# Adonis Ecology Ltd.

# Preliminary Ecological Appraisal and Preliminary Roost Assessment of GCB Cocoa Factory Site, Glemsford to Support a Planning Application

Project Ref: 1404

Prepared on behalf of:

**BE Design**
Fernwood Business Centre
14 Halifax Court
Newark
NG24 3JP

**By:**

**Adonis Ecology Ltd.**
Unit 11 Lavenham Studios
Brent Eleigh Road
Lavenham, Sudbury
Suffolk, CO10 9PE
Tel: 01787 249 160
E-mail: askus@adonisecology.co.uk
www.adonisecology.co.uk

Registered in England and Wales No: 6208092
Registered Office: Crane Court, 302 London Road, Ipswich, IP2 0AJ.

# Quality Assurance



The findings outlined within this report and the data we have provided are to our knowledge true, and express our bona fide professional opinions. This report has been prepared and provided in accordance with the Chartered Institute for Ecology and Environmental Management (CIEEM) Code of Professional Conduct and the British Standard BS 42020:2013 which provides a code of practice for biodiversity in planning and development (BSI, 2013). This standard also recommends compliance with CIEEM Guidelines for Preliminary Ecological Appraisals (CIEEM, 2013) and Guidelines for Ecological Report Writing (CIEEM, 2017) which includes model formats for Preliminary Ecological Appraisal and Ecological Impact Assessment.

As far as the author and report checker are aware, the only differences that occur in this report from the recommended layouts are:

- to enable greater clarity and reduce repetition (e.g. the report author is listed once on the quality assurance page in this report rather than on the front page, quality assurance page and introduction as in the CIEEM model formats);
- where there are inconsistencies in the guideline documents (e.g. the list of what should be included in the summary of an ecological report highlighted in the CIEEM Guidelines for Ecological Report Writing is different to that shown in the model formats in the same document); and
- to retain a proportionate approach in accordance with BS 42020:2013.

No method of assessment can completely remove the possibility of obtaining partially imprecise or incomplete information. Therefore, we cannot guarantee that this assessment completely defines the degree or extent of the occurrence of various species or habitats on the site, or the effectiveness of recommended actions as described in the report. In addition, as the ecological situation of a site is dynamic, this assessment pertains only to the conditions noted during the site visit. Therefore, to achieve the objectives of assessment as stated in this report, the conclusions are based on the information that was available during the time of the assessment and within the limits prescribed by our client in the agreement.

| | **Name** | **Signature** |
|---|---|---|
| **Report prepared by:** | Richard Sands MA MSc MCIEEM CEnv | R.J.N. Sands |
| **Report checked by:** | Stewart Wesley BSc (Hons) MCIEEM | S. Wesley |
| **Survey conducted by:** | Richard Sands. Details of relevant training and experience available on request. | |
| **Date of survey:** | 10th December 2020 | |

# Contents

# FIGURES & PHOTOGRAPHS



# TABLES

# 0 SUMMARY

0.1 Adonis Ecology Ltd. was commissioned by BE Design to undertake a Preliminary Ecological Appraisal (PEA) including a Preliminary Roost Assessment (PRA) of the GCB Cocoa Site, Lower Road, Glemsford, Sudbury, Suffolk, CO10 7UB, Grid Reference TL 834 465 . It was understood that it is proposed to refurbish and extend the existing buildings.

0.2 A desk study was undertaken, in addition to an extended Phase 1 Habitat survey which was conducted on the 10th December 2020. The site was checked for preferred habitat types, and signs or evidence of protected species and NERC Act 2006 Section 41 species and habitats.

0.3 The proposed works were considered to pose a potentially significant risk of impact on the following protected and/or Section 41 habitats and species/species groups:

- likely loss of 26m$^2$ of grassland of moderate dry acid grassland character;
- moderate risk of indirect impact to likely low numbers of foraging and/or commuting bats from additional lighting;
- moderate risk of impact to nesting birds in shrubs on site if shrub clearance works are undertaken between March and end August.

0.4 Management of the remaining grassland to control common nettle *Urtica dioica* and injurious weeds is recommended to retain the extent of acid grassland on site. Lighting precautions are provided to reduce risk of impact to foraging/commuting bats to negligible. Removing shrubs between September and February, or having an ecologist check for nesting birds no more than one week before removal, is recommended to avoid impact on nesting birds.

0.5 Overall, the site was considered to be of low local value for wildlife. With the recommended impact avoidance and mitigation measures implemented, the risk of impact to the nearby SSSI, protected and or Section 41 species, Section 41 habitats or local biodiversity from the proposed development could be reduced to negligible. Further, with the proposed biodiversity enhancements implemented, the site should achieve a net biodiversity gain as encouraged by the NPPF.

# 1 INTRODUCTION

## 1.1 Background

1.1.1 Adonis Ecology Ltd. was commissioned by BE Design to undertake a Preliminary Ecological Appraisal (PEA) including a Preliminary Roost Assessment (PRA) of the GCB Cocoa Site, Lower Road, Glemsford, Sudbury, Suffolk, CO10 7UB, Grid Reference TL 834 465 .

*Development Description*

1.1.2 The plans used to determine the boundaries of the site and the likely impacts from the proposed development were "Proposed Site Plan", drawing number 1002 dated 14th December 2020, "Proposed Details Site Plan of Revised Car Park and Entrance" drawing number 1006 dated 14th December 2020, and "Proposed Fence Line Plan and Details" drawing number 1005 dated 14th December 2020 which were produced by BE Design.

1.1.3 The site was approximately 6ha in size. It was understood that it is proposed to refurbish and extend the existing commercial premises, the external works of which included:

- Extending a small part of the roof of one factory building (Building A in Figure 1 in Appendix 1) upwards.
- Demolishing one factory building (Building C in Figure 1 in Appendix 1) and erecting a new building almost entirely over the existing building footprint and adjacent hardstanding.
- Erecting a new biomass building in the existing car park in the west of the site and linking it to the new building that replaces Building C.
- Widening the site entrance in the north west of the site and re-arranging the car park layout with associated erection of a gatehouse cabin.
- Erecting a new water treatment building and weighbridge in the east of the site over existing hardstanding.
- Installation of new 2.4m high palisade fencing and security gates in the west of the site around the re-arranged car park.

1.1.4 It was further understood that the Local Planning Authority (LPA) would require a PEA to accompany the planning application for the site.

*Aim and Objectives*

1.1.5 The aim of this report is to determine the potential impacts of the proposed development of the site on significant local biodiversity, taking into account the species and habitats that may be affected, positively or negatively, and the potential for impact avoidance, mitigation and enhancement measures on the site.

1.1.6 To achieve this aim, the report has the following objectives:

- to identify and describe potentially significant ecological impact risks relevant to planning associated with the proposed development;
- to identify ways in which any significant risk of deleterious impacts could be avoided, wherever reasonably possible;
- for any significant ecological risks that could not reasonably be avoided, to describe surveys that would be required to confirm presence/absence and severity of impact, and outline likely mitigation options;
- to identify and describe ways in which the proposed change in use could enhance local biodiversity.

### 1.2 Planning Policy and Legislation

1.2.1 Planning policy and guidance considered for this report included:

- National Planning Policy Framework (NPPF);
- National Planning Practice Guidance (NPPG) – Natural Environment.

1.2.2 Legislation considered for this report included:

- Protection of Badgers Act 1992;
- Wildlife and Countryside Act 1981, as amended;
- Countryside and Rights of Way Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006;
- Conservation of Habitat and Species Regulations 2017, as amended.

1.2.3 Key considerations from the NPPF and NPPG related to ecology and development include that impacts on legally protected species and habitats, as well as NERC Act (2006) Section 41 species and habitats, are a material consideration for individual planning consents (MHCLG, 2019).

1.2.4 The NPPF also promotes the enhancement of natural and local environments through planning, and encourages a move towards securing measurable net gains for biodiversity (MHCLG, 2019).

## 2 METHODOLOGY

### 2.1 Desk Study

2.1.1 On behalf of Adonis Ecology Ltd., Suffolk Biodiversity Information Service (SBIS) and Essex Wildlife Trust Biological Records Centre (EWTBRC) undertook searches for records of protected, Section 41 and rare species, as

well as non-statutory wildlife sites within 2km of the proposed development site.

2.1.2 Ordnance Survey maps, Google Earth and the Multi-agency Geographic Information for the Countryside (MAGIC) interactive map were used to locate ponds and ancient woodland within a 500m radius of the site, as well as to assess the general surroundings of the site. The MAGIC map was also used to determine whether any Local Nature Reserves or National Nature Reserves occurred within 2km of the site, and whether the site falls within any relevant Impact Risk Zones of Sites of Special Scientific Interest (SSSIs) and internationally designated sites such as Special Protection Areas (SPAs), Ramsars and Special Areas of Conservation (SACs).

2.1.3 Where a proposed development sites does fall within an Impact Risk Zone relevant to the type of development proposed, the MAGIC map was used to determine statutory wildlife sites within 2km of the proposed development and the closest Natura 2000 site where this falls further than 2km from the site.

