4034-1906-PEA_v1.0

Contract No: 1920/03/1

# Preliminary Ecological Appraisal

## Land at Squires Farm Industrial Estate, East Sussex

*Scoping Report to:*
Pyrite Industries Ltd

L. D. Brady
2nd May 2019

CALUMMA
Ecological Services

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# Contents

# 1. Summary

*Background*

1.1 Land at Squires Farm Industrial Estate has been proposed as the location of a new development project.

1.2 Calumma Ecological Services was commissioned to undertake a preliminary ecological assessment of the site and advise on the need for additional survey work and mitigation.

*Priority Habitats*

1.3 The proposed development site is characterised by hardstanding and bare ground.

1.4 A hedgerow with emergent trees is situated along the western and northern boundaries. Bluebells grow along the base of the hedgerow within the proposed development area.

1.5 Additional survey work is not considered necessary.

*Birds*

1.6 Structures such as trees and shrubs along the boundary of the proposed development site offer potential nesting habitat for songbirds. There was no evidence of nesting barn owl.

1.7 Care must be taken to ensure that nesting birds are not disturbed during clearance/construction works.

*Bats*

1.8 Several of the trees that are located along the site boundary display various holes and flaking bark etc. These features offer potential roosting habitat for bats. Bats are also likely to forage/commute along the boundary of the site.

1.9 If any trees are proposed for disturbance or removal, further survey work for bats is recommended.

*Reptiles*

1.10 Available habitat within the proposed development site offers negligible potential for reptiles.

1.11 Additional reptile survey work is not considered necessary.

*Amphibians*

1.12 Great crested newt has been recorded from the local area.

1.13 At least one pond occupied by great crested newt is known to be located within 180 m of the site boundary.

1.14 The scale of proposed development and distance from closest pond means that there will not be a significant negative impact on populations of great crested newt.

1.15 Precautionary mitigation is recommended.

*Badgers*

1.16 Mammal holes observed within the proposed development site are likely to be rabbit and/or fox.

1.17 No evidence of badger was observed within the site.

1.18 Additional survey work for badger is not considered necessary.

*Dormouse*

1.19 Areas proposed for construction works within the development site do not include habitat that is considered suitable for dormouse.

1.20 Providing adjacent hedgerows are no disturbed, additional survey work for dormouse is not considered necessary.

*Water Vole*

1.21 No waterbodies are located within the site boundary.

1.22 Proposed development work at the site will have no significant impact on populations of water vole that may occur in the locality and additional survey work is not considered necessary.

*Invertebrates*

1.23 Available habitat within the proposed development area is considered to offer only limited opportunities for widespread invertebrates.

1.24 Additional survey work for invertebrates is not considered necessary.

*Other Considerations*

1.25 Hedgehogs are likely to forage and shelter in or close to the boundary of the proposed development site.

1.26 On the basis of the site assessment it is not expected that other protected species will be found to be present on the site.

## 2. Site Location and Assessment

| | |
|---|---|
| **Site Name:** | Land at Squires Farm Industrial Estate - *the site*; Fig. 2.1 |
| **Grid Reference:** | TQ 508 184 |
| **County:** | East Sussex |
| **Planning Authority:** | Wealden District Council |
| **Natural Area:** | Low Weald and Pevensey |

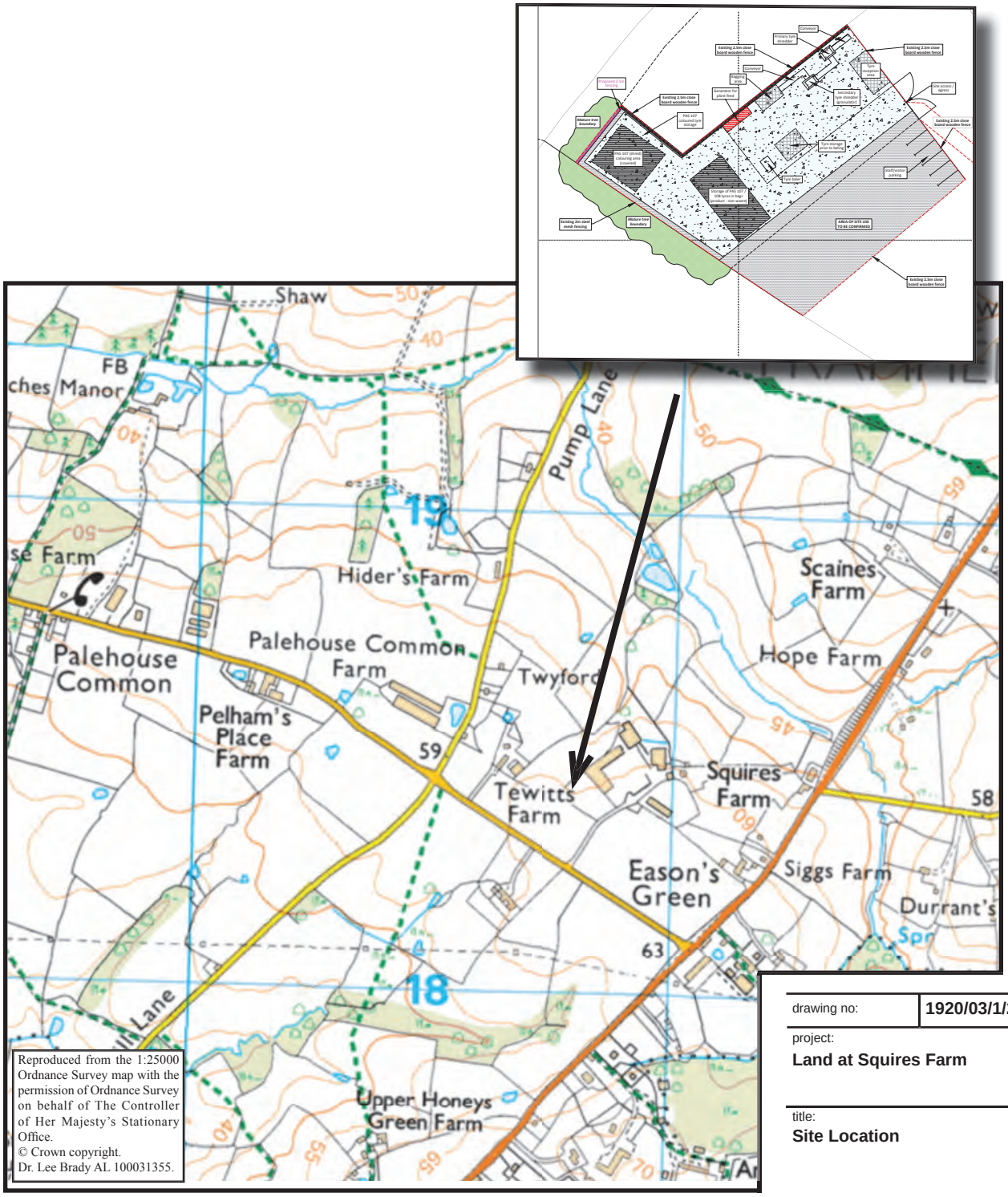
| | |
|---|---|
| **Client:** | Pyrite Industries Ltd |
| **Proposed Disturbance:** | Change of use of land and operation of an end-of-life tyre recycling facility comprising the shredding, colouring and baling for recovery together with enabling works. |
| **Survey Request:** | Preliminary Ecological Appraisal |

| | |
|---|---|
| **Surveyors:** | Lee Brady PhD, BSc (Hons), MCIEEM<br>*For and on behalf of Calumma Ecological Services* |

| | |
|---|---|
| **Assessment Period:** | 18th April 2019 |
| **Limitations:** | This assessment did not include detailed surveys of protected species. Scoping surveys assess likely presence of species on a site and recommend follow-up survey work, management and mitigation as appropriate. This report may need to be updated if new information becomes available (e.g. ponds not previously known to be present). |
| **Reliance:** | Information, including any survey data, contained within this report must only be relied upon for a maximum period of one year from the date of the report. |

# Fig. 2.1 Land at Squires Farm Industrial Estate, Uckfield, East Sussex (TQ 508 184)

Location of study site.

