis</i>	Peach Blossom	insect - moth	31/12/1998	31/12/2008	8
<i>Watsonalla binaria</i>	Oak Hook-tip	insect - moth	31/12/1997	31/12/2010	16
<i>Watsonalla cultraria</i>	Barred Hook-tip	insect - moth	31/12/2005	-	1
<i>Agonopterix arenella</i>	Brindled Flat-body	insect - moth	31/12/2003	23/09/2006	2
<i>Epermenia chaerophyllella</i>	Garden Lance-wing	insect - moth	30/10/2012	-	1
<i>Calliteara pudibunda</i>	Pale Tussock	insect - moth	31/12/1997	31/12/2012	19
<i>Catocala nupta</i>	Red Underwing	insect - moth	31/12/1997	31/12/2012	17
<i>Euproctis chrysorrhoea</i>	Brown-tail	insect - moth	31/12/1997	31/12/2012	16
<i>Euproctis similis</i>	Yellow-tail	insect - moth	31/12/1997	31/12/2012	18
<i>Herminia grisealis</i>	Small Fan-foot	insect - moth	31/12/1998	31/12/2010	11
<i>Hypena proboscidalis</i>	Snout	insect - moth	31/12/1997	31/12/2012	23
<i>Laspeyria flexula</i>	Beautiful Hook-tip	insect - moth	31/12/2006	31/12/2011	5
<i>Leucoma salicis</i>	White Satin Moth	insect - moth	31/12/1997	31/12/2012	15
<i>Lygephila pastinum</i>	Blackneck	insect - moth	31/12/2002	31/12/2006	3
<i>Lymantaria monacha</i>	Black Arches	insect - moth	31/12/1999	09/08/2006	7
<i>Orgyia antiqua</i>	Vapourer	insect - moth	31/12/1997	31/12/2012	13
<i>Rivula sericealis</i>	Straw Dot	insect - moth	31/12/1997	31/12/2012	21
<i>Schrankia costaestrigalis</i>	Pinion-streaked Snout	insect - moth	31/12/2008	-	1
<i>Scoliopteryx libatrix</i>	Herald	insect - moth	31/12/1997	31/12/2011	16
<i>Zanclagnatha tarsipennalis</i>	Fan-foot	insect - moth	31/12/1997	31/12/2012	19
<i>Scrobipalpa nitentella</i>	Common Sea Groundling	insect - moth	27/09/2011	-	1
<i>Abraxas grossulariata</i>	Magpie	insect - moth	31/12/1997	31/12/2012	12
<i>Acasis viretata</i>	Yellow-barred Brindle	insect - moth	31/12/2000	31/12/2008	6
<i>Agriopis leucophaearia</i>	Spring Usher	insect - moth	31/12/2003	31/12/2005	2
<i>Agriopis marginaria</i>	Dotted Border	insect - moth	31/12/2000	31/12/2011	3
<i>Alcis repandata</i>	Mottled Beauty	insect - moth	31/12/1997	31/12/2006	11

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<i>Alcis repandata subsp. repandata</i>	Mottled Beauty	insect - moth	31/12/2011	31/12/2012	2
<i>Alsophila aescularia</i>	March Moth	insect - moth	31/12/1998	31/12/2007	7
<i>Anticlea badiata</i>	Shoulder Stripe	insect - moth	31/12/1997	-	1
<i>Anticlea derivata</i>	Streamer	insect - moth	31/12/2002	31/12/2011	8
<i>Apeira syringaria</i>	Lilac Beauty	insect - moth	31/12/2001	31/12/2008	4
<i>Aplocera efformata</i>	Lesser Treble-bar	insect - moth	31/12/1997	31/12/2011	15
<i>Aplocera plagiata</i>	Treble-bar	insect - moth	31/12/1997	31/12/2010	9
<i>Aplocera plagiata subsp. plagiata</i>	Treble-bar	insect - moth	31/12/2003	31/12/2007	5
<i>Asthena albulata</i>	Small White Wave	insect - moth	31/12/1998	20/05/2004	4
<i>Biston betularia</i>	Peppered Moth	insect - moth	31/12/1997	31/12/2012	18
<i>Biston betularia form carbonaria</i>	Peppered Moth	insect - moth	31/12/1999	31/12/2011	7
<i>Biston betularia form insularia</i>	Peppered Moth	insect - moth	31/12/1998	31/12/2011	9
<i>Biston strataria</i>	Oak Beauty	insect - moth	31/12/1998	31/12/2008	7
<i>Cabera exanthemata</i>	Common Wave	insect - moth	23/08/1958	31/12/2011	14
<i>Cabera pusaria</i>	Common White Wave	insect - moth	31/12/1999	31/12/2012	17
<i>Campaea margaritata</i>	Light Emerald	insect - moth	31/12/1997	31/12/2012	22
<i>Camptogramma bilineata</i>	Yellow Shell	insect - moth	31/12/1997	31/12/2012	9
<i>Camptogramma bilineata subsp. bilineata</i>	Yellow Shell	insect - moth	31/12/2003	-	1
<i>Camptogramma bilineata subsp. hibernica</i>	Yellow Shell	insect - moth	31/12/1998	31/12/2002	5
<i>Catarhoe cuculata</i>	Royal Mantle	insect - moth	31/12/1999	31/12/2010	5
<i>Catarhoe rubidata</i>	Ruddy Carpet	insect - moth	31/12/2001	31/12/2005	2
<i>Cepphis advenaria</i>	Little Thorn	insect - moth	31/12/2003	07/06/2006	2
<i>Chiasmia clathrata</i>	Latticed Heath	insect - moth	31/12/2004	31/12/2011	2
<i>Chloroclysta citrata</i>	Dark Marbled Carpet	insect - moth	31/12/2001	31/12/2003	2
<i>Chloroclysta siterata</i>	Red-green Carpet	insect - moth	31/12/2002	-	1
<i>Chloroclysta truncata</i>	Common Marbled Carpet	insect - moth	31/12/1997	31/12/2012	22
<i>Chloroclystis v-ata</i>	V-pug	insect - moth	31/12/1998	31/12/2011	9
<i>Cidaria fulvata</i>	Barred Yellow	insect - moth	31/12/1997	31/12/2011	7
<i>Colostygia pectinataria</i>	Green Carpet	insect - moth	31/12/1998	31/12/2012	18
<i>Colotois pennaria</i>	Feathered Thorn	insect - moth	31/12/1997	31/12/2010	7
<i>Comibaena bajularia</i>	Blotched Emerald	insect - moth	31/12/2003	13/06/2004	2
<i>Cosmorhoe ocellata</i>	Purple Bar	insect - moth	31/12/1997	31/12/2010	10
<i>Crocallis elinguaris</i>	Scalloped Oak	insect - moth	31/12/1997	31/12/2012	16
<i>Cyclophora annularia</i>	Mocha	insect - moth	31/12/2007	31/12/2009	2
<i>Cyclophora linearis</i>	Clay Triple-lines	insect - moth	31/12/2003	31/12/2011	10
<i>Cyclophora porata</i>	False Mocha	insect - moth	31/12/2002	31/12/2012	5
<i>Cyclophora punctaria</i>	Maiden's Blush	insect - moth	31/12/2001	31/12/2012	16
<i>Cyclophora puppillaria</i>	Blair's Mocha	insect - moth	14/07/2007	31/12/2012	6
<i>Ecliptopera silaceata</i>	Small Phoenix	insect - moth	31/12/2003	31/12/2010	5
<i>Ectropis bistortata</i>	Engrailed	insect - moth	31/12/1997	31/12/2012	14
<i>Electrophaes corylata</i>	Broken-barred Carpet	insect - moth	31/12/2003	31/12/2009	5
<i>Ennomos alniaria</i>	Canary-shouldered Thorn	insect - moth	31/12/1997	31/12/2012	16
<i>Ennomos autumnaria</i>	Large Thorn	insect - moth	31/12/2001	31/12/2009	7
<i>Ennomos fuscantaria</i>	Dusky Thorn	insect - moth	31/12/2001	31/12/2009	11

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Epione repandaria</i>	Bordered Beauty	insect - moth	31/12/1997	31/12/2010	6
<i>Epirrhoe alternata</i>	Common Carpet	insect - moth	31/12/1998	31/12/2012	10
<i>Epirrhoe alternata subsp. alternata</i>	Common Carpet	insect - moth	31/12/2003	31/12/2007	8
<i>Epirrhoe rivata</i>	Wood Carpet	insect - moth	31/12/1997	31/12/1999	2
<i>Epirrita</i>	Indet. November Moth	insect - moth	31/12/2009	31/12/2012	4
<i>Epirrita dilutata</i>	November Moth	insect - moth	31/12/2001	31/12/2007	5
<i>Erannis defoliaria</i>	Mottled Umber	insect - moth	31/12/2000	31/12/2002	3
<i>Euchoeca nebulata</i>	Dingy Shell	insect - moth	31/12/1998	31/12/2003	2
<i>Eulithis mellinata</i>	Spinach	insect - moth	31/12/1997	31/12/2010	10
<i>Eulithis prunata</i>	Phoenix	insect - moth	31/12/1997	31/12/2011	16
<i>Eulithis pyraliata</i>	Barred Straw	insect - moth	31/12/1997	31/12/2012	8
<i>Eupithecia abbreviata</i>	Brindled Pug	insect - moth	31/12/2003	31/12/2012	7
<i>Eupithecia absinthiata</i>	Wormwood Pug	insect - moth	31/12/2006	31/12/2012	3
<i>Eupithecia assimilata</i>	Currant Pug	insect - moth	31/12/1997	31/12/2012	6
<i>Eupithecia centaureata</i>	Lime-speck Pug	insect - moth	31/12/1997	31/12/2012	16
<i>Eupithecia denotata subsp. denotata</i>	Campanula Pug	insect - moth	31/12/1997	-	1
<i>Eupithecia dodoneata</i>	Oak-tree Pug	insect - moth	31/12/2003	31/12/2010	6
<i>Eupithecia exiguata</i>	Mottled Pug	insect - moth	31/12/1998	31/12/2011	10
<i>Eupithecia exiguata subsp. exiguata</i>	Mottled Pug	insect - moth	31/12/2003	-	1
<i>Eupithecia haworthiata</i>	Haworth's Pug	insect - moth	31/12/1997	31/12/2011	5
<i>Eupithecia icterata</i>	Tawny Speckled Pug	insect - moth	31/12/2005	31/12/2006	2
<i>Eupithecia icterata subsp. subfulvata</i>	Tawny Speckled Pug	insect - moth	31/12/1998	31/12/2011	2
<i>Eupithecia indigata</i>	Ochreous Pug	insect - moth	31/12/1998	07/06/2006	4
<i>Eupithecia innotata</i>	Angle-barred Pug	insect - moth	31/12/2006	31/12/2010	2
<i>Eupithecia intricata</i>	Freyer's Pug	insect - moth	31/12/1997	31/12/2003	6
<i>Eupithecia intricata subsp. arceuthata</i>	Freyer's Pug	insect - moth	31/12/2012	-	1
<i>Eupithecia inturbata</i>	Maple Pug	insect - moth	31/12/2003	31/12/2011	4
<i>Eupithecia lariciata</i>	Larch Pug	insect - moth	31/12/2004	-	1
<i>Eupithecia linariata</i>	Toadflax Pug	insect - moth	31/12/1999	07/06/2006	5
<i>Eupithecia nanata</i>	Narrow-winged Pug	insect - moth	31/12/2002	31/12/2004	2
<i>Eupithecia phoeniceata</i>	Cypress Pug	insect - moth	31/12/1997	31/12/2012	10
<i>Eupithecia plumbeolata</i>	Lead-coloured Pug	insect - moth	31/12/1997	-	1
<i>Eupithecia pulchellata</i>	Foxglove Pug	insect - moth	31/12/1997	31/12/2012	18
<i>Eupithecia simplicata</i>	Plain Pug	insect - moth	31/12/2001	31/12/2008	5
<i>Eupithecia subfuscata</i>	Grey Pug	insect - moth	31/12/1997	31/12/2011	4
<i>Eupithecia subumbrata</i>	Shaded Pug	insect - moth	31/12/1997	31/12/2010	2
<i>Eupithecia succenturiata</i>	Bordered Pug	insect - moth	31/12/2000	-	1
<i>Eupithecia tenuiata</i>	Slender Pug	insect - moth	31/12/2001	31/12/2010	5
<i>Eupithecia tripunctaria</i>	White-spotted Pug	insect - moth	31/12/1998	31/12/2011	15
<i>Eupithecia ultimaria</i>	Channel Islands Pug	insect - moth	31/12/2012	-	1
<i>Eupithecia venosata</i>	Netted Pug	insect - moth	31/12/2001	-	1
<i>Eupithecia vulgata</i>	Common Pug	insect - moth	31/12/1999	31/12/2012	8
<i>Eupithecia vulgata subsp. vulgata</i>	Common Pug	insect - moth	31/12/2003	31/12/2007	8
<i>Geometra papilionaria</i>	Large Emerald	insect - moth	31/12/1997	31/12/2006	7



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<i>Gymnoscelis rufifasciata</i>	Double-striped Pug	insect - moth	31/12/1997	31/12/2012	22
<i>Hemistola chrysoprasaria</i>	Small Emerald	insect - moth	31/12/1997	31/12/2011	13
<i>Hemithea aestivaria</i>	Common Emerald	insect - moth	31/12/1997	31/12/2011	16
<i>Horisme tersata</i>	Fern	insect - moth	31/12/1997	31/12/2010	5
<i>Horisme vitalbata</i>	Small Waved Umber	insect - moth	31/12/1997	31/12/2012	16
<i>Hydrelia flammeolaria</i>	Small Yellow Wave	insect - moth	31/12/1999	31/12/2008	7
<i>Hydriomena furcata</i>	July Highflyer	insect - moth	31/12/1997	31/12/2012	14
<i>Hydriomena impluviata</i>	May Highflyer	insect - moth	31/12/1997	31/12/2012	10
<i>Hylaea fasciaria</i>	Barred Red	insect - moth	31/12/1999	31/12/2011	11
<i>Hypomecis punctinalis</i>	Pale Oak Beauty	insect - moth	31/12/2003	31/12/2010	5
<i>Hypomecis roboraria</i>	Great Oak Beauty	insect - moth	31/12/1997	28/06/2006	4
<i>Idaea aversata</i>	Riband Wave	insect - moth	31/12/1997	31/12/2012	25
<i>Idaea biselata</i>	Small Fan-footed Wave	insect - moth	31/12/1997	31/12/2012	19
<i>Idaea dimidiata</i>	Single-dotted Wave	insect - moth	31/12/1997	31/12/2012	17
<i>Idaea fuscovenosa</i>	Dwarf Cream Wave	insect - moth	31/12/1997	31/12/2012	9
<i>Idaea seriata</i>	Small Dusty Wave	insect - moth	31/12/1999	31/12/2012	10
<i>Idaea subsericeata</i>	Satin Wave	insect - moth	31/12/2005	-	1
<i>Idaea trigeminata</i>	Treble Brown Spot	insect - moth	31/12/1997	31/12/2012	16
<i>Itame brunneata</i>	Rannoch Looper	insect - moth	31/12/2011	-	1
<i>Jodis lactearia</i>	Little Emerald	insect - moth	31/12/2003	31/12/2011	5
<i>Larentia clavaria</i>	Mallow	insect - moth	31/12/1997	31/12/2011	5
<i>Ligdia adustata</i>	Scorched Carpet	insect - moth	31/12/1997	31/12/2011	17
<i>Lomaspilis marginata</i>	Clouded Border	insect - moth	31/12/1997	31/12/2012	22
<i>Lomographa bimaculata</i>	White-pinion Spotted	insect - moth	31/12/2000	31/12/2009	5
<i>Lomographa temerata</i>	Clouded Silver	insect - moth	31/12/1997	31/12/2010	18
<i>Lycia hirtaria</i>	Brindled Beauty	insect - moth	31/12/2011	-	1
<i>Macaria liturata</i>	Tawny-barred Angle	insect - moth	31/12/1997	31/12/2006	3
<i>Macaria notata</i>	Peacock Moth	insect - moth	31/12/2001	29/04/2007	10
<i>Melanthia procellata</i>	Pretty Chalk Carpet	insect - moth	31/12/2002	09/08/2006	4
<i>Menophra abruptaria</i>	Waved Umber	insect - moth	31/12/1997	31/12/2012	16
<i>Odontopera bidentata</i>	Scalloped Hazel	insect - moth	31/12/2001	31/12/2011	4
<i>Operophtera brumata</i>	Winter Moth	insect - moth	31/12/2003	31/12/2011	3
<i>Opisthograptis luteolata</i>	Brimstone Moth	insect - moth	31/12/1997	31/12/2012	27
<i>Orthonama obstipata</i>	Gem	insect - moth	31/12/2002	31/12/2012	13
<i>Ourapteryx sambucaria</i>	Swallow-tailed Moth	insect - moth	31/12/1997	31/12/2011	19
<i>Pasiphila rectangulata</i>	Green Pug	insect - moth	31/12/1997	31/12/2010	14
<i>Peribatodes rhomboidaria</i>	Willow Beauty	insect - moth	31/12/1997	31/12/2012	23
<i>Perizoma alchemillata</i>	Small Rivulet	insect - moth	31/12/2001	31/12/2011	6
<i>Perizoma bifasciata</i>	Barred Rivulet	insect - moth	31/12/1997	-	1
<i>Perizoma didymata</i>	Twin-spot Carpet	insect - moth	31/12/1999	31/12/2010	2
<i>Perizoma flavofasciata</i>	Sandy Carpet	insect - moth	31/12/1997	31/12/2011	4
<i>Petrophora chlorosata</i>	Brown Silver-line	insect - moth	31/12/2003	31/12/2007	3
<i>Phigalia pilosaria</i>	Pale Brindled Beauty	insect - moth	31/12/2001	31/12/2005	2
<i>Plagodis dolabraria</i>	Scorched Wing	insect - moth	31/12/1999	31/12/2011	15

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<i>Plemyria rubiginata</i>	Blue-bordered Carpet	insect - moth	31/12/1997	31/12/2011	12
<i>Pterapherapteryx sexalata</i>	Small Seraphim	insect - moth	31/12/2000	31/12/2003	3
<i>Rhodometra sacraria</i>	Vestal	insect - moth	31/12/1999	31/12/2011	18
<i>Scopula floslactata</i>	Cream Wave	insect - moth	31/12/1997	31/12/2010	3
<i>Scopula imitaria</i>	Small Blood-vein	insect - moth	31/12/1997	31/12/2012	17
<i>Scopula immutata</i>	Lesser Cream Wave	insect - moth	31/12/2003	-	1
<i>Scopula marginepunctata</i>	Mullein Wave	insect - moth	31/12/2001	31/12/2003	2
<i>Selenia dentaria</i>	Early Thorn	insect - moth	31/12/1997	31/12/2012	22
<i>Selenia tetralunaria</i>	Purple Thorn	insect - moth	31/12/1997	31/12/2011	11
<i>Thera britannica</i>	Spruce Carpet	insect - moth	31/12/1999	31/12/2012	7
<i>Thera cupressata</i>	Cypress Carpet	insect - moth	31/12/2000	31/12/2011	11
<i>Thera firmata</i>	Pine Carpet	insect - moth	31/12/2009	31/12/2010	2
<i>Thera obeliscata</i>	Grey Pine Carpet	insect - moth	31/12/1997	31/12/2011	9
<i>Theria primaria</i>	Early Moth	insect - moth	31/12/1999	-	1
<i>Timandra comae</i>	Blood-Vein	insect - moth	31/12/1997	31/12/2012	13
<i>Timandra griseata</i>	Blood-Vein	insect - moth	27/08/1999	31/12/2002	5
<i>Xanthorhoe designata</i>	Flame Carpet	insect - moth	31/12/2002	31/12/2012	8
<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet	insect - moth	31/12/1997	31/12/2010	13
<i>Xanthorhoe fluctuata</i>	Garden Carpet	insect - moth	31/12/1997	31/12/2012	19
<i>Xanthorhoe montanata</i>	Silver-ground Carpet	insect - moth	31/12/1999	31/12/2012	4
<i>Xanthorhoe montanata subsp. montanata</i>	Silver-ground Carpet	insect - moth	20/05/2004	07/06/2006	2
<i>Xanthorhoe spadicearia</i>	Red Twin-spot Carpet	insect - moth	31/12/1999	31/12/2012	18
<i>Acrocercops bronniardella</i>	Brown Oak Slender	insect - moth	26/11/2001	04/11/2002	2
<i>Caloptilia rufipennella</i>	Small Red Slender	insect - moth	26/11/2001	-	1
<i>Caloptilia semifascia</i>	Maple Slender	insect - moth	10/09/2011	-	1
<i>Caloptilia stigmatella</i>	White-triangle Slender	insect - moth	04/11/2002	30/10/2012	3
<i>Cameraria ohridella</i>	Horse-Chestnut Leaf-miner	insect - moth	15/09/2004	19/07/2009	5
<i>Gracillaria syringella</i>	Common Slender	insect - moth	30/10/2012	-	1
<i>Parornix anglicella</i>	Hawthorn Slender	insect - moth	28/11/2001	30/10/2012	3
<i>Parornix devoniella</i>	Hazel Slender	insect - moth	30/10/2012	-	1
<i>Phyllocnistis unipunctella</i>	Poplar Bent-wing	insect - moth	31/10/2002	-	1
<i>Phyllonorycter acerifoliella</i>	Maple Midget	insect - moth	10/09/2011	-	1
<i>Phyllonorycter coryli</i>	Nut Leaf Blister Moth	insect - moth	30/10/2012	-	1
<i>Phyllonorycter corylifoliella</i>	Hawthorn Midget	insect - moth	28/11/2001	30/10/2012	4
<i>Phyllonorycter leucographella</i>	Firethorn Leaf Miner	insect - moth	12/02/2004	30/10/2012	7
<i>Phyllonorycter maestingella</i>	Beech Midget	insect - moth	04/11/2002	30/10/2012	2
<i>Phyllonorycter messaniella</i>	Garden Midget	insect - moth	28/11/2001	30/10/2012	5
<i>Phyllonorycter nicellii</i>	Red Hazel Midget	insect - moth	30/10/2012	-	1
<i>Phyllonorycter oxyacanthae</i>	Common Thorn Midget	insect - moth	10/09/2011	30/10/2012	2
<i>Phyllonorycter platani</i>	London Midget	insect - moth	15/09/2004	31/10/2011	2
<i>Phyllonorycter spinicolella</i>	Sloe Midget	insect - moth	26/11/2001	10/09/2011	3
<i>Hepialus hecta</i>	Gold Swift	insect - moth	31/12/1997	31/12/2012	3
<i>Hepialus lupulinus</i>	Common Swift	insect - moth	31/12/2001	31/12/2011	5
<i>Hepialus sylvina</i>	Orange Swift	insect - moth	31/12/1997	31/12/2011	14

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<i>Ochlodes sylvanus</i>	Large Skipper	insect - butterfly	31/12/1995	05/07/2008	15
<i>Thymelicus lineola</i>	Essex Skipper	insect - butterfly	30/07/1997	31/12/2007	4
<i>Thymelicus sylvestris</i>	Small Skipper	insect - butterfly	31/12/1995	31/12/2007	12
<i>Euthrix potatoria</i>	Drinker	insect - moth	31/12/1997	31/12/2009	8
<i>Lasiocampa quercus</i>	Oak Eggar	insect - moth	31/12/1997	31/12/2005	2
<i>Malacosoma neustria</i>	Lackey	insect - moth	31/12/1997	31/12/2009	11
<i>Poecilocampa populi</i>	December Moth	insect - moth	31/12/1997	31/12/2004	5
<i>Apoda limacodes</i>	Festoon	insect - moth	31/12/2006	31/12/2007	2
<i>Aricia agestis</i>	Brown Argus	insect - butterfly	15/06/2006	14/08/2010	5
<i>Celastrina argiolus</i>	Holly Blue	insect - butterfly	25/07/1996	22/03/2012	17
<i>Celastrina argiolus subsp. britanna</i>	Holly Blue	insect - butterfly	31/12/2007	-	1
<i>Lycaena phlaeas</i>	Small Copper	insect - butterfly	05/06/1996	01/09/2010	18
<i>Lycaena phlaeas subsp. eleus</i>	Small Copper	insect - butterfly	31/12/2007	-	1
<i>Neozephyrus quercus</i>	Purple Hairstreak	insect - butterfly	20/07/2004	14/07/2009	6
<i>Polyommatus icarus</i>	Common Blue	insect - butterfly	31/12/1997	14/08/2010	13
<i>Polyommatus icarus subsp. icarus</i>	Common Blue	insect - butterfly	31/12/2007	-	1
<i>Lyonetia clerkeella</i>	Apple Leaf Miner	insect - moth	30/10/2012	-	1
<i>Ectoedemia erythrognella</i>	Coast Bramble Pigmy	insect - moth	28/11/2001	30/10/2012	3
<i>Ectoedemia heringi</i>	White-spot Pigmy	insect - moth	26/11/2001	28/11/2001	2
<i>Ectoedemia quinquella</i>	Five-spot Pigmy	insect - moth	26/11/2001	04/11/2002	3
<i>Ectoedemia subbimaculella</i>	Spotted Black Pigmy	insect - moth	26/11/2001	04/11/2002	3
<i>Stigmella aurella</i>	Golden Pigmy	insect - moth	26/11/2001	30/10/2012	9
<i>Stigmella basiguttella</i>	Base-spotted Pigmy	insect - moth	28/11/2001	-	1
<i>Stigmella centifoliella</i>	Narrow-barred Pigmy	insect - moth	28/11/2001	-	1
<i>Stigmella floslactella</i>	Coarse Hazel Pigmy	insect - moth	26/11/2001	-	1
<i>Stigmella hemargyrella</i>	Beech Pigmy	insect - moth	04/11/2002	30/10/2012	3
<i>Stigmella hybnerella</i>	Greenish Thorn Pigmy	insect - moth	10/09/2011	-	1
<i>Stigmella lemniscella</i>	Red Elm Pigmy	insect - moth	30/10/2012	-	1
<i>Stigmella microtheriella</i>	Nut-tree Pigmy	insect - moth	30/10/2012	-	1
<i>Stigmella obliquella</i>	Willow Pigmy	insect - moth	28/11/2001	30/10/2012	3
<i>Stigmella perpygmaeella</i>	Least Thorn Pigmy	insect - moth	30/10/2012	-	1
<i>Stigmella plagicolella</i>	Scrubland Pigmy	insect - moth	28/11/2001	30/10/2012	5
<i>Stigmella roborella</i>	Common Oak Pigmy	insect - moth	26/11/2001	28/11/2001	2
<i>Stigmella ruficapitella</i>	Red-headed Pigmy	insect - moth	28/11/2001	04/11/2002	2
<i>Stigmella salicis</i>	Sallow Pigmy	insect - moth	26/11/2001	-	1
<i>Stigmella suberivora</i>	Holm-oak Pigmy	insect - moth	15/04/2002	-	1
<i>Stigmella tityrella</i>	Small Beech Pigmy	insect - moth	30/10/2012	-	1
<i>Stigmella trimaculella</i>	Black-poplar Pigmy	insect - moth	31/10/2002	-	1
<i>Abrostola tripartita</i>	Spectacle	insect - moth	31/12/1997	31/12/2012	12
<i>Abrostola triplasia</i>	Dark Spectacle	insect - moth	31/12/1997	31/12/2009	11
<i>Acontia lucida</i>	Pale Shoulder	insect - moth	31/12/2004	-	1
<i>Acrionicta</i>		insect - moth	31/12/1997	31/12/2012	20
<i>Acrionicta aceris</i>	Sycamore	insect - moth	31/12/1997	31/12/2010	10
<i>Acrionicta leporina</i>	Miller	insect - moth	31/12/1997	31/12/2010	5

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Acronicta megacephala</i>	Poplar Grey	insect - moth	31/12/1997	31/12/2012	15
<i>Acronicta rumicis</i>	Knot Grass	insect - moth	31/12/1997	31/12/2012	15
<i>Agrochola circellaris</i>	Brick	insect - moth	31/12/1997	31/12/2003	2
<i>Agrochola litura</i>	Brown-spot Pinion	insect - moth	31/12/1997	31/12/2006	5
<i>Agrochola lota</i>	Red-line Quaker	insect - moth	31/12/1997	31/12/2009	9
<i>Agrochola lychnidis</i>	Beaded Chestnut	insect - moth	31/12/1997	31/12/2009	9
<i>Agrochola macilentata</i>	Yellow-line Quaker	insect - moth	31/12/2001	31/12/2011	4
<i>Agrotis cinerea</i>	Light Feathered Rustic	insect - moth	31/12/1999	-	1
<i>Agrotis clavis</i>	Heart & Club	insect - moth	31/12/1997	31/12/2012	17
<i>Agrotis exclamationis</i>	Heart & Dart	insect - moth	31/12/1997	31/12/2012	22
<i>Agrotis ipsilon</i>	Dark Sword-grass	insect - moth	31/12/1997	31/12/2012	37
<i>Agrotis puta</i>	Shuttle-shaped Dart	insect - moth	31/12/1997	31/12/2012	22
<i>Agrotis puta subsp. puta</i>	Shuttle-shaped Dart	insect - moth	31/12/2000	-	1
<i>Agrotis segetum</i>	Turnip Moth	insect - moth	31/12/1997	31/12/2012	17
<i>Allophyes oxyacanthae</i>	Green-brindled Crescent	insect - moth	31/12/1998	31/12/2011	8
<i>Amphipoea fucosa</i>	Saltern Ear	insect - moth	31/12/2005	31/12/2010	3
<i>Amphipoea oculaea</i>	Ear Moth	insect - moth	31/12/2004	31/12/2011	3
<i>Amphipyra</i>		insect - moth	31/12/2011	-	1
<i>Amphipyra berbera subsp. svenssoni</i>	Svensson's Copper Underwing	insect - moth	31/12/2000	31/12/2001	2
<i>Amphipyra pyramidea</i>	Copper Underwing	insect - moth	31/12/1997	31/12/2010	17
<i>Amphipyra tragopoginis</i>	Mouse Moth	insect - moth	31/12/1997	31/12/2008	12
<i>Apamea anceps</i>	Large Nutmeg	insect - moth	31/12/2009	31/12/2011	3
<i>Apamea lithoxylaea</i>	Light Arches	insect - moth	31/12/1997	31/12/2012	20
<i>Apamea monoglypha</i>	Dark Arches	insect - moth	31/12/1997	31/12/2012	20
<i>Apamea ophiogramma</i>	Double Lobed	insect - moth	31/12/2000	31/12/2012	8
<i>Apamea remissa</i>	Dusky Brocade	insect - moth	31/12/2000	31/12/2012	9
<i>Apamea sordens</i>	Rustic Shoulder-knot	insect - moth	31/12/2012	-	1
<i>Apamea sublustris</i>	Reddish Light Arches	insect - moth	31/12/1997	31/12/2006	3
<i>Apamea unanimitis</i>	Small Clouded Brindle	insect - moth	31/12/1997	31/12/2008	3
<i>Aporophyla nigra</i>	Black Rustic	insect - moth	31/12/1997	31/12/2011	18
<i>Archanara dissoluta</i>	Brown-veined Wainscot	insect - moth	31/12/2001	31/12/2009	4
<i>Archanara geminipuncta</i>	Twin-spotted Wainscot	insect - moth	31/12/1997	31/12/2010	4
<i>Archanara sparganii</i>	Webb's Wainscot	insect - moth	31/12/2004	31/12/2008	4
<i>Arenostola phragmitidis</i>	Fen Wainscot	insect - moth	31/12/2001	31/12/2010	3
<i>Atethmia centrigo</i>	Centre-barred Sallow	insect - moth	31/12/1997	31/12/2009	9
<i>Autographa gamma</i>	Silver Y	insect - moth	31/12/1997	31/12/2012	161
<i>Autographa pulchrina</i>	Beautiful Golden Y	insect - moth	31/12/2010	-	1
<i>Axylia putris</i>	Flame	insect - moth	31/12/1998	31/12/2012	15
<i>Brachylomia viminalis</i>	Minor Shoulder-knot	insect - moth	31/12/2003	31/12/2004	2
<i>Caradrina kadenii</i>	Clancy's Rustic	insect - moth	31/12/2010	31/12/2012	3
<i>Caradrina morpheus</i>	Mottled Rustic	insect - moth	31/12/1997	31/12/2011	13
<i>Celaena leucostigma</i>	Crescent	insect - moth	31/12/2003	-	1
<i>Cerastis rubricosa</i>	Red Chestnut	insect - moth	31/12/1997	31/12/2003	3
<i>Charanyca trigrammica</i>	Treble Lines	insect - moth	31/12/1997	31/12/2012	18

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<i>Chilodes maritimus</i>	Silky Wainscot	insect - moth	31/12/2003	31/12/2005	3
<i>Chortodes pygmina</i>	Small Wainscot	insect - moth	31/12/1997	31/12/2012	13
<i>Coenobia rufa</i>	Small Rufous	insect - moth	31/12/2003	-	1
<i>Colocasia coryli</i>	Nut-tree Tussock	insect - moth	31/12/1997	31/12/2011	19
<i>Conistra ligula</i>	Dark Chestnut	insect - moth	31/12/1997	31/12/2009	4
<i>Conistra rubiginea</i>	Dotted Chestnut	insect - moth	31/12/1997	31/12/2012	3
<i>Conistra vaccinii</i>	Chestnut	insect - moth	31/12/1998	31/12/2011	8
<i>Cosmia affinis</i>	Lesser-spotted Pinion	insect - moth	31/12/2002	31/12/2007	2
<i>Cosmia pyralina</i>	Lunar-spotted Pinion	insect - moth	31/12/1998	31/12/2006	3
<i>Cosmia trapezina</i>	Dun-bar	insect - moth	31/12/1997	31/12/2011	20
<i>Craniophora ligustri</i>	Coronet	insect - moth	31/12/1997	31/12/2012	20
<i>Cryphia domestica</i>	Marbled Beauty	insect - moth	31/12/1997	31/12/2008	12
<i>Cryphia muralis</i>	Marbled Green	insect - moth	31/12/1997	31/12/2011	13
<i>Cucullia asteris</i>	Star-wort	insect - moth	31/12/2004	31/12/2006	2
<i>Cucullia chamomillae</i>	Chamomile Shark	insect - moth	31/12/1997	31/12/2005	3
<i>Cucullia umbratica</i>	Shark	insect - moth	31/12/2002	31/12/2011	6
<i>Diachrysis chrysitis</i>	Burnished Brass	insect - moth	31/12/1997	31/12/2012	16
<i>Diarsia mendica</i>	Ingrailed Clay	insect - moth	31/12/1997	31/12/2012	10
<i>Diarsia rubi</i>	Small Square-spot	insect - moth	31/12/1997	31/12/2012	14
<i>Dichonia aprilina</i>	Merveille Du Jour	insect - moth	31/12/1999	31/12/2009	5
<i>Diloba caeruleocephala</i>	Figure of Eight	insect - moth	31/12/1998	31/12/2002	5
<i>Discestra trifolii</i>	Nutmeg	insect - moth	31/12/1997	31/12/2011	15
<i>Dryobotodes eremita</i>	Brindled Green	insect - moth	31/12/2002	31/12/2009	7
<i>Elaphria venustula</i>	Rosy Marbled	insect - moth	31/12/2010	-	1
<i>Eremobia ochroleuca</i>	Dusky Sallow	insect - moth	31/12/1997	31/12/2008	13
<i>Euplexia lucipara</i>	Small Angle Shades	insect - moth	31/12/2000	31/12/2008	6
<i>Eupsilia transversa</i>	Satellite	insect - moth	31/12/2002	31/12/2011	6
<i>Eurois occulta</i>	Great Brocade	insect - moth	04/08/2006	31/12/2006	2
<i>Gortyna flavago</i>	Frosted Orange	insect - moth	31/12/2001	31/12/2011	9
<i>Graphiphora augur</i>	Double Dart	insect - moth	31/12/2010	-	1
<i>Hada plebeja</i>	Shears	insect - moth	31/12/1997	31/12/2009	12
<i>Hadena bicurris</i>	Lychnis	insect - moth	31/12/1997	31/12/2012	18
<i>Hadena compta</i>	Varied Coronet	insect - moth	31/12/1997	31/12/2007	9
<i>Hadena perplexa</i>	Tawny Shears	insect - moth	31/12/2004	23/09/2006	3
<i>Hadena perplexa subsp. perplexa</i>	Tawny Shears	insect - moth	31/12/2003	31/12/2011	3
<i>Hadena rivularis</i>	Campion	insect - moth	31/12/1998	31/12/2012	8
<i>Hecatera bicolorata</i>	Broad-barred White	insect - moth	31/12/1998	31/12/2012	13
<i>Helicoverpa armigera</i>	Scarce Bordered Straw	insect - moth	31/12/2000	31/12/2009	22
<i>Heliopsis peltigera</i>	Bordered Straw	insect - moth	31/12/1998	31/12/2010	40
<i>Hoplodrina alsines</i>	Uncertain	insect - moth	31/12/1997	31/12/2012	17
<i>Hoplodrina ambigua</i>	Vine's Rustic	insect - moth	31/12/1997	31/12/2012	17
<i>Hoplodrina blanda</i>	Rustic	insect - moth	31/12/1997	31/12/2012	22
<i>Hydraecia micacea</i>	Rosy Rustic	insect - moth	31/12/1997	31/12/2011	15
<i>Ipimorpha retusa</i>	Double Kidney	insect - moth	31/12/2002	31/12/2005	2

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<i>Ipimorpha subtusa</i>	Olive	insect - moth	31/12/2000	31/12/2006	5
<i>Lacanobia oleracea</i>	Bright-Line Brown-Eye	insect - moth	31/12/1997	31/12/2012	19
<i>Lacanobia suasa</i>	Dog's Tooth	insect - moth	31/12/1999	31/12/2006	5
<i>Lacanobia thalassina</i>	Pale-shouldered Brocade	insect - moth	31/12/2011	-	1
<i>Lacanobia w-latinum</i>	Light Brocade	insect - moth	31/12/2006	31/12/2012	4
<i>Lithophane leautieri</i>	Blair's Shoulder-knot	insect - moth	31/12/1997	31/12/2012	11
<i>Lithophane leautieri subsp. hesperica</i>	Blair's Shoulder-knot	insect - moth	31/12/1998	31/12/2002	5
<i>Lithophane ornitopus</i>	Grey Shoulder-knot	insect - moth	31/12/2004	-	1
<i>Lithophane semibrunnea</i>	Tawny Pinion	insect - moth	31/12/2009	31/12/2010	2
<i>Luperina testacea</i>	Flounced Rustic	insect - moth	31/12/1997	31/12/2012	15
<i>Lycophotia porphyrea</i>	True Lover's Knot	insect - moth	31/12/1997	31/12/2009	7
<i>Macdunnoughia confusa</i>	Dewick's Plusia	insect - moth	02/06/2006	31/12/2008	4
<i>Mamestra brassicae</i>	Cabbage Moth	insect - moth	31/12/1997	31/12/2012	16
<i>Melanchra persicariae</i>	Dot Moth	insect - moth	31/12/1997	31/12/2010	14
<i>Melanchra pisi</i>	Broom Moth	insect - moth	31/12/1999	-	1
<i>Mesapamea</i>		insect - moth	11/08/2007	31/12/2012	6
<i>Mesapamea secalis agg.</i>	Common Rustic	insect - moth	31/12/1999	31/12/2002	4
<i>Mesapamea secalis</i>	Common Rustic	insect - moth	31/12/1997	31/12/2007	8
<i>Mesoligia furuncula</i>	Cloaked Minor	insect - moth	31/12/1999	31/12/2011	8
<i>Mesoligia literosa</i>	Rosy Minor	insect - moth	31/12/1997	31/12/2011	11
<i>Mormo maura</i>	Old Lady	insect - moth	31/12/1997	31/12/2006	10
<i>Mythimna albipuncta</i>	White-point	insect - moth	31/12/2001	31/12/2012	16
<i>Mythimna comma</i>	Shoulder-striped Wainscot	insect - moth	31/12/2002	31/12/2011	6
<i>Mythimna conigera</i>	Brown-line Bright-eye	insect - moth	31/12/2005	-	1
<i>Mythimna ferrago</i>	Clay	insect - moth	31/12/1997	31/12/2012	11
<i>Mythimna impura</i>	Smoky Wainscot	insect - moth	31/12/1997	31/12/2011	19
<i>Mythimna l-album</i>	L-album Wainscot	insect - moth	31/12/1997	31/12/2011	15
<i>Mythimna litoralis</i>	Shore Wainscot	insect - moth	31/12/2003	-	1
<i>Mythimna obsoleta</i>	Obscure Wainscot	insect - moth	31/12/2004	31/12/2011	3
<i>Mythimna pallens</i>	Common Wainscot	insect - moth	31/12/1997	31/12/2012	25
<i>Mythimna straminea</i>	Southern Wainscot	insect - moth	31/12/1998	31/12/2004	6
<i>Mythimna unipuncta</i>	American Wainscot	insect - moth	31/12/2002	31/12/2010	12
<i>Mythimna vitellina</i>	Delicate	insect - moth	31/12/2002	31/12/2011	25
<i>Naenia typica</i>	Gothic	insect - moth	31/12/1997	31/12/2006	5
<i>Noctua comes</i>	Lesser Yellow Underwing	insect - moth	31/12/1997	31/12/2012	20
<i>Noctua fimbriata</i>	Broad-bordered Yellow Underwing	insect - moth	31/12/1997	31/12/2012	22
<i>Noctua interjecta</i>	Least Yellow Underwing	insect - moth	31/12/1997	31/12/2011	10
<i>Noctua interjecta subsp. caliginosa</i>	Least Yellow Underwing	insect - moth	31/12/1999	31/12/2001	3
<i>Noctua janthe</i>	Lesser Broad-bordered Yellow Underw	insect - moth	31/12/1997	31/12/2012	22
<i>Noctua pronuba</i>	Large Yellow Underwing	insect - moth	31/12/1997	31/12/2012	28
<i>Nonagria typhae</i>	Bulrush Wainscot	insect - moth	31/12/2000	31/12/2011	5
<i>Ochropleura plecta</i>	Flame Shoulder	insect - moth	31/12/1997	31/12/2012	22
<i>Oligia</i>		insect - moth	31/12/1998	31/12/2012	9
<i>Oligia fasciuncula</i>	Middle-barred Minor	insect - moth	31/12/1997	31/12/2012	11

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<i>Oligia strigilis</i>	Marbled Minor	insect - moth	31/12/1997	31/12/2007	8
<i>Oligia versicolor</i>	Rufous Minor	insect - moth	31/12/1997	31/12/2012	12
<i>Omphaloscelis lunosa</i>	Lunar Underwing	insect - moth	31/12/1997	31/12/2012	20
<i>Orthosia cerasi</i>	Common Quaker	insect - moth	31/12/1997	31/12/2012	20
<i>Orthosia cruda</i>	Small Quaker	insect - moth	31/12/1997	31/12/2012	18
<i>Orthosia gothica</i>	Hebrew Character	insect - moth	31/12/1997	31/12/2012	18
<i>Orthosia gracilis</i>	Powdered Quaker	insect - moth	31/12/1997	31/12/2012	10
<i>Orthosia incerta</i>	Clouded Drab	insect - moth	31/12/1997	31/12/2012	16
<i>Orthosia miniosa</i>	Blossom Underwing	insect - moth	31/12/2003	31/12/2007	3
<i>Orthosia munda</i>	Twin-spotted Quaker	insect - moth	31/12/1998	31/12/2012	11
<i>Orthosia populeti</i>	Lead-coloured Drab	insect - moth	31/12/1998	-	1
<i>Panolis flammea</i>	Pine Beauty	insect - moth	31/12/1997	31/12/2009	9
<i>Paradrina clavipalpis</i>	Pale Mottled Willow	insect - moth	31/12/1997	31/12/2012	18
<i>Parastichtis ypsilon</i>	Dingy Shears	insect - moth	31/12/1999	31/12/2009	11
<i>Peridroma saucia</i>	Pearly Underwing	insect - moth	31/12/1997	31/12/2011	12
<i>Phlogophora meticulosa</i>	Angle Shades	insect - moth	31/12/1997	31/12/2012	22
<i>Photodes minima</i>	Small Dotted Buff	insect - moth	31/12/1997	31/12/2010	4
<i>Plusia festucae</i>	Gold Spot	insect - moth	31/12/1999	31/12/2012	10
<i>Polia nebulosa</i>	Grey Arches	insect - moth	31/12/2006	-	1
<i>Polychrysis moneta</i>	Golden Plusia	insect - moth	31/12/1998	31/12/2001	4
<i>Polymixis flavicincta</i>	Large Ranunculus	insect - moth	31/12/1997	31/12/2011	10
<i>Polymixis lichenea</i>	Feathered Ranunculus	insect - moth	31/12/2003	31/12/2012	9
<i>Polymixis lichenea subsp. lichenea</i>	Feathered Ranunculus	insect - moth	31/12/1997	31/12/2002	6
<i>Rhizedra lutosa</i>	Large Wainscot	insect - moth	31/12/1997	31/12/2011	11
<i>Rusina ferruginea</i>	Brown Rustic	insect - moth	31/12/2006	-	1
<i>Shargacucullia lychnitis</i>	Striped Lychnis	insect - moth	31/12/2000	31/12/2008	3
<i>Shargacucullia verbasci</i>	Mullein	insect - moth	31/12/1997	31/12/2012	11
<i>Sideridis albicolon</i>	White Colon	insect - moth	31/12/1999	31/12/2000	2
<i>Spaelotis ravidia</i>	Stout Dart	insect - moth	14/08/1997	-	1
<i>Spodoptera exigua</i>	Small Mottled Willow	insect - moth	31/12/2001	31/12/2010	31
<i>Thalpophila matura</i>	Straw Underwing	insect - moth	31/12/2000	31/12/2008	5
<i>Tholera decimalis</i>	Feathered Gothic	insect - moth	31/12/2003	31/12/2007	4
<i>Xanthia aurago</i>	Barred Sallow	insect - moth	31/12/2002	31/12/2010	7
<i>Xanthia gilvago</i>	Dusky-lemon Sallow	insect - moth	31/12/2002	31/12/2003	2
<i>Xanthia icteritia</i>	Sallow	insect - moth	31/12/1997	31/12/2010	10
<i>Xanthia togata</i>	Pink-barred Sallow	insect - moth	31/12/1997	31/12/2011	10
<i>Xestia c-nigrum</i>	Setaceous Hebrew Character	insect - moth	31/12/1997	31/12/2012	23
<i>Xestia ditrapezium</i>	Triple-spotted Clay	insect - moth	31/12/2006	31/12/2009	2
<i>Xestia sexstrigata</i>	Six-striped Rustic	insect - moth	31/12/2003	31/12/2007	4
<i>Xestia triangulum</i>	Double-square Spot	insect - moth	31/12/1997	31/12/2012	12
<i>Xestia xanthographa</i>	Square-spot Rustic	insect - moth	31/12/1997	31/12/2012	23
<i>Xylocampa areola</i>	Early Grey	insect - moth	31/12/1997	31/12/2012	18
<i>Bena bicolorana</i>	Scarce Silver-lines	insect - moth	31/12/2003	31/12/2009	2
<i>Earias clorana</i>	Cream-bordered Green Pea	insect - moth	31/12/2006	31/12/2010	4