2.1.4 These results were then combined with the findings of the site survey in order to assess the risk of ecology issues relevant to planning occurring on site.

## 2.2 Site Survey

*Habitats, Plants and Surroundings*

2.2.1 The site was visited on the 10th December 2020 to survey for ecology issues. This included the following:

- a Phase 1 Habitat Assessment recording dominant and higher plant species present on site, and a survey for Japanese knotweed *Fallopia japonica*, giant hogweed *Heracleum mantegazzianum* and other non-native, invasive plant species as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended);
- an assessment of the suitability of habitats present on site for widespread reptiles, bats, great crested newts *Triturus cristatus* and other protected or Section 41 species;
- an assessment of the habitats surrounding the site and in the local area;
- a direct survey for evidence of protected species as far as possible within seasonal constraints, e.g. for bats and badgers *Meles meles*.

*Survey Constraints*

2.2.2 The survey was undertaken outside the peak time of year to survey the ecological value of a site, which is taken to be between April and September. However, it was considered that sufficient plant species would be visible and could be identified at this time of year to determine habitat types on site, and to assess the likely value of these habitats for local wildlife. It should be noted

that some herbaceous plant species may not have been visible above ground or identifiable to species level.

## 2.3 Protected Species

*Bats – Survey Methodology*

2.3.1 A Preliminary Roost Assessment (PRA) was conducted in daylight, on the buildings/structures on site (as access allowed) and trees on and adjacent to the site during the site visit. The assessment was conducted by an ecologist who holds a Natural England Level 2 Class licence for bats (2015-11578-CLS-CLS).

2.3.2 The bat survey methods followed Natural England Bat Mitigation Guidelines (Natural England, 2004) and Bat Conservation Trust (BCT) Good Practice Guidelines (Collins, 2016) and therefore considerations were:

- the availability of access points of a size large enough to allow entry of bats to roosts;
- the presence and suitability as roosts of cracks, crevices, holes, dense ivy *Hedera helix* covering and other places;
- signs of bat activity or presence.

2.3.3 Definite signs of bat activity were taken to be:

- the bats themselves;
- droppings;
- dead bats;
- audible bat squeaks;
- scratch marks;
- urine splatter.

2.3.4 Signs of possible bat presence were taken to be:

- grease marks;
- moth and butterfly wings.

2.3.5 The outside of the buildings were checked for gaps, cavities, access points and crevices, and any signs of bats, in accordance with Natural England guidelines (Natural England, 2004).

2.3.6 Trees were checked for any gaps, holes, cracks or crevices suitable for roosting bats, as well as any signs or evidence of bats, in accordance with Natural England (2004) and BCT (Collins, 2016) guidelines.

2.3.7 The suitability of places to roost was assessed based upon potential for access and lack of cobwebs and dirt.

2.3.8 Inspection survey is a suitable method at any time of year for determining presence or likely absence of bats, according to Natural England guidelines (Natural England, 2004).

2.3.9 Detailed inspection of roof areas of the buildings was not practically feasible, and detailed internal inspection of the buildings was not undertaken. Internal spaces, which were only partly accessed, consisted of recently vacated factory floor spaces and offices, were considered unsuitable for bats given their high level of lighting, lack of crevices and lack of apparent access for bats. The external inspection was considered sufficient to determine the likelihood of bats roosting in the buildings with a high level of confidence.

*Badgers*

2.3.10 The badger assessment, also conducted during the site visit consisted of a thorough search of the proposed development site for signs and evidence of badgers and badger setts.

2.3.11 Definite signs of badger activity were taken to be:

- badgers themselves;
- badger latrines;
- badger paw prints;
- badger hairs.

2.3.12 Signs of possible badger presence were taken to be:

- well trampled animal paths;
- snuffle holes;
- small piles of dry grass and similar on paths;
- any further signs.

2.3.13 Some areas of dense scrub on site could not be checked thoroughly for badger setts or signs/evidence of badger activity. However, access through the vast majority of the site was considered sufficient to detect signs of potential badger activity that could indicate a sett on or near the site.

## 2.4 Evaluation Method

*Habitats*

2.4.1 To enable our determination of certain Phase 1 and Section 41 habitats to be as objective as possible and consistently follow government guidelines, a habitat metric was developed. Using JNCC and DEFRA descriptions of Phase

1 and BAP habitats, as well as relevant NVC (National Vegetation Classification) descriptions, characteristics and plant species required for identifying Phase 1 and Section 41 habitats were determined. These characteristics and species were incorporated into an Excel table with formulas. These formulas take data on characteristics and plant species about a habitat parcel inputted by a surveyor to calculate whether the habitat present conforms to the various Phase 1 and Section 41 habitat types.

2.4.2 The Phase 1 Habitat types automatically separated and identified by the metric are:

- scattered trees;
- broadleaved woodland;
- coniferous woodland;
- mixed woodland.

2.4.3 For grassland, the metric also gives measures of agricultural improvement, species richness and the wildflower and sedge cover (excluding weeds) based on DEFRA guidelines. This can enable the grassland to be categorised as “improved”, “semi-improved” or “unimproved”, but we consider it more ecologically appropriate to describe grassland with the three variables separately. This is because the value of the grassland with regard to biodiversity in terms of plant species richness, and the value of the grassland in terms of its contribution to the ecosystem through provision of nectar and pollen resources, can vary to a considerable extent independently of the degree of agricultural improvement.

2.4.4 For woodland, the metric also gives a measure of ancient woodland character, based on the recorded presence of ancient woodland plant indicator species.

2.4.5 It was considered other commonly encountered Phase 1 Habitat types, e.g. ephemeral/short perennial, could be readily identified from the recorded vegetation cover, dominant plant species and height without the need for formulas to ensure accuracy and consistency.

2.4.6 The Section 41 habitats automatically separated and identified by the metric are:

- Section 41 hedgerow;
- traditional orchard;
- lowland beech and yew woodland;
- lowland mixed deciduous woodland;
- wet woodland;
- reedbeds;

- heathland;
- open mosaic habitat.

2.4.7 For some Section 41 habitats, the result of the formulas give a measure of the degree to which the habitat parcel corresponds with a Section 41 habitat type based on indicator species presence. This is the case for the following Section 41 habitats in the metric:

- lowland dry acid grassland;
- lowland meadows;
- lowland calcareous grassland;
- purple moor-grasses and rush;
- lowland fens;
- lowland raised bog.

2.4.8 To keep the number of habitat characteristics that have to be recorded to a manageable level, the habitat metric does not at present identify coastal, aquatic and upland Section 41 habitat types. Similarly, it was considered that the number of features that need to be recorded to identify Coastal and Floodplain Grazing Marsh, Arable Margin or Wood Pasture and Parkland would make the recording for the metric unwieldy, so such habitats are determined by direct reference to the relevant JNCC descriptions when the situation is such that these habitats could be present.

2.4.9 A list of the characteristics that are used to determine a particular habitat type in the metric, and the bibliography for development of the metric, are available on request.

*Bats*

2.4.10 Where roosting bats themselves were not found, to determine whether bat roosts were likely to be present within the buildings, a calculation of the risk level has been undertaken. This calculation uses information on features known from published research to influence bat roost occurrence, to calculate the probability of major/maternity roosts or minor roosts of both crevice and void dwelling species occurring on site. Features used in the calculation include within site variables, such as potential roosting opportunities and the presence or absence of bat signs, as well as off-site variables within 500m of the site, which are shown in the results section in Table 1.

2.4.11 The probability level at which each feature may influence the likelihood of a bat roost occurring has been determined using past bat emergence/re-entry surveys of buildings carried out in England and Wales by Adonis Ecology in accordance with Bat Conservation Trust guidelines (Hundt, 2012), where the presence or absence of a bat roost has been proven beyond reasonable doubt.

2.4.12 It should be noted that, because the survey data used to derive the probability levels for each feature were all from buildings considered to present at least a low risk of supporting a bat roost, the calculated probability for bats to occur on any proposed development site is likely to overstate, rather than understate, the probability of a bat roost occurring.

2.4.13 It should also be noted that Adonis Ecology currently has insufficient data from past surveys to produce an equivalent probability calculation for bat roosts in trees, or bat hibernation roosts in buildings. For these situations, ecologist judgement has been used to determine the likelihood of such roosts occurring on site.

*Other Species*

2.4.14 The evaluation for protected and Section 41 species is divided into two parts:

1. the number of that species that the zone of influence could intrinsically support (i.e. carrying capacity) and;

2. the likelihood of the species actually occurring in the zone of influence, which is dependent upon both the intrinsic value of the habitat parcel and also extrinsic factors such as connectivity to other suitable habitat.

2.4.15 It should be noted that the zone of influence may include only parts of the site and/or may extend off site, depending upon the scale and form of development and the ecology of the species concerned.

