

PRELIMINARY ECOLOGICAL APPRAISAL

FOR FRIENDS OF STRATFIELD BRAKE

LAND AT THE TRIANGLE, KIDLINGTON, OXFORDSHIRE

JUNE 2023 | VERSION 2.1

| | |
|----------------------|---|
| Client Name | Friends of Stratfield Brake |
| Site Location | Land at The Triangle, east of Frieze Way, Kidlington, Oxfordshire |
| Project Code | FN23-031 |
| Project Name | The Triangle |

Document Control

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EXECUTIVE SUMMARY

Future Nature WTC was commissioned in April 2023 to undertake a Preliminary Ecological Appraisal of the land at The Triangle in Kidlington, Oxfordshire. The appraisal sought to identify the value of the habitats present for biodiversity and whether there were opportunities for protected and priority habitats or species to be present.

The site is predominantly formed by willow coppice, surrounded and bisected by a grassland access track, with peripheral habitats also including dense mixed and hawthorn scrub and occasional trees. There is additionally an area of high quality woodland adjacent to the southern site boundary, and an ephemeral pond/waterbody within the boundary scrub.

The scrub, adjacent woodland and grassland habitats confer potential opportunities for bats (foraging, commuting and roosting), birds, invertebrates and limited potential opportunities for reptiles, amphibians, badger and other mammals such as hedgehogs. Accordingly any potential development would need to fully consider any potential adverse impacts on these habitats and species groups, with appropriate mitigation measures designed into the project.

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1 INTRODUCTION

1.1 BACKGROUND

Future Nature WTC, as part of the Wildlife Trust Consultancies (WTC), was commissioned in April 2023 to undertake a Preliminary Ecological Appraisal of land at The Triangle, Kidlington to identify the habitats on site and the species they potentially support.

1.2 SITE LOCATION & DESCRIPTION

The Triangle is located just south of the village of Kidlington, next to the Oxford Parkway Park and Ride, with a central grid reference of SP 49865 12068, as shown in Figure 1. The site boundary, shown in Figure 2, is approximately 5 hectares in size, and predominantly comprises a willow coppicing plantation.

Beyond the boundary, the site is bound by the A4260 'Frieze Way' to the west, by Oxford Road to the east, and Kidlington roundabout to the north. The site is bound by woodland to the south, beyond which lies an arable field and the A34 road.

Figure 1: The Triangle Site Location

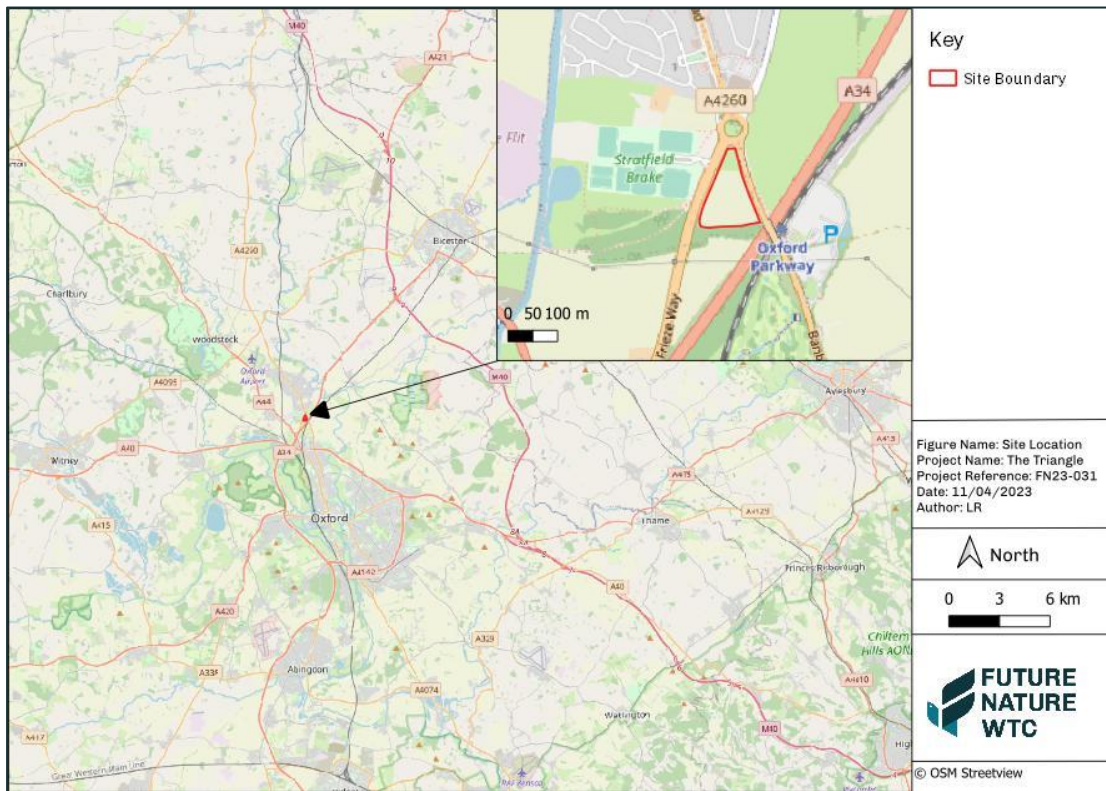


Figure 2: The Triangle Site Boundary



1.3 REPORT OBJECTIVES

The objectives of this report are to:

- Identify statutory and non-statutory designated sites within 1 km of the site;
- Identify records of protected and notable species within 1 km of the site;
- Identify the habitats present on the site and their potential to support protected and notable species; and
- Identify any sensitive ecological receptors to potential development of the site.

2 METHODOLOGY

2.1 DESK STUDY

A desk study was undertaken to identify surrounding habitats and species records:

- An assessment of aerial imagery and Ordnance Survey mapping;
- A search of the Multi Agency Geographic Information for the Countryside (MAGIC) website¹ for statutory designated sites, priority habitats and records of European protected species within 2 km of the survey area; and
- A data search submitted to Thames Valley Environmental Records Centre (TVERC) for notable species, invasive non-native species (INNS) and local non-statutory designated sites within 2km of the site.

2.2 FIELD SURVEY

2.2.1 Habitats/Protected Species

The site was subject to a preliminary walk over survey, during which habitat types were identified and their boundaries mapped. Habitat types were defined as per the UK Habitat Classification criteria² and a habitat map was produced (Figure 3). The habitats were separated into those measured by area and those measured as linear features, as required by the UK Habitat Classification criteria.

During the preliminary survey the site was also checked for evidence of protected and priority species, and habitats were assessed for their potential to support them.

The survey visit was undertaken on 4th May 2023 in suitable weather conditions, as reported in Table 3.3.

¹ Multi Agency Geographic Information for the Countryside (www.magic.gov.uk)

² The UK Habitat Classification, Habitat Definitions Version 1.1 (2020)

2.3 LIMITATIONS TO SURVEY

The field survey and associated habitat condition assessment was undertaken within the optimal growing season and in good conditions.

3 RESULTS

3.1 DESK STUDY

3.1.1 Designated Sites

A search of the MAGIC Website³ and local records centre indicated that a small section of the site itself is designated as a Cherwell District Wildlife Site, albeit this is primarily associated with the adjacent offsite woodland. There are two statutory designated sites within the 2 km search area and seven non-statutory sites, many of which comprise meadow. Details of these designated sites are summarised below in Table 1.

The site is situated within a number of SSSI (Site of Special Scientific Interest) Impact Risk Zones, which are used to 'to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)'. In particular the south west corner of the site is situated within a zone associated with Pixey and Yarnton Meads SSSI (which is also designated as Oxford Meadows Special Area of Conservation SAC), whereby any large infrastructure proposal with a floorspace of 1000m² or greater requires consultation from Natural England to determine any potential adverse impacts in respect of water supply, with a Habitat Regulations Assessment potentially being required due to the SAC designation.

| Table 1: Designated Sites | | | |
|-------------------------------------|------------------|--|----------------------------------|
| Designation | Site Name | Reason for Designation | Distance from Survey Area |
| Statutory designated sites | | | |
| Special Area of Conservation | Oxford Meadows | Lowland hay meadows reflecting the influence of long term traditional grazing and hay cutting over several centuries. One of only three sites in the UK known for creeping marshwort <i>Apium repens</i> . | 1867m |

³ Multi Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk

| | | | |
|---|--|---|--|
| SSSI | Pixey and Yarnton Meads | Unimproved floodplain meadows with botanically rich grassland | 1867m |
| Non-Statutory designated sites | | | |
| Cherwell District / Oxford City Wildlife Site | Stratfield Brake | Range of habitats including broadleaved woodland, grassland, ponds and scrub. | Partially within and adjacent to south of site. |
| Cherwell District Wildlife Site / Woodland Trust Reserve | Stratfield Brake | As above. | Immediately west of the site, separated from the above designation by the road Frieze Way. |
| LWS | Loop Farm Meadows | Wet, species-rich flood-plain fields including a small area of reedbeds | 1465m |
| LWS | Meadows west of Oxford Canal | Two fields that have retained ridge and furrow with lowland meadow on the ridges and fen in the furrows | 668m |
| LWS | Canalside Meadow (Oxford Canal Marsh) | Wet meadow grading into sedge-dominated fen. Important site for birds including snipe. | 1855m |
| LWS | Meadow Noth of Goose Green | Small wet meadow with a mix of tall wetland habitat with large sedges and rushes and wet grassland | 1855m |
| LWS | Wet Woodland and swamp south west of Yarnton | Wet woodland dominated by grey, crack and goat willow | 1450m |

| | | | |
|----------------------------------|-----------------------------------|---|-------|
| LWS | Cassington to Yarnton Gravel Pits | Series of gravel pit lagoons providing important habitat for wintering wildfowl and breeding birds. | 1762m |
| LWS | Wolvercote Mead | Five meadows supporting unimproved grassland with areas of lowland hay meadow. | 1647m |
| Oxford City Wildlife Site | Linkside Lake | Large pond thought to be spring fed with steeply sloping banks. | 1341m |
| Conservation Target Area | Lower Cherwell Valley | | 493m |

3.1.2 Priority Habitats

A search of the MAGIC website and the TVERC data identified the following priority habitats within the 1 km search area.