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<i>Meganola albula</i>	Kent Black Arches	insect - moth	31/12/2000	31/12/2010	5
<i>Nola confusalis</i>	Least Black Arches	insect - moth	31/12/2000	31/12/2010	5
<i>Nola cucullatella</i>	Short-cloaked Moth	insect - moth	31/12/1999	31/12/2012	9
<i>Pseudoips prasinana</i>	Green Silver-lines	insect - moth	31/12/1997	31/12/2006	3
<i>Pseudoips prasinana subsp. britannica</i>	Green Silver-lines	insect - moth	31/12/2001	31/12/2011	3
<i>Cerura vinula</i>	Puss Moth	insect - moth	31/12/1997	31/12/2010	9
<i>Clostera curtula</i>	Chocolate-tip	insect - moth	31/12/1997	31/12/2012	12
<i>Drymonia dodonaea</i>	Marbled Brown	insect - moth	31/12/2003	31/12/2009	4
<i>Drymonia ruficornis</i>	Lunar Marbled Brown	insect - moth	31/12/2000	31/12/2009	6
<i>Furcula bifida</i>	Poplar Kitten	insect - moth	31/12/2003	31/12/2011	3
<i>Furcula furcula</i>	Sallow Kitten	insect - moth	31/12/1998	31/12/2012	11
<i>Notodonta dromedarius</i>	Iron Prominent	insect - moth	31/12/1997	31/12/2012	18
<i>Notodonta ziczac</i>	Pebble Prominent	insect - moth	31/12/1997	31/12/2012	15
<i>Phalera bucephala</i>	Buff-tip	insect - moth	31/12/1997	31/12/2012	17
<i>Pheosia gnoma</i>	Lesser Swallow Prominent	insect - moth	31/12/1997	31/12/2012	16
<i>Pheosia tremula</i>	Swallow Prominent	insect - moth	31/12/1997	31/12/2012	16
<i>Pterostoma palpina</i>	Pale Prominent	insect - moth	31/12/1997	31/12/2012	18
<i>Ptilodon capucina</i>	Coxcomb Prominent	insect - moth	31/12/2001	31/12/2012	6
<i>Ptilodon cucullina</i>	Maple Prominent	insect - moth	31/12/1999	31/12/2010	11
<i>Stauropus fagi</i>	Loabster Moth	insect - moth	31/12/1999	28/06/2006	5
<i>Aglais urticae</i>	Small Tortoiseshell	insect - butterfly	31/12/1995	04/08/2008	35
<i>Apatura iris</i>	Purple Emperor	insect - butterfly	16/07/2010	-	1
<i>Aphantopus hyperantus</i>	Ringlet	insect - butterfly	20/06/2007	-	1
<i>Argynnis paphia</i>	Silver-washed Fritillary	insect - butterfly	05/09/2004	05/07/2008	5
<i>Coenonympha pamphilus</i>	Small Heath	insect - butterfly	30/07/2008	28/07/2010	2
<i>Inachis io</i>	Peacock	insect - butterfly	31/12/1995	06/04/2012	56
<i>Issoria lathonia</i>	Queen of Spain Fritillary	insect - butterfly	14/07/2009	15/10/2009	17
<i>Limenitis camilla</i>	White Admiral	insect - butterfly	13/07/2003	05/07/2008	10
<i>Maniola jurtina</i>	Meadow Brown	insect - butterfly	31/12/1995	24/07/2010	43
<i>Maniola jurtina subsp. insularis</i>	Meadow Brown	insect - butterfly	31/12/2007	-	1
<i>Melanargia galathea</i>	Marbled White	insect - butterfly	31/12/1999	24/06/2008	2
<i>Pararge aegeria</i>	Speckled Wood	insect - butterfly	31/12/1995	26/07/2011	39
<i>Pararge aegeria subsp. tircis</i>	Speckled Wood	insect - butterfly	31/12/2007	-	1
<i>Polygonia c-album</i>	Comma	insect - butterfly	10/08/1996	06/04/2012	37
<i>Pyronia tithonus</i>	Hedge Brown	insect - butterfly	31/12/1995	26/07/2011	34
<i>Pyronia tithonus subsp. britanniae</i>	Hedge Brown	insect - butterfly	19/07/1996	31/12/2007	6
<i>Vanessa atalanta</i>	Red Admiral	insect - butterfly	07/08/1996	26/07/2011	66
<i>Vanessa cardui</i>	Painted Lady	insect - butterfly	05/06/1996	18/10/2009	35
<i>Carcina quercana</i>	Long-horned Flat-body	insect - moth	04/11/2002	30/10/2012	7
<i>Anthocharis cardamines</i>	Orange-tip	insect - butterfly	05/06/1996	12/04/2012	25
<i>Anthocharis cardamines subsp. britannica</i>	Orange-tip	insect - butterfly	31/12/2007	-	1
<i>Colias croceus</i>	Clouded Yellow	insect - butterfly	05/06/1996	18/10/2009	15
<i>Gonepteryx rhamni</i>	Brimstone	insect - butterfly	31/12/1995	22/03/2012	26
<i>Gonepteryx rhamni subsp. rhamni</i>	Brimstone	insect - butterfly	31/12/2007	-	1



Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Pieris brassicae</i>	Large White	insect - butterfly	18/09/1997	28/07/2010	60
<i>Pieris napi</i>	Green-veined White	insect - butterfly	05/06/1996	26/07/2011	34
<i>Pieris napi subsp. sabellicae</i>	Green-veined White	insect - butterfly	31/12/2007	-	1
<i>Pieris rapae</i>	Small White	insect - butterfly	31/12/1995	15/03/2012	75
<i>Luffia ferchaultella</i>	Virgin Smoke	insect - moth	28/11/2001	-	1
<i>Psyche casta</i>	Common Sweep	insect - moth	10/09/2011	-	1
<i>Emmelina monodactyla</i>	Common Plume	insect - moth	31/12/2003	-	1
<i>Pterophorus pentadactyla</i>	White Plume Moth	insect - moth	31/12/2003	-	1
<i>Aphomia sociella</i>	Bee Moth	insect - moth	31/12/2003	06/08/2004	2
<i>Apomyelois bistriatella subsp. subcognata</i>		insect - moth	02/08/2003	-	2
<i>Endotricha flammealis</i>	Rosy Tabby	insect - moth	31/12/2003	06/08/2004	3
<i>Euzophera pinguis</i>	Ash-bark Knot-horn	insect - moth	31/12/2003	06/08/2004	2
<i>Hypsopygia costalis</i>	Gold Triangle	insect - moth	31/12/2003	23/09/2006	3
<i>Sesia bembeciformis</i>	Lunar Hornet Moth	insect - moth	25/02/1993	31/12/2002	2
<i>Synanthedon myopaeformis</i>	Red-belted Clearwing	insect - moth	04/07/2006	-	1
<i>Synanthedon tipuliformis</i>	Currant Clearwing	insect - moth	31/12/2009	31/12/2010	2
<i>Agrius convolvuli</i>	Convolvulus Hawk-moth	insect - moth	31/12/2002	31/12/2006	9
<i>Deilephila elpenor</i>	Elephant Hawk-moth	insect - moth	31/12/1997	31/12/2012	20
<i>Deilephila porcellus</i>	Small Elephant Hawk-moth	insect - moth	31/12/1999	31/12/2010	7
<i>Hyles gallii</i>	Bedstraw Hawk-moth	insect - moth	31/12/2002	-	1
<i>Hyles livornica</i>	Striped Hawk-moth	insect - moth	31/12/2002	31/12/2006	8
<i>Hyloicus pinastri</i>	Pine Hawk-moth	insect - moth	31/12/1999	31/12/2011	15
<i>Laothoe populi</i>	Poplar Hawk-moth	insect - moth	31/12/1997	31/12/2012	17
<i>Macroglossum stellatarum</i>	Humming-bird Hawk-moth	insect - moth	31/12/1997	06/10/2010	33
<i>Mimas tiliae</i>	Lime Hawk-moth	insect - moth	31/12/1997	31/12/2010	13
<i>Smerinthus ocellata</i>	Eyed Hawk-moth	insect - moth	31/12/1997	31/12/2012	15
<i>Sphinx ligustri</i>	Privet Hawk-moth	insect - moth	31/12/1997	31/12/2012	16
<i>Emmetia marginata</i>	Bordered Carl	insect - moth	28/11/2001	10/09/2011	4
<i>Tischeria ekebladella</i>	Oak Carl	insect - moth	26/11/2001	10/09/2011	4
<i>Acleris emargana</i>	Notch-wing Button	insect - moth	31/12/2003	05/09/2004	2
<i>Acleris ferrugana</i>	Rusty Oak Button	insect - moth	04/11/2002	-	1
<i>Acleris forsskaeleana</i>	Maple Button	insect - moth	31/12/2003	13/06/2004	2
<i>Acleris literana</i>	Lichen Button	insect - moth	31/12/2003	24/07/2004	2
<i>Acleris variegana</i>	Garden Rose Tortrix	insect - moth	31/12/2003	09/08/2006	2
<i>Agapeta hamana</i>	Common Yellow Conch	insect - moth	31/12/2003	24/07/2004	3
<i>Agapeta zoegana</i>	Knapweed Conch	insect - moth	31/12/2003	28/06/2006	2
<i>Aleimma loeflingiana</i>	Yellow Oak Button	insect - moth	31/12/2003	28/06/2006	3
<i>Apotomis betulatana</i>	Birch Marble	insect - moth	31/12/2003	28/06/2006	2
<i>Archips podana</i>	Large Fruit-tree Tortrix	insect - moth	31/12/2003	28/06/2006	2
<i>Archips xylosteana</i>	Variiegated Golden Tortrix	insect - moth	31/12/2003	28/06/2006	2
<i>Cacoecimorpha pronubana</i>	Carnation Tortrix	insect - moth	31/12/2003	09/08/2006	2
<i>Cnephasia stephensiana</i>	Grey Tortrix	insect - moth	31/12/2003	28/06/2006	2
<i>Cydia pomonella</i>	Codling Moth	insect - moth	31/12/2003	09/08/2006	5
<i>Epiblema uddmanniana</i>	Bramble Shoot Moth	insect - moth	31/12/2003	28/06/2006	4

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Epiphyas postvittana</i>	Light Brown Apple Moth	insect - moth	31/12/2003	29/04/2007	4
<i>Eulia ministrana</i>	Brassy Twist	insect - moth	31/12/2003	29/04/2007	3
<i>Gypsonoma dealbana</i>	Common Cloaked Shoot	insect - moth	31/12/1997	04/11/2002	2
<i>Pandemis heparana</i>	Dark Fruit-tree Tortrix	insect - moth	31/12/2003	09/08/2006	3
<i>Syndemis musculana</i>	Dark-barred Twist	insect - moth	31/12/2003	29/04/2007	3
<i>Tortrix viridana</i>	Green Oak Tortrix	insect - moth	31/12/2003	31/12/2006	4
<i>Ypsolopha dentella</i>	Honeysuckle Moth	insect - moth	31/12/2003	09/08/2006	2
<i>Panorpa</i>		insect - scorpion fly (Mecoptera)	31/12/2005	-	1
<i>Sialis lutaria</i>	Alder Fly	insect - alderfly (Megaloptera)	23/08/2002	10/09/2002	2
<i>Aeshna cyanea</i>	Southern Hawker	insect - dragonfly (Odonata)	22/09/1985	29/02/2000	2
<i>Aeshna mixta</i>	Migrant Hawker	insect - dragonfly (Odonata)	31/10/1972	29/02/2000	8
<i>Anax imperator</i>	Emperor Dragonfly	insect - dragonfly (Odonata)	26/08/1996	19/07/2003	6
<i>Brachytron pratense</i>	Hairy Dragonfly	insect - dragonfly (Odonata)	29/02/2000	-	1
<i>Coenagrion puella</i>	Azure Damselfly	insect - dragonfly (Odonata)	13/07/1989	08/06/2005	4
<i>Enallagma cyathigerum</i>	Common Blue Damselfly	insect - dragonfly (Odonata)	25/07/1995	19/07/2003	9
<i>Ischnura elegans</i>	Blue-tailed Damselfly	insect - dragonfly (Odonata)	26/08/1996	19/07/2003	5
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	insect - dragonfly (Odonata)	17/05/1990	19/07/2003	6
<i>Libellula depressa</i>	Broad-bodied Chaser	insect - dragonfly (Odonata)	17/05/1990	29/02/2000	2
<i>Orthetrum cancellatum</i>	Black-tailed Skimmer	insect - dragonfly (Odonata)	17/05/2008	-	1
<i>Sympetrum sanguineum</i>	Ruddy Darter	insect - dragonfly (Odonata)	29/02/2000	23/08/2002	2
<i>Sympetrum striolatum</i>	Common Darter	insect - dragonfly (Odonata)	31/10/1972	04/10/2008	14
<i>Conocephalus fuscus</i>	Long-winged Cone-head	insect - orthopteran	31/12/2005	-	1
<i>Meconema thalassinum</i>	Oak Bush-cricket	insect - orthopteran	31/12/2005	-	1
<i>Nemoura cinerea</i>		insect - stonefly (Plecoptera)	23/05/2001	-	1
<i>Isoperla grammatica</i>		insect - stonefly (Plecoptera)	23/05/2001	-	2
<i>Agapetus fuscipes</i>		insect - caddis fly (Trichoptera)	23/05/2001	10/09/2002	5
<i>Hydroptila tineoides</i>		insect - caddis fly (Trichoptera)	23/08/2002	10/09/2002	2
<i>Chaetopteryx villosa</i>		insect - caddis fly (Trichoptera)	23/08/2002	10/09/2002	4
<i>Drusus annulatus</i>		insect - caddis fly (Trichoptera)	23/08/2002	10/09/2002	7
<i>Limnephilus extricatus</i>		insect - caddis fly (Trichoptera)	23/08/2002	-	1
<i>Limnephilus lunatus</i>		insect - caddis fly (Trichoptera)	23/05/2001	10/09/2002	5
<i>Plectrocnemia conspersa</i>		insect - caddis fly (Trichoptera)	23/08/2002	-	1
<i>Psychomyiidae</i>		insect - caddis fly (Trichoptera)	10/09/2002	-	1
<i>Collembola</i>	Springtail	springtail (Collembola)	03/09/2002	-	1
<i>Anguilla anguilla</i>	European Eel	bony fish (Actinopterygii)	31/07/1997	23/08/2002	2
<i>Phoxinus phoxinus</i>	Minnnow	bony fish (Actinopterygii)	31/07/1997	-	1
<i>Gasterosteus aculeatus</i>	Three-spined Stickleback	bony fish (Actinopterygii)	31/07/1997	10/09/2002	5
<i>Pungitius pungitius</i>	Nine-spined Stickleback	bony fish (Actinopterygii)	23/08/2002	10/09/2002	3
<i>Platichthys flesus</i>	Flounder	bony fish (Actinopterygii)	31/07/1997	10/09/2002	7
<i>Bufo bufo</i>	Common Toad	amphibian	01/01/1992	20/09/2010	11
<i>Rana temporaria</i>	Common Frog	amphibian	01/01/1987	22/01/2007	35
<i>Lissotriton helveticus</i>	Palmate Newt	amphibian	14/02/2000	31/12/2006	7
<i>Lissotriton vulgaris</i>	Smooth Newt	amphibian	01/01/1987	30/11/2012	20
<i>Triturus cristatus</i>	Great Crested Newt	amphibian	31/03/2002	-	2

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Capreolus capreolus</i>	Roe Deer	terrestrial mammal	28/11/2001	31/12/2006	2
<i>Vulpes vulpes</i>	Red Fox	terrestrial mammal	13/01/1998	30/11/2012	10
<i>Meles meles</i>	Badger	terrestrial mammal	28/11/2001	31/08/2012	6
<i>Mustela erminea</i>	Stoat	terrestrial mammal	31/12/2006	-	1
<i>Mustela furo x putorius</i>	Polecat-Ferret	terrestrial mammal	25/01/2000	-	1
<i>Mustela nivalis</i>	Weasel	terrestrial mammal	23/10/2002	-	1
<i>Neovison vison</i>	American Mink	terrestrial mammal	09/09/2001	31/12/2001	2
<i>Phoca vitulina</i>	Common Seal	marine mammal	30/09/2005	-	1
<i>Chiroptera</i>	Bat sp.	terrestrial mammal	31/12/1983	04/05/2013	42
<i>Eptesicus serotinus</i>	Serotine	terrestrial mammal	07/07/1999	12/09/2012	19
<i>Myotis</i>	Unidentified Bat	terrestrial mammal	26/07/2007	16/08/2012	6
<i>Myotis mystacinus/brandtii</i>	Whiskered/Brandt's	terrestrial mammal	06/07/2002	-	2
<i>Myotis bechsteinii</i>	Bechstein's Bat	terrestrial mammal	17/07/2006	-	1
<i>Myotis daubentonii</i>	Daubenton's Bat	terrestrial mammal	31/12/1999	09/07/2011	7
<i>Myotis mystacinus</i>	Whiskered Bat	terrestrial mammal	31/12/1999	17/07/2006	2
<i>Myotis nattereri</i>	Natterer's Bat	terrestrial mammal	31/12/1999	08/07/2003	3
<i>Nyctalus leisleri</i>	Lesser Noctule	terrestrial mammal	25/07/2007	11/06/2010	3
<i>Nyctalus noctula</i>	Noctule Bat	terrestrial mammal	31/12/1999	12/09/2012	22
<i>Pipistrellus</i>	Pipistrelle sp.	terrestrial mammal	31/12/1954	06/05/2013	78
<i>Pipistrellus nathusii</i>	Nathusius's Pipistrelle	terrestrial mammal	10/08/2012	22/08/2012	4
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle (45 kHz)	terrestrial mammal	07/07/1999	12/09/2012	56
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle (55 kHz)	terrestrial mammal	15/06/1992	12/09/2012	147
<i>Long-eared sp.</i>		terrestrial mammal	15/01/2011	-	2
<i>Plecotus auritus</i>	Brown Long-eared Bat	terrestrial mammal	12/03/1993	19/11/2011	12
<i>Plecotus austriacus</i>	Grey Long-eared Bat	terrestrial mammal	30/01/1996	-	1
<i>Erinaceus europaeus</i>	West European Hedgehog	terrestrial mammal	17/06/1968	21/06/2013	7
<i>Neomys fodiens</i>	Eurasian Water Shrew	terrestrial mammal	31/10/1999	24/07/2006	2
<i>Sorex araneus</i>	Eurasian Common Shrew	terrestrial mammal	31/12/2006	14/09/2010	3
<i>Sorex minutus</i>	Eurasian Pygmy Shrew	terrestrial mammal	31/12/2006	-	1
<i>Talpa europaea</i>	European Mole	terrestrial mammal	31/01/1966	18/02/2006	5
<i>Oryctolagus cuniculus</i>	European Rabbit	terrestrial mammal	31/07/1997	30/09/2010	12
<i>Apodemus sylvaticus</i>	Wood Mouse	terrestrial mammal	31/12/2006	-	1
<i>Arvicola amphibius</i>	European Water Vole	terrestrial mammal	31/12/1971	06/08/2013	21
<i>Microtus agrestis</i>	Field Vole	terrestrial mammal	30/01/1966	31/12/1972	2
<i>Mus musculus</i>	House Mouse	terrestrial mammal	30/06/2002	-	1
<i>Myodes glareolus</i>	Bank Vole	terrestrial mammal	17/04/1999	16/09/2010	3
<i>Rattus norvegicus</i>	Brown Rat	terrestrial mammal	31/12/1972	12/04/2012	4
<i>Muscardinus avellanarius</i>	Hazel Dormouse	terrestrial mammal	07/08/2010	-	1
<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	terrestrial mammal	31/12/1971	31/12/2006	22
<i>Anguis fragilis</i>	Slow-worm	reptile	01/01/1991	30/11/2012	38
<i>Natrix natrix</i>	Grass Snake	reptile	01/08/1997	30/11/2012	4
<i>Zootoca vivipara</i>	Common Lizard	reptile	12/04/1995	15/09/2010	5
<i>Pisces</i>	Fish	unassigned	04/07/2011	-	1
<i>Pisidium</i>	Indet. Pea Mussel	mollusc	23/08/2002	31/12/2006	5

Latin Name	Common Name	Taxon Group	First Date	Last Date	No. of Rec's
<i>Sphaerium</i>		mollusc	31/12/2006	-	1
<i>Physa fontinalis</i>	Bladder snails	mollusc	23/08/2002	10/09/2002	2
<i>Valvata (Cincinna) piscinalis</i>	Valve Snail	mollusc	23/08/2002	10/09/2002	2
<i>Valvata (Valvata) cristata</i>	Flat Valve Snail	mollusc	10/09/2002	-	1
<i>Hydrobia ulvae</i>	Laver Spire Shell	mollusc	23/08/2002	31/08/2006	4
<i>Potamopyrgus antipodarum</i>	Jenkins' Spire Snail	mollusc	23/05/2001	10/09/2002	7
<i>Acroloxus lacustris</i>	Lake limpets	mollusc	10/09/2002	-	1
<i>Carychium minimum</i>		mollusc	31/08/2002	-	2
<i>Carychium tridentatum</i>		mollusc	31/08/2002	-	2
<i>Zonitoides (Zonitoides) nitidus</i>	Shiny Glass Snail	mollusc	23/08/2002	-	1
<i>Ashfordia</i>		mollusc	31/08/2002	-	8
<i>Galba (Galba) truncatula</i>	Dwarf Pond Snail	mollusc	23/08/2002	10/09/2002	3
<i>Lymnaea (Lymnaea) stagnalis</i>	Great Pond Snail	mollusc	31/12/2006	-	1
<i>Lymnaea (Stagnicola) palustris</i>	Marsh Pond Snail	mollusc	23/08/2002	-	1
<i>Radix auricularia</i>	Ear Pond Snail	mollusc	31/12/2006	-	1
<i>Radix balthica</i>	Wandering Snail	mollusc	23/08/2002	31/12/2006	3
<i>Discus (Gonyodiscus) rotundatus</i>	Rounded Snail	mollusc	31/12/2006	-	1
<i>Anisus (Anisus) leucostoma</i>	White-lipped Ramshorn	mollusc	31/12/2006	-	1
<i>Anisus (Disculifer) vortex</i>	Whirlpool Ramshorn	mollusc	23/08/2002	31/12/2006	3
<i>Gyraulus (Gyraulus) albus</i>	White Ramshorn	mollusc	23/05/2001	-	1
<i>Menetus (Dilatata) dilatatus</i>		mollusc	31/12/2006	-	1
<i>Planorbarius corneus</i>	Great Ramshorn Snail	mollusc	31/12/2006	-	1
<i>Planorbis carinatus</i>	Keeled Ramshorn	mollusc	23/08/2002	-	1
<i>Planorbis planorbis</i>		mollusc	23/05/2001	31/12/2006	2
<i>Succinea putris</i>		mollusc	23/08/2002	31/08/2002	10
<i>Vertigo (Vertigo) moulinsiana</i>	Desmoulin's Whorl Snail	mollusc	31/08/2002	31/12/2003	5
<i>Nematoda</i>	nematodes	roundworm (Nematoda)	03/09/2002	-	1
<i>Dendrocoelum lacteum</i>	flatworms	flatworm (Turbellaria)	29/02/2000	10/09/2002	2
<i>Dugesia lugubris</i>		flatworm (Turbellaria)	29/02/2000	-	1
<i>Polycelis</i>		flatworm (Turbellaria)	23/08/2002	10/09/2002	2
<i>Polycelis felina</i>		flatworm (Turbellaria)	23/05/2001	-	1
<i>Polycelis tenuis</i>		flatworm (Turbellaria)	23/05/2001	-	1

# **MAP CITATION SHEETS**

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

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

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

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

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

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

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

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

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

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

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

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

### West Sussex

<b>Site Name:</b>	<b>Fishbourne Meadows</b>	<b>Owner:</b>	West Sussex County Council
<b>Site Ref:</b>	C32	<b>Size (ha):</b>	8.4
<b>District:</b>	Chichester	<b>Date:</b>	Identified May 1992
<b>Parish:</b>	Fishbourne	<b>Author:</b>	Graham Roberts
<b>National Grid Ref:</b>	SU840045		
<b>Habitat:</b>	Neutral grassland, scrub and stream		

#### Summary

This site consists of several meadows lying adjacent to Chichester Harbour Site of Special Scientific Interest. Although this permanent pasture appears to have been semi-improved with fertilisers there are some botanically interesting areas with it. Several locally uncommon plants are found. The site includes a chalk spring and derelict watercress beds.

#### Site description

Botanically, the most interesting area is the western end. Here the vegetation consists of tall herbs and rank grasses with invading scrub. The grasses include Crested Dog's-tail (*Cynosurus cristatus*), Creeping Bent (*Agrostis stolonifera*), Red Fescue (*Festuca rubra*) and Yorkshire Fog (*Holcus lanatus*). Marsh Arrowgrass (*Triglochin palustris*), a rare plant in the County, grows in some abundance. This species is often associated with unimproved grassland. Another interesting species that occurs here is Divided Sedge (*Carex divisa*), a plant with a localised distribution. Southern Marsh Orchids (*Dactylorhiza praetermissa*) have been recorded.

The abandoned watercress beds are surrounded by rush-dominated pasture with some 'wet meadow' species. These include Hard Rush (*Juncus inflexus*), Soft Rush (*J. effusus*), Jointed Rush (*J. articulatus*), Hairy Sedge (*Carex hirta*), Cuckooflower (*Cardamine pratensis*) and Lesser Spearwort (*Ranunculus flammula*). Pepper Saxifrage (*Silaum silaus*) and Common Bird's-foot-trefoil (*Lotus corniculatus*) are found in the drier grassland.

Brooklime (*Veronica beccabunga*) and Fool's Water-cress (*Apium nodiflorum*) grow amongst the marginal vegetation of the stream and ditch. Wild Celery (*Apium graveolens*), a localised species in West Sussex, also occurs here. The clear running water appears to be in good condition and supports Three-spined Stickleback.

The meadows, hedgerows and scrub provide varied habitat for a diversity of breeding birds. At least 5 species of warbler breed, including Sedge Warbler and Whitethroat. Linnet and Reed Bunting also breed. Resident species which frequent the site but breed nearby include Yellowhammer, Green Woodpecker, Kestrel and Water Rail.

#### Management recommendations

Much of the interest of this small site results from the high wildlife value of the adjacent land. It is thus the management of the whole complex which is important. Fishbourne meadows should continue to be managed as a mosaic of open grassland, hedges, scrub, stream and ditch.

## SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

### West Sussex

<b>Site Name:</b>	<b>River Lavant Marsh</b>		
<b>Site Ref:</b>	C103	<b>Owner:</b>	Private
<b>District:</b>	Chichester	<b>Size (ha):</b>	6.6
<b>Parish:</b>	Appledram	<b>Date:</b>	Identified May 1997
<b>National Grid Ref:</b>	SU841037	<b>Author:</b>	Graham Roberts
<b>Habitat:</b>	Marsh and reedbed		

#### Summary

River Lavant Marsh consists of an embanked grazing marsh in the former estuary of the River Lavant. Across the embankment lies Fishbourne Channel, part of Chichester Harbour Site of Special Scientific Interest (SSSI). The marsh which includes a small reedbed and grazed marshy grassland is of great botanical and ornithological importance.

#### Site description

Bordering the River Lavant along the northern side of the site is an area of low lying grazing marsh of exceptional botanical interest. This area contains an abundance of the declining nationally scarce grass, Bulbous Foxtail (*Alopecurus bulbosus*). Two other nationally scarce grasses, Sea Barley (*Hordeum marinum*) and the Saltmarsh Grass (*Puccinellia rupestris*), both of which are very rare in Sussex, also occur. Other local plants include Divided Sedge (*Carex divisa*) and Grey Club-rush (*Schoenoplectus tabernaemontani*).

The drier grasslands which occupy much of the remainder of the site are generally of less botanical interest. However, another nationally scarce plant, Dittander (*Lepidium latifolium*), occurs on the bank of the River Lavant.

An ungrazed part of the marsh in the north-west corner of the site has developed into a reedbed. The reedbed is of ornithological interest, supporting breeding Reed and Sedge Warblers, and Water Rail in winter.

In winter, the wet grassland is an important feeding and roosting site for waders and wildfowl, particularly when flooded. It attracts large numbers of Black-tailed Godwit, Brent Geese and Redshank. During March 1995 an incredible flock of 2000 Black-tailed Godwit fed on this flooded marsh. Other species such as Curlew, Oystercatcher, Snipe, Jack Snipe and Shelduck occur regularly in winter.

#### Management recommendations

The grassland is well managed by cattle grazing. The reedbed may benefit from management in the future.



## SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

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

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

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

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

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

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

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

## SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

<b>Site Name:</b>	<b>Chichester Harbour</b>		
<b>County:</b>	West Sussex, Hampshire		
<b>District:</b>	Chichester, Havant		
<b>Local Planning Authority:</b>	Chichester District Council, Havant Borough Council		
<b>Size:</b>	3695 hectares (9130.3 acres) in total 2657 hectares (6566.7 acres) in West Sussex		
<b>National Grid Ref:</b>	SU760000		
<b>Date Notified (Under 1949 Act):</b>	1970	<b>Date of last revision:</b>	1980
<b>Date Notified (Under 1981 Act):</b>	1985 (1984 Hants)	<b>Date of last revision:</b>	-
<b>Other Information:</b>	This site lies within the South Coast Plain. It includes Nutbourne Marshes Local Nature Reserve. The site is listed in 'A Nature Conservation Review' and is a Geological Conservation Review site.		

### Reason for Notification

Chichester Harbour is a large estuarine basin in which at low water extensive mud and sandflats are exposed, drained by channels which unite to make a common exit to the sea. The site is of particular significance for wintering wildfowl and waders and also breeding birds both within the Harbour and in the surrounding permanent pasture fields and woodlands. There is a wide range of habitats which have important plant communities.

The intertidal area is fragmented in the upper reaches of the harbour by intruding tongues of land giving a very long and varied coastline. The harbour exhibits a wide range of intertidal and associated terrestrial habitats and with the neighbouring Langstone and Portsmouth Harbours is unusual in providing a large volume of sheltered saline water fed by a few streams of only low volume. The extensive intertidal mudflats are the feeding grounds, at the relevant times of year for internationally important numbers of ringed plover, grey plover, redshank, black-tailed godwit, dunlin, sanderling, curlew and greenshank (the latter two in autumn particularly). Bar-tailed godwit numbers are of European importance. Amongst the wildfowl, shelduck, teal and dark-bellied brent goose numbers are of international importance with 5% of the world population of the latter. The unimproved permanent pasture behind the sea wall provides alternative feeding sites for the geese and major high tide wader roosts. Some of this pasture is floristically rich being a red fescue *Festuca rubra* sward with scarce species such as green-winged orchid *Orchis morio* and adder's tongue fern *Ophioglossum vulgatum*.

The lower saltmarsh habitat fringing the mud flats is dominated by cord grass *Spartina anglica* and in most places the upper saltmarsh is rather restricted by the sea wall but there are some pure stands of sea purslane *Halimione portulacoides* while in some areas there is also sea lavender *Limonium vulgare*, sea aster *Aster tripolium* and other saltmarsh species.

Shingle occurs as spits and islands and most are rather unstable permitting little vegetation to become established. This habitat forms the main breeding grounds in the harbour for ringed plover, blackheaded gull and three species of terns. The extensive sand dunes at East Head are dominated by marram grass *Ammophila arenaria* although the degree of ground cover varies from 90% to 10% on the more recently established dunes.

At the head of Fishbourne Channel saltmarsh grades through a reed *Phragmites australis* bed into fresh marsh influenced by a chalk spring. Most of the other fresh marshes behind the sea wall are small but at Thorney Deep's reclaimed saltmarsh has given way to extensive fresh water marsh vegetation influenced by salt water intrusion; here the reed is fringed by extensive areas of rushes *Juncus* species and invasive willow *Salix* scrub. A number of small ponds occur one of which contains the rare annual beard grass *Polypogon monspeliensis*. Significant blocks of scrub, mainly hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa* occur which are important for breeding and roosting birds. Hedgerows of oak *Quercus robur* are common and in some places the oak roots are strongly influenced by salt water. Semi-natural broadleaved woodland associated with the Harbour is important for breeding birds and supports

two heronries. Oak is the major tree species usually with hazel *Corylus avellana* coppice, as at Old Park Wood, although Tournerbury Wood has well spaced oaks with the occasional beech *Fagus sylvatica*, holly *Ilex aquifolium* and yew *Taxus baccata* with a fairly dense ground flora of bramble *Rubus fruticosus* and bracken *Pteridium aquilinum*.

Notable invertebrates include the long-winged conehead *Conocephalus discolor* and the moths, starwort shark *Cucullia asteris*, the sand dart *Agrotis ripae*, shore wainscot *Mythimna litoralis* and lunar hornet *Sphecia bemeciformis*.

### **Geology and Physiography**

East of Langstone, at SU725053, a low cliff line at high water mark exhibits a complex of Brickearth and Coombe Rock deposits and at East Head, SZ769991 there is a sizeable sand dune and shingle system both of which are of geomorphological importance.

## SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

### Operations likely to damage the special interest

**Site name: Chichester Harbour (OLD1003245)**

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

1. Cultivation, including ploughing, rotovating, harrowing, and re-seeding.
2. Grazing and changes in the grazing regime (including type of stock or intensity or seasonal pattern of grazing and cessation of grazing).
3. Stock feeding and changes in stock feeding practice.
4. Mowing or other methods of cutting vegetation and changes in the mowing or cutting regime (including hay making to silage and cessation).
5. Application of manure, fertilisers and lime.
6. Application of pesticides, including herbicides (weedkillers).
7. Dumping, spreading or discharge of any materials.
8. Burning.
9. The release into the site of any wild, feral or domestic animal\*, plant or seed.
10. The killing or removal of any wild animal\*, including pest control.
11. The destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf.
12. Tree and/or woodland management+ and changes in tree and/or woodland management+.
- 13a. Drainage (including the use of mole, tile, tunnel or other artificial drains).
- 13b. Modification of the structure of watercourses (eg rivers, streams, springs, ditches, dykes, drains), including their banks and beds, as by re-alignment, re-grading and dredging.
- 13c. Management of aquatic and bank vegetation for drainage purposes.
14. The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
15. Infilling of ditches, dykes, drains, ponds, pools, marshes or pits.
- 16a. Freshwater fishery production and/or management, including sporting fishing and angling.
- 16b. Coastal fishing or fisheries management and seafood or marine life collection, including the use of traps or fish cages.
17. Reclamation of land from sea, estuary or marsh.
18. Bait digging in intertidal areas.
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.
22. Storage of materials.
23. Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
24. Modification of natural or man-made features, clearance of loose rock, scree or spoil and battering, buttressing, grading or seeding rock-faces, outcrops or cuttings, infilling of pits and quarries.
26. Use of vehicles or craft likely to damage or disturb features of interest.
27. Recreational or other activities likely to damage or disturb features of interest.
28. Game and waterfowl management and hunting practice.

- \* 'Animal' includes any mammal, reptile, amphibian, bird, fish or invertebrate.
- + Including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management.

# KEY NATIONAL AND INTERNATIONAL SITE DESIGNATIONS

## National Nature Reserve (NNR)

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

## Special Area of Conservation (SAC)

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

## Special Protection Area (SPA)

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

## Ramsar

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

## National Park

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

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

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

## Area of Outstanding Natural Beauty (AONB)

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

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

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

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

### **Local Nature Reserve (LNR)**

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

### **Country Park**

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

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

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

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

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

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

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Designated: 28 October 1987

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## 3. Country:

UK (England)

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## 4. Name of the Ramsar site:

Chichester and Langstone Harbours

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

### b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:



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**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

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**8. Geographical coordinates (latitude/longitude):**

50 48 23 N                      00 55 12 W

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**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Portsmouth

The site lies on the central south coast of mainland England, approximately 1 km east of Portsmouth.

**Administrative region:** Hampshire; West Sussex

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**10. Elevation (average and/or max. & min.) (metres):    11. Area (hectares): 5810.03**

Min.	-2
Max.	4
Mean	0

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**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Chichester and Langstone Harbours are large, sheltered estuarine basins comprising extensive mud and sand flats exposed at low tide. The site is of particular significance for over-wintering wildfowl and waders and also a wide range of coastal and transitional habitats supporting important plant and animal communities.

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**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**1, 5, 6**

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**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 1

Two large estuarine basins linked by the channel which divides Hayling Island from the main Hampshire coastline. The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes.

Ramsar criterion 5

**Assemblages of international importance:**

**Species with peak counts in winter:**

76480 waterfowl (5 year peak mean 1998/99-2002/2003)

**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in spring/autumn:**

Ringed plover , <i>Charadrius hiaticula</i> , Europe/Northwest Africa	853 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	906 individuals, representing an average of 2.5% of the population (5 year peak mean 1998/9-2002/3)
Common redshank , <i>Tringa totanus totanus</i> ,	2577 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)

**Species with peak counts in winter:**

Dark-bellied brent goose, <i>Branta bernicla bernicla</i> ,	12987 individuals, representing an average of 6% of the population (5 year peak mean 1998/9-2002/3)
Common shelduck , <i>Tadorna tadorna</i> , NW Europe	1468 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)
Grey plover , <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering	3043 individuals, representing an average of 1.2% of the population (5 year peak mean 1998/9-2002/3)
Dunlin , <i>Calidris alpina alpina</i> , W Siberia/W Europe	33436 individuals, representing an average of 2.5% of the population (5 year peak mean 1998/9-2002/3)

**Species/populations identified subsequent to designation for possible future consideration under criterion 6.**

**Species regularly supported during the breeding season:**

Little tern , <i>Sterna albifrons albifrons</i> , W Europe	130 apparently occupied nests, representing an average of 1.1% of the breeding population (Seabird 2000 Census)
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Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

Details of bird species occurring at levels of National importance are given in Section 22

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	neutral, shingle, sand, mud, alluvium, nutrient-rich, sedimentary, clay, gravel
Geomorphology and landscape	lowland, coastal, floodplain, shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), enclosed coast (including embayment), estuary, islands, lagoon, pools
Nutrient status	eutrophic, mesotrophic
pH	circumneutral
Salinity	brackish / mixosaline, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Bognor Regis, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/bognor_regis.html">www.metoffice.com/climate/uk/averages/19712000/sites/bognor_regis.html</a> ) Max. daily temperature: 13.7° C Min. daily temperature: 7.7° C Days of air frost: 24.0 Rainfall: 717.4 mm Hrs. of sunshine: 1902.9

**General description of the Physical Features:**

Chichester and Langstone Harbours are large, sheltered estuarine basins comprising extensive sand- and mud-flats exposed at low tide. The two harbours are joined by a stretch of water that separates Hayling Island from the mainland. Tidal channels drain the basin and penetrate far inland. The basin contains a wide range of coastal habitats.

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

Chichester and Langstone Harbours are large, sheltered estuarine basins comprising extensive sand- and mud-flats exposed at low tide. The two harbours are joined by a stretch of water that separates Hayling Island from the mainland. Tidal channels drain the basin and penetrate far inland.

**18. Hydrological values:**

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping, Maintenance of water quality (removal of nutrients)

**19. Wetland types:**

Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	46
H	Salt marshes	21.4
Other	Other	14.3
F	Estuarine waters	14.1
B	Marine beds (e.g. sea grass beds)	1.7
Ts	Freshwater marshes / pools: seasonal / intermittent	0.9
E	Sand / shingle shores (including dune systems)	0.8
Tp	Freshwater marshes / pools: permanent	0.4
Sp	Saline / brackish marshes: permanent	0.3
W	Shrub-dominated wetlands	0.07
M	Rivers / streams / creeks: permanent	0.02
J	Coastal brackish / saline lagoons	0.01

**20. General ecological features:**

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The site comprises two large, interconnected sheltered estuarine basins providing extensive intertidal mud and sand flats with eelgrass *Zostera* spp. beds, large areas of mixed saltmarsh and extensive cord-grass *Spartina* spp. swards in an advanced state of degeneration. Fringing habitats include shingle spits, saline, brackish and freshwater lagoons, coastal grazing marsh and deciduous woodland. The site supports important overwintering populations of migratory waterfowl.

Ecosystem services

**21. Noteworthy flora:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Nationally important species occurring on the site.**

Higher plants.

*Polypogon monspeliensis, Zostera angustifolia, Zostera marina, Zostera noltei*

**22. Noteworthy fauna:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Birds****Species currently occurring at levels of national importance:****Species regularly supported during the breeding season:**

Mediterranean gull , <i>Larus melanocephalus</i> , Europe	47 apparently occupied nests, representing an average of 43.5% of the GB population (Seabird 2000 Census)
Black-headed gull , <i>Larus ridibundus</i> , N & C Europe	3180 apparently occupied nests, representing an average of 2.4% of the GB population (Seabird 2000 Census)

Common tern , <i>Sterna hirundo hirundo</i> , N & E Europe	127 apparently occupied nests, representing an average of 1.2% of the GB population (Seabird 2000 Census)
<b>Species with peak counts in spring/autumn:</b>	
Little egret , <i>Egretta garzetta</i> , West Mediterranean	224 individuals, representing an average of 13.5% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian oystercatcher , <i>Haematopus ostralegus ostralegus</i> , Europe & NW Africa -wintering	3403 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Whimbrel , <i>Numenius phaeopus</i> , Europe/Western Africa	192 individuals, representing an average of 6.4% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak)
Eurasian curlew , <i>Numenius arquata arquata</i> , N. a. <i>arquata</i> Europe (breeding)	3108 individuals, representing an average of 2.1% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	6 individuals, representing an average of 4.4% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	215 individuals, representing an average of 36% of the GB population (5 year peak mean 1998/9-2002/3)
Ruddy turnstone , <i>Arenaria interpres interpres</i> , NE Canada, Greenland/W Europe & NW Africa	569 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
<b>Species with peak counts in winter:</b>	
Little grebe , <i>Tachybaptus ruficollis ruficollis</i> , Europe to E Urals, NW Africa	131 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3)
Black-necked grebe , <i>Podiceps nigricollis nigricollis</i> , Europe, N Africa	14 individuals, representing an average of 11.6% of the GB population (5 year peak mean 1998/9-2002/3)
Great bittern , <i>Botaurus stellaris stellaris</i> , W Europe, NW Africa	1 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian teal , <i>Anas crecca</i> , NW Europe	2226 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Red-breasted merganser , <i>Mergus serrator</i> , NW & C Europe	306 individuals, representing an average of 3.1% of the GB population (5 year peak mean 1998/9-2002/3)
Water rail , <i>Rallus aquaticus</i> , Europe	12 individuals, representing an average of 2.6% of the GB population (5 year peak mean 1998/9-2002/3)
Bar-tailed godwit , <i>Limosa lapponica lapponica</i> , W Palearctic	1189 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)

### Species Information

17 British Red Data Book species and 84 nationally scarce species have been recorded from Chichester and Langstone Harbours Ramsar site.

**23. Social and cultural values:**

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Aquatic vegetation (e.g. reeds, willows, seaweed)
- Archaeological/historical site
- Environmental education/ interpretation
- Fisheries production
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Subsistence fishing
- Tourism
- Traditional cultural
- Transportation/navigation

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? **No**

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

**24. Land tenure/ownership:**

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	+
Private	+	+
Public/communal	+	+

**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	

Cutting of vegetation (small-scale/subsistence)		+
Fishing: commercial	+	+
Fishing: recreational/sport	+	+
Marine/saltwater aquaculture	+	
Gathering of shellfish	+	
Bait collection	+	
Arable agriculture (unspecified)		+
Permanent arable agriculture		+
Livestock watering hole/pond	+	
Permanent pastoral agriculture	+	
Hay meadows	+	+
Hunting: recreational/sport	+	+
Industry	+	+
Sewage treatment/disposal	+	+
Harbour/port	+	+
Flood control	+	+
Irrigation (incl. agricultural water supply)		+
Mineral exploration (excl. hydrocarbons)		+
Transport route	+	+
Domestic water supply		+
Urban development		+
Non-urbanised settlements	+	+
Military activities	+	+
Horticulture (incl. market gardening)		+

**26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:**

*Explanation of reporting category:*

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2		+		+
Eutrophication	1		+		+
Pollution – domestic sewage	1			+	

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?  
Erosion - Coastal Defence Strategies, regulation of private coastal defences, shoreline management plans are in place or are being developed.

Some larger-scale saltmarsh re-creation projects, beneficial usage of maintenance dredgings and managed realignment scheme to offset losses to coastal squeeze have been proposed. CHaMPs identify potential areas suitable for managed realignment.

Is the site subject to adverse ecological change? YES

### 27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	+
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	+
Site management statement/plan implemented	+	
Area of Outstanding National Beauty (AONB)	+	+
Special Area of Conservation (SAC)	+	

#### b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

### 28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

### 29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

#### Contemporary.

##### Fauna.

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

Bird Ringing by Solent Shorebirds Study Group.

##### Environment.

Coastal Sediment (SCOPAC)

Water Quality/Eutrophication (EA/Southern Water).

Various research and educational establishments carry out ongoing research into a number of different aspects of the environment.



**Flora.**

*Spartina* survey (EN project).

**Completed.**

**Environment.**

Extensive research and survey into:

Tidal regimes.

Proposed:

Intertidal Habitat Monitoring (EN/EA project).

Sediment movement.

**Flora and Fauna.**

The distribution of all major plant and animal groups/communities.

**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Interpretation facilities and interpretative panels exist at strategic locations on the Harbour footpaths; all nature reserve areas are covered by warden and ranger services with an educational remit. An Education Officer is employed by the Chichester Harbour Conservancy to instruct both school parties and adults in the cultural and nature conservation aspects of the harbour.

**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

**Activities, Facilities provided and Seasonality.**

Walking, including dog walking: all year.

Birdwatching: all year.

Angling and bait-digging: all year.

Swimming (in restricted areas) - mostly summer.

Sailing, windsurfing, canoeing, waterskiing.

Sept-Feb wildfowling.