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project:
**Land at Squires Farm**

title:
**Site Location**

| | |
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| scale: **N.T.S.** | date: **May 2019** |

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# 3. Legal Protection

The legal protection of animals and plants in the United Kingdom is governed by several different regulations and conventions. Principally, these include:

- The Wildlife & Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 and
- The Habitats and Species Directive (92/43/EC) enacted through the Conservation of Habitats and Species Regulations 2017. Development works affecting listed species are subject to a licence granted by an appropriate authority. This authority is currently Natural England.
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Hedgerow Regulations 1997

Species and habitats receive legal protection that may prohibit sale, disturbance and/or killing/injury.

## 3.1 Flora

A number of plant species are protected under Section 13 of the amended 1998 Wildlife and Countryside Act of 1981. It is an offence to intentionally pick, uproot or destroy any wild plant listed in Schedule 8 of the Act. The list includes both higher plants including several of the rarer orchids and lower plants including several mosses and lichens.

## 3.2 Birds

All wild birds (birds in a wild state resident in or visiting Great Britain) and their nests and eggs are protected under the Wildlife & Countryside Act 1981. Particular emphasis is given to the protection of breeding birds. With certain exceptions, it is an offence to intentionally kill, injure or take wild birds, take, damage or destroy the nest of wild birds while in use or being built, take or destroy the eggs of wild birds, disturb wild birds listed in Schedule 1 when nest building or at a nest containing eggs or young, or disturb dependent young of wild birds.

## 3.3 Bats

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence for anyone to intentionally kill, injure or handle a bat, to possess a bat (whether live or dead), deliberately disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter.

## 3.4 Reptiles

All native reptiles are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (WCA 1981). It is an offence for anyone to intentionally kill or injure a ‘widespread’ reptile species

(viviparous lizard, slow-worm, grass snake or adder), or sell or offer for sale without a licence.

The sand lizard and smooth snake, their breeding sites or resting places (any structure that may offer refuge) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010. It is an offence for anyone intentionally to kill, injure or handle either of these two species, to possess an animal (whether live or dead), deliberately disturb a sheltering animal, or sell or offer an animal for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by sand lizards and smooth snakes for shelter.

### 3.5 Amphibians

All native amphibians are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (WCA 1981). It is an offence for anyone to sell or offer for sale any native amphibian species without a licence.

The great crested newt and natterjack toad, their breeding sites (typically ponds) or resting places (typically a terrestrial habitat that offers refuge) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010. It is an offence for anyone to intentionally kill, injure or handle either of these two species, to possess an animal (whether live or dead), deliberately disturb a sheltering animal, or sell or offer an animal for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by natterjack toads or great crested newts for shelter.

### 3.6 Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure or take badgers or to interfere with a badger sett. The term ‘badger sett’ is normally understood to mean the system of tunnels and chambers, in which badgers live, and their entrances and immediate surrounds. The 1992 Act specifically defines a sett as “any structure or place which displays signs indicating current use by a badger”.

### 3.7 Hazel Dormouse

Individual animals, their breeding sites or resting places (nests) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence for anyone intentionally to kill, injure or handle a dormouse, to possess a dormouse (whether live or dead), deliberately disturb a dormouse, or sell or offer a dormouse for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by dormice for shelter, whether they are present or not.

### 3.8 Water Vole

Until the 6th April 2008 water voles received partial protection under the Wildlife & Countryside Act 1981 (as amended). This included protection from killing or taking by certain prohibited methods. Breeding and resting places (burrows) were fully protected from destruction or obstruction; it was also an offence to disturb them in these places. From April 2008 water voles and their resting places are fully protected in England. It is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places. It continues to be an offence to disturb them in their breeding or resting places.

### 3.9 Invertebrates

A small number of invertebrates including beetles, crickets, butterflies and moths are protected under Section 9, Schedule 5 of the amended 1998 WCA 1981 against deliberate killing, injuring and taking. Other species receive partial protection under the same act. For example, it is an offence for anyone to sell or offer for sale a stag beetle without a licence. The stag beetle is also listed as a Priority Species on the UK BAP.

### 3.10 The National Planning Policy Framework

The National Planning Policy Framework (2018) (NPPF) has reformed the planning system, to make it less complex and more accessible, to protect the environment and to promote sustainable growth. Regarding 'Conserving and enhancing the natural environment', when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying a number of principles.

### 3.11 Miscellaneous Planning Policy

Previous planning policy refers to UK Biodiversity Action Plan (BAP) habitats and species as being a material consideration in the planning process. Although such habitats and species remain material considerations in the planning process, they are now described as *Species and Habitats of Principal Importance for Conservation* in England, or simply priority habitats and priority species. The list of habitats and species is still derived from Section 41 of the Natural Environmental and Rural Communities (NERC) Act 2006. Note that as was previously the case when it was a BAP priority species, hen harrier continues to be regarded as a priority species although it does not appear on the Section 41 list.

# 4. Literature Review

## 4.1 MAGIC Geographic Information System

http://magic.defra.gov.uk

### 4.1.1 Habitat Designations

Nearby priority habitat designations are illustrated in Appendix I.

Information available through MAGIC indicates that habitat within the proposed development site has no specific designations associated with it.

Other priority habitats located within the local area include:

- Ancient and Semi-Natural Woodland
- Deciduous woodland
- Good Quality Semi-Improved Grassland

### 4.1.2 Statutory Designated Areas

The locations of nearby designated areas are illustrated in Appendix II.

Information available through MAGIC indicates that land within the proposed development site has no specific designations associated with it.

Other statutory designated sites located nearby include:

- Park Corner Heath SSSI (3.5 km south)
- Buxted Park SSSI (4.1 km north west)
- Plashett Park SSSI (4.6 km south west)

### 4.1.3 Site of Special Scientific Interest Impact Risk Zone

Natural England has created a tool that is accessed via MAGIC to determine the risk of development impact on designated areas (including SSSIs, SACs, SPAs and Ramsar sites). Available information indicates that the proposed development **is located** within a SSSI risk zone.

The SSSI risk tool provides guidance on when the Local Planning Authority should consult Natural England (Table 4.1). Natural England will then provide advice on any potential impacts and how these might be avoided or mitigated. Available information indicates that the Local Planning Authority **will not** be required to consult Natural England over possible impacts to nearby designated areas.

### 4.1.4 European Protected Species Licences

Information available via MAGIC reveals EPS mitigation licences have been obtained for bats within 1 km of the proposed development site. The closest EPS licence was issued in 2013.

| Planning Category | Consult NE if Proposals Include |
|---|---|
| All Planning Applications | n/a |
| Infrastructure | Airports, helipads and other aviation proposals. |
| Wind & Solar Energy | n/a |
| Minerals, Oils & Gas | n/a |
| Rural Non Residential | n/a |
| Residential | n/a |
| Rural Residential | n/a |
| Air Pollution | Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t. |
| Combustion | General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. |
| Waste | n/a |
| Composting | n/a |
| Discharges | n/a |
| Water Supply | n/a |
| Notes | n/a |

**Table 4.1.** SSSI Risk Assessment for proposed development site: When to consult Natural England.

## 4.2 Records Searches

Available records for protected species have been obtained from Sussex Biodiversity Record Centre. A summary of available information is included in Appendix III. Reports produced in connection with other nearby development projects were also reviewed where available.