- **Lowland Mixed Deciduous Woodland:** There are several areas of Lowland Mixed Deciduous Woodland within 2km of The Triangle. The closest area is located directly south of the site, with two small linear sections additionally situated along the west and east site boundary. Stratfield Brake woodland to the west is also recorded as this priority habitat.
- **Traditional Orchard:** There are four areas of Traditional Orchard within 2km of The Triangle.
- **Coastal Floodplain Grazing Marsh:** Two areas of CFGM are 658m south west of the site with reasonable connectivity through Stratfield Brake and the Lower Cherwell Valley CTA, constrained by Frieze Way road.
- **Lowland Meadows:** Adjoining the areas of CFGM are two fields classified as Lowland meadow, again with reasonable but constrained connectivity to The Triangle.
- **Lowland Fens:** Canalside Meadows LWS is 1855m south west of The Triangle. The LWS is separated from The Triangle by a number of major roads including the A40 and A34.
- **Reedbeds:** Loop Farm Meadows LWS and Dukes Lock Pond LWS are both reedbed sites 1465m south west of The Triangle but they are separated by roads.

- **Priority Ponds:** Two ponds are 500m to the west of The Triangle with good connectivity through Stratfield Brake, albeit constrained by Frieze Way road.

3.1.3 European Protected Species Licencing

The MAGIC website identified a number of granted European Protected Species (EPS) licenses within 2 km of the site, for Great Crested Newts (GCN) and a variety of bat species.

Table 2: Granted EPS licenses within 1km

| Reference | Species | Start and End Date | Type | Distance from Survey Area |
|-------------------------|---|--------------------------------|--|---------------------------|
| 2014-1382 EPS-MIT | Great Crested Newt | 05/09/2014 to 30/06/2019 | Damage and destruction of resting place | 1.16km |
| EPSM2012-5322 | Great Crested Newt | 06/12/2013 to 30/06/2019 | Destruction of breeding site and resting place | 1.16km |
| 2014-3653- EPS-MIT | Brown Long-eared bat, Common Pipistrelle, Daubenton’s bat, Natterers bat, Soprano Pipistrelle | 01/03/2015 to 31/08/2020 | Damage and destruction of resting place | 1.74km |
| 2014-3653- EPS-MIT-1 | Brown Long-eared bat, Common Pipistrelle, Daubenton’s bat, Natterers bat, Soprano Pipistrelle | 21/04/2015 to 31/08/2020 | Damage and destruction of resting place | 1.74km |
| 2014-3653- EPS-MIT-2 | Brown Long-eared bat, Common Pipistrelle, Daubenton’s bat, | 21/05/2015 to 31/08/2020 | Damage and destruction of resting place | 1.74km |

| | | | | |
|-------------------------|---|--------------------------------|---|--------|
| | Natterers bat, Soprano Pipistrelle | | | |
| 2014-3653- EPS-MIT-3 | Brown Long-eared bat, Common Pipistrelle, Daubenton's bat, Natterers bat, Soprano Pipistrelle | 01/06/2015 to 31/08/2020 | Damage and destruction of resting place | 1.74km |
| 2014-3653- EPS-MIT-6 | Brown Long-eared bat, Common Pipistrelle, Daubenton's bat, Natterers bat, Soprano Pipistrelle | 23/08/2019 to 31/08/2022 | Damage and destruction of resting place | 1.74km |
| 2014-3653- EPS-MIT-7 | Brown Long-eared bat, Common Pipistrelle, Daubenton's bat, Natterers bat, Soprano Pipistrelle | 03/11/2020 to 31/12/2022 | Damage and destruction of resting place | 1.74km |
| 2014-3653- EPS-MIT-5 | Brown Long-eared bat, Common Pipistrelle, Daubenton's bat, Natterers bat, Soprano Pipistrelle | 14/03/2016 to 31/08/2022 | Damage and destruction of resting place | 1.74km |

3.1.4 General Land Use

A review of aerial imagery and Ordnance Survey mapping indicates that the surrounding land use comprises a mixture of arable/recreational land and Oxford Parkway Park and Ride, whilst the Cherwell Wildlife Site/Woodland Trust reserve Stratfield Brake wood is located immediately to the west of the site.

3.2 DATA SEARCH

3.2.1 Local Records Centre

Protected and Notable Species

A total of 225 notable species were found within a 1km radius of the site including 106 birds, five amphibians, 48 plants, 37 insects, 18 mammals, four fish and two reptiles. A summary of the records of protected or otherwise notable species provided by TVERC is available in Appendix B.

Those records which are of particular note include 69 records of great crested newt *Triturus cristatus*, last recorded in 2018, and a number of bird records for species which have the potential to use the site and nearby habitats, which are discussed further in the relevant sections below.

3.3 FIELD SURVEY

3.3.1 Survey Conditions

A summary of the survey conditions are provided in Table 3.3.


| Table 3.1: Survey Conditions | | | | |
|------------------------------|---------------------|-------------|---------------|----------------------------------|
| Date | Average Temperature | Cloud Cover | Precipitation | Wind Conditions (Beaufort scale) |
| 04/05/2023 | 17°C | 10% | None | 2 |


3.3.2 Habitat Assessment


The types of habitat identified on the site have been categorised using the UK Habitat Classification. A total of four habitat features were recorded during the survey.


Overview Description


The habitat features found in the survey area are described below in Table 3.2. The locations of these features are presented in the baseline habitat map on Figure 3. Target Notes are used to identify features of interest and their locations are shown on Figure 3 and described in Table 3.3.

| Table 3.2: Habitat Features | | | | |
|--|--------|-----------|---|---|
| Habitat Feature | Area | Condition | Description | Photo |
| c1d6 120 Short Rotation Coppice | 3.35ha | N/A | <p>The majority of the site comprises dense stands of relatively young willow coppice, managed for commercial use. The ground is relatively damp in places. The ground flora is limited to occasional young bramble <i>Rubus fruticosus</i>, ash <i>Fraxinus excelsior</i>, seedlings, broad-leaved dock <i>Rumex obtusifolius</i>, creeping buttercup <i>Ranunculus repens</i>, creeping cinquefoil <i>Potentilla repens</i>, whilst infrequent ground ivy <i>Glechoma hederacea</i>, field forget-me-not <i>Mysotis arvensis</i>, young hawthorn <i>Crataegus monogyna</i>, elm <i>Ulmus minor</i> saplings, horsetail <i>Equisetum sp.</i> and common fleabane <i>Pulicria dysenterica</i> are also present, with a strong moss component through much of the habitat. On average there were approximately 6 ground flora species per metre squared.</p> |  |

| | | | | |
|--|--------------|-----------------|---|---|
| <p>h3f 14 120 Hawthorn scrub</p> | <p>0.6ha</p> | <p>Moderate</p> | <p>An area of relatively young hawthorn dominant scrub is located within the northern corner of the site. The coverage is dense in places albeit with frequent small gaps / clearings. Other shrubs are occasionally present, including willow, elm and oak. The ground flora is relatively sparse and includes frequent willowherb <i>Epilobium sp.</i>, with common fleabane, ragwort <i>Senecio jacobaea</i>, creeping buttercup, glaucous sedge <i>Carex flacca</i>, fescue <i>Festuca sp.</i>, bugle <i>Ajuga reptans</i>, salad burnet <i>Sanguisorba minor</i>, Yorkshire fog <i>Holcus lanatus</i> and infrequent ground ivy present, whilst a strong moss component is also frequent. The ground is relatively damp in places, in particular there is a small section close to the entrance at Oxford Road, with willow becoming more frequent and rush <i>Juncus sp.</i> present.</p> |  |
|--|--------------|-----------------|---|---|

| | | | | |
|---|---------------|-----------------|---|---|
| <p>h3h 11 120 162 Mixed scrub</p> | <p>0.23ha</p> | <p>Moderate</p> | <p>A linear section of scrub is located along and adjacent to the eastern and western boundaries of the site, effectively an over-wide hedgerow at the east, and a linear extension of the adjacent woodland understorey to the west (here located adjacent to site). Although hawthorn dominant, the scrub is generally more mature and outgrown than the above described habitat, and includes a number of standard oaks. Other scrub species are occasionally present such as elm and hazel, with a dense bramble stand / deadwood pile infilling a gap in one location at the eastern boundary.</p> <p>The scrub occasionally encroaches into the grassland habitat around the site perimeter, particularly at the western site boundary.</p> <p>A small ephemeral waterbody was also noted within an offsite area of this habitat immediately adjacent to the eastern site boundary, which does not support any aquatic / emergent vegetation. The waterbodies potential to support amphibians is considered in section 3.3.4 below.</p> |  |
|---|---------------|-----------------|---|---|

| | | | | |
|---|---------------|-------------|--|---|
| <p>g3c 14 120 Other neutral grassland</p> | <p>0.73ha</p> | <p>Poor</p> | <p>Grassland is located around the periphery of the site, which is managed in keeping with its use as an access track to the willow coppice planting, which it also bisects in one location. The grassland is generally relatively species poor, varying between 6-8 species per metre squared on average. The sward is grass dominant, though forbs are occasional to frequent, with scattered rushes also present. There are indicators of higher quality grassland in the sward such as common spotted orchid and oxeye daisy, though these are infrequent, with species such as common nettle, broad-leaved dock and creeping buttercup likely indicating the areas of disturbance / localised nutrient input. The grassland has some affinity with G3c8 Holcus – Juncus neutral grassland, which is a species poor type of grassland.</p> <p>Species present include Yorkshire fog, cocksfoot <i>Dactylis glomerata</i>, wood false brome <i>Brachypodium sylvaticum</i>, soft rush <i>Juncus effusus</i>, pendulous sedge <i>Carex pendula</i> (infrequent), creeping cinquefoil, ground ivy, creeping buttercup, common nettle <i>Urtica dioica</i>, willowherb sp., bramble seedlings, vetch <i>Vicia</i> sp., broad-leaved dock, dove’s foot cranesbill <i>Geranium molle</i>, raspberry <i>Rubus idaeus</i>, ragwort, creeping thistle <i>Cirsium arvense</i>, St. John’s wort <i>Hypericum</i> sp., white clover <i>Tifolium repens</i>, bristly oxtongue <i>Helminthotheca</i></p> |  |
|---|---------------|-------------|--|---|