**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs,  
European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol,  
BS1 6EB

**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House,  
Northminster Road, Peterborough, PE1 1UA, UK

**34. Bibliographical references:**

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

**Site-relevant references**

Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP & Davidson, NC (eds.) (1998) *Coasts and seas of the United Kingdom. Region 9 Southern England: Hayling Island to Lyme Regis*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)

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- Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough
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- Chichester Harbour Conservancy [www.conservancy.co.uk](http://www.conservancy.co.uk)
- Clark, M & Gurnell, A (1987) *The Solent estuary: environmental background*. Southampton University, GeoData Unit, Southampton
- Covey, R (1998) Chapter 7. Eastern Channel (Folkestone to Durlston Head) (MNCr Sector 7). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 199-218. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCr series)
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- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
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- Musgrove, AJ, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)
- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. [www.wwt.org.uk/publications/default.asp?PubID=14](http://www.wwt.org.uk/publications/default.asp?PubID=14)
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Sneddon, P & Randall, RE (1994) *Coastal vegetated shingle structures of Great Britain: Appendix 3. Shingle sites in England*. Joint Nature Conservation Committee, Peterborough
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- Tubbs, C (1991) The Solent: a changing wildlife heritage. Hampshire and Isle of Wight Wildlife Trust, Romsey  
Tubbs, JM (1980) Wader and shelduck feeding distribution in Langstone Harbour, Hampshire. *Bird Study*, **27**, 239-248

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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
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# NATURA 2000

## STANDARD DATA FORM

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

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	199810
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
00 55 40 W	50 47 47 N

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

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK561	Hampshire	45.00%
UK562	Isle of Wight	5.00%
0	Marine	29.00%
UK533	West Sussex	21.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

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

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Sandbanks which are slightly covered by sea water all the time	32	C	C	C	C
Estuaries	59	A	B	B	B
Mudflats and sandflats not covered by seawater at low tide	45	A	C	B	C
Coastal lagoons	1.3	C	B	B	C
Annual vegetation of drift lines	1	C	A	B	C
Perennial vegetation of stony banks	1	C	B	B	C
<i>Salicornia</i> and other annuals colonising mud and sand	1.1	B	B	B	C
<i>Spartina</i> swards ( <i>Spartinion maritimae</i> )	0.84	A	A	C	A
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	18	B	B	B	B
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")	1	C	B	B	C
Fixed dunes with herbaceous vegetation ("grey dunes")	1	D			

#### 3.2 Annex II species

Species name	Population				Site assessment			
	Resident	Migratory			Population	Conservation	Isolation	Global
		Breed	Winter	Stage				
<i>Vertigo moulinsiana</i>	Rare	-	-	-	B	B	B	C
<i>Lutra lutra</i>	Present	-	-	-	D			
<i>Phoca vitulina</i>	Present	-	-	-	D			

### 4. Site description

#### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	14.0
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	59.0
Salt marshes. Salt pastures. Salt steppes	23.0
Coastal sand dunes. Sand beaches. Machair	0.5
Shingle. Sea cliffs. Islets	3.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	0.5
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

## 4.1 Other site characteristics

### Soil & geology:

Alluvium, Clay, Gravel, Limestone/chalk, Mud, Neutral, Nutrient-rich, Sand, Sandstone/mudstone, Sedimentary, Shingle

### Geomorphology & landscape:

Coastal, Enclosed coast (including embayment), Estuary, Intertidal sediments (including sandflat/mudflat), Island, Islands, Lagoon, Lowland, Open coast (including bay), Shingle bar, Subtidal sediments (including sandbank/mudbank)

## 4.2 Quality and importance

Sandbanks which are slightly covered by sea water all the time

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

Estuaries

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

Mudflats and sandflats not covered by seawater at low tide

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

Coastal lagoons

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

Annual vegetation of drift lines

- which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 100 hectares.
- for which the area is considered to support a significant presence.

Perennial vegetation of stony banks

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

*Salicornia* and other annuals colonising mud and sand

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

*Spartina* swards (*Spartinion maritimae*)

- for which this is one of only two known outstanding localities in the United Kingdom.
- which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 100 hectares.

Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

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

Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")

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

*Vertigo moulinsiana*

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

### 4.3 Vulnerability

The following factors affect or potentially threaten the Solent Maritime cSAC: -

- existing and proposed flood defence and coast protection works;
- coastal squeeze of intertidal habitats due to coastal erosion/ sea level rise and sea-walls/ development in the hinterland;
- developments pressures including ports, marinas, jetties etc. Proposals often involve capital/ maintenance dredging to provide/ improve deep water access, and land-claim of coastal habitats;
- potential accidental pollution from shipping, oil/chemical spills, heavy industrial activities, former waste disposal sites and waste-water discharge;
- introduction of non-native species e.g. from shipping activity.

These issues are being addressed through a number of mechanisms including the review of consents procedure under the Habitats Regulations, the Management Scheme for European Marine Sites, Biodiversity Action Plans, other coastal strategies, management plans and management agreements. All future developments will be assessed for adverse effects on integrity under the Habitats Regulations.

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

### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	4.5
UK00 (N/A)	28.6
UK04 (SSSI/ASSI)	71.4

# NATURA 2000

## STANDARD DATA FORM

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

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

1.5 Relationship with other Natura 2000 sites

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

1.7 Site name

### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	198710
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
00 55 12 W	50 48 23 N

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

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK561	Hampshire	54.00%
UK533	West Sussex	46.00%

#### 2.6 Biogeographic region

  
Alpine

  
Atlantic

  
Boreal

  
Continental

  
Macaronesia

  
Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

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

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment			
		Resident	Migratory		Population	Conservation	Isolation	Global
Breed	Winter	Stage						
A054	<i>Anas acuta</i>		330 I		C		C	
A056	<i>Anas clypeata</i>		100 I		C		C	
A052	<i>Anas crecca</i>		1824 I		C		C	
A050	<i>Anas penelope</i>		2055 I		C		C	
A169	<i>Arenaria interpres</i>		430 I		C		C	
A046a	<i>Branta bernicla bernicla</i>		17119 I		A		C	
A144	<i>Calidris alba</i>		236 I		C		C	
A149	<i>Calidris alpina alpina</i>		44294 I		B		C	
A137	<i>Charadrius hiaticula</i>		846 I		B		C	
A157	<i>Limosa lapponica</i>		1692 I		B		C	
A069	<i>Mergus serrator</i>		297 I		B		C	
A160	<i>Numenius arquata</i>		1861 I		C		C	
A141	<i>Pluvialis squatarola</i>		3825 I		B		C	
A195	<i>Sterna albifrons</i>	100 P			B		C	
A193	<i>Sterna hirundo</i>	33 P			C		C	
A191	<i>Sterna sandvicensis</i>	31 P			C		C	
A048	<i>Tadorna tadorna</i>		2410 I		B		C	
A162	<i>Tringa totanus</i>		1788 I		C		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	63.0
Salt marshes. Salt pastures. Salt steppes	21.5
Coastal sand dunes. Sand beaches. Machair	0.3
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	0.4
Bogs. Marshes. Water fringed vegetation. Fens	0.5
Heath. Scrub. Maquis and garrigue. Phygrana	0.1
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	1.7
Alpine and sub-alpine grassland	
Improved grassland	11.7
Other arable land	
Broad-leaved deciduous woodland	0.8
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	0.2
<b>Total habitat cover</b>	<b>100%</b>



## 4.1 Other site characteristics

### Soil & geology:

Alluvium, Clay, Gravel, Mud, Neutral, Nutrient-rich, Sand, Sedimentary, Shingle

### Geomorphology & landscape:

Coastal, Enclosed coast (including embayment), Estuary, Floodplain, Intertidal sediments (including sandflat/mudflat), Islands, Lagoon, Lowland, Pools, Shingle bar, Subtidal sediments (including sandbank/mudbank)

## 4.2 Quality and importance

### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

#### During the breeding season the area regularly supports:

<i>Sterna albifrons</i> (Eastern Atlantic - breeding)	4.2% of the GB breeding population 5 year mean, 1992-1996
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<i>Sterna hirundo</i> (Northern/Eastern Europe - breeding)	0.3% of the GB breeding population 5 year mean, 1992-1996
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<i>Sterna sandvicensis</i> (Western Europe/Western Africa)	0.2% of the GB breeding population 5 year mean, 1993-1997
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#### Over winter the area regularly supports:

<i>Limosa lapponica</i> (Western Palearctic - wintering)	3.2% of the GB population 5 year peak mean 1991/92-1995/96
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### ARTICLE 4.2 QUALIFICATION (79/409/EEC)

#### Over winter the area regularly supports:

<i>Anas acuta</i> (North-western Europe)	1.2% of the population in Great Britain 5 year peak mean 1991/92-1995/96
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<i>Anas clypeata</i> (North-western/Central Europe)	1% of the population in Great Britain 5 year peak mean 1991/92-1995/96
--	---

<i>Anas crecca</i> (North-western Europe)	0.5% of the population 5 year peak mean 1991/92-1995/96
--	--

<i>Anas penelope</i> (Western Siberia/North-western/North-eastern Europe)	0.7% of the population in Great Britain 5 year peak mean 1991/92-1995/96
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<i>Arenaria interpres</i> (Western Palearctic - wintering)	0.7% of the population in Great Britain 5 year peak mean 1991/92-1995/96
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<i>Branta bernicla bernicla</i> (Western Siberia/Western Europe)	5.7% of the population 5 year peak mean 1991/92-1995/96
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<i>Calidris alba</i> (Eastern Atlantic/Western & Southern Africa - wintering)	0.2% of the population 5 year peak mean 1991/92-1995/96
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<i>Calidris alpina alpina</i> (Northern Siberia/Europe/Western Africa)	3.2% of the population 5 year peak mean 1991/92-1995/96
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<i>Charadrius hiaticula</i> (Europe/Northern Africa - wintering)	3% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Mergus serrator</i> (North-western/Central Europe)	3% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Numenius arquata</i> (Europe - breeding)	1.6% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Pluvialis squatarola</i> (Eastern Atlantic - wintering)	2.3% of the population 5 year peak mean 1991/92-1995/96
<i>Tadorna tadorna</i> (North-western Europe)	3.3% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Tringa totanus</i> (Eastern Atlantic - wintering)	1% of the population 5 year peak mean 1991/92-1995/96
<b>ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS</b>	
<b>Over winter the area regularly supports:</b>	
93230 waterfowl (5 year peak mean 01/04/1998)	
Including:	
<i>Branta bernicla bernicla</i> , <i>Tadorna tadorna</i> , <i>Anas penelope</i> , <i>Anas crecca</i> , <i>Anas acuta</i> , <i>Anas clypeata</i> , <i>Mergus serrator</i> , <i>Charadrius hiaticula</i> , <i>Pluvialis squatarola</i> , <i>Calidris alba</i> , <i>Calidris alpina alpina</i> , <i>Limosa lapponica</i> , <i>Numenius arquata</i> , <i>Tringa totanus</i> , <i>Arenaria interpres</i> .	

### 4.3 Vulnerability

The SPA comprises two large, sheltered estuarine basins on the central south coast of England. Langstone Harbour is fringed by urban and industrial development, whereas Chichester is surrounded mainly by high grade farmland. The site is subjected to significant recreational pressures, especially during summer months. Effluent discharges and agricultural run-off can lead to localised eutrophication problems although recent studies carried out by the Environmental Agency have shown that elevated nutrient levels are maintained by inputs from coastal waters.

Sea-level rise and 'coastal squeeze' are significant threats to the long-term maintenance of habitat diversity and structural integrity. Incremental loss of fringing habitats and transitional communities is a threat as hard coastal defences are maintained by riparian land-owners. A strategy for managing sea defences, incorporating set-back, is currently being prepared by the Environment Agency (EA). Impact on the site from water abstraction is being investigated by the EA.

Both harbours are managed by statutory bodies whose remits include conservation of the natural environment. Conservation bodies have an advisory input to the management of the harbours, and play an active role in the management of numerous Local Authority and RSPB nature reserves around the site. Additional measures for safeguarding the nature conservation interests of the harbours including measures to address effects of recreational activity are expected to be applied via the Management Scheme for the Solent Maritime candidate SAC.

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

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

## ANCIENT & VETERAN TREES

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

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

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

### Ancient trees

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

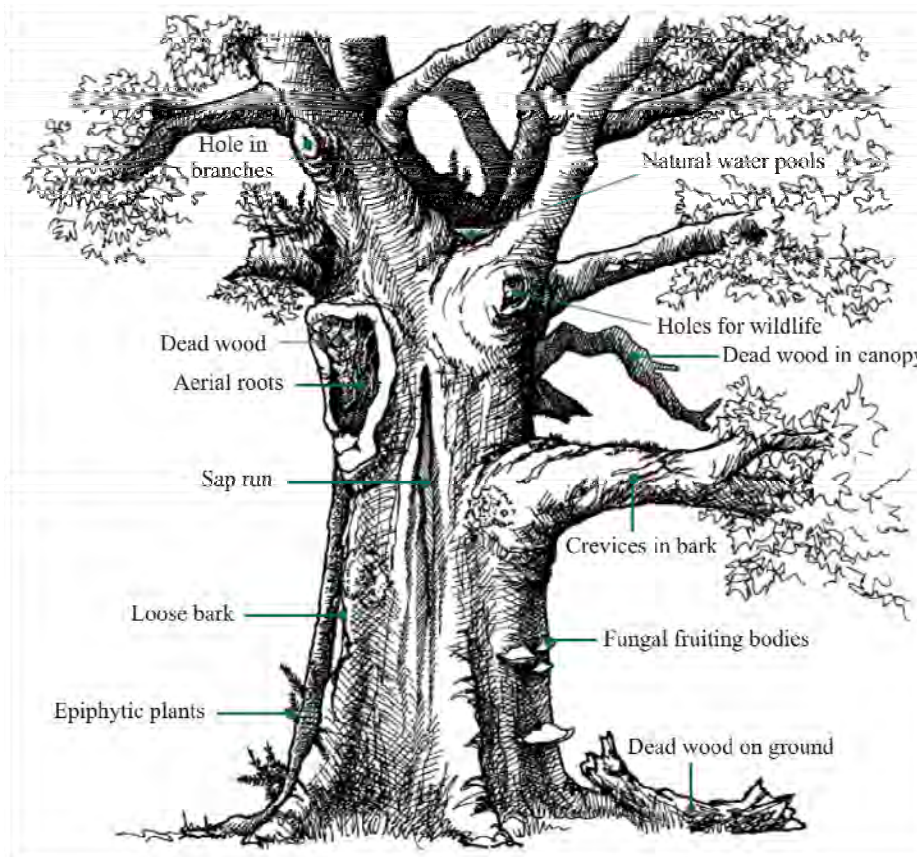
### Veteran trees

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

### Notable trees

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

### Characteristic features of an ancient tree include:



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

### Characteristic features of a veteran tree

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

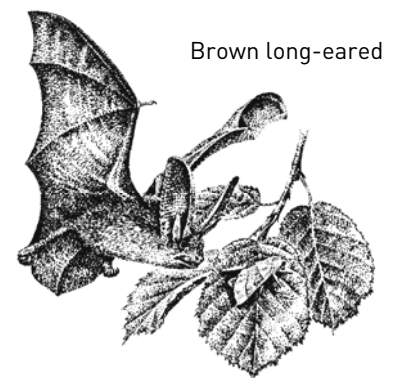
## Ancient tree ecology

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

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

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

Insects associated with decaying wood include: rare click beetles such as the violet click beetle *Limoniscus violaceus*, the wasp mimic crane fly *Ctenophora flaveolata* and the oak longhorn beetle *Rhagium mordax*. The black-headed cardinal beetle *Pyrochroa coccinea* is an insect associated with veteran trees and old growth woodland.



Brown long-eared

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

## Ancient tree management

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

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

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

## The Ancient Tree Hunt

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

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

(Illustrations courtesy of Natural England.)

# ANCIENT WOODLAND

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

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



Bluebell

The habitat can be placed into two broad categories:-

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

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

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

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

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

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

Other important terms:

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

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

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

Ancient woodland in Sussex can be identified by using the Ancient Woodland Inventory held by Natural England. The Ancient Woodland Inventory was set up in 1981 by the Nature Conservancy Council (now Natural England). Ancient woodland status is determined using information from historic Ordnance Survey and estate maps and information about the name of the wood, its shape, relief, internal boundaries and location relative to other features such as parish boundaries. Ground survey information such as flora and historical features plus aerial photography interpretation is also used when available.

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

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

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

(Illustrations courtesy of Natural England.)

# CHALK STREAM

A chalk river or stream is a watercourse which flows across chalk bedrock, and/or is influenced by local chalk geology. Chalk rivers are usually fed by underground or seasonal springs and often have 'winterbourne' stretches in their headwaters which run dry, or partially dry in late summer because of lack of rainfall recharging the spring. Sites are generally considered to be streams rather than rivers if they are no further than 5km from their source, nor greater than 5m wide (unless they have been artificially widened.)

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

All chalk rivers are fed from groundwater aquifers which means they have clean, clear water and relatively stable water temperatures. These unique conditions along with their chalk geology, support a rich diversity of wildlife including important fish populations such as brown trout, native crayfish and many other specialist species. Their rarity means that chalk rivers are recognised as a priority habitat under the UK BAP and many have been designated as SSSI's.

## ***Chalk streams in Sussex***

Sussex chalk streams often occur in small gulleys which are much more wooded than most other headwater chalk streams. This results in unusual features including:

- Mini chalk waterfalls which form when chalk water upwellings 'calcify' in the air;
- Dense shade which means that there is naturally less vegetation cover;
- Typical chalk river plants like water crowfoot are often absent – which is more natural;
- Stream channels are diverse because of natural flow restrictions such as tree roots;
- Woody debris is common in the channel and it influences the stream flow;
- The substrate (stream bed) is less frequently made up of flints and mobile gravels.

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

- Ditching and removal of natural features
- Weirs and man-made obstructions to flow
- Urbanisation of streams
- Non-native invasive species
- Abstraction of water from groundwater aquifers and streams
- Pollution
- Lack of recognition

## ***Some associated species***

- Fool's water-cress *Apium nodiflorum*
- Blunt-fruited water-starwort *Callitriche obtusangula*
- Brook water crowfoot *Ranunculus peltatus*
- Lesser water-parsnip *Berula erecta*
- Brown trout *Salmo trutta*
- White-clawed crayfish *Austropotamobius pallipes*
- Southern damselfly *Coenagrion mercuriale*

# COASTAL & FLOODPLAIN GRAZING MARSH

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



Lapwing

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

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

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

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

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

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

## ***Some associated species***

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

## ***Further information***

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

(Illustration courtesy of Natural England.)



# COASTAL SALTMARSH

Coastal saltmarshes lie at the top of the intertidal zone on fine sediments. The vegetation here is adapted to regular immersion by the tide.

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

- Saltmarshes are an important resource for breeding and wintering wading birds and wildfowl.
- They provide sheltered nursery sites for several species of fish.
- Areas with high structural and plant diversity are particularly important for invertebrates.

## ***Coastal saltmarsh in Sussex***

The majority of saltmarsh in Sussex is found in Chichester Harbour, and smaller amounts in Pagham and Rye Harbours. Sussex's saltmarshes support a number of nationally scarce plants including sea barley and golden samphire.



Sea aster

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

- "Coastal squeeze" resulting from coastal development, erosion and coastal defences, restricts the ability of saltmarsh habitat to move.
- Disruption of natural coastal processes as a result of coastal protection work, dredging or coastal defences can affect natural sediment systems.
- Non-native species such as cord grass.

## ***Some associated species***

- Twite *Carduelis flavirostris*
- Bass *Dicentrarchus labrax*
- Starwort moth *Cucullia asteris*
- Shore crab *Carcinus maenas*
- Common saltmarsh grass *Puccinella maritima*
- Sea aster *Aster tripolium*

## ***Further information***

- Buglife: [www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/coastalsaltmarsh](http://www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/coastalsaltmarsh)

(Illustration courtesy of Natural England.)

# INTERTIDAL MUDFLAT

Mudflats are sedimentary intertidal habitats created by deposition in low energy coastal environments particularly estuaries and other sheltered areas.

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

- Mudflats are part of a habitat sequence between open water and saltmarsh, and have an important role in reducing the impact of waves upon saltmarshes, damage to coastal defences and flooding of low-lying land.
- A wide range of invertebrates is supported including molluscs, annelids and lugworms.
- Mudflats are highly productive, making them important feeding areas for birds. They support internationally important populations of migrant and wintering waders.
- Due to their sheltered nature mudflats are important areas for fish, in particular flatfish, which use them as nursery areas.



Golden plover

## ***Intertidal mudflats in Sussex***

Sussex has just over 1,100 hectares of intertidal mudflats. Much of this occurs in a mosaic with saltmarsh and seagrass beds.

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

- Sea level rise is expected to result in the loss of up to 10,000 hectares of intertidal mudflat by 2013, with much of this in southern England.
- Land claim for development, and industry including hard flood defences.
- Pollution from agricultural, industrial and urban sources.
- Human disturbance from fishing and bait digging can have adverse impacts.
- Introduction of invasive species such as cord grass.

## ***Some associated species***

- Golden plover *Pluvialis apricaria*
- Atlantic salmon *Salmo salar*
- Lugworm *Arenicola marina*
- Mud shrimp *Corophium volutator*
- Glasswort *Salicornia europaea*
- Spiral wrack *Fucus spiralis*

## ***Further information***

- Buglife: [www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/mudflats](http://www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/mudflats)

(Illustrations courtesy of Natural England.)

# LOWLAND FEN

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



Water shrew

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

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

## ***Lowland fens in Sussex***

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

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

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

## ***Some associated species***

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

## ***Further information***

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

(Illustrations courtesy of Natural England.)

## LOWLAND HEATHLAND

Heathland is a largely open landscape occurring on impoverished, acidic soils. It is characterised by plants such as heathers and dwarf gorses of varying height, and usually occurs with areas of other habitat such as acid grassland and open water.



Sand lizard

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

- Heathland is often interspersed with bare ground, acid grassland, gorse, bracken, bog and scattered trees. This provides a range of habitat, increasing value to wildlife.
- A diversity of invertebrates is found with rare species including wasps, beetles and spiders. Areas of bare ground are often particularly important to invertebrates.
- There is a relatively low number of plants; however many rare species are found, particularly in the wetter areas, including white-beak sedge and bog asphodel.
- The rare smooth snake and sand lizard are found on some West Sussex heathlands.
- Several uncommon birds thrive on heathland including nightjar and stonechat.

### ***Heathland in Sussex***

Heathland in Sussex occurs mainly on the Wealden Greensand in West Sussex and in the High Weald of East Sussex, where Ashdown Forest contains the largest area of heathland remaining in South East England. The South Downs retain areas of chalk heath, a rare habitat that develops on acidic deposits overlying chalk, on which an interesting mix of chalk grassland and heathland plants are found.

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

- Lack of management results in a simplified vegetation structure and dominance of scrub.
- Agricultural improvement, including use of chemicals and intensive-livestock farming.
- Isolation and fragmentation of sites reduces dispersal opportunities making species more susceptible to extinction.
- Development including mineral extraction and conversion to conifer plantation.
- Recreation can cause disturbance to breeding birds, enrichment of soil and a danger of fire damage.

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

- Dartford warbler *Sylvia undata*
- Sand lizard *Lacerta agilis*
- Bog bush-cricket *Metrioptera brachyptera*
- Heath tiger beetle *Cicindela sylvatica*
- Bog pimpernel *Anagallis tenella*
- Heath bedstraw *Galium saxatile*

### ***Further information***

- Buglife: [www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/lowlandheathland](http://www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/lowlandheathland)

(Illustration courtesy of Natural England.)

## NOTABLE ROAD VERGE

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.



Common spotted orchid

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. For example, in September 2008 West Sussex County Council undertook a hay cut on 19 NRVs across the county. Mimicking traditional grassland management techniques, grass was collected manually and removed, preventing the build up of excess nutrients and competitive plants.

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.

The lead organisation for this Habitat Action Plan is West Sussex County Council (contact Ben Rainbow on 01243 642119 or email [ben.rainbow@westsussex.gov.uk](mailto:ben.rainbow@westsussex.gov.uk)).

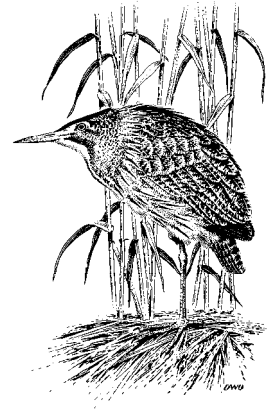
(Illustration courtesy of Natural England.)

# REEDBED

Reedbeds are wetlands dominated by stands of common reed where the water table is at or above ground level for most of the year. They tend to incorporate open water and ditches, and areas of wet grassland and carr woodland may also be associated with them.

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

- They provide important breeding and roosting habitat for birds including rare species such as bearded tit and Cetti's warbler.
- A number of invertebrates are recorded from reedbeds including moths, snails and beetles. Many of the species found are now uncommon.
- Reedbeds provide a refuge for shoals of fish, which in turn provide food for other species.



Bittern

## ***Reedbeds in Sussex***

The majority of reedbeds in Sussex are less than five hectares in size. The largest reedbed in Sussex is at Filsham, which is around 17 hectares.

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

- Drainage for farming and development, and over-abstraction of water.
- Water pollution can cause a loss of diversity and dominance by a few species.
- Flood defence measures can contribute to loss of reedbeds.
- A lack of management.

## ***Some associated species***

- Bittern *Botaurus stellaris*
- Grass snake *Natrix natrix*
- Swollen spire snail *Mercuria confusa*
- Flame wainscot *Mythimna flammea*
- Common reed *Phragmites australis*
- Reed sweet-grass *Glyceria maxima*

## ***Further information***

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

(Illustration courtesy of Natural England.)

## **Sussex Biodiversity Record Centre**

Woods Mill  
Henfield  
West Sussex  
BN5 9SD

Tel: 01273 497521

Email: [sxbrc@sussexwt.org.uk](mailto:sxbrc@sussexwt.org.uk)

Website: [www.sxbrc.org.uk](http://www.sxbrc.org.uk)

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

[www.sxbrc.org.uk/about/partners](http://www.sxbrc.org.uk/about/partners)

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## **Appendix EDP 2**

### **Site status of bird species recorded during Breeding Bird Surveys**



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## Site Status of Bird Species Recorded During the BBS

Species	Section 1 (Located to the north of Newlands Lane and south west of Old Broyle Road)		Section 2 (Located to the north east of Old Broyle Road)		Section 3 (Located to the south of Newlands Lane)	
	Section Status	Population	Section Status	Population	Section Status	Population
Mallard ( <i>Anas platyrhynchos</i> )	Possible breeder	Two pairs were recorded within this section of the site, with three further birds observed that were not displaying any behaviour characteristic of breeding.  It is considered to be a possible breeder as suitable habitat for nesting exists within this section of the site (n.b. mallard can nest some distance from wetland habitat).	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.
Grey partridge ( <i>Perdix perdix</i> )	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single grey partridge was recorded within field F1, during the first BBS visit.  Owing to the suitability of the farmland habitat for this species, and the rather cryptic nature of this species whilst breeding, it is considered that this species could have bred on site. As a result, it is considered to be a 'possible breeder'.
Pheasant ( <i>Phasianus colchicus</i> )	Breeder	Between one and three pairs were recorded within this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single pheasant was recorded on site during the course of the BBS.  Owing to the suitability of the farmland habitat for this species, and the rather cryptic nature of this species whilst breeding, it is considered that this species could have bred on site. As a result, it is considered to be a 'possible breeder'.
Little egret ( <i>Egretta garzetta</i> )	Non-breeder	A single adult bird was recorded flying over the northern edge of field F14.	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.
Grey Heron ( <i>Ardea cinerea</i> )	Non-breeder	A single adult bird was recorded flying over field F9 on the second BBS visit.	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.
Sparrowhawk ( <i>Accipiter nisus</i> )	Possible breeder	A single female sparrowhawk was recorded hunting over field F15. Although no behaviour characteristic of breeding was recorded, it is considered that suitable breeding habitat for this species exists within this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single female sparrowhawk was recorded hunting over field F1 during the second BBS visit. Although no behaviour characteristic of breeding was recorded, it is considered that suitable breeding habitat for this species exists within the site.
Common buzzard ( <i>Buteo buteo</i> )	Breeder	Activity by this species was recorded over the woodland copse (W4), with distraction behaviour and calling observed on two occasions. A pair was also recorded circling over the adjacent field (F13N) on the first BBS visit. It is considered that based on these observations, a single pair of buzzard were nesting within W4.	Non-breeder	A single bird was recorded flying over field F18 during the third BBS visit.  Although the habitat on site is considered suitable for this species to breed, buzzard were not recorded during any of the other BBS visits. Furthermore, with regard to the conspicuous nature of this species, it is considered that if the species was breeding within this section, further observations would have been made.	Non-breeder	Two individuals were recorded together, over field F7, during the course of the first BBS visit.  Although the habitat on site is considered suitable for this species to breed, buzzard were not recorded during any of the other BBS visits. Furthermore, with regard to the conspicuous nature of this species, it is considered that if the species was breeding within this section, further observations would have been made.
Kestrel ( <i>Falco tinnunculus</i> )	Possible breeder	Two birds were recorded within suitable breeding habitat, namely within field F8 and, secondly, adjacent to the Whitehouse Farm buildings.	-	Not recorded within this section of the site.	Possible breeder	Three birds were recorded over the course of the BBS, within suitable breeding habitat. Two birds were recorded hunting over field F2, whilst a third was recorded hunting over field F6. It is considered that the site represents suitable breeding habitat for this species.

## Site Status of Bird Species Recorded During the BBS

Species	Section 1 (Located to the north of Newlands Lane and south west of Old Broyle Road)		Section 2 (Located to the north east of Old Broyle Road)		Section 3 (Located to the south of Newlands Lane)	
	Section Status	Population	Section Status	Population	Section Status	Population
Black-headed gull ( <i>Chroicocephalus ridibundus</i> )	Non-breeder	A single bird was recorded flying over field F8.	-	Not recorded within this section of the site.	Non-breeder	Five birds were recorded flying over the site over the course of the BBS visits. It is not considered that suitable breeding habitat for this species exists within the site.
Lesser Black-backed gull ( <i>Larus fuscus</i> )	-	Not recorded within this section of the site.	Non-breeder	Two birds were recorded feeding within field F18. No behaviour characteristic of breeding was recorded. It is considered that the habitat is not suitable for this species to breed within this section.	Non-breeder	A single bird was recorded flying over field F2, in a north-easterly direction, during the second BBS visits. No behaviour characteristic of breeding was recorded. It is considered that the habitat is not suitable for this species to breed within this section.
Herring gull ( <i>Larus argentatus</i> )	Non-breeder	A single bird was observed flying over F14 on the first BBS visit. A second bird was recorded feeding within field F13N on the second BBS visit. No behaviour characteristic of breeding was recorded.	Non-breeder	Severn birds were recorded over the course of the BBS visits, with a number of these recorded feeding within field F18. No behaviour characteristic of breeding was recorded. It is considered that the habitat is not suitable for this species to breed within this section.	Non-breeder	A single bird was recorded flying over field F2, in a westerly direction, during the second BBS visit. No behaviour characteristic of breeding was recorded. It is considered that the habitat is not suitable for this species to breed within this section.
Stock dove ( <i>Columba oenas</i> )	-	Not recorded within this section of the site.	Possible breeder	A single stock dove was recorded over field F18 during the second BBS visit.  Although no breeding behaviour was recorded, it is considered that the section has areas of potentially suitable breeding habitat for this species. As such, it is considered that this species should be regarded as a possible breeder.	Possible breeder	A total of three stock dove were recorded over this section of the site during the course of the surveys. Two were recorded within field F2, whilst a third individual was recorded within the southern section of field F6.  Although no breeding behaviour was recorded, it is considered that this section has areas of potentially suitable breeding habitat for this species. As such, it is considered that this species should be regarded as a possible breeder.
Woodpigeon ( <i>Columba palumbus</i> )	Breeder	Between five and 13 pairs were recorded within woodland, hedgerows and scrub across this section. An additional 39 birds were recorded although these displayed no behaviour characteristic of breeding.	Possible breeder	A total of eight woodpigeon were recorded within field F18 over the course of the surveys.  Although no breeding behaviour was recorded, it is considered that this section has areas of potentially suitable breeding habitat for this species. As such, it is considered that woodpigeon should be regarded as a possible breeder.	Breeder	Between one and 12 pairs were recorded within the tall scrubby field boundaries and woodland. A further 46 birds were recorded across the section, typically feeding within arable field margins, but displaying no behaviour characteristic of breeding.
Collared dove ( <i>Streptopelia decaocto</i> )	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single bird was recorded displaying breeding behaviour on a single occasion. Two further collared dove, displaying no behaviour characteristic of breeding, were recorded over the course of the BBS visits.
Swift ( <i>Apus apus</i> )	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.	Non-breeder	Four birds were recorded foraging over field F7. It is considered that no suitable nesting habitat exists within this section of the site.
Green woodpecker ( <i>Picus viridis</i> )	Breeder	Between one and four pairs were recorded across this section of the site. Birds displaying breeding behaviour were recorded within the woodland copse (W4), within the boundaries adjacent to the south west corner of field F8 and the boundary to the south of field F11.	Possible breeder	A single bird was recorded within boundary trees between fields F17 and F18 during the third BBS visit.  It is considered that the section represents suitable breeding habitat for this species.	Possible breeder	Up to two pairs of green woodpecker were recorded across this section of the site. Birds displaying breeding behaviour were recorded on a single occasion within woodland W2, and on the boundary of field F7.
Great Spotted Woodpecker ( <i>Dendrocopus major</i> )	Breeder	Between two and seven pairs were recorded across this section of the site. These were predominantly recorded within trees adjacent to field F9 and F10, and woodland strips.	-	Not recorded within this section of the site.	Possible breeder	Up to three pairs were recorded within woodland and hedgerow trees across this section of the site. A further bird was observed, but no breeding behaviour recorded.

## Site Status of Bird Species Recorded During the BBS

Species	Section 1 (Located to the north of Newlands Lane and south west of Old Broyle Road)		Section 2 (Located to the north east of Old Broyle Road)		Section 3 (Located to the south of Newlands Lane)	
	Section Status	Population	Section Status	Population	Section Status	Population
Magpie ( <i>Pica pica</i> )	Breeder	Between three and five pairs were recorded on the site, predominantly within woodland and boundary habitats.	-	Not recorded within this section of the site.	Breeder	Between three and four pairs were recorded within this section of the site, predominantly within woodland and boundary habitats.
Jay ( <i>Garrulus glandarius</i> )	Possible breeder	This species was recorded on three occasions within the boundaries of field F15. A jay was also observed within the hedgerow between F12 and F13N. No behaviour characteristic of breeding was recorded, however it is considered that the section offers suitable breeding habitat for this species.	-	Not recorded within this section of the site.	Possible breeder	A single jay was recorded displaying breeding behaviour within the boundary between fields F3 and F4, during the first BBS visit.  A second bird was recorded within the south of field F6, although no breeding behaviour was observed.
Jackdaw ( <i>Corvus monedula</i> )	Breeder	A family was recorded on the woodland edge of field F12.	Possible breeder	A single bird was recorded over field F18 during the third BBS visit.  It is considered that this section of the site holds areas of suitable breeding habitat for this species.	Breeder	One pair of jackdaw was recorded within the site boundary.
Rook ( <i>Corvus frugilegus</i> )	-	Not recorded within this section of the site.	-	Not recorded within this section of the site although a rookery was recorded within the woodland to the north of this section.	Possible breeder	Two rooks were recorded across the site. Although no individuals were recorded as displaying behaviour characteristic of breeding, it is considered that the habitat on site is suitable for this species to breed successfully. As it is possible that the surveys may have missed potential breeding behaviour, this species is therefore considered to be a possible breeder.
Carrion crow ( <i>Corvus corone</i> )	Breeder	Between one and five pairs were recorded within this section of the site, with an additional number of birds observed that did not display any behaviour characteristic of breeding.	Possible breeder	A total of three crows were recorded across the section. Although no individuals were recorded as displaying behaviour characteristic of breeding, it is considered that the habitat within this section is suitable for this species to breed successfully. This species is therefore considered to be a possible breeder.	Possible breeder	A total of fourteen crows were recorded across this section of the site. Although no individuals were recorded as displaying behaviour characteristic of breeding, it is considered that the habitat within this section is suitable for this species to breed successfully. This species is therefore considered to be a possible breeder.
Goldcrest ( <i>Regulus regulus</i> )	Breeder	A single pair was recorded on the northern boundary of the site.	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.
Blue tit ( <i>Cyanistes caeruleus</i> )	Breeder	Between 29 and 45 pairs were recorded within boundaries, woodland and scrub across this section of the site.	Breeder	Between three and six pairs were recorded, distributed within hedgerows and the woodland edge.	Breeder	Between 16 and 26 pairs were recorded, well distributed across the site within hedgerows and woodland.
Great tit ( <i>Parus major</i> )	Breeder	Between eight and 21 pairs were recorded within boundaries, woodland and scrub across this section of the site.	Breeder	Between one and three pairs were recorded within hedgerows and the woodland edge.	Breeder	Between six and 13 pairs were recorded within hedgerows and woodland across the section.
Coal tit (Periparus ater)	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single bird was recorded on a single occasion singing within woodland W3,
Sskylark ( <i>Alauda arvensis</i> )	Breeder	Between 16 and 30 pairs were recorded within the following fields: F8, F9, F11, F13S, F13N and F14. The greatest density of this species was recorded within F9.	-	Not recorded within this section of the site.	Breeder	Between four and five pairs were recorded, with birds holding territory over fields F1, F2 and F7.
Swallow ( <i>Hirundo rustica</i> )	Breeder	It is considered that this species is breeding within the buildings associated with Whitehouse Farmhouse, with six birds recorded frequently over these buildings. Swallow were also recorded foraging over fields F8, F9, F11, F13S, F13N and F15, with a maximum of six recorded at any one time.	-	Not recorded within this section of the site.	Non-breeder	Two swallow were recorded flying over this section of the site during the course of the BBS visits. No breeding behaviour was recorded, and it is considered that no suitable nesting habitat exists within this section of the site.
Long-tailed tit ( <i>Aegithalos caudatus</i> )	Breeder	Six pairs were confirmed as breeding within this section of the site, with those pairs (and family groups) recorded along the southern boundary of the section, the woodland belt (W4) and the hedgerow between F12 and F13N.	-	Not recorded within this section of the site.	Breeder	Two family groups were recorded, one within woodland W3, and the second located within the hedgerow north of field F5.

## Site Status of Bird Species Recorded During the BBS

Species	Section 1 (Located to the north of Newlands Lane and south west of Old Broyle Road)		Section 2 (Located to the north east of Old Broyle Road)		Section 3 (Located to the south of Newlands Lane)	
	Section Status	Population	Section Status	Population	Section Status	Population
Chiffchaff ( <i>Phylloscopus collybita</i> )	Breeder	Between one and two pairs were recorded within boundaries, woodland and scrub across the site.	-	Not recorded within this section of the site.	Breeder	Between two and six pairs were recorded within the hedgerows and woodland across this section of the site.
Blackcap ( <i>Sylvia atricapilla</i> )	Breeder	Between eight and 16 pairs were recorded within hedgerows across this section.	Possible breeder	Two birds were recorded singing on one occasion. One was observed within the hedgerow to the south of field F17, the second within the hedgerow to the east of field F18.	Breeder	Between three and seven pairs were recorded within scrubby hedgerows and woodlands across this section of the site.
Garden warbler ( <i>Sylvia borin</i> )	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single bird was recorded singing within woodland W1 during the second BBS visit.
Lesser whitethroat ( <i>Sylvia curruca</i> )	-	Not recorded within this section of the site.	Possible breeder	A single bird was recorded singing within the hedgerow to the south of field F17, during the first BBS visit.	-	Not recorded within this section of the site.
Common whitethroat ( <i>Sylvia communis</i> )	Breeder	Between eight and 15 pairs were recorded within this section of the site, predominantly within the dense hedgerows and scrub.	Possible breeder	Up to two pairs, located within the hedgerow that bounds the southern edge of the section.	Breeder	Between one and six pairs were recorded within woodland and dense hedgerows.
Nuthatch ( <i>Sitta europaea</i> )	Possible breeder	This species was recorded within the woodland copse (W4), and was also recorded singing within the woodland edge adjacent to F12.	-	Not recorded within this section of the site.	Breeder	One pair: a single bird was recorded carrying food within the woodland W3.
Treecreeper ( <i>Certhia familiaris</i> )	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single bird was recorded within woodland W1. Although no breeding behaviour was recorded, it is considered that the woodland and hedgerows within this section of the site represent suitable breeding habitat for this species. As such, it is considered that this species should be regarded as a 'possible breeder'.
Wren ( <i>Troglodytes troglodytes</i> )	Breeder	Between 14 and 23 pairs were recorded within boundaries, woodland and scrub across this section.	Possible breeder	Up to two pairs of wren were recorded within hedgerows and woodland edge.	Breeder	Between eight and 16 pairs were recorded across the section, within hedgerows and woodland.
Starling ( <i>Sturnus vulgaris</i> )	Non-breeder	Groups of starling were recorded within BBS Section 1, with 12 recorded within field F9, and seven recorded adjacent to the Whitehouse Farm buildings. Both these groups were recorded on the second BBS visit. Further scattered individuals, including two juveniles, were recorded within the vegetation associated with the disused railway line, located on the eastern edge of the site. It is considered these birds were from a breeding population located within the residential properties to the east of the site.	Non-breeder	Five starling were recorded flying over field F18 during the second BBS visit.	Non-breeder	A total of 13 starling were recorded within the site over the course of the BBS visits, although no birds displayed behaviour characteristic of breed. Typically recorded in small groups around fields F2, F3, F4 and F5.
Blackbird ( <i>Turdus merula</i> )	Breeder	Between 14 and 28 pairs were recorded within boundaries, woodland and scrub across this section of the site.	Breeder	Between one and four pairs were recorded across the section, within woodland edge and hedgerow habitats.	Breeder	Between five and nine pairs were recorded across the site, typically within woodland and hedgerow habitats.
Song thrush ( <i>Turdus philomelos</i> )	Breeder	Between two and four pairs were recorded within this section of the site. Breeding was confirmed within the boundary on the northern edge of field F10. Possible breeders were recorded on the eastern edge of the site adjacent to current development and also along the woodland edge adjacent to field F12.	Possible breeder	Up to two pairs, with breeding behaviour recorded on a single occasion within the woodland edge of field F17, and the southern hedgerow of this section.	Possible breeder	Up to four pairs were recorded within this section of the site. Possible breeders were recorded within woodland W3, the southern boundary of field F7, the north west corner of field F1, and within field parcel F3, however breeding behaviour was not recorded on more than one occasion.
Mistle thrush ( <i>Turdus viscivorus</i> )	Possible breeder	This species was only recorded on the second BBS visit, with one bird recorded calling and feeding within F13N, and a second recorded within F10.	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.
Robin ( <i>Erithacus rubecula</i> )	Breeder	Between 13 and 28 pairs were recorded within boundaries, woodland and scrub across the section.	Breeder	Between one and two pairs of robin were recorded within hedgerows.	Breeder	Between 10 and 17 pairs were recorded within hedgerows and woodland across this section of the site.
Dunnock	Breeder	Between six and 15 pairs were recorded within	Possible	A single bird was recorded singing within the	Breeder	Between four and 11 pairs were recorded within the

## Site Status of Bird Species Recorded During the BBS

Species	Section 1 (Located to the north of Newlands Lane and south west of Old Broyle Road)		Section 2 (Located to the north east of Old Broyle Road)		Section 3 (Located to the south of Newlands Lane)	
	Section Status	Population	Section Status	Population	Section Status	Population
( <i>Prunella modularis</i> )		boundaries, woodland and scrub across the section.	breeder	hedgerow to the south of field F17, on a single survey visit.		hedgerows and woodland across this section of the site.
House sparrow ( <i>Passer domesticus</i> )	Breeder	Between two and seven pairs were recorded. The majority of these were located on the boundary of field F14 with New Cottages (Newlands Lane). One pair were recorded adjacent to the eastern side of the Whitehouse Farm buildings. Approximately 12 pairs were recorded within the roof line of the New Cottages.	Possible breeder	A single male house sparrow was recorded within the hedgerow on the southern boundary of this section.  It is considered that the habitats within the section provide potential breeding habitat for this species, although typically this species would have a closer association with residential properties or farmsteads. It is therefore regarded as a 'possible breeder'.	Breeder	Between four and five pairs were recorded.  Three males were recorded 'singing' on two occasions within garden hedgerows, located on the western edge of field F2 (adjacent to residential properties). A further single male was recorded 'singing' on two occasions within the western boundary of F5. Further house sparrow could be heard within the estate beyond.  One male was recorded 'singing' on a single occasion within the northern boundary of field F4.  Further house sparrow, displaying no breeding behaviour, were recorded within woodland W1 and within the field edge of F1 (close to New Cottages).
Chaffinch ( <i>Fringilla coelebs</i> )	Breeder	Between 14 and 27 pairs were recorded within boundaries, woodland and scrub across the section.	Breeder	A single pair of chaffinch were recorded within the hedgerow between fields F17 and F18.	Possible breeder	Up to seven pairs were recorded within hedgerows and woodland.
Greenfinch ( <i>Carduelis chloris</i> )	Breeder	Between two and three pairs of greenfinch were recorded within the vicinity of the disused railway, along the eastern side of the site.	Possible breeder	A single greenfinch was recorded within suitable breeding habitat, over field F17.	Breeder	Between one and four pairs of greenfinch were recorded within tall hedgerows and trees across the section of the site.
Goldfinch ( <i>Carduelis carduelis</i> )	Breeder	Between two and six pairs of this species were recorded within boundaries and woodland across this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single goldfinch was recorded singing on a single occasion, located within the boundary between fields F3 and F4
Linnet ( <i>Carduelis cannabina</i> )	Possible breeder	A single bird was observed singing on the boundary between F13S and F13N on the final survey visit. No other breeding activity was recorded.	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.
Bullfinch ( <i>Pyrrhula pyrrhula</i> )	Possible breeder	Two birds were recorded calling, one located on the woodland edge of field F12, with a second adjacent to the eastern edge of Whitehouse Farm. Each bird was only observed on a single occasion.	-	Not recorded within this section of the site.	Possible breeder	A single bullfinch was recorded singing within the north east corner of field F5 during the first BBS visit.
Yellowhammer ( <i>Emberiza citrinella</i> )	Breeder	Between five and eight pairs were recorded within this section of the site. Breeding activity was recorded along the southern boundary, within fields F8 and F9, and along the track between F13S and F13N.	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.
Reed bunting ( <i>Emberiza schoeniclus</i> )	-	Not recorded within this section of the site.	-	Not recorded within this section of the site.	Possible breeder	A single reed bunting was recorded singing within the south western corner of field F7 during the first BBS.

## **Appendix EDP 3 Illustrative Site Photographs**

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**Photo EDP 1:** Seasonally wet ditch transecting field F2 taken in November 2013 during period of high water level



**Photo EDP 2:** Conditions within seasonally wet ditch running through field F2 during mid-summer showing heavy choking by ditch vegetation and no water depth. Photograph taken 26 June 2013



**Photo EDP 3:** Substantial layer of flint and chalk within bank of wet ditch along the western boundary of field F1 showing unsuitability for burrowing mammals. Photo taken 8 November 2013



**Photo EDP 4:** Section of ditch network along western boundary of field F1 showing significant canopy overhang from adjoining woodland. Photo taken 8 November 2013



**Photo EDP 5:** Seasonally wet ditch adjacent to Newlands Lane photographed during high water levels on 8 November 2013, and following recent flailing of bankside vegetation



**Photo EDP 6:** Same section of ditch along Newlands Lane photographed 22 August 2013 with no water in ditch, and more extensive bankside vegetation



**Photo EDP 7:** Derelict grain store buildings located in south east corner of field F11



**Photo EDP 8:** Internal view of derelict farm building in south east corner of field F11



**Photo EDP 9:** Internal view of derelict farm building in south east corner of field F11



**Photo EDP 10:** Large ivy coverage over western end of small subsidiary building to the west of three large derelict buildings located in south west corner of field F11.