2.4.16 The likelihood of a species occurring on site is currently determined by the ecologist making a judgement based on the following factors:

- the intrinsic value of habitats in the zone of influence to the species, estimated using a metric described further on in this section, and presumes that areas that are able to potentially support larger populations are more likely to have the species present;

- whether the species has been recorded locally, and how far from the site, taking into account that some species tend to be better recorded than others in certain environments;

- whether signs of species were observed within the zone of influence during the survey or surveys, taking into account season of survey and that some species and signs are much less likely to be observed during a Phase 1 Habitat Survey than others;

- the degree to which the site is considered to be connected to suitable habitat, taking into account the quantity, suitability and distance of nearby suitable habitat. Habitat out to 500m from the site is taken into account when considering this connectivity.

2.4.17 To enable our determination of the value of habitat parcels to protected and Section 41 species to be as objective as possible, be evidence based

wherever possible and, where not possible, to be consistent and measurable, the habitat metric was extended to enable automatic calculations of the intrinsic value of habitat parcels to the more commonly relevant protected and Section 41 species.

2.4.18 For each species, the key characteristics of a habitat that affected its ability to support the species (i.e. which affected the carrying capacity of the species) and the carrying capacity of that species were determined based upon published scientific research and official guidelines where this information could be found. Where this information was not found to be available, then evidence from surveys undertaken over the last 13 years by Adonis Ecology was used. Where this was limited, then the judgement of the principal ecologist (Richard Sands MA MSc CEnv MCIEEM) was used to determine the key habitat characteristics and likely relationship to the species population. These key habitat characteristics were incorporated into Excel recording sheet and linked formulas. These formulas use the data on characteristics of a habitat parcel inputted by a surveyor to calculate the intrinsic value of the habitat parcel to the protected and Section 41 species.

2.4.19 For most of the species, the output value is the estimated population of that species that the habitat parcel could support, presuming:

- The species has colonised the site.
- The species has had sufficient time since colonising the site for the population to grow to capacity.
- There are not unusual outside effects, e.g. abnormally high predation pressure or re-stocking.

2.4.20 For some species, due to limited meaningful information on population density (e.g. foraging bats, where measurements are usually a function of activity as well as density), the output value is expressed relative to 1, where 1 would correspond to 1ha of ideal habitat.

2.4.21 A list of the key characteristics that are used for determining a particular species value in the metric, and the bibliography for development of the metric, are available on request.

# 3 RESULTS AND EVALUATION

## 3.1 Site Location and Description

*Site Location and Description*

3.1.1 The site was located in a rural area immediately south of the A1092, 1.1km south east of the village of Glemsford and 6km north west of the centre of the town of Sudbury (Google Earth, 2020).

3.1.2 The site consisted of a factory with associated buildings, hardstanding and landscaping.

## 3.2 The Surroundings

*Description of Site Surroundings*

3.2.1 The site was bordered to the north by the A1092, with arable fields beyond. To the west of the site was an area of native scrub and trees, beyond which were residential areas of Stour Close. To the south and east were areas of woodland dominated by willow *Salix* spp. and alder *Alnus glutinosa* around lakes and ponds either side of the River Stour, which formed part of the eastern boundary of the site, beyond which were further areas of arable landscape (Google Earth, 2020).

3.2.2 The key habitats and features surrounding the site are summarised in Table 1 following.

*Table 1: Key Habitat Features Surrounding Site*

| Feature | Value |
|---|---|
| Percentage deciduous tree cover within 500m of site | 26% |
| Percentage non-illuminated tree/tall shrub cover (over 4m) within 50m of the site | 40% |
| Number of non-illuminated tree/tall shrub lines within 50m of the site | 5 |
| Distance to nearest medium-large pond, lake, river or open stream | 0m (at east boundary) |
| Percentage of rough grassland within 500m of the site | 4% |
| Degree to which surrounding 500m is built up (rural, suburban, urban) | Rural |

*Waterbodies within 500m*

3.2.3 Table 2 following shows waterbodies within 500m of the site as indicated on Ordnance Survey maps provided by Promap (2020). Minor hindrances to amphibian dispersal are considered to include features such as minor roads, slow-flowing small rivers and streams, arable land and extensive areas lacking in potential amphibian refuges. Major hindrances to amphibian dispersal are considered to include features such as busy roads, built up areas and wide or fast-flowing rivers and streams.

*Table 2: Waterbodies within 500m of the Site*

| | Location relative to Site | | Hindrances to Amphibian Dispersal | |
|---|---|---|---|---|
| **Waterbody Type** | **Distance** | **Direction** | **Minor** | **Major** |
| River | 0m | East | None | None |
| Lake | 8m | South | None | None |
| Large Pond | 18m | East | None | None |
| Medium Pond | 56m | East | None | River Stour |
| Medium Pond | 91m | East | None | River Stour |

| | | | | |
|---|---|---|---|---|
| Small Pond | 96m | East | None | River Stour |
| Lake | 176m | South west | None | River Stour |
| Lake | 242m | South west | None | River Stour |
| Large Pond | 239m | South | None | River Stour |
| Medium Pond | 282m | West | A country lane and limited residential | None |
| Large Pond | 292m | South | None | River Stour |
| Medium Pond | 305m | East | None | River Stour |
| Large Pond | 309m | South | None | River Stour |
| Medium Pond | 312m | East | None | River Stour |
| Medium Pond | 345m | East | None | River Stour |
| Medium Pond | 360m | South | None | River Stour |
| Large Pond | 387m | South west | None | River Stour |
| Large Pond | 415m | North | Arable | A1092 |
| Small Pond | 454m | West | Arable and limited residential | A1092 |
| Small Pond | 468m | East | None | River Stour |
| Large Pond | 470m | East | None | River Stour |

*Ancient Woodlands within 500m*

3.2.4 There was no ancient woodland known within 500m of the site (MAGIC, 2020).

*Statutory Designated Sites*

3.2.5 The proposed development site falls within Impact Risk Zones for designated sites requiring the Local Planning Authority (LPA) to consult Natural England on all developments proposed in this location (MAGIC, 2020). This means that Natural England consider that developments proposed in this area could potentially affect a Site(s) of Special Scientific Interest (SSSI) or other statutory designated sites.

3.2.6 No National Nature Reserves (NNR) or Local Nature Reserves (LNR) were found to occur within 2km of the proposed development site, and the nearest Natura 2000 site was 27.7km to the south east (MAGIC, 2020).

3.2.7 SSSIs within 2km of the site are shown in Table 3 following.

*Table 3: Nearest Nationally Statutory Designated Sites*

| | **Location from Site** | | **Cited Features** | |
|---|---|---|---|---|
| **Site Name** | **Distance** | **Direction** | **Habitats** | **Species** |
| Glemsford Pits SSSI | 0m (immediately | South, west and | Water-filled disused gravel | Outstanding assemblage of |

| | | | | |
|---|---|---|---|---|
| | beyond boundary to south of site) | east | workings, river, tall fen, rabbit-grazed acidic grassland, tall herb, scrub and woodland. | Odonata (dragonflies and damselflies). Combination of habitats also valuable for other invertebrates and birds. |
| Kentwell Woods SSSI | 745m | North | A variety of woodland types with ancient woodland groundflora. | Ancient woodland indicator species including oxslip *Primula elatior*. |

3.2.8 Information in Table 3 is from MAGIC (2020) and linked Natural England and JNCC webpages.

*Non-Statutory Designated Sites*

3.2.9 Table 4 following summarises the non-statutory designated sites, such as County Wildlife Sites (CWSs), Local Wildlife Sites (LWSs), Sites of Interest to Nature Conservation (SINCs) and Roadside Nature Reserves (RNRs), that occur within 2km of the proposed development site and meet at least one of the following criteria:

- occur within 500m of the proposed development site;
- are strongly connected by habitat to the proposed development site (e.g. by a river or continuous woodland);
- are cited for particularly mobile species such as birds, bats or highly mobile invertebrates (e.g. from Lepidoptera, Hymenoptera and Odonata).

*Table 4: Nearby Non-statutory Designated Sites*

| | **Location from Site** | | **Cited Features** |
|---|---|---|---|
| **Site Name** | **Distance** | **Direction** | **Key Habitats and Species** |
| Foxearth Meadows Nature Reserve LWS | 80m | South | Open water, shaded pools, damp grassland and scrub supporting Essex Red Data list plant species and an exceptional assemblage of dragonflies including hairy dragonfly. |

3.2.10 Information in Table 4 is from EWT (2020).

## 3.3 Buildings and Significant Species Signs on Site

3.3.1 A Phase 1 Habitat plan showing the buildings/structures on site as described below, and showing the location of the key features found is provided in Figure 1 in Appendix 1. The calculation of estimated likelihoods of bat roosts occurring in each building is shown in Table 11 in Appendix 3.

*Building A: Easternmost Factory Building*

3.3.2 This building was constructed of metal cladding (see Photograph 1 in Appendix 2) and appeared to have a low angle roof of similar material. No gaps or crevices suitable for bats were observed. The surrounding hardstanding was supplied with lighting.

*Building B: Northernmost Building – Containing Offices*

3.3.3 This building was largely constructed of brick (see Photograph 2 in Appendix 2) with low angle roofs that appeared to be constructed mostly of metal sheeting. No gaps or crevices suitable for bats were observed. The surrounding hardstanding was supplied with lighting.