| | | | | |
|---|-----|-----|---|---|
| | | | <p><i>echioides</i>, field forget-me-not, common dandelion <i>Taraxacum officinale</i> agg., cleavers <i>Galium aparine</i>, greater plantain <i>Plantago major</i>, rose <i>Rosa</i> sp., bugle, speedwell <i>Veronica</i> sp., common daisy <i>Bellis perennis</i>, horsetail sp., plus infrequent common spotted orchid <i>Dactylorhiza fuchsii</i>, oxeye daisy <i>Leucanthemum vulgare</i> and cuckoo flower <i>Cardamine pratensis</i>.</p> | |
| <p>w1f Lowland mixed deciduous woodland (offsite)</p> | N/A | N/A | <p>An area of good quality deciduous woodland is located offsite adjacent to the southern site boundary. This woodland is identified as the Priority Habitat ‘Deciduous Woodland’ on MAGIC mapping, and is considered to be in line with this habitat description.</p> <p>The canopy is relatively continuous, albeit with frequent gaps which let some light through, and is typified by mature oak and ash, whilst there is also a scattered understorey throughout, predominantly formed by mature hawthorn.</p> <p>The ground flora is relatively continuous and diverse, with species including bramble, prunus sp., elm and hawthorn seedlings, plus ground ivy, Yorkshire fog, herb Robert, garlic mustard, cleavers, common dog violet, bindweed sp., raspberry, wood avens, wood false</p> |  |

| | | | |
|---|--|--|--|
| | | <p>brome, lords & ladies, dogs mercury, pendulous sedge, goldilocks buttercup, cowslip, wood sedge, common ivy, bluebell (including dense patches native and hybrid) and lesser celandine.</p> <p>Some deer browsing damage was noted, whilst deadwood is occasionally present. A dry shallow ditch is also located close to the southern site boundary.</p> | |
| <p>Secondary Codes used include; 11 Scattered trees, 14 Scattered rushes, 120 Wet, 162 Temporary water bodies</p> | | | |

| Target Note | Description |
|--------------------|---|
| 1 | Deadwood pile present. Occasional scallops noted within willow coppice. |
| 2 | Small section of scrub encroaches into onsite grassland. Two willow trees with moderate bat potential (due to rot holes and deadwood) are also located adjacent to site at this location. |
| 3 | Localised areas of decreased species diversity (6 species per metre squared) within grassland along western side of site. |
| 4 | Diversity of grassland generally increases back to 8 species per metre squared. |
| 5 | Linear section of scrub adjacent to site becomes more outgrown with elder <i>Sambucus nigra</i> additionally present. |
| 6 | Localised area of scrub noticeably damper, with rushes present. Debris pile also present. |
| 7 | Ephemeral waterbody present at edge of site. |
| 8 | Slight decrease in species diversity of grassland (still at least 6 species per metre squared). |

Figure 3: The Triangle Habitat Map



3.3.3 Schedule 9 Plant Species

No non-native invasive species on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were identified during the field survey.

3.3.4 Protected Species

This section describes the potential for protected and priority/notable species to be present or supported in the habitats found at the site. It also outlines the results of the data search of local species records, provided by Thames Valley Environmental Records Centre.

Bats

The data search returned 252 bat records from 13 species or species groups within 2km of the site, including rare species such as western barbastelle *Barbastella barbastellus* and Bechstein's bat *Myotis bechsteinii*, recorded in 2016 and 2019 respectively.

The scrub habitat at the site periphery confers moderate potential opportunities for foraging and commuting bats, particularly when considered in combination with Stratfield Brake wood to the west and parcels of Priority Habitat deciduous woodland along the A34 to the north and south. The woodland immediately adjacent to the site also confers good opportunities for this species group, including the aforementioned rare species which utilise woodland habitat. The grassland and willow coppice are also of some limited value, forming a mosaic with greater value habitats at the site.

The site additionally provides opportunities for roosting bats, including from rot holes / deadwood in 2 mature willows adjacent to the southwest corner of the site, whilst the adjacent offsite woodland generally offers moderate roosting potential for this species group.

Birds

Desk study

The data search returned records of 106 protected and notable bird species within 2km of the site. Several in each category are mentioned which would potentially find habitats at the site valuable. Nine of these are protected under Schedule 1 Part 1 of the WCA⁴ 1981 (as amended) including Redwing *Turdus iliacus*, Fieldfare *Turdus pilaris* and Barn Owl *Tyto alba*.

Sixteen Species of Principle Importance (as listed under Section 41 of NERC⁵ Act) were also recorded including Dunnock *Prunella modularis*, Spotted Flycatcher *Muscicapa striata* and Reed Bunting *Emberiza schoeniclus*.

Thirty-six species are Red listed BoCC⁶ and 54 are Amber listed Species include Whitethroat *Curruca communis*, Marsh tit *Poecile palustris* and Tawny Owl *Strix aluco*.

Field survey and nesting potential

During the field survey ten bird species were incidentally recorded, chiff chaff *Phylloscopus collybita*, blackcap *Sylvia atricapilla*, blue tit *Cyanistes caeruleus*, blackbird *Turdus merula* and goldfinch *Carduelis carduelis*, great tit *Parus major*, robin *Erithacus rubecula*, long-tailed tit

⁴ Wildlife and Countryside Act 1981

⁵ Natural Environment and Rural Communities Act 2006

⁶ Birds of Conservation Concern 5, December 2021

Aegithalos caudatus, wren *Troglodytes troglodytes* and dunnoek *Prunella modularis* which is included in the Amber list (BoCC⁷):. It should be noted that this is only a small snapshot of species present at the time of survey, and that a suite of breeding bird surveys would be needed to understand the full breeding bird assemblage in detail.

Peripheral and boundary habitats at the site offer moderate foraging and sheltering opportunities for birds, including the scrub and trees, which are likely to support a modest assemblage of breeding birds, with greater opportunities afforded by the adjacent offsite woodland. Furthermore, the site provides connectivity through the landscape in combination with nearby areas of woodland Priority Habitat, in particular to the west, south and north.

Nesting birds are also likely to use the dense / woody vegetation within the scrub habitat and trees, of which any active nests are protected from disturbance until chicks have fledged.

Amphibians

The data search returned records of five amphibian species, including common frog *Rana temporaria*, common toad *Bufo bufo*, great crested newt, palmate newt *Lissotriton helveticus* and smooth newt *Lissotriton* all of which are protected under schedule five part nine of the Wildlife and Countryside Act 1981, whilst common toad and great crested newt are also a priority species. Great crested newt is also a European Protected Species⁸ and therefore receives additional protection.

The scrub, grassland and willow coppice habitat, plus the adjacent offsite woodland provide suitable terrestrial habitat for this species group.

A single ephemeral waterbody is located within mixed scrub at the eastern site boundary, in effect a widened section of ditch / small pond, whilst a further five ponds are located within 500m of the site, albeit separated by main roads. The onsite waterbody confers some minor potential for the protected species great crested newt, the priority species common toad *Bufo bufo* and other amphibians, however likelihood of this waterbody regularly drying somewhat reduces this potential, in addition to its lack of aquatic / emergent vegetation. A Habitat

⁷ Birds of Conservation Concern 5, December 2021

⁸ The Conservation of Habitats and Species Regulations 2017

Suitability Index score for Great Crested Newts was calculated for this waterbody, which describes the waterbody as having a 'poor' suitability (please see Appendix C). There are additionally barriers to movement of this species group due to the site and land beyond to the south being bound by major roads.

Reptiles

The data search returned records for two species, slow worm *Anguis fragilis* and Grass Snake *Atrix helvetica* within 2km of the site in 2015, both of which receive partial protection under schedule five part nine of the Wildlife and Countryside Act 1981, in addition to being priority species.

The scrub, grassland and willow coppice habitat on site confer some minor opportunities for common reptiles, in addition to the adjacent offsite woodland, albeit the regular management of the grassland reduces the potential of this habitat. Piles of deadwood are present within the adjacent offsite woodland, whilst a debris pile is located near the site entrance, which provide potential refugia for reptiles. However, the potential use of the site by reptiles is constrained given that the site and land to the south beyond are bound by major roads which form a barrier to this species group.

Badger

The data search returned 23 records of badger *Meles meles* within 2km of site, with dates of records ranging from 1996 to 2010. Badger receive full protection under the Badger Protection Act 1992.

No evidence of badger setts or other specific activity were recorded within or adjacent to the site. The scrub and grassland habitats present within the site provide some opportunities for foraging badgers which have territories within the wider area, albeit this is constrained by the main roads which are present in all directions surrounding the site.

Hazel Dormouse

The data search returned no records of dormice. Dormice are a European Protected Species⁹.

The scrub habitat, especially the more mature outgrown scrub at the site boundaries, confers some limited opportunities for dormice, in addition to the adjacent offsite woodland. This potential is however somewhat constrained by the roads surrounding the site which form barriers to suitable habitat in the wider landscape.

Other mammals

The data search returned six records of notable mammals within 2km of site between 2009 and 2020, including: hedgehog *Erinaceus europaeus*, European water vole *Arvicola amphibius*, polecat *Arvicola amphibius* and otter *Lutra lutra*, all of which are priority species, whilst otter and water vole are a European Protected Species¹⁰.

There are no watercourses suitable for water vole or otter near the site which are therefore considered likely to be absent.

The dense scrub and deadwood / debris pile provide limited suitable habitat for hibernating and resting hedgehogs. The grassland, scrub, willow coppice and adjacent offsite woodland also provide suitable foraging habitat.

Other common mammals such as fox are likely to use the site, although these do not receive any specific protection.

Invertebrates

Forty-one invertebrate species were recorded within 2km of site, consisting of four true flies, 24 moths, two butterflies and six beetles.

Habitats present at the site are likely to support a modest assemblage of common invertebrates, in particular the mature boundary scrub, whilst the adjacent offsite woodland is likely to support a wider variety of invertebrates such as saproxylic species. A number of common species of invertebrate were incidentally recorded during the habitat survey,

⁹ The Conservation of Habitats and Species Regulations 2017

including orange tip *Anthocharis cardamines*, peacock *Aglais io*, large white *Pieris brassicae*, brimstone *Gonopteryx rhamni* and an unidentified dragonfly.

4 SITE EVALUATION AND SENSITIVE RECEPTORS

4.1 DESIGNATED SITES

European Protected Sites

The south west section of the site is located within the Oxford Meadows Special Area of Conservation Impact Risk Zone as defined by MAGIC. This site is particularly vulnerable to pollution, invasive species and human induced changes in hydraulic conditions. As such, any development which increases the requirement for water use in the area may need to undergo a Habitat Regulations Assessment in order to understand any potential adverse impacts on this designation.

Local Protected Sites

The Cherwell District / Oxford City Wildlife Site 'Stratfield Brake' is situated immediately adjacent to the south of site, with a small section located within the south west corner of the site. The section closest to site comprises established woodland, which supports thirteen species of long established woodland, and a good range of bird species.

This woodland is vulnerable to increased human disturbance (further described in 4.2 below) and habitat fragmentation arising from potential development at the site, particularly when considering the faunal assemblage it is likely to support.