**Photo EDP 11:** Field pond located on site in field F17



**Photo EDP 12:** Large intensive arable fields typical of majority of the site. Photograph taken 11 April 2013



**Photo EDP 13:** Heavily disturbed informal footpath located around arable field, typical of informal footpath network across the site



**Photo EDP 14:** Typical row of mature oaks bounding arable fields

## **Appendix EDP 4 Botanical Survey Results: Woodlands**



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Common Name	Scientific Name	Woodland Number & DAFOR				
		W1	W2	W3	W4	W5
Field maple	<i>Acer campestre</i>	R	R		R	
Norway maple	<i>Acer platanoides</i>		R			
Sycamore	<i>Acer pseudoplatanus</i>					
Silver birch	<i>Betula pendula</i>			R	R	
Sweet chestnut	<i>Castanea sativa</i>		O	F / LD		R
Dogwood	<i>Cornus sanguinea</i>	O				
Hazel	<i>Corylus avellana</i>	O	F	F	A	O
Hawthorn	<i>Crataegus monogyna</i>	A	F		F	F
Broom	<i>Cytisus scoparius</i>		O			
Beech	<i>Fagus sylvatica</i>					F
Ash	<i>Fraxinus excelsior</i>			O	O	
Holly	<i>Ilex aquifolium</i>	A	F	F	O	R
Wild privet	<i>Ligustrum vulgare</i>	F	O		O	F
Poplar	<i>Populus x canadensis Serotina</i>					
Aspen	<i>Populus tremula</i>		O	F / LA		
Wild cherry	<i>Prunus avium</i>		R	O	R	R
Blackthorn	<i>Prunus spinosa</i>	F	O	F / LD	R	
Turkey oak	<i>Quercus cerris</i>					O
Holm oak	<i>Quercus ilex</i>					O
Sessile oak	<i>Quercus petraea</i>		F		D	F
English oak	<i>Quercus robur</i>	D	R	A		
Hybrid oak	<i>Quercus x rosacea</i>				O	O
Rose species	<i>Rosa sp.</i>	R	O	R	R	R
Bramble	<i>Rubus fruticosus agg.</i>	A	F	F	O / LA	
Goat willow	<i>Salix caprea</i>		O	O	R	
Hybrid willow	<i>Salix x reichardtii</i>	R	R	O		
Grey willow	<i>Salix cinerea</i>	F	F	F		
Elder	<i>Sambucus nigra</i>			O		O
Rowan	<i>Sorbus aucuparia</i>		R			
Wych elm	<i>Ulmus glabra</i>	R				
Field elm	<i>Ulmus minor</i>					F
Brown bent	<i>Agrostis vinealis</i>		F	F		
Bugle	<i>Ajuga reptans</i>			R		
Hedge garlic	<i>Alliaria petiolata</i>				R	
Sweet vernal grass	<i>Anthoxanthum odoratum</i>		O			
Greater Burdock	<i>Arctium lappa</i>					R
Cuckoo pint	<i>Arum maculatum</i>	O		R		
Black spleenwort	<i>Asplenium adiantum-nigrum</i>	R				
False wood-brome	<i>Brachypodium sylvaticum</i>	O		O	O	
Hairy brome	<i>Bromopsis ramosa</i>	R				
Grey sedge	<i>Carex divulsa</i>		O			
Pendulous sedge	<i>Carex pendula</i>	R			R	
Remote sedge	<i>Carex remota</i>	O			F / LA	
Wood sedge	<i>Carex sylvatica</i>	O	F	R		
Enchanter's nightshade	<i>Circaea lutetiana</i>				F	
Cocksfoot	<i>Dactylis glomerata</i>		O			
Spurge laurel	<i>Daphne laureola</i>	R				
Tufted hair-grass	<i>Deschampsia caespitosa</i>		R	LO		
Wavy hair-grass	<i>Deschampsia flexuosa</i>		O / LF			
Foxglove	<i>Digitalis purpurea</i>			R		
Male fern	<i>Dryopteris filix-mas</i>	R			O	
Broad buckler fern	<i>Dryopteris dilatata</i>					
Bearded couch	<i>Elymus caninus</i>			O		
Marsh bedstraw	<i>Galium palustre</i>					

Common Name	Scientific Name	Woodland Number & DAFOR				
		W1	W2	W3	W4	W5
Herb robert	<i>Geranium robertianum</i>				R	
Herb benet	<i>Geum urbanum</i>	R			O	
Ground ivy	<i>Glechoma hederacea</i>			O		O
Ivy	<i>Hedera helix</i>	D	F	O / LA	O / LF	D
Sunflower species	<i>Helianthus sp.</i>		R			
Yorkshire fog	<i>Holcus lanatus</i>			O		
Bluebell	<i>Hyacinthoides non-scripta</i>	A	O	A		O / LF
Stinking iris	<i>Iris foetidissima</i>					R
Honeysuckle	<i>Lonicera periclymenum</i>	F	F	O		O
Hairy wood-rush	<i>Luzula pilosa</i>	R	O			
Common cow-wheat	<i>Melampyrum pratense</i>		F / LA			
Wood melick	<i>Melica uniflora</i>	D	F / LA	O	R	O
Dog's mercury	<i>Mercurialis perennis</i>			O		
Wood millet	<i>Milium effusum</i>	R		R		
Hemlock water-dropwort	<i>Oenanthe crocata</i>			LO		
Soft shield fern	<i>Polystichum setiferum</i>	R			R	
Aspen (suckers)	<i>Populus tremula</i>			F / LA		
Primrose	<i>Primula vulgaris</i>					
Selfheal	<i>Prunella vulgaris</i>			R		
Bracken	<i>Pteridium aquilinum</i>		F	O / LD		
Holm oak (sapling)	<i>Quercus ilex</i>		R			
Redcurrant	<i>Ribes rubrum</i>			R	O	
Wood dock	<i>Rumex sanguineus</i>	F		F	O / LA	
Butcher's broom	<i>Ruscus aculeatus</i>	R	R	R	R	F
Common figwort	<i>Scrophularia nodosa</i>			O		
Common ragwort	<i>Senecio jacobaea</i>			O		
Red campion	<i>Silene dioica</i>			R		
Bittersweet	<i>Solanum dulcamara</i>	R				
Goldenrod	<i>Solidago virgaurea</i>		R	R		
Betony	<i>Stachys officinalis</i>		R			
Hedge woundwort	<i>Stachys sylvatica</i>				R	
Greater stitchwort	<i>Stellaria holostea</i>	O	R / LO	O		R
Common chickweed	<i>Stellaria media</i>			R		
Black bryony	<i>Tamus communis</i>	R		R		
Wood sage	<i>Teucrium scorodonia</i>		F	F		
Yew (sapling)	<i>Taxus baccata</i>		R			
Nettle	<i>Urtica dioica</i>			O	O / LA	O
Heath speedwell	<i>Veronica officinalis</i>			R		
Common dog violet	<i>Viola rivinana</i>				R	
Bank haircap (a moss)	<i>Polytrichum formosum</i>		O			

## **Appendix EDP 5 Hedgerow Survey Results**

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## Hedgerow Survey Results

N.B. Woody species recorded using the following abbreviations: Ac - Acer campestre; Ca - Corylus avellana; Cm - Crataegus monogyna; Cys - Broom; Fe - Fraxinus excelsior; Ia - Ilex aquifolium; Pa - Wild cherry; Pot - Aspen; Ps - Prunus spinosa; Qr - Quercus robur; Ros - Rose; Sn - Sambucus nigra; Sx - Willow; Tip - Large-leaved lime; Um - Elm.

Hedge No.	Woody Species		Woodland plants	Additional Features							Path/bridleway?	Important hedgerow?
	Species recorded	Mean count from 30m samples (sample size)		Bank/wall?	Gaps <10%	Standard trees	Ditch?	Connections (>4)	Parallel hedge?	Minimum 3 Schedule 2 woodland species?		
Survey date: 10.07.12												
H1	Cm, Ps, Qr, Sn, Um, Ia, Ros	5 (4)	<i>A. maculatum</i>	N	Y	N	N	N	N	N	N	N
H2	Cm, Ps, Ia, Um, Cm	3 (1)	-	N	Y	N	N	N	Y	N	N	N
H3	Cm, Qr, Sn	1 (2)	<i>D. filix-mas</i>	N	Y	N	Y	N	Y	N	N	N
H4	Cm, Ps, Ros, Sx, Liv, Ia, Qr, Tip	5 (3)	<i>G. robertianum</i>	N	Y	Y	Y	N	Y	N	N	Y
H5	Cm, Sn, Ia	3 (1)	-	N	Y	N	N	N	Y	N	N	N
H6	Sx, Cys, Fe, Qr, Ros, Liv, Ca, Cm, Ia, Rac	5 (2)	<i>G. robertianum, B. sylvaticum, T. scorodonia</i>	N	Y	Y	Y	Y	N	Y	N	Y
H7	Liv, Qr, Ps, Ros, Cm, Ac, Fe, Cys, Ia, Ca, Sx	5 (2)	<i>T. scorodonia, B. sylvaticum</i>	N	Y	Y	Y	Y	N	N	N	Y
H8	Ca, Ps, Sx, Ros, Qr, Pot, Sn, Cys, Cm, Pa	5 (3)	<i>B. sylvaticum, G. urbanum, T. scorodonia</i>	N	Y	Y	N	Y	Y	Y	Y	Y
H9	Ca, Sx, Ps, Fe, Ros, Sn, Qr	2 (3)	<i>D. filix-mas</i>	N	Y	Y	Y	Y	N	N	N	N
H10	Cys, Rac, Ia, Qr, Ps, Cm, Liv, Sx, Ros, Sn	6 (3)	<i>M. pratense, T. scorodonia</i>	Y	N	Y	Y	Y	N	N	N	Y
H11	Qr, Ps, Pot, Cs, Ros, Cm, Ca, Liv, Sx	5 (3)	<i>B. sylvaticum, A. maculatum</i>	N	N	Y	Y	Y	N	N	N	Y
H12	Qr, Ros, Cm, Pot, Sx, Ps, Ia	4 (2)	-	N	Y	Y	Y	N	N	N	N	N
H13	Cs, Ps, Qr	3 (1)	<i>A. maculatum</i>	N	Y	N	Y	N	N	N	Y	N
Survey date: 26.06.13												
H14	Qr, Liv, Ros, Rac, Ca, Cm, Ps	5 (3)	-	N	Y	N	N	Y	N	N	Y	N
H15	Cm, Ca, Ros, Liv, Qr, Ps, Fe, Ac	5 (3)	-	N	Y	N	N	Y	Y	N	Y	Y

Hedge No.	Woody Species		Woodland plants	Additional Features							Path/bridleway?	Important hedgerow?
	Species recorded	Mean count from 30m samples (sample size)		Bank/wall?	Gaps <10%	Standard trees	Ditch?	Connections (>4)	Parallel hedge?	Minimum 3 Schedule 2 woodland species?		
H16	Liv, Ps, Ros, Qr, Cm, Sn, Ia, Fe	5 (6)	<i>H. non-scriptus</i>	N	Y	Y	Y	Y	N	N	N	Y
H17	Ps, Qr, Cm, Ros, Fe, Sn	4 (2)	-	N	Y	Y	N	Y	N	N	Y	Y
H18	Sn, Qr, Ps, Cm, Liv, Fe, Ros	4 (3)	-	N	Y	Y	N	Y	N	N	N	N
H19	Qr, Cm	2 (1)	-	N	Y	N	N	N	N	N	N	N
H20	Sn, Ac, Qr, Cm, Um, Ps, Ros	4 (1)	-	N	Y	Y	Y	N	Y	N	N	N
H21	Qr, Cm, Ros, Ps, Sx, Sn	3 (2)	-	N	Y	N	N	N	Y	N	Y	N
H22	Cm, Qr, Ros	3 (1)	-	N	Y	Y	N	N	N	N	N	N
H23	Ps, Ros, Cm, Qr, Ca	2 (1)	-	N	Y	Y	N	N	Y	N	N	N
H24	Ca, Ac, Cm, Qr, Ros, Ps, Fe	6 (1)	-	N	Y	Y	Y	N	N	N	N	Y
H25	Cm, Ps, Fe, Ros, Um, Ac, Qr, Sn, Ca	6 (3)	-	N	Y	Y	Y	Y	Y	N	Y	Y
H26	Ac, Ps, Fe, Sxca, Ca, Ros, Cm	5 (1)	-	N	Y	Y	N	N	N	N	N	N
H27	Ros, Sxca, Cm, Sn, Um, Ps, Fe	6 (2)	-	N	N	Y	N	Y	Y	N	N	Y
H28	Sn, Cm, Ps, Qr, Ros, Cs, Ac	3 (4)	-	Y	N	Y	N	Y	Y	N	Y	N
H29	Ac, Cm, Qr, Ps, Sn, Liv, Fe	5 (3)	-	Y	N	Y	N	Y	Y	N	Y	Y
H30	Cm, Um, Fe, Qr, Ros, Sn	3 (6)	-	N	Y	Y	N	Y	N	N	N	N

## **Appendix EDP 6 Botanical Survey Results: Grasslands**



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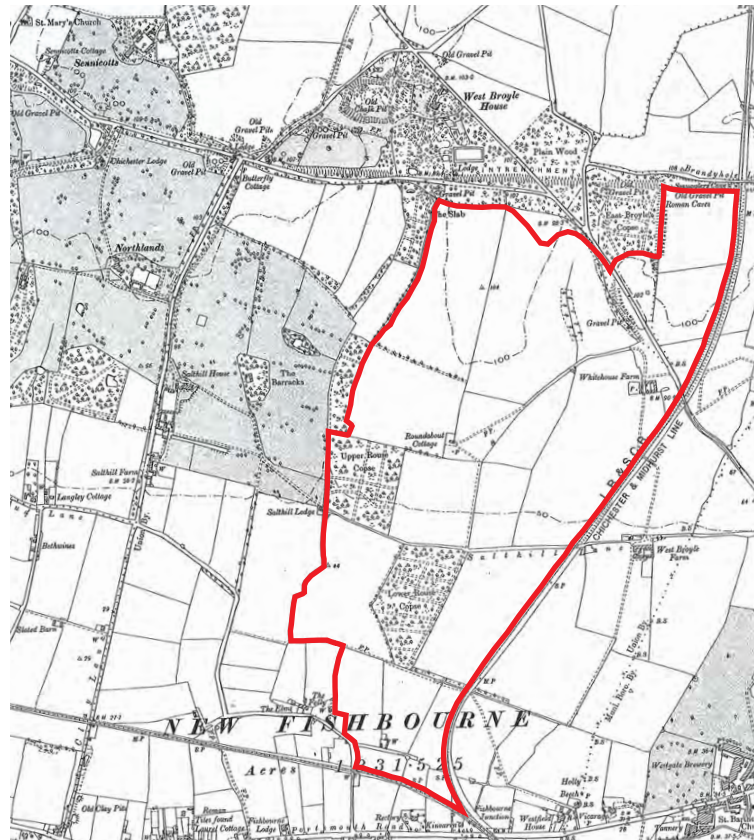
Common Name	Scientific Name	Field Number and DAFOR Scale					
		2	3	4	5	6	8
Common bent	<i>Agrostis capillaris</i>	O	F	O	F	O	F
Creeping bent	<i>Agrostis stolonifera</i>	D	F	F	O	O	F
Marsh foxtail	<i>Alopecurus geniculatus</i>	R				R	
Meadow foxtail	<i>Alopecurus pratensis</i>	R					
False oat-grass	<i>Arrhenatherum elatius</i>	D	A	F	A	A	A
False wood-brome	<i>Brachypodium sylvaticum</i>	R	R	R	R		
Soft brome	<i>Bromus hordaceus</i>		O			R	
Smooth brome	<i>Bromus racemosus</i>	F				R	
Wood small-reed	<i>Calamagrostis epigejos</i>	R /LD					
Crested dog's-tail	<i>Cynosurus cristatus</i>				R		
Cock's-foot	<i>Dactylis glomerata</i>	F	A	F	F	F	F
Wavy hair-grass	<i>Deschampsia flexuosa</i>					O	
Common couch	<i>Elymus repens</i>				R		
Sheep's fescue	<i>Festuca ovina</i>					R	
Red fescue	<i>Festuca rubra</i>	R				O	
Yorkshire fog	<i>Holcus lanatus</i>	D	D	D	D	D	D
Meadow barley	<i>Hordeum secalinum</i>	F					
Perennial rye-grass	<i>Lolium perenne</i>	O		R	R		
Reed canary-grass	<i>Phalaris arundinacea</i>				R		
Timothy	<i>Phleum pratense</i>	R					
Annual meadow-grass	<i>Poa annua</i>					O	
Rough meadow-grass	<i>Poa trivialis</i>	O					F
Marsh horsetail	<i>Equisetum palustre</i>			F / LA	R		
Compact rush	<i>Juncus conglomeratus</i>	R				A	A
Soft rush	<i>Juncus effusus</i>	R				F	
Hard rush	<i>Juncus inflexus</i>	R					
Hairy sedge	<i>Carex hirta</i>	R		O			
Oval sedge	<i>Carex leporina</i>					O	R
False fox sedge	<i>Carex otrubae</i>					R	
Pendulous sedge	<i>Carex pendula</i>						
Yarrow	<i>Achillea millefolium</i>		R				O
Agrimony	<i>Agrimonia eupatoria</i>					R	O
Bugle	<i>Ajuga reptans</i>						O / LF
Fool's water-cress	<i>Apium nodiflorum</i>						
Greater burdock	<i>Arctium lappa</i>		R				
Birch species (whips)	<i>Betula sp.</i>	R				R	

Common Name	Scientific Name	Field Number and DAFOR Scale					
		2	3	4	5	6	8
Hedge bindweed	<i>Calystegia sepium</i>						
Black knapweed	<i>Centaurea nigra</i>					F	R
Common centaury	<i>Centaureum erythrea</i>		R/LF				R
Rosebay	<i>Chamerion angustifolium</i>	R					
Creeping thistle	<i>Cirsium arvense</i>	R	O	R	O	O	R
Marsh thistle	<i>Cirsium plaustre</i>					O	R
Spear thistle	<i>Cirsium vulgare</i>		R	R	R		R
Dogwood	<i>Cornus sanguineus</i>	O					
Beaked hawksbeard	<i>Crepis capillaris</i>		R			F	
Southern marsh orchid	<i>Dactylorhiza praetermissa</i>	R /LO					
Teasel	<i>Dipsacus fullonum</i>		R	R			
American willowherb	<i>Epilobium ciliatum</i>	R					
Great willowherb	<i>Epilobium hirsutum</i>	R		R	R	O	
Hoary willowherb	<i>Epilobium parviflorum</i>	R	R	R	R	R	R
Meadowsweet	<i>Filipendula ulmaria</i>	R					
Ash (seedlings / whips)	<i>Fraxinus excelsior</i>	A	R	O/LA	O	O	O
Hedge bedstraw	<i>Galium mollugo</i>		R				
Cut-leaved cranesbill	<i>Geranium dissectum</i>	R	R		R	R	
Herb benet	<i>Geum urbanum</i>		R				
Ivy	<i>Hedera helix</i>						R
Hogweed	<i>Heracleum sphondylium</i>	O	R	R	R	R	R
Perforate St John's-wort	<i>Hypericum perforatum</i>						
Square-stemmed St John's-wort	<i>Hypericum tetrapterum</i>		R			R	R
Common cat's -ear	<i>Hypochaeris radicata</i>					O	F
Greater bird's-foot trefoil	<i>Lotus pedunculatus</i>	R / LF	O		R	A	A
Purple loosestrife	<i>Lythrum salicaria</i>				R		
Corn mint	<i>Mentha arvensis</i>						O
Hemlock water-dropwort	<i>Oenanthe crocata</i>					R	R
Redleg	<i>Persicaria maculosa</i>					R	
Bristly ox-tongue	<i>Picris echioides</i>	R	O	O/LF			
Greater plantain	<i>Plantago major</i>	O					R
Creeping cinquefoil	<i>Potentilla reptans</i>				R		
Self-heal	<i>Prunella vulgaris</i>	R	O	R	R	R	O
Fleabane	<i>Pulicaria dysenterica</i>	A / LD	F	F	R	A	A

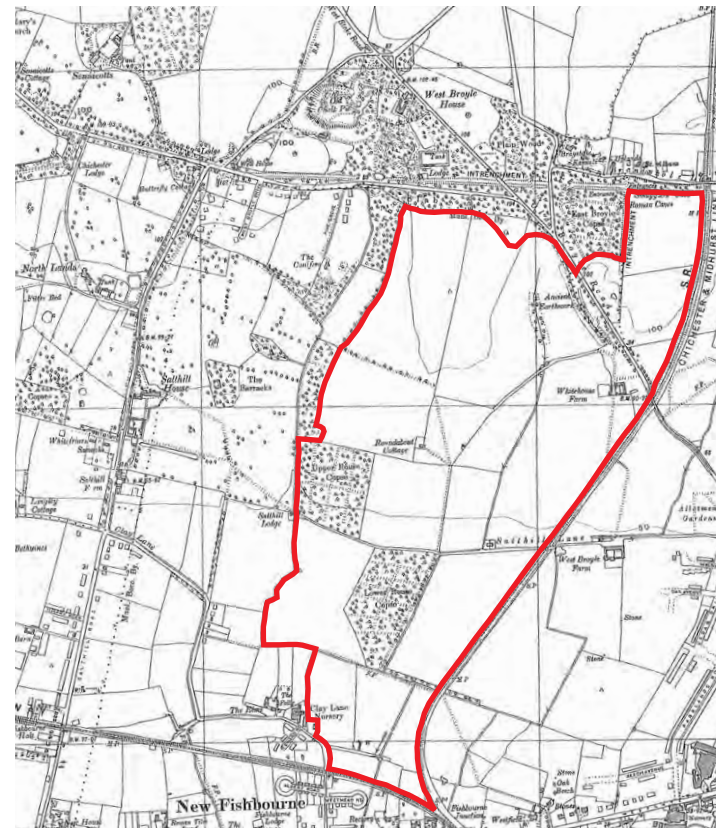
Common Name	Scientific Name	Field Number and DAFOR Scale					
		2	3	4	5	6	8
Turkey oak (seedling)	<i>Quercus cerris</i>			R			
Oak species (whips)	<i>Quercus sp.</i>	R				R	F
Creeping buttercup	<i>Ranunculus repens</i>	O / LF	O	R	R	O	O
Rose species	<i>Rosa sp.</i>	R				R	R
Bramble	<i>Rubus fruticosus agg.</i>	A	O / LF	F	O	F	F
Clustered dock	<i>Rumex conglomeratus</i>	O / LF	O	O	R	F	O
Broad-leaved dock	<i>Rumex obtusifolius</i>					R	R
Wood dock	<i>Rumex sanguineus</i>	R	F	O			
Hybrid willow	<i>Salix x reichardtii</i>	O					A
Grey willow	<i>Salix cinerea</i>	F / LA		R	R	A	A
Figwort	<i>Scrophularia nodosa</i>					R	
Hoary ragwort	<i>Senecio erucifolius</i>	F			R	O	R
Common ragwort	<i>Senecio jacobaea</i>	R	O	F	R	R	R
Bittersweet	<i>Solanum dulcamara</i>						
Lesser stitchwort	<i>Stellaria graminea</i>						O
Dandelion	<i>Taraxacum officinale agg.</i>					R	
Upright hedge parsley	<i>Torilis japonica</i>				R/LF		
Red clover	<i>Trifolium pratense</i>	R				R	
White clover	<i>Trifolium repens</i>	O	O	R	R	O	O
Nettle	<i>Urtica dioica</i>		O	R	O	R	
Heath speedwell	<i>Veronica officinalis</i>	R				R	
Smooth tare	<i>Vicia tetraperma</i>	O			R	F	
Common dog violet	<i>Viola riviniana</i>						R

**Appendix EDP 7**  
**Extracts from the 1899, 1932 and 1977 Revisions of the Ordnance**  
**Survey Map**

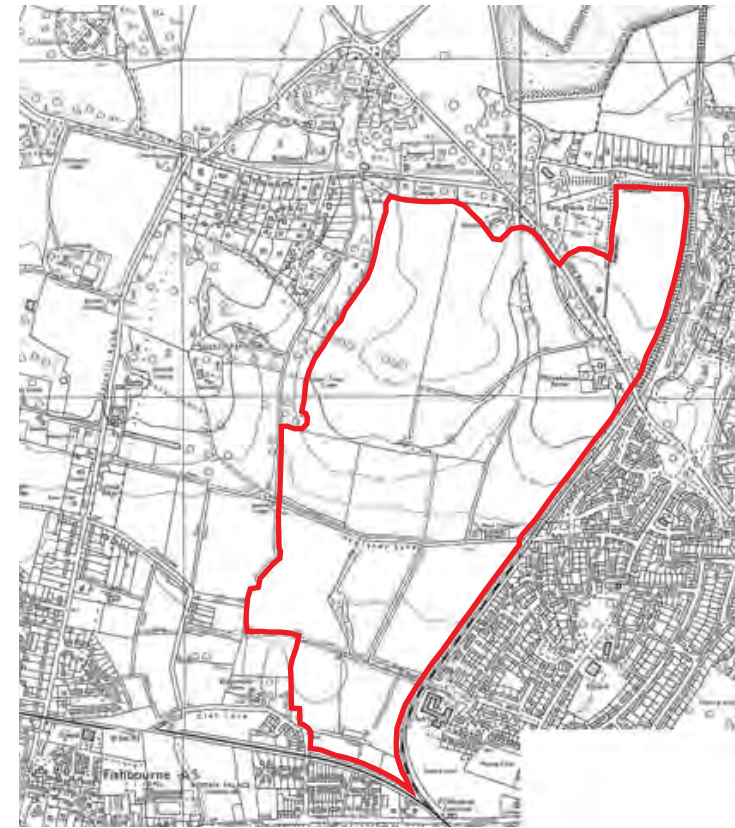
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(1899)

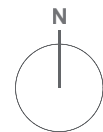


(1932)



(1977)

 Site Boundary



**THE ENVIRONMENTAL DIMENSION PARTNERSHIP**  
 Tithe Barn, Barnsley Park Estate, Barnsley, Cirencester,  
 Gloucestershire, GL7 5EG t 01285 740427 f 01285 740848  
 e info@edp-uk.co.uk www.edp-uk.co.uk

client

**Linden Homes and Miller  
 Strategic Land**

project title

**Land West of Chichester**

drawing title

**Extracts from the 1899, 1932 and 1977  
 Revisions of the Ordnance Survey  
 Map**

date	27 JANUARY 2014	drawn by	TB
drawing number	EDP 129/104	checked	AC
scale	1:10,000 @A3		

## **Appendix EDP 8 Bat Tree Roost Assessment Results**



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Tree No.	Species (age class)	Feature(s) Identified from Initial Inspection from the Ground	Potential	Requirement for Further Survey
<i>Trees surveyed on 9 and 10 July 2012</i>				
T1	Oak (mature)	Hole where limb has fallen on north side of tree at approx. 2.5m above ground.	Low	None
T2	Oak (mature)	Several decayed branches. Small amount of peeling bark and snag end on north of tree at approx. 2m high.	Low	None
T3	Oak (mature)	Several holes formed where small branches have fallen, ivy on south and east side of tree. Located between 3-6m high.	Low	None
T4	Oak (mature)	Holes in branch where branch has sustained some damage, on east side of tree. Third Oak along track.	Medium	Climbing survey
T5	Oak (mature)	Potential hole on west side of tree at the base of a branch. Fourth Oak along track.	Low	None
T6	Oak (mature)	Heavily reduced crown as a result of decay. Some dead limbs with possible splits. Foliage obscures much of trunk. Fifth Oak along track.	Low	None
T7	Oak (mature)	Woodpecker hole located on west side at approx. 1.5m, several splits and cracks in branches on west, south and east of tree.	Medium	Climbing survey
T8	Oak (mature)	Knot hole in branch on south of tree c. 3m high. Peeling bark and possible splits in branch on west of tree. Several dead branches	Medium	Climbing survey
T9	Oak (mature)	Woodpecker hole in branch on West side of tree, approx. 6m high and flaking bark on same branch.	Medium	Climbing survey
T10	Oak (mature)	Several branches showing decay. On west side there are potential cracks where a branch has split at approx. 4m and another at approx. 6m.	Medium	Climbing survey
T11	Dead	Small standing dead tree with peeling bark and splits.	Low	None
T12	Oak (mature)	Mature tree in hedgerow. Possible hole at base of dead branch on south side of tree.	Low	None
T13	Oak (mature)	Large tree with possible hole at base of dead stump on south side at approx. 5m high. Peeling bark along a dead branch on south side at approx. 6m high and decay leading to possible cavity at c. 7m above ground.	Medium	Climbing survey
T14	Oak (mature)	Large tree along lane. On north side, 2 holes where branches have fallen off trunk at c. 3.5m and 4.5m above ground.	Low	None
T15	Dead	Standing dead tree with peeling bark.	Low	None
T16	Oak (mature)	Several woodpecker holes on north trunk.	Medium	Climbing survey

<b>Tree No.</b>	<b>Species (age class)</b>	<b>Feature(s) Identified from Initial Inspection from the Ground</b>	<b>Potential</b>	<b>Requirement for Further Survey</b>
T17	Oak (mature)	Branch over-lying ditch with peeling bark. Other features may be present but vegetation obscures good view of tree.	Low	None
T18	Oak (mature)	Large tree with 2 branches that have large fracture wounds and possible crevices. Not possible to fully see from the ground.	Low	None
T19	Hazel (mature)	Vertical crack in trunk of tree.	Low	None
T20	Sycamore (mature)	Lost limb, potential gaps where tree has lost limb, opening facing upwards (likely to collect rain).	Low	None
T21	Ash (mature)	Lost limb leaving potential entrance/exit hole on east side of tree; another potential entrance/exit hole where a branch has fallen off.	Medium	Climbing survey
T22	Poplar sp.	Vertical crack 10m up tree, tree set 10m in to woodland.	Low	None
T23	Ash	Woodpecker holes (multiple) in Ash tree leaning over field from woodland (5/6m into field).	Medium	Climbing survey
T24	Ash	3 or 4 large holes left where branches have fallen – clear entrance holes – 1 facing NE over field; 1 large crack in branch leaving potential hole.	High	Climbing survey
T25	Oak	Snag end where branch has cracked and fallen off – not good visual on tree.	Low	None
T26	Sweet chestnut	Small dead branches that have twisted causing cracks and gaps where single bats could potentially roost.	Low	None
T27	Beech	Several woodpecker holes. Potential cavity in dead branch.	Medium	Climbing survey
T28	Sweet chestnut	1 Woodpecker hole 2.5m up – appears to have cavity	Low	None
T29	Oak	Hole where branch has fell off – appears to be deep hole Clear entrance/exit over field – facing south.	Medium	Climbing survey
T30	Oak	Potential hole where branch has fallen – facing south-west over field, clear entrance; split in branch where limb has fallen.	Low	None
T31	Oak	2 potential holes where limbs have fallen.	Low	None
T32	Oak	1 potential hole facing south over field.	Low	None
T33	Oak	Bark splitting away from branch on southern side of tree – cracks/splits along branch leaving potential hole.	Low	None
T34	Oak	Hole 8cm/5cm on north side of tree, may lead to larger cavity – 1m high from ground level.	Low	None

Tree No.	Species (age class)	Feature(s) Identified from Initial Inspection from the Ground	Potential	Requirement for Further Survey
T35	Oak	Long split on branch facing NE on tree with peeling bark. Several woodpecker holes.	Medium	Climbing survey
T36	Oak	10cm long hole / 2cm wide – 4m high off ground on north side of tree. South side – hole where limb lost.	Medium	Climbing survey
T37	Oak	Large split on branch facing north east and peeling bark.	Low	None
T38	Oak	Split in branch leaving potential gap – east side.	Low	None
T39	Oak	Split in branch leaving potential access hole – east side, 4-5m above ground.	Low	None
T40	Oak	Potential downwards facing cavity on north side of Oak tree. Cannot get good visual viewing to be sure.	Low	None
T41	Beech	Knot up trunk (4-5m high). Circular shaped hole, facing up. Woodpecker hole, 50cm up, west side of tree facing into arable field.	Low	None
T42	Beech	Woodpecker hole 10m up facing west into arable field.	Medium	Climbing survey
T43	Beech	2 knots, 4m and 5m high Circular holes facing across arable field.	Low	None
T44	Beech	Circular hole c. 5m up facing out over arable field.	Medium	Inspection with endoscope (can access feature with ladder, climbing not required)
T45	Beech	Split in trunk, covered partially by Ivy c. 4-5m up tree.	Low	None
T46	Beech	Split in branch c. 8m high & knot hole c. 5m up hole facing up. Both features on west side of tree.	Low	None
T47	Beech	Knots on main branch. Hole goes into tree, difficult to see in, c. 4m up. 1 knot c. 8m up. Hole on limb overhanging arable field, difficult to see if hole goes in any distance.	Low	None
T48	Beech	Woodpecker hole facing out into arable field c. 3-4m up tree, west facing.	Low	None
T49	Beech	Hole at base of limb where it joins trunk c. 8-10m high facing south. Hole 4-5m up on north side of trunk.	Medium	Climbing survey
T50	Beech	Limb fallen off, hole facing up and west across arable field.	Low	None
T51	Beech	2 small holes, both face west out over arable field c. 5m up tree.	Low	None
T52	Beech	1 hole faces out to west c. 4m up tree.	Low	None
T53	Beech	Hole created by fallen branch c. 4m up facing west out to field. Also peeling bark across main trunk.	Low	None
T54	Oak	Hole in west side of tree where limb has fallen – 5m into woodland.	Low	None

<b>Tree No.</b>	<b>Species (age class)</b>	<b>Feature(s) Identified from Initial Inspection from the Ground</b>	<b>Potential</b>	<b>Requirement for Further Survey</b>
T55	Oak	Woodland edge. 5m high two dead branches, lateral split on 1 of the branches.	Low	None
T56	Holm oak	Located within group of 4 trees in a field. Hole leading into trunk at 2m on south side of tree.	Low	None
T57	Ash	Cavity in a branch on the west side of the tree at 4m. Two knot holes on north and west side at 5-6m.	Medium	Climbing survey
T58	Oak (mature)	Mature tree along track. Snag ended branch on north side of tree with small cracks and possible gaps.	Low	None
T59	Oak (mature)	Peeling bark on underside of dead limb on east side of Oak. Wound in adjacent branch creating holes leading into branch, both at approx. 3.5m. At 6m a large branch has fallen and there are potential roosting features left in the branch stump.	Medium	Climbing survey
T60	Oak (mature)	Small knot hole at 2m on field-side, south of tree.	Medium	Climbing survey
T61	Oak (mature)	Large tree on opposite side of track to previous trees. A lot of dead wood in crown, with areas of peeling bark, splits and cracks in branches all around tree.	Medium	Climbing survey
T62	Oak (mature)	Knot hole on trunk on west side at approx. 4m. Several breaks with possible crevices where bark has split.	Medium	Climbing survey
T63	Oak (mature)	2 split branches, 1 on field side (north) leads to several possible cavities, the other on South-west side with horizontal splits in branch.	Medium	Climbing survey
<i>Trees surveyed on 25 September 2013</i>				
T64	Oak (mature)	Single woodpecker hole (2-4cm diameter) on northern aspect (c. 10m above ground).	Low	None
T65	Oak (mature)	Mature oak standard located within large hay meadow. Peeling bark and snag end on 3 limbs on west side of canopy	Medium	Climbing survey
T66	Oak (mature)	One limb on north side c.10m above ground with outer bark completely lost and longitudinal crack along bottom side. Dense ivy covering most of canopy impairing visual inspection from the ground; tree of sufficient age/maturity to suggest more features may be present.	Low	None

<b>Tree No.</b>	<b>Species (age class)</b>	<b>Feature(s) Identified from Initial Inspection from the Ground</b>	<b>Potential</b>	<b>Requirement for Further Survey</b>
T67	Oak (mature)	Woodpecker hole of 5cm diameter on northern aspect of northern most limb c. 5m above ground; snag end where limb has been lost on north-west aspect of tree c. 7m above ground, remaining part of limb has some peeling bark and small (2-3cm diameter) woodpecker holes on south-west side; snag end and peeling bark where limb lost on west side of tree, 7m above ground, woodpecker hole at base of remaining limb. All features of low-medium potential of use by roosting bats.	Medium	Climbing survey
T68	Oak (mature)	Large vertical hollow on south-east aspect of tree, (10cm diameter, 50cm height) c. 14m above ground; well-worn woodpecker hole (6-7cm diameter) on north-east aspect of tree, c. 8m above ground.	Medium	Climbing survey
T69	Oak (mature)	Snag end on south side of tree with peeling bark below on remainder of limb, open and exposed; tree of sufficient age/maturity to suggest more features may be present.	Low	None
T70	Oak (mature)	Hole left on east side of tree where limb lost, doesn't appear to extend to any depth; tree of sufficient age/maturity to suggest more features may be present.	Low	None
T71	Oak (mature)	Woodpecker hole on north-west aspect of tree, which can be seen from north-east side of tree, c. 6m above ground, 5-6cm diameter; snag end just above, too high to assess potential from ground; well-worn woodpecker hole (3-4cm diameter) on south-east aspect c. 7m above ground.	Low	None
T72	Oak (semi-mature)	No features seen from the ground, but visual examination from the ground impaired by canopy of tree and surrounding trees.	Low	None
T73	Oak (semi-mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None

<b>Tree No.</b>	<b>Species (age class)</b>	<b>Feature(s) Identified from Initial Inspection from the Ground</b>	<b>Potential</b>	<b>Requirement for Further Survey</b>
T74	Oak (semi-mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T75	Oak (semi-mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T76	Oak (semi-mature)	Snag end, upward facing on south side of tree c. 14m above ground, visual inspection from the ground impaired by canopy of tree and surrounding trees.	Low	None
T77	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T78	Oak (mature)	Woodpecker hole (5cm diameter), upward facing on south side of tree c. 8m above ground; two snag ends on south-west side of tree.	Low	None
T79	Oak (semi-mature)	Snag end, vertical crack and peeling bark on north side of tree; vertical crack on south side of tree.	Low	None
T80	Oak (semi-mature)	Three woodpecker holes on south side of tree (4-5cm diameters), large woodpecker hole (8cm diameter) on north side, cluttered.	Medium	Climbing survey
T81	Oak (mature)	No features identified from ground, visual inspection restricted by thick stem ivy over tree.	Low	None
T82	Oak (mature)	No features identified from ground but inspection impaired by ivy and leaf cover in lower canopy.	Low	None
T83	Oak (mature)	Crevice where limb has been lost on north side, c. 4m above ground; vertical cracks on northern sides of limbs on north side where branch has died, probably not deep enough to support roosting bats.	Low	None
T84	Oak (semi-mature)	Downward facing hole (10cm diameter) c. 3m above ground on south-west side of tree, uncluttered; significant deadwood in crown.	Low	None

<b>Tree No.</b>	<b>Species (age class)</b>	<b>Feature(s) Identified from Initial Inspection from the Ground</b>	<b>Potential</b>	<b>Requirement for Further Survey</b>
T85	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T86	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T87	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T88	Ash (mature)	Hole (8cm diameter, 14cm height) where limb has been lost on east side of tree, c. 5m above ground; second hole (6cm diameter) where limb has been lost on south-east side of tree, c. 5m above ground.	Medium	Climbing survey
T89	Oak (mature)	Dense ivy coverage restricting visual assessment, no features seen from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T90	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T91	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T92	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T93	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None



<b>Tree No.</b>	<b>Species (age class)</b>	<b>Feature(s) Identified from Initial Inspection from the Ground</b>	<b>Potential</b>	<b>Requirement for Further Survey</b>
T94	Oak (mature)	No features identified from the ground but tree is of sufficient age/maturity that such potential features may be present in locations not visible from the ground.	Low	None
T95	Sweet chestnut (semi-mature)	Hole beneath where limb has been lost on south-east aspect of tree, c. 8m above ground, uncluttered.	Low	None
T96	Sweet chestnut (semi-mature)	Tree approximately 5m in woodland, with hole where limb has been lost on south side, c. 10m above ground, uncluttered.	Low	None
T97	Sweet chestnut (semi-mature)	Woodpecker hole (4cm diameter, 6cm in height) on south side of tree, c. 7m above ground, uncluttered, facing into arable field.	Low	None
T98	Sweet chestnut (semi-mature)	Woodpecker hole downward facing, cluttered, c. 7m above ground, tree located approximately 5m into woodland.	Low	None
T99	Sweet chestnut (semi-mature)	One small (4cm diameter) woodpecker hole on east side of tree, c. 3m above ground.	Low	None
T100	Oak (mature)	Snag end with vertical cracks and peeling bark in crown visible from east side of tree; potential crevice where main trunk has split into two branches.	Medium	Climbing survey
T101	Oak (mature)	Snag end on east side of tree; thick stemmed ivy; large downward facing crack on branch on south side of tree where limb has cracked.	Medium	Climbing survey
T102	Oak (mature)	Two small woodpecker holes on east side of tree - 6m and 7m above ground; peeling bark on limb extending east from tree.	Low	None
T103	Oak (mature)	Woodpecker hole (5-6cm diameter) on south side of side branch extending west, c. 5m above ground.	Low	None
T104	Oak (mature)	Cracked branch facing upwards on west side c. 4m above ground; snag end facing upwards at c. 10m above ground on south-west side; cracked branch with peeling bark c. 11m above ground on south-west side; some ivy cover on trunk.	Low	None
T105	Oak (semi-mature)	Snag end branch at c. 7m above ground on west side.	Low	None

<b>Tree No.</b>	<b>Species (age class)</b>	<b>Feature(s) Identified from Initial Inspection from the Ground</b>	<b>Potential</b>	<b>Requirement for Further Survey</b>
T106	Oak (mature)	Woodpecker hole on south side of large limb on west side of tree; tree has lost large limb on south side leaving deep vertical fissures/cracks but very open and exposed.	Medium	Climbing survey
T107	Oak (mature)	Two snag ends on west side (5 and 7m above ground); large 6cm diameter woodpecker hole at c. 6m above ground; snag end with deep vertical fissures on north side at c. 5m above ground.	Medium	Climbing survey
T108	Oak (semi-mature)	Snag end with vertical fissures and peeling bark on south-east side.	Low	None
T109	Oak (mature)	Snag end on south-east side of tree; woodpecker hole on north side; sufficient age/maturity to suggest additional features not visible from the ground are present.	Medium	Climbing survey

## **Appendix EDP 9 Bat Transect Activity Results**

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Site: Whitehouse Farm, Chichester

Project Number: EDP 129

Dusk transect survey 28/05/12

Start time: 21:00

Sunset: 21:14

Finish time: 00:00

	Temp (°C)	Cloud Cover (%)	Precipitation	Wind (Beaufort)
<b>Start</b>	22.0	0	Nil	2
<b>Mid</b>		0	Nil	1
<b>Finish</b>		0	Nil	0

Surveyor Name and Transect Number (colour): Grace O'Donovan Transect Route 1 (Purple)

Time	Species	Activity	Walk/Stop Number
21:44	Common pipistrelle	Commuting along hedgerow – single pass	5-4
21:45	Soprano pipistrelle	Foraging along hedgerow – multiple passes	5-4
21:47	Soprano pipistrelle	Commuting along hedgerow – multiple passes	5-4
21:48	Soprano pipistrelle	Commuting along hedgerow – single pass	5-4
21:49	Common pipistrelle	Commuting along hedgerow – multiple passes	5-4
21:50	Common pipistrelle	Foraging along hedgerow – multiple passes	5-4
21:51	Common pipistrelle	Commuting along hedgerow – multiple passes	5-4
21:52	Common pipistrelle	Commuting along hedgerow	5-4
21:53	Common pipistrelle	Foraging along hedgerow – multiple passes	4
21:54	Common pipistrelle	Commuting along hedgerow – single pass	4
21:55	Common pipistrelle	Commuting along hedgerow – multiple passes	4
21:57	Soprano pipistrelle	Commuting along hedgerow – single pass	4-3
22:04	Common pipistrelle	Foraging along hedgerow – single pass	3
22:05	Myotis sp.	Commuting along hedgerow – multiple passes	3
22:06	Myotis sp.	Commuting along hedgerow – single pass	3
22:07	Pipistrelle sp.	Commuting along hedgerow – single pass	3
22:07	Common pipistrelle	Commuting along hedgerow – single pass	3
22:12	Common pipistrelle	Commuting along hedgerow – single pass	3
22:22	Common pipistrelle	Commuting along hedgerow – single pass	3-2
22:23	Common pipistrelle	Commuting along hedgerow – single pass	3-2

<b>Time</b>	<b>Species</b>	<b>Activity</b>	<b>Walk/Stop Number</b>
22:28	Myotis sp.	Commuting along hedgerow – single pass	2
22:30	Common pipistrelle	Commuting along hedgerow – single pass	2
22:31	Myotis sp.	Commuting along hedgerow – single pass	2
22:32	Common pipistrelle	Commuting along hedgerow – multiple passes	2-1
22:34	Myotis sp.	Commuting along hedgerow – multiple passes	2-1
22:36	Soprano pipistrelle	Commuting along hedgerow – multiple passes	2-1
22:38	Soprano pipistrelle	Commuting along hedgerow – single pass	2-1
22:46	Common pipistrelle	Commuting along hedgerow – single pass	12
22:49	Common pipistrelle	Foraging around corner of field – single pass	12
22:51	Common pipistrelle	Commuting along hedgerow – multiple passes	12-11
22:57	Common pipistrelle	Commuting along hedgerow – single pass	11
22:58	Common pipistrelle	Commuting along hedgerow – single pass	11
22:58	Serotine	Commuting along hedgerow – single pass	11
23:00	Common pipistrelle	Commuting along hedgerow – single pass	11
23:03	Soprano pipistrelle	Commuting along hedgerow – single pass	11-10
23:06	Soprano pipistrelle	Commuting along hedgerow – single pass	11
23:07	Common pipistrelle	Commuting along hedgerow – multiple passes	11
23:08	Soprano pipistrelle	Commuting along hedgerow – multiple passes	11
23:09	Soprano pipistrelle	Commuting along hedgerow – multiple passes	11
23:11	Pipistrelle sp.	Commuting – multiple passes	10
23:13	Pipistrelle sp.	Commuting – multiple passes	10
23:13	Pipistrelle sp.	Commuting – multiple passes	10
23:16	Pipistrelle sp.	Commuting – multiple passes	10-9
23:24	Pipistrelle sp.	Commuting – single pass	9
23:25	Pipistrelle sp.	Foraging – multiple passes	9
23:34	Pipistrelle sp.	Commuting – multiple passes	8
23:35	Pipistrelle sp.	Commuting – multiple passes	8
23:36	Soprano pipistrelle	Commuting along hedgerow – multiple passes	8
23:37	Common pipistrelle	Commuting along hedgerow – multiple passes	8
23:37	Common pipistrelle	Foraging along hedgerow – multiple passes	8

Time	Species	Activity	Walk/Stop Number
23:39	Common pipistrelle	Commuting along hedgerow – multiple passes	8

**Surveyor Name and Transect Number (colour): Dominic Price Transect Route 2 (Green)**

Time	Species	Activity	Walk/Stop Number
21.47	45 Pip	Foraging up and down east side of hedgerow	4
22.00	45 Pip x2/3	Lots of Activity	
22.13	55 Pip	Commuting both ways	
22.15	45 Pip	Especially busy on this junction – Appears to be two bats on recording – both 45 Pips	
22.26	45 Pip x1/2	Travelling both way in corner	
22.38	45 Pip x3	Another very busy junction (6) commuting in both directions	6
23.13	45 Pip	Rather infrequent passing	
23.23	45 Pip (2) 55Pip (1)	Activity at junction of trees	
23.28 – 23.33	45 Pip x2	Commuting north - south along hedgerow	
23.36	45 Pip x3	Much activity along this line of trees	
23.47	45 Pip	Commuting north	

