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## Ecology Report

**PROPOSED NEW DWELLING**  
**The Arboretum, The Park, Great Barton, Suffolk**

September 2023



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## Contents Amendment Record

**REPORT NUMBER: THEARBORETUMGTBARTON/2023/ER/001**

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Signed
1	0	Initial draft	09/08/2023	A. Gregory
1	1	Final draft	07/09/2023	C. Whiting

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# Executive Summary

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of land at The Arboretum, The Park, Great Barton, Suffolk. A planning application is to be submitted to West Suffolk Council to construct a dwelling in the garden to the south of the existing property.

The site currently comprises an area of garden comprising lawn, shrubs and trees and ruderal vegetation.

The habitats on site will provide limited foraging and refuge opportunities for a range of garden birds, amphibians, bats, badger (*Meles meles*), and hedgehogs (*Erinaceus europaeus*), with additional potential for some S.41 list invertebrates.

Recommendations are made to avoid wildlife offences and ecological impacts, particularly in relation to protected species. Where impacts cannot be avoided, measures are proposed to mitigate remaining effects including timing of works and good working practices, with necessary compensation detailed. Biodiversity enhancements are proposed, ensuring gains are delivered.

# 1 Introduction

## 1.1 BRIEF

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of land at The Arboretum, The Park, Great Barton, Suffolk (TL 88958 67217; Figure 1). A planning application is to be submitted to West Suffolk Council to construct a new dwelling in the garden to the south of the existing property.

The ecological survey and this report are necessary to:

- Identify the existing ecological value of the site;
- Identify the need for further (e.g., protected species) surveys;
- Assess any potential adverse impacts of the proposed development on ecological features of the site or nearby designated sites;
- Make recommendations for mitigation (if required); and
- Identify opportunities for biodiversity enhancements and, consistent with national and local planning policy, net gains.

This report will be used to develop the proposals as necessary, and to form the basis for the submission of biodiversity information with any planning application. It reflects the site at the time of the survey and should be reviewed and revised as appropriate.

## 1.2 SITE LOCATION AND DESCRIPTION

The proposed development site (Photos 1 to 4, Figures 1 and 2) comprises an area of lawn with several mature boundary trees and shrubs and some areas of ruderal vegetation.

Photos are provided in Appendix A1.

## 2 Planning policy and legislation

### 2.1 INTRODUCTION

This chapter summarises the key legislation and policies relevant to assessing the biodiversity impacts of the scheme upon habitats and species.

### 2.2 PLANNING POLICY

#### 2.2.1 *National Planning Policy Framework (NPPF)*

The National Planning Policy Framework was originally published in 2012 and most recently revised in July 2021. The document sets out the Government's planning policies for England and provides guidance on how these policies are expected to be applied. It provides a framework for, and must be taken account of within, locally prepared plans for housing and other development, and is a material consideration in planning decisions.

An overarching objective of the NPPF, which aims to integrate and secure net gains, is to contribute to protecting and enhancing the natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

The full NPPF is available to view online using the gov.uk website: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachm ent\\_data/file/1005759/NPPF\\_July\\_2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachm ent_data/file/1005759/NPPF_July_2021.pdf) . Policies of particular relevance to development and biodiversity include 174, 180, 181 and 182.

**174.** Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

**180.** When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest (SSSI), and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSI;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

**181.** The following should be given the same protection as habitats sites:

a) potential Special Protection Areas and possible Special Areas of Conservation;

b) listed or proposed Ramsar sites; and

c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

**182.** The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects) unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

## 2.2.2

### *Local Plan*

Adopted local plans provide the framework for development across England, and include policies related to conserving and enhancing the natural environment. Planning policies and supporting documents that are used to plan, deliver and monitor development across the West Suffolk Council area can be found at [https://www.westsuffolk.gov.uk/planning/Planning\\_Policies/local\\_plans/westsuffolklocal-plan-former-forest-heath-and-st-edmundsbury-areas.cfm](https://www.westsuffolk.gov.uk/planning/Planning_Policies/local_plans/westsuffolklocal-plan-former-forest-heath-and-st-edmundsbury-areas.cfm)

## 2.3

### **LEGISLATION**

### 2.3.1

#### *Environment Act 2021*

The Environment Act received royal assent in November 2021. The Act will set clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water and waste, and includes an important new target to reverse the decline in species abundance by the end of 2030. Of particular relevance to development planning will the requirement for all new development to deliver a quantified (10%) Biodiversity Net Gain.

### 2.3.2 *Natural Environment and Rural Communities (NERC) Act 2006*

Section 40 places a duty on every public body in exercising its functions, to have regard to the purpose of conserving biodiversity; this includes restoring or enhancing populations or habitats. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and public-sector decision making. *Species and habitats of principal importance* in this respect are those published under Section 41 (“S. 41”) of the NERC Act 2006.

### 2.3.3 *Wildlife and Countryside Act 1981 (as amended)*

Rare and scarce habitats and species are afforded varying levels of protection under the Wildlife and Countryside Act 1981 (as amended) (hereafter “WCA 1981”). Some species and groups are afforded full protection (e.g. Schedule 1 bird species, bats), whilst others receive partial protection (e.g. widespread reptiles). Section 3.1 provides further detail relevant to this scheme. Species afforded legal protection are referred to by their relevant schedule (“Sch.”) within the act, i.e. “Sch. 1” (birds), “Sch. 5” (other animals), or “Sch. 8” (plants).

Invasive plant species such as Japanese knotweed (*Reynoutria japonica*) and giant hogweed (*Heracleum mantegazzianum*) are listed on Schedule 9 of the WCA 1981. It is an offence to plant or otherwise cause these species to grow in the wild and this includes the development of sites such that the plant colonises land owned by a third party.

### 2.3.4 *The Countryside and Rights of Way (CROW) Act 2000*

The CROW Act 2000 strengthened and updated elements of the WCA 1981, and gave a statutory basis to biodiversity conservation, requiring government departments to have regard for biodiversity in carrying out its functions and to take positive steps to further the conservation of listed habitats and species. It strengthened the protection of SSSIs and threatened species. Many of its provisions have been incorporated as amendments into the WCA 1981 and some have been superseded by the NERC Act 2006.

### 2.3.5 *The Conservation of Habitats and Species Regulations 2017*

The Conservation of Habitat and Species Regulations 2017 (hereafter referred to as the Habitat Regulations 2017) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), and elements of the EU Wild Birds Directive, into national law. The 2017 Regulations provide for the designation and protection of ‘European sites’ (SPAs, and SACs), the protection of ‘European Protected Species’ (“EPS”), and the adaptation of planning and other controls for the protection of European Sites.

They have been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019, which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

Under the Regulations, competent authorities i.e. any Minister, government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the relevant EC Directives.



### 2.3.6

#### *Protection of Badgers Act 1992*

The Protection of Badgers Act 1992 (hereafter “PBA 1992”) consolidates and improves upon the previous Badgers Act 1973, Badgers Act 1991, and Badgers (Further Protection) Act 1991. Under the PBA 1992 (except when holding a licence to do so) it is illegal for a person to wilfully; kill, injure, take, possess, sell, or otherwise cruelly treat a badger. It is also illegal to dig out, damage, destroy, or obstruct entry to setts (including by use of dog(s)). Further information on offences, exceptions, and penalties are listed on the PBA 1992 on [legislation.gov.uk](http://legislation.gov.uk).

# 3 Methodology

## 3.1 INTRODUCTION

This report has been produced with reference to relevant guidance, most notably:

- Guidelines for Ecological Report Writing (CIEEM, 2017);
- Biodiversity – Code of Practice for Planning and Development (BS 42020:2013<sup>1</sup>);
- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018); and
- Biodiversity Net Gain: good practise principles for development (CIRIA, CIEEM and IEMA, 2016).

