

# PROPOSED CHANGE OF USE FROM RESIDENTIAL GARDEN TO COMMERCIAL USE AT REDGATE FARM, BAWSEY, NORFOLK



## PRELIMINARY ECOLOGICAL APPRAISAL

**FINAL**

**Prepared by:**

Philip Parker Associates Ltd  
White Row Cottage  
Leziate Drove  
Pott Row  
King's Lynn  
Norfolk  
PE32 1DB

**Prepared for:**

Jordan Barrett

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DOCUMENT HISTORY				
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## **1.0 EXECUTIVE SUMMARY**

### **1.1 INTRODUCTION**

The Borough Council of King's Lynn and West Norfolk have requested that an ecological assessment be submitted as part of the proposed application for the change of use from a residential garden to commercial use at Redgate Farm, Bawsey.

1.2 Philip Parker Associates Ltd have been instructed to prepare an ecological appraisal of the proposed development.

1.3 This report presents the results of a Preliminary Ecological Appraisal that was undertaken on the 21<sup>st</sup> April 2021 by principal ecologist Philip Parker (2015-14467-CLS-CLS) and assisted by placement student Polly Godfrey. The report has been prepared following guidance prepared by the Institute of Ecology and Environmental Management (CIEEM) and BS 42020:2013 Biodiversity: Code of practice for planning and development.

### **1.4 DATA SEARCH**

A 2km data search was undertaken with the Norfolk Biodiversity Information Service (NBIS). The following designated sites were noted within 500m of the proposed development site.

- The closest SAC, RAMSAR and NNR to the development is Roydon Common which is located 1.8Km to the north;
- The closest SSSI (Site of Special Scientific Interest) was Bawsey located 448m South-west;
- 1 County Wildlife Site, adjacent to the B1145s, located within 500m;
- The closest bat species were serotine, daubenton's, soprano pipistrelle, pipistrelle species and brown long-eared, all recorded 100m north-west of the site.

### **1.5 HABITAT**

The proposed development site comprised of largely bare ground with only remnant vegetation around the margins of the site, following clearance over the summer 2020. The southern and western boundaries were demarked by a close-board fence. Portacabins associated with the site were also present to the south along with mature oak and scots pine trees. Immediately to the east of the site a pond was situated, which apparently dries up each summer. Another pond was located to the north (taking treated sewage from adjacent properties) and a further better quality pond was located 70m to the north-west. The site was located within a network of habitats linking to a number of designated sites to the north.

## 1.6 **FAUNA**

### **Bats**

The data search noted serotine, daubenton's, soprano pipistrelle, pipistrelle specie and brown long-eared all within 100m of the development. The area generally was considered to have high potential for foraging and commuting bats due to the connectivity of the landscape features (ponds, woodland and hedgerows) which were in the vicinity of the site). There was no potential roosting bat habitat on the site that would be affected by the development proposals.

## 1.7 **Badgers**

The data search noted 1 record of Eurasian badger 1.03km south-west of the site. No direct evidence for badgers was noted in or adjacent to the proposed development area, although the surrounding habitat was considered to have the potential to support badgers.

## 1.8 **Water Voles/Otter**

The data search showed no existing records for water voles in the surrounding area. There was no direct evidence of water vole or otter on the site itself, however a flowing stream 50m to the north-east did have some potential for both species. Neither of the 2 adjacent ponds was considered to provide suitable habitat for water vole or otter.

## 1.9 **Hedgehog**

The data search identified 2 records with the closest 155m south-west. Due to the lack of grassland or vegetation cover, potential for foraging mammals such as hedgehog on the site. The piles of logs felled from the trees could provide potential hibernacula for some mammals.

## 1.10 **Birds**

The data search identified little owl and barn owl both 511m south. The proposed development area has limited potential to support breeding birds, a jackdaw was noted nesting in an owl box above the entrance to the site. The trees, scrub and hedgerows surrounding the development site could support breeding birds.

## 1.11 **Reptiles**

The data search identified no existing records for reptiles within 500m. As the site has been cleared, there is no terrestrial habitat for reptiles present. However, the stacked tree trunks on site could provide cover and shelter for animals in the locality by acting as an hibernacula (e.g. grass snake).

#### 1.12 **Amphibians**

The data search identified no existing records for amphibians within the 500m radius. Comments on the application from a local neighbour suggested newts (species unknown) are frequently found in the local gardens. 2 ponds occur within 20m of the application site. An HSI of both ponds has been undertaken to evaluate the potential likelihood for great crested newts to be present. One of the ponds appears to dry each summer (without the input of additional drainage water) and the other takes flow from sewage treatment plants of local properties. The potential for GCN to occur in both of these ponds is considered to be poor to below average. A further pond was located some 70m to the west. This was considered to have excellent potential for great crested newts to occur.

#### 1.13 **Invertebrates**

By its nature, the proposed development site is considered unlikely to support significant invertebrate populations.

#### 1.14 **IMPACT ASSESSMENT**

##### **Development proposals**

The development relates to the change of use from a residential garden to commercial use. This would involve the construction of an office building, a new static caravan, 2 new storage containers and parking for 5 cars.

#### 1.15 **POTENTIAL IMPACTS**

The potential impact on ecological resources resulting from the proposed development are as follows:

#### 1.16 **Potential impacts on designated sites**

No likely impact on designated sites (the closest designated site is 450m north-east) subject to surface run-off being dealt with in a satisfactory manner.