4.2 HABITATS

The dominant habitat at the site comprises willow coppice, which is of only low ecological value given its regular management.

The grassland which forms the access track around and through the coppice plantation is also currently of limited ecological value, due to the nature of its use and associated management. However a number of indicators of higher quality grassland/of botanical interest are present (e.g. common spotted orchid), whilst the sward regularly featured 8 species per metre squared

despite the intensive management. Any losses to this habitat would therefore lose the potential for restoration of this grassland.

The peripheral habitats primarily comprise dense scrub at the boundaries and an area of younger hawthorn scrub at the northern end of the site. These habitats provide good opportunities for fauna and are of elevated ecological value in the site context, but also when considering they provide connectivity with offsite habitats in the local area. Accordingly they are considered to be of moderate value at the local level, and would be sensitive to any losses and / or disturbance (such as from littering, which already occurs at points close to the main roads) arising from a change in land use.

The adjacent offsite woodland is considered to be of elevated ecological value, and accords with the Priority Habitat 'Lowland Mixed Deciduous Woodland' designation, as indicated on Defra's MAGIC mapping and described within the Cherwell District Wildlife Site Citation. The ground flora is relatively diverse and several indicators of ancient woodland are present including wood sedge, pendulous sedge, goldilocks buttercup and bluebell, whilst historic OS mapping indicates this area of woodland (and the wider Stratfield Brake Woodland Trust Reserve to the west) to have been present since at least 1898¹⁰. Further detailed survey work would be required to confirm the likelihood of the habitat comprising ancient woodland. In any case, in line with current guidance, the habitat is considered to be of elevated ecological value up to the National Level¹¹. Any change in land use would have the potential to adversely impact on this habitat through increased recreational pressure, increase nutrient input from dog fouling and from other disturbance such as littering (already present within scrub near to the road), accidental damage, increased air- or water-borne pollutants and lighting (see fauna headings below).

4.3 BNG

If entered into the latest biodiversity metric (Defra 4.0), the habitats at the site are considered to have a baseline value of 17.89 habitat units. It should be noted that this metric does not account for fauna present at the site.

¹⁰ <https://www.nls.uk/digital-resources/>

¹¹ Design Manual for Roads and Bridges. Sustainability & Environment Appraisal, LA 108 Biodiversity, March 2020. Table 3.9 ([af0517ba-14d2-4a52-aa6d-1b21ba05b465 \(standardsforhighways.co.uk\)](https://www.standardsforhighways.co.uk/af0517ba-14d2-4a52-aa6d-1b21ba05b465))

4.4 BATS

The site confers potential for commuting and foraging bats, including the scrub and adjacent woodland habitats, and particularly when considering connectivity to habitats in the wider landscape, albeit the roads surrounding the site will slightly reduce this benefit, especially for rarer/more sensitive species. Roosting opportunities are also afforded by mature willow boundary trees and generally by mature trees in the adjacent offsite woodland. At least 13 bat species are known to have occurred within 2km of the site, including the rare woodland specialists Bechstein's bat and western Barbastelle.

Further survey work would be required to understand use of the site by bats, though habitats present generally are of moderate potential for this species group, with any population present potentially sensitive to increased disturbance through a change in land use or increased lighting and habitat fragmentation as a result of this.

4.5 BIRDS

The scrub and adjacent woodland habitats at or near the site are likely to support a modest assemblage of breeding birds. Similarly to bats, the value of these habitats should be considered in combination with offsite habitats which provide connectivity through the wider landscape. A wide range of notable bird species are known to have occurred within 2km of the site, including the red list species nightingale *Luscinia megarhynchos* which favours dense scrubby habitat, plus lesser spotted woodpecker and spotted flycatcher which favour woodland habitat.

Further survey work would be required to fully understand the bird assemblage present, which would be sensitive to changes in land use which may cause an increase in disturbance or habitat fragmentation in the local area.

4.6 AMPHIBIANS

The site confers minor potential opportunities for amphibians, limited to a single small waterbody which appears to be ephemeral in nature and suitable terrestrial habitat including

in particular the scrub and adjacent woodland, albeit these are isolated from habitats in the wider area by major roads. Great crested newts (69 records) and other priority species of amphibian are known to occur within 2km of the site.

Further survey work would be required to understand the presence / likely absence of the protected species great crested newt, which if present would be sensitive to any increase in disturbance such as from littering and loss of terrestrial habitat which may arise from a change in land use. Great crested newts are European Protected Species and therefore appropriate mitigation and a licence from Natural England would be required for any works that could affect them.

4.7 REPTILES

Habitats at the site including the grassland, scrub and offsite woodland confer some potential opportunities for reptiles, albeit as with amphibians this is constrained by the road barriers surrounding the site and adjacent land. Grass snake and slow-worm are known to have occurred within 2km of the site.

Further survey work would be required to understand the extent of any reptile population which may be present, and their sensitivity to changes in land use arising from loss of terrestrial habitat and disturbance.

4.8 BADGER (AND OTHER MAMMALS)

Although no badger setts were identified at the site, they are potentially present in the wider area (including land to the south of the site, particularly before any roads become a barrier), and therefore may enter the site for foraging, with potential opportunities afforded by the scrub, grassland and adjacent woodland. Badgers are known to have occurred in the wider area, as are a number of other mammals which the site affords potential opportunities for, such as the priority species hedgehog and protected species polecat.

Should these species be present at the site, they would be sensitive to increased disturbance, loss of terrestrial habitat and mortality from any increase in road traffic.

4.9 DORMICE

Some limited opportunities for dormice are present at the site, including the dense scrub and adjacent woodland, albeit none are known to have occurred in the wider area, whilst the roads form a barrier to colonisation of this species. They are therefore considered likely to be absent.

4.10 INVERTEBRATES

The scrub and grassland habitat at the site likely support a modest assemblage of invertebrates, with the adjacent woodland likely supporting a more diverse and complex assemblage. A wide range of notable species (42 total) are known to have occurred within 2km of the site, including several beetle species, numerous moth species and several flies, true bugs and molluscs. Two dragonfly/damselfly species are also known to occur, including the red list species common darter, with the ephemeral pond conferring some limited opportunities for this species group.

The invertebrate assemblage present will be sensitive to changes in land use which increase any levels of lighting, air pollution, habitat fragmentation or loss of terrestrial habitats.

5 CONCLUSION

Overall, the site supports habitats of elevated ecological value including dense / hawthorn scrub, whilst the grassland has some potential to be of higher quality, currently constrained by management practices. The adjacent woodland is of a high quality, and is considered to accord with the Priority Habitat designation 'Mixed Deciduous Woodland', whilst several ancient woodland indicator species are present within the ground flora.

Such habitats confer a range of opportunities for protected and notable species, in particular for foraging, commuting and roosting bats, breeding birds, invertebrates and minor potential for amphibians, reptiles, badger and hedgehog.

Further survey work would be required to further understand the presence of such species.

Any change in land use which increases human activity and reduces habitat area would have the potential to increase habitat fragmentation in the area, plus disturbance to habitats of elevated value and to notable / protected species which may use the site.

6 APPENDICES

APPENDIX A – LOCAL RECORDS SEARCH

| Common Name | Latin Name | European Directives | UK Legislation | NERC | Other Designations | No of records | Earliest Record | Latest Record |
|--------------------|-----------------------------------|------------------------|--|----------|--------------------|---------------|-----------------|---------------|
| | | | | s41 | | | | |
| Common Frog | <i>Rana temporaria</i> | HabDir-A5 | WACA-Sch5-s9.5a | NA | NA | 17 | 12/07/1995 | 19/06/2020 |
| Common Toad | <i>Bufo bufo</i> | NA | WACA-Sch5-s9.5a | NERC-S41 | NA | 9 | 14/06/2003 | 23/04/2021 |
| Great Crested Newt | <i>Triturus cristatus</i> | HabDir-A2np, HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a | NERC-S41 | NA | 69 | 27/04/2009 | 14/06/2018 |
| Palmate Newt | <i>Lissotriton helveticus</i> | NA | WACA-Sch5-s9.5a | NA | NA | 6 | 11/05/2009 | 08/06/2009 |
| Smooth Newt | <i>Lissotriton vulgaris</i> | NA | WACA-Sch5-s9.5a | NA | NA | 37 | 21/04/2009 | 04/06/2015 |
| Arctic Tern | <i>Sterna paradisaea</i> | BirdsDir-A1 | NA | NA | Bird-Amber | 1 | 04/05/2019 | 04/05/2019 |
| Barn Owl | <i>Tyto alba</i> | NA | WACA-Sch1-p1 | NA | NA | 15 | 08/02/2000 | 08/04/2021 |
| Barnacle Goose | <i>Branta leucopsis</i> | BirdsDir-A1 | NA | NA | Bird-Amber | 8 | 22/04/1998 | 18/04/2019 |
| Bittern | <i>Botaurus stellaris</i> | BirdsDir-A1 | WACA-Sch1-p1 | NERC-S41 | Bird-Amber | 2 | 18/02/2000 | 26/03/2001 |
| Black-headed Gull | <i>Chroicocephalus ridibundus</i> | NA | NA | NA | Bird-Amber | 38 | 31/05/1998 | 06/07/2021 |

| Black-tailed Godwit | <i>Limosa limosa</i> | NA | WACA-Sch1-p1 | NERC-S41 | Bird-Red, RL- Global-post2001-NT | 62 | 27/03/1998 | 17/09/2019 |
|---------------------|---------------------------------|---------------------|----------------|----------|----------------------------------|---------------|-----------------|---------------|
| Black Redstart | <i>Phoenicurus ochruros</i> | NA | WACA-Sch1-p1 | NA | Bird-Amber | 1 | 19/04/2000 | 19/04/2000 |
| Black Tern | <i>Chlidonias niger</i> | BirdsDir-A1 | WACA-Sch1-p1 | NA | NA | 4 | 11/05/1998 | 08/05/2019 |
| Brambling | <i>Fringilla montifringilla</i> | NA | WACA-Sch1-p1 | NA | NA | 23 | 14/03/1999 | 04/04/2006 |
| Bullfinch | <i>Pyrrhula pyrrhula</i> | NA | NA | NERC-S41 | Bird-Amber | 17 | 27/12/1998 | 04/03/2016 |
| Cetti's Warbler | <i>Cettia cetti</i> | NA | WACA-Sch1-p1 | NA | NA | 21 | 26/02/2019 | 06/07/2021 |
| Common Gull | <i>Larus canus</i> | NA | NA | NA | Bird-Amber | 13 | 18/12/2002 | 30/12/2019 |
| Common Sandpiper | <i>Actitis hypoleucos</i> | NA | NA | NA | Bird-Amber | 33 | 10/05/1998 | 04/05/2013 |
| Common Tern | <i>Sterna hirundo</i> | BirdsDir-A1 | NA | NA | Bird-Amber | 31 | 14/05/1998 | 06/07/2021 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC s41 | Other Designations | No of records | Earliest Record | Latest Record |
| Corn Bunting | <i>Emberiza calandra</i> | NA | NA | NERC-S41 | Bird-Red | 3 | 09/03/2003 | 29/06/2010 |
| Cuckoo | <i>Cuculus canorus</i> | NA | NA | NERC-S41 | Bird-Red | 9 | 12/05/2000 | 06/05/2021 |
| Curlew | <i>Numenius arquata</i> | NA | NA | NERC-S41 | Bird-Red, RL- Global-post2001-NT | 25 | 07/03/1998 | 19/06/2019 |

