

FORD ENERGY RECOVERY FACILITY AND  
WASTE SORTING AND TRANSFER FACILITY,  
FORD CIRCULAR TECHNOLOGY PARK



ENVIRONMENTAL STATEMENT  
TECHNICAL APPENDIX I:  
NATURAL HERITAGE



**LINDSAY CARRINGTON  
ECOLOGICAL SERVICES**

**ECOLOGICAL APPRAISAL AND PHASE 1 BAT SURVEY  
FORD CIRCULAR TECHNOLOGY PARK  
FORD  
ARUNDEL  
BN18 0HY**

**FEBRUARY 2020**

**ON BEHALF OF FORD EFW LTD (GRUNDON WASTE  
MANAGEMENT LIMITED AND VIRIDOR)**



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## SUMMARY

1. Lindsay Carrington Ecological Services were commissioned by Terence O'Rourke, to conduct an ecological appraisal of a waste transfer facility at Ford Circular Technology Park, Arundel, BN18 0HY (Ordnance Survey Grid Reference SU 99444 03338).
2. An ecological appraisal is a multi-disciplinary walk-over survey and was conducted with the objective of identifying any ecological constraints associated with the proposals, such as the site's potential to support any legally protected species or habitats of high nature conservation value.
3. The majority of the site comprises colonised hardstanding, with small areas of unconnected poor semi-improved grassland, scrub, broadleaved woodland, a non-native hedgerow, scattered trees, debris piles and bare ground. Three large hangars, offices, a garage and a bunker are also present on site.
4. A phase 1 bat survey was undertaken entailing a detailed internal and external inspection of the buildings on site, directly searching for signs of bat or bats themselves. An assessment of the potential of the building to support roosting bats was also made. The buildings on site are considered to hold negligible potential for roosting bats.
5. Suitable habitat for nesting birds is present on site. Further recommendations have been made in section 5.1.
6. Recommendations have been made in section 5.2 to increase the biodiversity value of the site, which includes the planting of native shrubs in any landscaping and providing nesting opportunities for birds and roosting opportunities for bats.

## **1.0 INTRODUCTION**

Lindsay Carrington Ecological Services were commissioned by Terence O'Rourke to conduct an ecological appraisal of a waste transfer facility, at Ford Circular Technology Park, Arundel, BN18 0HY (Ordnance Survey Grid Reference SU 99444 03338). The purpose of the survey was to inform the ecological constraints and opportunities for the demolition of the buildings on site and construction of an energy recovery facility.

An ecological appraisal is a multi-disciplinary walk-over survey to identify any ecological constraints associated with a development proposal, such as the site's potential to support any legally protected species or habitats of high nature conservation value.

Section 2 of the report provides background information on relevant legislation and policy. Section 3 details the methodologies adopted for the ecological surveys that were conducted and section 4 provides an account of the survey results. Section 5 provides information on the relevance of the results to the development proposal and recommends measures to avoid, mitigate or compensate for the effects on a particular habitat or species.

## 2.0 LEGISLATION AND POLICY

### 2.1 Legislation

The following legislation may be of relevance to the proposed works. Full details of statutory obligations with respect to biodiversity and the planning system can be found in DCLG Circular 06/2005.

- **The Conservation of Habitats and Species Regulations 2019:**  
This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into domestic law. The Regulations provide protection for a number of species including:
  - All species of bat;
  - Dormouse;
  - Otter; and
  - Great crested newt.

This legislation makes it an offence to deliberately capture, kill or injure individuals of these species listed on Schedule 2 and damage or destroy their breeding site or place of shelter. It is also illegal to deliberately disturb these species in such a way as to be likely to significantly affect: (i) the ability of any significant group of the species to survive, breed or rear or nurture their young; or (ii) the local distribution or abundance of the species<sup>1</sup>;

This legal protection means that where development has the potential to impact on bats, or other European protected species, the results of a protected species survey must be submitted with a planning application.

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are also protected under this legislation. These are a network of sites designated for supporting habitats or species of high nature conservation importance in the European context. Any activity that has a detrimental effect on these European sites is made an offence under the Regulations. Where a development is likely to have a significant impact on a European site, the Regulations require a rigorous assessment of the impacts, known as an Appropriate Assessment.

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<sup>1</sup> The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 consolidates the numerous amendments that were made to the Conservation (Natural Habitats, &c.) Regulations 1994. Of particular relevance are amendments made in August 2007 and January 2009 which increased the threshold of illegal levels of disturbance to European Protected Species (EPS). An offence is only committed if the deliberate disturbance would result in significant impacts to the EPS population. However, it should be noted that activities that cause low levels of disturbance to these species continue to constitute an offence under Section 9 of the Wildlife and Countryside Act (see below).

- **The Wildlife and Countryside Act 1981 (and amendments):** Protected fauna and flora are listed under Schedules 1, 5 & 8 of the Act. Species likely to be of relevance include:
  - All species of **bat**. It is an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost;
  - All species of **British reptile** (in particular grass snake, common lizard, adder and slow-worm). It is illegal to kill or injure these species; and
  - **Great crested newt**. It is illegal to obstruct access to any structure or place which great crested newts use for shelter or protection or to disturb any great crested newt while it is using such a place.

This Act also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built). In addition, it is an offence to disturb any nesting bird listed on Schedule 1 or their young.

Schedule 9 of the Act lists those species for which it is an offence to plant or cause their spread. Species listed under Schedule 9 that are most likely to be encountered are Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*).

Sites of Special Scientific Interest (SSSIs) are also protected under the Wildlife and Countryside Act 1981. These are a network of sites identified as being of national nature conservation importance and hence afforded legal protection.

- **The Countryside and Rights of Way Act 2000:** This Act strengthens nature conservation and wildlife protection through a number of mechanisms. It places a duty on Government Ministers and Departments to conserve biological diversity, provides police with stronger powers relating to wildlife crimes, and improves protection and management of SSSIs.
- **The Protection of Badgers Act 1992:** This Act makes it an offence to wilfully take, injure or kill a badger (*Meles meles*); cruelly mistreat a badger; interfere with badger setts, sell or possess a live badger; mark or ring a badger. A licence is required for work affecting badgers and their setts.
- **Wild Mammals (Protection) Act 1996:** This Act provides protection for all wild animals from intentional acts of cruelty.
- **Hedgerow Regulations 1997:** These Regulations establish a set of criteria for assessing the importance of hedgerows. Where a hedgerow is deemed to be 'important' its removal is prohibited without consent from the local Planning Authority.

