

**APPENDIX 9.4**  
**EVALUATION OF ECOLOGICAL FEATURES**

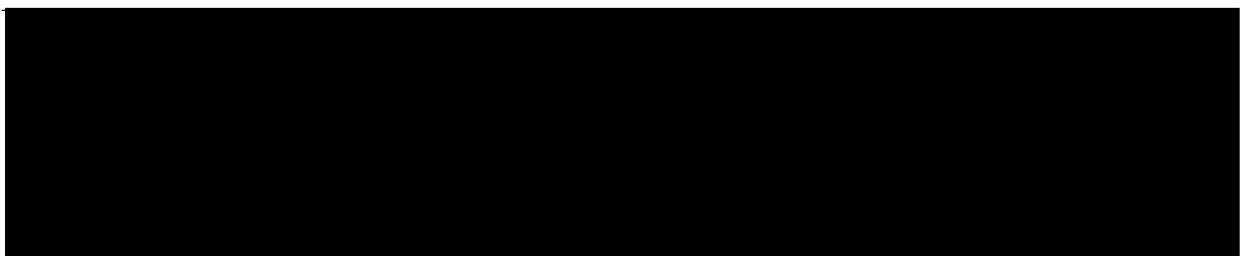
**FORD AIRFIELD, WEST SUSSEX**

**ENVIRONMENTAL STATEMENT**

**TECHNICAL APPENDIX 9.4 – EVALUATION OF ECOLOGICAL  
FEATURES**

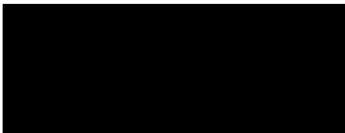
**Final Document**

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### ECOSA Quality Assurance Record

This report has been produced in accordance with the CIEEM Guidelines for Ecological Report Writing 2017 (CIEEM, 2017). The survey work has been undertaken in line with references within CIEEM's Source of Survey Guidance (CIEEM, 2017).

|                                 |                                                                                                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
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## FORD AIRFIELD, WEST SUSSEX

### ENVIRONMENTAL STATEMENT

#### TECHNICAL APPENDIX 9.4 – EVALUATION OF ECOLOGICAL FEATURES

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## **1.0 EVALUATION**

### **1.1 Introduction**

This appendix details the evaluation rationale for ecological features within the site's Zone of Influence, based on evaluation methodologies and criteria detailed in **Technical Appendix 9.3**.

### **1.2 Statutory and Non-statutory Designated Sites**

A single statutory designated site of nature conservation interest is situated within the site's Zone of Influence, Arun Valley SPA, which is European importance.

### **1.3 Vegetation**

Only one notable plant species was recorded on site, a single specimen of corn parsley *Petroselinum segetum*, within the margins of an arable field. This species features on the Sussex rare species inventory and has been recorded a number of times in the local area.

A hedgerow qualifying as a UK BAP Priority Habitat is any boundary line of trees or shrubs over 20 metres long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide. As such, all hedgerows on site qualify as Priority Habitat. However, with the exception of one stretch of hedgerow, all hedgerows on site are species poor and heavily managed.

The woodland on site represents a habitat type that is both a Lowland Mixed Deciduous Woodland Priority Habitat and Woodland Sussex BAP Habitat, however, it is of poor quality as the ground flora is heavily influenced by the surrounding land use, most areas have been colonised by grasses and arable weeds. The woodland habitat on site is too limited in extent to merit importance at county level.

Pond 8 lies within the site boundary and represents Eutrophic Standing Water Sussex BAP Habitat, however, the waterbody supports a low diversity of species and is too limited in extent to merit importance at county level.

Grassland, scrub and ruderal habitats do not represent habitats of note at the UK or county level and support a low diversity of common and widespread species. They are also limited in extent.

A summary of the criteria and value of on-site habitats at the geographic scale is provided in **Table 1**.