#### 1.17 **Potential impacts on protected/notable species**

Given that the site has already been cleared back to bare ground prior to the planning application, the impacts of this development on further habitats and protected species is considered to be limited (with the proviso of mitigation in relation to log piles and prevention of the development of further habitat).

#### 1.18 **Requirements for further survey**

Subject to the precautionary mitigation set out below, no further surveys are considered necessary.

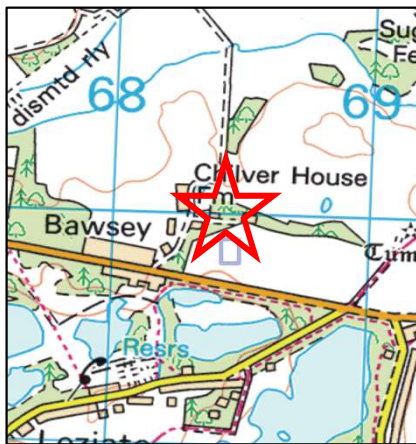
#### 1.19 **MITIGATION AND ENHANCEMENTS**

Precautionary mitigation and enhancement proposals (to comply with Planning Policy Guidance) include the following:

- Careful clearance of any remaining habitat on the site (including the log piles);
- Limitations in external lighting to prevent impacts on foraging bats using the adjacent habitat features;
- Net gain biodiversity enhancement could be achieved through the Incorporation of bat boxes and bird boxes on adjacent trees;
- Enhancement of the proposed pond to provide habitat for amphibians;

## 2.0 INTRODUCTION

- 2.1 The Borough Council of King's Lynn and West Norfolk have requested that an ecological assessment be submitted as part of the proposed application relating to the change of use from a residential garden to commercial development at Redgate Farm, Bawsey, Norfolk.
- 2.2 Philip Parker Associates Ltd have been instructed to undertake an ecological appraisal of the proposed development.
- 2.3 This report presents the results of a Preliminary Ecological Appraisal (PEA) that was undertaken on the 21<sup>st</sup> April 2021 by principal ecologist Philip Parker (2015-14467-CLS-CLS) and assisted by placement student Polly Godfrey.
- 2.4 The report has been prepared following guidance prepared by the Institute of Ecology and Environmental Management (CIEEM) and BS 42020:2013 Biodiversity : Code of practice for planning and development.
- 2.5 The development site is located at Redgate farm, Bawsey at Ordnance Survey Grid Reference TF 68391 20010 as shown on the following Ordnance Survey and aerial photograph extract.



**Figure 1 – Location plan**  
Crown Copyright and database rights  
2021 Ordnance Survey



**Figure 2 – Aerial photograph**  
Imagery © 2021 Gooley, Getmapping plc,  
Infoterra Ltd & Bluesky

## 2.6 NATIONAL CHARACTER AREA

The site falls within the north-west Norfolk National Character Area (NCA). This has a very open, rolling topography which contrasts with the surrounding coastal, fenland and other lowland NCAs. It extends from Downham Market on the edge of the Fens east towards Castle

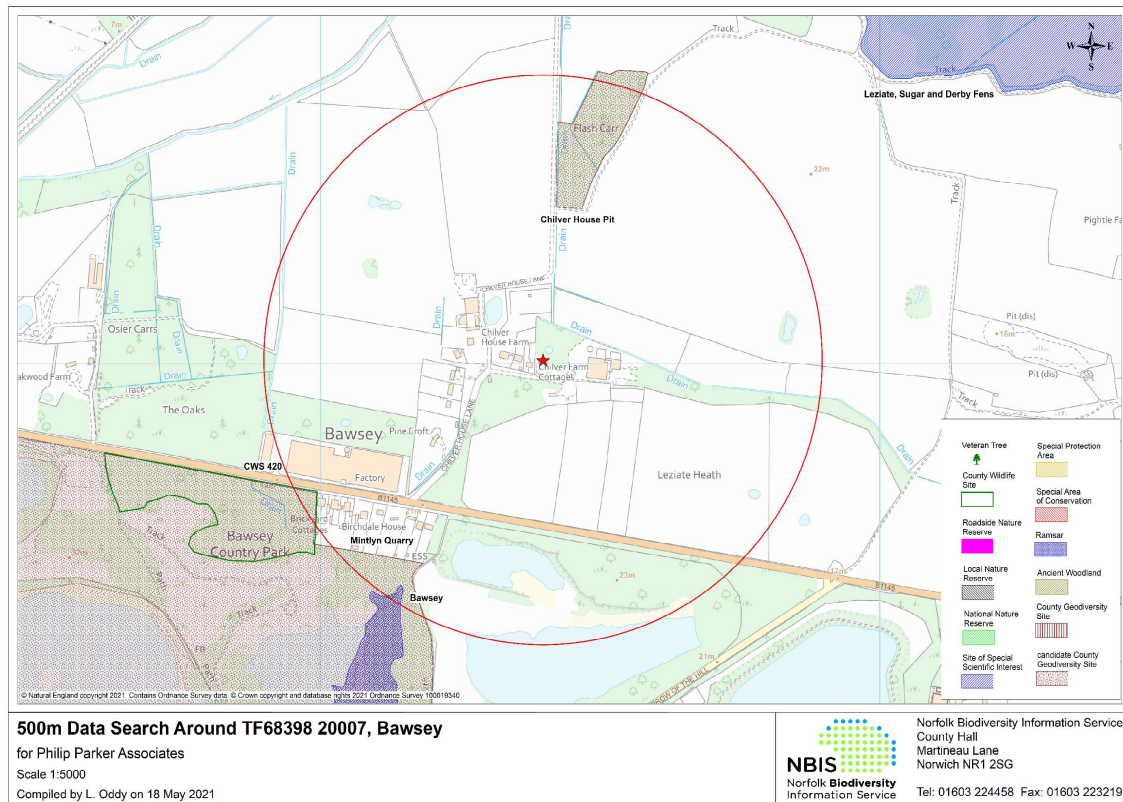
Acre, and skirts Fakenham before sweeping eastwards into a narrowing triangular area abutting the western edge of the Cromer Ridge.