## **2.2 Policy**

The following policy is of relevance to the proposed works:

- **National Planning Policy Framework (NPPF):** This sets out the Government's vision for biodiversity in England with the broad aim that planning, construction, development and regeneration should maintain and enhance, restore or add to biodiversity and geological conservation interests. NPPF (2018) includes sections on legally protected species and sites (see Section 2.1).
- **Local Sites (including Sites of Importance for Nature Conservation (SINCs), Local Nature Reserves (LNR), and Biological Notification Sites (BNSs)/County Wildlife Sites (CWSs):** These are a network of sites designated for their nature conservation importance in a local context. Although they are not afforded legal protection they contribute towards local and national biodiversity.
- **Biodiversity Action Plans (BAPs):** BAPs set out policy for protecting and restoring priority species and habitats as part of the UK's response as signatories to the Convention on Biological Diversity. BAPs operate at both a national and local level with priority species and habitats identified at a national level and a series of Local BAPs that identify ecological features of particular importance to a particular area of the country. The requirement to consider and contribute towards BAP targets was strengthened through the Countryside and Rights of Way Act 2000. Habitat and Species Action Plans that are likely to be of relevance include:
  - Slow worm (UK BAP).
  - Soprano pipistrelle bat (UK BAP).
  - Brown long-eared bat (UK BAP).

## **3.0 METHODOLOGY**

### **3.1 Desk study**

Sussex Biodiversity Record Centre (SxBRC) and the Multi-Agency Geographical Information for the Countryside (MAGIC) website were used to provide any information they may hold on protected species within two kilometres and designated sites within ten kilometres of the proposed development.

### **3.2 Field study**

#### **3.2.1 Vegetation**

The standard phase 1 habitat survey methodology (JNCC, 2010) was adopted whereby habitats are mapped using colour codes (appendix I). A detailed walkover survey was undertaken on the 27<sup>th</sup> November 2019 by Alex Coggins, directly searching for legally protected and invasive species of plant and categorising any habitats of ecological value that were encountered. A general description of the vegetation was also noted, listing species encountered and scoring their abundance using the DAFOR scale:

- D Dominant;
- A Abundant;
- F Frequent;
- O Occasional;
- R Rare;
- L Local (used as a prefix to any of the above).

#### **3.2.2 Protected species assessment**

Habitats and features were assessed for their potential to support protected species (see section 2). In many cases determining the presence, distribution and population size of protected species will require additional, specialist surveys.

##### ***Badgers***

A direct search was undertaken for signs of badger (*Meles meles*). Signs of badger may include setts, dung pits, latrines, paths or hairs on fences and vegetation. Any setts encountered were classified according to the number of entrances and the extent of their use.

## **Bats**

### Buildings

Bats roost in a wide variety of sites within buildings, with many species roosting in cracks and crevices, within brick work, under slates and tiles, and within timber beam joints where they are difficult to see.

Bats often access roosts at key areas such as the gable end, soffits, barge boards, ridge tiles, between double lintels, around window frames, through open joints in the brickwork or broken tiles through open doors / entrances to the buildings.

The presence of roosting bats can be spotted through signs such as accumulations of moth or butterfly wings, staining, bat droppings, or bats themselves. The absence of these cannot, however, be treated as conclusive evidence that bats are not using the buildings. An assessment was therefore also made of the potential of the building to support bats based on the following scale:

**Table 1: Criteria for assessing bat roosting potential of buildings**

|   |   |
|---|---|
| <b>Confirmed Roost</b>                      | Evidence of bat occupation found  |
| <b>High Roosting Potential</b>              | With significant roosting potential, either because they contain a large number of suitable features or those features present appear optimal |
| <b>Medium Roosting Potential</b>            | Features with moderate roosting potential, with roosting features appearing less suitable   |
| <b>Low or Negligible Roosting Potential</b> | Buildings with few, if any, features suitable for roosting  |

The survey was carried out by Alex Coggins (Natural England class licence CL17: 2019-39837-CLS-CLS) on the 27<sup>th</sup> November 2019. Weather conditions were 7/8 cloud cover, 3/12 wind and showers.

### Trees

All bats use trees as they provide a foraging area, and connectivity between different habitats, however, the most significant use is as a roost. Bats often roost in trees. Features such as old woodpecker holes, splits, cavities and rot holes, loose or flaking bark and ivy creepers will be exploited by bats to roost. Any trees present on site were therefore assessed for their potential to support roosting bats by searching for such features. The presence of roosting bats can be spotted through signs such as accumulations of moth or butterfly wings, staining, bat droppings, or bats themselves. The absence of these cannot, however, be treated as conclusive evidence that bats are not present, and therefore an assessment was made of the potential of the trees to support bats based on the scale presented below in Table 2, adapted from the *Good Practice Guidelines* (Collins, 2016):

**Table 2: Criteria for assessing bat roosting potential of trees**

|   |   |
|---|---|
| <b>High Roosting Potential</b>              | Trees with multiple, highly suitable features capable of supporting larger roosts or with evidence of bat occupation found  |
| <b>Moderate Roosting Potential</b>          | Trees with definite bat potential, supporting fewer suitable features than high roosting potential trees or with potential for use by single bats   |
| <b>Low or Negligible Roosting Potential</b> | Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found or the tree supports some features which may have limited potential to support bats or trees with no potential to support bats |

### ***Dormice***

The habitat on site was assessed for the potential to support dormice (*Muscardinus avellanarius*), which are found in habitats such as woodlands, scrub and hedgerows with good connectivity and suitable food plants. Satellite images were used to assess the connectivity of any suitable habitat present on the site to other areas of woodland and hedgerow networks.

### ***Great crested newts***

Suitable breeding ponds are essential to support populations of great crested newt (*Triturus cristatus*) although they actually only spend a relatively short period of the year in the ponds during the spring for breeding. The remainder of the year is spent in suitable 'foraging' habitat such as tall grassland and woodland. During the winter the great crested newt hibernates, often amongst the roots of trees and scrub or in places such as piles of rubble, amongst foundations of buildings or under fallen trees and logs.

Great crested newts are known to forage up to at least five hundred metres from their breeding sites and suitable habitats that fall within five hundred metres must be considered even in situations where the breeding site itself will not be affected. Ponds within a five hundred metre radius were therefore identified during this survey and habitats within and immediately adjacent to the site were assessed in terms of their suitability as foraging habitat. Further specialist surveys will be recommended where appropriate.

### ***Reptiles***

Reptiles are widespread in habitats that provide both cover, in the form of scrub or tall vegetation, and basking areas such as areas of hard standing or short grassland communities. Piles of debris or rubble also provide excellent cover and hibernation sites for reptiles. Effective survey for reptiles is time-consuming and labour intensive involving the use of artificial refuges (usually roofing felt or carpet tiles) which attract individuals. Habitats within the site were therefore assessed for their suitability to support reptiles and further specialist surveys recommended where appropriate.

## 4.0 RESULTS

### 4.1 Desk study

#### *Statutory sites*

Table 3 below lists statutory sites designated for nature conservation that are located within ten kilometres of the site and non-statutory sites within two kilometres of the site.