**Table 1:** Evaluation criteria and geographic value of the site for each habitat type

| Habitat                                    | Notable habitats present?                                                               | Rare species present? | Habitat Quality | Size/extent     | Importance |
|--------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------|-----------------|-----------------|------------|
| Arable land                                | No                                                                                      | No <sup>1</sup>       | Poor            | Not significant | Negligible |
| Grassland                                  | No                                                                                      | No                    | Poor            | Not significant | Negligible |
| Hedgerows                                  | Yes – Hedgerows Priority Habitat                                                        | No                    | Poor            | Not significant | Local      |
| Ruderal vegetation                         | No                                                                                      | No                    | Poor            | Not significant | Negligible |
| Scrub                                      | No                                                                                      | No                    | Poor            | Not significant | Negligible |
| Standing water                             | Yes – Eutrophic Standing Waters Sussex BAP Habitat                                      | No                    | Poor            | Not significant | Negligible |
| Woodland, tree lines and wooded boundaries | Yes - Lowland Mixed Deciduous Woodland Priority Habitat and Woodland Sussex BAP Habitat | No                    | Poor            | Not significant | Local      |

## 1.4 Mammals

### 1.4.1 Bats

#### Roosting Bats

All on-site trees are assessed as having low or moderate suitability for roosting bats and are therefore only likely to be used opportunistically or as low status roosts. The limited number of suitable trees on site in the context of the local area, particularly the large extent of woodland which lies approximately two kilometres north of the site. The site is therefore unlikely to represent a significant roosting resource in the context of the local area. The site is therefore considered likely to be of importance at the site level for roosting bats.

#### Foraging and Commuting Bats

Bat surveys recorded at least ten species of bat foraging and commuting at the site. **Table 2** details the evaluation criteria (and associated score in brackets)<sup>2</sup> and geographic value of the site for each bat species.

**Table 2:** Evaluation criteria and geographic value of the site for each bat species

| Species     | Rarity      | Number of bats      | Roosts Nearby    | Habitat Quality | Geographic Value |
|-------------|-------------|---------------------|------------------|-----------------|------------------|
| Barbastelle | Rarest (20) | Individual bats (5) | Small number (3) | Poor (2)        | County (30)      |

<sup>1</sup> Corn parsley present but does not represent a significant population

<sup>2</sup> Details of the evaluation scoring system are provided in **Technical Appendix 9.2**

|                                   |             |                           |                     |          |             |
|-----------------------------------|-------------|---------------------------|---------------------|----------|-------------|
| Brown long-eared bat*             | Common (2)  | Small number of bats (10) | Moderate number (4) | Poor (2) | Local (18)  |
| Grey long-eared bat*              | Rarest (20) | Individual bats (5)       | None (1)            | Poor (2) | County (28) |
| Common pipistrelle                | Common (2)  | Large number of bats (20) | Moderate number (4) | Poor (2) | County (28) |
| Greater horseshoe                 | Rarest (20) | Individual bats (5)       | None (1)            | Poor (2) | County (28) |
| <i>Myotis</i> species (common) ** | Rarer (5)   | Small number of bats (10) | Small number (3)    | Poor (2) | Local (20)  |
| Nathusius' pipistrelle            | Rarer (5)   | Small number of bats (10) | None (1)            | Poor (2) | Local (18)  |
| Noctule                           | Rarer (5)   | Small number of bats (10) | None (1)            | Poor (2) | Local (18)  |
| Serotine                          | Rarer (5)   | Small number of bats (10) | Small number (3)    | Poor (2) | Local (20)  |
| Soprano pipistrelle               | Common (2)  | Small number of bats (10) | Small number (3)    | Poor (2) | Local (17)  |

\* It was not possible to identify foraging and commuting long-eared bats to species level, and, grey long-eared bat *Plecotus austriacus* cannot be ruled out as it is known to occur on the southern coast of Sussex (Sussex Bat Group, n.d.). Therefore a precautionary approach has been taken but it has been assumed that only individual grey long-eared bats would occur on site given their rarity in the county.

\*\* It was not possible to identify foraging and commuting *Myotis* bats to species level. The presence of rarer species of *Myotis* bat (Bechstein's *Myotis bechsteinii*, alcahloe *Myotis alcahloe* and greater mouse-eared *Myotis myotis*) cannot be ruled out as although very rare there are records of all three species within the county (Sussex Bat Group, n.d.). However, greater mouse-eared bat is exceptionally rare, with only one individual recorded in the country and it is therefore considered unlikely that this bat was present on site. Bechstein's bat and alcahloe bat rely on mature woodland habitat which is not present on site. Therefore it has been assumed that the more common species of *Myotis* bat are present on site.

Based on habitat quality and relative level of activity, the site is of importance at the local level for the majority of bat species using the site. However, due to the presence of rarer species barbastelle and greater horseshoe (and the potential presence of grey long-eared bat) and due to the high levels of common pipistrelle activity at the site, the site is of county importance for foraging and commuting bats overall.