- 2.7 This NCA is very important for agriculture with a large-scale arable and grassland landscape comprising extensive arable cropping and some areas of mixed farming, – the dominant livestock type is pigs. The name ‘Good Sands’, often applied to the eastern half of this area, derives from the fertility of the versatile light soils which distinguish the area from the low-fertility sands of Breckland to the south. Many of the villages are centred on greens or ponds and built from local vernacular materials – carstone and chalk in the west with flint becoming characteristic further east, reflecting the underlying geology. Aquifers underlying the NCA and extending well beyond its boundaries provide water both locally and regionally



### 3.0 DATA SEARCH

3.1 In order to assess whether there are any protected sites and species records for the development site and the surrounding area a 500m data search from the Norfolk Biodiversity Information Service (NBIS) was undertaken on the 14<sup>th</sup> May 2021. In addition, checks for designated sites outside the 500m data search area has been made on <https://magic.defra.gov.uk>



**Figure 3 - NBIS data search**

### 3.2 PROTECTED SITES

A summary of the protected sites is given below.

### 3.3 NATURA 2000 SITES

The Habitats Directive (Council Directive 92/43/EEC of 21 May 1992) requires EU Member States to create a network of protected wildlife areas, known as Natura 2000, across the European Union. This network consists of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), established to protect wild birds under the Birds Directive (Council Directive 79/409/EEC of 2<sup>nd</sup> April 1979). These sites are part of a range of measures aimed at conserving important or threatened habitats and species.

#### 3.4 **Special Area of Conservation (SAC)**

Special Areas of Conservation have been given special protection under the European Union's Habitats Directive. They provide increased protection to a variety of wild animals, plants and habitats and are a vital part of global efforts to conserve the world's biodiversity.

#### 3.5 **Special Protection Area (SPA)**

Special Protection Areas are strictly protected sites classified in accordance with Article 4 of the EC Directive on the conservation of wild birds (79/409/EEC), also known as the Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds, listed in Annex I to the Birds Directive, and for regularly occurring migratory species.

#### 3.6 **RAMSAR Sites**

Ramsar sites are wetlands of international importance designated under the Ramsar Convention.

3.7 Sites proposed for selection are advised by the UK statutory nature conservation agencies, or the relevant administration in the case of Overseas Territories and Crown Dependencies, co-ordinated through JNCC. In selecting sites, the relevant authorities are guided by the Criteria set out in the Convention. The UK also has a national Ramsar Committee composed of experts who provide further advice.

3.8 In the UK, the first Ramsar sites were designated in 1976. Since then, many more have been designated. Compared to many countries, the UK has a relatively large number of Ramsar sites, but they tend to be smaller in size than many countries. The initial emphasis was on selecting sites of importance to water birds within the UK, and consequently many Ramsar sites are also Special Protection Areas (SPA) classified under the Birds Directive. However, greater attention is now being directed towards the selection of Ramsar sites in UK Overseas Territories and Crown Dependencies; the first of these was designated in 1990. Both within the UK and overseas, non-bird features are increasingly taken into account, both in the selection of new sites and when reviewing existing sites.

#### 3.9 **Sites of Special Scientific Interest (SSSI)**

The SSSI/ASSI series has developed since 1949 as the national suite of sites providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features. These sites are also used to underpin other national and international nature conservation designations. Most SSSIs are privately-owned or managed; others are owned or managed by public bodies or non-government organisations. The SSSI/ASSI designation may extend into intertidal areas out to the jurisdictional limit of local authorities, generally Mean Low

Water in England and Northern Ireland; Mean Low Water of Spring tides in Scotland. In Wales, the limit is Mean Low Water for SSSIs notified before 2002, and, for more recent notifications, the limit of Lowest Astronomical Tides, where the features of interest extend down to LAT. There is no provision for marine SSSIs/ASSIs beyond low water mark, although boundaries sometimes extend more widely within estuaries and other enclosed waters.

3.10 Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs have been re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and the Nature Conservation (Scotland) Act 2004.

3.11 The closest SSSI to the development is Bawsey Pit SSSI, this is located 448m south-west.

### 3.12 **County Wildlife Sites**

County Wildlife Sites are second tier ecological sites, identified as they fulfil a range of select criteria for their ecological interest on a county level. They do not receive statutory protection but are usually offered some protection under local plan policy.