**Table 3: Statutory designated sites within a ten kilometre radius and non-statutory sites within a two kilometre radius of Ford Circular Technology Park**

| Site name                    | Conservation status | Distance & direction from the application site | Size (ha) | Citation features   |
|------------------------------|---------------------|--|-----------|---|
| Duncton to Bignor Escarpment | SAC <sup>2</sup>    | 9.5 km north                                   | 214.35    | A steeply sloping area of broadleaved woodland and heathland noted for Annex I habitat <i>Asperulo-Fagetum</i> beech forests.   |
|                              | SSSI <sup>3</sup>   | 9.5 km north                                   | 214.35    | A steeply sloping area of broadleaved woodland and heathland. Rare plants present include the white helleborine ( <i>Cephalanthera damasonium</i> ), yellow bird's nest ( <i>Monotropa hypopitys</i> ) and green hellebore ( <i>Helleborus viridis</i> ). The woods also have a rich mollusc fauna. |
| Climping Beach               | SSSI                | 2.9 km south east                              | 65.8      | The predominant habitat within the site is vegetated shingle beach with associated sand dune system. Plants of interest include yellow horned poppy ( <i>Gaucium flavum</i> ), sea dale ( <i>Crambe maritima</i> ) and sea holly ( <i>Eryngium maritimum</i> )                                      |

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<sup>2</sup> SAC: Special Area of Conservation

<sup>3</sup> SSSI: Site of Special Scientific Interest

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| Site name          | Conservation status | Distance & direction from the application site | Size (ha) | Citation features   |
|--------------------|---------------------|--|-----------|---|
| Arundel Park       | SSSI                | 4.3 km north east                              | 140.46    | The site contains species-rich chalk grassland with dense areas of scattered scrub and mature semi-natural woodland, small areas of mixed plantation, marshy grassland and an artificial lake.  |
| Fairmile Bottom    | SSSI                | 5.6 km north                                   | 68.0      | Fairmile Bottom contains a range of nationally rare habitats including yew ( <i>Taxus baccata</i> ) woodland, scrub and unimproved chalk grassland.   |
| Arun Banks         | SSSI                | 6.9 km north                                   | 25.1      | Habitats present include extensive reedbed within the upper tidal stretch of the River Arun. These habitats support a diverse and rich flora including one nationally uncommon plant ( <i>Schoenoplectus lacustris</i> sub-species <i>tabernaemontani x triqueter</i> ) |
| Bognor Reef        | SSSI                | 7.4 km south west                              | 64.4      | Habitats within this site include a significant area of vegetated shingle beach, an uncommon habitat in Britain and a small area of old sand dune.  |
| Halnaker Chalk Pit | SSSI                | 8.9 km north west                              | 6.54      | The site comprises bare and partly vegetated chalk pit with scrub and woodland around the periphery. The site has approximately half of the British population of the nationally rare plant broad-leaved cudweed ( <i>Filago pyramidata</i> ).                          |

| Site name                         | Conservation status | Distance & direction from the application site | Size (ha) | Citation features  |
|-----------------------------------|---------------------|--|-----------|--|
| Amberley Mount to Sullington Hill | SSSI                | 9.2 km north east                              | 181.2     | The site comprises some of the most diverse chalk grassland in Sussex, juniper ( <i>Juniperus communis</i> ) scrub habitat is also present. The site contains nationally restricted invertebrates including various moths, butterflies and snails. |
| West Beach                        | LNR <sup>4</sup>    | 2.4 km south east                              | 15.7      | Forms part of Climping Beach SSSI.   |
| Fairmile Bottom                   | LNR                 | 5.6 km north                                   | 61.3      | Forms part of Fairmile Bottom SSSI.  |
| The Brooks                        | LNR                 | 5.9 km west                                    | 19.1      | The Brooks has extensive grassland, reedbeds, ponds and newly planted woodland.  |

*The proposed development is 2.9 km north west of Climping Beach SSSI and 4.3 km south west of Arundel Park SSSI. This buffer is considered sufficient that the proposed development will not result in any impacts to either of these protected sites. No non-statutory sites are present within a two kilometre radius of the site. No further recommendations have been made.*

### ***Protected species records***

Table 4 below presents the results of the search for protected species highlighted by SxBRC within a two kilometre radius of the site including protected species records within the last 15 years.

**Table 4: Protected and notable species within a two kilometre radius of Ford Circular Technology Park**

| Common name                  | Scientific name                 | Status   | Records                                   |
|------------------------------|---------------------------------|--|---|
| <b><i>Mammals (bats)</i></b> |                                 |  |   |
| Western barbastelle          | <i>Barbastella barbastellus</i> | Annex 2 <sup>5</sup> , Schedule 2 Habs Regs <sup>6</sup> , Schedule 5 WCA <sup>7</sup> , UK BAP <sup>8</sup> | 1 record within a 2 km radius dated 2018. |

<sup>4</sup> LNR: Local Nature Reserve

<sup>5</sup> Annex 2: Species listed under Annex II of The Habitats Directive (Directive 92/43/EEC)

<sup>6</sup> Habs Regs: The Conservation of Habitat and Species Regulations 2017

<sup>7</sup> WCA: Wildlife and Countryside Act (1981) (as amended)