#### **1.4.2 Badger**

No setts have been identified on site. The site provides suitable habitat in the form of grassland, hedgerows, woodland and arable land, totalling approximately 75 hectares. Consultation of online mapping resources suggests on-site habitat is unlikely to comprise a significant resource for the local badger population given the extensive agricultural land present in the wider landscape. The site is therefore considered to be of importance at the site level for badger.

#### **1.4.3 European hedgehog**

European hedgehog may be present on site due to records in the local area and the presence of suitable habitat, however, their presence/absence and the size of the on-site population, if present, is not known. No quantitative information is publicly available on the Sussex population of European hedgehog. However, the species is currently common and widespread, but declining, across both England and the south east (Wilson & Wembridge, 2018) (Mammal Watch South East, 2015). The site provides suitable habitat in the form of grassland, hedgerows, woodland and field margins, totalling approximately 4.2 hectares. Consultation of online mapping resources suggests on-site habitat is unlikely to form a significant proportion of available habitat at the local level. The site is therefore considered to be of importance at the site level for European hedgehog.

#### **1.4.4 Brown hare**

Brown hare may be present on site due to records in the local area and the presence of suitable habitat, however, their presence/absence and the size of the on-site population, if present, is not known. No quantitative information is publicly available on the Sussex population of brown hare. However, the species is more frequently located along the county border between West Sussex and Hampshire and is more patchily distributed across the rest of the county (Mammal Watch South East, 2015). The site provides suitable habitat in the form of grassland and arable land, totalling approximately 74 hectares. Consultation of online mapping resources suggests on-site habitat is unlikely to form a significant proportion of available habitat at the local level. The site is therefore considered to be of importance at the site level for brown hare.

#### **1.4.5 Harvest mouse**

Harvest mouse may be present on site due to records in the local area and the presence of suitable habitat, however, their presence/absence and the size of the on-site population, if present, is not known. No quantitative information is publicly available on the Sussex population of harvest mouse. The species appears to be widespread but infrequent across West Sussex, with declining numbers, however, it is possible that the species is under recorded (Mammal Watch South East, 2015).

The site provides approximately 70 hectares of foraging habitat in the form of cereal crops and the 4.4 kilometres of hedgerow on site provides shelter during the winter months. Consultation of online mapping resources suggests on-site habitat is unlikely to form a significant proportion of available habitat at the local level. The site is therefore considered to be of importance at the site level for harvest mouse.

## 1.5 Birds

### 1.5.1 Breeding Birds

The site provides breeding territory for two Red Listed species, skylark and song thrush, and two Amber Listed species, dunnock and stock dove. Skylark, song thrush and dunnock are Species of Principal Importance, and are local Biodiversity Action Plan (IBAP) priority species, however, none are listed in the Sussex Rare Species Inventory. Although these species are of greater conservation concern, the populations on site are not significant at the county level, all representing less than 0.1% of the county population (**Table 3**).

**Table 3:** Notable breeding bird populations on site as a percentage of the county population

| Species     | Conservation Status | Breeding Pairs on Site | Breeding Pairs in Sussex | Percentage of County Population |
|-------------|---------------------|------------------------|--------------------------|---------------------------------|
| Skylark     | Red, S41, LBAP      | 9                      | 14,000                   | 0.06%                           |
| Song thrush | Red, S41, LBAP      | 3                      | 35,000                   | <0.01%                          |
| Dunnock     | Amber, S41, LBAP    | 7                      | 38,000                   | 0.02%                           |
| Stock dove  | Amber               | 1                      | 4000-8000                | 0.01-0.03%                      |

The site provides approximately 70 hectares of arable farmland suitable for nesting skylark, however, this habitat is of low quality for skylark, comprising large fields of intensively managed crops. Skylark are known to prefer smaller field sizes and less managed habitat with a lower sward height, including grassland and set-aside (Eraud & Boutin, 2002). The site also supports approximately 0.5 hectares of woodland, trees, hedgerows and scrub suitable for nesting song thrush, dunnock and stock dove (as well as many other more common bird species recorded at the site). Given the context of the site and the large extent of arable farmland in the wider area, on-site habitat is unlikely to provide a significant resource for local bird populations. The site is therefore considered to be of importance at the site level for breeding birds.