The following sections summarise the approaches used to review existing data, and to undertake appropriate field surveys to scope and inform an Ecological Impact Assessment (EclA) for the scheme. Where further surveys are considered necessary, this is identified in section 5.

## 3.2 DESK SURVEY

The following data sources were consulted to assess the potential for the application site to support protected or notable habitats/species:

- Aerial photos, Ordnance Survey maps, and the MAGIC website (<http://magic.defra.gov.uk/>): These were used to identify habitat types including priority habitats, suitability for particular species/groups, and the locality of nationally and internationally designated sites;
- Natural England (NE) open source protected species and habitat survey data; and
- Historical biological records: species and locally designated site records within 2km of the sites were provided by the Suffolk Biological Information Service (SBIS) (Appendix A2).

From this exercise, it was concluded that the following legally protected species/groups may be present on the sites and/or land immediately adjacent:

- Amphibians including great crested newt (*Triturus cristatus*)<sup>2</sup>;
- Mammals including badgers<sup>3</sup> and bats<sup>2</sup>;
- Breeding birds<sup>4</sup> including Red and Amber status<sup>5</sup> species; and
- S. 41<sup>6</sup> list habitats such as hedgerows, and species such as hedgehog.

In the context of the setting and nature of the developments, the 'zone of influence' of the scheme is considered restricted to habitats on the sites and species within 250m of the site boundaries.

## 3.3 FIELD SURVEY

An initial site walkover was undertaken on the 26 July 2022 to 1) record habitats present; and 2) assess the value of the habitats present for protected and notable species. A list of vascular plants and a description of the vegetation was made,

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<sup>1</sup> BSI Standards publication BS 42020:2013 Biodiversity – Code of practice for planning and development.

<sup>2</sup> GCNs and all species of bats receive full protection under the WCA 1981 and Habitats Regulations 2017.

<sup>3</sup> Badgers and their setts are afforded protection by the PBA 1992.

<sup>4</sup> All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.

<sup>5</sup> The conservation statuses of UK bird species are listed within the Birds of Conservation Concern 5 (Stanbury *et al.*, 2021).

<sup>6</sup> S. 41 of the NERC Act 2006 lists 'habitats and species which are of principal importance for the conservation of biodiversity in England'.

including the location and extent of any Schedule 9 (WCA 1981) plants. Photos of the habitats present, and any field signs are provided in Appendix A1.

### 3.3.1 *Habitats and vascular plants*

The site was walked with all distinct vegetation and habitat types, and any features of interest identified using the UKHab Habitat Survey methodology (Butcher *et al.*, 2020). Care was taken to record as many species as possible.

### 3.3.2 *Amphibians and reptiles*

#### a) Amphibians

No ponds were present on site. One pond exists within 250m but was not accessible.

The terrestrial habitat suitability of the site was assessed with respect to refugia and foraging habitat based on the known habitat preferences of GCN and widespread amphibians such as common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*), and common toad (*Bufo bufo*).

#### b) Reptiles

Habitats on and around the application site were assessed with respect to the known foraging and refuge habitat preferences of widespread reptile species.

### 3.3.3 *Bats*

#### a) Tree roost potential

Existing trees which may require removal were visually checked to assess their suitability for use by roosting bats using the following criteria:

1. All potential roosting cavities (e.g. natural cavities, rot holes, woodpecker holes, splits, peeling bark) were inspected from the ground using binoculars where necessary;
2. All potential niches would be assigned a category according to Bat Conservation Trust (BCT) protocols (Collins, 2016). These categories are listed below:
  - High Suitability: Trees with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat;
  - Moderate Suitability: Trees with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation;
  - Low Suitability: A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential. However, the tree(s) are of a size and age that elevated surveys may result in features being found; or features which may have limited potential to support bats; and
  - Negligible Suitability: Trees with negligible bat roost potential.
3. Where potential niches existed, niches below 5m high were physically inspected using ladders. Any cavities with the potential to support roosting bats were inspected with an endoscope and/or a small LED torch as necessary;
4. All potential roosting niches were checked for the presence of bats (alive or dead), faecal staining, fur and/or scratch marks around the entrance and droppings within the cavities or attached to the trunk/bough below the entrance.

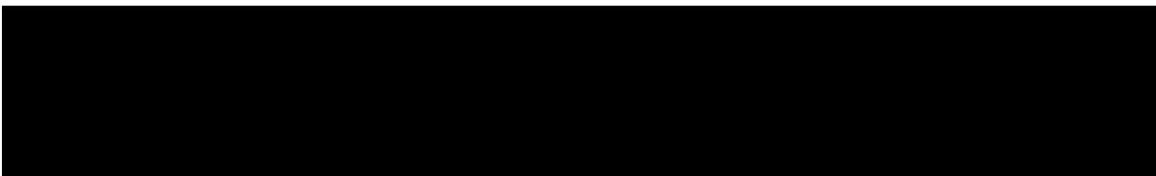
b) Foraging and commuting habitat

Consideration is given to the value of any potential foraging and commuting habitats (i.e., hedgerows, trees, streams, ponds, composting areas) on the application site.

3.3.4 *Nesting birds*



3.3.5 *Badger*



3.3.6 *S.41 list habitats and species*

The site was surveyed to determine the presence of any S. 41 habitats such as native species-rich hedgerows. The site's suitability for S. 41 list species such as hedgehog was assessed based on their habitat preferences.

3.3.7 *Non-native invasive plant species*

The site was inspected for Schedule 9 species such as Japanese knotweed and giant hogweed.

**3.4 SURVEY CONSTRAINTS**

Given the nature of the site and the survey carried out, the timing of the survey visit was considered appropriate for this report.

**3.5 SURVEYORS**

The initial site walkover was undertaken by Christian Whiting BSc (Hons) MSc MCIEEM and Alex Gregory an ecologist with MHE Consulting Ltd.

Christian who has over 24 years' experience working as an ecologist and holds Natural England (NE) survey licences for bats (2015-14745-CLS-CLS - Bat Survey Level 2, and great crested newts (Class A licence 2015-17633-CLS-CLS).

He is a Registered Consultant (Registration RC089) on NE's Bat Mitigation Class Licence and the Environment Agency's and Water Management Alliance IDB water vole organisational and class licences respectively. His main areas of expertise are bats, vascular plants, amphibians and reptiles, otter (*Lutra lutra*) and water vole.

Alex Gregory has 2 years' experience as an ecologist with MHE Consulting Ltd.

**3.6 ASSESSMENT**

Impacts and effects upon habitats and species are assessed with reference to the CIEEM Guidelines for Ecological Impact Assessment (2018) and are reported in Section 5, based on the baseline conditions reported in Section 4.

The assessment includes potential impacts upon habitats and species during the construction and operational phases of the scheme. It considers positive and negative impacts, their extent, magnitude and duration, frequency and timing and reversibility.

# 4 Results

## 4.1 INTRODUCTION

This chapter summarises the results of the desk and field surveys.

## 4.2 BASELINE ECOLOGICAL CONDITIONS - DESK STUDY

### 4.2.1

#### *Designated sites*

Any locally designated sites (e.g., Local Nature Reserves and County Wildlife Sites) within 2km, nationally designated sites within 5km and internationally designated sites within 13km of the application site are listed below in Table 4.1.