*Building C: South West Factory Building*

3.3.4 This building was like the easternmost factory building constructed of metal cladding (see Photograph 3 in Appendix 2) and appeared to have a low angle roof of similar material. No gaps or crevices suitable for bats were observed. The surrounding hardstanding was supplied with lighting.

*Other Buildings*

3.3.5 Other buildings on site, consisting of the pump house and substation, are not proposed to be altered and so were not inspected.

### 3.4 Habitats and Significant Species Signs on Site

3.4.1 A Phase 1 Habitat plan showing the habitats on site and highlighting the key features found in the area of impact is provided in Figure 1 in Appendix 1. The key characteristics of the predominant vegetated habitats on site is given in Table 9 in Appendix 3.

3.4.2 The majority of the site consisted of hardstanding. A tall fence covered with variegated ivy *Hedera helix* was present within the area of hardstanding just south of Building A.

3.4.3 An area of short grassland (habitat unit ID number 1) occurred in the south of the site that appeared to be both cut and heavily rabbit grazed (see Photograph 4 in Appendix 2). The grassland contained indicator species including frequent biting stonecrop *Sedum acre*, occasional Buck's horn plantain *Plantago coronopus* and occasional common centaury *Centaurium erythraea*. Frequent patches of common nettle *Urtica dioica* occurred within the grassland. A drainage/filter ditch occurred in the eastern part of the grassland (see Photograph 5 in Appendix 2), lined with stones at the base and holding up to around 5cm depth of water in places. The vegetation within the ditch was largely terrestrial in type, with a few clumps of rush *Juncus* spp. towards the western end being the only wetland species apparent. The boundary of the site to the south with the adjacent SSSI consisted of a post and wire fence.

3.4.4 In the east of the site was a bank with immature deciduous trees and scrub to

about 7m in height (habitat unit ID number 2), consisting of native species such as hazel *Corylus avellana* and field maple *Acer campestre* plus also non-native corkscrew willow *Salix matsudana* "tortusa". Further mixed native and ornamental scrub occurred in the west of the site (see Photograph 6 in Appendix 2), where the 2m closest to the car park was strongly dominated by non-native species, in particular snowberry *Symphoricarpus albus*. The snowberry was also frequent further west in to what was otherwise more native scrub dominated by willows *Salix* spp., hazel and hawthorn *Crataegus monogyna*.

3.4.5 In the north of the site was grassland (see Photograph 7 in Appendix 2) that appeared to be regularly mown amenity grassland (habitat unit ID number 3) with scattered ornamental trees, containing indicator species in the form of occasional buck's horn plantain, occasional common stork's bill *Erodium cicutarium* and rare common knapweed *Centaurea nigra*. A dry ditch was present in the grassland near the A1092 and a low, 1m high hedge of non-native rose *Rosa rugosa* ran east to west within the grassland.

3.4.6 Within the car park in the west of the site were strips of *Berberis* sp. (see Photograph 3 in Appendix 2) managed to a height and width of around 1m, with bare soil below (habitat unit ID number 4). Lighting was present throughout the car park. A small patch of one of the small leaved cotoneaster *Cotoneaster* sp. species occurred between the car park and the north west corner of Building 2 (see Photograph 7 in Appendix 2).

3.4.7 The only tree within the surveyed area noted to have significant (above negligible) potential for bats as defined in BCT (Collins, 2016) guidelines for assessing trees with bat risk is shown in Figure 1 in Appendix 1, and described in Table 5 following:

*Table 5: Trees with Significant Likelihood of Bat Roosts*

| Tree Label in Figure 1 | Description of Tree and Potential Bat Roost Features | Bat Roost Likelihood Level |
|---|---|---|
| T01 | A mature silver birch *Betula pendula* with south facing cavity (see Photograph 8 in Appendix 2). | Moderate |

3.4.8 No specific signs or evidence of any protected or Section 41 species were found within the site.

### 3.5 Evaluation – Species and Habitats

3.5.1 Table 6 below summarises the site evaluation for protected species (some of which are also Section 41 species) where the legal protection is relevant to the proposed development and Table 7 summarises the site evaluation for Section 41 species.

3.5.2 Where the likelihood of presence of any protected species or species group in Table 6 was considered to be greater than negligible (highlighted in red), the legislation surrounding such species and the risk are detailed in the following section. Where further explanation of negligible risk is provided in the following section, the risk is highlighted in green.

3.5.3 For Section 41 species and species groups in Table 7, the impact risk is detailed in the following section only where it is considered the proposed development could have a potentially significant risk of impact on the local population (highlighted in red), i.e. where one of the following conditions is met:

- more than negligible likelihood of a high estimated zone of influence carrying capacity;
- more than very low likelihood of a moderate estimated zone of influence carrying capacity;
- more than low likelihood of a low estimated zone of influence carrying capacity;
- high likelihood of a very low estimated zone of influence carrying capacity.

*Table 6: Evaluation of Protected Species Likelihood on Site*

| Species or species group | Species present in data search | Signs found | Connectivity of site to other suitable habitat | Estimated zone of influence carrying capacity | Likelihood of presence in zone of influence |
|---|---|---|---|---|---|
| Roosting bats – buildings | Several species | None | High | Negligible | Negligible |
| Roosting bats – trees | | None | | Negligible | Negligible |
| Foraging/ commuting bats | | N/A | | Low | **Moderate** |
| Badger setts | No | None | High | Low | Negligible |
| Badger foraging/ dispersing | | None | | Low | Negligible |
| Dormouse | No | None* | Moderate | Negligible | Negligible |
| Otter | Yes | None | Low | Negligible | Negligible |
| Water vole | Yes | None | None | None | None |
| Great crested newts - breeding | No | None* | Low | None | None |
| Great crested newts – dispersing and refuges | | None* | | Very Low | **Negligible** |
| Reptiles | Common lizard and grass snake 160m and 196m south respectively | None* | High | Negligible | Negligible |
| Schedule 1 nesting birds | Several species | None | Moderate | Negligible | Negligible |
| Common nesting birds | Numerous | None | High | Low | **Moderate** |

| Species or species group | Species present in data search | Signs found | Connectivity of site to other suitable habitat | Estimated zone of influence carrying capacity | Likelihood of presence in zone of influence |
|---|---|---|---|---|---|
| Protected plants/fungi | None | None | Low | Very Low | Negligible |
| Protected invertebrates | None | None* | Low | Negligible | Negligible |
| Other protected species relevant to development | No | None* | None | None | None |

* Denotes where signs and evidence are unlikely to be found in a single survey visit, even if species present.

*Table 7: Evaluation of Section 41 Species Likelihood on Site*

| Species or species group | Species present in data search | Signs found | Connectivity of site to other suitable habitat | Estimated zone of influence carrying capacity | Likelihood of presence in zone of influence |
|---|---|---|---|---|---|
| Hedgehog | Yes | None* | Low | Very low | Low |
| Brown hare | Yes | None | Moderate | Negligible | Negligible |
| Polecat | No | None* | Very Low | Negligible | Negligible |
| Harvest mouse | Yes | None* | Very Low | Negligible | Low |
| Common toad | Yes | None* | Low | Very low | Low |
| Section 41 plants and fungi | Grape hyacinth and shepherd's needle | None | Very Low | Very low | Negligible |
| Section 41 breeding birds | Several species | None | Moderate | Very low | Low |
| Section 41 invertebrates | Stag Beetle, Grayling, small heath and numerous moth species | None* | Low | Very low | Low |
| Section 41 fish | European eel, spined loach and brown trout | None* | None | None | None |
| Other Section 41 species | No | None | None | None | None |

*Denotes where signs and evidence are unlikely to be found in a single survey visit, even if species present.

3.5.4 Table 8 below lists the Section 41 habitats that are most likely to be encountered inland in lowland England, their occurrence on site and the amount of each habitat considered likely to be impacted by the proposed development. Habitats on site were assessed against JNCC criteria for UK BAP habitats (JNCC, 2016), which are those habitats listed for Section 41.