### 1.5.2 Wintering Birds

A number of red and amber listed birds were recorded across the site as part of the wintering bird surveys undertaken in 2018/2019 with a total of six red listed species and six amber listed species recorded across the site. Dunnock, house sparrow, linnet, skylark and song thrush are Species of Principal Importance. Dunnock, house sparrow, linnet, skylark and song thrush are also local Biodiversity Action Plan (LBAP) priority species. However, the majority of the birds recorded were not recorded in significant numbers. A summary of notable species recorded as a proportion of the county population is provided in **Table 4**.

**Table 4:** Notable wintering birds on site as a proportion of the county population

| Species                 | Conservation Status | Peak Count | Wintering Population in Sussex | Percentage of County Population |
|-------------------------|---------------------|------------|--------------------------------|---------------------------------|
| Black-headed gull       | Amber               | 200        | 10,001 – 60,000                | <2.0%                           |
| Common gull             | Amber               | 50         | 10,001 – 60,000                | <0.50%                          |
| Dunnock                 | Amber, S41, LBAP    | 3          | 10,001 – 60,000                | <0.03%                          |
| Great black-backed gull | Amber               | 5          | 2,001 – 10,000                 | <0.25%                          |
| Herring gull            | Amber               | 30         | 10,001 – 60,000                | <0.30%                          |
| House sparrow           | Red, S41, LBAP      | 8          | 10,001 – 60,000                | <0.68%                          |
| Kestrel                 | Amber               | 2          | 201 – 2,000                    | <0.08%                          |
| Linnet                  | Red, S41, LBAP      | 10         | 2,001 – 10,000                 | <0.50%                          |
| Meadow pipit            | Amber               | 2          | 2,001 – 10,000                 | <0.01%                          |
| Redwing                 | Red                 | 77         | 2,001 – 10,000                 | <3.85%                          |
| Skylark                 | Red, S41, LBAP      | 100        | 10,001 – 60,000                | <0.99%                          |
| Song thrush             | Red, S41, LBAP      | 4          | 10,001 – 60,000                | <0.04%                          |

The wintering bird survey identified that the site supports a fairly typical assemblage of wintering birds. The peak counts of notable species recorded do not represent significant populations. All species recorded represent < 2% of their county populations, with the exception of redwing (<3.85%). However, the peak count of 77 redwing was recorded during a single survey, with the next highest peak count recorded as 5

individuals. It is therefore considered highly likely that the site is used transiently by this species and does not constitute an important breeding or foraging area.

Given the relatively low quality of on-site habitat for wintering birds and the availability of suitable habitat in the wider area, the site is considered to be of importance at the site level for wintering birds.

## 1.6 Reptiles

Common lizard was the only species recorded on site. The peak count of one common lizard represents a low population. No information is publicly available on the Sussex population of common lizard. However, the species is common and widespread across the country (Wilkinson & Arnell, 2013). Although there is some connectivity with the wider landscape, on-site habitat suitable for reptiles is limited to field margins and small areas of unmanaged land of approximately 4.4 hectares, and these areas are likely subject to disturbance on a semi-regular basis due to the use of the site for farming. This is considered unlikely to comprise a significant resource for the local reptile population given the extensive agricultural land present in the wider landscape. The site is therefore considered to be of importance at the site level for reptiles.

## 1.7 Amphibians

Common toad *Bufo bufo* may be present on site due to records in the local area and the presence of suitable habitat, however, their presence/absence and the size of the on-site population, if present, is not known. No information is publicly available on the Sussex population of common toad. However, the species is common and widespread across the country (Wilkinson & Arnell, 2013).

Although there is some connectivity with the wider landscape, on-site habitat suitable for amphibians is limited to field margins and small areas of unmanaged land of approximately 4.4 hectares, and these areas are likely subject to disturbance on a semi-regular basis due to the use of the site for farming. This is considered unlikely to comprise a significant resource for the local amphibian population given the extensive agricultural land present in the wider landscape. The site is therefore considered to be of importance at the site level for amphibians.

## 1.8 Invertebrates

The majority of habitats on site have negligible suitability for notable species of invertebrate known to be present in the local area. Woodland, hedgerows and scattered trees which have suitability for a range of *Lepidoptera* Species of Principal Importance, including brown hairstreak *Thecla betulae* and stag beetle *Lucanus cervus*.

However, habitats on site suitable to support these species are limited extent (less than three hectares) and do not form a significant proportion of that in the local area. They

are highly unlikely to perform a critical ecological function for any notable species or support important populations or assemblages. The site is therefore considered to be of importance at the site level for invertebrates.

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