**Table 4.1 Relevant designated sites**

Site name	Site designation
Barton Shub	CWS
RNR 182	RNR
Pakenham Meadows	SSSI
The Glen Chalk Caves, Bury St. Edmund's	SSSI
Breckland	SAC; SPA

#### Locally designated sites

A single County Wildlife Site (CWS) and Roadside Nature Reserve (RNR) 182 are located within 2km of the application site. The RNR is notable for containing a protected (Schedule 8) and rare species of fungus sandy stillball (*Battarrea phalloides*).

#### Nationally designated sites

Pakenham Meadows SSSI comprises unimproved, species-rich wet meadows with dykes abutting Pakenham Stream. The meadows support a variety of grasses, sedges and forbs including ragged robin (*Lychnis flos-cuculi*), southern march orchid (*Dactylorhiza praetermissa*) and early marsh orchid (*Dactylorhiza incarnata*). Marsh marigold (*Caltha palustris*), water mint (*Mentha aquatica*) and other wetland herbs are found in the peat bog areas.

The Glen Chalk Caves, Bury St. Edmund's SSSI comprises a small series of chalk mines used by several species of hibernating bat including western barbastelle (*Barbastella barbastellus*), Daubenton's (*Myotis daubentonii*), whiskered (*M. mystacinus*), Brandt's (*M. brandtii*) and brown long-eared (*Plectus auritus*) (BLE). A single lesser horseshoe (*Rhinolophus hipposideros*) bat has been recorded at the site, which also offers foraging habitat in the form of scrub and mixed woodland.

**The application site lies within a SSSI Impact Risk Zone but does not meet any of the criteria for consideration. Given the nature and limited size of the development, no significant impacts or effects are anticipated in relation to any of the features of the designated site.**

#### Internationally designated sites

The Breckland Special Area Conservation (SAC) and Special Protection Area (SPA) comprises 28 component SSSIs and covers an area of 39433.66 ha and comprises dry heath and grassland on largely free draining sandy soils of glacial origin which are influenced by the continental climate. Throughout the 20th Century much of Breckland was planted with conifers, and part of the site has been lost to arable farming.

The remnants of dry heath and grassland that have survived these recent changes support heathland breeding birds which have also adapted to live in forest and arable habitats. Species such as woodlark (*Lullula arborea*) and nightjar breed in clear-fell and open heath areas, whilst stone curlews establish nests on open ground provided by arable cultivation in the spring, as well as on Breckland grass-heath. The presence of more than 1% of the British populations of these species qualifies the site under article 4.1 of the Directive (79/409/EEC):

Annex I species	Count and season	Period	% population
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#### Habitat regulations assessment

Human disturbance is considered a major issue regarding breeding success for the Breckland SPA interest where new housing can result in increased walkers (and dogs) using footpaths which can in turn disturb birds when prospecting for nest sites and incubating eggs such that recruitment levels reduce where increased human disturbance occurs.

Where a development or project may, alone or in combination, have a 'likely significant effect' upon the features of the Natura 2000 or Ramsar site, the Habitats Regulations (EU Exit) 2019 require a Habitats Regulations Assessment (HRA) to be undertaken. To determine if a site has the potential to impact upon the SPA interest features, stone curlew, woodlark and nightjar buffers (hereafter "SPA buffers") were produced around where the birds normally breed. Within such zones a likely significant effect from new development is presumed at the plan level and adverse effects cannot be ruled out. **However, the proposed development is located outside of the SPA buffers and therefore, no significant effect on the SPA is likely and no HRA is required.**

#### 4.2.2

##### *Species*

No protected or notable species records exist within the application site boundary. Table 4.2 identifies relevant species records for within 250m (**in bold**) (where geographical precision is <1km) and 2km of the application site boundary, respectively.

**Table 4.2 Protected/notable species within 2km of site**

Scientific Name	Common Name	Designation
<b>Amphibians and reptiles</b>		
<i>Bufo bufo</i>	Common toad	Sch. 5; S. 41
<i>Lissotriton vulgaris</i>	Smooth newt	Sch. 5
<b>Bats</b>		
<i>Nyctalus leisleri</i>	Leisler's	Sch. 5
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Sch. 5
<i>P. pygmaeus</i>	Soprano pipistrelle	Sch. 5; S. 41
<i>Plecotus auritus</i>	Brown long-eared	Sch. 5; S. 41
<b>Birds</b>		
<b><i>Accipiter nisus</i></b>		Amber Status
<b><i>Apus apus</i></b>		Red Status
<b><i>Chloris chloris</i></b>		Red Status
<b><i>Delichon urbicum</i></b>		Red Status
<b><i>Falco tinnunculus</i></b>		Amber Status
<b><i>Milvus milvus</i></b>		Sch. 1

<i>Muscicapa striata</i>		Red Status; S. 41
<i>Passer domesticus</i>		Red Status
<i>Pyrrhula pyrrhula</i>		Amber Status
<i>Prunella modularis</i>		Amber Status
<i>Sturnus vulgaris</i>		Red Status
<i>Turdus philomelos</i>		Red Status
<i>Troglodytes troglodytes</i>		Amber Status
<i>Tyto alba</i>		Sch. 1
<b>Invertebrates</b>		
<i>Satyrium w-album</i>	White-letter hairstreak	Sch. 5; S. 41
<b>Other mammals</b>		
<i>Erinaceus europaeus</i>	Hedgehog	S. 41
<i>Lepus europaeus</i>	Brown hare	S. 41
<i>Mustela putorius</i>	Polecat	S. 41

#### 4.2.2

##### *NE open source GCN records*

Assessment of Natural England's GCN class licence returns data and eDNA pond survey records show the closest positive record (licence return) to be located c. 5.2km southwest of the application site (dated 2016), which is beyond normal dispersal range of the species.

#### 4.3

### **BASELINE ECOLOGICAL CONDITIONS – FIELD SURVEY**

#### 4.3.1

##### *Habitats and vascular plants*

Descriptions of the habitats (Appendix A1) and the characteristic plants species present are provided below.

##### a) Modified grassland (g4 64)

Most of the land within the site comprises short mown lawn (Photos 1 to 3) which supports a number of grasses and forbs including yarrow (*Achillea millefolium*), cat's-ear (*Hypochaeris radicata*), chickweed (*Stellaria media*), creeping thistle (*Cirsium arvense*), daffodil (*Narcissus agg.*), daisy (*Bellis perennis*), dandelion (*Taraxacum agg.*), lesser celandine (*Ficaria verna*), nettle (*Urtica dioica*), perennial rye-grass (*Lolium perenne*), ragwort (*Jacobaea vulgaris*), red fescue (*Festuca rubra*), ribwort plantain (*Plantago lanceolata*), small-flowered crane's-bill (*Geranium pusillum*), spear thistle (*Cirsium vulgare*), spotted medick (*Medicago arabica*), and Yorkshire-fog (*Holcus lanatus*).

##### b) Trees

A number of semi-mature and mature trees (Photos 1 to 5) including pedunculate oak (*Quercus robur*), beech (*Fagus sylvatica*) along with holly (*Ilex aquifolium*), hornbeam (*Carpinus betulus*), Lawson's cypress (*Chamaecyparis lawsoniana*) and yew.

##### c) Shrubs

Several ornamental shrubs exist (Photos 3 and 4) around the northern and southern site boundary including common laurel (*Prunus laurocerasus*), Portuguese laurel (*Prunus lusitanica*), hazel (*Corylus avellana*), magnolia (*Magnolia* sp), spotted laurel (*Aucuba japonica*), and box (*Buxus sempervivens*). A cordyline exists within lawn.

##### d) Hedgerow

A short section of conifer hedgerow (Photo 3) exists along the edge of some trees and shrubs to the north of the proposed dwelling.

#### 4.3.2

##### *Amphibians and reptiles*

###### a) Ponds

No ponds were present on site or within 250m of the site.