**Surveyor Name and Transect Number (colour): Doug Williams Transect Route 3 (Orange)**

Time	Species	Activity	Walk/Stop Number
21:35	Common pipistrelle	Commuting around Oak tree, then flew towards hedgerow	3
21:37	Common pipistrelle	Same bat as above, flew back to way point 4, foraging along track	4
21:44	Common pipistrelle	Foraging along track 4	4b
21.48	Common pipistrelle	Feeding buzzes	4c
21:52	Common pipistrelle	Foraging	5
22.13	Common pipistrelle	Foraging in and around Oak trees	6
22.16	Common pipistrelle	Foraging around Oak tree	6
22.18	Myotis sp.	Commuting alongside tree line	6a
22.20	Soprano pipistrelle	Commuting alongside tree line	6a
22.21	Myotis sp. X 2	Two individuals commuting alongside hedge line then over to neighbouring field	

Time	Species	Activity	Walk/Stop Number
22.28	Common pipistrelle	Foraging	7
22.46	Noctule	Heard not seen	
23.16	Common pipistrelle	Foraging	11
23.38	Common pipistrelle	Foraging	13
23.46	Common pipistrelle	Foraging	13a

**Dusk/dawn transect survey: 30/07/12**

**Start time: 20:40**

**Sunset: 20:51**

**Finish time: 23:20**

	Temp (°C)	Cloud Cover (%)	Precipitation	Wind (Beaufort)
<b>Start</b>	17.0	95	Nil	2-4
<b>Mid</b>	16.0	100	Nil	2-4
<b>Finish</b>				

**Dusk**

**Surveyor Name and Transect Number (colour): James Bird Purple Transect Route 1 (purple)**

Time	Species	Activity	Walk/Stop Number
21:24	Common pipistrelle	Commuting south along boundary on west side of field F12 (approx. 5-6m above ground, 1-2m offset from feature)	3-4
21:27	Common pipistrelle	Heard not seen	4
21:30	Common pipistrelle	Commuting north, foraging along field margin (approx. 3m above ground, 3m offset from feature)	4
21:31	Serotine	Commuting north and headed into woodland (approx. 4m above ground, 3m offset from feature)	4
21:37	Common pipistrelle	Commuting south along west boundary of field F11 (approx. 4m above ground, 3m offset from feature)	4-5
21:40	Pipistrelle sp.	Commuting south	4-5
21:40	Noctule	Heard not seen	4-5
21:44	Myotis sp.	Commuting north out of woodland and then foraging around field corner (approx. 3-4m above ground, 2-3m offset from feature)	4-5
21:50 – 21:54	Myotis sp.	Foraging around field margins, several passes (approx. 1-2m above ground, 3-4m offset from feature)	5
21:56 – 21:57	Myotis sp.	Heard not seen	5-6
21:59	Common pipistrelle	Commuting east along field boundary (approx. 1-2m above ground, 2m offset from feature)	5-6
21:59	Myotis sp.	Commuting east along field boundary (approx. 1-2m above ground, 2m offset from feature)	5-6
22:01	Myotis sp.	Heard not seen	5-6



Time	Species	Activity	Walk/Stop Number
22:04	Common pipistrelle	Heard not seen	5-6
22:05	Myotis sp.	Heard not seen	5-6
22:05	Soprano pipistrelle	Heard not seen	5-6
22:10 – 22:11	Common pipistrelle	Foraging around field margin (approx. 3-4m above ground, 3-4m offset from feature)	6
22:12 – 22:14	Common pipistrelle	Foraging – bats appear to be commuting north west to south east over arable field	6
22:12 – 22:14	Myotis sp.	Foraging – bats appear to be commuting north west to south east over arable field	6
22:21	Pipistrelle sp.	Heard not seen	6-7
22:23	Common pipistrelle X 2	Foraging along east side of field F12, several passes (approx. 2-4m above ground, 2-3m offset from feature)	6-7
22:32	Myotis sp.	Heard not seen	7
22:38	Pipistrelle sp.	Heard not seen	7-8
22:42	Noctule	Heard not seen	8
22:45	Soprano pipistrelle	Commuting south east over field F11 (approx. 5m above ground, 10-12 m offset from feature)	8
22:50	Soprano pipistrelle	Heard not seen	8-9
22:52	Common pipistrelle	Foraging along southern boundary of field F12 (approx. 2-3m above ground, 2-4m offset from feature)	8-9
23:04	Common pipistrelle	Heard not seen	9
23:05	Common pipistrelle	Heard not seen	9-10
23:11	Common pipistrelle	Heard not seen - commuting along field margin	10
23:15	Common pipistrelle	Heard not seen	10-11
23:24	Myotis sp.	Heard not seen	12

## Dawn

**Surveyor Name and Transect Number (colour): James Bird Transect Route 1 (purple)**

Time	Species	Activity	Walk/Stop Number
03:40	Common pipistrelle	Heard not seen	At start
03:41	Myotis sp.	Heard not seen	At start
03:44	Pipistrelle sp.	Social calls	0-1
03:45	Myotis sp.	Heard not seen	0-1
03:49	Soprano pipistrelle	Commuting south to north, foraging briefly before continuing north	1
03:54	Common pipistrelle	Heard not seen	1-2
03:55	Common pipistrelle		1-2
03:58	Myotis sp.	Heard not seen	2

Time	Species	Activity	Walk/Stop Number
04:02	Common pipistrelle	Heard not seen	2
04:04	Soprano pipistrelle	Heard not seen	2-3
04:07	Common pipistrelle	Heard not seen – foraging up and down southern boundary of field F12	2-3
04:14	Common pipistrelle	Heard not seen	3
04:18	Myotis sp.	Heard not seen	3-4
04:20	Common pipistrelle	Heard not seen	4
04:24	Pipistrelle sp.	Heard not seen	4
04:34	Pipistrelle sp.	Heard not seen	5-6
04:37	Common pipistrelle	Heard not seen	5-6
04:39	Noctule	Heard not seen	6
04:50	Myotis sp.	Heard not seen	7
05:05	Pipistrelle sp.	Heard not seen	9
05:15	Myotis sp.	Heard not seen	10
05:19	Noctule	Heard not seen	10

## Dusk

### Surveyor Name and Transect Number (colour): Tom Wigglesworth Transect Route 2 (Green)

Time	Species	Activity	Walk/Stop Number
21:22	Common pipistrelle	Heard not seen	3-4
21:24	Common pipistrelle	Foraging inside derelict building (approx. 2-4m above ground)	3-4
21:30	Soprano pipistrelle	Commuting west to east (approx. 3m above ground, 2m offset from feature)	3-4
21:34	Common pipistrelle	Heard not seen	3-4
21:36	Pip sp.	Heard not seen	4
21:38	Noctule	Heard not seen – foraging closeby	4
21:43	Common pipistrelle	Foraging south to north	4-5
22:04	Common pipistrelle	Heard not seen	5-6
22:06	Common pipistrelle	Heard not seen	5-6
22:09	Common pipistrelle	Foraging south to north (approx. 4m above ground, 2m offset from feature)	5-6
22:10 – 22:11	Common pipistrelle	Foraging (approx. 2-4m above ground, 1-3m offset from feature)	5-6
22:12	Common pipistrelle	Heard not seen – Foraging	6
22:14	Common pipistrelle	Heard not seen – Foraging	6
22:16	Common pipistrelle	Foraging, travelling north to south (approx. 4m above ground, 2m offset from feature)	6
22:21	Soprano pipistrelle	Heard not seen	6-7

Time	Species	Activity	Walk/Stop Number
22:25 - 22:26	Soprano pipistrelle	Foraging beside tree (approx. 2-4m above ground, 1-5m offset from feature)	7
22:27	Common pipistrelle	Heard not seen – foraging	7
22:31 - 22:33	Common pipistrelle	Heard not seen	7-8
22:37	Myotis sp.	Heard not seen	8
22:40	Common pipistrelle	Heard not seen	8
22:41 - 22:42	Common pipistrelle	Heard not seen	8-9
22:43 - 22:44	Common pipistrelle	Heard not seen	8-9
22:45	Common pipistrelle	Heard not seen	8-9
22:47	Common pipistrelle	Heard not seen	9
22:49	Common pipistrelle	Heard not seen	9
22:50 - 22:53	Common pipistrelle	Heard not seen	9
22:54 - 22:58	Common pipistrelle	Continuous foraging activity around trees on east side	9-10
23:01	Soprano pipistrelle	Heard not seen	9-10
23:10 - 23:11	Common pipistrelle	Heard not seen	10-11
23:13	Myotis sp.	Heard not seen	11
23:15	Myotis sp.	Heard not seen	11
23:17	Myotis sp.	Heard not seen	11
23:18	Common pipistrelle	Heard not seen	11-12

### Dawn

Surveyor Name and Transect Number (colour): Tom Wigglesworth Transect Route 2 (Green)

Time	Species	Activity	Walk/Stop Number
03:42	Common pipistrelle	Heard not seen	0-1
03:43 - 03:48	Common pipistrelle	Heard not seen	1
03:49	Common pipistrelle	Heard not seen	1-2
03:50 - 03:53	Common pipistrelle	Heard not seen	1-2

Time	Species	Activity	Walk/Stop Number
03:55 – 03:57	Common pipistrelle	Heard not seen	2
03:59	Myotis sp.	Heard not seen	2
04:05	Pipistrelle sp.	Heard not seen	2-3
04:11	Common pipistrelle	Heard not seen	3
04:18	Myotis sp.	Heard not seen	4
04:22 – 04:23	Soprano pipistrelle	Heard not seen	4
04:24	Common pipistrelle	Heard not seen	4-5
04:26	Soprano pipistrelle	Heard not seen	4-5
04:27	Soprano pipistrelle	Heard not seen	4-5
04:27	Myotis sp.	Heard not seen	4-5
04:41	Soprano pipistrelle	Heard not seen – Foraging	5-6
04:42 – 04:43	Myotis sp.	Foraging	5-6
04:42 – 04:43	Pipistrelle sp.	Foraging	5-6
04:47	Common pipistrelle	Heard not seen	5-6
04:48	Common pipistrelle	Heard not seen	6
04:54	Common pipistrelle	Foraging between tree canopies (approx. 4-6m above ground, 1-2m offset from feature)	6-7
04:59	Common pipistrelle	Heard not seen	6-7
05:01	Common pipistrelle	Heard not seen	7
05:08	Noctule	Heard not seen	7-8

## Dusk

**Surveyor Name and Transect Number (colour): Jane Cole Transect Route 3 (Orange)**

Time	Species	Activity	Walk/Stop Number
21:24	Noctule	Heard not seen – commuting	5
21:26	Noctule	Foraging	5
21:35	Common pipistrelle	Commuting	6
21:40	Common pipistrelle	Commuting along hedgerow	7
21:46	Common pipistrelle	Foraging along hedgerow	7
22:01	Pipistrelle sp.	Foraging	8
22:08	Pipistrelle sp.	Foraging along hedgerow	8
22:27 – 22:28	Noctule	Foraging	9

Time	Species	Activity	Walk/Stop Number
22:27 – 22:28	Myotis sp.	Foraging	9
22:44	Brown Long-Eared bat	Heard distinctly in field but quiet on recording	11
22:49	Noctule	Foraging	11
23:09- 23:11	Myotis sp.	Foraging	13
23:12	Common pipistrelle	Foraging	13
23:20	Myotis sp.	Foraging in derelict barn	

## Dawn

Surveyor Name and Transect Number (colour): Jane Cole Transect Route 3 (Orange)

Time	Species	Activity	Walk/Stop Number
04:05	Pipistrelle sp.	Foraging in woodland	2
04:11	Common pipistrelle	Foraging at mature tree	3
04:19	Soprano pipistrelle		4
04:29	Common pipistrelle	Foraging at mature tree	4
04:37	Pipistrelle sp.	Commuting along hedgerow	5
04:42	Noctule		6
05:11	Noctule		11

## Dusk transect survey: 03/09/12

Start time: 19:29

Sunset: 19:44

Finish time: 21:45

	Temp (°C)	Cloud Cover (%)	Precipitation	Wind (Beaufort)
<b>Start</b>	19.4	50	Nil	1
<b>Mid</b>	16.2	40	Nil	0
<b>Finish</b>	17.3	70	Nil	0

Surveyor Name and Transect Number (colour): Georgia Croxford Transect Route 1 (Purple)

Time	Species	Activity	Walk/Stop Number
20:04	Noctule	Heard not seen	3
20:10	Soprano pipistrelle	Commuting south along hedgerow (approx. 4m above ground, 5m offset from feature)	
20:16	Noctule	Foraging amongst trees	
20:27	Myotis sp.	Heard not seen	
20:29	Myotis sp.	Flew north along boundary (approx. 6m above ground, 4m offset from feature)	
20:33	Myotis sp.	Flew north along boundary (approx. 4m above ground, 7m offset from feature)	
20:34	Myotis sp.	Foraging north to south along hedgerow	

Time	Species	Activity	Walk/Stop Number
20:35	Myotis sp.	Commuting north along boundary (approx. 5m above ground, 6m offset from feature)	
20:36	Myotis sp. X 2	Seen commuting out of woodland, foraging, travelling north (approx. 7m above ground, 1m offset from feature)	
20:38	Myotis sp.	Heard not seen	5
20:39	Myotis sp.	Heard not seen	5
20:45	Pipistrelle sp.	Heard not seen	5
20:47	Noctule	Heard not seen	
20:48	Pipistrelle sp.	Social calls	
20:53	Myotis sp.	Foraging – Heard not seen	
20:57	Myotis sp.	Foraging – Heard not seen	6
21:01	Pipistrelle sp.	Heard not seen - Social calls	6
21:04	Common pipistrelle	Heard not seen	
21:10	Common pipistrelle	Heard not seen	7
21:14	Soprano pipistrelle	Heard not seen	
21:20	Soprano pipistrelle	Heard not seen	8
21:25	Soprano pipistrelle	Heard not seen	
21:28	Pipistrelle sp.	Heard not seen - Social calls	9
21:40	Myotis sp.	Heard not seen	11
21:42	Pipistrelle sp.	Heard not seen	11
21:43	Common pipistrelle	Heard not seen	11
21:46	Pipistrelle sp.	Heard not seen - Social calls	12

**Surveyor Name and Transect Number (colour): Mark Gash Transect Route 2 (green)**

Time	Species	Activity	Walk/Stop Number
20:06	Soprano pipistrelle	Heard not seen – single pass	3
20:11	Soprano pipistrelle	Heard not seen – multiple passes near field past large Oak	3-4
20:14	Soprano pipistrelle	Heard not seen – single pass, same hedgerow	3-4
20:16	Soprano pipistrelle	Single bat at buildings, multiple passes	4
20:24	Myotis sp.	Commuting along hedgerow south of buildings	4-5
20:29	Myotis sp.	Heard not seen	5
20:34	Myotis sp.	Multiple passes	5-6
20:35	Myotis sp.	Multiple passes	5-6
20:39	Myotis sp.	Foraging – multiple passes	5-6
20:41	Myotis sp.	Single pass – Heard not seen	6
20:50	Soprano pipistrelle	Heard not seen	6-7
20:52	Myotis sp.	Single pass – Foraging	7
21:15	Myotis sp.	Single pass – Heard not seen	8
21:18	Myotis sp.	Heard not seen – multiple passes	9-10
21:21	Myotis sp.	Heard not seen	9-10
21:24	Myotis sp.	Multiple passes	9-10
21:29	Serotine	Heard not seen	10

21:35	Common pipistrelle	Heard not seen	10-11
21:42	Pipistrelle sp.	Single pass - Heard not seen	10-11

**Surveyor name and Transect Number (colour) Rob Forbes Transect Route 3 (orange)**

Time	Species	Activity	Walk/Stop Number
20:21	Common pipistrelle	Foraging along track, multiple passes (approx. 2-3m above ground, offset from feature 2-4m)	5
20:22	Common pipistrelle	Foraging along track, multiple passes	5
20:31	Common pipistrelle	Foraging, multiple passes (approx. 3m above ground, 2-3m offset from feature)	5-6
20:34	Common pipistrelle	Foraging over field margins and field (approx. 2-3m above ground)	5-6
20:46	Soprano pipistrelle	Heard not seen	6-7
20:50	Pipistrelle sp.	Heard not seen. Brief call. No recording made.	7
20:54	Common pipistrelle	Heard not seen. Foraging, commuting south along hedgerow, single pass.	7-8
20:58	Common pipistrelle	Heard not seen. Foraging, multiple passes	8
21:02	Pipistrelle sp.	Foraging along hedgerow, single pass	8
21:13	Common pipistrelle	Foraging north along hedgerow	9
21:18	Myotis sp.	Heard not seen. West of gardens	9-10
21:20	Common pipistrelle	Heard not seen – multiple passes	10
21:26	Common pipistrelle	Heard not seen – faint	10-11
21:33	Noctule	Heard not seen	11
21:39	Noctule	Heard not seen – brief and faint	12
21:41	Myotis sp.	Heard not seen - faint	12

**Dusk Transect Survey**

**Date: 29/05/2013**

**Start Time: 20:46**

**Sunset: 21:05**

**Finish time: 22:54**

**Weather Conditions**

	Temp (°C)	Cloud Cover (%)	Precipitation	Wind (Beaufort)
<b>Start</b>	14.0	80	Nil	3
<b>Mid</b>	12.5	80	Nil	2
<b>Finish</b>	12.0	100	Nil	2

**Surveyor Name and Transect Number (colour): James Bird Transect Route 4 (Brown)**

Time	Species	Activity	Walk/Stop Number
		<i>**Equipment failure (settings wrong), data based on surveyor observations**</i>	
2124	Common pipistrelle	Commuting North along tree line. Height above ground 3m, offset from feature 1m.	4-5
2128	Common pipistrelle	Foraging in circles around field corner. Height above ground 4-6m, offset from feature 1-10m.	5
2129	Soprano pipistrelle	Foraging in circles around field corner. Height above ground 4-6m, offset from feature 1-10m.	5
2136	Pipistrellus sp.	Foraging around field corner. Height above ground 1-6m, offset from feature 1-10m.	6
2138	Myotis sp.	Heard not seen, foraging	6
2141	Common pipistrelle	Foraging around field corner, several passes. Height above ground 1-6m, offset from feature 1-10m.	6
2144	Common pipistrelle	Commuting South along hedgerow, then into woodland strip, then several passes along hedge. Height above ground 1-6m, offset from feature 1-3m.	6-7
2146	Common pipistrelle	Several passes North to South along hedgerow. Height above ground 1-4m, offset from feature 3m.	6-7
2149	Pipistrellus sp.	Foraging North to South along hedge, several passes. Height above ground 2-4m, offset from feature 1-4m.	6-7
2152	Pipistrellus sp.	Heard not seen	7
2157	Pipistrellus sp.	Commuting North to South, then South to North along tree line. Height above ground 4m, offset from feature 3m.	7-8
2157	Pipistrellus sp.	Commuting North to South, then South to North along tree line. Height above ground 4m, offset from feature 3m.	7-8
2157	Pipistrellus sp.	Commuting North to South, then South to North along tree line. Height above ground 4m, offset from feature 3m.	7-8
2157-2214	Pipistrellus sp.	Foraging continuously along tree line. Height above ground 1-6m, offset from feature 1-10m.	7-8
2157-2214	Pipistrellus sp.	Foraging continuously along tree line, several passes North to South and into field to forage. Height above ground 1-6m, offset from feature 1-10m.	7-8
2204-2209	Common pipistrelle	Constant feeding buzzes. Height above ground 1-10m, offset from feature 1-10m.	8
2204-2209	Common pipistrelle	Constant feeding buzzes. Height above ground 1-10m, offset from feature 1-10m.	8
2214	Pipistrellus sp.	Heard not seen, faint	9
		<i>**at 2224 noticed that EM3 had stopped recording, restarted recording at 2225**</i>	
2227	Common pipistrelle	Foraging along Newlands Lane, several passes. Height above ground 1-5m, offset from feature 2-6m.	10+
		<i>**Left site at 2242 to drive to northern part of site – no recording until 2247**</i>	
2254	Soprano pipistrelle	Heard not seen	11
2256	Myotis sp.	Heard not seen	11
2257	Common pipistrelle	Heard not seen	11
2259	Common pipistrelle	Heard not seen	11-12
2303	Common pipistrelle	Heard not seen	11-12



Time	Species	Activity	Walk/Stop Number
2303	Common pipistrelle	Heard not seen	11-12
2310	Common pipistrelle	Heard not seen	12
		<i>**Other species identified from recorded files**</i>	
	Myotis sp.	Very brief call, 2 bats	
	Leisler	3 bats	

**Surveyor Name and Transect Number (colour): Ali Wouters, Transect Route 5 (Blue)**

Time	Species	Activity	Walk/Stop Number
		<i>**Equipment failure (only four recordings), data based on surveyor observations**</i>	
20:45	Common pipistrelle	Heard not seen	0-1
20:45	Myotis sp.	Heard not seen	0-1
20:45	Soprano pipistrelle	Heard not seen	0-1
21:26	Common pipistrelle	Foraging in field corner. Height above ground 4-5m, offset from feature 4m.	4-5
21:29	Common pipistrelle	Foraging in field corner. Height above ground 3-6m, offset from feature 1-3m.	4-5
2129	Common pipistrelle	Foraging in field corner. Height above ground 3-6m, offset from feature 1-3m.	4-5
2134	Common pipistrelle	Heard not seen	5
2135	Common pipistrelle	Flying right over tree line. Height above ground 8-10m.	5
2137	Common pipistrelle	Flying along hedge. Height above ground 6-8m, offset from feature 3m.	5-6
2140-2142	Common pipistrelle	Flying around large tree. Height above ground 3-6m, offset from feature 0-3m.	6
2146	Pipistrellus sp.	Heard not seen	6-7
2148	Common pipistrelle	Heard not seen	6-7
2149	Soprano pipistrelle	Heard not seen	6-7
2151	Pipistrellus sp.	Flew through a gap in hedge back into field	6-7
2207	Pipistrellus sp.	Flying in field corner. Height above ground 10m, offset from feature 20m.	8
2212	Pipistrellus sp.	Heard not seen, no recording	8-9
2223	Pipistrellus sp.	Flying over field, heard not seen	9-10
2225	Pipistrellus sp.	Heard not seen	10
2226	Pipistrellus sp.	Heard not seen	10
2229	Pipistrellus sp.	Social call as well	10
2231-2237	Common pipistrelle	Heard not seen, constant activity along boundary	10-11

## Dusk transect survey

Date: 29/07/2013

Start time: 20:45

Sunset: 20:55

Finish time: 22:57

### Weather conditions

	Temp (°C)	Cloud Cover (%)	Precipitation	Wind (Beaufort)
Start	17.3	10	Nil	3-4
Mid	17.0	60	Nil	2-3
Finish	16.2	40	Nil	2-3

### Surveyor name and Transect Number (colour): Richard Pash Transect Route 4 (Brown)

Time	Species	Activity	Walk/Stop Number
2059	Noctule	Heard not seen	12
2138	Common pipistrelle	Heard not seen, distant foraging possibly on Centaurian Way	10-9
2142	Common pipistrelle	Heard not seen, single pass	9
2145	Common pipistrelle	Heard not seen	9
2147	Soprano pipistrelle	Heard not seen	9-8
2149	Common pipistrelle	Foraging along tree line – repeated passes. Height above ground 3-5m, offset from feature 2-3m.	9-8
2149	Soprano pipistrelle	Foraging along tree line – repeated passes. Height above ground 3-5m, offset from feature 2-3m.	9-8
2155	Common pipistrelle	Heard not seen. Single, distant pass	9-8
2157	Common pipistrelle	Heard not seen. Foraging, single pass	8
2201	Common pipistrelle	Foraging along hedgerow. Height above ground 2-4m, offset from feature 2-3m.	8-7
2202	Common pipistrelle	Foraging along hedgerow, two passes. Height above ground 2-3m, offset from feature 2-3m.	8-7
2206	Serotine	Heard not seen, single pass	7
2206	Common pipistrelle	Heard not seen, single pass	7
2210	Serotine	Heard not seen, faint and brief	7-6
2214-2218	Common pipistrelle	Foraging in sheltered field corner, repeated passes. Two pipistrelles chasing – social behaviour and foraging. Height above ground 1-3m, offset from feature 1-8m.	6
2214-2218	Common pipistrelle	Foraging in sheltered field corner, repeated passes. Two pipistrelles chasing – social behaviour and foraging. Height above ground 1-3m, offset from feature 1-8m.	6
2218	Soprano pipistrelle	Heard not seen	6
2220	Common pipistrelle	Single pass along hedgerow. Height above ground 2m, offset from feature 2m.	6-5
2221	Common pipistrelle	Heard not seen	6-5
2222-2226	Common pipistrelle	Foraging in sheltered field corner, repeated passes. Height above ground 2-4m, offset from feature 1-6m.	5
2222-2226	Soprano pipistrelle	Foraging in sheltered field corner, repeated passes. Height above ground 2-4m, offset from feature 1-6m.	5

Time	Species	Activity	Walk/Stop Number
2227	Common pipistrelle	Heard not seen, three passes. Foraging	5-4
2227	Myotis sp.	Heard not seen, single pass on lane	5-4
2229-2232	Common pipistrelle	Heard not seen, foraging. Repeated passes on lane. Height above ground 2-3m, offset from feature 2-3m.	4
2240	Common pipistrelle	Heard not seen, briefly foraging in sheltered field corner.	3-2
2242-2243	Common pipistrelle	Foraging along tree line and beneath canopy. Height above ground 2-3m, offset from feature 1-3m.	3-2
2243	Soprano pipistrelle	Heard not seen	3-2
2246-2249	Common pipistrelle	Foraging up and down hedgerow (sheltered). Height above ground 2-4m, offset from feature 1-3m.	2-1
2251	Myotis sp.	Two passes along hedge and into field. Height above ground 2m, offset from feature 1-5m.	2-1
2251	Serotine	Heard not seen, brief and faint	2-1
2253	Common pipistrelle	Heard not seen. Foraging, repeated passes.	2-1
2254	Common pipistrelle	Heard not seen. Foraging, two passes.	1
2255	Myotis sp.	Single pass	1
2255-2257	Common pipistrelle	Heard not seen	1

**Surveyor name and Transect Number (colour): Nick Jones, Transect Route 5 (Blue)**

Time	Species	Activity	Walk/Stop Number
2122-2124	Soprano pipistrelle	Foraging in corner of field	9-8
2129	Noctule	Heard not seen	8
2140	Soprano pipistrelle	Heard not seen, foraging in corner of field	7-6
2142	Soprano pipistrelle	Heard not seen, foraging in corner of field	7-6
2145	Common pipistrelle	Heard not seen	7-6
2147	Pipistrellus sp.	Heard not seen, no recording	7-6
2149	Soprano pipistrelle	Heard not seen	7-6
2151	Soprano pipistrelle	Heard not seen, flying SW	6
2159	Soprano pipistrelle	Heard not seen	6-5
2208	Common pipistrelle	Heard not seen	4
2209	Common pipistrelle	Heard not seen	4
2212	Serotine	Heard not seen	4-3
2214-2219	Common pipistrelle	Foraging	3
2220-2221	Common pipistrelle	Foraging	3-2
2220-2221	Serotine	Heard not seen	3-2
2220	Myotis sp.	Heard not seen	3-2
2224	Leisler's	Heard not seen	3-2
2224	Common pipistrelle	Heard not seen	3-2
2233	Common pipistrelle	Heard not seen	2
2233-2238	Common pipistrelle	Heard not seen, intermittent activity	2
2237	Myotis sp.	Heard not seen	2
2239	Common pipistrelle	Heard not seen	2-1
2241	Soprano pipistrelle	Heard not seen	2-1
2251	Common pipistrelle	Heard not seen	1-end

## Dawn transect survey

Date: 30/07/2013

Start time: 03:56

Sunrise: 05:26 Finish time: 05:26

### Weather conditions

	Temp (°C)	Cloud Cover (%)	Precipitation	Wind (Beaufort)
Start	16.4	95	Sharp shower at 03:50-03:55	2-3
Finish	16.6	100	Nil	2-3

### Surveyor Name and Transect Number (colour): Richard Pash Transect Route 4 (Brown)

Time	Species	Activity	Walk/Stop Number
		<i>**Equipment failure (no recordings), data based on surveyor observations**</i>	
0423	Common pipistrelle	Heard not seen. Brief call, single pass	11-10
0456	Common pipistrelle	Heard not seen. Brief and faint call	7
0502	Common pipistrelle	Foraging in field corner, repeated passes. Height above ground 3-5m, offset from feature 1-6m.	6
0506	Soprano pipistrelle	Commuting, flying fast and direct to field corner. Height above ground 5m, offset from feature 5m.	5-4

### Surveyor Name and Transect Number/colour: Nick Jones, Transect Route 5 (Blue)

Time	Species	Activity	Walk/Stop Number
0406	Common pipistrelle	Heard not seen	12-11
0408	Common pipistrelle	Heard not seen	11
0410	Common pipistrelle	Commuting NE along hedge	11
0438	Common pipistrelle	High over survey point, commuting South over railway line	7
0438	Common pipistrelle	High over survey point, commuting South over railway line	7
0441	Soprano pipistrelle	Commuting over field	7-6
0443	Common pipistrelle	Heard not seen	7-6
0448	Common pipistrelle	Heard not seen	6
0455	Common pipistrelle	Heard not seen	5-4
0457	Common pipistrelle	Heard not seen	5-4
0458	Common pipistrelle	Heard not seen	4
0504	Common pipistrelle	Heard not seen, no recording	4-3
0505	Common pipistrelle	Heard not seen, no recording	3
0508	Common pipistrelle	Heard not seen, no recording	3

## Dusk transect survey

Date: 24/09/13

Start time: 18:55

Sunset: 18:58

Finish time: 21:04

### Weather conditions

	Temp (°C)	Cloud Cover (%)	Precipitation	Wind (Beaufort)
Start	18.1	30	-	0
Mid	15.1	90	-	0
Finish	16.1	100	-	0

### Surveyor Name and Transect Number (colour): Georgia Croxford, Transect Route 4 (Brown)

Time	Species	Activity	Walk/Stop Number
1929	Soprano pipistrelle	Heard not seen	3-4
1930	Soprano pipistrelle	Same bat as previous, flew north along boundary and into trees	3-4
1934	Soprano pipistrelle	Foraging in field corner	3-4
1934	Common pipistrelle	Foraging in field corner	3-4
1934	<i>Myotis</i> sp.	Foraging in field corner	3-4
1937	<i>Myotis</i> sp.	Flew east along lane	4
1939	Common pipistrelle	Two bats foraging along lane and field corner	4-5
1943	Nathusius' pipistrelle	Heard not seen	4-5
1944	Soprano pipistrelle	Heard not seen	5
1947	Soprano pipistrelle	Heard not seen, with social calls (two bats)	5
1953	Common pipistrelle	Heard not seen	6
1953	<i>Myotis</i> sp.	Heard not seen	6
1953	Noctule	Flew over trees towards west	6
1958	Common pipistrelle	Heard not seen, foraging	6-7
2000	Common pipistrelle	Heard not seen, foraging	6-7
2003-2007	Common pipistrelle	Heard not seen, foraging	7
2010	Common pipistrelle	Heard not seen, two bats	7-8
2011	Common pipistrelle	Heard not seen	8
2012	Common pipistrelle	Heard not seen, two bats	8
2014	Common pipistrelle	Heard not seen, two bats	8
2020	Pipistrelle sp.	Heard not seen	9-10
2026	Common pipistrelle	Heard not seen	9-10
2044	Soprano pipistrelle	Heard not seen, social calls	11
2055	<i>Myotis</i> sp.	Heard not seen	12
2059	Common pipistrelle	Heard not seen, foraging	12-end

### Surveyor Name and Transect Number (colour): James Bird, Transect Route 5 (Blue)

Time	Species	Activity	Walk/Stop Number
1924	Pipistrelle sp.	Heard not seen	3
1929	Noctule	Heard not seen	3
1933	Common pipistrelle	Heard not seen, with social calls	4

1933	Barbastelle	Heard not seen	4
1934	Common pipistrelle	Heard not seen	4
1934	Barbastelle	Heard not seen	4
1936	Common pipistrelle	Heard not seen	4
1939	Common pipistrelle	Commuting west along treeline	4-5
1940	Common pipistrelle	Heard not seen	4-5
1941	Common pipistrelle	Commuting west along treeline	4-5
1942	Common pipistrelle	Same bat as above	4-5
1945	Pipistrelle sp.	Heard not seen	5
1946	Common pipistrelle	Heard not seen	5
1948	Common pipistrelle	Heard not seen	5
1955	Soprano pipistrelle	Heard not seen, foraging around large oak	6
1956	Soprano pipistrelle	Heard not seen, foraging around large oak	6
2001-2002	Soprano pipistrelle	Heard not seen, with social calls	6-7
2021	Common pipistrelle	Heard not seen	8
2022	Common pipistrelle	Heard not seen	8-9
2033	Common pipistrelle	Heard not seen	9-10
2039	Soprano pipistrelle	Heard not seen	9-10
2040	Common pipistrelle	Heard not seen	10
2043	Common pipistrelle	Heard not seen	10
2044	Common pipistrelle	Heard not seen, social calls	10
2047	Common pipistrelle	Foraging along treeline	10-11
2048	Common pipistrelle	Two bats foraging along treeline	10-11
2051	Common pipistrelle	Heard not seen	10-11
2051	Barbastelle	Heard not seen	10-11
2053	Soprano pipistrelle	Heard not seen, social calls	10-11
2100	<i>Myotis</i> sp. (probable Daubenton's)	Heard not seen	11
2107	Noctule	Heard not seen	12

## **Appendix EDP 10**

### **Automated Detector Results**

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2012

June 2012

Anabat I.D.	Location	Date	Species recorded						Grand Total	
			Common pipistrelle	Common pip. feeding buzz	Soprano pipistrelle	Soprano pip. feeding buzz	Pipistrelle sp.	Myotis sp.		Serotine
1	F12 west boundary	22/06/2012	39	14	128	10	2	6		199
		23/06/2012			2					2
		<b>Total</b>	<b>39</b>	<b>14</b>	<b>130</b>	<b>10</b>	<b>2</b>	<b>6</b>		<b>201</b>
2	F15 east boundary	22/06/2012	5							5
		23/06/2012	3							3
		24/06/2012	17		19			10		47
		25/06/2012	23		7			11	1	42
		26/06/2012	8		1			1		10
		<b>Total</b>	<b>56</b>		<b>27</b>			<b>22</b>	<b>1</b>	<b>107</b>
3	F11 east boundary	23/06/2012	4		1					5
		24/06/2012	5		4		1	1		11
		25/06/2012	149	10	38			7		204
		26/06/2012	39	3	4					46
		<b>Total</b>	<b>197</b>	<b>13</b>	<b>47</b>		<b>1</b>	<b>8</b>		<b>266</b>
4	F8 west boundary	22/06/2012	476		42		1	7		527
		23/06/2012	85		15			1		101
		24/06/2012	144		77		5	5		231
		25/06/2012	21		7					28
		26/06/2012	47		6					53
		<b>Total</b>	<b>773</b>		<b>147</b>		<b>6</b>	<b>13</b>		<b>940</b>
5	F10 west	22/06/2012	1011	107	136		14			1268

Anabat I.D.	Location	Date	Species recorded							Grand Total
			Common pipistrelle	Common pip. feeding buzz	Soprano pipistrelle	Soprano pip. feeding buzz	Pipistrelle sp.	Myotis sp.	Serotine	
	boundary	23/06/2012	186	5	12		1			204
		24/06/2012	346		40		5	5		396
		25/06/2012	77		8					85
		<b>Total</b>	<b>1620</b>	<b>112</b>	<b>196</b>		<b>20</b>	<b>5</b>		<b>1953</b>
6	F14 east boundary	23/06/2012	3							3
		24/06/2012	3					4		7
		25/06/2012	43		5		1	8		57
		26/06/2012	3		2			4		9
		<b>Total</b>	<b>52</b>		<b>7</b>		<b>1</b>	<b>16</b>		<b>76</b>
<b>Grand Total</b>			<b>2737</b>	<b>139</b>	<b>554</b>	<b>10</b>	<b>30</b>	<b>70</b>	<b>1</b>	<b>3543</b>

### August 2012

Anabat I.D.	Location	Date	Species recorded									Grand Total
			Common pipistrelle	Soprano pipistrelle	Nathusius' pipistrelle	Myotis sp.	Noctule	Serotine	Leisler's bat	Barbastelle	Long-eared bat	
7	F12 north boundary	-	<i>Anabat failed - no data recorded</i>									
8	F15 south west boundary	13/08/2012	6	3			1		1			11
		14/08/2012	1			2	1	1				5
		15/08/2012	77	37		28	1					143
		16/08/2012		5		4						9
		17/08/2012	5	1		5	1	1				13

Anabat I.D.	Location	Date	Species recorded									Grand Total
			Common pipistrelle	Soprano pipistrelle	Nathusius' pipistrelle	Myotis sp.	Noctule	Serotine	Leisler's bat	Barbastelle	Long-eared bat	
		18/08/2012	5	5					3			13
		19/08/2012	67	8		6			1			82
		<b>Total</b>	<b>161</b>	<b>59</b>		<b>45</b>	<b>4</b>	<b>2</b>	<b>5</b>			<b>276</b>
9	F11 south west boundary	13/08/2012	44			1		2				47
		14/08/2012	8			1		2				11
		15/08/2012	630	8								638
		16/08/2012	47	2				6	1			56
		17/08/2012	9									9
		18/08/2012	7									7
		19/08/2012	29			1						30
		<b>Total</b>	<b>774</b>	<b>10</b>		<b>3</b>		<b>10</b>	<b>1</b>			<b>798</b>
10	F8 east boundary	13/08/2012	30	8		12	2	2				54
		14/08/2012	219	211		174	1	3	1			609
		15/08/2012		4		2						6
		16/08/2012	211	255		369		5				840
		17/08/2012	130	72		38			1			241
		18/08/2012	12	6		5	2	1				26
		19/08/2012	3	9		2						14
		<b>Total</b>	<b>605</b>	<b>565</b>		<b>602</b>	<b>5</b>	<b>11</b>	<b>2</b>			<b>1790</b>
11	F9 north boundary	13/08/2012	54	36		4	9	9	1		1	114
		14/08/2012	66	21		1	1	4	1			94
		15/08/2012	167	38		6	1					212
		16/08/2012	66	41		6	4	6	2	1		126
		17/08/2012	57	17		4	4	14				96

Anabat I.D.	Location	Date	Species recorded									Grand Total
			Common pipistrelle	Soprano pipistrelle	Nathusius' pipistrelle	Myotis sp.	Noctule	Serotine	Leisler's bat	Barbastelle	Long-eared bat	
		18/08/2012	31	30		6	6	7				80
		19/08/2012	65	35	2	5	9	2				118
		<b>Total</b>	<b>506</b>	<b>218</b>	<b>2</b>	<b>32</b>	<b>34</b>	<b>42</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>840</b>
12	F14 north east boundary	13/08/2012	7	10		1	7	1				26
		14/08/2012	122	18		1	3	10	8			162
		15/08/2012	7	5								12
		16/08/2012	344	14		5	2	10	4	1		380
		17/08/2012	33	16		2	1	19	7			78
		18/08/2012	7	1			3	6				17
		19/08/2012	9	2			4	2				17
		<b>Total</b>	<b>529</b>	<b>66</b>		<b>9</b>	<b>20</b>	<b>48</b>	<b>19</b>	<b>1</b>		
<b>Grand Total</b>	<b>2573</b>	<b>918</b>	<b>2</b>	<b>691</b>	<b>63</b>	<b>113</b>	<b>31</b>	<b>2</b>	<b>1</b>		<b>4396</b>	

2013

June 2013

Anabat I.D.	Location	Date	Species recorded								Grand Total	
			Common pipistrelle	Soprano pipistrelle	Pipistrelle sp.	Nathusius' pipistrelle	Myotis sp.	Noctule	Serotine	Leisler's bat		Barbastelle
13	F18 east boundary	25/06/2013	3	1								4
		26/06/2013	3	4								7
		27/06/2013	2	1			2					5
		28/06/2013	2					1				3

Anabat I.D.	Location	Date	Species recorded									Grand Total
			Common pipistrelle	Soprano pipistrelle	Pipistrelle sp.	Nathusius' pipistrelle	Myotis sp.	Noctule	Serotine	Leisler's bat	Barbastelle	
		29/06/2013	5					2	1			8
		30/06/2013	16	5			1					22
		<b>Total</b>	<b>31</b>	<b>11</b>			<b>3</b>	<b>3</b>	<b>1</b>			<b>49</b>
14	F6 west boundary	25/06/2013	114	22			7	8				151
		26/06/2013	93	38		1	44	62		2	1	241
		27/06/2013	493	187			84	23				787
		28/06/2013	368	459			68	13	2	5		915
		29/06/2013	97	70			81	22	1			271
		30/06/2013	84	18			33	14				149
		<b>Total</b>	<b>1249</b>	<b>794</b>		<b>1</b>	<b>317</b>	<b>142</b>	<b>3</b>	<b>7</b>	<b>1</b>	<b>2514</b>
15	F1 south boundary	25/06/2013	11	2			2					15
		26/06/2013	19	7			4		1			31
		27/06/2013	36	8			4	2				50
		28/06/2013	105	1	2		2					110
		29/06/2013	66	1			3					70
		30/06/2013	126	4	3							133
		<b>Total</b>	<b>363</b>	<b>23</b>	<b>5</b>		<b>15</b>	<b>2</b>	<b>1</b>			<b>409</b>
16	F2 south boundary	25/06/2013	306	5			2	3		4		320
		26/06/2013	129				3	9				141
		27/06/2013	195	7			6	17				225
		28/06/2013	192	9			15	5				221
		29/06/2013	172	3			3	7	1			186
		30/06/2013	94	5			4	9				112
		<b>Total</b>	<b>1088</b>	<b>29</b>			<b>33</b>	<b>50</b>	<b>1</b>	<b>4</b>		<b>1205</b>

Anabat I.D.	Location	Date	Species recorded									Grand Total
			Common pipistrelle	Soprano pipistrelle	Pipistrelle sp.	Nathusius' pipistrelle	Myotis sp.	Noctule	Serotine	Leisler's bat	Barbastelle	
		<b>Grand Total</b>	<b>2731</b>	<b>857</b>	<b>5</b>	<b>1</b>	<b>368</b>	<b>197</b>	<b>6</b>	<b>11</b>	<b>1</b>	<b>4177</b>

### August 2013

Anabat I.D.	Location	Date	Species recorded									Grand Total
			Common pipistrelle	Soprano pipistrelle	Pipistrelle sp.	Nathusius' pipistrelle	Myotis sp.	Noctule	Serotine	Leisler's bat	Barbastelle	
17	F18 east boundary	05/08/2013	41	38			2	2	1			84
		06/08/2013	83	16		1	1	1	1	1		104
		07/08/2013	95	15	3		4	1		2		120
		08/08/2013	41	9			2	1	1			54
		09/08/2013	64	11			3					78
		10/08/2013	125	19			4	2	2	1		153
		11/08/2013	174	30		1	1	2		1		209
		<b>Total</b>	<b>623</b>	<b>138</b>	<b>3</b>	<b>2</b>	<b>17</b>	<b>9</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>802</b>
18	F1 east boundary	05/08/2013	18	11				5	1	1		36
		06/08/2013	25	7				1	1		2	36
		07/08/2013	25	10			1	3	1	1		41
		08/08/2013	21	28				3				52
		09/08/2013	21	11						1		33
		10/08/2013	21	9				1	1	2		34
		11/08/2013	27	18			1			6		52
		<b>Total</b>	<b>158</b>	<b>94</b>			<b>2</b>	<b>13</b>	<b>4</b>	<b>11</b>	<b>2</b>	<b>284</b>

Anabat I.D.	Location	Date	Species recorded								Grand Total	
			Common pipistrelle	Soprano pipistrelle	Pipistrelle sp.	Nathusius' pipistrelle	Myotis sp.	Noctule	Serotine	Leisler's bat		Barbastelle
19	F2 west boundary	05/08/2013	334	122			24		6	2		488
		06/08/2013	24	26			14	1				65
		07/08/2013	28	15			12	1		1		57
		08/08/2013	160	92			33	1	1			287
		09/08/2013	90	31			30	3	1	1		156
		10/08/2013	77	92		2	34	1	2	1		209
		11/08/2013	77	55		2	26	1		4		165
		<b>Total</b>	<b>790</b>	<b>433</b>		<b>4</b>	<b>173</b>	<b>8</b>	<b>10</b>	<b>9</b>		<b>1427</b>
20	F3 west boundary	05/08/2013	2				2	4				8
		06/08/2013	7	3			3			1		14
		07/08/2013	15	3			4					22
		08/08/2013	8	7				1				16
		09/08/2013	7	6			2					15
		10/08/2013	10	5								15
		11/08/2013	5	3			4	1		1		14
		<b>Total</b>	<b>54</b>	<b>27</b>			<b>15</b>	<b>6</b>		<b>2</b>		<b>104</b>
<b>Grand Total</b>	<b>1625</b>	<b>692</b>	<b>3</b>	<b>6</b>	<b>207</b>	<b>36</b>	<b>19</b>	<b>27</b>	<b>2</b>	<b>2617</b>		

**Appendix EDP 11**  
**National and county status of bird species recorded during the**  
**Breeding Bird Surveys**



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## National and county status of bird species recorded during the BBS

Species	Schedule 1	UK BAP	UK Conservation Status	UK Conservation Status Criteria	Sussex Notable Bird Species (criteria in parentheses)	County Status
Mallard ( <i>Anas platyrhynchos</i> )	-	-	Amber Status	Moderate decline in the UK non-breeding population size (of between 25-50%), over 25 years, in addition to a moderate decline in the UK non-breeding population size since the first BoCC review, starting in 1969.	-	<i>Common resident and winter visitor.</i>
Grey partridge ( <i>Perdix perdix</i> )	-	✓	Red Status	Severe decline in the UK breeding population size (of more than 50%), over 25 years, in addition to a severe decline in the UK breeding population size since the first BoCC review, starting in 1969.  Species of European Conservation Concern	✓ (positive breeding status; March – August records)	<i>Scarce resident; much declined but benefiting locally through conservation effort.</i>
Pheasant ( <i>Phasianus colchicus</i> )	-	-	No Status	-	-	<i>Very common introduced resident. Population augmented annually by captive-bred stock.</i>
Little egret ( <i>Egretta garzetta</i> )	-	-	Amber Status	At least 50% of the UK breeding population is found in 10 or fewer sites.	✓ (confirmed breeding records and recognised roosts)	<i>Formerly rare, but has bred since 2001 and is a scarce and increasing resident and probably scarce autumn visitor; status as winter visitor uncertain.</i>
Grey Heron ( <i>Ardea cinerea</i> )	-	-	Green Status	-	✓ (confirmed breeding records)	<i>Fairly common resident.</i>
Sparrowhawk ( <i>Accipiter nisus</i> )	-	-	Green Status	-	-	<i>Common resident and passage migrant.</i>
Common buzzard ( <i>Buteo buteo</i> )	-	-	Green Status	-	-	<i>Fairly common and increasing resident and probably scarce passage migrant.</i>
Kestrel ( <i>Falco tinnunculus</i> )	-	-	Amber Status	Species of European Conservation Concern	-	<i>Fairly common resident and passage migrant.</i>
Black-headed gull ( <i>Chroicocephalus ridibundus</i> )	-	-	Amber Status	Moderate decline in the UK non-breeding population size (of more than 25% but less than 50%), over 25 years, with at least 20% of the European non-breeding population found in the UK.	-	<i>Common breeding species and very common to abundant winter visitor and passage migrant.</i>
Lesser Black-backed gull ( <i>Larus fuscus</i> )	-	-	Amber Status	At least 50% of the UK breeding population is found in 10 or fewer sites, and, at least 20% of the European breeding population is found in the UK.	-	<i>Fairly common passage migrant and winter visitor; scarce (mainly immature) in summer and scarce breeder.</i>
Herring gull ( <i>Larus argentatus</i> )	-	✓	Red Status	Severe decline in the UK breeding population size, of more than 50%, since the first BoCC review, starting in 1969.  Severe decline in the UK non-breeding population size, of more than 50%, over 25 years.  At least 20% of the European non-breeding population is found in the UK.	-	<i>Very common resident; status uncertain as passage migrant; winter visitor.</i>
Stock dove ( <i>Columba oenas</i> )	-	-	Amber Status	At least 20% of the European breeding population is found in the UK.	-	<i>Common resident and possible winter visitor.</i>
Woodpigeon ( <i>Columba palumbus</i> )	-	-	Green Status	-	-	<i>Abundant resident and winter visitor.</i>
Collared dove ( <i>Streptopelia decaocto</i> )	-	-	Green Status	-	-	<i>Very common resident.</i>
Swift	-	-	Amber Status	Moderate decline in the UK breeding population size (of more than 25% but less than 50%), over	✓	<i>Common summer visitor and passage migrant.</i>

## National and county status of bird species recorded during the BBS

Species	Schedule 1	UK BAP	UK Conservation Status	UK Conservation Status Criteria	Sussex Notable Bird Species (criteria in parentheses)	County Status
( <i>Apus apus</i> )				25 years	(confirmed and probably breeding records)	
Green woodpecker ( <i>Picus viridis</i> )	-	-	Amber Status	Species of European Conservation Concern	-	Fairly common or common resident.
Great Spotted Woodpecker ( <i>Dendrocopus major</i> )	-	-	Green Status	-	-	Common resident.
Magpie ( <i>Pica pica</i> )	-	-	Green Status	-	-	Very common resident.
Jay ( <i>Garrulus glandarius</i> )	-	-	Green Status	-	-	Very common resident.
Jackdaw ( <i>Corvus monedula</i> )	-	-	Green Status	-	-	Very common resident.
Rook ( <i>Corvus frugilegus</i> )	-	-	Green Status	-	-	Very common resident.
Carrion crow ( <i>Corvus corone</i> )	-	-	Green Status	-	-	Very common resident.
Goldcrest ( <i>Regulus regulus</i> )	-	-	Green Status	-	-	Very common breeding resident, common passage migrant and winter visitor.
Blue tit ( <i>Cyanistes caeruleus</i> )	-	-	Green Status	-	-	Abundant resident.
Great tit ( <i>Parus major</i> )	-	-	Green Status	-	-	Abundant resident.
Coal tit ( <i>Periparus ater</i> )	-	-	Green Status	-	-	Very common resident.
Skylark ( <i>Alauda arvensis</i> )	-	✓	Red Status	Severe decline in the UK breeding population size (of more than 50%), over 25 years. Species of European Conservation Concern.	-	Very common but declining resident, and probably common passage migrant and winter visitor.
Swallow ( <i>Hirundo rustica</i> )	-	-	Amber Status	Species of European Conservation Concern.	✓ (confirmed and probably breeding records)	Common summer visitor and abundant passage migrant.
Long-tailed tit ( <i>Aegithalos caudatus</i> )	-	-	Green Status	-	-	Very common resident.
Chiffchaff ( <i>Phylloscopus collybita</i> )	-	-	Green Status	-	-	Very common summer visitor and passage migrant; small numbers winter.
Blackcap ( <i>Sylvia atricapilla</i> )	-	-	Green Status	-	-	Very common summer visitor and passage migrant; small numbers winter.
Garden warbler ( <i>Sylvia borin</i> )	-	-	Green Status	-	-	Common summer visitor and passage migrant.