<sup>8</sup> UKBAP: UK Biodiversity Action Plan

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| Common name               | Scientific name                   | Status                                       | Records  |
|---------------------------|-----------------------------------|--|--|
| Serotine                  | <i>Eptesicus serotinus</i>        | Schedule 2 Habs Regs, Schedule 5 WCA         | 3 records within a 2 km radius dated between 2014 and 2018.  |
| Myotis bat                | <i>Myotis</i> sp.                 | Schedule 2 Habs Regs, Schedule 5 WCA         | 2 records within a 2 km radius dated 2018.                   |
| Daubenton's bat           | <i>Myotis daubentonii</i>         | Schedule 2 Habs Regs, Schedule 5 WCA         | 4 records within a 2 km radius dated 2018.                   |
| Whiskered/ Brandt's bat   | <i>Myotis mystacinus/brandtii</i> | Schedule 2 Habs Regs, Schedule 5 WCA         | 1 record within a 2 km radius dated 2018.                    |
| Natterer's bat            | <i>Myotis nattereri</i>           | Schedule 2 Habs Regs, Schedule 5 WCA         | 2 record within a 2 km radius dated 2018.                    |
| Leisler's bat             | <i>Nyctalus leisleri</i>          | Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP | 1 record within a 2 km radius dated 2018.                    |
| Noctule                   | <i>Nyctalus noctula</i>           | Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP | 1 record within a 2 km radius dated 2010.                    |
| Nathusius's pipistrelle   | <i>Pipistrellus nathusii</i>      | Schedule 2 Habs Regs, Schedule 5 WCA         | 2 record within a 2 km radius dated 2015.                    |
| Common pipistrelle        | <i>Pipistrellus pipistrellus</i>  | Schedule 2 Habs Regs, Schedule 5 WCA         | 7 records within a 2 km radius dated between 2007 and 2018.  |
| Soprano pipistrelle       | <i>Pipistrellus pygmaeus</i>      | Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP | 2 records within a 2 km radius dated between 2015 and 2018.  |
| Long-eared species        | <i>Plecotus</i> sp.               | Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP | 2 records within a 2 km radius dated 2015.                   |
| Brown long-eared          | <i>Plecotus auritus</i>           | Schedule 2 Habs Regs, Schedule 5 WCA, UK BAP | 4 records within a 2 km radius dated between 1997 and 2018.  |
| <b>Mammals (non-bats)</b> |                                   |  |  |
| European water vole       | <i>Arvicola amphibius</i>         | Schedule 5 WCA, UK BAP                       | 5 records within a 2 km radius dated between 2010 and 2015.  |
| West European hedgehog    | <i>Erinaceus europaeus</i>        | UKBAP  | 37 records within a 2 km radius dated between 2010 and 2017. |
| Brown hare                | <i>Lepus europaeus</i>            | UKBAP  | 3 records within a 2 km radius dated between 2013 and 2019.  |
| Harvest mouse             | <i>Micromys minutus</i>           | UKBAP  | 1 record within a 2 km radius dated 2010.                    |

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| Common name                    | Scientific name              | Status                                      | Records   |
|--------------------------------|------------------------------|---|---|
| <b>Reptiles and amphibians</b> |                              |   |   |
| Slow-worm                      | <i>Anguis fragilis</i>       | Schedule 5 WCA, UKBAP                       | 12 records within a 2 km radius dated 2018.                   |
| Common toad                    | <i>Bufo bufo</i>             | UKBAP                                       | 17 records within a 2 km radius dated 2010.                   |
| Grass snake                    | <i>Natrix helvetica</i>      | Schedule 5 WCA, UKBAP                       | 5 records within a 2 km radius dated 2018.                    |
| Great crested newt             | <i>Triturus cristatus</i>    | Habs Regs, Schedule 5 WCA, UKBAP            | 58 records within a 2 km radius dated between 2010 and 2017.  |
| Adder                          | <i>Viperia berus</i>         | Schedule 5 WCA, UKBAP                       | 1 record within a 2 km radius dated 2014.                     |
| Common lizard                  | <i>Zootoca vivipara</i>      | Schedule 5 WCA, UKBAP                       | 7 records within a 2 km radius dated 2018.                    |
| <b>Birds</b>                   |                              |   |   |
| Lesser redpoll                 | <i>Acanthis cabaret</i>      | Red List BoCC, UK BAP                       | 21 records within a 2 km radius dated between 2010 and 2018.  |
| Skylark                        | <i>Alauda arvensis</i>       | Red List BoCC, UK BAP                       | 375 records within a 2 km radius dated between 1990 and 2018. |
| Kingfisher                     | <i>Alcedo atthis</i>         | Schedule 1, Annex 1, Amber List BoCC        | 137 records within a 2 km radius dated between 2010 and 2018. |
| Short-eared owl                | <i>Asio flammeus</i>         | Annex 1, Amber List BoCC                    | 37 records within a 2 km radius dated between 2010 and 2018.  |
| Brent goose                    | <i>Branta bernicloa</i>      | Amber List BoCC                             | 87 records within a 2 km radius dated between 2010 and 2017.  |
| Stone-curlew                   | <i>Burhinus oedicephalus</i> | Schedule 1, Annex 1, Amber List BoCC, UKBAP | 4 records within a 2 km radius dated between 2014 and 2017.   |
| Marsh harrier                  | <i>Circus aeruginosus</i>    | Schedule 1, Annex 1, Amber List BoCC        | 51 records within a 2 km radius dated between 2010 and 2018.  |
| Hen harrier                    | <i>Circus cyaneus</i>        | Schedule 1, Annex 1, Red List BoCC          | 2 records within a 2 km radius dated between 2010 and 2016.   |
| White stork                    | <i>Ciconia ciconia</i>       | Annex 1                                     | 4 records within a 2 km radius dated between 2010 and 2017.   |
| Cuckoo                         | <i>Cuculus canorus</i>       | Red List BoCC, UK BAP                       | 26 records within a 2 km radius dated between 2010 and 2016.  |

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| Common name              | Scientific name             | Status                                     | Records   |
|--------------------------|-----------------------------|--|---|
| Mute swan                | <i>Cygnus olor</i>          | Amber List<br>BoCC                         | 615 records within a 2 km radius dated between 2010 and 2018. |
| Little ringed plover     | <i>Charadrius dubius</i>    | Schedule 1                                 | 3 records within a 2 km radius dated between 2016 and 2018.   |
| Ringed plover            | <i>Charadrius hiaticula</i> | Red List BoCC                              | 307 records within a 2 km radius dated between 2010 and 2018. |
| Cetti's warbler          | <i>Cettia cetti</i>         | Schedule 1                                 | 151 records within a 2 km radius dated between 2010 and 2018. |
| Stock dove               | <i>Columba oenas</i>        | Amber List<br>BoCC                         | 131 records within a 2 km radius dated between 2010 and 2018. |
| Little egret             | <i>Egretta garzetta</i>     | Annex 1                                    | 270 records within a 2 km radius dated between 2010 and 2018. |
| Merlin                   | <i>Falco columbarius</i>    | Schedule 1,<br>Annex 1, Red<br>List BoCC   | 24 records within a 2 km radius dated between 2010 and 2018.  |
| Peregrine                | <i>Falco peregrinus</i>     | Schedule 1,<br>Annex 1                     | 29 records within a 2 km radius dated between 2010 and 2017.  |
| Hobby                    | <i>Falco subbuteo</i>       | Schedule 1                                 | 68 records within a 2 km radius dated between 2010 and 2018.  |
| Woodlark                 | <i>Lullula arborea</i>      | Schedule 1,<br>Annex 1, UK<br>BAP          | 2 records within a 2 km radius dated 2010                     |
| Grasshopper warbler      | <i>Locustella naevia</i>    | Red List BoCC,<br>UK BAP                   | 18 records within a 2 km radius dated between 2010 and 2017   |
| Mediterranean gull       | <i>Larus melanocephalus</i> | Schedule 1,<br>Annex 1, Amber<br>List BoCC | 97 records within a 2 km radius dated between 2010 and 2018.  |
| Common gull              | <i>Larus canus</i>          | Amber List<br>BoCC                         | 65 records within a 2 km radius dated between 2010 and 2018.  |
| Lesser black-backed gull | <i>Larus fuscus</i>         | Amber List<br>BoCC                         | 65 records within a 2 km radius dated between 2010 and 2018.  |
| Yellow-legged gull       | <i>Larus michahellis</i>    | Amber List<br>BoCC                         | 18 records within a 2 km radius dated between 2010 and 2018.  |
| Herring gull             | <i>Larus argentatus</i>     | Red List BoCC,<br>UK BAP                   | 440 records within a 2 km radius dated between 2010 and 2018. |