###### b) Terrestrial habitat

###### *i) Amphibians*

The application site offers areas of refuge and foraging habitat within the areas of trees and shrubs, whilst the lawn provides potential foraging habitat at night during warm wet nights.

###### *ii) Reptiles*

The short grassland provides little cover for reptiles, whilst the ruderal habitat and woodland provides covers and some overwintering areas including a composting area in the woodland to the south (Photo 6). Grass snakes could potentially inhabit the larger area of gardens locally and potentially pass through the site, but the composting area is heavily shaded and therefore considered unsuitable for egg laying as grass snakes prefer compost or muck heaps in full sun.

Given the lack of records (no SBIS or NBN Atlas records within 2km of the site) and generally sub-optimal habitat on site, particularly where the house will be located the overall habitat suitability for reptiles was assessed as low.

#### 4.3.3

##### *Bats*

###### a) Tree Roost Assessment

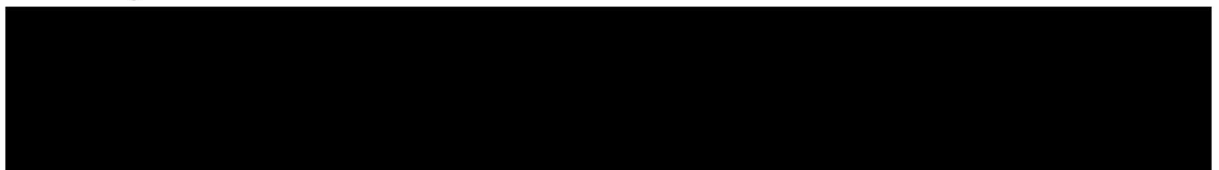
The majority of the trees and shrubs support no suitable roosting niches for bats, but some semi-mature and mature oaks and beech trees (all are to be retained) are of a size and age that potential niches (e.g. low roost potential) could be present high up in the canopy which were not visible at the time of the site walkover when the trees were in leaf.

###### b) Foraging/commuting habitat

The trees and shrubs on site offer moderate to high quality bat commuting and foraging habitat (Collins 2016).

#### 4.3.4

##### *Nesting birds*



#### 4.3.5

##### *Badger*



#### 4.3.6

##### *S. 41 habitats and species*

###### a) Habitats

No S. 41 habitats were recorded on site.

###### b) Species

Hedgehogs may forage across the grassland, and under the hedgerows nearby. The mature trees including some oak, beech, yew and holly may support small populations of S. 41 invertebrates such as Lepidoptera.



4.3.7

*Non-native invasive plants*

No non-native invasive species were recorded within the application site boundary.

4.4

**GEOGRAPHIC CONTEXT**

The geographic context of a feature is a useful consideration within an assessment of impacts. For this report, the geographic frames of reference for the habitats and species present on site are provided in Table 4.3; values are based upon the criteria in Table A2.1 and expert best judgements.

**Table 4.3 Feature value based on geographic context**

<b>Feature</b>	<b>Value</b>
Grassland, ruderal, trees and shrubs	Local
Amphibians and reptiles	Local
Bats	Local
Nesting and foraging birds	Local
S. 41 habitats and species	Local

# 5 Assessment and recommendations

## 5.1 INTRODUCTION

The following section provides a summary description of the proposed development, with an assessment of associated impacts and likely significant effects upon biodiversity.

The assessment and recommendations are based on use of the mitigation hierarchy, which in the first instance aims to avoid impacts. Where impacts cannot be avoided, they should be minimised (through mitigation). Only where impacts cannot be avoided or minimised should there be compensation for biodiversity harm.

Ecological enhancements are suggested, and consideration is given to individual as well as overall net gains or losses of biodiversity.

## 5.2 DESCRIPTION OF PROPOSED DEVELOPMENT

Planning permission is being sought to construct a detached dwelling. It will require the permanent loss of grassland, a single immature tree and some ruderal vegetation, with potential impacts on common amphibians, reptiles, bats, hedgehog and nesting/roosting birds.

The assessment and recommendations below provide preliminary recommendations for mitigation and enhancements for the proposed development. They are based on the architects' drawings by Les Andrews and an arboricultural assessment and planting plan by Giles Hill (Landscape Sculpture and Design Partnership) and information available at the time of writing and should be updated accordingly as the scheme is subsequently amended.

## 5.3 NEED FOR FURTHER SURVEYS

It is generally advised that subject to no significant change in site management regimes, and dependent on the species present, baseline survey results remain valid for approximately 12 – 18 months (CIEEM, 2019). Exceptions include where mobile species are/may be present, where site management practices cease or change, or where existing guidance indicates otherwise.

## 5.4 ASSESSMENT OF IMPACTS

The EclA assessment process (CIEEM, 2018) involves:

- Identifying and characterising impacts and their effects;
- Incorporating measures to avoid and mitigate negative impacts and effects;
- Assessing the significance of any residual effects after mitigation;
- Identifying appropriate compensation measures to offset significant residual effects; and
- Identifying opportunities for ecological enhancement.

The emphasis in EclA is on the assessment of 'significant effects' i.e. an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. In broad terms significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species including extent, abundance, and distribution.

The ecological features to be subject to detailed assessment in this report are those judged to be important and potentially affected by the project; protected species are included where the development will result in a potential breach of legislation.

## 5.5 HABITATS AND VASCULAR PLANTS

### a) *Potential impacts*

Vegetation clearance and construction activities will result in the permanent loss of a area of grassland, an immature beech tree and some ruderal vegetation. Loss of these habitats constitutes a minimal negative ecological effect at a Local level (i.e., loss of greenspace).

Any accidental damage to retained trees or areas of retained grassland during construction would result in a significant negative effect at the Local level.

### b) *Mitigation*

The works footprint and associated disturbance should be minimised as much as possible. Retained shrubs, trees and grassed areas should be protected with temporary fencing (e.g., Heras) to prevent above ground damage and Root Protection Areas (RPAs) should be used to inform the detailed design.

The builder's welfare unit (if required) should ideally be sited off vegetated areas or the area will require reinstatement on completion of the works.

### c) *Residual effects*

There will be a small residual effect due to the loss areas of grassland vegetation that will require compensation (see section 5.10). The loss of a small beech tree will not require compensation.

## 5.6 AMPHIBIANS AND REPTILES

### a) *Potential impacts*

Ground-breaking and construction activities, in addition to limited vegetation clearance, could result in the potential entrapment, injury and mortality of amphibians (including potentially GCNs) through contact with caustic substances (e.g., wet cement), trenches (e.g., sewerage and surface water drainage runs), and movement of stored building materials.

During the operational phase site drainage comprising the use of gully pots and down pipes connecting to closed surface water drainage or those with silt traps can result in animals becoming trapped (Muir *et al.*, 2012) and impact upon amphibians.

Combined, such impacts could result in permanent negative effects upon low-to-moderate numbers of individuals.