| | | | | | | | | |
|-------------------------|----------------------------|-------------|--------------|----------|------------|----|------------|------------|
| Dunlin | <i>Calidris alpina</i> | NA | NA | NA | Bird-Red | 5 | 15/03/1998 | 10/11/2004 |
| Dunnock | <i>Prunella modularis</i> | NA | NA | NERC-S41 | Bird-Amber | 38 | 31/05/2001 | 06/07/2021 |
| Fieldfare | <i>Turdus pilaris</i> | NA | WACA-Sch1-p1 | NA | Bird-Red | 24 | 20/01/1998 | 04/03/2016 |
| Gadwall | <i>Mareca strepera</i> | NA | NA | NA | Bird-Amber | 93 | 07/01/1998 | 08/04/2021 |
| Garganey | <i>Spatula querquedula</i> | NA | WACA-Sch1-p1 | NA | Bird-Amber | 1 | 30/04/1998 | 30/04/1998 |
| Golden Plover | <i>Pluvialis apricaria</i> | BirdsDir-A1 | NA | NA | NA | 10 | 19/12/1998 | 04/03/2016 |
| Goldeneye | <i>Bucephala clangula</i> | NA | WACA-Sch1-p2 | NA | Bird-Red | 26 | 02/02/1998 | 13/04/2021 |
| Goshawk | <i>Accipiter gentilis</i> | NA | WACA-Sch1-p1 | NA | NA | 1 | 15/10/2003 | 15/10/2003 |
| Grasshopper Warbler | <i>Locustella naevia</i> | NA | NA | NERC-S41 | Bird-Red | 4 | 19/07/2000 | 29/06/2010 |
| Great Black-backed Gull | <i>Larus marinus</i> | NA | NA | NA | Bird-Amber | 1 | 01/01/2019 | 31/01/2019 |
| Great Northern Diver | <i>Gavia immer</i> | BirdsDir-A1 | WACA-Sch1-p1 | NA | Bird-Amber | 1 | 27/10/1999 | 27/10/1999 |
| Great White Egret | <i>Ardea alba</i> | NA | NA | NA | Bird-Amber | 3 | 08/10/2019 | 28/12/2021 |
| Green Sandpiper | <i>Tringa ochropus</i> | NA | WACA-Sch1-p1 | NA | Bird-Amber | 41 | 17/01/1998 | 11/10/2004 |
| Greenfinch | <i>Chloris chloris</i> | NA | NA | NA | Bird-Red | 15 | 09/03/2003 | 07/04/2022 |

| Greenshank | Tringa nebularia | NA | WACA-Sch1-p1 | NA | Bird-Amber | 8 | 13/05/1998 | 03/08/2019 |
|--------------------------|-------------------|---------------------|----------------|----------|--------------------|---------------|-----------------|---------------|
| Grey Partridge | Perdix perdix | NA | NA | NERC-S41 | Bird-Red | 2 | 27/08/2003 | 14/01/2009 |
| Grey Wagtail | Motacilla cinerea | NA | NA | NA | Bird-Amber | 35 | 25/02/1998 | 14/05/2021 |
| Greylag Goose | Anser anser | NA | NA | NA | Bird-Amber | 14 | 17/03/2000 | 08/04/2021 |
| Herring Gull | Larus argentatus | NA | NA | NERC-S41 | Bird-Red | 6 | 18/07/2002 | 05/03/2021 |
| Hobby | Falco subbuteo | NA | WACA-Sch1-p1 | NA | NA | 41 | 09/05/1998 | 01/09/2019 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC | Other Designations | No of records | Earliest Record | Latest Record |
| | | | | s41 | | | | |
| Honey-buzzard | Pernis apivorus | BirdsDir-A1 | WACA-Sch1-p1 | NA | Bird-Amber | 1 | 01/09/1998 | 01/09/1998 |
| House Martin | Delichon urbicum | NA | NA | NA | Bird-Red | 13 | 22/04/1998 | 19/06/2020 |
| House Sparrow | Passer domesticus | NA | NA | NERC-S41 | Bird-Red | 16 | 31/05/2001 | 19/04/2022 |
| Kestrel | Falco tinnunculus | NA | NA | NA | Bird-Amber | 12 | 10/07/2000 | 06/07/2021 |
| Kingfisher | Alcedo atthis | BirdsDir-A1 | WACA-Sch1-p1 | NA | NA | 100 | 14/07/1995 | 28/05/2021 |
| Lapwing | Vanellus vanellus | NA | NA | NERC-S41 | Bird-Red | 21 | 15/06/1998 | 01/06/2019 |
| Lesser Black-backed Gull | Larus fuscus | NA | NA | NA | Bird-Amber | 4 | 06/12/1998 | 04/03/2016 |

| | | | | | | | | |
|---------------------------|----------------------------|-------------|--------------|----------|------------|----|------------|------------|
| Lesser Redpoll | Acanthis cabaret | NA | NA | NERC-S41 | NA | 5 | 04/01/2006 | 18/01/2021 |
| Lesser Spotted Woodpecker | Dryobates minor | NA | NA | NERC-S41 | Bird-Red | 4 | 08/09/2000 | 19/06/2004 |
| Linnet | Linaria cannabina | NA | NA | NERC-S41 | Bird-Red | 15 | 22/10/2000 | 11/04/2019 |
| Little Egret | Egretta garzetta | BirdsDir-A1 | NA | NA | NA | 26 | 29/06/2000 | 12/03/2021 |
| Little Gull | Hydrocoloeus minutus | BirdsDir-A1 | WACA-Sch1-p1 | NA | NA | 1 | 21/04/2019 | 21/04/2019 |
| Little Ringed Plover | Charadrius dubius | NA | WACA-Sch1-p1 | NA | NA | 65 | 21/03/1998 | 15/06/2006 |
| Mallard | Anas platyrhynchos | NA | NA | NA | Bird-Amber | 28 | 23/03/1998 | 05/03/2021 |
| Marsh Harrier | Circus aeruginosus | BirdsDir-A1 | WACA-Sch1-p1 | NA | Bird-Amber | 2 | 19/10/1998 | 31/03/2003 |
| Marsh Tit | Poecile palustris | NA | NA | NERC-S41 | Bird-Red | 14 | 27/10/2003 | 28/12/2021 |
| Meadow Pipit | Anthus pratensis | NA | NA | NA | Bird-Amber | 10 | 01/02/2000 | 24/03/2021 |
| Mediterranean Gull | Ichthyaetus melanocephalus | BirdsDir-A1 | WACA-Sch1-p1 | NA | Bird-Amber | 3 | 11/04/2019 | 05/06/2020 |
| Merlin | Falco columbarius | BirdsDir-A1 | WACA-Sch1-p1 | NA | Bird-Red | 2 | 06/04/2000 | 03/11/2002 |
| Mistle Thrush | Turdus viscivorus | NA | NA | NA | Bird-Red | 4 | 16/02/2009 | 17/01/2013 |

| Moorhen | Gallinula chloropus | NA | NA | NA | Bird-Amber | 20 | 31/05/2001 | 06/07/2021 |
|---------------|-------------------------|---------------------|----------------|------|-----------------------|---------------|-----------------|---------------|
| Nightingale | Luscinia megarhynchos | NA | NA | NA | Bird-Red | 1 | 15/05/2001 | 15/05/2001 |
| Osprey | Pandion haliaetus | BirdsDir-A1 | WACA-Sch1-p1 | NA | Bird-Amber | 1 | 09/09/2000 | 09/09/2000 |
| Oystercatcher | Haematopus ostralegus | NA | NA | NA | Bird-Amber | 84 | 12/01/1998 | 30/06/2021 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC | Other Designations | No of records | Earliest Record | Latest Record |
| | | | | s41 | | | | |
| Peregrine | Falco peregrinus | BirdsDir-A1 | WACA-Sch1-p1 | NA | NA | 26 | 01/02/1998 | 20/10/2019 |
| Pintail | Anas acuta | NA | WACA-Sch1-p2 | NA | Bird-Amber | 23 | 06/05/1998 | 19/12/2019 |
| Pochard | Aythya ferina | NA | NA | NA | Bird-Red | 22 | 07/12/1998 | 05/03/2021 |
| Quail | Coturnix coturnix | NA | WACA-Sch1-p1 | NA | Bird-Amber | 1 | 20/05/1998 | 20/05/1998 |
| Red Kite | Milvus milvus | BirdsDir-A1 | WACA-Sch1-p1 | NA | RL-Global-post2001-NT | 13 | 03/05/2002 | 28/05/2021 |
| Redshank | Tringa totanus | NA | NA | NA | Bird-Amber | 28 | 14/02/1998 | 09/10/2003 |
| Redstart | Phoenicurus phoenicurus | NA | NA | NA | Bird-Amber | 1 | 19/04/2006 | 19/04/2006 |
| Redwing | Turdus iliacus | NA | WACA-Sch1-p1 | NA | Bird-Amber | 18 | 01/04/2000 | 08/04/2021 |