*Table 8: Section 41 Habitats and Amounts Expected to be Impacted by Proposed Development of Site*

| Section 41 Habitats | Approximate Amount on site (ha unless otherwise stated) | Comments | Likely amount of impact (ha/m) |
|---|---|---|---|
| Rivers | 0 | No similar habitat on site, river adjacent to site but over 90m from nearest proposed works | 0 |
| Ponds | 0 | No similar habitat on site - drainage filter ditch likely to be dry most of year | 0 |
| Eutrophic Standing Waters | 0 | No similar habitat on site | 0 |
| Arable Field Margins | 0 | No similar habitat on site | 0 |
| Hedgerows | 0 | Only lines of shrubs are dominated by non-native species | 0m |
| Traditional Orchards | 0 | No similar habitat on site | 0 |
| Wood Pasture & Parkland | 0 | No similar habitat on site | 0 |
| Lowland Beech & Yew Woodland | 0 | No similar habitat on site | 0 |
| Wet Woodland | 0 | No similar habitat on site | 0 |
| Lowland Mixed Deciduous Woodland | 0 | No similar habitat on site | 0 |
| Lowland Dry Acid Grassland | 0 | Habitat unit ID no. 1 with moderate dry acid grassland character | 26m$^2$ |
| Lowland Calcareous Grassland | 0 | No calcareous grassland indicator species found on site | 0 |
| Lowland Meadows | 0 | Habitat unit ID no. 3 with mixed low neutral/dry acid grassland character but also some agricultural improvement | 0 |
| Coastal and Flood Plain Grazing Marsh | 0 | No similar habitat on site | 0 |
| Lowland Heathland | 0 | No similar habitat on site | 0 |
| Purple Moor-grass and Rush Pastures | 0 | No similar habitat on site | 0 |
| Lowland Fens | 0 | No similar habitat on site | 0 |
| Reedbeds | 0 | No similar habitat on site | 0 |
| Lowland Raised Bog | 0 | No similar habitat on site | 0 |
| Open Mosaic Habitats on Previously Developed Land | 0 | No similar habitat on site | 0 |

### 3.6 Overall Ecological Value of the Site

3.6.1 Overall, the site was considered to be of likely low value for wildlife at a local level, with the majority of this value from the size of the site, the presence of grassland with moderate dry acid grassland character and the connections to adjacent significant habitats. This can be seen from evaluation of the site using the criteria as set out in Table 12 in Appendix 3.

# 4 LEGISLATION AND IMPACT RISK ASSESSMENT

## 4.1 Bats

*Summary of Relevant Legislation*

4.1.1 Bats are protected under the Conservation of Habitats and Species Regulations 2017 (as amended), as well as the Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000. Offences likely to be relevant to development are to:

- deliberately capture, injure or kill a bat;
- deliberately disturb a bat in a way that would affect its ability to survive, breed, rear young, hibernate or migrate or significantly affect the local distribution or abundance of the species;
- damage or destroy a roost;
- intentionally or recklessly disturb a bat at a roost;
- intentionally or recklessly obstruct access to a roost.

*Foraging and Commuting Bats – Impact Risk*

4.1.2 The proposed development is not expected to impact any treelines, and the relatively small amount of vegetation that will be impacted consists of predominantly ornamental scrub (much of it illuminated) and short grassland that is of relatively low intrinsic value to foraging bats. The risk of direct impact to foraging bats from loss of habitat is therefore likely to be negligible.

4.1.3 However, any significant increase in lighting on the site that increases light falling on the trees of the SSSI immediately south of the site could pose a moderate risk of indirect impact to low numbers of foraging and/or commuting bats, by rendering habitat less suitable for bats. Impact avoidance measures described in Section 5 of this report should be undertaken to reduce this risk to negligible.

## 4.2 Herpetofauna

*Great Crested Newts – Relevant Legislation*

4.2.1 Great crested newts are protected under the Conservation of Habitats and Species Regulations 2017 (as amended), as well as the Wildlife and Countryside Act 1981 as amended by the Countryside Rights of Way Act 2000. Offences likely to be relevant to development are to:

- damage or destroy a breeding site or resting place;
- intentionally or deliberately capture or kill;

- intentionally injure;
- deliberately disturb, or intentionally or recklessly disturb in a place of shelter or protection;
- intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.

*Great Crested Newts – Impact Risk*

4.2.2 Although a pond occurs only around 18m east of the site and a lake 8m south of the site, the location of the areas of vegetation to be affected by the proposal in the west of the site means that the vast majority of the vegetated habitat to be affected would be over 250m from the nearest pond. An estimated 199m$^2$ at most of vegetated habitat would be affected within 100m of a pond/lake, that being the lake to the south of the site which is a fishery containing carp *Cyprinus carpio* and pike *Esox Lucius* (Sudbury and Long Melford District Angling Association, undated) amongst other coarse fish species. Given the presence of such fish and the lack of local records of great crested newts, it is highly unlikely that great crested newts occur in this lake. Other water bodies within 250m of around 477m$^2$ of vegetated habitat expected to be affected were separated from the areas of expected impact by either the buildings and hardstanding of the factory site itself or the River Stour.

4.2.3 Given therefore the very low likelihood of great crested newts in the nearest pond/lake and the limited carrying capacity of the areas of vegetated habitat to be affected due to the low number of potential refuges (see Table 10 in Appendix 3), it is considered the risk of impact on great crested newts would be negligible.

## 4.3 Nesting Birds

*Summary of Relevant Legislation*

4.3.1 Wild birds are protected under the Wildlife and Countryside Act 1981 and, with certain exceptions (where certain species are causing a public health risk), it is an offence to intentionally:

- kill or injure any wild bird;
- take, damage or destroy the nest of any wild bird while it is in use or being built;
- take or destroy the egg of any wild bird.

*Impact Assessment*

4.3.2 The shrubs on site were considered suitable for common nesting birds.

4.3.3 Therefore, the removal of or cutting back of shrubs if undertaken between March and end August (i.e. during the nesting season) would pose a high risk of harm to at least low numbers of nesting birds on the site. Therefore, impact avoidance measures described in Section 5 of this report should be

undertaken to reduce this to negligible.

## 4.4 Section 41 Habitats

*Summary of Relevant Legislation*

4.4.1 Certain habitats qualify as NERC Act 2006 Section 41 habitats if they meet specific criteria. The conservation of any Section 41 habitats are a material consideration for any planning application.

*Section 41 Lowland Dry Acid Grassland*

4.4.2 An estimated 26m$^2$ of the grassland in the south of the site that exhibited moderate dry acid grassland character is expected to be lost to the proposed development.

4.4.3 Mitigation measures to consist of better control of nettle on the remaining area of grassland should be implemented on site as outlined in Section 5 of this report to return patches of ruderal to grassland habitat to ensure there is no net loss of dry acid grassland habitat with the proposed development.

## 4.5 Schedule 9 Invasive Species

*Summary of Relevant Legislation*

4.5.1 It is illegal under the Wildlife and Countryside Act 1981 (as amended) to cause plant species listed under Schedule 9 of that act to spread in the wild. Actions that could cause such species to spread in the wild include exporting soil and plant material off site, and inadvertently carrying seeds and material off site via mud in tyre treads.

*Cotoneaster*

4.5.2 It is recommended that the patch of cotoneaster that requires removal for the proposed development be disposed of within the site (not in proximity to the SSSI).

## 4.6 Designated Sites

*Statutory Designated Sites*

4.6.1 The proposed development is not expected to directly impact any of the habitats on the adjacent SSSI.

4.6.2 The proposed development site was considered to not have any habitats in common with or habitat connections to Kentwell Woods SSSI.

4.6.3 Potential connections with interest features of the Glemsford Pits SSSI on site include the acid grassland and that some of the Odonata, other invertebrates and birds of the SSSI would at times likely travel through and forage on parts of the proposed development site.

4.6.4 The impact of the development on the grassland on site that exhibits moderate

dry acid grassland character is discussed above, and mitigated for as described in Section 5 of this report.

4.6.5 Given that the habitats on site to be affected consist of short grassland and shrubs dominated by non-native species, and the limited amount of vegetation to be affected (especially given the large amount of native scrub available in the local area) it is considered any impact on Odonata, other invertebrates and birds of the Glemsford Pits SSSI foraging off site would be negligible.

*Non-Statutory Designated Sites*

4.6.6 Ecological connections with the Foxearth Nature Reserve were limited to the potential for Odonata, other invertebrates and birds to at times likely travel through and forage on parts of the proposed development site.

4.6.7 Given that the habitats on site to be affected consist of short grassland and shrubs dominated by non-native species, and the limited amount of vegetation to be affected (especially given the large amount of native scrub available in the local area) it is considered any impact on Odonata, other invertebrates and birds of the Foxearth Nature Reserve foraging off site would be negligible.

# 5 RECOMMENDATIONS

## 5.1 Further Surveys

*Other Surveys*

5.1.1 No surveys for any protected or Section 41 species or habitats were considered necessary as the mitigation and impact avoidance measures outlined below were considered sufficient to prevent significant risk of impact to all other protected and/or Section 41 species or habitats from the proposed development of the site.

*Validity of PEA*

5.1.2 If site works do not commence for more than 18 months from the date of the survey undertaken for this report, the ecology of the site should be re-assessed as the ecological situation may have changed in the intervening time.

## 5.2 Mitigation

5.2.1 It is recommended that, if the Local Planning Authority are minded to grant planning consent, the mitigation measures described below should be conditioned as part of a Biodiversity Enhancement and Management Strategy for the site.

*Dry Acid Grassland*

5.2.2 It is recommended that the clumps of common nettle and injurious weeds within the grassland in the southern area of the site be strimmed regularly

during spring and summer sufficient to reduce their extent for the long term by at least 26m$^2$, thereby allowing the dry acid grassland flora to recover in those patches.

## 5.3 Impact Avoidance Measures

5.3.1 It is recommended that, if the Local Planning Authority are minded to grant planning consent, the impact avoidance measures described below should be conditioned.