### b) *Mitigation*

Given the low potential for amphibians and reptiles to disperse across the site (see 4.2.4) a Precautionary Working Method Statement is recommended with the following best practice measures to mitigate impacts as follows:

1. The lawn within the site boundary should be kept short with regular mowing prior to and during construction.
2. Excavations should be filled on the same day they are dug or covered overnight with ply boarding and any gaps filled with damp sharp sand;

3. If this is not feasible access ramps should be created to allow animals to escape and the excavations should be inspected daily and immediately prior to infilling. Any animals (except for GCN) present should be moved into retained hedgerows and/or other boundary habitats providing adequate cover;
4. Footings and concrete slabs should be poured during the morning where possible to ensure it has solidified prior to dusk to reduce the risk of animals coming into contact with wet concrete;
5. Any hand mixing of mortar or concrete should be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact;
6. Any excess concrete should be poured into a concrete skip, so it can then set to prevent animals coming into contact;
7. All building materials and waste materials should be stored on hard gravel driveway to the north of the site or stored off the ground on pallets to reduce risk of animals seeking refuge;
8. The GCN poster in Appendix A3 should be erected in the welfare facilities provided for construction staff on site;
9. Should any GCNs be encountered, works should stop immediately, and advice be sought from a suitably experienced ecologist. Any other animals should be allowed to move out of the works area, or safely relocated; and
10. Permeable paving should be used preferentially to avoid the need for gully pots. Downpipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen<sup>7</sup> to prevent amphibians entering drains; and
11. If gully pots are required, they should use small diameter (6mm) grates where possible. Any installed gully pots should be situated  $\geq 100\text{mm}$  from the roadside, OR a wildlife-kerb<sup>8</sup> must be installed adjacent to each gully pot AND a gully pot ladder<sup>9</sup> placed into each gully pot.

Downpipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen<sup>10</sup> to prevent amphibians entering drains.

*c) Residual effects*

With mitigation measures proposed, no significant effects are anticipated during either the construction or operational phases.

## 5.7

### **BATS**

*a) Potential impacts*

i) Roosting bats

No impacts predicted.

ii) Foraging and commuting habitats

Vegetation clearance will remove areas of short grassland and small sections of ruderal vegetation, neither of which are considered significant in relation to local foraging opportunities and as such are assessed as negligible in effect.

iii) Light disturbance

Lighting (construction and operational phases) can impact bat commuting and foraging behaviour and increase the risk of predation, which could affect foraging success and population recruitment and is considered a potential significant effect at the local level.

<sup>7</sup> <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

<sup>8</sup> e.g. <https://www.aco.co.uk/products/wildlife-kerb>

<sup>9</sup> <https://www.thebhs.org/the-bhs-amphibian-gully-pot-ladder>

<sup>10</sup> <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

Lighting impacts relate to security lighting external to the buildings, and potentially from spillage of internal lighting once the buildings are in use. In this instance, impacts on retained trees and hedgerow habitats around the site boundary are most relevant.

iv) Roofing membranes

Research has shown bats can become entangled in modern breathable roofing membranes (BRMs) causing injury or death to individuals (Waring *et al.* 2013) if bats can access under pantiles, plain tiles or slates. However, a zinc roof is proposed on the dwelling such that no suitable gaps (>5mm) which could allow bats to enter such that no impacts are predicted.

b) *Mitigation*

i) Foraging and commuting habitat

As per 5.5, protective fencing will be used to protect retained hedgerows and trees.

ii) Light disturbance

Exterior lighting (as well as temporary security lighting during the construction phase) design must minimise lighting impacts upon retained natural habitats including boundary hedgerows and trees, particularly to the south and east of the site, and should follow current guidance as necessary<sup>11,12</sup>:

*Type of lamp (light source)*: Light levels should be as low as possible as required to fulfil the lighting need. Lighting should have a maximum of 7.5 to 10 lux and LED lights should be used using the warm white (or amber) spectrum, with peak wavelengths >550nm (2700 or 3000°K) and no UV component; and

*Lighting design*: Lighting should be directed to where it is needed, with minimal horizontal spillage towards retained habitats including mature broadleaved trees and hedgerows. This can be achieved by restricting the height of the lighting columns/fixtures and the design of the luminaire, including the following measure:

Light columns/fixtures in general should be as short as possible as light at a low level reduces the ecological impact.

Luminaires with an upward light ratio of 0% should be mounted on the horizontal i.e. with no upward tilt.

If taller lights are required, and as a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill; and

PIR movement sensors and timers should be used to minimise the 'lit time'.

iii) Roof membrane

The new dwelling should use bat friendly roofing felt (e.g. Type 1F) if handmade clay pantiles, plain tiles or weatherboarding are to be used. If tight fitting tiles (e.g. interlocking pantiles or machine-made plain tiles), slates or concrete weather-boarding are used, BRM may only be used if gaps are less than 5mm to ensure bats cannot come into contact with the membrane.

c) *Residual effects*

No residual effects anticipated.

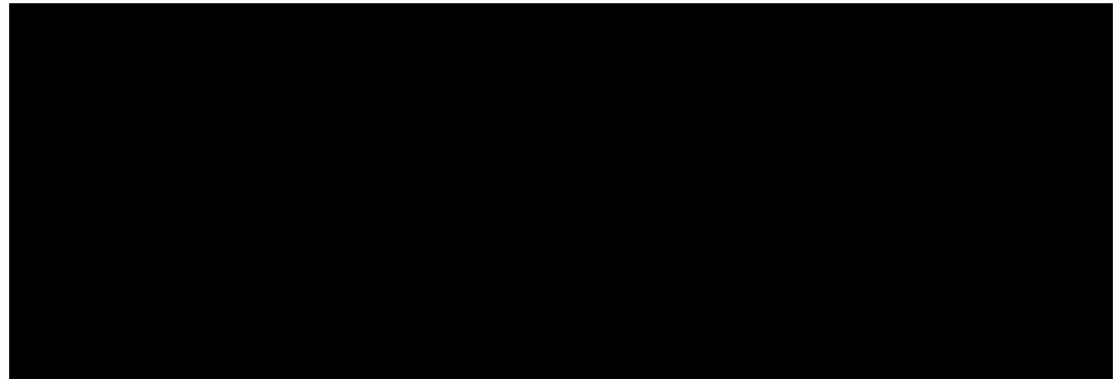
<sup>11</sup> <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

<sup>12</sup> [www.eurobats.org/sites/default/files/documents/publications/publication\\_series/WEB\\_DIN\\_A4\\_EUROBATS\\_08\\_ENGL\\_NVK\\_28022019.pdf](http://www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf)

## 5.8

### NESTING BIRDS

#### a) *Potential impacts*



#### b) *Mitigation*

As per 5.5.

Habitat avoidance and mitigation as per sections 5.5 and 5.6.

Commencement of the building works should take place outside of the nesting bird season. If this is not feasible, a check for nesting birds should be undertaken prior to works starting. If any active nests are present, works within 5m must wait until the young have fledged.

#### c) *Residual effects*

Effects upon active nests are expected to result in a negligible residual effect.

## 5.9

### OTHER S. 41 LIST HABITATS AND SPECIES

#### a) *Potential impacts*

Vegetation clearance, ground-breaking and construction activities will result in the permanent loss of foraging habitat for hedgehog (e.g., lawn and scrub).

During construction, hedgehogs could potentially fall into open trenches resulting in entrapment and possible injury and mortality of individuals due to falling in or becoming in contact with caustic substances such as fresh concrete.

Erection of ecological barriers (e.g. timber panel fencing) would affect foraging access for animals. In combination such impacts would be considered to result in a negative ecological effect at the Local level.

Combined, the above impacts would result in negative effects upon local individuals.

#### b) *Mitigation*

Habitat avoidance and mitigation as per section 5.5 and 5.6.

Site clearance should always consider the potential presence of hedgehogs with vigilance, with no clearance of scrub undertaken when temperatures are regularly below 6°C. Animals encountered at other times should be moved to suitable cover, e.g., base of hedgerows or in the grassland areas to the west of the application site.

During construction, concrete should be poured early in the day or covered with ply boarding or membrane overnight to prevent animals coming into contact. Trenches should be covered overnight, or mammal ladders (large rough planks placed at shallow angles) placed to allow animals escape. Uncovered trenches must be checked daily and any animals encountered be relocated out of the works area.