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| Common name             | Scientific name                   | Status                                     | Records   |
|-------------------------|-----------------------------------|--|---|
| Iceland gull            | <i>Larus glaucooides</i>          | Amber List<br>BoCC                         | 2 records within a 2 km radius dated between 2010 and 2018.   |
| Glaucous gull           | <i>Larus hyperboreus</i>          | Amber List<br>BoCC                         | 4 records within a 2 km radius dated between 2010 and 2014.   |
| Great black-backed gull | <i>Larus marinus</i>              | Amber List<br>BoCC                         | 150 records within a 2 km radius dated between 2010 and 2018. |
| Caspian gull            | <i>Larus cachinnans</i>           | Amber List<br>BoCC                         | 1 record within a 2 km radius dated between 2010 and 2018.    |
| Black-headed gull       | <i>Chroicocephalus ridibundus</i> | Amber List<br>BoCC                         | 490 records within a 2 km radius dated between 2010 and 2018. |
| Red kite                | <i>Milvus milvus</i>              | Schedule 1,<br>Annex 1, Amber<br>List BoCC | 21 records within a 2 km radius dated between 2010 and 2018.  |
| Yellow wagtail          | <i>Motacilla flava</i>            | Red List BoCC,<br>UK BAP                   | 3 records within a 2 km radius dated 2016.                    |
| Whimbrel                | <i>Numenius phaeopus</i>          | Schedule 1, Red<br>List BoCC               | 39 records within a 2 km radius dated between 2010 and 2018.  |
| Curlew                  | <i>Numenius arquata</i>           | Red List BoCC,<br>UK BAP                   | 60 records within a 2 km radius dated between 2010 and 2018.  |
| Osprey                  | <i>Pandion haliaetus</i>          | Schedule 1,<br>Annex 1, Amber<br>List BoCC | 14 records within a 2 km radius dated between 2010 and 2016.  |
| House sparrow           | <i>Passer domesticus</i>          | Red List BoCC,<br>UK BAP                   | 33 records within a 2 km radius dated between 2008 and 2017.  |
| Tree sparrow            | <i>Passer montanus</i>            | Red List BoCC,<br>UK BAP                   | 1 record within a 2 km radius dated 2017.                     |
| Grey partridge          | <i>Perdix perdix</i>              | Red List BoCC,<br>UK BAP                   | 166 records within a 2 km radius dated between 2010 and 2018. |
| Black redstart          | <i>Phoenicurus ochruros</i>       | Schedule 1, Red<br>List BoCC               | 32 records within a 2 km radius dated between 1989 and 2017.  |
| Willow warbler          | <i>Phylloscopus trochilus</i>     | Amber List<br>BoCC                         | 79 records within a 2 km radius dated between 2010 and 2018.  |
| Bullfinch               | <i>Pyrrhula pyrrhula</i>          | Amber List<br>BoCC, UK BAP                 | 2 records within a 2 km radius dated 2010.                    |
| Golden plover           | <i>Pluvialis apricaria</i>        | Annex 1                                    | 27 records within a 2 km radius dated between 2010 and 2018.  |

| Common name   | Scientific name            | Status                | Records  |
|---------------|----------------------------|-----------------------|--|
| Woodcock      | <i>Scolopax rusticola</i>  | Red List BoCC         | 28 records within a 2 km radius dated between 2010 and 2016. |
| Turtle dove   | <i>Streptopelia turtur</i> | Red List BoCC, UK BAP | 26 records within a 2 km radius dated between 2010 and 2018. |
| Starling      | <i>Sturnus vulgaris</i>    | Red List BoCC, UK BAP | 24 records within a 2 km radius dated between 2010 and 2017. |
| Tawny owl     | <i>Strix aluco</i>         | Amber List BoCC       | 21 records within a 2 km radius dated between 2010 and 2012. |
| Song thrush   | <i>Turdus philomelos</i>   | Red List BoCC, UK BAP | 22 records within a 2 km radius dated between 2010 and 2017. |
| Mistle thrush | <i>Turdus viscivorus</i>   | Red List BoCC         | 9 records within a 2 km radius dated between 2009 and 2010.  |
| Barn owl      | <i>Tyto alba</i>           | Schedule 1            | 44 records within a 2 km radius dated between 2010 and 2018. |

The presence of the above protected and notable species within close vicinity of the site increases the likelihood of them using the site where suitable habitat has been identified.

## 4.2 Field study

The accompanying phase 1 habitat map provided as appendix I depicts the habitats encountered and highlights areas of particular interest with target notes.

Descriptions of these habitats are provided below:

### 4.2.1 Vegetation

#### *Colonised hardstanding (Target note 1)*

The majority of the site comprises hardstanding which has been colonised in some areas. Species present within the areas of colonised hardstanding include abundant common mouse-ear (*Cerastium fontanum*), frequent spear thistle (*Cirsium vulgare*) and rare red valerian (*Centranthus ruber*). A full list of species is presented in table 5 below.

**Table 5: Species present within colonised hardstanding**

| Common name                              | Latin name | Abundance | Status |
|--|------------|-----------|--------|
| <i>Grasses, ferns, rushes and mosses</i> |            |           |        |