3.13 County Wildlife Sites Adjacent to B1145. This is an area of silver birch (*Betula pendula*) dominated woodland on an acid, sandy substrate, possibly an old heathland. Part of the wood is on a steep slope and a recreational trail runs through the site. The canopy is dominated by birch with occasional rowan (*Sorbus aucuparia*) and oak (*Quercus robur*). The woodland shows a good age structure. The ground flora is dominated by dense bracken (*Pteridium aquilinum*) with frequent wood sage (*Teucrium scorodonia*) and occasional honeysuckle (*Lonicera periclymenum*) and creeping soft-grass (*Holcus mollis*).

### 3.14 **PROTECTED SPECIES**

The following records for protected species were noted within the NBIS data search.

#### 3.15 **Bats**

- Pipistrelle species *Pipistrellus pipistrellus sensu lato* – 2 records, latest 2014 – closest record 100m north-west
- Soprano pipistrelle *Pipistrellus pygmaeus* – 2 record, latest 2014 - closest record 100m north-west
- Brown long-eared *Plecotus auritus* – 1 record, latest 2014 – closest record 100m north-west
- Serotine *Eptesicus serotinus* – 2 records, latest 2014 – closest record 100m north-west

- Daubenton's *Myotis daubentonii* – 1 record, latest 2013 – closest record 100m north-west

### 3.16 Mammals

- Brown hare *Lepus europaeus* – 3 record, latest 2014– closest record 511m south-east
- Hedgehog *Erinaceus europaeus* - 2 records, latest 2008 –closest record 155m south - west
- Badger *Meles meles* – 1 record, latest 2003 – closet record 1.03Km south-west
- Polecat *Mustela putorius* – 1 record, latest 2018 – closest record 511m south-west

### 3.17 Owls

- Barn owl *Tyto alba* – 1 record, latest 2009 – closest record 511m south
- Little owl *Athene noctua* - 1 record, latest 2006 – closest record 511m south

3.18 No records for amphibians and reptiles were noted on the data search.

## 4.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT SITE

### 4.1 GENERAL

The following description is based on the site visit undertaken on the 21<sup>st</sup> of April 2021 by principal ecologist Philip Parker (2015-14467-CLS-CLS) assisted by Polly Godfrey.

### 4.2 GENERAL SETTING

The proposed development site comprised of largely bare ground with only remnant vegetation around the margins of the site following clearance over summer 2020. The southern and western boundaries were marked by a close boarded fence. Portacabins associated with the site were also present to the south, along with mature oak and Scot's pine trees. Immediately to the east of the site a pond was located, which apparently dries up each summer. Another pond was located to the north (taking runoff from sewage treatments systems for several properties) and a further better-quality pond was located 70m to the north-west. The site is located within a network of habitats linking to the designated sites to the north.

4.3 Habitat descriptions are based on those given in the Phase 1 Handbook (JNCC).

### 4.4 Short Perennial (J1.3)

Around the edges of the site there were remnant areas of grass and short perennials consisting of ryegrass *Lolium spp*, Fescue *Fetuca spp*. Herbaceous species included poppy *Papaver rhoeas*, common nettle *Urtica dioica*, cleavers *Galium aparine*, hogweed *Heracleum sphondylium*, red deadnettle *Lamium purpureum*, ivy leaved speedwell *Veronica hederifolia*, smooth sow thistle, *Sonchus oleraceus* dandelion, lady's purse *Capsella bursa-pastoris* and creeping thistle *Cirsium arvense*.



Figure 4 – Small perennials growing around west edge of site



Figure 5 – Short perennials growing around northern edge of site

#### 4.5 Bare ground (J4)

The site was purchased in 2020 and was apparently covered in ruderal vegetation at the time of purchase. To make the site tidy prior to the planning application, the ruderal vegetation was cut to c300mm in August 2020 and at a later date was stripped of all of its vegetation. The site is now bare ground across the majority of the development site. The site contains rubble from recently removed sheds and from historic tipping of rubbish.



**Figure 6** – Bare ground, photo taken from the west of the site



**Figure 7** – Bare ground and remaining rubble spoil heap



**Figure 8** – Bare ground and pond to the east visible

## 5.0 FAUNA SURVEY

### 5.1 GENERAL

The potential scope of works, data search and habitats within the site have informed the basis of the preliminary ecological appraisal. The following protected and priority species have been considered further within this report:

- Bats
- Badger
- Water vole
- Otter
- Hedgehog
- Breeding birds
- Reptiles
- Amphibians

### 5.2 BATS

#### Legislation

In Britain, all bat species and their roosts are legally protected, by both domestic and international legislation, namely:

- The Wildlife and Countryside Act (1981) (as amended);
- The Countryside and Rights of Way Act, 2000 and
- The Conservation of Habitats and Species Regulations (2017).

5.3 This legislation makes it an offence amongst others to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

5.4 A bat roost is regarded as “any structure or place which any wild animal....uses for shelter or protection” As bats tend to reuse the same roosts, legal opinion is that the roost is protected whether or not the bats are present at the time.

5.5 Bats are also listed under the Natural Environment and Rural Communities Act (NERC, 2006). This is a list of habitats and species that are of principal importance for the conservation of

biodiversity in England. The list (including 56 habitats and 943 species) has been drawn up in consultation with Natural England and draws upon the UK BAP List of Priority Species and Habitats. The S41 list should be used to guide decision-makers such as local and regional authorities when implementing their duty: to have regard to the conservation of biodiversity in the exercise of their normal duties.