| | | | | | | | | |
|--------------------|-----------------------------------|-------------|--------------|----------|-----------------------|----|------------|------------|
| Reed Bunting | <i>Emberiza schoeniclus</i> | NA | NA | NERC-S41 | Bird-Amber | 28 | 29/11/1999 | 06/07/2021 |
| Ringed Plover | <i>Charadrius hiaticula</i> | NA | NA | NA | Bird-Red, Bird- Amber | 7 | 14/02/1998 | 10/08/2000 |
| Rook | <i>Corvus frugilegus</i> | NA | NA | NA | Bird-Amber | 5 | 28/09/2006 | 08/04/2021 |
| Ruddy Shelduck | <i>Tadorna ferruginea</i> | BirdsDir-A1 | NA | NA | NA | 13 | 29/03/1998 | 21/08/2002 |
| Ruff | <i>Calidris pugnax</i> | BirdsDir-A1 | WACA-Sch1-p1 | NA | Bird-Red | 2 | 23/08/2002 | 14/01/2003 |
| Sedge Warbler | <i>Acrocephalus schoenobaenus</i> | NA | NA | NA | Bird-Amber | 7 | 31/05/2001 | 14/05/2021 |
| Shelduck | <i>Tadorna tadorna</i> | NA | NA | NA | Bird-Amber | 7 | 01/01/2019 | 06/11/2019 |
| Shoveler | <i>Spatula clypeata</i> | NA | NA | NA | Bird-Amber | 24 | 24/02/1998 | 01/06/2021 |
| Skylark | <i>Alauda arvensis</i> | NA | NA | NERC-S41 | Bird-Red | 26 | 01/02/2000 | 06/07/2021 |
| Smew | <i>Mergellus albellus</i> | BirdsDir-A1 | NA | NA | Bird-Red | 3 | 20/01/2019 | 23/03/2019 |
| Snipe | <i>Gallinago gallinago</i> | NA | NA | NA | Bird-Amber | 24 | 23/01/1998 | 30/09/2019 |
| Song Thrush | <i>Turdus philomelos</i> | NA | NA | NERC-S41 | Bird-Amber | 46 | 18/04/2006 | 06/07/2021 |
| Sparrowhawk | <i>Accipiter nisus</i> | NA | NA | NA | Bird-Amber | 5 | 18/06/2003 | 04/03/2016 |
| Spotted Flycatcher | <i>Muscicapa striata</i> | NA | NA | NERC-S41 | Bird-Red | 9 | 11/07/1998 | 27/07/2006 |
| Starling | <i>Sturnus vulgaris</i> | NA | NA | NERC-S41 | Bird-Red | 18 | 07/05/1999 | 14/01/2020 |

| Stock Dove | Columba oenas | NA | NA | NA | Bird-Amber | 8 | 26/02/2000 | 08/04/2021 |
|---------------------|---------------------|---------------------|----------------|----------|--------------------|---------------|-----------------|---------------|
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC | Other Designations | No of records | Earliest Record | Latest Record |
| | | | | s41 | | | | |
| Swift | Apus apus | NA | NA | NA | Bird-Red | 50 | 20/07/2000 | 12/06/2021 |
| Tawny Owl | Strix aluco | NA | NA | NA | Bird-Amber | 6 | 02/02/2006 | 19/10/2019 |
| Teal | Anas crecca | NA | NA | NA | Bird-Amber | 21 | 17/08/1998 | 27/04/2021 |
| Temminck's Stint | Calidris temminckii | NA | WACA-Sch1-p1 | NA | NA | 1 | 13/05/1998 | 13/05/1998 |
| Tree Pipit | Anthus trivialis | NA | NA | NERC-S41 | Bird-Red | 1 | 30/08/2001 | 30/08/2001 |
| Tree Sparrow | Passer montanus | NA | NA | NERC-S41 | Bird-Red | 1 | 12/04/2003 | 12/04/2003 |
| Turnstone | Arenaria interpres | NA | NA | NA | Bird-Amber | 1 | 13/05/1998 | 13/05/1998 |
| Turtle Dove | Streptopelia turtur | NA | NA | NERC-S41 | Bird-Red | 3 | 16/05/1998 | 10/08/2003 |
| Wheatear | Oenanthe oenanthe | NA | NA | NA | Bird-Amber | 7 | 28/03/1998 | 21/04/2003 |
| Whinchat | Saxicola rubetra | NA | NA | NA | Bird-Red | 5 | 17/09/1998 | 08/08/2003 |
| White-fronted Goose | Anser albifrons | NA | NA | NA | Bird-Red | 2 | 20/04/2019 | 31/08/2019 |
| Whitethroat | Curruca communis | NA | NA | NA | Bird-Amber | 15 | 17/06/2000 | 06/07/2021 |
| Wigeon | Mareca penelope | NA | NA | NA | Bird-Amber | 40 | 07/01/1998 | 27/04/2021 |
| Willow Tit | Poecile montanus | NA | NA | NERC-S41 | Bird-Red | 2 | 18/09/2000 | 08/08/2002 |

| Willow Warbler | Phylloscopus trochilus | NA | NA | NA | Bird-Amber | 4 | 09/04/2009 | 25/04/2013 |
|--------------------|----------------------------|---------------------|----------------|----------|--------------------|---------------|-----------------|---------------|
| Woodpigeon | Columba palumbus | NA | NA | NA | Bird-Amber | 51 | 31/05/2001 | 19/04/2022 |
| Wren | Troglodytes troglodytes | NA | NA | NA | Bird-Amber | 35 | 31/05/2001 | 18/09/2022 |
| Yellow-legged Gull | Larus michahellis | NA | NA | NA | Bird-Amber | 8 | 04/01/2019 | 01/12/2019 |
| Yellow Wagtail | Motacilla flava | NA | NA | NERC-S41 | Bird-Red | 2 | 17/04/1998 | 30/04/2021 |
| Yellow Wagtail | Motacilla flava flavissima | NA | NA | NERC-S41 | Bird-Red | 5 | 17/04/1998 | 30/04/2021 |
| Yellowhammer | Emberiza citrinella | NA | NA | NERC-S41 | Bird-Red | 10 | 11/02/1999 | 30/06/2009 |
| Barbel | Barbus barbus | HabDir-A5 | HabReg-Sch4 | NA | NA | 17 | 21/08/2001 | 14/06/2022 |
| Brown Trout | Salmo trutta subsp. fario | NA | NA | NERC-S41 | NA | 3 | 26/09/2002 | 03/07/2008 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC s41 | Other Designations | No of records | Earliest Record | Latest Record |
| Brown/Sea Trout | Salmo trutta | NA | NA | NERC-S41 | NA | 4 | 26/09/2002 | 02/06/2016 |
| Bullhead | Cottus gobio | HabDir-A2np | NA | NA | NA | 20 | 21/08/2001 | 14/06/2022 |

| | | | | | | | | |
|----------------------|---|-----------|-----------|----|---------------------------------------|----|------------|------------|
| A Flowering Plant | <i>Spergula arvensis</i> var. <i>sativa</i> | NA | NA | NA | RL-Eng-post2001-VU, RL-GB-post2001-VU | 1 | 20/08/2012 | 21/09/2015 |
| A Flowering Plant | <i>Utricularia vulgaris</i> | NA | NA | NA | Oxon-Scarce | 1 | 20/08/2012 | 21/09/2015 |
| Annual Beard-grass | <i>Polypogon monspeliensis</i> | NA | NA | NA | Oxon-Rare, Status-NS | 1 | 19/07/2018 | 19/07/2018 |
| Bladder-sedge | <i>Carex vesicaria</i> | NA | NA | NA | Oxon-Scarce, RL-Eng-post2001-VU | 1 | 09/08/2005 | 09/08/2005 |
| Bluebell | <i>Hyacinthoides non-scripta</i> | NA | WACA-Sch8 | NA | NA | 7 | 12/07/1995 | 21/05/2021 |
| Bogbean | <i>Menyanthes trifoliata</i> | NA | NA | NA | Oxon-Scarce | 1 | 17/06/2015 | 17/06/2015 |
| Bulbous Meadow-grass | <i>Poa bulbosa</i> | NA | NA | NA | Status-NS | 2 | 09/04/2020 | 19/04/2020 |
| Butcher's-broom | <i>Ruscus aculeatus</i> | HabDir-A5 | NA | NA | NA | 1 | 07/03/2017 | 07/03/2017 |
| Chives | <i>Allium schoenoprasum</i> | NA | NA | NA | Status-NS | 1 | 21/05/2016 | 21/05/2016 |
| Common Valerian | <i>Valeriana officinalis</i> | NA | NA | NA | RL-Eng-post2001-NT | 14 | 14/07/1995 | 24/06/2019 |

| Corn Marigold | Glebionis segetum | NA | NA | NA | RL-Eng- post2001- VU, RL-GB- post2001- VU | 2 | 21/09/2015 | 10/09/2016 |
|----------------------|----------------------------|---------------------|----------------|--------------|---|---------------|-----------------|---------------|
| Corn Mint | Mentha arvensis | NA | NA | NA | RL-Eng- post2001- NT | 2 | 18/09/2016 | 30/05/2021 |
| Cornflower | Centaurea cyanus | NA | NA | NERC- S41 | NA | 1 | 21/09/2015 | 21/09/2015 |
| Cultivated Vetch | Vicia sativa subsp. sativa | NA | NA | NA | Oxon-Rare | 2 | 09/06/1995 | 23/02/2014 |
| Devil's-bit Scabious | Succisa pratensis | NA | NA | NA | RL-Eng- post2001- NT | 5 | 09/06/1995 | 24/06/2019 |
| Field Mouse-ear | Cerastium arvense | NA | NA | NA | RL-Eng- post2001- NT | 1 | 30/04/2005 | 27/06/2005 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC s41 | Other Designations | No of records | Earliest Record | Latest Record |
| Field Scabious | Knautia arvensis | NA | NA | NA | RL-Eng- post2001- NT | 3 | 14/06/2007 | 16/09/2016 |
| Greater Spearwort | Ranunculus lingua | NA | NA | NA | Oxon-Scarce | 2 | 17/06/2015 | 21/07/2020 |
| Harebell | Campanula rotundifolia | NA | NA | NA | RL-Eng- post2001- NT | 1 | 22/05/2000 | 22/05/2000 |