The use of close board fencing is proposed and should be avoided where possible and native species-rich hedgerows proposed for the site boundaries. **If close board is to be installed between the gardens, then at least one hedgehog highway<sup>13</sup> should be provided at either end of the fencing run with signage<sup>14</sup>. Gates should also be raised off the ground by a minimum of 130mm.**

*c) Residual effects*

Direct impacts upon hedgehog will be avoided with no significant residual impacts.

## 5.10

### COMPENSATION

The loss of grassland should be compensated for by enhancing retained grassland around the new dwelling by establishing wildflower borders of at least 3m wide. This should use a seed mix suitable for sandy soils<sup>15,16</sup>.

Lawn areas should be enhanced by seeding bare areas of ground with a flowering lawn seed mix<sup>17</sup>, whilst retained lawn areas could be overseeded in the spring or autumn after first cutting it short and scarifying it extensively to create some bare areas.

## 5.11

### CUMULATIVE EFFECTS

The West Suffolk Council website was searched on 7 September 2023 for significant planning applications within 1km of the application site dating back by two years. The search returned many householder applications for extensions or alterations to existing dwellings, with a low number of minor residential schemes, and two applications for the material change of land use. Refused and withdrawn applications were not considered in relation to cumulative ecological effects. Any applications considered relevant in relation to cumulative ecological effects are listed below:

A decision is pending (DC/22/0556/FUL) for an application erect a single detached dwelling and cart lodge on land adjacent to The Greenover, The Park, Great Barton. At the time of writing no ecology report has been submitted with the application.

Permission was granted (DC/22/0122/FUL) to erect a single dwelling with a detached garage (following the demolition of an existing dwelling and outbuildings) at Winslade, The Park, Great Barton. A Preliminary Ecological Appraisal Report (PEAR) submitted with the application found the buildings (to be demolished) to support no evidence of roosting bats with no further surveys required for bats, or any other protected species.

Outline planning permission was granted (DC/20/1719/OUT) (all matters reserved) to erect two dwellings on land adjacent to the Primary School, School Road, Great Barton. A PEAR submitted with the application noted that the site had been cleared prior to the site walkover being undertaken, and, as such, the site was of relatively low ecological value. No further surveys were required whilst mitigation measures and biodiversity enhancements were suggested to reduce ecological impacts.

**Given the number and scale of previous local applications as well as the relatively small scale of the current scheme, no significant cumulative effects are considered likely.**

<sup>13</sup> <https://www.hedgehogstreet.org/help-hedgehogs/link-your-garden/>

<sup>14</sup> <https://ptes.org/shop/just-in/hedgehog-highway/>

<sup>15</sup> <https://wildseed.co.uk/mixtures/view/8>

<sup>16</sup> <https://www.bostonseeds.com/products/wildflowers-seed/wildflower-seed-mixtures-20/bs3m-dry-sandy-loam-soils-wildflower-seeds.html>

<sup>17</sup> <https://wildflowerlawnsandmeadows.com/product/wild-flower-lawn-seed-mix/>

## 5.12

### ENHANCEMENT OPPORTUNITIES

It should be noted that from November 2023 it is anticipated that all planning permissions granted in England (with a few exemptions) will be formally required to deliver at least 10% biodiversity net gain (see Section 2.3.1). Quantitative assessments of habitat losses and gains using the Defra Metric will therefore be necessary.

Subject to the recommended mitigation and compensation measures, the proposed scheme will avoid causing significant negative ecological effects. With appropriate design and landscape planting (Table 5.1), the scheme can deliver a biodiversity gain in compliance with local and national planning policies and legislation.

Mitigation measures proposed will ensure negative ecological effects are avoided. To maximise biodiversity gains a minimum of 4 of the 7 enhancements (Table 5.1) are suggested.

**Table 5.1 Biodiversity enhancements**

Feature	Enhancement suggestion
Birds	<ol style="list-style-type: none"> <li>Two open-fronted and two hole-entrance nest boxes (Appendix A4) could be mounted on suitable planted trees.</li> <li>Two sparrow terraces (Appendix A4) could be erected on the walls of the new dwellings.</li> <li>Swift boxes (e.g., Manthorpe swift brick) could be installed into the brick wall (6 on the west and east gable ends) or erected on the walls.</li> </ol> <p>A speaker connected to an MP3 player should be fitted in one of the 6 boxes erected on each of the gable ends and swift return calls must be played during May and early June as they will attract swifts returning to the UK and prospecting for potential nest sites.</p> <p><a href="https://peakboxes.co.uk/knowledge-learning-blog/2019/10/13/attracting-swifts-sound-systems">https://peakboxes.co.uk/knowledge-learning-blog/2019/10/13/attracting-swifts-sound-systems</a></p>
Bats	<ol style="list-style-type: none"> <li>Three bat boxes (see Appendix A5) could be erected on suitable mature trees in the area.</li> <li>Two integrated roost bricks<sup>18</sup> could be incorporated into the walls of the new dwellings (location to be agreed on site with a suitably experienced ecologist).</li> </ol>
Nectar rich climbers	<ol style="list-style-type: none"> <li>Any ornamental planting should utilise nectar rich plants for the benefit of pollinators and associated predators (e.g., foraging bats and hedgehogs).</li> </ol> <p>Planting should include nectar rich climbers such as wild honeysuckle (<i>Lonicera periclymenum</i>), which could be planted at 5ft intervals along existing and proposed hedgerows or trained up fences, posts, or trellises.</p>
Fruit trees	<ol style="list-style-type: none"> <li>A minimum of 4 Suffolk heritage fruit trees<sup>19</sup> should be planted within the gardens of the new dwelling as part of the proposed tree planting.</li> </ol>

<sup>18</sup> <https://www.nhbs.com/4/woodcrete-and-woodstone-bat-boxes>

<sup>19</sup> <https://www.applesandorchards.org.uk/>



Feature	Enhancement suggestion
Wildlife friendly composting	8. A wildlife friendly composting area could be created along the eastern site boundary (see Appendix A7).

**Peat-based compost will not be used in any planting scheme to avoid impacts upon habitats and carbon storage.**

### 5.13

#### **CONCLUSIONS**

With the avoidance, mitigation and compensation measures suggested, the scheme will minimise biodiversity impacts and provide some enhancements.

Measures proposed should be secured through appropriate planning conditions as per the British Standard (BS 42020:20131). These could include conditions for a Biodiversity Method Statement (e.g., BS 42020:2013 D.2.1) or equivalent document used to detail mitigation, compensation and enhancement implementation and associated monitoring.

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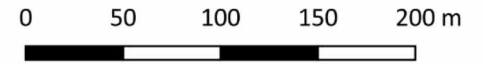
Waring, S., Essah, E., Gunnell, K. and Bonser, R. (2013) *Double jeopardy: the potential for problems when bats interact with breathable roofing membranes in the United Kingdom*. *Architecture & Environment*, 1 (1). pp. 1-13.