## 5.6 Existing records

Pipistrelle species, soprano pipistrelle, serotine, daubenton's and brown long-eared were all noted within the 500m NBIS data search. The closest record was for brown long-eared, located 100m north-west.

## 5.7 Survey Methodology

In summer, bats typically roost in trees and buildings. They feed along hedgerows, woodland edge, old pasture and over water. In winter, hibernation sites can include trees and buildings but more commonly underground structures such as caves and ice houses.

5.8 The Bat Mitigation Guidelines produced by English Nature (now Natural England) set out the timescales for survey work, as follows:

**Table 1 Timescales for bat survey**

SEASON	ROOST TYPE	INSPECTION	BAT DETECTOR AND EMERGENCE COUNTS
Spring (Mar – May)	Building	Suitable (Signs, perhaps bats)	Limited, weather dependent
	Trees	Suitable (Signs only)	Static detectors may be useful
	Underground	Suitable (signs only)	Static detectors may be useful
Summer (June – August)	Building	Suitable (signs and bats)	Suitable
	Trees	Difficult	Limited, use sunrise survey
	Underground	Suitable (signs only)	Rarely useful
Autumn (September – November)	Building	Suitable (signs and bats)	Limited, weather dependent
	Trees	Difficult	Rather limited, weather dependent; use sunrise survey
	Underground	Suitable (signs, perhaps bats)	Static detectors may be useful
Winter (December – February)	Building	Suitable (signs, perhaps bats)	Rarely useful
	Trees	Difficult (best for signs after leaves have gone)	Rarely useful
	Underground	Suitable (signs and bats)	Static detectors may be useful

## 5.9 Building survey Methodology

There were no buildings on site that could support roosting bats.



### 5.10 Tree survey Methodology

There were no trees on-site which could offer bat roosting potential. A few of the surrounding trees could have roosting potential but none of these would be affected by the proposed development

### 5.11 Suitability of structures/trees for bat roosting potential

The potential of the trees to support roosting bats and the general habitat for the potential for foraging bats has been assessed against Table 4.1 of the Bat Survey Guidelines 2016 (see Table 3 below).

**Table 2 Suitability of structures for bat use**

Suitability	Description of roosting habitats	Commuting and foraging habitat
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree 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 status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree 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.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, treelined watercourses and grazed parkland. Site is close to and connected to known roosts.
Confirmed roost	Bats discovered roosting within the building/tree or definitive evidence to suggest they do so.	

5.12 On the basis of the above, it is considered that the site had negligible potential for roosting bats. The site itself is well connected to the surrounding area through the stream and trees behind the site. Also, the site is nearby to Sites of Special Scientific Interest Sugar Fen and Leziate Fen, along with Pott Row Wood, Bawsey pits and Roydon Common. Due the connectivity of the site and location in relation to these key wildlife sites, it is considered that there is high commuting and foraging potential for the site.

### 5.13 **BADGERS**

#### **Legislation**

Badgers are protected under Appendix III of the Bern Convention and are protected in Britain under the Protection of Badgers Act 1992, and under Schedule 6 of the Wildlife and Countryside Act 1981.

5.14 A badger sett is defined in the legislation as “any occurrence which displays signs indicating current use by a badger” and includes seasonally used setts.

5.15 Badgers can be disturbed by work near the sett even if there is no direct interference or damage to the sett. A licence may be required for any working within 30m of a badger sett. The licensing authority is Natural England.

### 5.16 **Existing records**

The NBIS data search noted 1 record of Eurasian badger 1.03km south-west of the site.

### 5.17 **Survey methodology**

The survey involved a detailed search of the site and immediate areas to identify evidence of badger residence, foraging or territorial activity in the vicinity of the paddock. Particular emphasis was placed on the location of badger setts. Paths and signs of territorial activity such as dung piles and latrines were searched for.

### 5.18 **Survey results**

No evidence of badger activity was noted on site; it should be noted that the survey did not extend a significant distance off site as these areas were not in the applicant’s ownership. The habitat surrounding the site (woodland and farmland) does however have good potential to support badger.

## 5.19 WATER VOLE

### Legislation

Water vole *Arvicola amphibius* is protected through its inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This section of the Act protects water vole places of shelter from damage and disturbance as well as protecting the water vole itself. Legal protection makes it an offence to intentionally:

- Damage, destroy or obstruct access to any structure or place that water voles use for shelter or protection;
- Kill, injure or take water voles whilst they are using shelter.

## 5.20 Existing records

No existing records of water vole were noted on the NBIS 500m data search.

## 5.21 Survey Methodology

Although a detailed survey was not undertaken during the preliminary assessment, the area on and immediately adjacent to the site was assessed for suitable habitat such as banks for burrows, water edge berms, vegetation cover, suitable water depth for swimming and diving and food source. Any obvious signs of the presence of water vole signs such as latrines, piles of eaten vegetation (feeding stations), burrows and runs were also noted.

## 5.22 Survey Results

The site had limited potential to support water vole and as the ponds to the east apparently dries out in the summer and the pond to the north takes treated sewage. There was a stream to the north-east of the site (see Figure 9). No obvious evidence of water vole was noted in the closest section and the potential is considered limited due to the limited vegetation on the banks and the level of shading (see Figure 9).