| | | | | | | | | |
|----------------------|---------------------------------|----|----|--------------|---|---|------------|------------|
| Hoary Plantain | <i>Plantago media</i> | NA | NA | NA | RL-Eng- post2001- NT | 2 | 22/05/2000 | 16/06/2016 |
| Jacob's-ladder | <i>Polemonium caeruleum</i> | NA | NA | NA | Status-NR | 1 | 17/06/2015 | 17/06/2015 |
| Large-leaved Lime | <i>Tilia platyphyllos</i> | NA | NA | NA | Status-NS | 1 | 18/05/2011 | 18/05/2011 |
| Lesser Spearwort | <i>Ranunculus flammula</i> | NA | NA | NA | RL-Eng- post2001- VU | 1 | 17/06/2015 | 17/06/2015 |
| Marsh Arrowgrass | <i>Triglochin palustre</i> | NA | NA | NA | RL-Eng- post2001- NT | 1 | 04/09/2000 | 04/09/2000 |
| Marsh Ragwort | <i>Jacobaea aquatica</i> | NA | NA | NA | RL-Eng- post2001- NT | 4 | 04/09/2000 | 29/06/2010 |
| Marsh Stitchwort | <i>Stellaria palustris</i> | NA | NA | NERC- S41 | RL-Eng- post2001- VU, RL-GB- post2001- VU | 5 | 04/09/2000 | 29/06/2010 |
| Marsh Willowherb | <i>Epilobium palustre</i> | NA | NA | NA | Oxon-Rare | 1 | 29/06/2010 | 29/06/2010 |
| Meadow Saffron | <i>Colchicum autumnale</i> | NA | NA | NA | RL-GB- post2001- NT | 3 | 14/06/1997 | 28/10/2016 |
| Mudwort | <i>Limosella aquatica</i> | NA | NA | NA | Oxon-Rare, Status-NS | 1 | 30/07/2016 | 30/07/2016 |

| Narrow-leaved Bird's-foot-trefoil | Lotus tenuis | NA | NA | NA | Oxon-Scarce | 1 | 18/05/2011 | 18/05/2011 |
|-----------------------------------|---------------------|---------------------|----------------|------|-------------------------------|---------------|-----------------|---------------|
| Nettle-leaved Goosefoot | Chenopodium murale | NA | NA | NA | RL-Eng-post2001-EN, RL-GB- | 1 | 10/07/2016 | 10/07/2016 |
| | | | | | post2001-EN | | | |
| Pale St John's-wort | Hypericum montanum | NA | NA | NA | Oxon-Rare, RL- GB-post2001-NT | 1 | 18/05/2011 | 18/05/2011 |
| Quaking-grass | Briza media | NA | NA | NA | RL-Eng-post2001-NT | 5 | 09/06/1995 | 21/07/2012 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC | Other Designations | No of records | Earliest Record | Latest Record |
| | | | | s41 | | | | |
| Ragged-Robin | Silene flos-cuculi | NA | NA | NA | RL-Eng-post2001-NT | 13 | 04/09/2000 | 19/06/2020 |
| River Water-crowfoot | Ranunculus fluitans | NA | NA | NA | Oxon-Scarce | 1 | 10/09/2016 | 10/09/2016 |
| Round-fruited Rush | Juncus compressus | NA | NA | NA | RL-Eng-post2001-VU, RL-GB- | 2 | 02/07/2001 | 08/08/2009 |
| | | | | | post2001-VU | | | |

| | | | | | | | | |
|------------------------|--------------------------------|----|----|--------------|--|---|------------|------------|
| Rye Brome | <i>Bromus secalinus</i> | NA | NA | NA | Oxon-Scarce, Status-NS, RL- Eng- post2001- NT, RL-GB- post2001- NT | 1 | 04/08/2016 | 04/08/2016 |
| Slender Thistle | <i>Carduus tenuiflorus</i> | NA | NA | NA | Oxon-Rare | 1 | 09/05/2013 | 09/05/2013 |
| Spiny Restharrow | <i>Ononis spinosa</i> | NA | NA | NA | RL-Eng- post2001- NT | 3 | 14/06/2007 | 18/05/2011 |
| Stinking Hellebore | <i>Helleborus foetidus</i> | NA | NA | NA | Status-NS | 1 | 16/08/2007 | 16/08/2007 |
| Strawberry Clover | <i>Trifolium fragiferum</i> | NA | NA | NA | RL-Eng- post2001- VU, RL-GB- post2001- VU | 1 | 04/09/2000 | 04/09/2000 |
| Tormentil | <i>Potentilla erecta</i> | NA | NA | NA | RL-Eng- post2001- NT | 3 | 01/01/2001 | 28/06/2021 |
| Treacle-mustard | <i>Erysimum cheiranthoides</i> | NA | NA | NA | RL-Eng- post2001- NT | 1 | 21/09/2015 | 21/09/2015 |
| Tubular Water-dropwort | <i>Oenanthe fistulosa</i> | NA | NA | NERC- S41 | RL-Eng- post2001- VU, RL-GB- post2001- VU | 3 | 22/06/2007 | 21/07/2020 |

| Upright Spurge | <i>Euphorbia serrulata</i> | NA | NA | NA | Status-NR, RL- Eng-post2001-DD | 1 | 18/08/2015 | 18/08/2015 |
|------------------------|-----------------------------------|---------------------|----------------|------|--|---------------|-----------------|---------------|
| Water-violet | <i>Hottonia palustris</i> | NA | NA | NA | RL-Eng-post2001-VU, RL-GB-post2001-VU | 1 | 21/07/2020 | 21/07/2020 |
| Whorled Water- milfoil | <i>Myriophyllum verticillatum</i> | NA | NA | NA | Oxon-Scarce, RL-Eng-post2001-NT, RL-GB-post2001-VU | 1 | 21/07/2020 | 21/07/2020 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC | Other Designations | No of records | Earliest Record | Latest Record |
| | | | | s41 | | | | |
| Wild Strawberry | <i>Fragaria vesca</i> | NA | NA | NA | RL-Eng-post2001-NT | 1 | 16/06/2017 | 16/06/2017 |
| A Beetle | <i>Cercyon nigriceps</i> | NA | NA | NA | Notable, Notable- B | 1 | 01/06/1998 | 20/02/2010 |
| A Beetle | <i>Glaphyra umbellatarum</i> | NA | NA | NA | Notable-A | 1 | 01/06/1998 | 20/02/2010 |
| A Beetle | <i>Microplontus campestris</i> | NA | NA | NA | Notable-B | 1 | 01/06/1998 | 20/02/2010 |
| A Beetle | <i>Peltodytes caesus</i> | NA | NA | NA | Status-NS | 1 | 01/06/1998 | 20/02/2010 |

| | | | | | | | | |
|-----------------------|---|------------------------|-----------------------|----------|-----------------------|----|------------|------------|
| A Beetle | <i>Sepedophilus pedicularius</i> | NA | NA | NA | Notable | 1 | 01/06/1998 | 20/02/2010 |
| A Beetle | <i>Sigorus porcus</i> | NA | NA | NA | RL-GB-post2001-NT | 1 | 01/06/1998 | 20/02/2010 |
| Brown Hairstreak | <i>Thecla betulae</i> | NA | WACA-Sch5-s9.5a | NERC-S41 | RL-GB-post2001-VU | 47 | 16/08/2005 | 23/10/2020 |
| Small Heath | <i>Coenonympha pamphilus</i> | NA | NA | NERC-S41 | RL-GB-post2001-NT | 3 | 01/01/1998 | 17/07/2019 |
| White-clawed Crayfish | <i>Austropotamobius pallipes</i> | HabDir-A2np, HabDir-A5 | WACA-Sch5-s9.1t/s9.5a | NERC-S41 | RL-Global-post2001-EN | 2 | 21/10/2004 | 21/10/2004 |
| Common Darter | <i>Sympetrum striolatum</i> | NA | NA | NA | RL-GB-post2001-DD | 3 | 14/07/1995 | 20/08/2012 |
| Variable Damselfly | <i>Coenagrion pulchellum</i> | NA | NA | NA | RL-GB-post2001-NT | 1 | 25/06/2020 | 25/06/2020 |
| Large Black Slug | <i>Arion (Arion) ater</i> | NA | NA | NA | RL-GB-post2001-DD | 1 | 29/03/1994 | 29/03/1994 |
| Marsh Pond Snail | <i>Stagnicola palustris/fuscus/corvus</i> | NA | NA | NA | RL-GB-post2001-DD | 2 | 16/11/1978 | 21/07/1988 |
| Beaded Chestnut | <i>Agrochola lychnidis</i> | NA | NA | NERC-S41 | NA | 2 | 14/10/2000 | 14/10/2000 |
| Blood-vein | <i>Timandra comae</i> | NA | NA | NERC-S41 | NA | 3 | 16/06/2000 | 31/07/2000 |

| Centre-barred Sallow | <i>Atethmia centrago</i> | NA | NA | NERC-S41 | NA | 3 | 11/09/2000 | 11/09/2000 |
|-------------------------|-------------------------------|---------------------|----------------|----------|--------------------|---------------|-----------------|---------------|
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC | Other Designations | No of records | Earliest Record | Latest Record |
| | | | | s41 | | | | |
| Cinnabar | <i>Tyria jacobaeae</i> | NA | NA | NERC-S41 | NA | 2 | 16/06/2000 | 20/08/2012 |
| Dot Moth | <i>Melanchna persicariae</i> | NA | NA | NERC-S41 | NA | 1 | 31/07/2000 | 31/07/2000 |
| Dusky Thorn | <i>Ennomos fuscantaria</i> | NA | NA | NERC-S41 | NA | 1 | 11/09/2000 | 11/09/2000 |
| Feathered Gothic | <i>Tholera decimalis</i> | NA | NA | NERC-S41 | NA | 1 | 11/09/2000 | 11/09/2000 |
| Figure of Eight | <i>Diloba caeruleocephala</i> | NA | NA | NERC-S41 | NA | 2 | 14/10/2000 | 14/10/2000 |
| Ghost Moth | <i>Hepialus humuli</i> | NA | NA | NERC-S41 | NA | 3 | 16/06/2000 | 31/07/2000 |
| Green-brindled Crescent | <i>Allophyes oxyacanthae</i> | NA | NA | NERC-S41 | NA | 3 | 14/10/2000 | 14/10/2000 |
| Grey Dagger | <i>Acronicta psi</i> | NA | NA | NERC-S41 | NA | 3 | 06/05/2000 | 31/07/2000 |
| Knot Grass | <i>Acronicta rumicis</i> | NA | NA | NERC-S41 | NA | 2 | 31/07/2000 | 31/07/2000 |
| Large Wainscot | <i>Rhizedra lutosa</i> | NA | NA | NERC-S41 | NA | 1 | 14/10/2000 | 14/10/2000 |
| Latticed Heath | <i>Chiasmia clathrata</i> | NA | NA | NERC-S41 | NA | 1 | 31/07/2000 | 31/07/2000 |
| Mottled Rustic | <i>Caradrina morpheus</i> | NA | NA | NERC-S41 | NA | 1 | 16/06/2000 | 16/06/2000 |