## Figures



### Legend

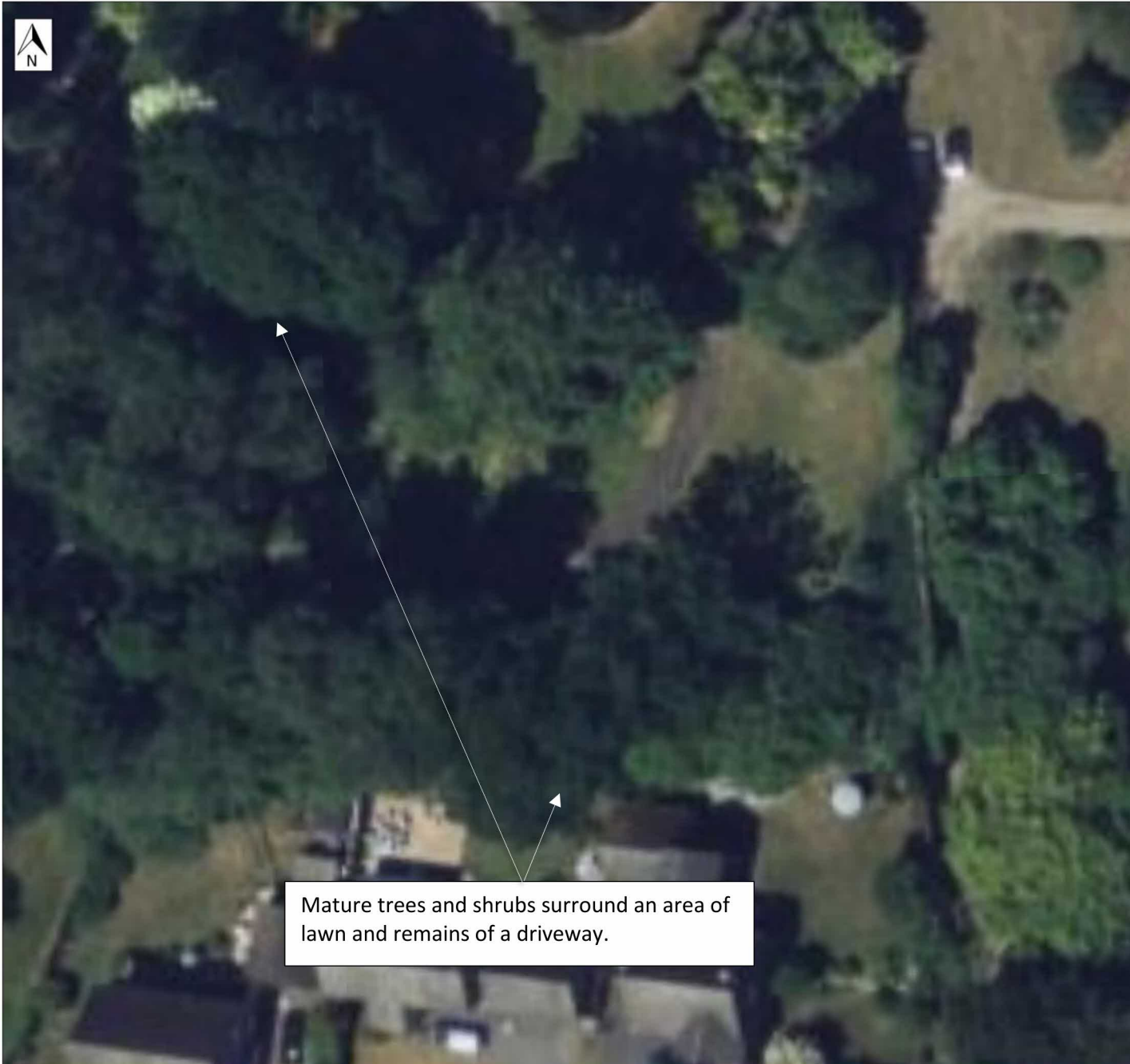
- 250m buffer
- Application site boundary



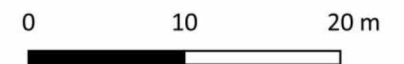
Project: The Arboretum, Great Barton, Suffolk

Drawn:	Date:	Drawing Ref:
CW	05/09/23	THEARBORETUM/ECO/001

Figure 1 Site location and ponds plan



## Legend



Project: The Arboretum, Great Barton, Suffolk

Drawn:	Date:	Drawing Ref:
CW	05/09/23	THEARBORUM/ECO/001

**Figure 1 Site location and ponds plan**

## Appendices

## **Appendix A1 Photos**





**Photo 1** View of the site looking east



**Photo 2** View of the site looking west



**Photo 3** Mown grassland, shrubs, trees and a section of conifer hedge



**Photo 4** Understorey to the north of the site – low ground cover due to shading



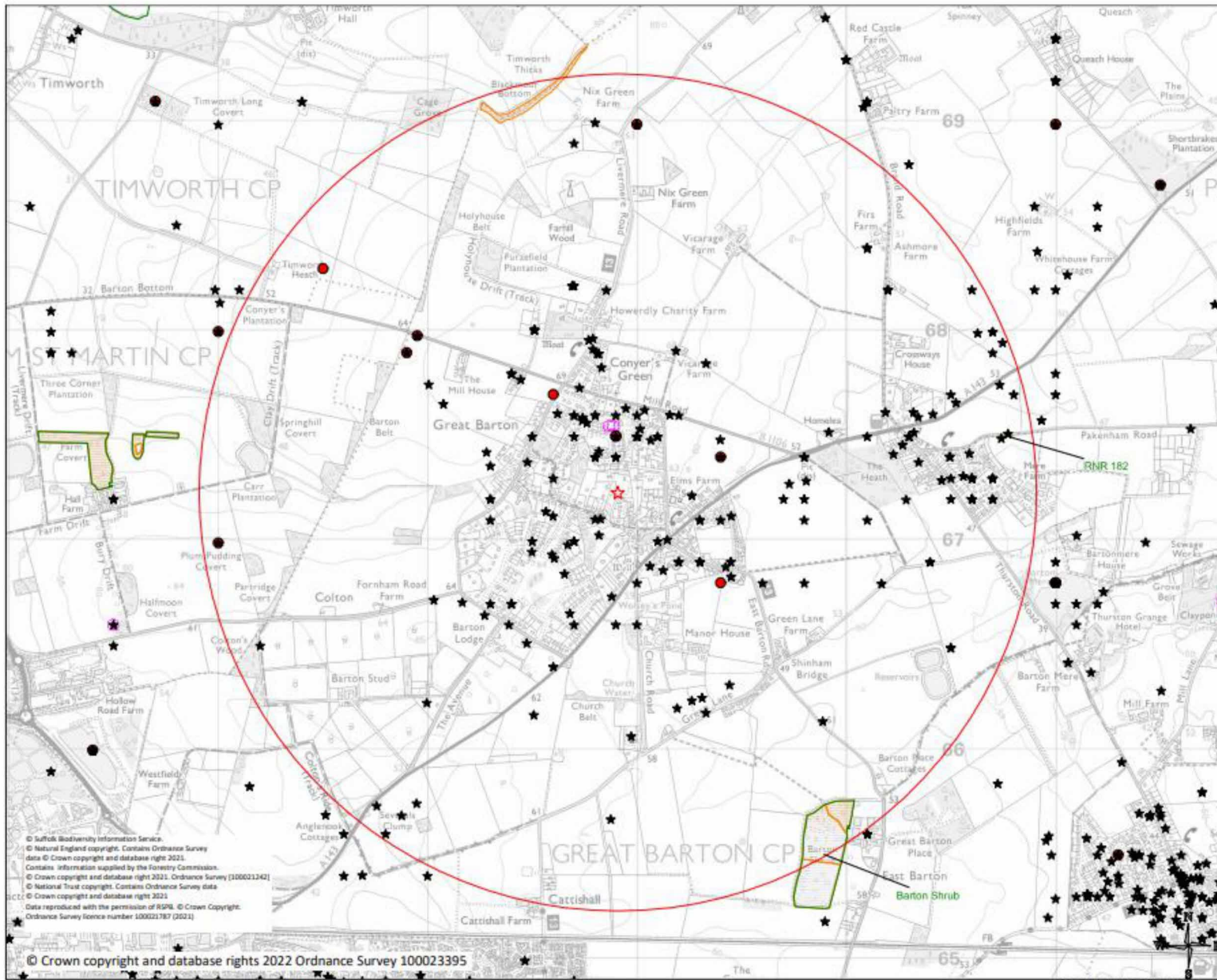
**Photo 5** Existing vehicle access



**Photo 6** Composting area within the trees to the south of where the new dwelling is proposed



## **Appendix A2 SBIS data search map**



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 Contains information supplied by the Forestry Commission.  
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Scale report: 1:18,000