## National and county status of bird species recorded during the BBS

Species	Schedule 1	UK BAP	UK Conservation Status	UK Conservation Status Criteria	Sussex Notable Bird Species (criteria in parentheses)	County Status
Lesser whitethroat ( <i>Sylvia curruca</i> )	-	-	Green Status	-	-	Fairly common summer visitor and passage migrant.
Common whitethroat ( <i>Sylvia communis</i> )	-	-	Amber Status	Moderate decline in the UK breeding population size (of between 25-50%) since the first BoCC review, starting in 1969.	-	Very common summer visitor and passage migrant.
Nuthatch ( <i>Sitta europaea</i> )	-	-	Green Status	-	-	Common resident.
Treecreeper ( <i>Certhia familiaris</i> )	-	-	Green Status	-	-	Common resident.
Wren ( <i>Troglodytes troglodytes</i> )	-	-	Green Status	-	-	Abundant resident.
Starling ( <i>Sturnus vulgaris</i> )	-	✓	Red Status	Severe decline in the UK breeding population size (of more than 50%), over 25 years, in addition to a severe decline in the UK breeding population size since the first BoCC review, starting in 1969.  Species of European Conservation Concern.	-	Common but declining resident, and very common to abundant winter visitor
Blackbird ( <i>Turdus merula</i> )	-	-	Green Status	-	-	Abundant breeding resident; very common or abundant winter visitor; status uncertain as passage migrant
Song thrush ( <i>Turdus philomelos</i> )	-	✓	Red Status	Severe decline in the UK breeding population size, of more than 50%, since the first BoCC review, starting in 1969.	-	Very common but decreasing resident and partial migrant; common passage migrant and winter visitor
Mistle thrush ( <i>Turdus viscivorus</i> )	-	-	Amber List	Moderate decline in the UK breeding population size (of between 25-50%), over 25 years, in addition to a moderate decline in the UK breeding population size since the first BoCC review, starting in 1969.	-	Common resident and partial migrant.
Robin ( <i>Erithacus rubecula</i> )	-	-	Green Status	-	-	Abundant resident; probably common passage migrant, mainly in autumn; status uncertain as winter visitor
Dunnock ( <i>Prunella modularis</i> )	-	✓	Amber Status	Moderate decline in the UK breeding population size (of between 25-50%) since the first BoCC review, starting in 1969.	-	Very common resident.
House sparrow ( <i>Passer domesticus</i> )	-	✓	Red Status	Severe decline in the UK breeding population size (of more than 50%), over 25 years, in addition to a severe decline in the UK breeding population size since the first BoCC review, starting in 1969.  Species of European Conservation Concern	-	Very common but possibly declining resident.
Chaffinch ( <i>Fringilla coelebs</i> )	-	-	Green Status	-	-	Abundant resident, and probably very common passage migrant and winter visitor.
Greenfinch ( <i>Carduelis chloris</i> )	-	-	Green Status	-	-	Very common resident, and possibly fairly common passage migrant and scarce winter visitor.
Goldfinch ( <i>Carduelis carduelis</i> )	-	-	Green Status	-	-	Probably fairly common resident, common summer visitor and passage migrant and fairly common winter visitor.

## National and county status of bird species recorded during the BBS

Species	Schedule 1	UK BAP	UK Conservation Status	UK Conservation Status Criteria	Sussex Notable Bird Species (criteria in parentheses)	County Status
Linnet ( <i>Carduelis cannabina</i> )	-	✓	Red Status	Severe decline in the UK breeding population size, of more than 50%, since the first BoCC review, starting in 1969.  Species of European Conservation Concern	-	<i>Common but decreasing resident and partial migrant.</i>
Bullfinch ( <i>Pyrrhula pyrrhula</i> )	-	✓	Amber Status	Moderate decline in the UK breeding population size (of between 25-50%), over 25 years, in addition to a moderate decline in the UK breeding population size since the first BoCC review, starting in 1969.	-	<i>Fairly common or common resident.</i>
Yellowhammer ( <i>Emberiza citrinella</i> )	-	✓	Red Status	Severe decline in the UK breeding population size (of more than 50%), over 25 years, in addition to a severe decline in the UK breeding population size since the first BoCC review, starting in 1969.	-	<i>Fairly common resident.</i>
Reed bunting ( <i>Emberiza schoeniclus</i> )	-	✓	Amber Status	Moderate decline in the UK breeding population size, of between 25-50%, since the first BoCC review, starting in 1969.	-	<i>Fairly common resident, passage migrant and winter visitor.</i>

### Notes:

#### UK Conservation Status and Criteria

All data gained from: Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD (2009) Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 102, pp296-341.

Green list criteria: All regularly occurring species that do not qualify under any of the red or amber criteria are green listed. The green list also includes those species listed as recovering from 'Historical Decline' in the last review that have continued to recover and do not qualify under any of the other criteria.

Red and amber-listed criteria: as stated within the table

#### Sussex Notable Bird Species

Sussex Biodiversity Records Centre (date unknown). *Sussex Notable Bird List* <<http://sxbrc.org.uk/data-requests/notable-bird-species-list.pdf>> [accessed 02/01/14]

#### County Status

All information, where in italics or specifically referenced, gained from: Sussex Ornithological Society (2012). *The Sussex Bird Report No.64 2011*. Sussex Ornithological Society.

## **Appendix EDP 12**

### **Great Crested Newt Habitat Suitability Index Results**

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Suitability Index	Criteria	Definition	Possible Score	1	2	3	4	5	6	7	8
SI <sub>1</sub>	Geographic Location	Zone A - optimal	1	1	1	1	1	1	1	Dry	1
		Zone B - marginal	0.5								
		Zone C - unsuitable	0.01								
SI <sub>2</sub>	Pond Area	Pond surface area to the nearest 50m <sup>2</sup>	*	0.9	0.4	0.2	1	0.05	0.05	Dry	0.9
SI <sub>3</sub>	Permanence	Never Dries	0.9	0.9	0.9	1	1	0.1	0.1	Dry	0.9
		Rarely dries (Dries no more than 2/10 years or in drought only)	1								
		Sometimes dries (Dries between 3/10 years to most years)	0.5								
		Dries annually	0.1								
SI <sub>4</sub>	Water Quality	Good (abundant & diverse invertebrate community)	1	1	1	0.33	0.67	0.01	0.01	Dry	0.67
		Moderate (moderate invertebrate community)	0.67								
		Poor (low invertebrate diversity, few submerged plants)	0.33								
		Bad (clearly polluted, no submerged plants)	0.01								
SI <sub>5</sub>	Shade	% shade of pond perimeter to at least 1m from the shore	*	0.6	1	1	0.6	0.2	0.2	Dry	1
SI <sub>6</sub>	Waterfowl	Absent (no evidence of waterfowl, excluding moorhen)	1	0.67	0.67	0.67	0.01	1	1	Dry	0.01
		Minor (waterfowl present, though little impact)	0.67								
		Major (severe impact of waterfowl)	0.01								
SI <sub>7</sub>	Fish	Absent (no records of fish stocking and no fish seen)	1	0.01	0.01	0.33	0.33	1	1	Dry	0.67
		Possible (no evidence of fish, but conditions suggest presence)	0.67								
		Minor (small numbers of crucian carp, goldfish or stickleback)	0.33								
		Major (dense populations of fish present)	0.01								
SI <sub>8</sub>	Pond Count	No. ponds within 1 km of survey pond not separated by major barriers and divided by 3.14	*	0.66	0.66	0.66	0.66	0.1	1	Dry	1
SI <sub>9</sub>	Terrestrial	Good (extensive habitat offering good opportunities for foraging and shelter surrounding pond)	1	1	1	1	1	1	0.67	Dry	0.67
		Moderate (habitat offering opportunities for foraging and shelter, but not extensive and does not completely surround pond)	0.67								
		Poor (habitat with poor structure, offering limited opportunities for foraging and shelter)	0.33								
		None (No suitable habitat around pond)	0.01								
SI <sub>10</sub>	Macrophytes	% pond surface area occupied by macrophyte cover (excluding duckweed) and submerged plants reaching the surface	*	0.85	0.5	0.4	0.35	0.3	0.3	Dry	1
<b>HSI Score = (SI<sub>1</sub>*SI<sub>2</sub>*SI<sub>3</sub>*SI<sub>4</sub>*SI<sub>5</sub>*SI<sub>6</sub>*SI<sub>7</sub>*SI<sub>8</sub>*SI<sub>9</sub>*SI<sub>10</sub>)<sup>1/10</sup></b>				0.53	0.49	0.57	0.45	0.22	0.27	Dry	0.55
<b>Pond Suitability (&lt;0.5 = poor; 0.5-0.59 = below average; 0.6-0.69 = average; 0.7-0.79 = good; &gt;0.8 = excellent)</b>				Below average	Poor	Below average	Poor	Poor	Poor	Dry	Below average

\* Score extrapolated from graphs within Oldham et al. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155



## **Appendix EDP 13 Great Crested Newt Survey Results**

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Visit No. and Date	Pond No.	No. Traps	Trapping Results				Torching Results					GCN Eggs found?	Other pertinent info.
			SN		PN		SN		PN		Lis. sp.		
			M	F	M	F	M	F	M	F			
1 15/04/13	1	10	0	1	1	1	4	0	0	0	3	None	Breeding toads, mallards, moorhens and stickleback
	2	15	0	0	2	4	11	0	2	0	0	None	>500 breeding toads, mallards, moorhens and >20 stickleback
	3	10	6	0	0	0	5	1	0	0	4	None	>50 breeding toads
	4	14	1	0	7	2	1	0	2	7	0	None	Mallards, moorhens, frogs and toads
	5	8	0	0	0	0	0	0	0	0	1	None	Pond drying up
	6	5	0	0	0	0	0	0	0	0	0	None	Pond drying up
2 22/04/13	1	23	1	0	2	4	0	0	0	0	27	None	Fish present
	2	20	0	0	1	5	0	0	0	2	4	None	Fish present
	3	14	3	0	0	0	2	1	0	0	0	None	-
	4	19	0	0	0	0	0	0	0	0	0	None	Moorhen and mallard
	5	8	0	0	0	0	0	0	0	0	0	None	-
	6	5	0	0	0	0	0	0	0	0	0	None	Very shallow
3 13/05/13	1	23	0	0	0	0	1	1	0	2	2	None	Fish present
	2	20	0	0	10	2	4	2	10	4	6	None	Lots of minnows and sticklebacks
	3	14	0	0	0	1	0	0	0	0	0	None	Mallards present
	4	20	0	0	0	0	0	0	0	0	0	None	Bats foraging over pond
	5	4	0	0	0	0	0	0	0	0	0	None	Mostly dried up
	6	0	Pond dried up										
4 28/05/13	1	27	0	0	0	0	0	0	1	1	0	None	Water scorpion, stonefly nymph, great diving beetle.
	2	20	0	0	3	0	0	0	14	11	0	None	>1000 tadpoles (frog and toad), >100 stickleback
	3	13	4	2	5	4	0	3	0	6	31	None	SN/PN eggs found. Tadpoles
	4	20	0	0	0	0	0	0	0	2	0	None	Moorhen and stickleback
	5	0	Pond dried up										
	6	0	Pond dried up										

**N.B.** SN refers to smooth newt (*Lissotriton vulgaris*), PN refers to palmate newt (*Lissotriton helveticus*), Lis. sp. (*Lissotriton* sp.) refers to a newt that was not seen well enough to determine exact species or sex.

## **Appendix EDP 14 Reptile Survey Results**

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## 2012 Reptile Survey Results

- Values denote number of individuals recorded during survey

Survey Compartment	Species	Survey Date					
		30/07/2012	30/08/2012	03/09/2012	10/09/2012	20/09/2012	27/09/2012
A	Common lizard		-		-	-	-
	Slow worm		18	8	1	-	3
	Grass snake		4	4	4	-	1
B	Common lizard		-	-		-	-
	Slow worm		-	-	-	2	1
	Grass snake		-	-	-	-	-
C	Common lizard		-	-	-	-	-
	Slow worm		5	10	1	-	-
	Grass snake	1 (incidental observation)		-	-	-	-
D	Common lizard		-	2	1	1	2
	Slow worm		10	15	5	2	7
	Grass snake		-	3	6	3	8
E	Common lizard		-	-	-	-	-
	Slow worm		18	6	9	6	1
	Grass snake		6	3	2	2	-
F	Common lizard		-	-	-	-	-
	Slow worm		5	14	2	1	-
	Grass snake		1	1	3	-	-

## 2013 Reptile Survey Results

- Values denote number of individuals recorded during survey

Survey Compartment	Species	Survey Date							
		29/05/2013	25/06/2013	10/07/2013	24/07/2013	22/08/2013	11/09/2013	18/09/2013	25/09/2013
G	Common lizard		15	0	3	0	13	11	7
	Slow worm		2	2	2	3	12	5	9
	Grass snake		0	0	1	0	3	4	2
H	Common lizard		1	0	0	2	3	1	6
	Slow worm		12	2	1	1	4	7	5
	Grass snake		0	0	0	0	0	0	0
I	Common lizard		0	0	0	0	2	0	0
	Slow worm		15	16	4	10	19	10	6
	Grass snake		0	0	0	0	0	0	0
J	Common lizard		1	0	0	0	0	0	0
	Slow worm		13	0	0	0	0	0	0
	Grass snake		0	0	0	0	0	0	0
K	Common lizard	8	2	1	0	0	7	5	
	Slow worm	7	14	10	3	3	3	0	
	Grass snake	0	1	0	1	0	1	0	
L	Common lizard	0	0	0	0	0	3	3	0
	Slow worm	0	0	0	0	0	0	0	0
	Grass snake	0	0	0	0	0	0	0	0
M	Common lizard	1	0	0	0	0	12	13	
	Slow worm	9	19	16	6	19	17	8	
	Grass snake	0	0	0	0	0	0	0	
N	Common lizard	-	5	0	0	0	0	4	
	Slow worm	-	7	8	1	0	2	3	

Survey Compartment	Species	Survey Date							
		29/05/2013	25/06/2013	10/07/2013	24/07/2013	22/08/2013	11/09/2013	18/09/2013	25/09/2013
O	Grass snake	-	2	0	0	0	0	0	
	Common lizard	8	0	0	0	0	4	25	
	Slow worm	18	53	18	2	31	11	6	
P	Grass snake	0	1	0	0	1	0	0	
	Common lizard	1	0	0	0	0	0	5	
	Slow worm	5	17	3	1	6	2	3	
Q	Grass snake	0	0	0	0	0	0	0	
	Common lizard	0	0	0	0	0	5	10	
	Slow worm	6	11	7	1	3	2	9	
	Grass snake	0	1	0	0	0	0	0	



**Appendix EDP 15**  
**Policy 50 – Development and Disturbance of Birds in Chichester and**  
**Langstone Harbours SPA**

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# Land at Whitehouse Farm, Chichester

## Policy 50 – Development and Disturbance of Birds in Chichester and Langstone Harbours SPA

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### 1.0 Introduction

- 1.1 CDC has adopted the recommendations of the Solent Disturbance and Mitigation Project in seeking to address the indirect effects of new residential development on the Chichester and Langstone Harbours SPA. In principle, the West of Chichester Consortium welcomes this pragmatic approach to the amelioration of potentially adverse effects, but recommends that consideration is given to the evidence set out in this paper.
- 1.2 The comments below relate to Policy 50 as set out in the Chichester Local Plan: Key Policies, Pre-submission, 2014-2029. Specifically the recommended amended Policy and supporting text contained at Appendix 1 of that suite of documents.
- 1.3 The paper considers:
- the history of the recreational disturbance issue;
  - the gamut of studies (both pre-existing and post-2006) development to address the concern with respect to new residential development *inter alia* around Chichester;
  - mitigation measures proposed in respect of residential development proposals at Graylingwell and Shopwyke;
  - emerging planning policy; and
  - conclusions which should be considered with respect to the West of Chichester site.

### 2.0 Background

- 2.1 The Appropriate Assessment (AA) of the 2006 Core Strategy raised concerns that any future increase in the population of Chichester may increase use of the Public Rights of Way (PROW) network around Chichester Harbour; in turn causing increased disturbance to its designated SPA bird interest.
- 2.2 The AA was received by Chichester District Council at the end of September 2006 and issued to its statutory consultees. Following a period of discussion, the AA was made publicly available on the Examination in Public (EiP) website in mid November 2006.

2.3 The AA identified two sources of potential recreational disturbance to the special interest features of the Chichester and Langstone Harbours SPA and Ramsar site. These were:

- i) Water-based recreation. This was identified as a cause of local migration of bird species up the harbour channels to less visited and less navigable wetland areas; and
- ii) Land based recreation from walkers and their dogs. The AA identified that disturbance was principally related to the walker's silhouette, when walking along the tops of flood defences, where the PROW are located. In terms of access density (patterns of visitor pressure), the AA acknowledged that evidence was sparse at that time.

2.4 The AA noted that levels of visitor access for water-based leisure activities (point (i)) could be adequately controlled by the Chichester Harbour Conservancy (CHC).

2.5 In relation to land based recreation, the AA stated that:

*"The heads of the channels in Chichester Harbour are amongst the most sensitive areas from the point of view of nature conservation and are used for drinking and bathing by waders and wildfowl. Increased development is likely to lead to increased visitor numbers and dog walkers. Fishbourne Channel is narrow with raised footpaths on either side. Increased numbers along the raised footpaths by Fishbourne Channel will lead to increased disturbance to feeding, drinking and bathing birds. Most serious problem for wintering populations."*

2.6 Dog walkers were cited as a specific problem "...disturbance is related more to walkers and their dogs passing along the shoreline" (para 7.6.15).

2.7 Following consultation with the CHC in 2007, EDP was able to identify only a single source of survey data, published by the Conservancy (Chichester Harbour Conservancy (2003) Survey of Land Based Recreation), which relates to "behaviour, perceptions, interests and future aspirations of users" but "did not attempt to estimate visitor numbers" (objectives, page 1).

2.8 This survey of land-based recreation involved 500 questionnaires conducted over the summer and winter period 2002/3. This survey found that:

- i) 69% of visitors arrived by car, 23% on foot and 5% by bicycle;
- ii) 46% of visitors came from within five miles (8.05 km) and 68% from within ten miles (16.1 km); and
- iii) 69% came to walk; 19% to walk a dog.

2.9 Measurements of the frequency of visits excluded consideration of permanent or full time residents, which clearly form a significant proportion of the use of the SPA, and are relevant to any consideration in connection with additional population in Chichester.

2.10 Following the previous 2006/2007 Examination in Public, the Inspector's Report on the Examination into the Core Strategy Development Plan Document (7 June 2007) identified within Paragraph 3.14 that:

*"The AA notes the absence of visitor data that would allow a conclusive assessment of the effect of development south-west of Chichester on the SPA, but in view of the proximity of this location to the SPA it recommends that large-scale housing development to the south-west of Chichester should be avoided in order to reduce the risk of disturbance to birds using the Fishbourne Channel part of the SPA. It also concludes that additional analysis would be required to provide adequate evidence that there would be no adverse effect on the integrity of the SPA from proposals to develop to the west of Chichester and at Fishbourne, two other potential locations included in the policy."*

2.11 In response to the original AA, Natural England noted that:

*"Natural England believes there will be an effect on the SPA and Ramsar site from development to the SW of Chichester [then] current development proposals. However, as the AA of the core strategy points out, there is currently not enough data to accurately predict the level of impact that might occur. Therefore, without the necessary evidence, Natural England cannot say that the development will definitely have, or to what scale it will have, an adverse effect on the integrity of the SPA and Ramsar site or whether these effects could be mitigated. Natural England accept that a more detailed AA is required in order to determine this."*

2.12 In their letter of 15 November 2006 to Alan Law, in respect of the Natural England response to the AA, CDC noted that disturbance is an acknowledged concern. However, in her advice note to the Inquiry (14 December 2006), the Inspector for the Chichester District LDF Submission Core Strategy noted a number of areas of significant concern including:

*"...the absence from the Core Strategy of a clear indication as to the location intended for large-scale development at Chichester. My concerns are compounded by ... uncertainties as to the effects of development at several of the identified locations on the Chichester and Langstone Harbours Special Protection Area and Ramsar site. These [ecological and flood risk issues] raise questions as to the suitability of some of the identified broad locations which would have to be resolved when site allocations Development Plan Documents are prepared..."*

2.13 Commencing in 2008, EDP was commissioned to undertake a combination of studies that were intended to identify whether additional development west of Chichester

would likely have an adverse effect on the integrity of the Chichester and Langstone Harbours SPA.

- 2.14 These comprised a desktop ornithological study and the results of a recreational survey, which together provided a factual overview of (a) the current status and distribution of Annex I and II birds within the Bosham and Fishbourne Channel sections of the Chichester and Langstone Harbours SPA, and (b) the nature of land-based recreation within the same study area, respectively. The resulting study reports were issued to both CDC and Natural England in the spring of 2009:
- Ornithological Desk Study (**EDP129\_03a\_050309**); and
  - Report on Findings of Recreation Survey (**EDP129\_06a\_060309**).
- 2.15 The findings of the study were subsequently the subject of discussions between EDP and Natural England (28 May 2009).
- 2.16 These studies focus on the potential for development West of Chichester and set out a package of mitigation measures, which would form part of that development in order to address any potential land-based recreational impacts on the Chichester and Langstone Harbours SPA/Ramsar Site pursuant to Regulation 48 of the Conservation (Natural Habitats &c.) Regulations 1994.
- 2.17 It was made clear to CDC and Natural England at that time that there was an intention to consider an application for residential development to the West of Chichester.

### **3.0 Graylingwell Hospital**

- 3.1 At the 28 May 2009 meeting with Natural England (see above), EDP also raised the issue of the Agency's removal of its objection to a scheme proposed at Graylingwell Hospital, Chichester (Planning Application CC/08/03533/OUT).
- 3.2 This development comprised approximately 743 residential dwellings, a care home, school, commercial buildings, community buildings, and an energy centre with associated vehicular access, open space provision and landscape planting.
- 3.3 Natural England had originally objected (October 2008) to the planning application on account of the potential adverse effects that the scheme would have on European designated sites (including disturbance arising from increased recreational activity), but amended its position following submission of further information by the applicant.
- 3.4 This further information recognised the potential for indirect impacts on qualifying features of the Chichester and Langstone Harbours SPA and, following advice from Natural England, proposed a suite of mitigation measures, which were to be

implemented alongside the Graylingwell Hospital development in order to mitigate them. This suite of measures included the following elements:

- i) Provision of 7.7ha of Suitable Alternative Natural Green Space (SANGS). The amount of SANGS necessary was calculated on the basis of:
    - a. The average number of residents per household within the Chichester area (2.15); and
    - b. Partial provision of open space against the SANGS guidance of 8ha per 1,000 populations (ultimately achieving 6ha per 1000).
  - ii) A commuted sum (£262,500) towards the wardening of the Chichester and Langstone Harbours SPA/Ramsar Site. The proposal allowed funding for the employment of one full time and one part time warden for a period of 5 years from the first occupation of the 156<sup>th</sup> dwelling and originated from a range of measures set out in a letter from Natural England in February 2009;
  - iii) A one-off payment of (£30,000) to Chichester District Council (CDC) to be spent on educational initiatives highlighting the sensitivities of the SPA/Ramsar Site and seeking public support and awareness. No information was provided as to how this sum was calculated; and
  - iv) A one-off payment (£30,000) to CDC for the purposes of interpretation, including signage and interpretation boards particularly, to be erected at key locations such as car parks. Again, no information was provided as to the means employed in the calculation of this figure.
- 3.5 The suite of measures was secured by a legal agreement (s106); with the applicant concluding (and Natural England agreeing) that, subject to their provision, the Graylingwell proposals would generate no significant adverse impacts on Chichester and Langstone Harbours SPA/Ramsar Site or the Solent Maritime SAC. It was also concluded that there would be no significant adverse impacts on the Pagham Harbour SPA/Ramsar Site located further east along the coastal plain.
- 3.6 There is no information on the planning file or other evidence which would suggest that Natural England was provided with any additional evidence to demonstrate that the mitigation measures would be effective and deliverable. At the 28 May 2009 meeting with EDP, officers of Natural England confirmed that, in their view, only the wardening would provide effective mitigation. In terms of the other three measures, Natural England considered:
- i) The SANGS provision was too small to attract significant numbers of visitors, and that residents were still likely to visit the coast because "*it is the coast*" (on the basis that coastal landscapes cannot be recreated in terrestrial locations); and

- ii) The education and interpretation contributions were “nice to have” measures, rather than being effective mitigation measures.

#### **4.0 Shopwhyke Lakes**

4.1 A further major planning application for residential development at Shopwhyke Lakes has been the subject of scrutiny through the planning system (Planning Application 11/05283/OUT).

4.2 This development proposal comprises 500 residential dwellings, a care village, employment redevelopment and associated access, open space provision and landscape planting.

4.3 In respect of the proposals, Natural England provided early advice through the scoping (EIA Regulations) exercise:

*“In order to conclude no likely significant effect, the application would need to include suitable avoidance or mitigation measures as part of the proposals. Without these measures, an appropriate assessment of the [recreational pressure and disturbance] effects would be required in order for the Council to assess whether the development would have an adverse effect upon the integrity of either the SPA orland SAC.”*

4.4 The applicant provided an assessment of potential effects based on the same evidence and method of calculating mitigation as was employed for the Graylingwell Hospital. In this instance, a suite of measures was proposed including:

- i) Provision of 8.12ha of Suitable Alternative Natural Green Space (SANGS). The amount of SANGS necessary was calculated on the basis of;
  - a. The average number of residents per household within the Chichester area (2.15); and
  - b. Partial provision of open space against the SANGS guidance of 8ha per 1,000 population (ultimately achieving 7.4ha per 1000).
- ii) Provision of two new footbridges linking the site with East Chichester and further countryside;
- iii) Provision of information packs to new residents and leaflets to local people promoting the new SANGS area; and
- iv) A one off payment of £5,000 secured towards measures set out within the Interim Policy Statement (later amended to £25,000).



- 4.5 The suite of measures has yet to be secured, although Natural England has not objected to the scheme, stating (in their letter of 6 March 2012) that:  
*“Natural England has no objection to the proposed development. Due to the nature of the open space being provided within the application and the evidence provided by the applicant’s consultants, it is considered that the impact of increased recreational pressure on the Harbour could be satisfactorily avoided.”*
- 4.6 Again, Natural England was not provided with any additional evidence to demonstrate that the mitigation measures would be *“effective and deliverable”*<sup>1</sup>; although relies on the principles agreed in the Interim Policy Statement.

## 5.0 West of Chichester

- 5.1 With regard to the ‘West of Chichester’ area, the West of Chichester Consortium has accepted since an early stage that, the proposed residential development of that site (as per Graylingwell Hospital and Shopwhyke Lakes) could, if unmitigated, potentially result in an adverse effect on the Chichester and Langstone Harbours SPA/Ramsar Site due *inter alia* to an increase in recreational pressure.
- 5.2 EDP’s recreational study (**EDP129\_06a\_060309**) identified a number of measures, which could form part of a tailored mitigation package for residential development at Whitehouse Farm. Natural England confirmed that, although a firm package of measures was not available for comment, the following might be considered acceptable:

1. Provision of Suitable Alternative Natural Green Space (SANGS)

This would be calculated on the basis of average household size within the Chichester area pro-rata 8ha per 1,000 population.

It was accepted that the extent and quality of land available for delivery west of Chichester provides the opportunity for significant areas of open space for both existing and future residents.

The areas available for consideration comprise natural landforms and woodland, containing, and adjacent to, areas designated for their wildlife value – and contain excellent uninterrupted connections to the wider countryside and South Downs. In particular, that the site offers considerably more than a normal urban park, with high quality and distinct natural characteristics and an open aspect across the City and adjoining rural areas with the potential to instil a strong sense of ‘escape’ from the urban area. The available area is unconstrained by existing uses and would be capable of fulfilling all of the practical requirements of ‘Suitable Alternative Natural Green Space’ as defined by Natural England;

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<sup>1</sup> Interim Planning Statement

2. A commuted sum towards the wardening or other management of the Chichester and Langstone Harbours SPA/Ramsar Site

At the time it was suggested that the appropriate sum could be agreed pro-rata with agreements made in respect of Graylingwell; although this situation may have progressed since the publication of the Interim Policy statement as evidenced through the level of contribution required in respect of the Shopwhyke Lakes proposals;

3. On-site (SPA) measures which could, if supported by the wardening role and in combination with (but not exclusive of) other measures, offer the potential to confer direct benefit to the reduction of bird disturbance effects within the SPA:

- a. Additional reed planting: Selective strengthening of the beneficial effects of screening, at important bird roosts, through the provision of additional tall reed planting;
- b. Strengthened hedgerow planting: Strengthening of the beneficial effects of screening, and physical separation, along selected recreational routes and other locations in the proximity of important bird roosts through the provision of additional planting;
- c. Provision of additional footpath links around Bosham and Fishbourne Channels: The provision of additional PROW, to create alternative routes (especially circular links) located in the vicinity of important bird roosting areas, but away from the shore and identified areas of sensitivity; and
- d. Review of agricultural land management practices in non-SPA areas adjacent to SPA: The availability of feeding grounds was identified as a key factor affecting the distribution of wildfowl and waders. Changes to land management practices (potentially achieved through land acquisition) could be made to encourage use of these fields for foraging. This would increase the availability of suitable habitat for key bird species.

4. A one-off payment to Chichester District Council (CDC) to be spent on educational initiatives highlighting the sensitivities of the SPA/Ramsar Site and seeking public support and awareness.

As well as initiatives to promote public awareness of the pressures facing the SPA, educational initiatives could include provision of information to new and existing residents on the western perimeter of Chichester. Information packs, containing leaflets, could be provided to raise awareness and promote the use of the PROW network in open countryside to the north and west of the proposed development; and provision of circular links and walks of variable length; and

5. A one-off payment to CDC for the purposes of interpretation, including signage and interpretation boards particularly at key locations such as car parks

EDP has previously raised the prospect of improved signage and interpretation on the SPA to explain to residents and visitors alike the importance of the area to birds, and particularly how users can modify their behaviour and actions; including the use of alternative footpaths; to assist in their conservation at sensitive times of the year.

## **6.0 Evidence base and the Solent Disturbance and Mitigation Project**

- 6.1 Further to the findings of the 2006 AA of the Core Strategy, additional research relating to bird disturbance, which was commissioned by the Solent Forum and supported by Natural England, has been underway.
- 6.2 The Solent Disturbance and Mitigation Project was initiated in 2008 by the Solent Forum, which includes representatives and support from Natural England and CDC. Its aim is to respond to potential impacts on the European Sites within the Solent arising from recreational pressure derived from new (and existing) residential areas *"within reach of the Solent Shores"*.
- 6.3 The Project has undertaken a number of bird and visitor surveys intended to inform an assessment of impacts arising from recreational activities on the conservation status of certain internationally protected bird species.
- 6.4 The Project is now complete following the publication of a suggested avoidance and mitigation strategy (Phase III).
- 6.5 EDP has reviewed the available reports arising from the Solent Disturbance and Mitigation project. These include the:
- i) Solent Disturbance & Mitigation Project Phase II – Results of Bird Disturbance Fieldwork 2009/10 (Liley *et al* 2010);
  - ii) Solent Disturbance & Mitigation Project Phase II – On-site Visitor Survey Results from the Solent Region (Fearnley *et al* 2010);
  - iii) Solent Disturbance & Mitigation Project Phase II – Results of the Solent Household Survey (Fearnley *et al* 2011);
  - iv) Solent Disturbance & Mitigation Project Phase II – Predicting the Impact of Human Disturbance on Overwintering Birds in the Solent (Stillman *et al* 2012); and

- v) The Solent Disturbance and Mitigation Project Phase III: Towards an Avoidance and Mitigation Strategy (Liley & Tildesley 2013).

6.6 The following broad conclusions are of relevance to the assessment of likely 'impacts' arising from the proposed development west of Chichester:

Bird disturbance (Liley et al 2010)

- Only 1 in 5 recreational 'events' results in disturbance;
- Whilst dog-walking causes some 47% of the 'major flights' recorded, it is also the single most common activity within the study area (i.e. 41%);
- The highest levels of disturbance to birds do not necessarily occur at the busiest 'sites';
- The likelihood of disturbance is strongly influenced by the distance from the source;
- Bird densities are highest where visitor numbers are low, indicating that disturbance does influence bird distribution; and
- Birds respond to water-based recreational disturbance at greater distances than would be the case on land and also tend to be displaced further.

6.7 Liley et al (2010) is noteworthy, as the report's authors urge caution in the interpretation and application of the data, by adding the following comment:

*"The data are not necessarily relevant at a local level, for example in assessing the impacts of a single development, and we urge caution in interpreting the results in this way."*

6.8 In other words, whilst the results of the project might be of value in the development of regional or sub-regional housing policy, it is unlikely to work at a local level in assisting the local authority to identify strategic residential allocations in Chichester District, where Fearnley et al (2010) have demonstrated that any of the proposed growth options around Chichester could have an effect on the Chichester and Langstone Harbours SPA through the generation of recreational disturbance.

6.9 For the most part, the bird disturbance work only provides data to reinforce conclusions which had been reached through previous research; i.e. that most recreational events do not cause 'disturbance' and that the nature and location of the activity is key.

6.10 Equally, and as reported previously by EDP, whilst walking and dog-walking give rise to the greatest number of disturbance 'events', this at least in part reflects the fact that they are far and away the most common activities in these sorts of environments.

- 6.11 In the same way, it is well known that the busiest sites do not necessarily have the greatest levels of disturbance, which may in part reflect the fact that the most sensitive species and most sensitive individuals within the least sensitive species will quite possibly just avoid such locations altogether.
- 6.12 Nevertheless, Liley *et al* 2010 is useful by virtue of the fact that it does finally suggest that recreational disturbance of wintering waterfowl can be mitigated, and the report intimates what forms of actions could be employed to offset likely effects.
- 6.13 In that regard, the research from 2009-10 does benefit the promotion of the Whitehouse Farm site over other growth options in Chichester District because, whilst they could all provide 'off-site' mitigation (i.e. the 'stick'), such as wardens, signage, barriers etc, it is the only potential development site which can also provide on-site measures (i.e. the 'carrot') through the provision of a substantial country park.

#### Recreational behaviour – On-site Visitor Survey (Fearnley *et al* 2010)

- Within the entirety of the Solent survey area, the Fishbourne Channel experiences comparatively low levels of recreation;
  - Across the survey area, 51% of visitors arrived at their chosen location by car and 46% 'on foot'; and
  - However, at Fishbourne Channel, the closest of the 20 survey stations to Chichester, the imbalance in transport modes was even more pronounced; so that 67% arrived by car and just 29% on foot.
- 6.14 Across the entirety of the survey area (Solent survey area), the 2009-10 survey demonstrated that half of all visitors who arrived at their chosen recreational location on foot lived within 0.7 kilometres of it. In contrast, half of those who arrived by car lived in excess of 4.0 kilometres away.
- 6.15 So, at Fishbourne Channel for instance, it was found that people travelled distances of up to 8.0 kilometres to reach their chosen place of recreation, based on their postcodes. This is confirmed by the supporting data, which show that the median distance travelled to reach Fishbourne Channel was 3.4 kilometres by car and just 700 metres on foot.
- 6.16 In other words, two-thirds of visitors to the nearest section of the SPA to Chichester drive there, rather than walk, and it is equally as likely that they will have come from at least four kilometres away and not the immediate area.

#### Recreational behaviour – Household Survey (Fearnley *et al* 2011)

- The majority (i.e. 52%) of coastal visits are made by car, with just 39% being made on foot;

- Half (i.e. 52%) of households which visit the coast by car travel less than 9.5km to reach their chosen destination;
  - Half (i.e. 50%) of households which visit the coast on foot travel less than 1.0km to reach their chosen destination;
  - In general terms, the further away people live from the coast the fewer times they will visit it for recreation;
  - By far the most popular attractive feature when households choose their coastal location to visit is '*sea views and attractive scenery*', followed by '*feeling safe*', an '*ability to do a range of different walks/routes*' and the '*presence of wildlife*';
  - No less than 93% of respondents with dogs stated that the two features of coastal areas which are listed most frequently as being strongly attractive or attractive are '*short travel time from home*' & '*sea views and attractive scenery*'; and
  - Sections of coast with greater formal car parking capacity generally appear to receive a higher number of annual visits in comparison with sections with lower formal car parking capacity.
- 6.17 These results correlate with EDP's own research (**EDP129\_10a\_200710**), which was set out in a report entitled "*Land at Whitehouse Farm, Chichester, West Sussex: Recreational Survey to Inform Scott Wilson's Appropriate Assessment of Chichester District Council's Core Strategy*" and completed in July 2010.
- 6.18 In that research, a postcode-based survey of Chichester residents, employing a methodology agreed in advance with Natural England, was undertaken by a contractor specialising in residential surveys (Count On Us).
- 6.19 The results demonstrated that there was virtually no difference between the four areas of proposed strategic growth for Chichester in terms of (1) the proportion of people visiting the SPA and (2) the means of access used.
- 6.20 In other words, in all four areas; to the west, south, east and north east of Chichester; between 65% and 67% of respondents access the SPA by car and just 20% to 23% do so on foot. This bears remarkably close correlation with the CHC's own survey data, which dates back to 2002/2003 (see paragraph 2.7 above).
- 6.21 The primacy of the motor car as the means of transport used for accessing the Chichester and Langstone Harbours SPA is also reflected in the pre-eminence of Birdham Marina and Canal for recreational activity, as confirmed by EDP's own study.

- 6.22 The study, which addressed all four areas proposed for strategic growth around Chichester, identified that, whilst 15% to 21% of respondents visited Fishbourne Channel to undertake their form of recreation, some 55% to 71% chose to drive to Birdham Marina/Canal instead. This presumably reflects that there is a large car park located there, whereas there is only restricted car parking available at Fishbourne.
- 6.23 The results of the 2009-10 survey (reported in Fearnley *et al*/2010) indicate that there is a significant correlation between the number of houses present within 1.0 kilometre of a survey station and the total number of visitors that were recorded there. In other words, survey locations with higher numbers of visitors also have a higher housing density within the 1.0 kilometre distance band.
- 6.24 Although in excess of 1.0km from the SPA, the inference is that the construction of new houses West of Chichester will inevitably lead to a proportionate increase in the number people visiting it and potentially disturbing its bird interest. However, the fact that some 67% of people visiting Fishbourne Channel will arrive by car, and may therefore live up to 8.0 kilometres away in doing so, must counteract this proposition, as the sheer number of visitors driving to the SPA would greatly outweigh those walking from the West of Chichester site.
- 6.25 Furthermore, based on the fact that 67% of respondents indicated that they travelled to this location in a car, it is clear that any of the proposed allocations at Chichester could theoretically cause similar levels of recreational disturbance in the SPA – including those to the east of Chichester with rapid access to it via the A27 (Shopwyke Lakes).
- 6.26 Therefore, set within that context, the available studies have shown that straight-line distance from the SPA is not a reliable criterion for defining the location of future growth at Chichester because (1) between 52 and 67% of new residents will drive to it, (2) they will do so wherever they live around the city and (3) the majority prefer to travel south to Birdham, presumably because there is a large car park.
- 6.27 As far as the development of mitigation measures is concerned, the 'on-site' visitor survey report (Fearnley *et al* 2010) observes that they "*...will be robust when they are underpinned by the following:*
- *Identification of which types of activities result in disturbance;*
  - *A clear understanding of the nature of these recreational activities; and*
  - *The credibility of a link between such activities and development per se.*"
- 6.28 In that regard, Fearnley *et al* 2010 also note that:

*"People who choose sites that are close to home or where there is easy parking are perhaps likely to be easier to draw to alternative sites. People who have travelled*

*considerable distances to undertake a specialist activity or who are drawn to the coast because of particular views or scenery are unlikely to want to go elsewhere – and therefore on-site measures will be necessary” (EDP emphasis).*

- 6.29 The results of EDP’s postcode-based survey of Chichester residents (see EDP 2010) add to the evidence base and serve to demonstrate that there is consistency across the four areas of potential strategic growth at Chichester in terms of the respondents’ use of the Chichester and Langstone Harbours SPA for recreational activities; i.e.:
1. Only between 1% and 3% of existing residents visit the SPA daily, with two-thirds of respondents visiting it no more frequently than once a month;
  2. At least 66% of respondents, in each of the areas proposed for strategic growth, also regularly visit another site for recreation, primarily away from the coast;
  3. In the majority of cases (>58%), respondents stated that they use their ‘alternative’ site as frequently for recreation as they do the SPA; and
  4. Between 70% and 80% of respondents, located across all four areas of proposed strategic growth at Chichester, stated that they would use a new country park to the west of the City, if this was provided.
- 6.30 Taken as a whole, this data underlines the importance which should be attached to the provision of high-quality alternative recreational space as part of any proposal for future strategic growth at Chichester.
- 6.31 There is clear evidence that existing residents do not solely visit the SPA for their recreation and could be persuaded to adopt new provision if it offered an appropriate mix of facilities and opportunities and was accessible (‘easy parking’) and located close to home.
- 6.32 There is no reason to believe that new residents at Chichester would not behave similarly, so that a combination of on-site and off-site measures could maintain the interest of the SPA and at the same time facilitate sustainable growth.

## **7.0 Emerging Planning Policy and Phase III of the Solent Disturbance and Mitigation Project**

- 7.1 Further to Liley *et al* 2010 and Fearnley *et al* 2010, CDC devised and adopted the *Interim Policy Statement on Development and Disturbance of Birds in the Chichester and Langstone Harbours SPA*; effective from September 2010; which offered a pragmatic solution to the consideration of development proposals until such time as more detailed policy guidance became available.