Figure 9 – Stream behind the proposed site

## 5.23 OTTER

### Legislation

Otters are protected both under the Wildlife and Countryside Act 1981 and by the Conservation (Natural Habitats, &c.) Regulations 2017. Otters and their resting places are fully protected, and it is an offence to:

- 1) Disturb otters in their breeding or resting places;
- 2) Damage, destroy or obstruct their breeding or resting places.

5.24 Otter shelters are legally protected whether or not an otter is present.

## 5.25 Existing records

No records for otter were noted within the NBIS 500m data search.

## 5.26 Survey methodology

The habitat on the site was searched for evidence of otter including laying up sites, commuting routes under cover, and potential feeding sites.

## 5.27 Survey results

There was no potential for otter to occur on or adjacent to the site. There is a stream to the north-east but no obvious evidence of otter was noted in the closest section.

## 5.28 HEDGEHOG

### Legislation

Hedgehogs *Erinaceus europaeus* listed as a UK 'Priority Species' under S41 of the NERC Act (2006) they are partially protected under Schedule 6 of the Wildlife and Countryside Act (1981), making it illegal to trap or kill them without a licence. They are known to be in serious decline in the countryside at the moment.

## 5.29 Existing records

The NBIS 500m data search identified 2 records with the closest 155m south-west.

## 5.30 Survey results

No evidence of hedgehogs was noted during the survey and there was little potential due to the lack of cover. However, the close proximity and connectivity to the surrounding habitat and suitable habitat on site (grassland and hedgerows) means that there is potential for hedgehog to occur in the area surrounding the site.

### 5.31 BREEDING BIRDS

#### Legislation

The majority of breeding birds in Britain are protected under the Wildlife and Countryside Act 1981 (plus amendments) from disturbance whilst nesting (generally from late April to the end of August).

5.32 Some birds such as barn owls receive special protection under Schedule 1 of the Wildlife and Countryside Act 1981 (plus amendments). This makes it an offence (amongst others) to intentionally or recklessly disturb the bird whilst building a nest, or when such a bird is in, on or near a nest containing eggs or young, or intentionally or recklessly disturb dependent young.

5.33 An assessment was made of the site's suitability to support breeding and wintering bird species. Nesting birds will utilise a broad range of habitats, including built structures, trees, scrub, isolated shrubs, dense herbaceous vegetation (terrestrial and aquatic) and open grassland. All bird species and evidence of breeding activity (active or inactive) observed on site was recorded.

#### 5.34 Existing records

The NBIS 500m data search identified little owl and barn owl, both 511m south.

#### 5.35 Survey results

The following birds were noted during the course of the survey: barn owl *Tyto alba*, robin *Erithacus rubecula*, nuthatch *Sitta europaea*, blue tit *Cyanistes caeruleus*, chiffchaff *Phylloscopus collybita*, blackcap *Sylvia atricapilla*, blackbird *Turdus merula*, chaffinch *Fringilla coelebs*, pheasant *Phasianus colchicus* and jackdaw *Corvus monedula*.

5.36 No direct evidence of breeding birds was noted on the proposed development site with the exception of a jackdaw which was nesting in an owl box, located on a tree close to the entrance to the site.

### 5.37 REPTILES

#### Legislation

The reptiles occurring in Norfolk (common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix*, adder *Vipera berus*) are all given limited legal protection under part of Section 9 (1) and all of Section 9 (5) of the Wildlife and Countryside Act 1981 (as amended). This means that it is an offence to intentionally kill, injure and offer for sale all of these reptiles.

#### 5.38 Existing records

No reptiles were noted within the 500m NBIS data search.

**5.39 Survey methodology**

An assessment was made of the site's suitability to support reptile populations. Key habitat features include: tussocky/patchy grassland; scrub edge; linear watercourses; ponds; compost heaps; brush piles and rubble/soil heaps. Linkage to suitable habitat within the surrounding landscape will increase the potential for reptiles to occur, although populations can occur within isolated/fragmented habitats even within urban areas.

**5.40 Survey results**

The majority of the proposed development site comprised of bare ground with a limited area of sparse grassland and short perennials tight to the western and northern margins. On the northern boundary, logs from felled trees were stacked up which could create hibernacula for reptiles.

**5.41 AMPHIBIANS**

**Legislation**

Great crested newts *Triturus cristatus* and their habitat (aquatic and terrestrial) are afforded full protection by The Wildlife and Countryside Act 1981 (Section 9, Schedule 5; and as amended) and The Conservation (Natural Habitats & c.) Regulations 1994. It is an offence to:

- 1) Disturb, injure or kill recklessly a great crested newt;
- 2) Disturb or destroy recklessly great crested newt habitat (a breeding site or place of shelter).

5.42 Great crested newt is also listed in the National Biodiversity Action Plan.

**5.43 Existing records**

No existing records were noted on the NBIS 500m data search

**5.44 Survey methodology**

Great crested newts utilise ponds for breeding and grassland areas for foraging. Newts are normally present in the breeding ponds between March and June and survey techniques to demonstrate presence or absence include torch survey, bottle trapping, netting and egg search. It is also possible to undertake a Habitat Suitability Index assessment (HSI), which assesses the potential of a pond to support great crested newts by looking at a range of environmental factors.