| Mouse Moth | <i>Amphipyra tragopoginis</i> | NA | NA | NERC-S41 | NA | 4 | 31/07/2000 | 11/09/2000 |
|-------------------|---------------------------------|---------------------|----------------|----------|--------------------|---------------|-----------------|---------------|
| Oak Hook-tip | <i>Watsonalla binaria</i> | NA | NA | NERC-S41 | NA | 1 | 31/07/2000 | 31/07/2000 |
| Powdered Quaker | <i>Orthosia gracilis</i> | NA | NA | NERC-S41 | NA | 1 | 06/05/2000 | 06/05/2000 |
| Rosy Rustic | <i>Hydraecia micacea</i> | NA | NA | NERC-S41 | NA | 7 | 11/09/2000 | 14/10/2000 |
| Rustic | <i>Hoplodrina blanda</i> | NA | NA | NERC-S41 | NA | 4 | 31/07/2000 | 31/07/2000 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC s41 | Other Designations | No of records | Earliest Record | Latest Record |
| Sallow | <i>Cirrhia icteritia</i> | NA | NA | NERC-S41 | NA | 3 | 11/09/2000 | 14/10/2000 |
| Shaded Broad-bar | <i>Scotopteryx chenopodiata</i> | NA | NA | NERC-S41 | NA | 2 | 31/07/2000 | 31/07/2000 |
| Small Square-spot | <i>Diarsia rubi</i> | NA | NA | NERC-S41 | NA | 11 | 08/04/2000 | 11/09/2000 |
| White Ermine | <i>Spilosoma lubricipeda</i> | NA | NA | NERC-S41 | NA | 3 | 16/06/2000 | 12/08/2000 |
| A True Bug | <i>Lygus pratensis</i> | NA | NA | NA | RL-GB-pre94-R | 1 | 26/10/2009 | 26/10/2009 |
| A True Fly | <i>Elachiptera austriaca</i> | NA | NA | NA | Notable | 2 | 15/10/1999 | 08/08/2009 |
| A True Fly | <i>Oscinisoma gilvipes</i> | NA | NA | NA | Notable | 3 | 15/10/1999 | 08/08/2009 |
| A True Fly | <i>Urophora cuspidata</i> | NA | NA | NA | Notable | 1 | 15/10/1999 | 08/08/2009 |

| | | | | | | | | |
|----------------------|----------------------------------|------------------------|--|----------|-------------------|----|------------|------------|
| Bechstein's Bat | <i>Myotis bechsteinii</i> | HabDir-A2np, HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NERC-S41 | NA | 1 | 11/10/2009 | 12/10/2009 |
| Brown Long-eared Bat | <i>Plecotus auritus</i> | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NERC-S41 | NA | 11 | 28/09/2009 | 29/09/2021 |
| Common Pipistrelle | <i>Pipistrellus pipistrellus</i> | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NA | NA | 52 | 03/08/2009 | 18/10/2021 |
| Daubenton's Bat | <i>Myotis daubentonii</i> | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NA | NA | 2 | 05/10/2001 | 05/10/2001 |
| Lesser Noctule | <i>Nyctalus leisleri</i> | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NA | RL-GB-post2001-NT | 12 | 01/01/2016 | 12/10/2021 |

| Myotis Bat species | Myotis | HabDir-A2np, HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NERC-S41 | RL-GB-post2001-CR, RL-GB-post2001-DD | 37 | 03/08/2009 | 18/10/2021 |
|-------------------------|-----------------------|------------------------|--|----------|--------------------------------------|---------------|-----------------|---------------|
| Nathusius's Pipistrelle | Pipistrellus nathusii | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NA | RL-GB-post2001-NT | 4 | 01/01/2016 | 18/10/2021 |
| | | | | | | | | |
| Common Name | Latin Name | European Directives | UK Legislation | NERC s41 | Other Designations | No of records | Earliest Record | Latest Record |
| Natterer's Bat | Myotis nattereri | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NA | NA | 2 | 28/08/2008 | 29/08/2008 |
| Noctule Bat | Nyctalus noctula | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NERC-S41 | NA | 43 | 03/08/2009 | 11/10/2021 |

| | | | | | | | | |
|-------------------------|--------------------------|------------------------|--|----------|-------------------|----|------------|------------|
| Pipistrelle Bat species | Pipistrellus | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NERC-S41 | RL-GB-post2001-NT | 25 | 10/06/2005 | 21/09/2021 |
| Serotine | Eptesicus serotinus | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NA | RL-GB-post2001-VU | 6 | 01/01/2016 | 02/07/2021 |
| Soprano Pipistrelle | Pipistrellus pygmaeus | HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NERC-S41 | NA | 56 | 03/09/2009 | 18/10/2021 |
| Western Barbastelle | Barbastella barbastellus | HabDir-A2np, HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b | NERC-S41 | RL-GB-post2001-VU | 1 | 01/01/2016 | 01/01/2016 |
| Brown Hare | Lepus europaeus | NA | NA | NERC-S41 | NA | 3 | 02/03/2008 | 11/04/2021 |
| Eurasian Badger | Meles meles | NA | Badgers-1992 | NA | NA | 23 | 09/03/1996 | 22/04/2021 |

| | | | | | | | | |
|------------------------|---------------------|---------------------------|--|----------|-------------------|-----|------------|------------|
| Eurasian Otter | Lutra lutra | HabDir-A2np, HabDir-A4 | HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a | NERC-S41 | NA | 109 | 21/04/2007 | 29/09/2021 |
| European Water Vole | Arvicola amphibius | NA | WACA-Sch5- | NERC-S41 | RL-GB-post2001-EN | 33 | 01/01/1997 | 21/09/2020 |
| | | | s9.4a/s9.4b/s9.4c | | | | | |
| Polecat | Mustela putorius | HabDir-A5 | HabReg-Sch4 | NERC-S41 | NA | 4 | 18/03/2000 | 21/04/2012 |
| West European Hedgehog | Erinaceus europaeus | NA | NA | NERC-S41 | RL-GB-post2001-VU | 62 | 04/04/1997 | 03/09/2021 |
| Grass Snake | Natrix helvetica | NA | WACA-Sch5-s9.1k/s9.5a | NERC-S41 | NA | 14 | 10/08/2001 | 21/05/2020 |
| Slow-worm | Anguis fragilis | NA | WACA-Sch5-s9.1k/s9.5a | NERC-S41 | NA | 9 | 23/09/2009 | 24/04/2021 |

APPENDIX B - POLICY AND LEGISLATION

Natural Environment and Rural Communities (NERC) Act 2006^{12 13}

Section 40 – To conserve biodiversity

Section 40 puts a duty on public authorities to conserve biodiversity when undertaking its duties and functions,

Section 41 – Biodiversity list and Action

Section 41 – Section 41 – Requires the Secretary of State to *publish a list of the living organisms and types of habitat considered to be of principal importance for the purpose of conserving biodiversity*. They must also *take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section or promote the taking by others of such steps*.

The 2007 lists were superseded by the UK Post-2010 Biodiversity Framework.

| SelectUK Priority Habitats (excl. marine habitats) ¹⁴ | |
|--|--------------------------------------|
| UK BAP broad habitat | UK BAP priority habitat |
| Boundary and Linear Features | Hedgerows |
| Broadleaved, Mixed and Yew Woodland | Traditional Orchards |
| | Wood-Pasture and Parkland |
| | Upland Oakwood |
| | Lowland Beech and Yew Woodland |
| | Upland Mixed Ash woods |
| | Wet Woodland |
| | Lowland Mixed Deciduous Woodland |
| Coniferous Woodland | Upland Birch woods |
| Acid Grassland | Native Pine Woodlands |
| Calcareous Grassland | Lowland Dry Acid Grassland |
| | Lowland Calcareous Grassland |
| Neutral Grassland | Upland Calcareous Grassland |
| | Lowland Meadows |
| Improved Grassland | Upland Hay Meadows |
| | Coastal and Floodplain Grazing Marsh |

¹² <https://www.legislation.gov.uk/ukpga/2006/16/section/40>

¹³ <https://www.legislation.gov.uk/ukpga/2006/16/section/41>

¹⁴ <http://jncc.defra.gov.uk/page-5706>

Protected Species Legislation

European Protected Species

European Protected Species (EPS) are species of plants and animals (other than birds) protected by law throughout the European Union. They are listed in Annexes II and IV of the European Habitats Directive and receive full protection under The Conservation of Species and Habitats Regulations (as amended) 2019. This make it an offence to:

- deliberately capture, injure or kill any European Protected Species (EPS)
- to deliberately disturb any European Protected Species (EPS);
- to damage or destroy a breeding site or place of rest or shelter used by any European Protected Species (EPS).

The Wildlife and Countryside Act 1981 (as amended) adds further protection by making it an offence to intentionally or recklessly¹⁵ disturb an EPS while it is occupying a structure or place which it uses for shelter or protection, or to obstruct access to any structure or place the species uses for shelter or protection.

| European Protected Species relevant to the site | |
|---|--------------------|
| Animals | |
| All bat species | Great Crested Newt |

| Other Protected Species | | |
|-------------------------|--|---|
| Species | Legislation | Level of Protection |
| Birds | Wildlife and Countryside Act 1981 (as amended) | <p>Under the Wildlife and Countryside Act (1981) it is an offence if any person:</p> <ul style="list-style-type: none"> • intentionally kills, injures or takes any wild bird • intentionally takes, damages or destroys the nest of any wild bird whilst that nest is in use of being built; • intentionally takes, damages or destroys eggs of any wild bird <p>Wild birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are protected from:</p> <ul style="list-style-type: none"> • intentional or reckless disturbance whilst it is building a nest or is in, on or near a nest containing eggs or young; • disturbance of dependent young |
| Reptiles | Wildlife and Countryside Act 1981 (as amended) | <p>Under the Wildlife and Countryside Act (1981) it is an offence if any person:</p> <ul style="list-style-type: none"> • intentionally kills or injures any reptile |

¹⁵ Under the Countryside and Rights of Way Act 2000 (CROW Act) extended the protection to cover reckless damage or disturbance

APPENDIX C – HABITAT SUITABILITY INDEX¹⁶

| Category | Score |
|------------------------|-------|
| S1 Geographic Location | 1 |
| S2 Pond Area | 0.1 |
| S3 Permanence | 0.1 |
| S4 Water Quality | 0.33 |
| S5 Shade | 0.2 |
| S6 Waterfowl | 1 |
| S7 Fish | 1 |
| S8 Pond Count | 0.1 |
| S9 Terrestrial Habitat | 0.67 |
| S10 Macrophytes | 0.33 |
| Overall Suitability | Poor |

¹⁶ ARG UK Advice Note 5, Great Crested Newt Habitat Suitability Index, May 2010