- 7.2 The Interim Policy Statement (Chichester District Council, 2010) reflected the previous advice of Natural England and the development control decisions made by CDC in recent years. There is little evidential support for the 1.0km and 7.0km 'zones' which have been identified within the Interim Policy Statement. Nonetheless, the issue of distance from the SPA has been influential in the identification of preferred 'Strategic Development Locations' by CDC between 2011 and 2013, where they have been applied to justify the exclusion of certain sites beyond the immediate periphery of the SPA.
- 7.3 In May 2013, the Solent Disturbance and Mitigation Project published 'Phase 3: Towards an Avoidance and Mitigation Strategy' (Liley & Tyldesley 2013), and is seemingly supported by the numerous local authorities with interests in the Solent area; notably, Chichester District Council (CDC).
- 7.4 As far as its summary is concerned, the report starts from the premise that: *"Modelling suggests that current access levels are sufficient to result in mortality to the wintering bird interest on the Solent, and predicted increases in access levels (as a result of new housing) will exacerbate these impacts"*.
- 7.5 Notwithstanding the predicted impact, it is worth noting that the Phase III Report clearly rejects the idea of creating 'exclusion zones' around the SPA boundary. This is principally based on the assessment that new residents are only part of the problem, in respect of disturbance, and this measure would do nothing to control visitors, tourists etc. It would also 'embargo' all forms of development from much of the south coast between West Sussex all the way to Dorset.
- 7.6 Therefore, whilst the Phase III Report notes that *"...one possible way in which it might be applied is by a series of small exclusion zones (say 400m) around sensitive access points"*, it clearly concludes that *"...we therefore suggest this approach does not merit further consideration with any large buffer"* (Liley & Tildesley 2013).
- 7.7 In light of that position, whereby there is clearly little (if any) merit in trying to exclude people from either the SPA or the wider area around it, the Phase III report sets out to *"...consider how a mitigation and avoidance strategy might look and function"*, with the principal objective being to provide *"...the framework for how a detailed, costed plan could be established"*.
- 7.8 With that in mind, the Phase III report considers a number of mechanisms by which the predicted impact on the bird interest of the SPA (resulting from increased recreational activity) could be addressed. They conclude that the threads of a mitigation package should include:
- A delivery officer;
  - A team of wardens/rangers;

- A coastal dog project;
- A review of parking;
- A review of watersport zones/watersport access;
- Codes of conduct pack;
- Series of site specific projects;
- Watersport permits and enforcement; and
- SANGs/additional GI/alternative roost sites.

7.9 Having identified and evaluated - through consultation with a number of individuals and bodies involved with the management of land within the SPA – the likely effectiveness of a broad range of measures that could potentially mitigate the predicted impact of recreational disturbance to the SPA’s bird interest, the Phase III report concludes that:

*“We consider the delivery officer, wardening team and coastal dog project to be elements that could be instigated quickly and easily, and these would have a broad geographic remit. They represent 'quick wins'. Work on the reviews and codes of conduct pack could be led by the delivery officer and be completed relatively easily, and are also relatively short term. A series of site specific and more local projects would then follow, as opportunities and need required, and these could be phased with development”.*

7.10 The Phase III report adopts a ‘sceptical’ position in respect of the provision of SANGs, stating at Paragraph 5.61 that:

*“We suggest that, in general terms, SANGs are not implemented straight away, but that they are included as elements only if there is good evidence that they may be effective in a particular location and there is a good mechanism for delivery, such as existing schemes/projects or in association with large development”.*

7.11 In that regard, Paragraph 5.62 adds that:

*“As discussed previously...if SANGs are to work in a coastal environment they will need to provide an alternative to the coast. Within the Solent area there may be a few areas that could come forward that are not designated and could provide additional space for recreation. Other options will be inland, where creating an alternative to the coast may be difficult”.*

7.12 Nevertheless, the following comment, at Paragraph 5.63, is of interest:

*"...it would therefore seem that SANGs would have a role only where they are close to people's homes and are attractive. Large developments may be the best way to deliver such mitigation, ensuring that the location of the SANG can be linked to the development."*

7.13 This is clearly important and noteworthy in respect of the West of Chichester site, where our previous recreational survey identified that the proposed country park is attractive to local residents (both new and existing) and would undoubtedly be located close to people's homes. Therefore, whilst its provision may not be an immediate (or even short term) solution, it should be considered to form part of the mix of mitigation measures that can be delivered through the site's proposed development, acting in combination with the provision of funding contributions for wardens, improved signage etc.

7.14 As far as the 'mechanisms' for the delivery of the proposed 'mitigation measures' is concerned, Paragraph 7.9 of the Phase III report sets out how new development would contribute directly:

*"Measures should be directly related to the effects of the development. They should be effective, proportionate and deliverable (see the basic principles). If the direct measures are considered to be insufficient to offset the effects of the development the developer may offer a combination of direct measures and a funding contribution which may be reduced by agreement to reflect the efficacy of the direct measures."*

7.15 In that regard, Paragraph 7.11 then addresses 'funding contributions'; i.e.:

*"In most cases it will not be possible for an individual development to implement any direct measures in order to wholly or partly offset its effects on the Solent SPAs. In such cases the effects of the development can be mitigated by it making a proportionate contribution to the cost of implementing the Strategy. This is likely to be done, where appropriate and the requirements are met, by way of either a Section 106 planning obligation, or a contribution included in the Community Infrastructure Levy (CIL)."*

7.16 As far as the 'apportionment of costs' is concerned, Paragraphs 7.33 to 7.35 of the Phase III Report recommend that a similar approach is adopted to that employed for the Thames Basin Heaths SPA. It is noted that this would provide transparency and certainty for future developers, as they would understand their liabilities/commitments from the outset, in addition to providing flexibility for those charged with managing the SPA, as they would be able to switch funding from delivering short to long term objectives as a greater quantum of development is achieved.

7.17 Paragraph 7.36 of the Phase III report identifies that the predicted annual cost of delivering the package of mitigation measures would be £420,000.

- 7.18 It is proposed that a standard charge should be set, in order to deliver this, with the charge calculated based on the predicted cost of the total mitigation package divided by the forecasted average population increase by type of dwelling.
- 7.19 However, no specific consideration is given to the *quid pro quo* that should be determined if a large development such as West of Chichester can deliver a degree of on-site mitigation through the provision of a country park.
- 7.20 Subsequent to the publication of the Phase III report, a meeting was held with Natural England and Chichester District Council in August 2013 to consider the West of Chichester proposals in the context of the emerging Local Plan (Draft Local Plan Key Policies - Preferred Approach, July 2013).
- 7.21 Natural England confirmed that conclusions of the Solent Disturbance and Mitigation Project: that it would be possible to mitigate the effects of development. In this context, and further to the principles of mitigation set out above (and provided previously), Natural England confirmed that the draft masterplan, including the country park as SANGS, constituted an acceptable solution such that it would not be objecting to the allocation of the site for development. Specifically in relation to the emerging development plan policy, it was agreed that the avoidance/ mitigation measures would include a financial contribution and a package of on-site measures.
- 7.22 The effectiveness of the proposed on-site measures, in reducing recreational disturbance within the nearby SPA, will need to be balanced against the financial contribution that the development should make to the implementation of off-site projects (accepting that there are some impacts, such as increased water sports, which cannot be mitigated through the provision of a country park).

## **8.0 Conclusions**

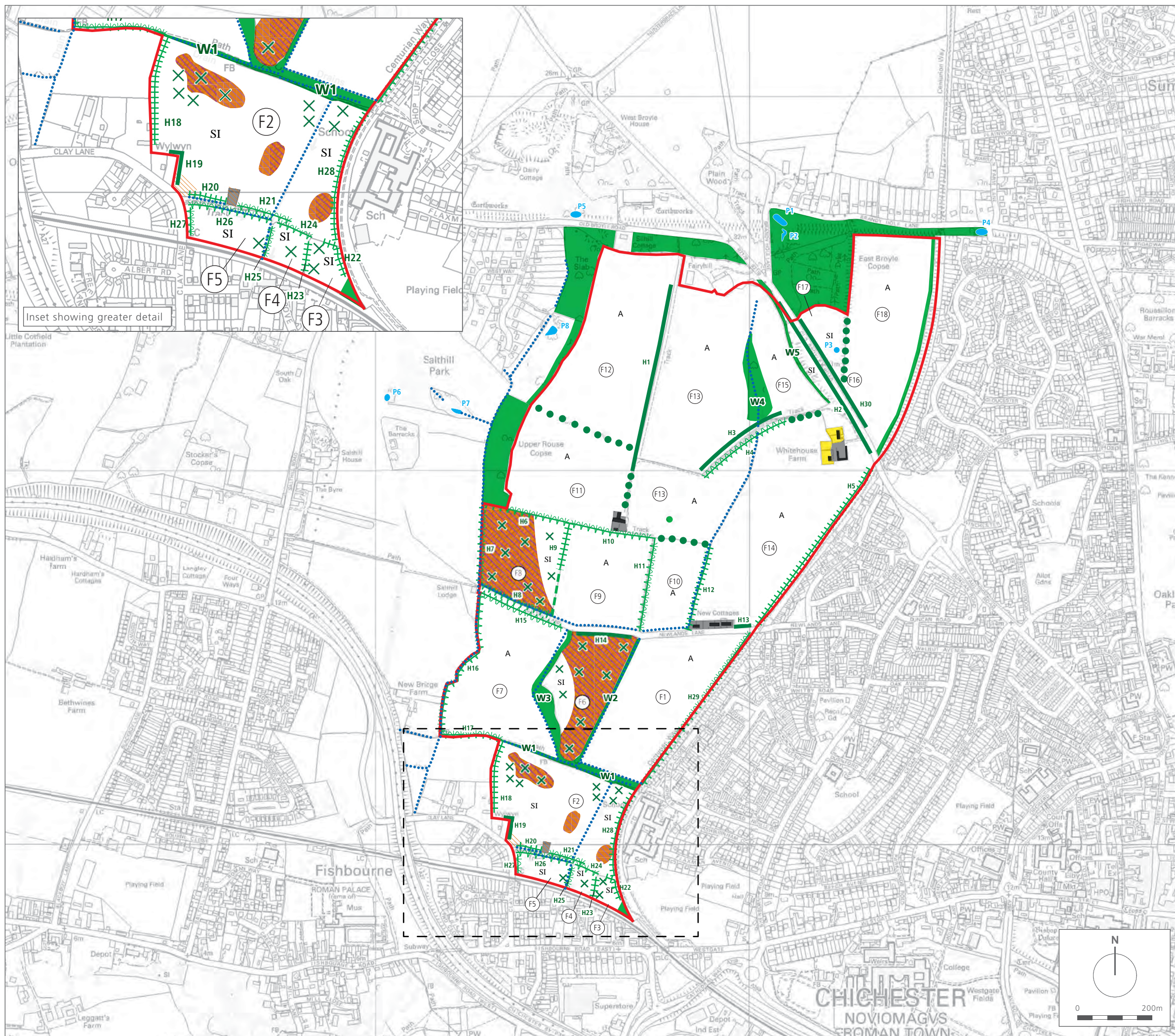
- 8.1 CDC has historically expressed uncertainty in respect of development West of Chichester; in part due to the potential for recreational disturbance impacts on the SPA, and a perceived inability to mitigate those impacts.
- 8.2 With regard to recreational disturbance to bird populations within the SPA, arising from new residents to the West of Chichester, the following points are now supported by the available evidence (and the final outcome of the Solent Disturbance and Mitigation Project):
1. Residential development at any of the sites proposed around the City has the potential to contribute to increased recreational pressure within the Chichester and Langstone Harbours SPA, based on the current evidence base;

2. The West of Chichester site, above and beyond other options around the City, offers the opportunity to incorporate strategic mitigation in the form of a large country park/ natural green space which will demonstrably result in a net reduction in recreational pressure on the Chichester and Langstone Harbours SPA. The West of Chichester site is the only strategic location at the City for which high quality and detailed proposals of this kind have been put forward; designed in accordance with Natural England's 'Guidance for the creation of Suitable Accessible Natural Green Space' (SANGS), and subject to consultation (2010) with the residents of Chichester. Natural England has now accepted that the country park/ green space proposals, subject to detailed design, are sufficient to mitigate the potential impacts of the development; and
3. Further opportunities for mitigation outlined in the Solent Disturbance and Mitigation Project, and EDPs own detailed recommendations as agreed, in principle, with Natural England (including financial contributions), are capable of successful implementation through the West of Chichester development proposals.

## Plans

- Plan EDP 1** Habitat Features Plan 2013  
(EDP129/93a 24 January 2014 TB/JB)
- Plan EDP 2** Hedgerow Survey Results 2012 - 2013  
(EDP129/105 24 January 2014 TB/JB)
- Plan EDP 3** Bat Activity Surveys 2012/2013 – Transect Routes and Anabat Locations  
(EDP129/90a 24 January 2014 TB/JB)
- Plan EDP 4** Breeding Bird Survey Schedule  
(EDP129/97a 24 January 2014 TB/TW)
- Plan EDP 5** Dormouse Nest Tube Locations and Survey Results 2012/2013  
(EDP129/81a 27 January 2014 TB/JB)
- Plan EDP 6** Water Vole Survey Area and Results 2013  
(EDP129/103a 27 January 2014 TB/JW)
- Plan EDP 7** Great Crested Newt Survey Area and Ponds 2012 - 2013  
(EDP129/73a 24 January 2014 TB/JB)
- Plan EDP 8** Reptile Survey Area 2012 to 2013  
(EDP129/102a 24 January 2014 TB/JW)
- Plan EDP 9** Tree Bat Roost Assessment 2012 - 2013  
(EDP129/98a 27 January 2014 TB/JB)
- Plan EDP 10** Bat Transect Survey Results – May 2012  
(EDP129/70a 24 January 2014 TB/JB)
- Plan EDP 11** Bat Transect Survey Results – July 2012  
(EDP129/71a 24 January 2014 TB/JB)
- Plan EDP 12** Bat Transect Survey Results – September 2012  
(EDP129/72a 24 January 2014 TB/JB)
- Plan EDP 13** Bat Transect Survey Results: May 2013  
(EDP129/94a 24 January 2014 TB/JB)
- Plan EDP 14** Bat Transect Survey Results: July (Dusk and Dawn) 2013  
(EDP129/95a 24 January 2014 TB/JB)

- Plan EDP 15** Bat Transect Survey Results: September 2013  
(EDP129/96a 24 January 2014 TB/JB)
- Plan EDP 16** Badger Survey Results 2012/2013  
(EDP129/88a 24 January 2014 TB/JB)
- Plan EDP 17** Reptile Survey Results 2012-2013: Slow-worm  
(EDP129/99a 24 January 2014 TB/JW)
- Plan EDP 18** Reptile Survey Results 2012-2013: Common Lizard  
(EDP129/100a 24 January 2014 TB/JW)
- Plan EDP 19** Reptile Survey Results 2012-2013: Grass Snake  
(EDP129/101a 24 January 2014 TB/JW)



- Site Boundary
- Broadleaved Woodland
- F1 Field Number
- Scattered Trees
- H1 Hedgerow ID
- W1 Woodland Parcel Identifier
- Species Rich Hedgerow
- Species Poor Hedgerow
- Defunct Species Poor Hedgerow
- Species Rich Hedgerow with Trees
- Species Poor Hedgerow with Trees
- Tall Ruderal
- x x Scattered Scrub
- A Arable Grassland
- Amenity Grassland
- Marshy Grassland
- SI Species-Poor Semi-Improved Grassland
- P1 Pond
- Seasonally Wet Ditch
- Building
- Hardstanding

**edp**

THE ENVIRONMENTAL DIMENSION PARTNERSHIP

Tithe Barn, Barnsley Park Estate, Barnsley, Cirencester,  
Gloucestershire, GL7 5EG t 01285 740427 f 01285 740848  
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client

**Linden Homes and Miller Strategic Land**

project title

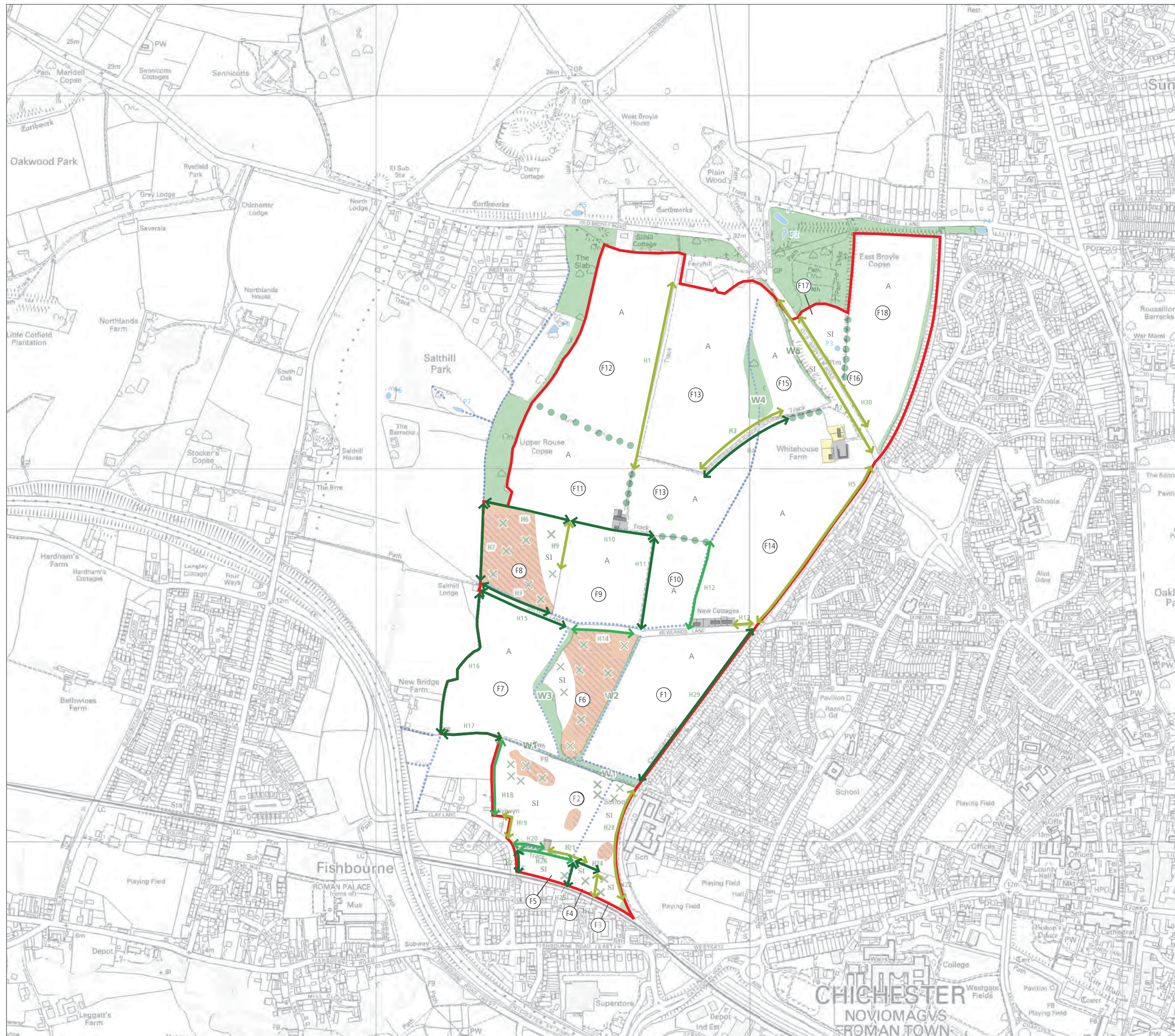
**Land West of Chichester**

drawing title

**Plan EDP 1: Habitat Features  
Plan 2013**

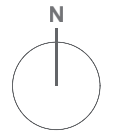
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- Site Boundary
- ↔ Hedgerow assessed as 'important' under the Hedgerow Regulations 1997
- ↔ Medium Importance Hedgerow\*
- ↔ Not Important Hedgerow\*

\* These hedgerows were assessed not to qualify as 'important' under the Hedgerow Regulations 1997. Those identified of 'medium' importance nonetheless contain ecological value and should be considered as medium priority for retention. Those identified as low importance are species poor and a low priority for retention.



THE ENVIRONMENTAL DIMENSION PARTNERSHIP

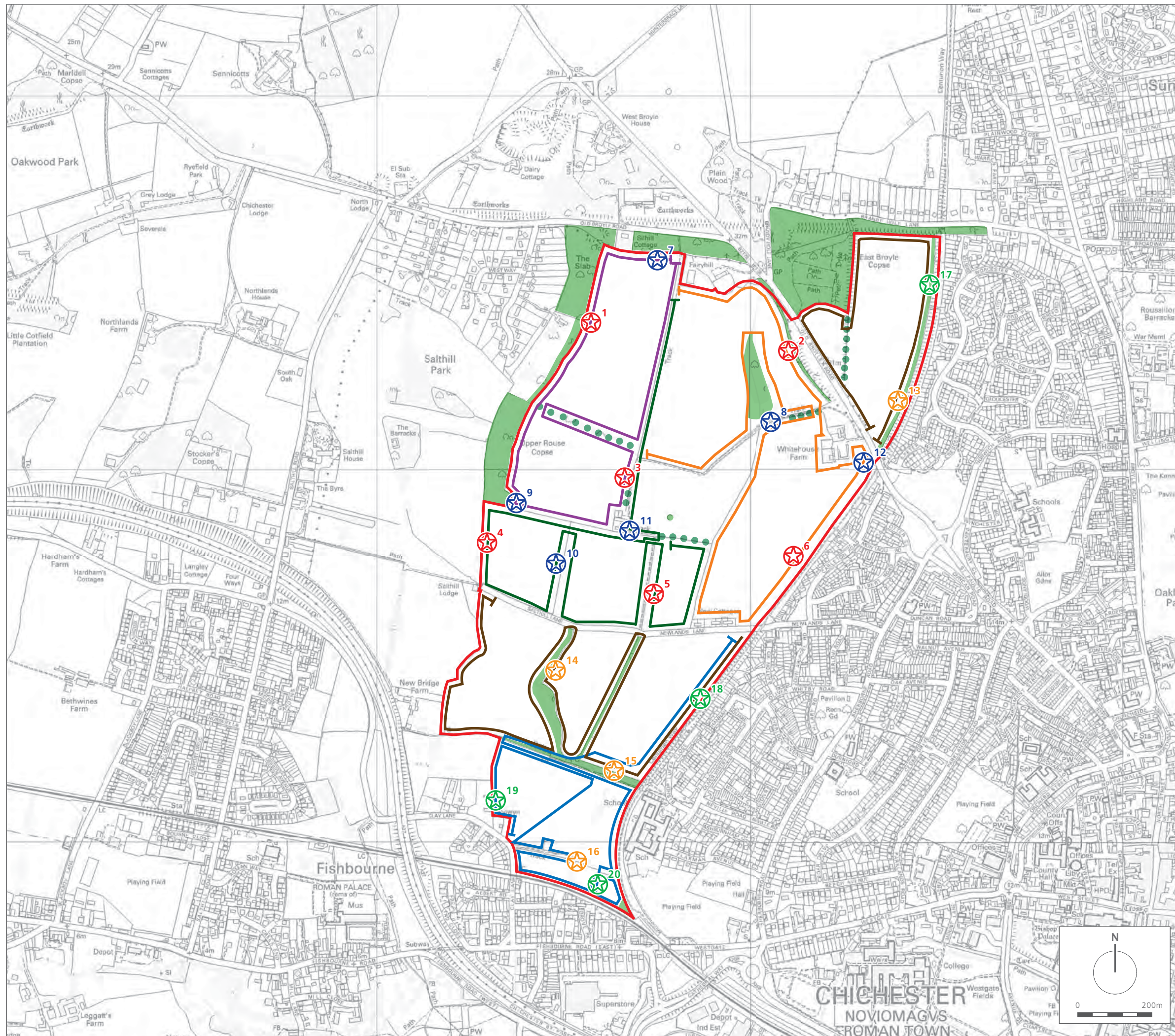
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client  
**Linden Homes and Miller Strategic Land**

project title  
**Land West of Chichester**




drawing title  
**Plan EDP 2: Hedgerow Survey Results 2012 - 2013**

date	24 JANUARY 2014	drawn by	TB
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-  Site Boundary
-  Broadleaved Woodland



**Transect Routes 2012**

-  Transect Route 1 (2.50km)
-  Transect Route 2 (3.3km)
-  Transect Route 3 (3.58km)



**Anabat Locations 2012**

-  Anabat Location and ID (22/06/12 - 27/06/12)
-  Anabat Location and ID (13/06/12 - 20/08/12)

**Transect Routes 2013**

-  Transect Route 4 (4.58km)
-  Transect Route 5 (3.61km)

**Anabat Locations 2013**

-  Anabat Location and ID (25/06/13 - 01/07/13)
-  Anabat Location and ID (05/08/13 - 12/08/13)



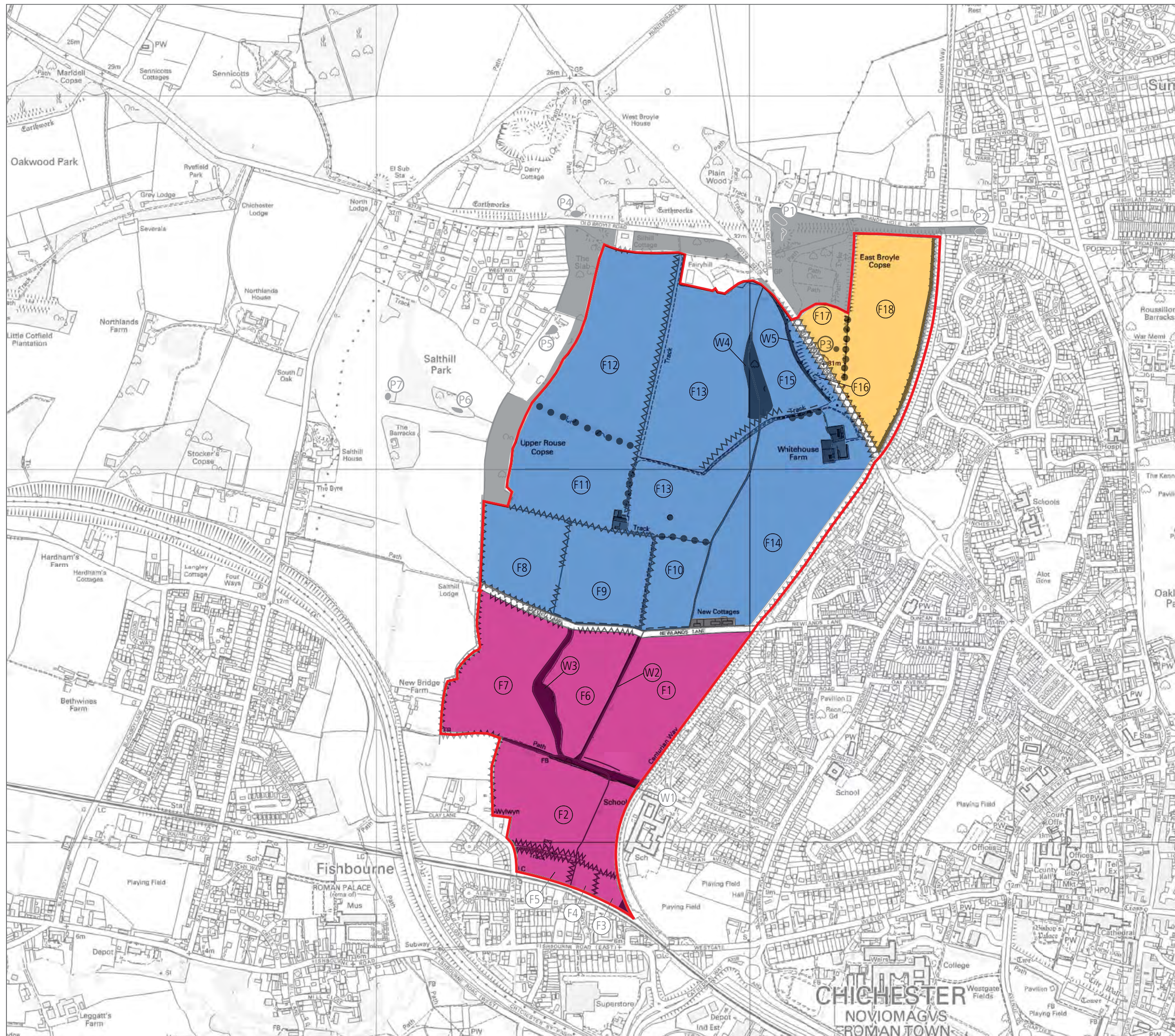
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client  
**Linden Homes and Miller Strategic Land**

project title  
**Land West of Chichester**

drawing title  
**Plan EDP 3: Bat Activity Surveys 2012/2013 - Transect Routes and Anabat Locations**

date	24 JANUARY 2014	drawn by	TB
drawing number	EDP 129/90a	checked	JB
scale	1:10,000 @ A3		



- Site Boundary
- BBS Section 1: Surveyed 2012
- BBS Section 2: Surveyed 2013
- BBS Section 3: Surveyed 2013



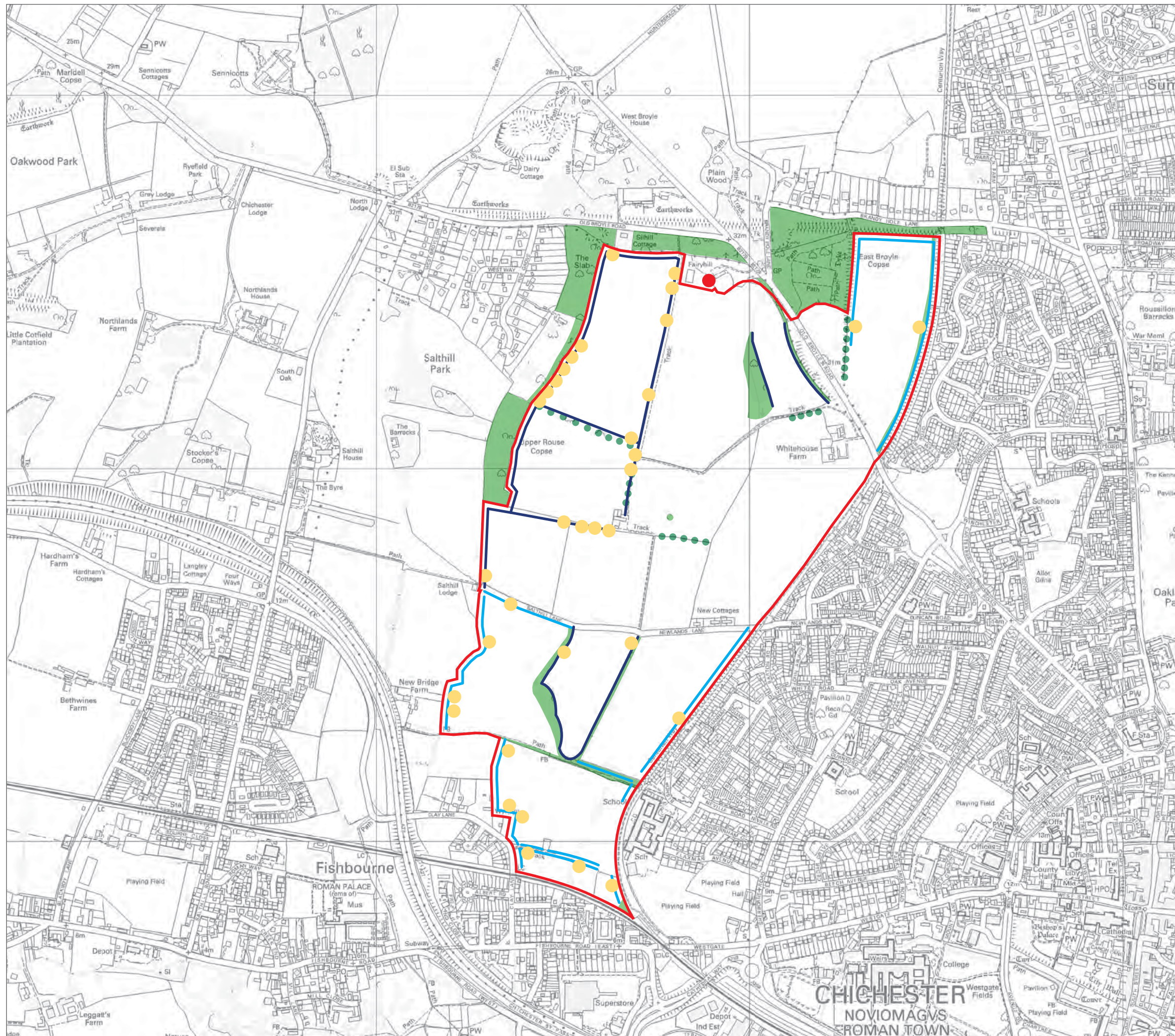
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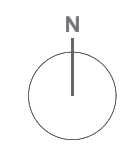
project title  
**Land West of Chichester**

drawing title  
**Plan EDP 4: Breeding Bird Survey Schedule**

date	24 JANUARY 2014	drawn by	TB
drawing number	EDP 129/97a	checked	TW
scale	1:10,000 @ A3		



- Site Boundary
- Broadleaved Woodland
- Dormouse Nest Tube Locations 2012
- Dormouse Nest Tube Locations 2013
- Dormouse Record
- Evidence of Woodmouse



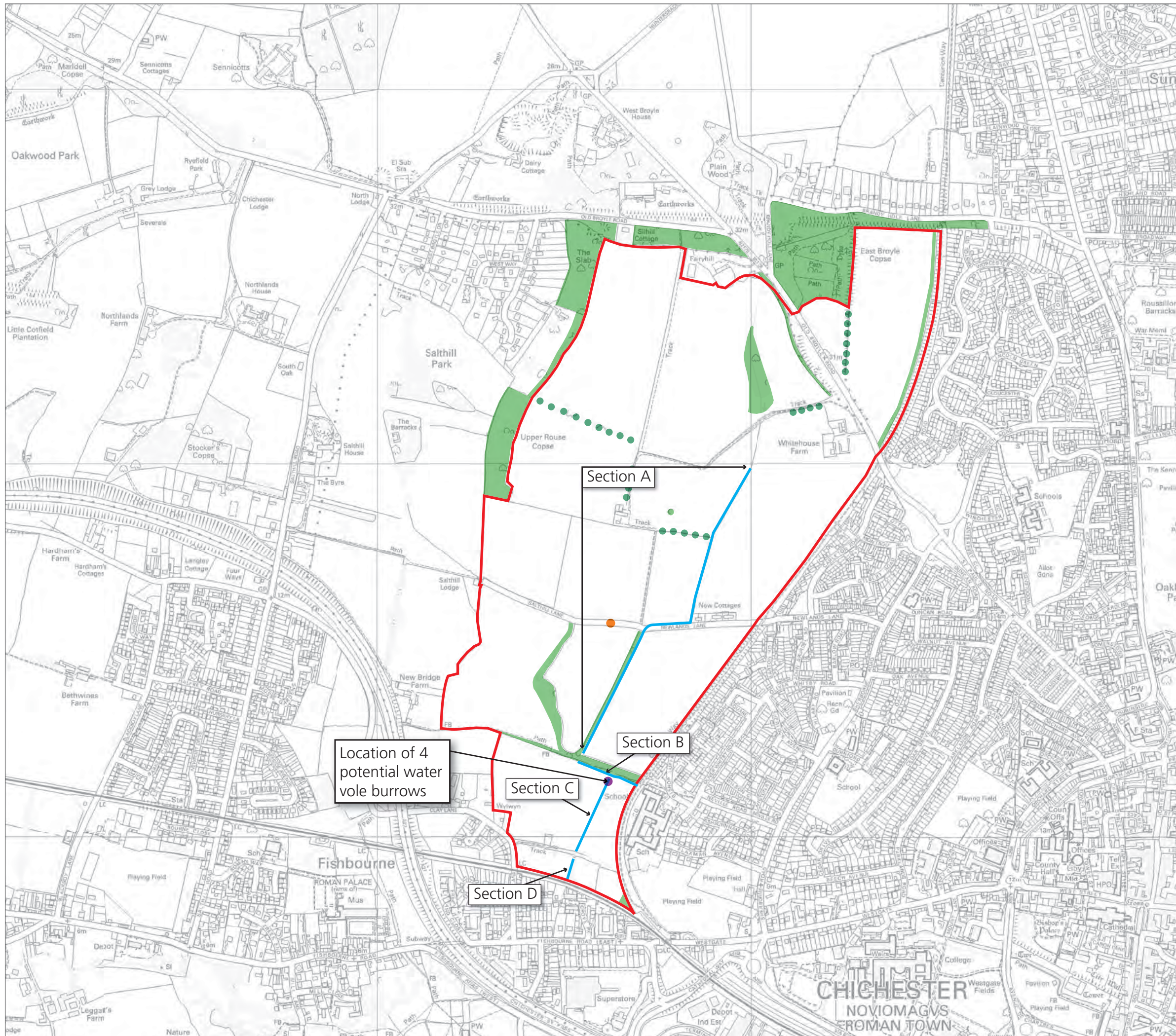
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project title  
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drawing title  
**Plan EDP 5: Dormouse Nest Tube Locations and Survey Results 2012/2013**

date	27 JANUARY 2014	drawn by	TB
drawing number	edp129/81a	checked	JB
scale	1:10,000 @ A3		



Location of 4 potential water vole burrows

Section A

Section B

Section C

Section D

- Site Boundary
- Desk Study Records
- Field Evidence Recorded
- Ditch Section Surveyed for Water Voles



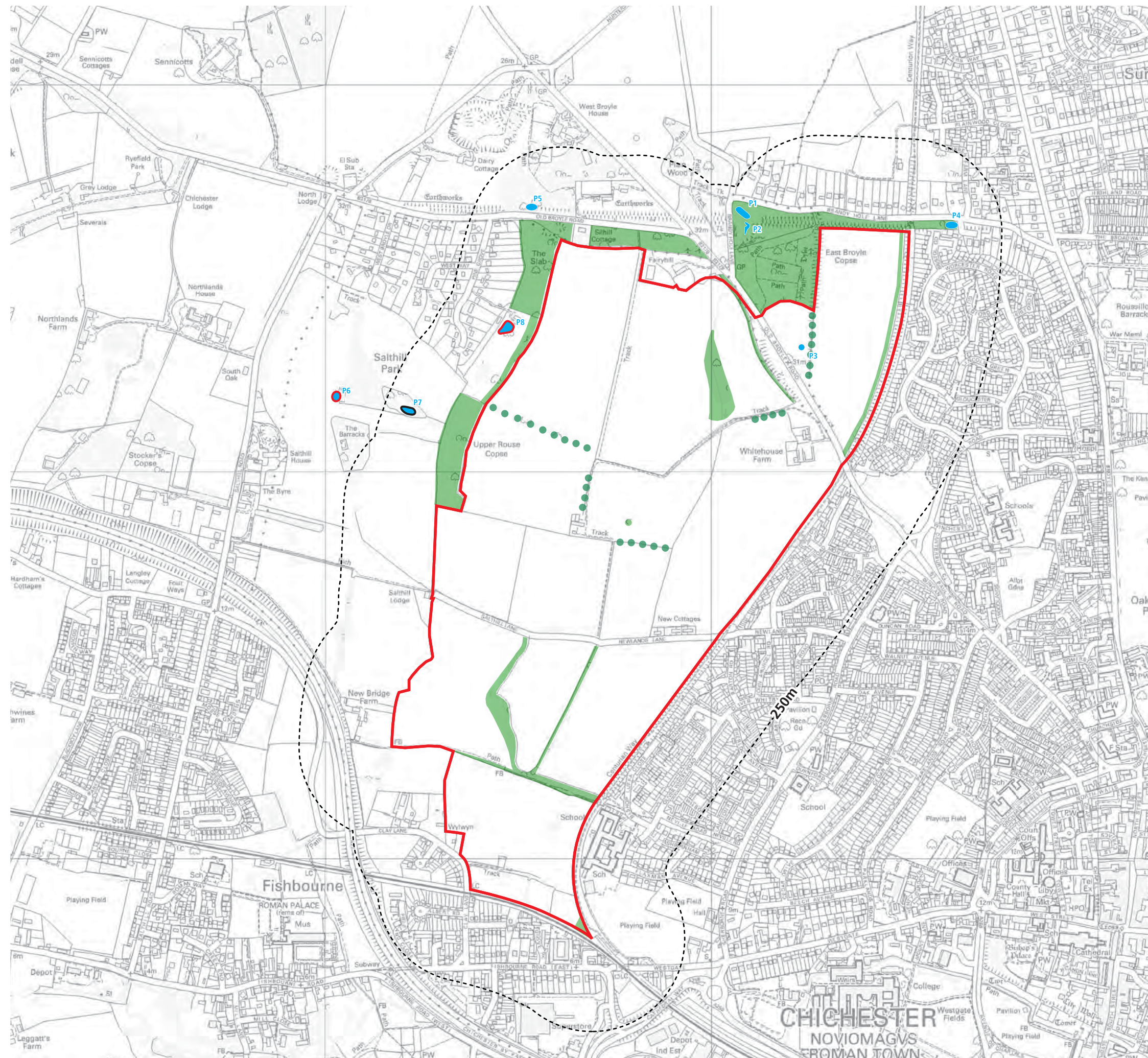
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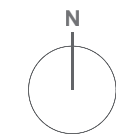
project title  
**Land West of Chichester**

drawing title  
**Plan EDP 6: Water Vole Survey Area and Results 2013**

date	31 JANUARY 2014	drawn by	TB
drawing number	EDP 129/103b	checked	JW
scale	1:10,000 @A3		



- Site Boundary
- Broadleaved Woodland
- 250m Offset from Site Boundary
- Pond Subject to Great Crested Newt Presence/Absence Survey
- Pond (Access to Survey not Permitted)
- Pond (Dry)



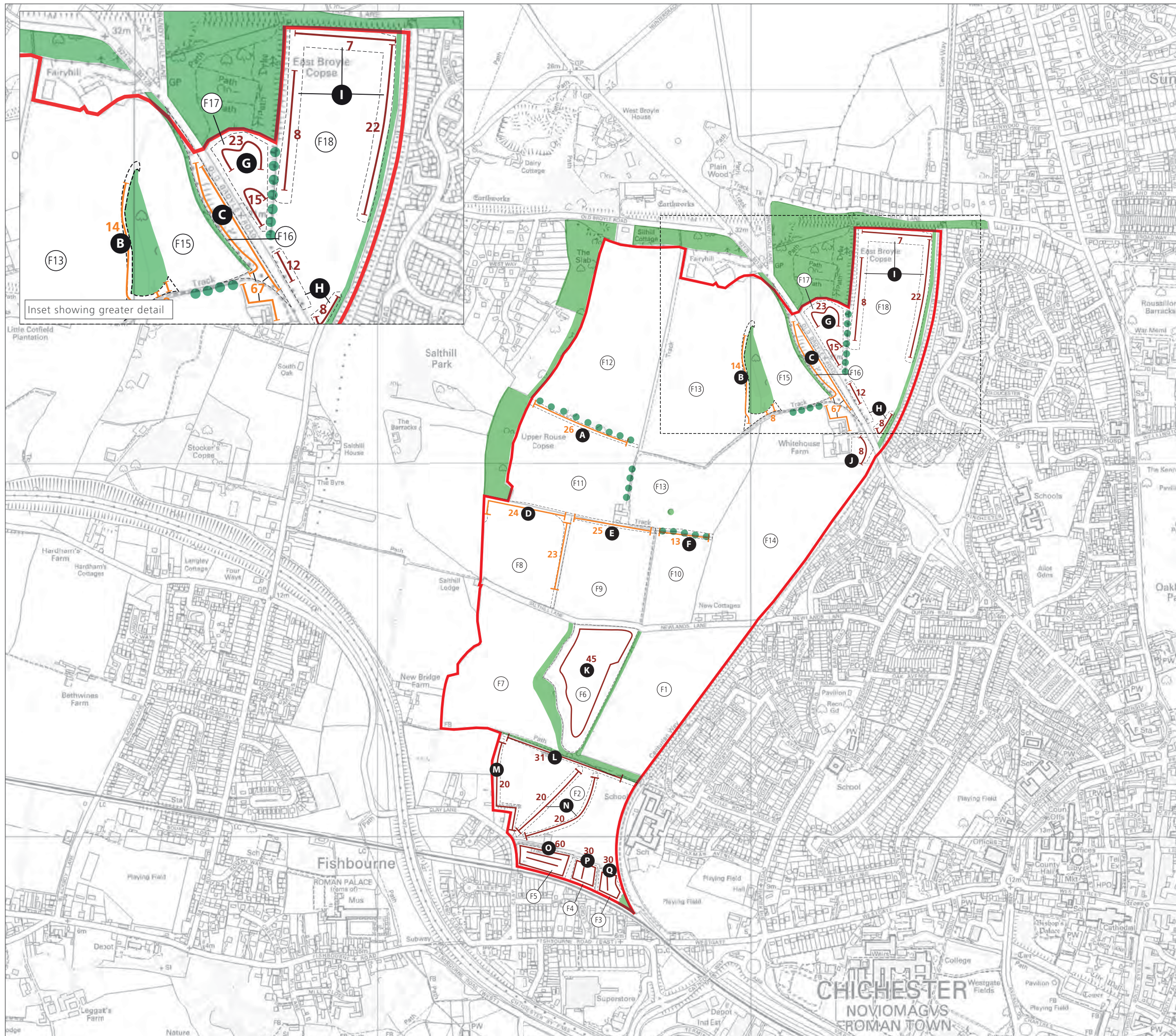
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project title  
**Land West of Chichester**

drawing title  
**Plan EDP 7: Great Crested Newt Survey Area and Ponds 2012 - 2013**

date	24 JANUARY 2014	drawn by	TB
drawing number	EDP 129/73a	checked	JB
scale	1:10,000 @ A3		



- Site Boundary
- A Reptile Survey Compartment
- F1 Field Number
- Location and Number of Artificial Reptile Refugia Deployed in 2012
- Location and Number of Artificial Reptile Refugia Deployed in 2013



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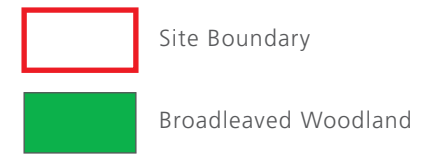
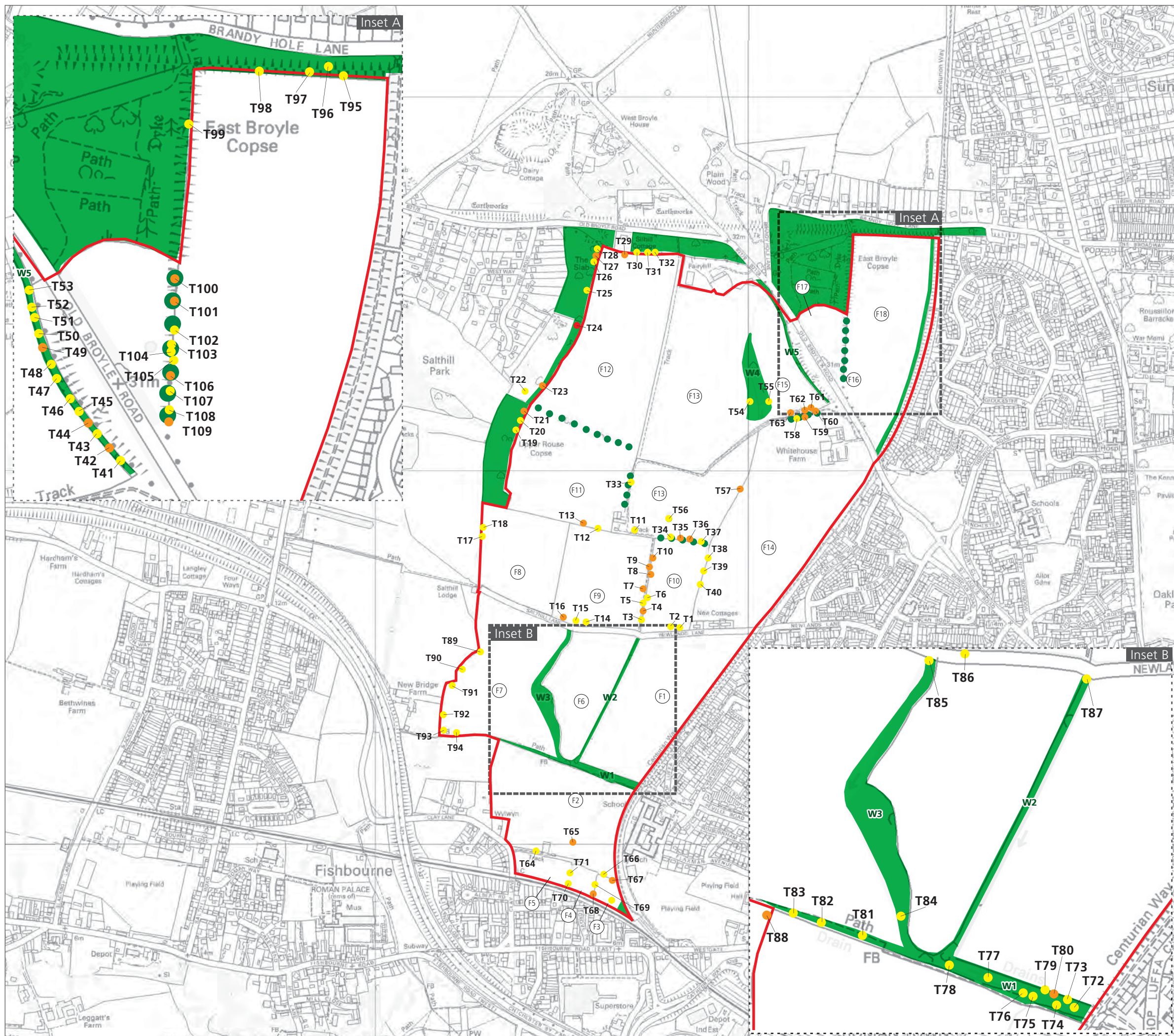
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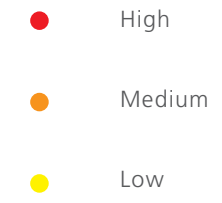
drawing title