*Foraging and Commuting Bats*

5.3.2 In order to reduce the risk of indirect disturbance to bats that may on occasion forage and/or commute through the site, both during and post-development, sensitive lighting of the site should be used and the guidelines below should be followed:

- minimise lighting on site so far as possible;
- use hoods or directional lighting to avoid light directed at surrounding trees, particularly the adjacent SSSI;
- have external lighting on as short a timer as possible so that lights are turned off when not in use.

5.3.3 Further, it is recommended that where possible, warm spectrum LED lights (ideally less than 2700K) are used, as LED bulbs produce the least amount of UV light possible. Lighting should also feature peak wavelengths higher than 550nm to avoid the light components that are most disturbing to bats. The brightness of the lamps should also be kept as low as feasibly possible, with significant impacts shown on bats at 3.6 lux, with bats shown to peak in foraging levels at 0.45 lux. Lighting should also be kept at as low a height level as possible, using low level bollards or down lights where possible. Lighting which emit an ultraviolet component or that have a blue spectral content have high attraction effects on insects and should be avoided (ILP, 2018).

5.3.4 It is also recommended that the development works should not take place between sunset and sunrise between April and September (the main season of bat activity), and any security or spot lighting required should be kept to a minimum, and where possible be placed on a short timer to reduce the extent of lighting on site during development.

*Nesting Birds*

5.3.5 To prevent risk of harm to active bird nests, the clearance of any shrubs should be undertaken outside of the bird nesting season (taken to be March to the end of September).

5.3.6 Where this is not possible, trees or shrubs to be removed should be checked by an ecologist for active bird nests no more than seven days before works begin. If an active bird nest was found, then the nest must remain undisturbed until an ecologist confirms the birds have finished nesting.

## 5.4 General Precautions

5.4.1 To prevent risk of harm to any other small animals that may occasionally be present on the site, the following general precautions should be undertaken:

- any trenches or holes which will be left overnight should either be fully covered, or have a wooden plank placed in them in such a way that any wildlife that falls in can climb out safely. Alternatively, one end of the trench should be sloped or stepped to allow animals to climb out;
- materials brought to the site for the construction works should be kept off the ground on pallets, so as to prevent small animals seeking refuge within them and coming into harm's way;
- rubbish and waste should be removed off site immediately or placed in a skip, to prevent small animals using the waste as a refuge, and thus coming into harm's way.

## 5.5 Enhancement Recommendations – Net Biodiversity Gain

5.5.1 The following are suggestions that the developer may consider to enhance the site for wildlife. These are not considered to be necessary for mitigation or compensation of impacts on protected species or sites, but are necessary to achieve a net biodiversity gain.

5.5.2 It is recommended that, if the Local Planning Authority are minded to grant planning consent, a Biodiversity Enhancement and Management Strategy based on the following recommendations be conditioned.

*Control of Non-native Shrubs*

5.5.3 It is recommended that any non-native shrub species left along the western boundary of the site after construction are removed and replaced with native shrub species to provide a native species buffer to the adjacent SSSI. This should include removal of especially the snowberry up to the border with the SSSI. A list of recommended replacement species is provided in Table 13 Appendix 3.

*Flowering Lawn*

5.5.4 It is recommended that areas of the amenity grassland in the north of the site be allowed to grow long for a minimum of one month during spring to allow plants within the amenity grassland to flower, thereby benefitting invertebrates. The grassland can be mown regularly as normal at other times. The areas of flowering lawn should not be treated with fertiliser or herbicides (apart from spot treatment of injurious weeds).

*Green Walls*

5.5.5 It is recommended that wire trellis be placed on the elevations of the proposed new buildings that face the adjacent Glemsford SSSI and be planted with native climber species to contribute to the native buffer with the adjacent SSSI.

An example of a green wall, albeit of variegated ivy, is already present along a fence just south of Building A in the east of the site.

*Planters*

5.5.6 It is recommended that planters containing wildlife attracting shrubs as approved by an ecologist be placed within the areas of hardstanding to provide stepping stones through the extensive hardstanding for invertebrates that forage on nectar and pollen.

*Bat and Bird Boxes*

5.5.7 The addition of bat and bird boxes on retained trees would be significantly increase the potential roosting and nesting sites for bats and birds. Installing multiple and varied bat and bird boxes could attract a larger diversity of species to the site. A minimum of three bat boxes and six bird boxes are recommended for the site to achieve a net biodiversity gain.

5.5.8 The Schwegler 1FE Bat Box (fitted with optional back plate) or 2FE Bat Box are recommended for external roosts, or other boxes can be used as approved for the site by an ecologist. These are suitable for most common bat species and require no maintenance. Each bat box or tube should be positioned at a height of more than 4m above ground level, away from external lighting, and where there is a clear path of flight to the boxes. The three bat boxes should each face a different aspect, preferably with one facing north, one facing southeast and the other facing southwest. This allows the bats to choose the box which provides the most suitable conditions each day.

5.5.9 Bird boxes should be installed on trees above 2m, out of the reach of predatory cats, and should not be in direct sunlight, to avoid nestlings overheating and dying. Boxes would either be from the following or as approved for the site by an ecologist:

- 1 x Schwegler 2H Open Nest Box suitable for the red-listed BoCC and Section 41 species song thrush *Turdus philomelos*, or Blackbird *Turdus merula*.
- 1 x Schwegler 2H open-fronted box suitable for robins *Erithacus rubecula* and wrens *Troglodytes troglodytes*.
- 2 x Schwegler 1B Hole Nest Box (26mm) suitable for blue tits *Cyanistes caeruleus*.
- 1 x Schwegler 1B Hole Nest Box (32mm) suitable for great tits *Parus major* and coal tits *Periparus ater*.
- 1 x Schwegler 2B or 2BN Treecreeper *Certhia familiaris* Nest Box

*Bee Boxes/Insect Nesting Aid*

5.5.10 Two Schwegler Clay and Reed Insect Nests could be provided to benefit native bees. The nesting boxes should be installed firmly (not allowed to

swing) in sheltered and sunny positions on trees, buildings or fences (above 2m) on site. These nests are designed to attract only harmless insects, including solitary bees which are harmless to humans and pets and are useful pollinators.

# 6 CONCLUSION

6.1 Overall, the site was considered to be of low local value for wildlife. With the recommended impact avoidance and mitigation measures implemented, the risk of impact to protected and or Section 41 species, Section 41 habitats or local biodiversity from the proposed development could be reduced to negligible. Further, with the proposed biodiversity enhancements implemented, the site should achieve a net biodiversity gain as encouraged by the NPPF.

# 7 REFERENCES

British Standards Institute (2013). *BS 42020:2013 Biodiversity – Code of Practice for Planning and Development*. British Standards Institute, London.

CIEEM (2013). *Guidelines for Preliminary Ecological Appraisal*. Technical Guidance Series. Chartered Institute for Ecology and Environmental Management.

CIEEM (2017). *Guidelines for Ecological Report Writing*. Chartered Institute for Ecology and Environmental Management, Winchester.

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition.* The Bat Conservation Trust, London.

EWT (2020). *Data request for Philips Avent Site, Lower Road, Glemsford TL834465 2km standard search*. Essex Wildlife Trust, Colchester.

Froglife (1999). *Froglife Advice Sheet 10: Reptile Survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife, Halesworth.

Google Earth (2020). *Aerial View of GCB Cocoa Site and Surroundings.* Image dated July 2018.

ILP (2018). *Bats and Artificial Lighting in the UK*. Institution of Lighting Professionals, Rugby.

JNCC (2016). *UK List of Priority Habitats*. http://jncc.defra.gov.uk/page-5706.

MAGIC (2020). *Statutory Wildlife Sites near GCB Cocoa Site, Glemsford*. Multi-Agency Geographic Information for the Countryside, London. Accessed December 2020.

MHCLG (2019). *National Planning Policy Framework – February 2019*. Available to download online from the Government website https://www.gov.uk/government/publications/national-planning-policy-framework--2.

Natural England (2001). *Great Crested Newt Mitigation Guidelines*. Natural England, Peterborough.

Natural England (2004). *Bat Mitigation Guidelines Version 2004*. Natural England, Peterborough.

Natural England (2019). *GCN Method Statement WML-A14-2 (Version March 2019)*. Natural England, Peterborough.

OPSI (2007). *Protection of Badgers Act 1992.* Office of Public Sector Information, HMSO, London.

Promap (2020). *VectorMap Local of GCB Cocoa Site and Surroundings*. Accessed December 2020. http://www.promap.co.uk.