*Note that the availability of records is directly related to survey effort. A lack of records does not necessarily indicate the absence of protected species.*

### 4.2.1 Non Statutory Designated Sites

The proposed development area is not located within any non statutory designated sites.

Other non statutory designated sites located nearby include:

Barnet Wood Common LWS (500 m East)

### 4.2.2 Protected Species

Species protected against killing/injury that have been recorded in the locality are listed below:

*Plants*

Bluebell

*Reptiles*

Grass Snake

*Amphibians*

Great Crested Newt

*Birds*

Red Kite

Merlin

Hobby

Peregrine

Green Sandpiper

Barn Owl

Kingfisher

Fieldfare

Redwing

Common Crossbill

*Mammals*

Hazel Dormouse

Common Pipistrelle Bat

Soprano Pipistrelle Bat

Brown Long-eared Bat

Daubenton's Bat

Serotine Bat

# 5. Proposed Development and Summary Site Description

## 5.1 Site Location

The proposed development site is located in the footprint of an existing industrial estate within the Low Weald and Pevensey Natural Area (English Nature, 1998). The site is accessed directly from the Squires Farm Industrial Estate.

## 5.2 Proposed Development

The proposed development includes change of use of land and operation of an end-of-life tyre recycling facility comprising the shredding, colouring and baling for recovery together with enabling works. The development area is ~ 0.19 Ha.

The development site boundary is illustrated in Fig. 5.1.

## 5.3 Aquatic Habitat

Ponds located within the local area have been identified using the following sources:

- Ordnance Survey (https://www.bing.com/maps)
- MAGIC (http://magic.defra.gov.uk)
- Google Earth

No ponds are located within the site boundary. Available information indicates that one pond is located within 180 m of the site boundary and six ponds are located within 500 m of the site boundary.

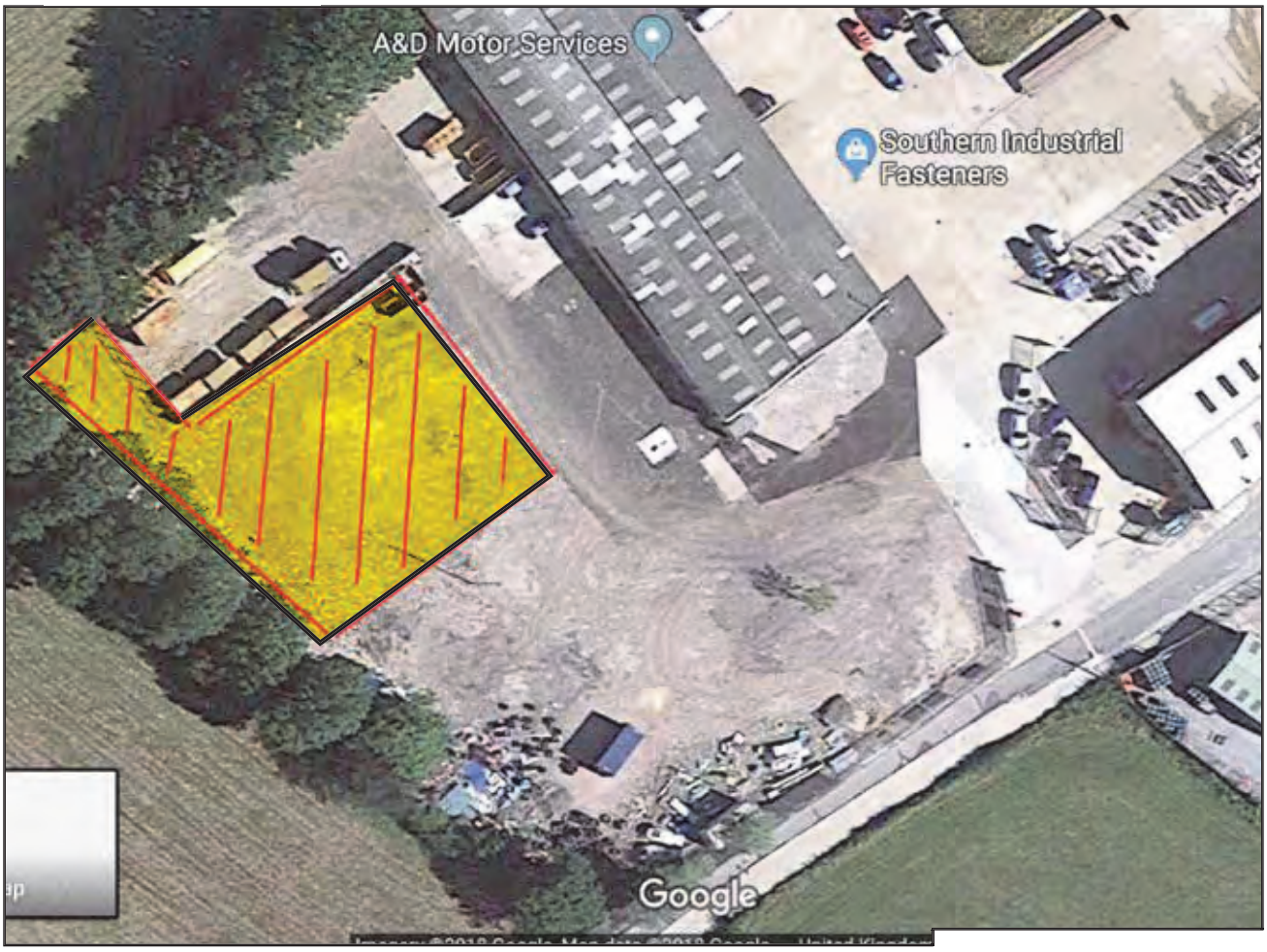
The search area for waterbodies is illustrated in Fig. 5.2.

## 5.4 Terrestrial Habitat

Land within the proposed development site largely consists of hardstanding and bare ground. A number of storage sheds/containers and various scattered ground debris are also present. A hedgerow with emergent trees is located along the western and northern boundaries of the site. The hedgerow is outside of the site boundary, but several trees are within.

Habitat available within the proposed development area is illustrated in Figs. 5.3 - 5.4.