**Plan EDP 8: Reptile Survey Area 2012 to 2013**

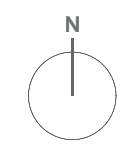
date	24 JANUARY 2014	drawn by	TB
drawing number	EDP 129/102a	checked	JW
scale	1:10,000 @A3		



**Trees with Bat Roost Potential**



Note:  
Tree numbers 1-63 surveyed during 2012; tree numbers 64-109 surveyed during 2013



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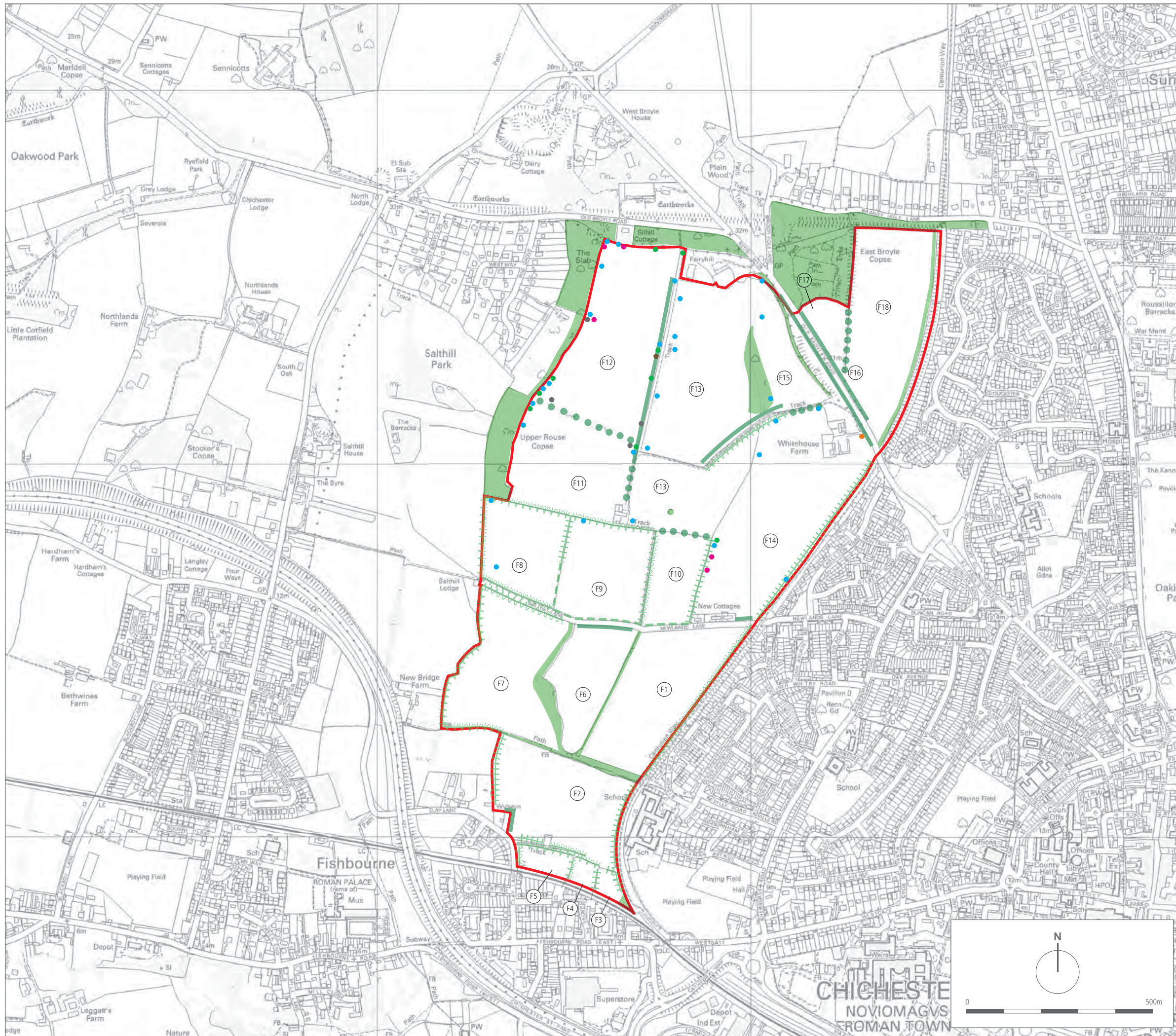
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project title  
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drawing title  
**Plan EDP 9: Tree Bat Roost Assessment 2012 - 2013**

date	31 JANUARY 2014	drawn by	TB
drawing number	EDP 129/98b	checked	JB
scale	1:10,000 @ A3		





- Site Boundary
- Broadleaved Woodland
- F1 Field Number
- Scattered Trees
- ∩∩∩∩ Species Rich Hedgerow
- Species Poor Hedgerow
- - - - Defunct Species Poor Hedgerow
- ∩∩∩∩ Species Rich Hedgerow with Trees
- + + + + + Species Poor Hedgerow with Trees

**Bat Species** (Colour denotes species)

- Common pipistrelle
- Soprano pipistrelle
- Pipistrelle Sp.
- Myotis Sp.
- Noctule
- Serotine



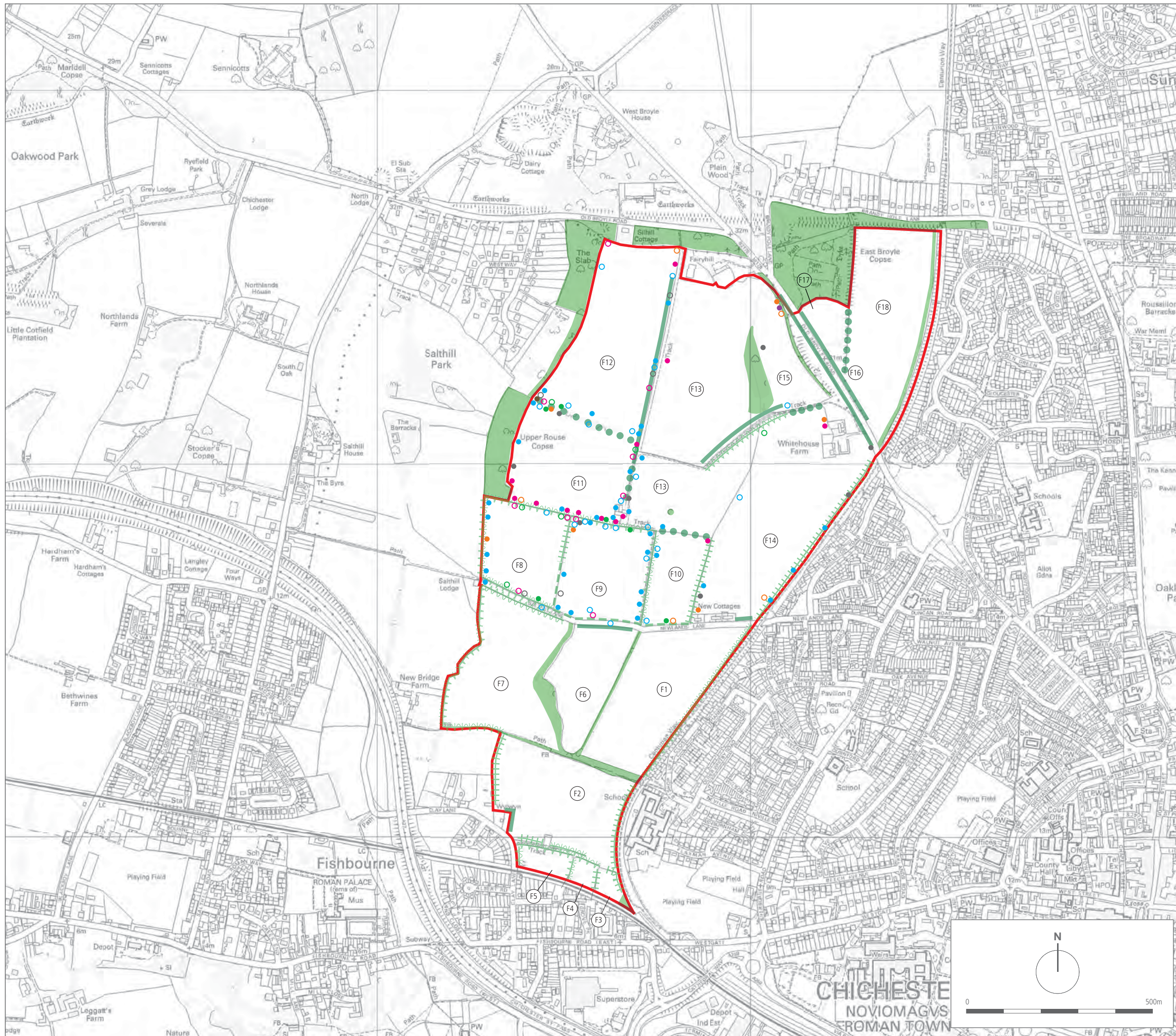
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**Plan EDP 10: Bat Transect Survey Results - May 2012**

date	31 JANUARY 2014	drawn by	TB
drawing number	EDP 129/70b	checked	JB
scale	1:10,000 @ A3		



- Site Boundary
- Broadleaved Woodland
- F1 Field Number
- Scattered Trees
- ∩∩∩∩ Species Rich Hedgerow
- Species Poor Hedgerow
- - - - Defunct Species Poor Hedgerow
- ∩∩∩∩ Species Rich Hedgerow with Trees
- + + + + + Species Poor Hedgerow with Trees

**Bat Activity**

- Dusk
- Dawn

**Bat Species** (Colour denotes species)

- Common pipistrelle
- Soprano pipistrelle
- Pipistrelle Sp.
- Myotis Sp.
- Noctule
- Serotine
- Brown long-eared bat



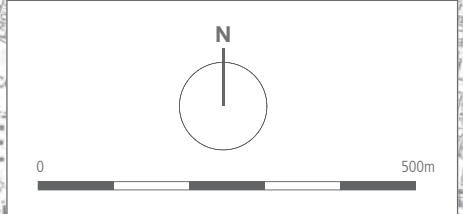
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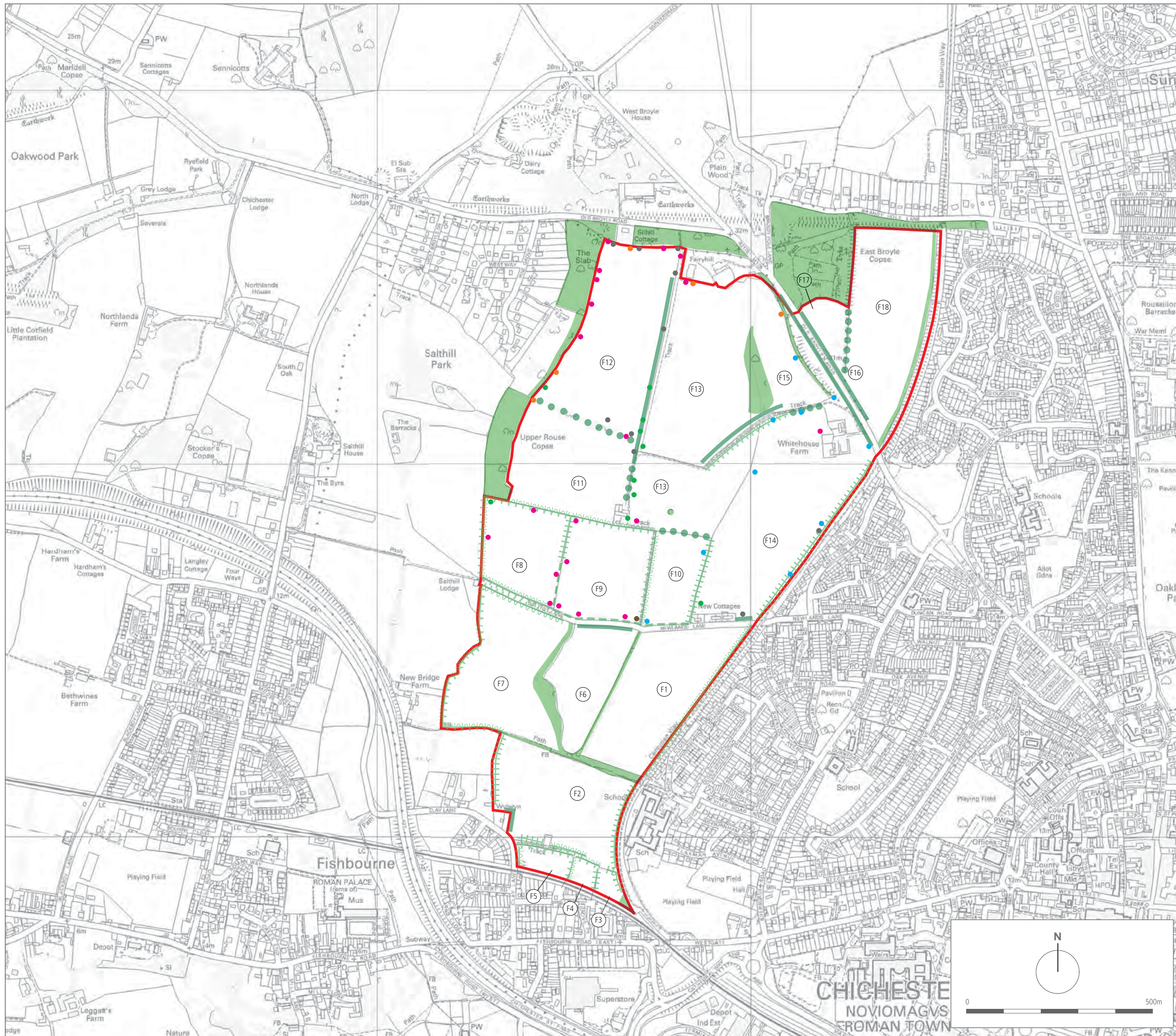
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drawing title  
**Plan EDP 11: Bat Transect Survey Results - July 2012**

date	31 JANUARY 2014	drawn by	TB
drawing number	EDP 129/71b	checked	JB
scale	1:10,000 @ A3		





- Site Boundary
- Broadleaved Woodland
- F1 Field Number
- Scattered Trees
- ∩∩∩∩ Species Rich Hedgerow
- Species Poor Hedgerow
- - - - Defunct Species Poor Hedgerow
- ∩∩∩∩ Species Rich Hedgerow with Trees
- + + + + + Species Poor Hedgerow with Trees

**Bat Species** (Colour denotes species)

- Common pipistrelle
- Soprano pipistrelle
- Pipistrelle Sp.
- Myotis Sp.
- Noctule
- Serotine



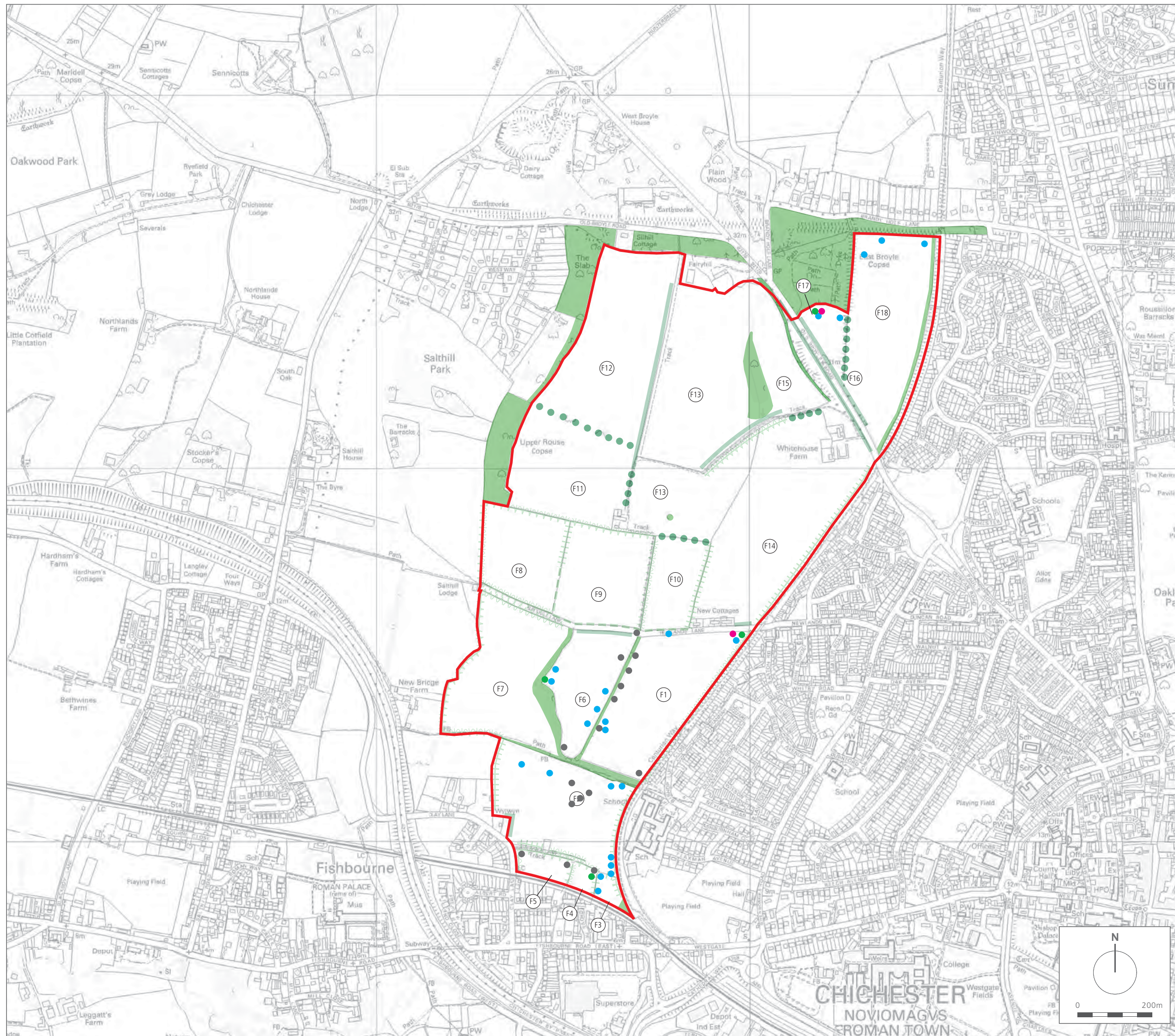
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drawing title  
**Plan EDP 12: Bat Transect Survey Results - September 2012**

date	31 JANUARY 2014	drawn by	TB
drawing number	EDP 129/72b	checked	JB
scale	1:10,000 @ A3		



- Site Boundary
  - Broadleaved Woodland
  - F1 Field Number
  - Scattered Trees
  - ∩∩∩∩ Species Rich Hedgerow
  - Species Poor Hedgerow
  - - - - Defunct Species Poor Hedgerow
  - ∩∩∩∩ Species Rich Hedgerow with Trees
  - + + + + + Species Poor Hedgerow with Trees
- Bat Species** (Colour denotes species)
- Common pipistrelle
  - Soprano pipistrelle
  - Pipistrelle Sp.
  - Myotis Sp.

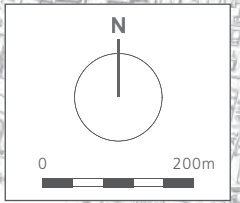
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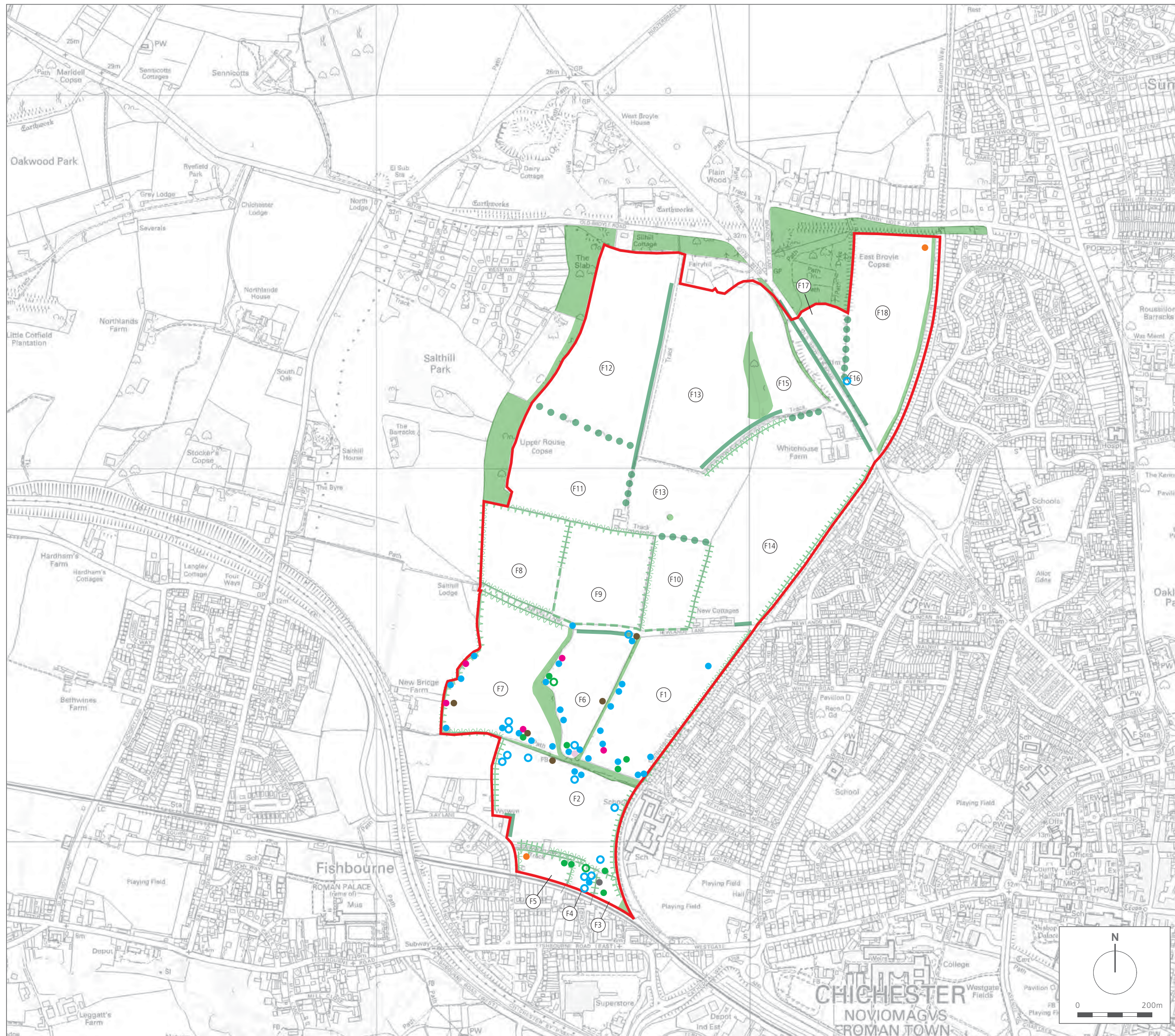
client  
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project title  
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drawing title  
**Plan EDP 13: Bat Transect Survey Results: May 2013**

date	31 JANUARY 2014	drawn by	TB
drawing number	EDP129/94b	checked	JB
scale	1:10,000 @ A3		





- Site Boundary
  - Broadleaved Woodland
  - F1 Field Number
  - Scattered Trees
  - ∩∩∩∩ Species Rich Hedgerow
  - Species Poor Hedgerow
  - - - - Defunct Species Poor Hedgerow
  - ∩∩∩∩ Species Rich Hedgerow with Trees
  - + + + + + Species Poor Hedgerow with Trees
- Bat Activity**
- Dusk
  - Dawn
- Bat Species** (Colour denotes species)
- Soprano pipistrelle
  - Pipistrelle Sp.
  - Myotis Sp.
  - Noctule
  - Serotine
  - Leisler's bat

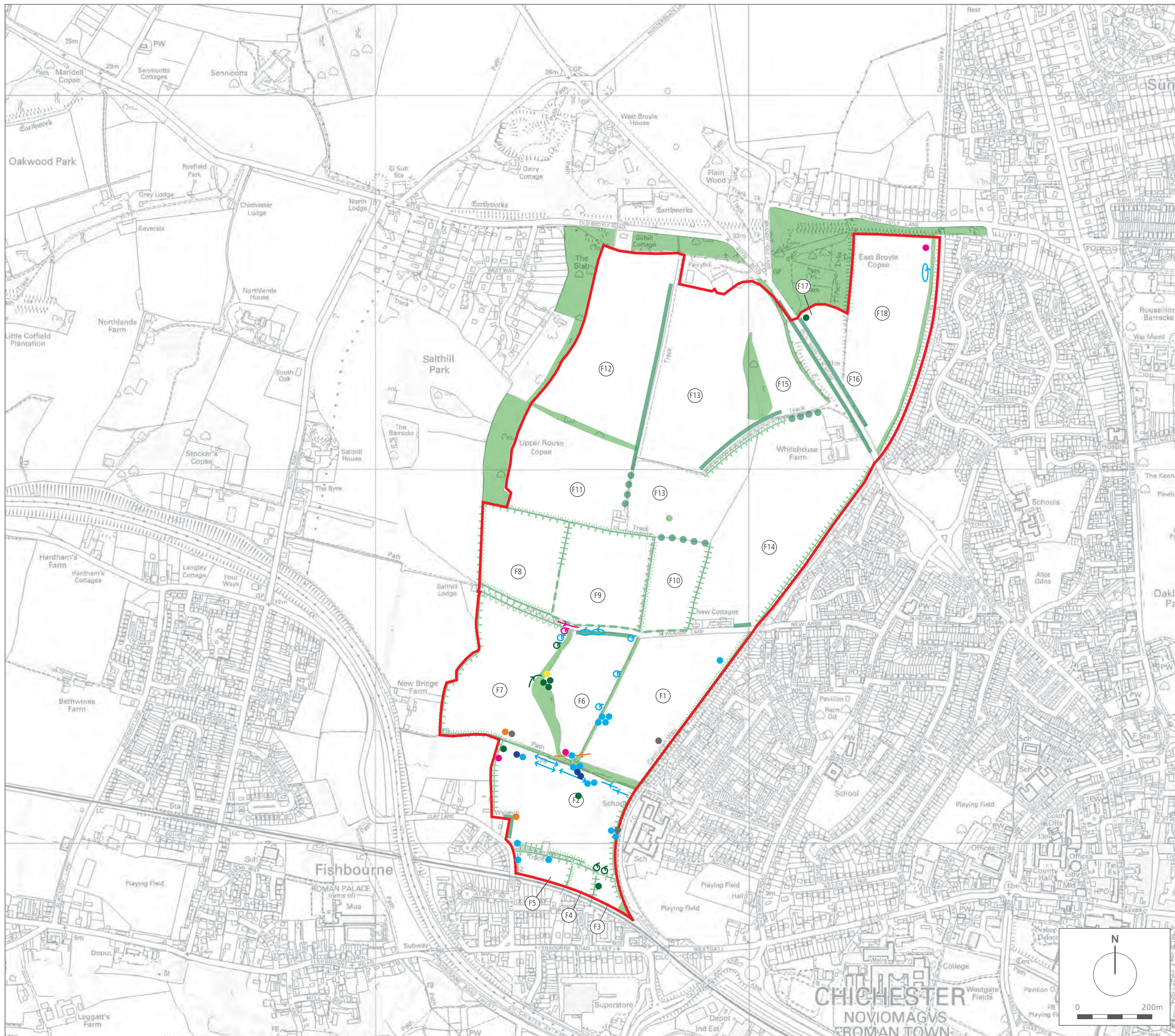
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project title  
**Land West of Chichester**

drawing title  
**Plan EDP 14: Bat Transect Survey Results: July (Dusk and Dawn) 2013**

date	31 JANUARY 2014	drawn by	TB
drawing number	EDP129/95b	checked	JB
scale	1:10,000 @ A3		



- Site Boundary
- Broadleaved Woodland
- F1 Field Number
- Scattered Trees
- ∩∩∩∩ Species Rich Hedgerow
- Species Poor Hedgerow
- - - Defunct Species Poor Hedgerow
- ∩∩∩∩ Species Rich Hedgerow with Trees
- + + + + + Species Poor Hedgerow with Trees
- Bat Activity**
- ↔ Bat commuting (one chevron per bat)
- ↻ Foraging Behaviour
- ↔ Foraging Behaviour
- Bat Species** (Colour denotes species)
- Common pipistrelle
- Soprano pipistrelle
- Nathusius pipistrelle
- Pipistrelle Sp.
- Myotis Sp.
- Noctule
- Barbastelle

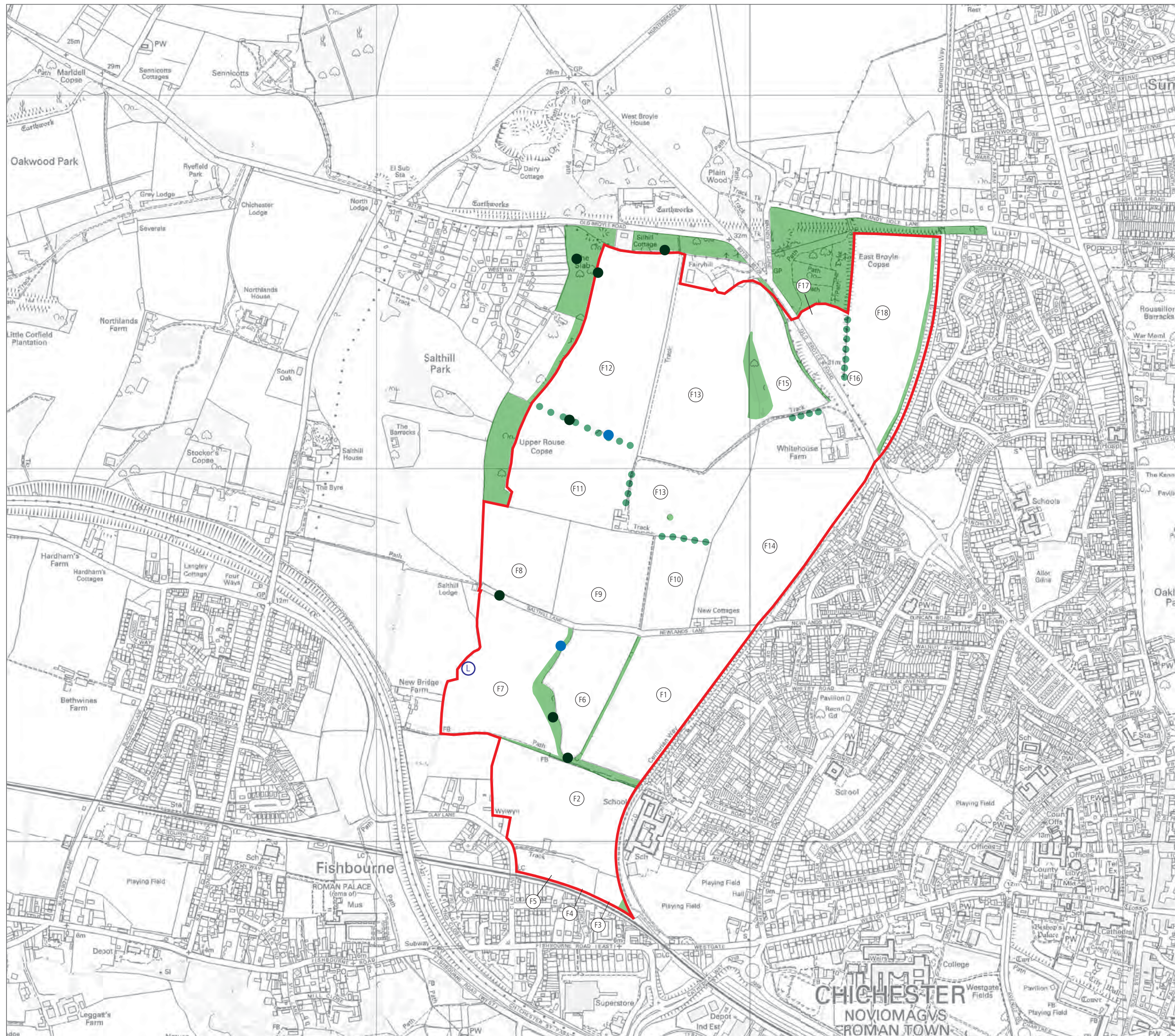
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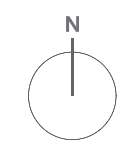
project title  
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drawing title  
**Plan EDP 15: Bat Transect Survey Results: September 2013**

date	31 JANUARY 2014	drawn by	TB
drawing number	EDP129/96b	checked	JB
scale	1:10,000 @ A3		



- Site Boundary
- Broadleaved Woodland
- Badger Sett (Disused)
- Rabbit Burrow/Warren (Disused)
- L Badger Latrine



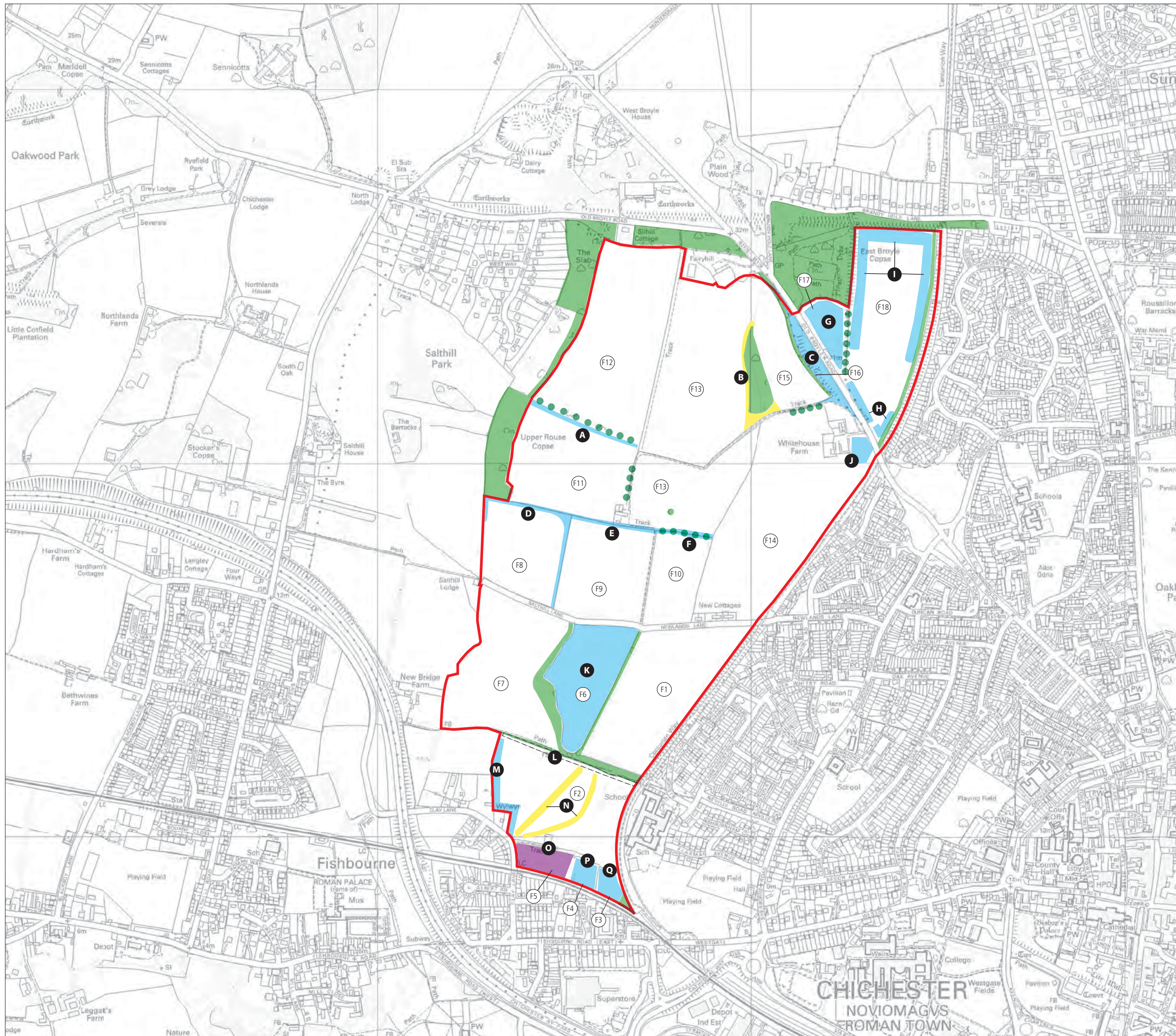
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client  
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project title  
**Land West of Chichester**

drawing title  
**Plan EDP 16: Badger Survey Results 2012/2013**

date	24 JANUARY 2014	drawn by	TB
drawing number	edp129/88a	checked	JB
scale	1:10,000 @ A3		

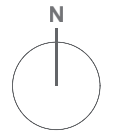


**Site Boundary**

**Reptile Survey Compartment**

**Population Size Class Estimate:**

- Small
- Medium
- Large
- None Found



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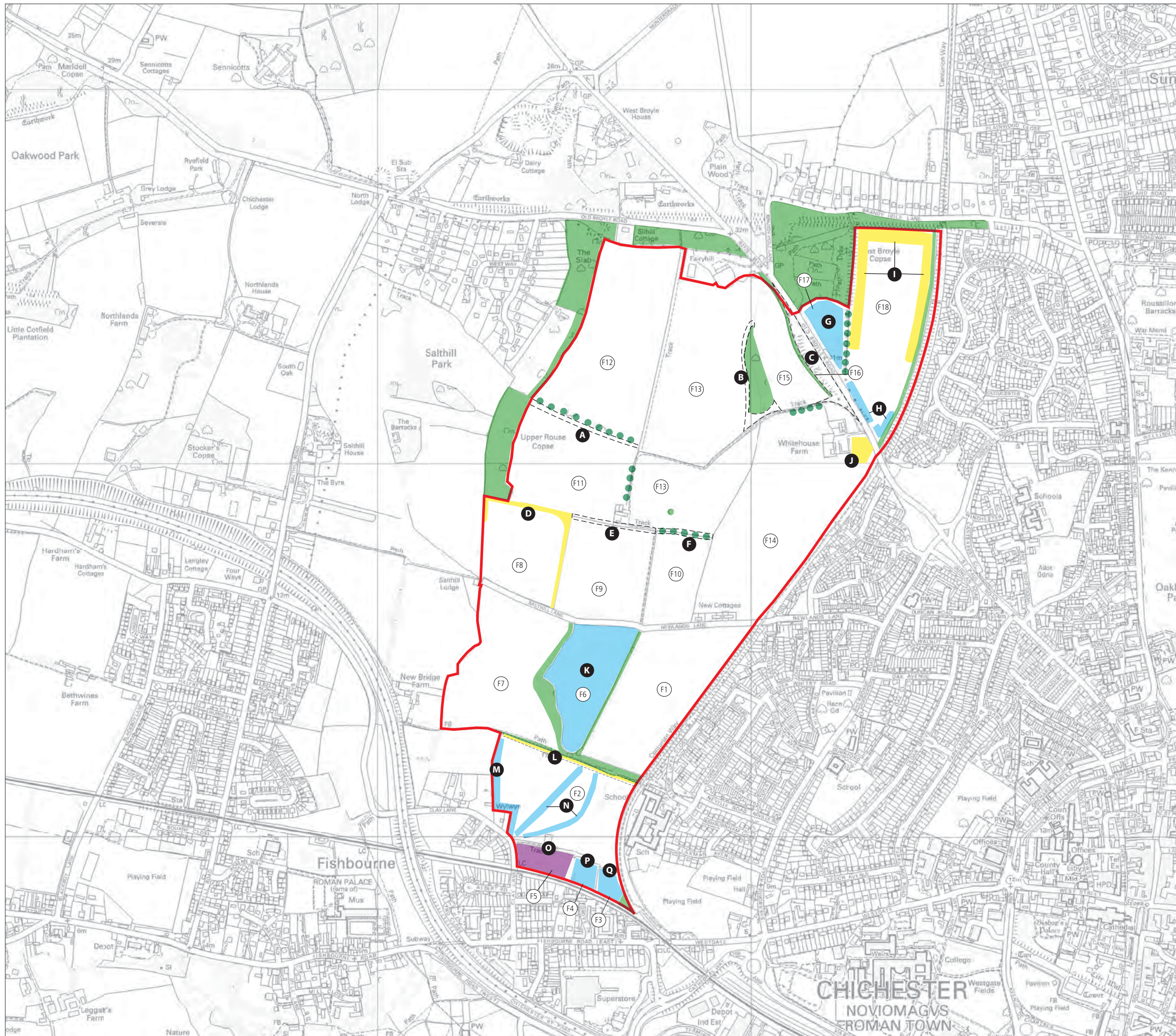
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project title  
**Land West of Chichester**

drawing title  
**Plan EDP 17: Reptile Survey Results 2012-2013: Slow-worm**

date	24 JANUARY 2014	drawn by	TB
drawing number	EDP 129/99a	checked	JW
scale	1:10,000 @A3		



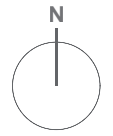


**Site Boundary**

**A** Reptile Survey Compartment

**Population Size Class Estimate:**

- Small
- Medium
- Large
- None Found



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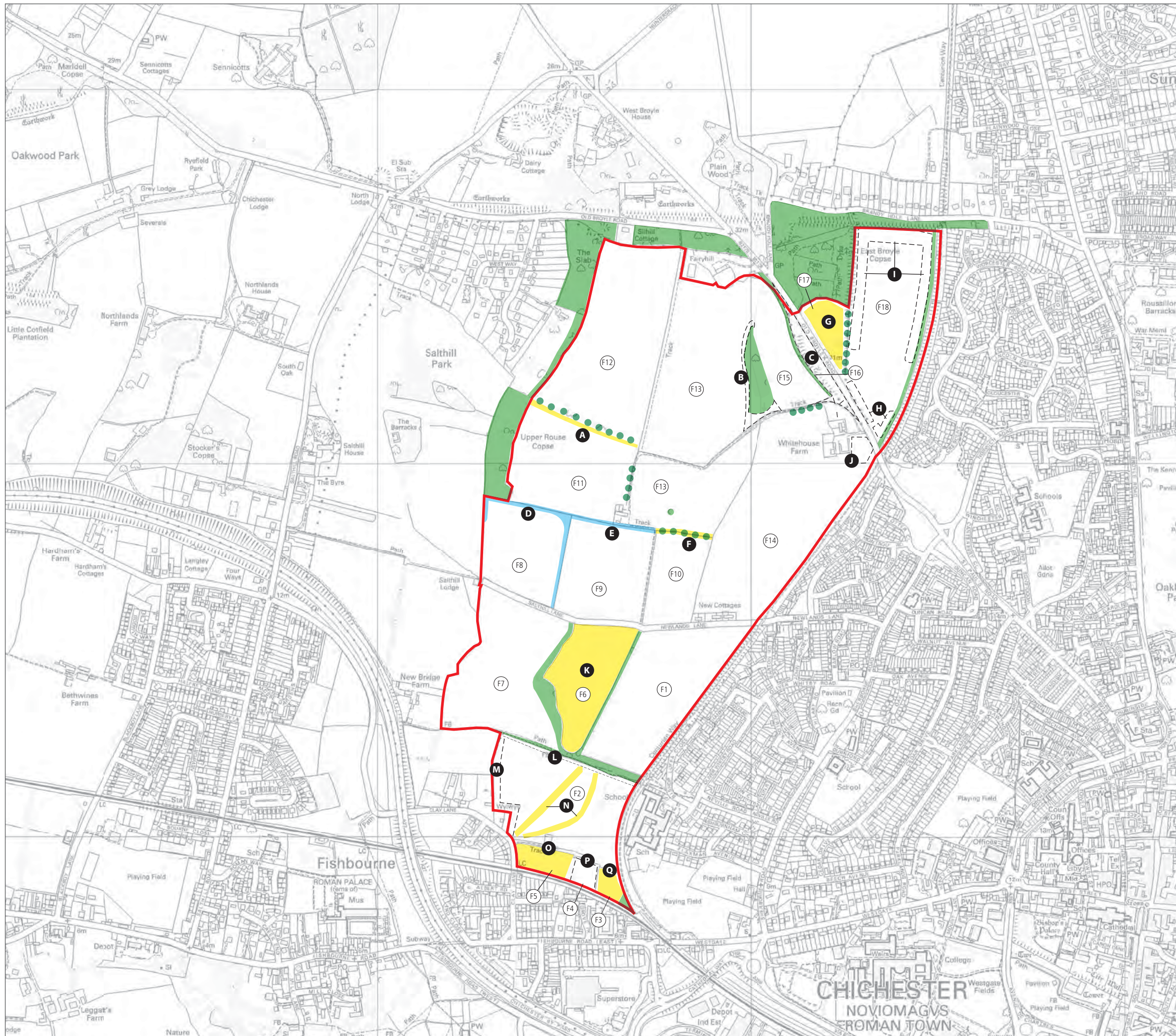
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drawing title  
**Plan EDP 18: Reptile Survey Results 2012-2013: Common Lizard**

date	24 JANUARY 2014	drawn by	TB
drawing number	EDP 129/100a	checked	JW
scale	1:10,000 @A3		



- Site Boundary
- A Reptile Survey Compartment
- Population Size Class Estimate:
- Small
- Medium
- None Found

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project title  
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drawing title  
**Plan EDP 19: Reptile Survey Results 2012-2013: Grass Snake**

date	24 JANUARY 2014	drawn by	TB
drawing number	EDP 129/101a	checked	JW
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