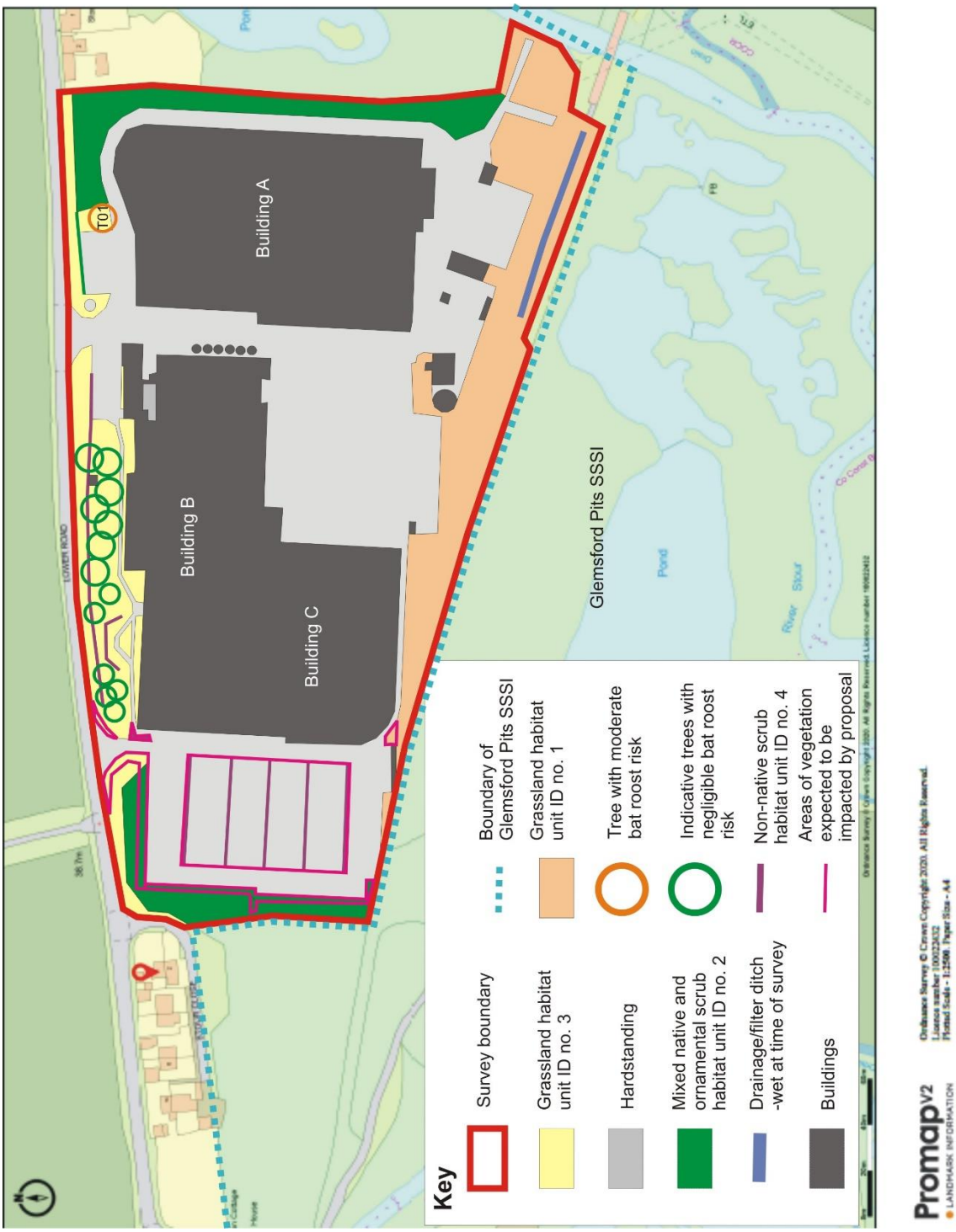
SBIS (2020). *Adonis Ecology (Philips Avent Site, Lower Road, Glemsford TL834465) 2km Data Search*. Suffolk Biodiversity Information Service, Ipswich.

Sudbury and Long Melford District Angling Association (Undated). *Other Still Waters and River Fishing*. http://www.slmaa.co.uk/p/blog-page_30.html

# 8 APPENDICES

## 8.1 Appendix 1: Figure

**Figure 1: Phase 1 Habitats and Features at GCB Cocoa Site, Glemsford 10th December 2020**



## 8.2 Appendix 2: Photographs

All photographs taken by Richard Sands (surveyor) at the GCB Cocoa Site, Lower Road, Glemsford, Sudbury, Suffolk, CO10 7UB, Grid Reference TL 834 465 on 10th December 2020

**Photograph 1: Western Elevation of Building A and Hardstanding in East of Site**


**Photograph 2: Northern Elevation of Building B and Grassland with Trees in North of Site**

**Photograph 3: Car Park and Western Elevation of Building C in West of Site**

**Photograph 4: Grassland and Southern Elevation of Building C in South West of Site**

**Photograph 5: Drainage/Filter Ditch in South East of Site**

**Photograph 6: Ornamental and Native Scrub adjacent to Car Park in West of Site**

**Photograph 7: Grassland with Scattered Trees and Cotoneaster Clump in North of Site**

**Photograph 8: Silver Birch with Cavity in North East of Site**

## 8.3 Appendix 3: Result and Evaluation Tables

*Table 9: Habitat Characteristics on Site*

| **Habitat unit ID number:** | **1** | **2** | **3** | **4** |
|---|---|---|---|---|
| **Main Phase 1 Habitat Type in area:** | **Grassland** | **Scrub** | **Grassland** | **Introduced Scrub** |
| **Habitat unit area in ha:** | 0.00 | 0.03 | 0.02 | 0.02 |
| **Terrestrial surface** | | | | |
| Hole frequency | Medium | None | None | None |
| % cover exposed substrate | 0 | 0 | 0 | 95 |
| **Tree layer (over 5m, except hawthorn, blackthorn, grey/goat willow)** | | | | |
| % cover | 0 | 10 | 25 | 0 |
| Typical height in m | 0 | 7 | 10 | 0 |
| Most common species | 0 | Crack Willow | 0 | 0 |
| **Shrub layer (under 5m, plus taller Hawthorn, Blackthorn, Grey/Goat Willow)** | | | | |
| % cover | 0 | 95 | 2 | 90 |
| Most common species | 0 | Snowberry | Rosa rugosa | Berberis sp. |
| Native woody spp. per 30m length | 0 | 2 | 0 | 0 |
| % Scrub native (if over 50% scrub or hedge) | 0 | 10 | 0 | 0 |
| Hedge width in m | 0 | 0 | 0 | 0 |
| **Subshrub layer (heather, heaths, small gorses, bilberry)** | | | | |
| % cover Heather & associated dwarf shrub | 0 | 0 | 0 | 0 |
| **Herb layer** | | | | |
| % cover | 95 | 5 | 98 | 0 |
| Typical height in m | 0.01 | 0.3 | 0.05 | 0 |
| Tussockyness | None | None | None | None |
| Most common species | Red Fescue | Common Nettle | Red Fescue | 0 |
| No. woodland indicator species | 0 | 0 | 0 | 0 |
| Grassland/Fen Species Richness per $m^2$ | 12 | 0 | 9 | 0 |
| Grassland Agricultural improvement Score | 0 | 0 | 6 | 0 |
| Wildflower & Sedge Cover excluding weeds | 33 | 1 | 28 | 0 |
| Lowland Dry Acid Grassland character | 7 | 0 | 4 | 0 |
| Lowland Meadows character | 0 | 0 | 1 | 0 |
| Lowland Calcareous Grassland character | 0 | 0 | 0 | 0 |
| **Litter layer** | | | | |
| % cover of litter over 2cm depth | 0 | 40 | 0 | 0 |

Species richness: 1-3 = very low, 4-8 = low, 9-15= moderate, 16+ = high

Agricultural improvement: 0-9=low, 10-29=moderate, 30+ = high

Wildflower & Sedge cover excluding weeds: 0-9=low, 10-30=moderate, 31+=high

Lowland Dry Acid Grassland character: 1-3=very low, 4-6=low, 7 =moderate, 8+=high

Lowland Meadows character: 1-3=very low, 4-6=low, 7-8=moderate, 9+=high

Lowland Calcareous Grassland character: 1-3=very low, 4-6=low, 7-9=moderate, 10+=high

*Table 10: Calculated Potential Value (Carrying Capacity) of Area expected to be impacted to Protected and Section 41 Species*

| Habitat unit ID number: | 1 | 2 | 3 | 4 | Overall |
|---|---|---|---|---|---|
| Bat foraging value (1) | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Badger foraging | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Dormouse value | 0.0 | 0.0 | 0.0 | 0.0 | **0.1** |
| Common Lizard value | 0.1 | 0.9 | 0.0 | 0.0 | **1.0** |
| Slow-worm value | 0.1 | 1.0 | 0.1 | 0.1 | **1.2** |
| Grass snake value | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Adder value | 0.0 | 0.0 | 0.0 | 0.0 | **0.1** |
| GCN value (2) | 0.8 | 9.0 | 0.0 | 0.0 | **9.8** |
| Ground nesting birds | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Shrub nesting birds (3) | 0.0 | 0.5 | 0.1 | 0.3 | **0.8** |
| Tree nesting birds (3) | 0.0 | 0.0 | 0.0 | 0.0 | **0.1** |
| | | | | | |
| Skylark nesting (3) | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Hedgehog foraging | 0.0 | 0.0 | 0.0 | 0.0 | **0.1** |
| Brown Hare value | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Polecat value | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Harvest mouse value | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Common Toad (2) | 0.0 | 1.3 | 0.0 | 0.0 | **1.4** |
| Stag Beetle (1) | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| Aculeates (1) | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |

(1) = 1=1ha ideal habitat

(2) = If within 100m of breeding pond

(3) = Number of territories

*Table 11: Likelihood of Bat Roosts Occurring in Buildings*

| Building | Roost Type | Roost size | Calculated Probability of Roost Occurring | Comments and Potential Modifying Factors | Likelihood of Roost Occurring |
|---|---|---|---|---|---|
| A | Crevice dwelling | Major | 0.03 | No apparent suitable roost sites for bats. | Negligible |
| | | Minor | 0.28 | | Negligible |
| | Void dwelling | Major | 0.01 | No apparent suitable roost sites for bats. | Negligible |
| | | Minor | 0.16 | | Negligible |
| | Hibernating | Major | N/A | No deep cracks within structure. No cellar or similar cool, humid structure. | Negligible |
| | | Minor | N/A | | Negligible |
| B | Crevice dwelling | Major | 0.01 | No apparent suitable roost sites for bats. | Negligible |
| | | Minor | 0.13 | | Negligible |
| | Void dwelling | Major | 0.01 | No apparent suitable roost sites for bats. | Negligible |
| | | Minor | 0.08 | | Negligible |
| | Hibernating | Major | N/A | No deep cracks within structure. No cellar or similar cool, humid structure. | Negligible |
| | | Minor | N/A | | Negligible |
| C | Crevice dwelling | Major | 0.01 | No apparent suitable roost sites for bats. | Negligible |
| | | Minor | 0.13 | | Negligible |
| | Void dwelling | Major | 0.01 | No apparent suitable roost sites for bats. | Negligible |
| | | Minor | 0.08 | | Negligible |
| | Hibernating | Major | N/A | No deep cracks within structure. No cellar or similar cool, humid structure. | Negligible |
| | | Minor | N/A | | Negligible |
| | | | | | Negligible |
| | Void dwelling | Major | 0.01 | No potential access points for bats into internal spaces. | Negligible |
| | | Minor | 0.08 | | Negligible |

*Table 12: Site Evaluation Score*

| Criteria | Rating/ Value | Example Levels | Score | Site Score |
|---|---|---|---|---|
| Size/Extent | Very High | >50 hectares | 5 | |
| | High | >10 but <50 hectares | 4 | |
| | Medium | >3 but <10 hectares | 3 | X |
| | Low | >1 but <3 hectares | 2 | |
| | Very Low | <1 hectare | 1 | |
| Diversity – Species | Very High | 150 or more native plant species found/expected on site. | 15 | |
| | High | Between 100 – 149 native plant species found/expected on site. | 10 | |
| | Medium | Between 60 – 99 native plant species found/expected on site. | 6 | |
| | Low | Between 30 – 59 native plant species found/expected on site. | 3 | X |
| | Very Low | Less than 30 native plant species found/expected on site. | 1 | |
| Diversity – | Very High | More than 10 habitat types present on site with a mix of | 15 | |

| Criteria | Rating/ Value | Example Levels | Score | Site Score |
|---|---|---|---|---|
| Habitats | | terrestrial and aquatic habitats present. | | |
| | High | Between 5 – 10 different habitat types on site with a mix of terrestrial and aquatic habitat types. | 10 | |
| | Medium | >3 terrestrial habitats on site but either none or very limited aquatic habitat present. | 6 | |
| | Low | >2 habitat types present on site but with a predominance of one terrestrial habitat type covering over 60% of the total area and no aquatic habitats. | 3 | X |
| | Very Low | Only 1 or 2 habitat types present on site with a predominance of one terrestrial habitat type which covers over 90% of the total area. | 1 | |
| Naturalness | Very High | Predominant habitats unmanaged, slow developing and difficult to recreate, such as ancient woodland, species rich hedgerows. If known, land that has been unmanaged for more than 25 years. | 10 | |
| | High | Habitats largely unmanaged or traditionally managed in line with historic management of the site, if known, this may include derelict land that has been unmanaged for between 10 and 25 years. | 8 | |
| | Medium | Over 40% of the site consisting of natural features as opposed to hardstanding/buildings. Some degree of management may occur on a rotational or at a significantly low level. If known, land that has been derelict and unmanaged for no more than 10 years. | 5 | |
| | Low | Limited area of natural habitats on site and/or these are predominantly well managed/maintained e.g. garden beds, intensively grazed pasture. If known, this may include derelict land that has been unmanaged for no more than 3 years. | 3 | X |
| | Very Low | Few natural habitats found on site (hardstanding, intensive one crop agricultural land, short cut amenity grassland. If land is derelict/unmanaged, this must have been for no more than one year. | 1 | |
| Rare or Exceptional Features | Very High | Species or habitat present in quantity that is considered very rare and important at national and local levels. | 20 | |
| | High | Species or habitat present in quantity that is considered rare and of high importance at a local level, e.g. large population of a Section 41 species. | 16 | |
| | Medium | Species or habitat present that is considered moderately important at a local level. | 10 | X |
| | Low | Species or habitats present in quantity not considered to be particularly rare or important at a local level. | 4 | |
| | Very Low | Species or habitats present considered to be widespread and common at both a local and national level or very common at a local level | 1 | |
| Fragility | Very High | Habitat unable to be recreated within a reasonable timescale (<50 years) if lost such as ancient woodland/trees, unimproved grassland etc. | 10 | |
| | High | Habitat difficult to recreate to the same standard within a reasonable timescale (<50 years) such as species-rich hedgerows | 8 | |
| | Medium | Habitats likely to be recreated to the same or close degree of similarity within 25 years such as semi-improved grasslands | 5 | X |
| | Low | Habitats relatively easy to recreate within 2-10 years such as improved grassland, non species-rich hedgerows | 3 | |
| | Very Low | Habitats easy to recreate and likely to establish within 1-2 years such as amenity grassland. | 1 | |
| Typicalness | Very High | Habitats on site rare at a national and/or regional level and/or considered to be very rare within the local context. | 5 | |
| | High | Habitats largely different to those nearby but with some similar areas known within the region. | 4 | |
| | Medium | Some habitats on site both similar and differing from those within a local context. | 3 | |

| Criteria | Rating/ Value | Example Levels | Score | Site Score |
|---|---|---|---|---|
| | Low | Habitats on site largely the same as surrounding and regional habitats but some minor areas of different or significant habitat at a local level. | 2 | X |
| | Very Low | Habitats on site largely the same as surrounding and regional habitats. | 1 | |
| Connectivity | Very High | More than 10 hedgerows, waterways and/or tree lines linking site to other potential habitat. Linking habitat generally of high quality (hedgerows with no gaps, woodland, mature gardens) and linking to many and/or large areas of similar and/or diverse habitats. | 15 | |
| | High | 6 – 9 hedgerows, tree lines or waterways linking site to other potential habitat. Connective habitat medium-high quality linking to areas of similar and/or diverse habitats. | 10 | |
| | Medium | Between 3 – 5 hedgerows, treelines and/or waterways connecting site to other potential habitat. Site usually linked to small areas of high quality habitat or large areas of poorer quality habitat. | 6 | X |
| | Low | 1 – 2 linking features such as hedgerows, waterways and/or tree lines to other potential habitat. Linking habitat generally of poor quality and linking to only small areas of similar habitat. | 3 | |
| | Very Low | Site surrounded by hardstanding, roads and/or other significant barriers to wildlife dispersal. No hedgerows, waterways or tree lines to link site to potential habitat. | 1 | |
| Value for Appreciation of Nature | Very High | Public Rights of Access on site and habitats providing screening of industrial/commercial areas from residential. | 5 | |
| | High | Public Rights of Access to the site and a reasonable number of local residents that may appreciate the visual appearance of the site. | 4 | |
| | Medium | Site occasionally used by local public and provides some positive visual impact for local residents. | 3 | |
| | Low | No public rights of access to the site although site provides some positive visual impact for low numbers of local residents | 2 | X |
| | Very Low | No public rights of access to the site, site not visible from any residential or commercial properties and/or site not considered to provide positive visual impact. | 1 | |
| **Site Score and Rating** | 37 – low | | | |

Site Value Scores: 9-19 = Very Low; 20-39 = Low; 40-59 = Moderate; 60-79 = High; 80-100 = Very High

*Table 13: Selected UK Native Trees and Shrubs*

| Common Name | Scientific Name |
|---|---|
| **Shrubs** | |
| Field Maple | *Acer campestre* |
| Dogwood | *Cornus sanguinea* |
| Hazel | *Corylus avellana* |
| Midland Hawthorn | *Crataegus laevigata* |
| Hawthorn | *Crataegus monogyna* |
| Spurge Laurel | *Daphne laureola* |
| Spindle | *Euonymus europaeus* |
| Holly | *Ilex aquifolium* |
| Privet | *Ligustrum vulgare* |
| Elder | *Sambucus nigra* |

| Common Name | Scientific Name |
|---|---|
| Wayfaring Tree | *Viburnum lantana* |
| Guelder Rose | *Viburnum opulus* |