# Fig. 5.1 Proposed Development Area

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project:
**Land at Squires Farm**

title:
**Proposed Development Area**

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|---|---|
| scale: **N.T.S.** | date: **May 2019** |

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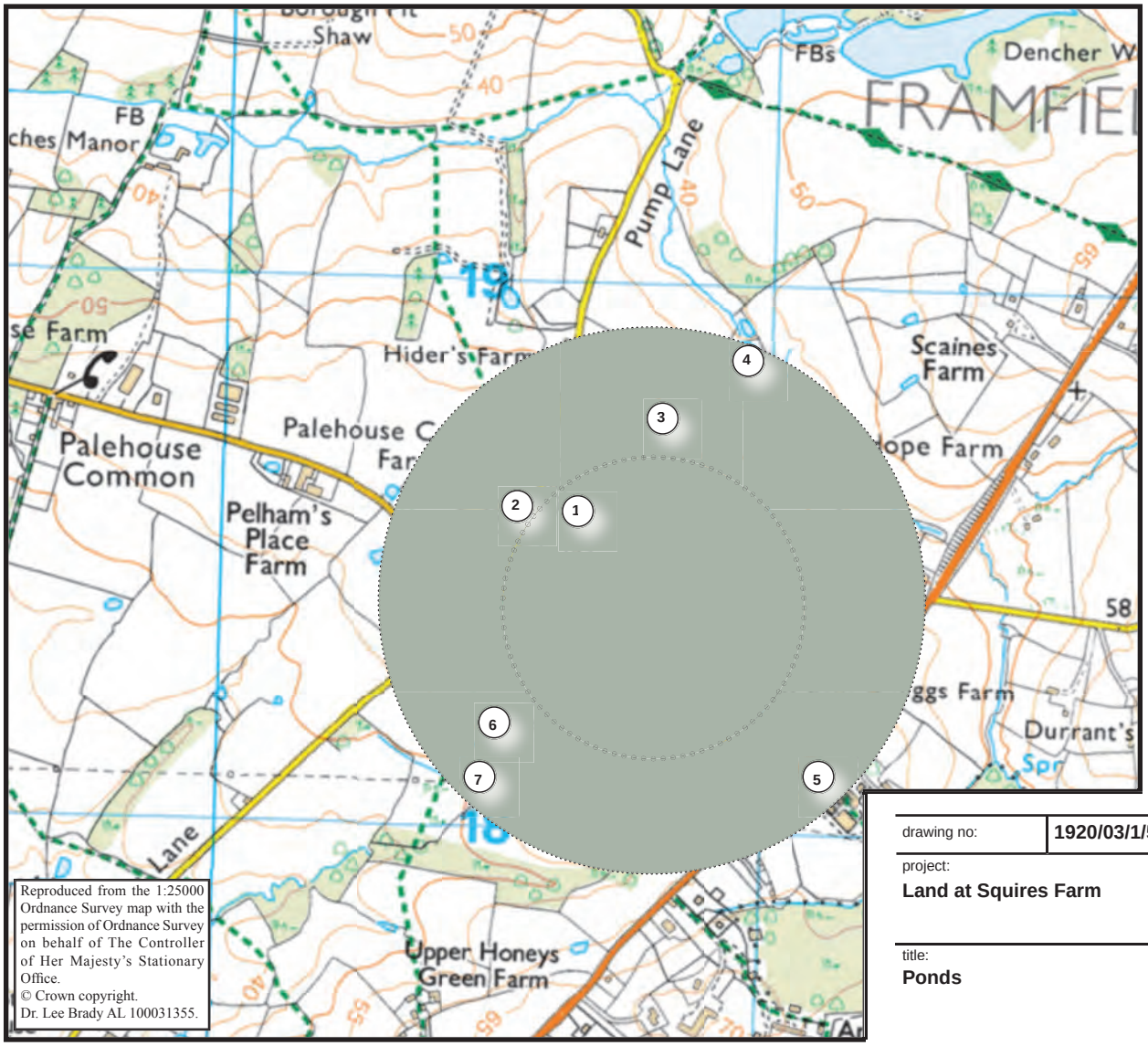
# Fig. 5.2 Ponds

Figure illustrates ponds known to occur within English Nature (2001) recommended area of search for great crested newt.

For ponds located more than 250 m from a proposed development, Natural England recommend that survey work is most appropriate when (a) the pond has the potential to support a large population, (b) the development includes particularly favourable habitat, (c) the development will have a significant impact on available habitat, (d) there is an absence of dispersal barriers.

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project:
**Land at Squires Farm**

title:
**Ponds**

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| scale: **N.T.S.** | date: **May 2019** |

***Key to Symbols***

surveyed pond

unsurveyed pond

filled/dry pond

250/500 m radius

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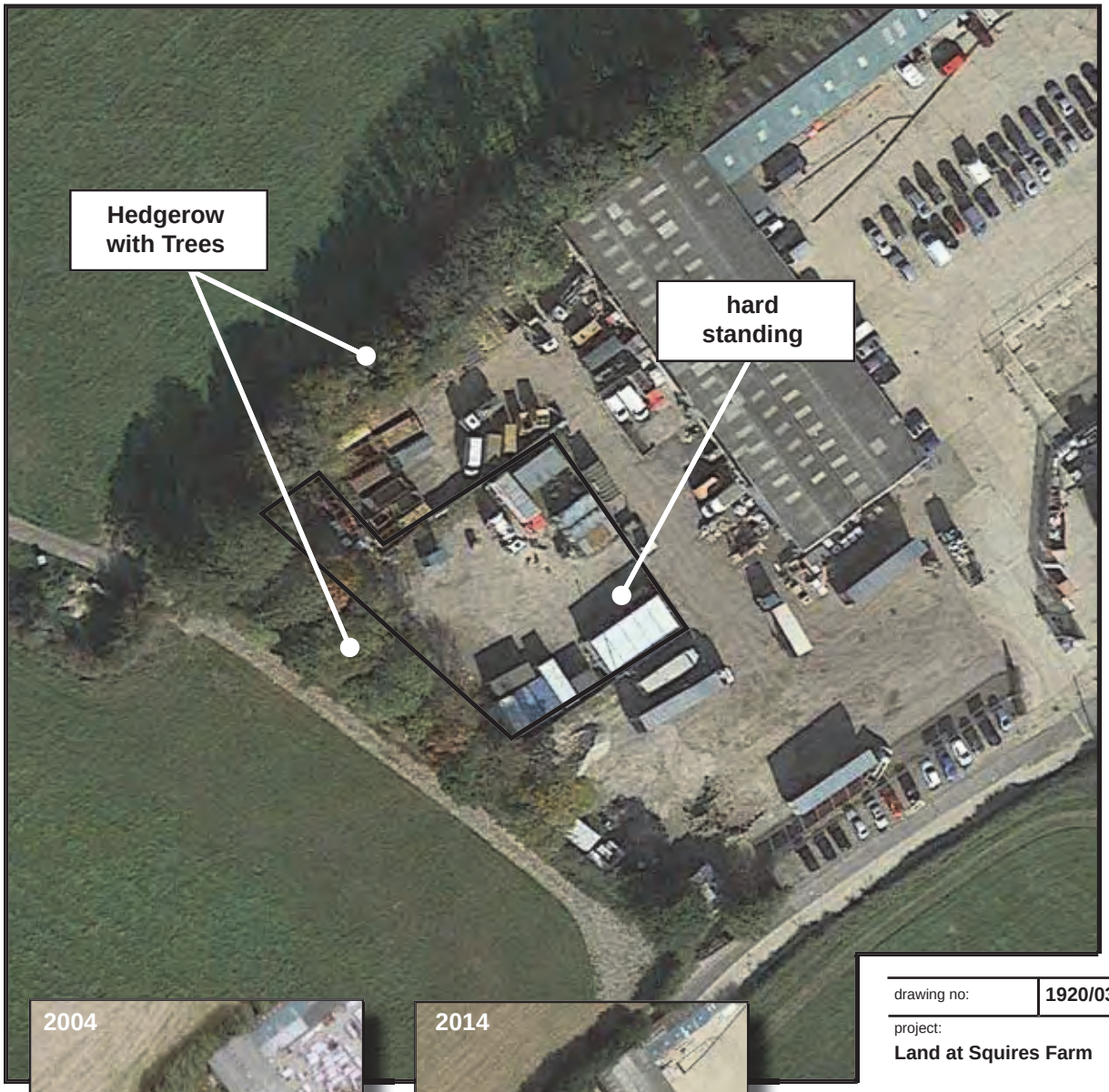
# Fig. 5.3 Habitats

Indicative location of proposed development, illustrating existing habitat (main plate 2018).