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|                                 |                              |    |   |
|---------------------------------|------------------------------|----|---|
| Creeping bent                   | <i>Agrostis stolonifera</i>  | LA | Common in grasslands of all kinds except on most acidic soils       |
| Cock's foot                     | <i>Dactylis glomerata</i>    | LA | Common & widespread   |
| Annual-meadow grass             | <i>Poa annua</i>             | LF | Abundant in grasslands, cultivated ground & wasteground             |
| <b><i>Herbaceous plants</i></b> |                              |    |   |
| Yarrow                          | <i>Achillea millefolium</i>  | R  | Common & widespread   |
| Daisy                           | <i>Bellis perennis</i>       | R  | Common & widespread   |
| Butterfly bush                  | <i>Buddleja davidii</i>      | R  | Non native  |
| Wavy bitter-cress               | <i>Cardamine flexuosa</i>    | O  | Common in damp habitats, streamsides, wasteland & gardens           |
| Red valerian                    | <i>Centranthus ruber</i>     | R  | Common & widespread   |
| Common mouse-ear                | <i>Cerastium fontanum</i>    | A  | Common & widespread   |
| Spear thistle                   | <i>Cirsium vulgare</i>       | F  | Common & widespread   |
| Canadian fleabane               | <i>Conyza canadensis</i>     | LF | Common on wasteland, roadsides & dunes                              |
| Foxglove                        | <i>Digitalis purpurea</i>    | R  | Common on acid soils  |
| Herb-Robert                     | <i>Geranium robertianum</i>  | LO | Common & widespread   |
| Cat's ear                       | <i>Hypochaeris radicata</i>  | LO | Common in meadows, grasslands, not usually on very calcareous soils |
| Bristly oxtongue                | <i>Picris echioides</i>      | F  | Common on clay or chalk soils                                       |
| Ribwort plantain                | <i>Plantago lanceolata</i>   | O  | Common & widespread   |
| Creeping buttercup              | <i>Ranunculus repens</i>     | LF | Common & widespread   |
| Bramble                         | <i>Rubus fruticosus</i> agg. | LF | Common & widespread   |
| Broad-leaved dock               | <i>Rumex obtusifolius</i>    | LO | Common & widespread   |
| Groundsel                       | <i>Senecio vulgaris</i>      | LO | Common in disturbed places  |
| Dandelion                       | <i>Taraxacum</i> agg.        | LO | Common & widespread   |
| Common nettle                   | <i>Urtica dioica</i>         | O  | Common & widespread   |
| Great mullein                   | <i>Verbascum thapsus</i>     | R  | Common in open woodlands, dry hedge banks & wasteland               |

*Species present in the hardstanding are common and widespread and the habitat is of negligible ecological value. No further action has been recommended.*

***Poor semi-improved grassland (Target note 2)***

Small areas of poor semi-improved grassland are present in patches throughout the site. Species present within the poor semi-improved grassland include dominant cock's foot

(*Dactylis glomerata*) and frequent false oat-grass (*Arrhenatherum elatius*) and bristly oxtongue (*Picris echioides*), A full list of species is presented in table 6 below.

**Table 6: Species present within the poor semi-improved grassland**

| Common name                                     | Latin name                   | Abundance | Status  |
|---|------------------------------|-----------|---|
| <b><i>Grasses, ferns, rushes and mosses</i></b> |                              |           |   |
| False oat-grass                                 | <i>Arrhenatherum elatius</i> | F         | Common in meadows & on road verges                                |
| Cock's foot                                     | <i>Dactylis glomerata</i>    | D         | Common & widespread   |
| Red fescue                                      | <i>Festuca rubra</i>         | R         | Common & widespread   |
| Yorkshire-fog                                   | <i>Holcus lanatus</i>        | A         | Common & widespread   |
| <b><i>Herbaceous plants</i></b>                 |                              |           |   |
| Yarrow  | <i>Achillea millefolium</i>  | O         | Common & widespread   |
| Creeping thistle                                | <i>Cirsium arvense</i>       | O         | Common & widespread   |
| Canadian fleabane                               | <i>Conyza canadensis</i>     | F         | Common on wasteland, roadsides & dunes                            |
| Wild carrot                                     | <i>Daucus carota</i>         | R         | Common, especially on calcareous soils                            |
| Great willowherb                                | <i>Epilobium hirsutum</i>    | LO        | Common in fens, marshes, river banks and occasionally drier areas |
| Dove's-foot crane's-bill                        | <i>Geranium molle</i>        | F         | Common & widespread   |
| Ivy   | <i>Hedera helix</i>          | R         | Common & widespread   |
| Hogweed   | <i>Heracleum sphondylium</i> | LF        | Common & widespread   |
| Common mallow                                   | <i>Malva sylvestris</i>      | R         | Common & widespread   |
| Black medick                                    | <i>Medicago lupulina</i>     | O         | Common on grassland & roadsides, especially on base-rich soils    |
| Bristly oxtongue                                | <i>Picris echioides</i>      | F         | Common on clay or chalk soils                                     |
| Ribwort plantain                                | <i>Plantago lanceolata</i>   | F         | Common & widespread   |
| Meadow buttercup                                | <i>Ranunculus acris</i>      | R         | Common & widespread   |
| Broad-leaved dock                               | <i>Rumex obtusifolius</i>    | R         | Common & widespread   |
| Groundsel                                       | <i>Senecio vulgaris</i>      | R         | Common in disturbed places  |
| Dandelion                                       | <i>Taraxacum</i> agg.        | O         | Common & widespread   |
| White clover                                    | <i>Trifolium repens</i>      | LF        | Common & widespread   |

*Species present in the poor semi-improved grassland are common and widespread. The patches of poor semi-improved grassland are small, isolated and surrounded by hardstanding and buildings, and therefore does not provide suitable habitat for reptiles or great crested newt. No further action has been recommended.*

***Scrub (Target note 3)***

Small, unconnected patches of scrub are present throughout the site. Species present included locally dominant bramble (*Rubus fruticosus* agg.) and frequent buddleia (*Buddleja* sp.).

*Species present in the scrub are common and widespread. The scrub provides suitable habitat for nesting birds. This is discussed further in section 4.2.2.*

***Broadleaved woodland (target note 4)***

An area of broadleaved woodland measuring approximately 0.3 hectares is present just inside the far northern boundary. Species present include dominant hornbeam (*Carpinus betulus*), abundant elder (*Sambucus nigra*), locally dominant bramble, locally abundant privet (*Ligustrum vulgare*) and ivy (*Hedera helix*), occasional occurrences of ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*) and rare occurrences of oak (*Quercus robur*). A scarce understorey of occasional lords and ladies is present (*Arum maculatum*) along with large areas of bare ground.

*Species present in the broadleaved woodland are common and widespread. The broadleaved woodland provides suitable habitat for nesting birds, however the current proposals do not affect this habitat. No further action has been recommended.*

***Non-native hedgerow (Target note 5)***

A recently planted ornamental hedgerow was present in the west of the site. Species present within the hedgerow included abundant ornamental species, occasional hawthorn species (*Crataegus* sp.), rose species (*Rosa* sp.) and ornamental oak species (*Quercus* sp.) and rare hazel (*Corylus avellana*).

*Species present in the non-native hedgerow are common and widespread. The non-native hedgerow provides suitable habitat for nesting birds. This is discussed further in section 4.2.2.*

***Scattered trees (Target note 6)***

Scattered trees are present throughout the site in the form of a single willow species (*Salix* sp.) in the north of the site and a conspicuous line of pollarded black poplars (*Populus nigra*) along the new road in the south-east of the site.

*The species present within the scattered trees are common and widespread. The scattered trees provide suitable habitat for nesting birds. This is discussed further in section 4.2.2.*

***Debris pile (target note 7)***

A large pile of old concrete walls and metal is present within the northern section of the site. Heavy bramble growth and rabbit warrens surround the pile.