**MHE Consulting (Arboretum, Great Barton TL88909 67231) 2km Data Enquiry**

Date: 18/07/2022 | Drawn by: Andy Mercer

## **Appendix A3 EclA criteria**

### A3.1 General criteria for geographic context/value

Designation	Example
<b>International</b>	<p>SPA, SAC and Ramsar sites and the features that they have been designated for.</p> <p>A sustainable area of habitat listed in Annex I of the Habitats Directive or smaller areas of such habitat which are essential to maintain the viability of a larger whole.</p> <p>A sustainable population of an internationally important species e.g., UK Red Data Book (RDB) species or European Protected Species (EPS) of unfavourable conservation status in Europe (e.g., Annex II species: bats, GCNs etc.), of uncertain conservation status or of global conservation concern in the UK BAP.</p>
<b>National</b>	<p>SSSI or a discrete area that meets the selection criteria for designation.</p> <p>A sustainable area of priority habitat identified included on the S. 41 NERC Act list or smaller areas of such habitat that are essential to maintain the viability of a larger whole.</p> <p>A sustainable population of priority species (listed under S. 41 of the NERC Act 2006).</p> <p>A sustainable population of a nationally important species i.e. RDB species not included in above category but which is listed on Schedules 5 or 8 of the WCA 1981 (as amended). Also, sites supporting a breeding population of such species or supplying a critical element of their habitat requirements.</p> <p>A sustainable population of uncommon or threatened Annex IV EPS species at a UK level.</p> <p>A nationally scarce species (occurs in 30-100 10km squares in the UK) that has its main UK population within the district.</p>
<b>County</b>	<p>A viable area of habitat identified in the county BAP.</p> <p>A County Wildlife Site.</p> <p>A sustainable population of common or non-threatened Annex IV EPS species at a UK level.</p> <p>A Nationally Scarce species that does not have its main population within the county.</p> <p>Any BAP species not included in the 'national' category above for which a county Action Plan exists.</p>
<b>Local</b>	<p>Individual members of local populations of priority or other nationally/internationally important species which are not in themselves key for maintaining a sustainable population (e.g. individual dog otter passing through area with no holts or resting sites).</p> <p>Other habitats and species not in the above categories but are considered to have some value at the district/borough level.</p>

## Appendix A4 GCN poster

# Great Crested Newt

If seen by any employee, works must cease immediately and an ecologist be contacted for advice

It is an offence to intentionally or recklessly disturb, injure or kill great crested newts

Further information can be found at [www.arguk.org](http://www.arguk.org)



## **Appendix A5 Bird boxes**




barkboxes.co.uk/product/willow-tit/

Sign In | Fulcrum ... UK Grid Reference... National Biodiversit... Bing Maps Santander Online... Microsoft Office Ho... Jacobs Engineering... Jacobs Engineering...

**BARK BOXES**  
Conserve and Enhance

Home About Us Other Services Gallery Contact



### Willow Tit/Tree Creeper

£35.00

A long, thin, box designed for fitting to smaller willow/birch trees, low to the ground, to encourage willow tit. Filled internally with damp sawdust/shavings/rotting wood as this species likes to excavate their own holes. The narrowing top crevice is designed to be suitable for roosting bats. Also suitable for tree creeper without the sawdust infill.

7 in stock (can be backordered)

- 1 + **Add to basket**

Category: bird and bat boxes

Description Additional information Reviews (0)


*Description*

barkboxes.co.uk/product/open-fronted-nest-box/

Sign In | Fulcrum ... UK Grid Reference... National Biodiversit... Bing Maps Santander Online... Microsoft Office Ho... Jacobs Engineering... Jacobs Engineering... Worldw...

**BARK BOXES**  
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### Open Fronted Nest Box

£25.00

For birds such as robin and pied wagtail. Open fronted but with a generous canopy to screen from aerial predators. Place in good cover not in the open.

43 in stock

- 1 + **Add to basket**

Category: bird and bat boxes

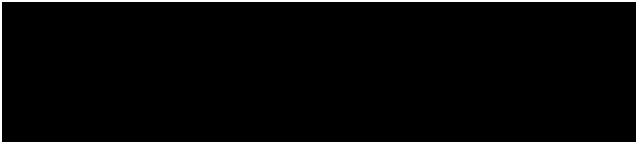
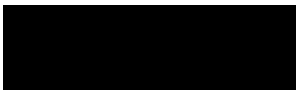
Description Additional information Reviews (0)

*Description*

Height tbc  
Width  
Depth  
Typical Weight



## **Appendix A6 Bat boxes**



## **Appendix A7 Wildlife friendly composting area**

## How to build a wildlife friendly compost heap...

- Clear an area.
- Stand a pallet up so its long edge sits on the ground.
- At either end of the pallet, hammer a stake between the two layers of the pallet.
- Place two pallets at right-angles to the first and once again secure with stakes.
- Secure the remaining pallet to the front using wire or string - this will allow you to remove it when you need to turn or empty your compost.



**Woodlouse** - minibeasts are vital to a compost heap.



**Slow worm** - may breed and have their young in the heap.



**Shaggy ink cap** - fungi help breakdown the contents of your compost heap.



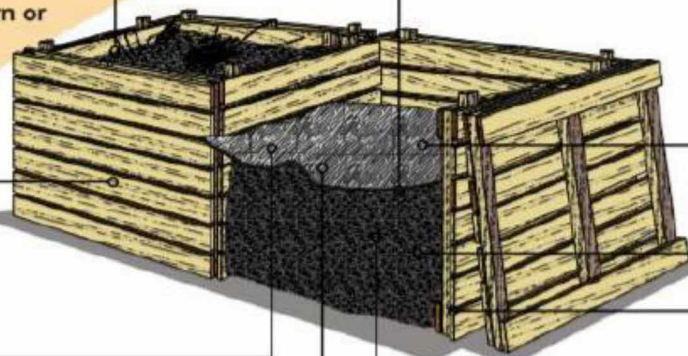
**Snail** - will feed on the compost and provide food for many different birds.



**Grass snake** - if you are lucky a female may lay eggs in your heap during June or July.



**Millipede** - they munch their way through the ingredients, turning it into a rich compost.



**Worm** - a healthy compost heap needs worms.



**Hedgehog** - may visit at night to feed on snails and other invertebrates.



**Common toad** - will find shelter in the damper parts of the heap.

### The compost heap's ingredients

Balance is the key to a good compost heap. To make a good mix you need more or less equal amounts of 'greens' and 'browns' plus small amounts from the 'others' list.

#### The Greens

##### Nitrogen-rich ingredients

- Comfrey leaves, nettles, young green weeds - avoid weeds with seeds, coffee grounds, grass cuttings, urine - diluted using 20 parts water to 1 part urine, raw vegetable peelings, tea bags and leaves, soft green prunings.

#### The Browns

##### Carbon-rich ingredients

- Cardboard - cereal packets and egg boxes, waste paper - even shredded, old bedding plants, newspaper - although it is better to recycle them, hay and straw, wood shavings, fallen leaves.

#### Other Compostable Items

- Wood ash - in moderation, hair, crushed egg shells, natural fibres - such as wool or cotton.