Available habitat consists of a hedgerow with emergent trees and patchy ground vegetation that borders the proposed development area. Much of the site is distrubed with several storage sheds and contaners. Quantities of debris litter the ground.



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project:
**Land at Squires Farm**

title:
**Habitats**

| | |
|---|---|
| scale: **N.T.S.** | date: **May 2019** |

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The proposed development site is located within an existing industrial estate and is dominated by hardstanding and bare ground. A number of storage sheds/containers are located within the site.

The proposed development site is bordered to the west and north by a hedgerow with a number of mature emergent trees. Ground vegetation is heavily disturbed, but includes species such as wild arum and bluebell.

Several trees along the site boundary display various holes, cracks and peeling bark. These offer potential roost opportunities for bats.

The site is littered with various items of debris. Such items provide potential sheltering places for amphibians. Common toads were found sheltering under one such item during the site assessment (inset).

## Fig. 5.4 Site Photographs

Figure illustrates habitat features located within the study area.

| | |
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| drawing no: | **1920/03/1/5.4** |
| project: **Land at Squires Farm** | |
| title: **Available Habitat** | |
| scale: **N.T.S.** | date: **May 2019** |

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# 6. Potential Ecology Interests

## 6.1 Habitats

Much of the proposed development site consists of bare ground and hardstanding. However, ground vegetation that includes species such as bluebell and wild arum is present along the base of the boundary hedgerow and extend under trees that are located within the development site boundary. Trees have been described by Arborsense (2019) and several in poor condition have been proposed for felling.

The hedgerow and mature oak tree located just outside of the western site boundary will not be disturbed. Arbosense (2019) has proposed root protection zone for the oak tree.

## 6.2 Birds

Within the local area there are areas of woodland, hedgerows, trees and ponds. This variety of potentially suitable habitat is expected to support a varied bird population within the locality. Structures, trees and shrubs located within and along the boundary of the proposed development site could support nesting songbirds. There was no evidence of barn owl.

It is considered unlikely that any species afforded protection by inclusion on Schedule 1 of the Wildlife & Countryside Act 1981 will nest in the area proposed for construction and additional bird survey work is not considered necessary.

## 6.3 Bats

Local habitat features include areas of buildings and woodland that provide roosting, foraging and commuting opportunities for bats. Bats are considered likely to commute/forage over the proposed development site.

### 6.3.1 Building Inspection

The various sheds and containers were considered to offer negligible potential for roosting bats.

### 6.3.2 Trees

A ground level inspection was made of trees located along the western boundary of the site. Particular attention was given to areas where bats might have access to potential roost sites. Such features included crevices, flaking bark, split limbs, woodpecker and/or rot holes. Trees were classified according to The Bat Conservation Trust's Survey Guidelines (2016).

Several dead/dying trees are located along the western boundary of the site. These trees are characterised by dead branches with various cracks and fissures together with flaking bark. Such features offer *Moderate* potential roosting potential for bats and a more detailed bat investigation must be undertaken before any trees are disturbed.

| Suitability | Description |
|---|---|
| Negligible | Negligible features on site likely to be used by roosting bats. |
| Low | A structure 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).<br><br>A tree of sufficient size or age to contain Potential Roost Features (PRFs) but with none seen from the ground, or features seen with only very limited roosting potential. |
| 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. |
| 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. |

**Table 6.1 - The BCT Guidelines (2016) tree classification guidelines.**

## 6.4 Reptiles

Available habitat within the proposed development site is not considered suitable for reptiles.

Further survey work to determine the likely presence of reptiles is not considered necessary.

## 6.5 Amphibians

One extant pond is known to be located within 250 m of the proposed development site.

Whilst all reasonable effort is made to identify ponds located around the site, small garden ponds and recently constructed ponds may not be included in available information sources. If additional ponds are subsequently identified close to the site, the great crested newt risk assessment may need to be updated.

Great crested newt has been reported as present in the closest pond (WB1).

### 6.5.1 Risk Assessment

Natural England has published a risk assessment tool for determining whether development activities are likely to result in significant disturbance to great crested newt (Natural England, 2008). Natural England advise:

*"This risk assessment tool has been developed as a general guide only, and it is inevitably rather simplistic. It has been generated by examining where impacts occurred in past mitigation projects, alongside recent research on newt ecology. It is not a substitute for a site-specific risk assessment informed by survey. In particular, the following factors are not included for sake of simplicity, though they will often have an important role in determining whether an offence would occur: population size, terrestrial habitat quality, presence of dispersal barriers, timing and duration of works, detailed layout of development in relation to newt resting and dispersal. The following factors could increase the risk of committing an offence: large population size, high pond density, good terrestrial habitat,*

*low pre-existing habitat fragmentation, large development footprint, long construction period. The following factors could decrease the risk: small population size, low pond density, poor terrestrial habitat, substantial pre-existing dispersal barriers, small development footprint, short construction period. You should bear these mitigating and aggravating factors in mind when considering risk..”*

| **Component** | **Likely effect** **(select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)** | **Notional offence probability score** |
|---|---|---|
| Great crested newt breeding pond(s) | No effect | 0 |
| Land within 100m of any breeding pond(s) | No effect | 0 |
| Land 100-250m from any breeding pond(s) | 0.1 - 0.5 ha lost or damaged | 0.1 |
| Land >250m from any breeding pond(s) | No effect | 0 |
| Individual great crested newts | No effect | 0 |
| | Maximum: | 0.1 |
| Rapid risk assessment result: | **GREEN: OFFENCE HIGHLY UNLIKELY** | |

**"Green: offence highly unlikely"** indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions (see **Non-licensed avoidance measures tool**) to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest.

Based on available information, the development size, quality of available terrestrial habitat and distance from the closest pond means that there is unlikely to be a negative impact on populations of newts that may breed in ponds in the local area.

### 6.5.2 Great Crested Newt Mitigation Licence

Land within the proposed development site includes various items of ground debris that offers great crested newt some opportunities for sheltering and protection.

Five levels of licence are available for development projects (Table 6.2).

The low scale of impact of the works within 180 m of a pond means that the proposed development should be subject to a non-licensed method statement (precautionary mitigation).

| Licence Level | Licence Type | Notes |
|---|---|---|
| 1 | No Licence | No or negligible impacts on gcn. |
| 2 | Non-Licensed Method Statement | Negligible or low impacts on gcn that can be prevented using avoidance measures. |
| 3 | Low Impact Class Licence | Low impacts on gcn in relatively small areas over short periods of time. No impacts on ponds. |
| 4 | Full EPS Licence | Impacts on gcn in larger areas or over longer periods of time. |
| 5 | District Level License | New licence proposed by NE that permits development without the need for survey and/or mitigation works. |

**Table 6.2.** Available licence categories for development projects affecting great crested newt (gcn).

#### 6.5.3 Other Widespread Amphibian Species

Common frog, common toad, smooth newt and palmate newt are likely to breed in nearby ponds, including those in residential gardens and ponds supporting fish.

One adult and one juvenile common toad were found sheltering under a wooden board during the site assessment.

A small number of amphibians could shelter in terrestrial habitat within the site but the proposed development is not considered likely to negatively impact on the local conservation status of widespread amphibian species.

Additional survey work for widespread amphibian species is not considered necessary.

### 6.6 Badgers

A small mammal burrow was found close to the western boundary of the site. This was considered to be most likely rabbit, perhaps also further excavated by fox. No evidence of badger was observed.