*The debris pile is of negligible ecological value. No further action is required.*

***Bare ground (Target note 8)***

Patches of bare ground are present adjacent to the new access road in the south east of the site.

*The bare ground is of negligible ecological value. No further action is required.*

## **4.2.2 Protected species assessment**

### ***Badgers***

No signs of badger including setts, foraging signs or latrines were recorded on the site during the walkover survey. Badgers are therefore, not considered to be present on site.

*No further action is required.*

### ***Bats***

#### **Buildings**

A total of three large hangars are present on site, the locations of which have been illustrated in appendix I.

#### ***Hangar 1 (Target note 9)***

##### *External*

- A very large hangar, constructed of concrete blocks and metal sheets, measuring approximately 60 metres in length, 50 metres in width and 15 metres in height.
- The roof is pitched and comprises corrugated metal sheets.
- The building is clad in corrugated metal sheets and wooden slats.
- The western elevation of the hangar is open.

##### *Internal*

- The building is open to the rafters and no roof void is present.
- A large steel frame is present with steel rafters.
- The hangar is in constant use as a waste transfer facility.

#### ***Hangar 2 (Target note 10)***

##### *External*

- A very large hangar measuring approximately 70 metres in length, 40 metres in width and 15 metres in height.
- The roof is pitched and comprises corrugated metal sheets.
- A small, single-storey, red brick extension is present on the north elevation. The flat roof comprises bitumen roofing felt.

##### *Internal*

- Internal access to the hangar was not possible as the building had been condemned.

#### ***Hangar 3 (Target note 11)***

*External*

- A very large hangar, constructed of corrugated metal sheets with a brick base, measuring approximately 70 metres in length, 40 metres in width and 15 metres in height.
- The roof is pitched and comprises corrugated metal sheets.
- A small single-storey extension is present on the north elevation. The flat roof comprises bitumen roofing felt. A dilapidated wooden shed is also present.

*Internal*

- No roof void is present.

***Offices and garage (Target note 12)***

*External*

- A two-storey office building is present on the south elevation of hangar 3.
- The office building is constructed of breezeblocks with a two-tiered flat roof comprising bitumen roofing felt.
- Wooden fascia boards are present and in good condition.
- Additional single-storey office buildings are present on the south elevation.
- The buildings are constructed of brick with a mono-pitch roof comprising corrugated plastic sheets.
- Wooden and plastic soffits are present and in good condition.
- A garage area is also present on the south elevation. The garage is constructed of red brick with a flat roof comprising corrugated plastic sheets.
- Two metal garage doors are present.

*Internal*

- No roof voids are present within the office buildings or the garage.

***Bunker (Target note 13)***

- The bunker is constructed of red brick and concrete.
- The building is underground.
- The doorway and window are open.
- The roof is flat and covered with bitumen felt in moderate condition.

*Internal*

- The building measures approximately 12 metres in length by five metres in width and five metres in height.
- Two concrete benches are present.
- The walls are covered in graffiti and a large amount of litter is present.

***Survey results***

Internal survey: evidence of bats

Despite a thorough search no evidence of bats was recorded within the buildings on site.

External survey: evidence of bats

Despite a thorough search no evidence of bats was recorded on the externals of the buildings on site.

***Potential for bats***

An assessment of the potential for the buildings to supports bats is described in table 7 below.

**Table 7: Potential for bats**

| <b>Location</b> | <b>Potential access points for bats</b>                | <b>Potential roosting opportunities for bats</b>       | <b>Overall suitability</b>   |
|-----------------|--|--|--|
| Hangar 1        | <ul style="list-style-type: none"> <li>None</li> </ul> | <ul style="list-style-type: none"> <li>None</li> </ul> | Due to the lack of potential access points and roosting opportunities for bats, the building is considered to hold <b>negligible</b> potential to support roosting bats. |
| Hangar 2        | <ul style="list-style-type: none"> <li>None</li> </ul> | <ul style="list-style-type: none"> <li>None</li> </ul> | Due to the lack of potential access points and roosting opportunities for bats, the building is considered to hold <b>negligible</b> potential to support roosting bats. |
| Hangar 3        | <ul style="list-style-type: none"> <li>None</li> </ul> | <ul style="list-style-type: none"> <li>None</li> </ul> | Due to the lack of potential access points and roosting opportunities for bats, the building is considered to hold <b>negligible</b> potential to support roosting bats. |

| Location           | Potential access points for bats  | Potential roosting opportunities for bats  | Overall suitability  |
|--------------------|---|--|--|
| Offices and garage | <ul style="list-style-type: none"> <li>None</li> </ul>                                | <ul style="list-style-type: none"> <li>None</li> </ul>   | Due to the lack of potential access points and roosting opportunities for bats, the building is considered to hold <b>negligible</b> potential to support roosting bats. |
| Bunker             | <ul style="list-style-type: none"> <li>Through the open window and doorway</li> </ul> | <ul style="list-style-type: none"> <li>The dilapidated nature of the old garage makes it unsuitable for bats due to high levels of light inside the old garage and being open to wind and rain.</li> </ul> | Due to the lack of potential access points and roosting opportunities for bats, the building is considered to hold <b>negligible</b> potential to support roosting bats. |

*The buildings on site were assessed as holding **negligible potential** to support roosting bats due to the absence of access points and roosting opportunities. No further action is required.*

#### Trees

Due to a lack of features such as holes, cracks and fissures on the trunks and/or limbs of the trees on site, the trees on site are considered to hold negligible potential for roosting bats.

*No further action is required.*

#### ***Dormouse***

SxBRC returned no records of dormice from within a two kilometre radius of the site, and no suitable habitat for dormice is present. The site also has poor connectivity to the wider environment. As such it is considered that dormice are absent from the application area.

*No further action is required.*

#### ***Great crested newts***

SxBRC returned 58 records within a 2 km radius dated between 2010 and 2017. Suitable habitat for great crested newt is present on site however these habitats are small, isolated and surrounded by hardstanding. It is therefore considered highly unlikely that great crested newts are present on the site.

*No further action is required.*

***Reptiles***

SxBRC returned records of common species of reptile within a two kilometre radius of the site. Suitable habitat for reptiles is present on site however these habitats are small, isolated and surrounded by hardstanding. It is therefore considered highly unlikely that reptiles are present on the site.

*No further action is required.*

***Nesting birds***

The scrub, broadleaved woodland, non-native hedgerow and scattered trees on site provide suitable habitat for nesting birds.