5.45 Recent development in eDNA technology means that it is possible to test pond water for the presence of great crested newt DNA between mid-April to the end of June. Environmental DNA (eDNA) is collected from the environment in which an organism lives rather than from the animal

themselves. In aquatic environments, animals such as great crested newts shed cellular material into the water by reproduction, saliva, urine, faeces or skin cells. The DNA will be present in the water for several weeks and can be collected through a sample which is then analysed to detect if the target species of interest have been present in the water body

#### 5.46 **Survey results**

P1 and P2 were located within 10m of the boundary of the site itself. A HSI has been undertaken of both of these ponds. The detail of the results can be found in Table 4 below. P1 was considered to have a poor HSI, largely due to water quality and reported lack of permanence during the summer months. P3 is 120m from the site which is within distance of foraging and commuting newts and amphibians and had excellent potential for great crested newts to occur (subject to absence of fish). The other 5 ponds (closest 365m) in the vicinity were not accessible for inspection.

5.47 The site itself was bare ground with a few short perennials along the boundary which in its current state provides little potential for foraging amphibians. The log piles to the north do however provide some potential cover and hibernation site.



**Figure 10** – Pond 1 to the east of the site



**Figure 11** – Pipe draining into Pond 2 to the north of the site



**Figure 12** – Pond 3 on a neighbours property to the west of the site

**Table 3 Great Crested Newt Habitat Suitability Index Assessment HSI**

Criteria with \* are assumed

	<b>Pond Area</b>	0.05 (63 m2)	0.05 (12 m2)	95 (947m2)
	<b>Shade</b>	1 (10%)	1.00 (25%)	(20%)
	<b>Pond Count</b>	0.8 (7 ponds)	0.8 (7 ponds)	9 (9 ponds)
	<b>Tenth Root</b>	0.46	0.547	839





## **6.0 EFFECTS OF THE PROPOSED DEVELOPMENT WORKS ON THE SPECIES PRESENT**

### **6.1 DEVELOPMENT PROPOSALS**

The development proposals are shown on the following Peter Humphrey Associates Drawing (6370/EX01).

6.2 The development proposals will result in the following:

- Change of use from residential garden to commercial use. This will result in the construction of an office building, retained caravan, 3 storage containers and parking for 6 cars. The necessary site clearance work required for this development to take place had largely been completed prior to the PEA survey being undertaken.

### **6.3 IMPACTS ON PROTECTED SITES**

Subject to there being no run-off into the adjacent water course, no impact from the proposed development on locally designated sites is envisaged subject to surface run-off being dealt with in a satisfactory manner.

### **6.4 IMPACTS ON PROTECTED SPECIES**

As the site has been cleared of vegetation pre-planning objection, the impacts on protected species are from the site when inspected on the 21<sup>st</sup> April 2021:

- No loss of bat roosting or foraging habitat;
- No loss or impact on bat roosting or foraging habitat (it is understood that there is no external lighting associated with this development);
- If the site is allowed to re-vegetate, species could re-occupy, and re-clearance could later impact on reptiles, amphibians and small mammals.

### **6.5 REQUIREMENTS FOR FURTHER SURVEYS**

Given the state of the habitat and appropriate mitigation, no further surveys are considered necessary.

### **6.6 LICENSING**

A derogation licence (a European Protected Species Licence) may be required from Natural England where the proposed development would result in an otherwise un-lawful activity. This includes:

- a. The killing or disturbance of a European Protected Species;
- b. Damage, destruction or obstruction of any place used by a European Protected Species for shelter or protection.

- 6.7 Any licence application will take a minimum of 30 working days to process and can only be processed once any relevant permissions have been issued. The granting of the relevant permissions to allow the works to proceed is no guarantee that a licence will be granted.
- 6.8 Following changes to the Habitats Regulations in 2007, the threshold to which a person commits an offence of deliberately disturbing a European Protected species has changed, such that the disturbance is likely to affect;
- (i) the ability of any significant group of animals of that species to survive, breed, or rear or nurture their young, or
  - (ii) the local distribution or abundance of that species
- 6.9 Further changes took place in January 2009, but these generally relate to increased monitoring of licensed mitigation works.
- 6.10 In April 2015, a new Low Impact Class Licence (now renamed the Bat Mitigation Class Licence) was introduced which covers works that impact small numbers of common bat species. Such licences are normally granted within 10 working days. Philip Parker is a registered consultant to work under this licence.
- 6.11 Licences cannot be issued on a precautionary basis and normally requires the benefit of supporting activity surveys to categorise the nature of the roost.
- 6.12 No derogation licence is likely to be required with respect to the proposed development as long as the site is maintained in its currently bare state.

## 7.0 MITIGATION /ENHANCEMENT STRATEGY

7.1 The proposed strategy is to mitigate the impacts of any development on the various species as set out above. In addition, proposals are also put forward to enhance the biodiversity of the site via the development. The delivery of biodiversity enhancement of development sites is promoted by National Planning Policy Framework and Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006.

### 7.2 BATS

The following table is based on the guidance within Table 8 given in the Bat Mitigation Guidelines. Although there should be no impact on bats it is recommended that enhancement is provided in line with the table section toned orange.