### 6.7 Hazel Dormouse

Habitats typically suitable for dormouse include:

- Deciduous woodland, with a dense understory, species-rich shrub layer and thick ground cover.
- Hazel or sweet chestnut coppice.
- Continuous, thick, wide hedgerows over 4m high with connections to nearby suitable woodland.
- Thick continuous areas of scrub, particularly bramble, close to hedgerows or woodlands.

However, it should be noted that the hazel dormouse is regularly reported in less typical habitats including coniferous woodland, tall grassland and coastal scrub/heath.

Providing the adjacent hedgerow remains undisturbed, the proposed development project will not disturb any habitat that is considered suitable for dormouse and additional survey work is not considered necessary.

### 6.8 Water Vole

No watercourses are present within the proposed development footprint.

It is considered that proposed development work at the site will have no significant impact on populations of water vole that could occur in the local area and additional survey work is not considered necessary.

### 6.9 Invertebrates

Available habitat within the proposed development area is considered to offer limited opportunities for widespread invertebrates.

### 6.10 Other Considerations

Hedgehogs are likely to be present in the local area and could disperse along the boundary of the site.

On the basis of the site assessment it is not expected that other protected species are present within the proposed site.

Once all recommended surveys are completed, the results should be summarised in a *Mitigation and Enhancement Report* that is used to support the planning application.

# 7. Recommendations

## 7.1 Habitats

### 7.1.1 Ground Flora

Ground vegetation within the area proposed for disturbance includes species such as bluebell and wild arum that are associated with hedgerows/woodland. Bluebells are protected by the Wildlife and Countryside Act (1981). It prohibits anyone from digging up bulbs in the countryside and landowners from removing bluebells from their land for sale. The species was also listed on Schedule 8 of the Act in 1998 which makes trade in wild bluebell bulbs or seeds an offence.

It is recommended that a buffer strip of 2 m be left along the western boundary of the site. The buffer strip will minimise disturbance to species such as bluebell and provide a wildlife refuge. Any bluebells growing outside of this buffer strip can be replanted within the buffer strip.

## 7.2 Birds

### 7.2.1 Nesting Birds

It is recommended that all reasonable steps be taken to avoid disturbance to trees located along the site boundaries. If any trees or shrubs located along the boundaries of the site are to be removed or damaged in any way, such work should take place outside of the bird nesting season. If it becomes necessary to undertake any such works during the bird nesting season, a further assessment must be undertaken by a suitably experienced ecologist within 48 hours of the proposed disturbance. If nesting birds are confirmed present, further disturbance must not take place until after the chicks have fledged.

### 7.2.2 Bird Nesting Boxes

The applicant should consider installing bird nesting boxes in suitable locations (e.g. boundary trees). Examples of suitable nest boxes are illustrated in Appendix IV. At least two such boxes that are suitable for hole nesting species such as blue tit are considered appropriate. Boxes created from woodcrete are less susceptible to damage from squirrels.

## 7.3 Bats

### 7.3.1 Bat Survey

Medium potential for bats was noted in several trees that have been recommended for removal. To determine whether or not bats are using features within the trees to roost, further surveys are recommended. A daytime investigation (e.g. using an endoscope) should be undertaken to further assess the likelihood of bats roosting in the trees. If deemed appropriate, trees should then be subject to two dusk emergence surveys in accordance with BCT Guidelines (2016). The survey should be carried out during the optimum season from May to August. If bats are found to be using any tree, a further survey would be required, as per current guidelines (BCT, 2016), to provide sufficient information to inform a European Protected Species Mitigation Licence from Natural England. At least 2 weeks gap should be left between each survey.

Appropriate bat habitat enhancement work will be informed by the results of the survey.

#### 7.3.2 Lighting

Some artificial lighting can be detrimental to roosting, foraging and commuting bats especially Daubenton's, Whiskered, Natter's and Long-eared. Impacts on bats are higher in the April/May and September/October time periods, when bats emerge earlier and when most lighting will be on. The impact on bats is increased after mid-October when British Summer Time ends (by subtracting an hour).

If lighting is required for the proposed scheme, the Bat Conservation Trust's *Bats and Lighting in the UK guidance* must be adhered to in the lighting design (Appendix V).

### 7.4 Amphibians

#### 7.4.1 Precautionary Mitigation Strategy

Precautionary mitigation work should be undertaken to minimise the risk of amphibians (including great crested newt) being killed or injured by proposed development works.

The scale of the proposed works means that they can be undertaken without the need for additional amphibian survey work or a great crested newt mitigation licence.

Calumma Ecological Services considers that non-licensed avoidance measures can be deployed to ensure that harm to amphibian and reptile populations is avoided. For great crested newts, Natural England advise:

*"Licensable activities should ideally be designed out of developments during the early planning stages. This should result in avoiding harm to great crested newt populations, and can save developers the time and expense of licensed mitigation measures. Many potentially licensable activities can in fact be avoided by careful planning of the development combined with simple precautionary measures. In many cases, adopting such an approach may mean that no licence is required (as no offence would be committed)."*

Mitigation can be provided by adhering to the following work practices:

| Project Element | Avoidance Measures to be Undertaken |
|---|---|
| Timing & duration | (a) Duration of groundworks will be kept as short as possible.<br><br>(b) Newts are most likely to be active above ground on warm wet evenings between March and October. Construction operations can avoid disturbance to newts by limiting work to daytime activities during this period. Works that disturb potential sheltering places must not take place during the winter hibernation period (November to February).<br><br>(c) If any rough vegetation or ground debris is cleared, this must be undertaken during the spring and summer under a watching brief from a suitably experienced ecologist.<br><br>(e) Ideally, ground debris that could provide sheltering places for amphibians should be tidied between March and June when newts are most likely to be present in ponds. |
| Construction methods and special precautions | (a) Trenches and other excavations (if required) should be backfilled before nightfall. Where this is not possible a ramp can be left in place to ensure that animals can easily exit. All trenches and excavations should be inspected before commencement of work to ensure that animals do not occupy the working area.<br><br>(b) Stored materials (that might act as temporary resting places) should all be raised off the ground (e.g on pallets).<br><br>(c) Contractors will be fully briefed on great crested newt mitigation measures and provided with a site guide that illustrates the permitted working area. This will help to minimize the risk of unnecessary disturbance to habitat located outside of the main construction area.<br><br>(d) If amphibians are discovered within the working area, they will be captured by the consultant ecologist and released into suitable habitat in the proposed buffer strip. |
| Exclusion fencing | Exclusion fencing is not considered necessary. |

### 7.4.2 Habitat Enhancement

Log piles and other sheltering places can be constructed within the proposed buffer strip. Five log piles are considered sufficient for the proposed development.

## 7.5 Dormouse

### 7.5.1 Avoidance Measures

It is recommended that all reasonable steps be taken to avoid disturbance to hedgerows. If any sections of hedgerow are to be removed or damaged in any way, survey work to confirm the presence or likely absence of dormouse will be required.

If dormouse is subsequently found to occupy habitat within the proposed development site a European Protected Species Mitigation Licence from Natural England will be required before such habitat can be disturbed.

## 7.6 Hedgehogs

### 7.6.1 Excavations

During months when hedgehogs are most likely to be active (March to October), excavations should not be left open for animals to fall into. If this is not possible, suitable planks of wood should be placed to allow trapped animals to escape. Any open excavation should be inspected before works commence in the morning and trapped animals relocated to a suitable place of safety along the site boundary.