*Recommendations have been made in section 5.1 to avoid harm for nesting birds and provide nesting opportunities for nesting birds post development.*

## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

The majority of the site comprises colonised hardstanding, as well as areas of poor semi-improved grassland, scrub, broadleaved woodland, a non-native hedgerow and scattered trees. The site was generally considered to be of low ecological value. The proposed development will result in the removal of all three hangars and associated buildings and some areas of hardstanding. Areas of colonised hardstanding, scrub and amenity grassland will also be lost, whilst the broad-leaved woodland will remain intact. The predicted impacts on habitats and species in the absence of mitigation are as follows:

- The damage or destruction of active birds nests within suitable habitat on site.

Mitigation strategies and recommendations for further surveys are provided below:

### **5.1 Nesting birds**

#### **5.1.1 Summary of findings**

The scrub, broadleaved woodland, non-native hedgerow and scattered trees on site provide foraging and nesting habitat common and widespread species of bird such as blue tit (*Cyanistes caeruleus*) and wren (*Troglodytes troglodytes*) as well as birds listed as amber on the BoCC (Birds of Conservation Concern) list such as dunnock (*Prunella modularis*), and Biodiversity Action Plan (BAP) species such as house sparrow (*Passer domesticus*).

#### **5.1.2 Implications of survey findings and recommendations for further action**

The following precautions should negate risk of harming, injuring or contributing to the demise of these species:

- All vegetation clearance should be conducted outside of the bird nesting season which is considered to run from 1<sup>st</sup> March to 31<sup>st</sup> August. Where this is not possible a suitably qualified ecologist should check potential nesting habitat immediately prior to clearance. Where nesting birds are encountered clearance must be postponed until the nestlings have fledged.

Ecological enhancement measures described in section 5.2 will provide foraging and nesting opportunities for many species

### **5.2 Ecological enhancement**

In order to comply with the NPPF framework the development is required to demonstrate net gain in biodiversity on site. This will be achieved through the following measures:

- Provision of bat boxes and nest boxes for bird species such as robin and house sparrow on the walls of the buildings or trees. Bat boxes and tubes, and bird boxes can be purchased from websites such as Alana Ecology <http://www.alanaecology.com> and Jacobi Jayne [www.jacobijayne.co.uk](http://www.jacobijayne.co.uk), and their provision on site would enhance the habitat for the local bat and bird population.
- Use of native shrubs and trees for landscaping schemes provides foraging habitat for a range of bird species. Suitable species include hazel, ash (*Fraxinus excelsior*), dog-rose (*Rosa canina*), elder, blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*) and field maple (*Acer campestre*).
- Landscaping schemes should include the planting of nectar rich flowering plants, with a variety of species, to provide a nectar source throughout the year. This will benefit local populations of invertebrates, including pollinating insects.
- All biodiversity enhancements should be secured through a Biodiversity Mitigation and Enhancement plan to be submitted to and approved by the Local Planning Authority as part of the application process.

## 6.0 REFERENCES

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Multi-Agency Geographical Information for the Countryside ([www.magic.gov.uk](http://www.magic.gov.uk))

### APPENDIX I: Phase 1 habitat map



**Target notes to accompany phase I habitat map**

| Target Note | Description  |
|-------------|--|
| 1           | Some areas of hardstanding have been colonised. Species present within the hardstanding include abundant common mouse-ear ( <i>Cerastium fontanum</i> ), locally abundant creeping bent ( <i>Agrostis stolonifera</i> ) and cock's-foot ( <i>Dactylis glomerata</i> ), frequent spear thistle ( <i>Cirsium vulgare</i> ) and bristly oxtongue ( <i>Picris echioides</i> ), locally frequent Canadian fleabane ( <i>Conyza canadensis</i> ), annual meadow grass ( <i>Poa annua</i> ), creeping buttercup ( <i>Ranunculus repens</i> ) and bramble ( <i>Rubus fruticosus</i> agg.), occasional wavy bitter-cress ( <i>Cardamine flexuos</i> ), ribwort plantain ( <i>Plantago lanceolata</i> ) and common nettle ( <i>Urtica dioica</i> ), locally occasional herb-Robert ( <i>Geranium robertianum</i> ), cat's-ear ( <i>Hypochaeris radicata</i> ), broad-leaved dock ( <i>Rumex obtusifolius</i> ), groundsel ( <i>Senecio vulgaris</i> ) and dandelion ( <i>Taraxacum</i> agg) and rare yarrow ( <i>Achillea millefolium</i> ), daisy ( <i>Bellis perennis</i> ), butterfly bush ( <i>Buddleja davidii</i> ), red valerian ( <i>Centranthus ruber</i> ), foxglove ( <i>Digitalis purpurea</i> ) and great mullein ( <i>Verbascum thapsus</i> ). |
| 2           | Poor semi-improved grassland with dominant cock's-foot, abundant Yorkshire-fog ( <i>Holcus lanatus</i> ), frequent false oat-grass ( <i>Arrhenatherum elatius</i> ), Canadian fleabane, dove's-foot crane's-bill ( <i>Geranium molle</i> ), bristly oxtongue and ribwort plantain, locally frequent hogweed ( <i>Heracleum sphondylium</i> ) and white clover ( <i>Trifolium repens</i> ), occasional yarrow, creeping thistle ( <i>Cirsium arvense</i> ), black medick ( <i>Medicago lupulina</i> ) and dandelion, locally occasional great willowherb ( <i>Epilobium hirsutum</i> ) and rare wild carrot ( <i>Daucus carota</i> ), red fescue ( <i>Festuca rubra</i> ), ivy ( <i>Hedera helix</i> ), common mallow ( <i>Malva sylvestris</i> ), meadow buttercup ( <i>Ranunculus acris</i> ), broad-leaved dock and groundsel.   |
| 3           | Scrub with dominant bramble and buddleia ( <i>Buddleja sp.</i> ).  |
| 4           | Broadleaved woodland with dominant hornbeam ( <i>Carpinus betulus</i> ), locally dominant bramble, abundant elder ( <i>Sambucus nigra</i> ), locally abundant privet ( <i>Ligustrum vulgare</i> ) and ivy, occasional ash ( <i>Fraxinus excelsior</i> ) and sycamore ( <i>Acer pseudoplatanus</i> ) and rare oak ( <i>Quercus robur</i> ). A scarce understorey of occasional lords and ladies ( <i>Arum maculatum</i> ) is present along with large areas of bare ground.   |
| 5           | Non-native hedgerow with abundant ornamental species, occasional hawthorn species ( <i>Crataegus sp.</i> ), rose species ( <i>Rosa sp.</i> ), oak species ( <i>Quercus sp.</i> ) and rare hazel ( <i>Corylus avellana</i> ).   |
| 6           | Scattered trees with willow species ( <i>Salix sp.</i> ) and black poplar ( <i>Populus nigra</i> ).  |
| 7           | Debris pile  |
| 8           | Bare ground  |
| 9           | Hangar 1   |
| 10          | Hangar 2   |
| 11          | Hangar 3   |
| 12          | Offices and garage   |
| 13          | Bunker   |