**Table 4 Guidelines for proportionate mitigation**

Roost status	Mitigation/compensation depending on the impact
<p>Feeding perches of common/rarer species</p> <p style="text-align: center;">↓</p> <p>Individual bats of common species</p> <p style="text-align: center;">↓</p> <p>Small numbers of common species. Not a maternity site</p>	<p>Flexibility over provision of bat boxes, access to new buildings etc. No conditions about timing or monitoring</p>
<p>Feeding perches of Annex II species</p> <p style="text-align: center;">↓</p> <p>Small numbers of rarer species. Not a maternity Site</p>	<p>Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements. Minimal timing constraints or monitoring requirements</p>

Roost status	Mitigation/compensation depending on the impact
Hibernation sites for small numbers of common/rarer species ↓	Timing constraints. More or less like-for-like replacement. Bats not to be left without a roost and must be given time to find the replacement. Monitoring for 2 years preferred.
Maternity sites of common species Maternity sites of rarer species ↓	
Significant hibernation sites for rarer/rarest species or all species assemblages Sites meeting SSSI guidelines ↓	Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost until replacement completed, and usage demonstrated. Monitoring for at least 2 years.
Maternity sites of rarest species	Oppose interference with existing roosts or seek improved roost provision. Timing constraints. No destruction of former roost until replacement completed and significant usage demonstrated. Monitoring for as long as possible.

### 7.3 Timing of the work

The Bat Mitigation Guidelines present the optimum seasons for works involving various types of bat roosts.

**Table 5 Optimum seasons for undertaking work in different types of roost**

Bat usage of the site	Optimum period for carrying out works (some variation between species)
Maternity	1 <sup>st</sup> October – 1 <sup>st</sup> May
Summer (not a proven maternity site)	1 <sup>st</sup> September – 1 <sup>st</sup> May
Hibernation	1 <sup>st</sup> May – 1 <sup>st</sup> October
Mating/swarming	1 <sup>st</sup> November – 1 <sup>st</sup> August

7.4 There need be no restriction on timing of the works in respect of bats.

### 7.5 New Bat Roosting Provision

Consider erecting 3 Kent boxes on one of the trees within the ownership close to the site boundary.



Figure 14 – Kent bat boxes on a tree

## 7.6 Lighting

The surrounding area has high potential for foraging and commuting bats. It is understood that there will be no external lighting associated with the development. However, if any lighting is required, the following measures should be undertaken.

- Any external lighting should be limited to only that absolutely necessary for safety purposes;
- The brightness of the lighting should be as low as possible and kept at a low level and directed away from the boundary vegetation and any existing/new bat boxes/roosting areas;
- Narrow spectrum lighting with no UV light is preferred;
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats;
- Lighting on sensors should not be so sensitive that foraging bats set them off and should be on short timers (1 minute).

## 7.7 BREEDING BIRDS

Bird nests, when occupied or being built, receive legal protection under the Wildlife and Countryside Act 1981 (as amended). Any clearance of potential bird nesting habitat should be undertaken outside the bird nesting season, which is generally seen as extending from March to the end of August, although it may extend for longer depending on local conditions. If there is no alternative to carrying out work in these areas during this period, then suitable nesting locations should be carefully inspected for evidence of nests prior to works commencing. If occupied nests are present, then works must stop in the area and only recommence once the nest becomes unoccupied of its own accord.

## 7.8 REPTILES/ AMPHIBIANS/SMALL MAMMALS

As the site has already been cleared, the potential for disturbance of terrestrial habitat for protected reptiles, amphibians and mammals is considered limited. To ensure that this remains the case, the following recommendations are for the use of the site:

- a. Keep the working area of the site clear of or vegetation or other structures which protected animals might use for cover;
- b. If any parts of the site are not required for the development, allow the development of vegetation and cover piles. This should be separated from the development area by appropriate fencing;
- c. Clearance of any remaining piles of vegetation debris, general debris and rough vegetation should take place outside the reptile hibernation period (typically October – March), in a careful and sensitive manner, by hand, to allow for any animals present to leave the area of their own accord (see also hedgehogs and nesting birds);
- d. All waste shall be placed directly into skips or designated areas so that debris piles and therefore potential refuge areas are not created;
- e. Piles of loose sand or other granular materials into which reptiles could bury are not to be left around the site. All such materials should ideally be delivered in bags and kept in such bags until required for use. Bags should be stored on pallets. If it is essential that they are delivered loose, they should be retained in designated areas which are not accessible to reptiles;
- f. All trenches will be left covered. They should be checked in the morning before they are filled in. All trenches are to be provided with a small mammal ramp to allow any animals that get trapped to escape.

7.9 If any animals are discovered during the works, they will be moved to a safe location away from the development site (location to be agreed).

## 7.10 Pond enhancements

Approach the owner of the adjacent pond to see if enhancement works can be undertaken to the adjacent pond.

## 7.11 ADVISORY NOTE

The report presents a true reflection of habitats present and wildlife usage at the site at the time of the survey and remain valid for a period of 12 months from the date of this report. Even given the precautions set out above, it is always possible that protected species could be encountered at any time. In such a case, work should cease immediately and either Natural England or Philip Parker Associates Limited (Tel: 01553 630842) be contacted for further advice.

## 8.0 REFERENCES

- **Altringham J D, 2003**, British Bats, Collins New Naturalist
- **Bat Conservation Trust, 2016**, BCT Bat Survey Guidelines Third edition
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**Philip Parker Associates Ltd  
White Row Cottage  
Leziate Drove  
Pott Row  
King's Lynn  
PE32 1DB**

**Tel : 01553 630842 Mob : 07850 275605  
Email : [admin@philipparkerassociates.co.uk](mailto:admin@philipparkerassociates.co.uk)**