### 7.6.2 Hedgehog Gate

The fencing designs to be used on site are currently unknown. However, if they are to be of a design similar to that of close board fencing which are typically solid from ground level, *hedgehog gates* should be installed in the fencing within the proposed development site. The gates consist of semi circular holes (measuring 0.13 m x 0.13 m) cut into the bottom of the fence to allow the movement of hedgehogs between neighbouring properties and into adjacent areas of land.

## 7. References and Further Reading

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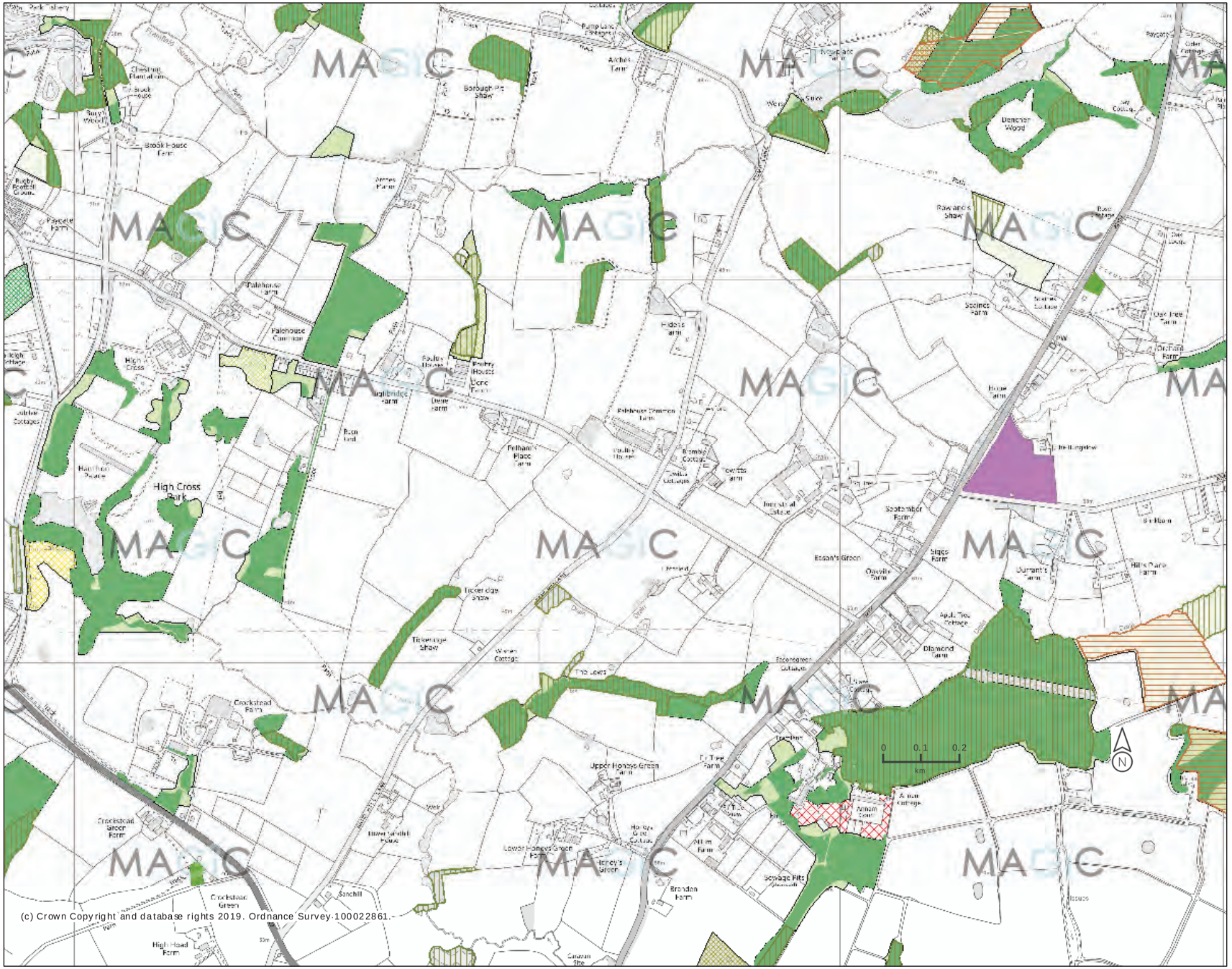
# Appendix I: Habitat Designations

**Source:**

MAGIC (http://www.magic.gov.uk)

MAGIC

# Habitat






## Legend

- Priority Habitat Inventory - Coastal Saltmarsh (England)
- Priority Habitat Inventory - Coastal Sand Dunes (England)
- Priority Habitat Inventory - Coastal Vegetated Shingle (England)
- Priority Habitat Inventory - Maritime Cliffs and Slopes (England)
- Priority Habitat Inventory - Mudflats (England)
- Priority Habitat Inventory - Saline Lagoons (England)
- Saline Lagoons (Wales)
- Saltmarsh (Wales)
- Sand Dunes (Wales)
- Priority Habitat Inventory - Calaminarian Grassland (England)
- Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England)
- Priority Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England)
- Priority Habitat Inventory - Lowland Calcareous Grassland (England)
- Priority Habitat Inventory - Lowland Dry Acid Grassland (England)
- Priority Habitat Inventory - Lowland Meadows (England)
- Priority Habitat Inventory - Purple Moor Grass and Rush Pasture (England)
- Priority Habitat Inventory - Upland Calcareous Grassland (England)
- Priority Habitat Inventory - Upland Hay Meadows (England)
- Priority Habitat Inventory - Lowland Heathland (England)
- Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England)
- Priority Habitat Inventory - Upland Heathland (England)
- Priority Habitat Inventory - Limestone Pavements (England)

Projection = OSGB36
xmin = 548800
ymin = 117100
xmax = 552100
ymax = 119800

0 0.15 0.3
km

Map produced by MAGIC on 1 May, 2019.

# Appendix II: Land Designations

**Source:**

MAGIC (http://www.magic.gov.uk)

MAGiC

# Designations


(c) Crown Copyright and database rights 2019. Ordnance Survey 100022861.

## Legend

- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Nature Reserves (Scotland)
- National Nature Reserves (Wales)
- National Parks (England)
- Ramsar Sites (England)
- Proposed Ramsar Sites (England)
- Ramsar Sites (Scotland)
- Ramsar Sites (Wales)

**Sites of Special Scientific Interest Units (England)**

- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- Destroyed
- Not Assessed
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Sites of Special Scientific Interest (Scotland)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (England)
- Possible Special Areas of Conservation (England)
- Special Areas of Conservation (Scotland)
- Special Areas of Conservation (Wales)
- Special Protection Areas (England)
- Potential Special Protection Areas (England)
- Special Protection Areas (Scotland)

Projection = OSGB36
xmin = 547100
ymin = 115700
xmax = 553700
ymax = 121200

0 0.35 0.7 km

Map produced by MAGIC on 1 May, 2019.

# Appendix III: Records

**Source:**

Sussex Biodiversity Records Centre (SxBRC/19/048)

# Ecological Data Search SxBRC/19/048 - Summary Report

**An ecological data search was carried out for land at Squires Farm Industrial Estate, Framfield on behalf of Lee Brady (Calumma Ecological Services) on 25/04/2019.**

**The following datasets were consulted for this report:**

| | Requested | Radius/buffer size |
|---|---|---|
| Designated sites, habitats & ownership maps | Yes | 1km |
| Protected, designated and invasive species | Yes | 1km |

## Summary of results

### Sites and habitats

| | |
|---|---|
| Statutory sites | None present |
| Non-statutory sites | 1 LWS / 2 Designated Road Verges |
| Section 41 habitats | 1 habitat |
| Ancient and/or ghyll woodland | Present |

### Protected and designated species

| | | |
|---|---|---|
| International designations | 13 species | 26 records |
| National designations | 44 species | 263 records |
| Other designations | 85 species | 467 records |
| **Total** | **94 species** | **493 records** |
| Invasive non-native | 15 species | 45 records |

The report is compiled using data held by Sussex Biodiversity Record Centre (SxBRC) at the time of the request. SxBRC does not hold comprehensive species data for all areas. Even where data are held, a lack of records for a species in a defined geographical area does not necessarily mean that the species does not occur there – the area may simply not have been surveyed.

**This summary page may be published.**
**The full report and maps may not be published or otherwise shared.**

**The data search report is valid until 25/04/2020 for the site named above.**

# Appendix IV: Bird Nesting Boxes

**Source:**

Various Manufacturers
e.g. Alana Ecology (http://WWW.alanaecology.com/)

**Bird Boxes for Trees**

| **Model** | Schwegler 2H Open Fronted Nest Box | Nesting basket | Schwegler 1B Bird Box, | Standard nest box | Open fronted nest box | Large open fronted nest box |
|---|---|---|---|---|---|---|
| **Notes** | This box is attractive to robins, pied wagtails, spotted flycatcher, wrens, etc.<br>Can be sited on trees or the walls of buildings with the entrance to one side. | A willow basket modelled on natural nests. It can be tied into the forks of tree branches to offer a nesting incentive in new areas.<br>Suitable for the smaller owls and birds of prey. Site in woodland at least 5-7m high. | Suitable for a wide range of species. The box can be nailed to the trunk of a tree, or hung from a branch. | The 3.2cm entrance hole is suitable for sparrow, great tit, crested tit, nuthatch and pied flycatcher; also available with: 2.5cm hole designed to attract: blue tit, coal tit, marsh tit, treecreeper, and very small birds.<br>2.8cm hole designed to attract: sparrows, great tits, and crested tit. | The open fronted wooden nesting box is made to a simple fixed panel design, with access possible through the open front.<br>Designed to attract: wagtails, robins, flycatchers, blackbirds, etc. | Designed to attract: Woodpeckers, owls, starlings, doves, pigeons, jackdaws and kestrels, together with many of the large British birds. |
| **Material** | Woodcrete | Willow basket | Woodcrete | Wood | Wood | Wood |
| **Dimensions** | n/a | Woven willow basket 40-70cm diameter | 23cm high x 16cm diameter. | Size:29.5cm Height x 12.7cm Width x 14.5cm Depth | 29.5cm Height x 12.7cm Width x 14.5 Depth ; Open front | 52cm Height x 20.5cm Width x 19cm Depth |
| |  |  |  |  |  |  |

Source: http://www.alanaecology.com/

**Bird Boxes for Buildings**

| **Model** | Schwegler N24 Nest Brick | Schwegler N25 Nest Brick | Schwegler No 18 Swift Box | Sparrow Terrace | Schwegler 9A House Martin Double Nest | Schwegler N26 Nest Brick |
|---|---|---|---|---|---|---|
| **Notes** | Designed for installation into the fabric of a building, this box is suitable for smaller birds such as tits. | Designed for installation into the fabric of a building, this box is suitable for swifts. | This nest box is suitable for fixing high under the eaves or under the guttering of a building. | House sparrows are colonial nesters and prefer to nest close to each other; this box provides room for three families under one roof. Designed for fixing to walls and buildings. | These boxes are durable and ready for immediate use when birds return each summer. Easily fixed under the eaves on the outside walls of buildings, at least 2 m from the ground. The backing board may be painted to match the building. | Designed for installation into the fabric of a building, this box is suitable for species such as pied wagtail, spotted flycatcher, etc. |
| **Material** | Woodcrete | Woodcrete | Woodcrete on board backing. | Woodcrete | Woodcrete | Woodcrete |
| **Dimensions** | Entrance hole 32mm<br>180mm wide x 180mm deep x 240mm high<br>Weight 7.3kg | Entrance hole 55 x 33mm<br>260mm wide x 220mm deep x 180mm high<br>Weight 8.8kg | Exterior dimensions 19 x 50 x 22cm<br>Interior dimensions 14 x 34 x 15cm. | Dimensions 245 x 430 x 200mm.<br>Weight 13kg. | n/a | Entrance hole 110 x 80mm<br>Dimensions 180mm wide x 180mm deep x 200mm high<br>Weight 5.4kg |
| |  |  |  |  |  |  |

Source: http://www.alanaecology.com/

# Appendix V: Bats and Lighting

**Source:**

Bat Conservation Trust and Institution of Lighting Engineers

**Summary of Requirements**

The two most important features of street and security lighting with respect to bats are:

1. The UV component. Low or zero UV installations are preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas.
2. Restriction of the area illuminated. Lighting must be shielded to maintain dark areas, particularly above lighting installations, and in many cases, land adjacent to the areas illuminated. The aim is to maintain dark commuting corridors for foraging and commuting bats. Bats avoid well lit areas, and these create barriers for flying bats between roosting and feeding areas.

**UV characteristics:**

**Low**

- Low pressure Sodium Lamps (SOX) emit a minimal UV component
- High pressure Sodium Lamps (SON) emit a small UV component
- White SON, though low in UV, emit more than regular SON

**High**

- Metal Halide lamps emit more UV than SON lamps, but less than Mercury lamps
- Mercury lamps (MBF) emit a high UV component.
- Tungsten Halogen, if unfiltered, emit a high UV component
- Compact Fluorescent (CFL), if unfiltered, emit a high UV component.

**Variable**

- Light Emitting Diodes (LEDs) have a range of UV outputs. Variants are available with low or minimal UV output.

Glass glazing and UV filtering lenses are recommended to reduce UV output.

**Street lighting**

Low-pressure sodium or high-pressure sodium must be used instead of mercury or metal halide lamps. LEDs must be specified as low UV. Tungsten halogen and CFL sources must have appropriate UV filtering to reduce UV to low levels.

Lighting must be directed to where it is needed and light spillage avoided. Hoods must be used on each lamp to direct light and contain spillage. Light leakage into hedgerows and trees must be avoided.

If possible, the times during which the lighting is on overnight must be limited to provide some dark periods. If the light is fitted with a timer this must be adjusted to reduce the amount of 'lit time' and provide dark periods.

**Security and domestic external lighting**

The above recommendations concerning UV output and direction apply. In addition:

- Lighting should illuminate only ground floor areas - light should not leak upwards to illuminate first floor and higher levels;
- Lamps of greater than 2000 lumens (150 W) must not be used;
- Movement or similar sensors must be used - they must be carefully installed and aimed, to reduce the amount of time a light is on each night;
- Light must illuminate only the immediate area required, by using as sharp a downward angle as possible;
- Light must not be directed at or close to bat roost access points or flight paths from the roost - a shield or hood can be used to control or restrict the area to be lit;
- Wide angle illumination must be avoided as this will be more disturbing to foraging and commuting bats as well as people and other wildlife;
- Lighting must not illuminate any bat bricks and boxes placed on buildings, trees or other nearby locations.


*Calumma Ecological Services* is an independent wildlife consultancy specialising in the applied conservation of amphibians and reptiles. *Calumma Ecological Services* offers a full range of specialist services to private companies, local authorities, government agencies, wildlife organisations and members of the public.

*Calumma Ecological Services* works towards the policy of 'best practice' advocated by ARG UK (formally known as Herpetofauna Groups of Britain and Ireland).

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