PRELIMINARY BAT ROOST ASSESSMENT OF:

LORDS FARM BARN AND STABLES
QUEEN STREET
EYNSHAW
WITNEY
0X29 4HQ

Client: Jessop & Cook Architects
Our reference: ECO2291
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1.0 Introduction

Survey and reporting

1.1 This report details the results of a Preliminary Bat Roost Assessment of Lords Farm Barn and Stables, Queen Street, Eynsham, Witney, OX29 4HQ. The survey, carried out on 3 September 2019, was undertaken to inform a planning application for the site.

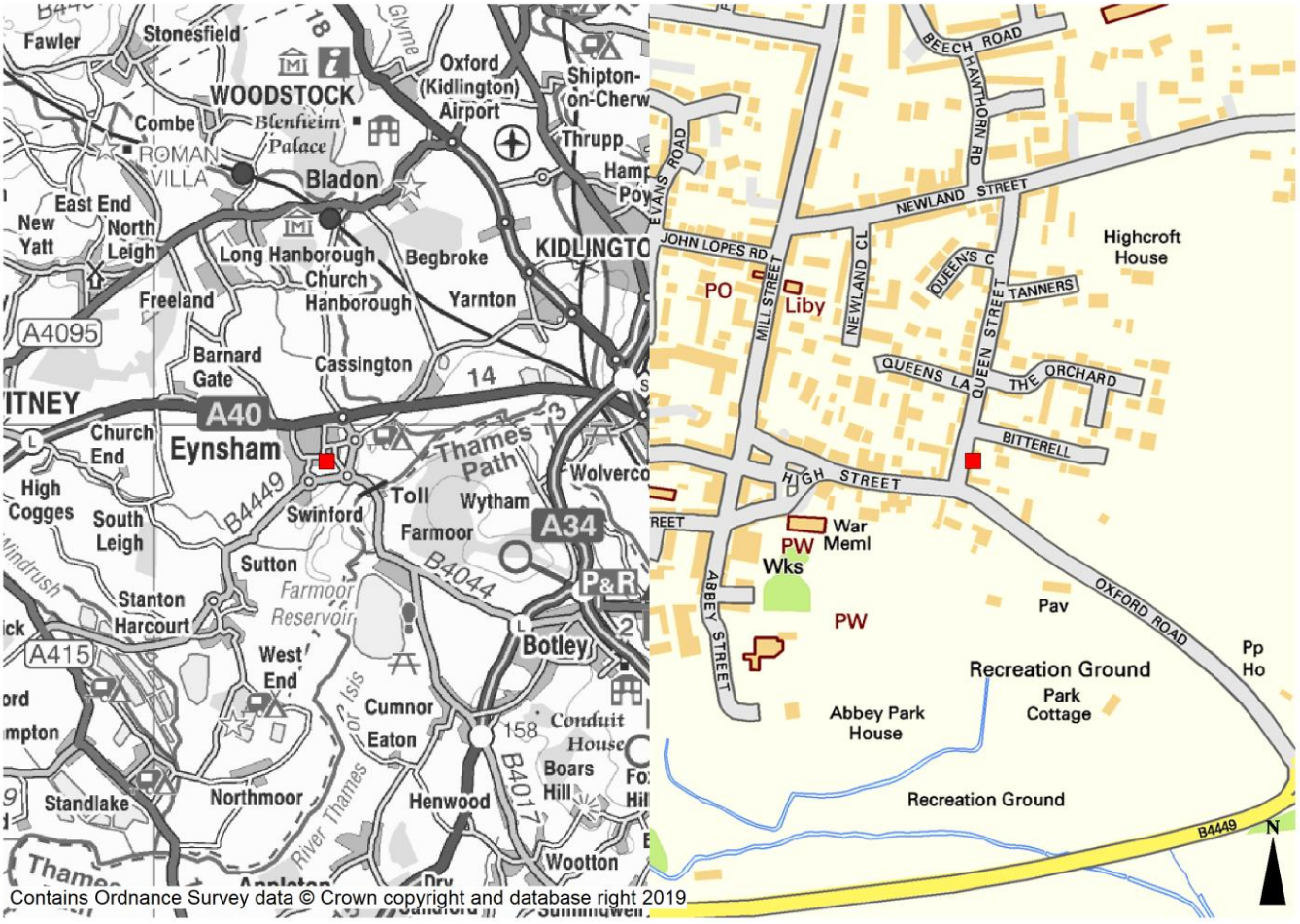
Application site

1.2 Lords Farm Barn is located at the southern end of Queens Street, a residential street running through Eynsham in Oxfordshire (Grid reference SP43470928). The application site comprises a stone walled barn (which adjoins the residential properties directly to the north and south), a stonewalled stable (located to the rear of the barn), and, the hardstanding yard between the two buildings.

Details of proposed works

1.3 It is proposed to convert both buildings, and, erect a link extension between them, to create a single residential dwelling. No trees will be affected by the proposals.

Figure 1 – Site location



2.0 Methodology

Desk study

2.1 A desk study data search was undertaken. This involved reviewing publicly available datasets and citations of statutory designated sites of importance for nature conservation and Natural England's Ancient Woodland Inventory for sites within the zone of influence of the survey area (considered to be a maximum of 500m in this case).

2.2 In addition, species records (on Natural England's MAGIC website[1]) were accessed, and aerial photographs and Ordnance Survey maps were studied for features of interest.

Preliminary Bat Roost Assessment

2.3 The preliminary bat roost assessment comprised a survey of the buildings, and any trees to be affected by the proposals (none in this case), for bats, signs of bats and features potentially suitable for use by roosting bats, and an assessment of the surrounding habitat in terms of its suitability for commuting and foraging bats.

2.4 The survey consisted of a detailed search of the interior and exterior of the buildings looking for bats and/or evidence of bats including droppings (on walls and windowsills and in roof and loft spaces), rub or scratch marks, staining at potential roosts and exit holes, live or dead bats and features, such as raised or missing tiles, potentially suitable for use by roosting bats. Binoculars, an endoscope, a ladder and a high-powered torch were used as required.

2.5 Buildings are classified according to their suitability for use by roosting bats. Classification is dependent on a number of factors including:

- Bats and/or signs of bats
- External and internal features potentially suitable for use by roosting bats (e.g. raised or missing tiles, gaps behind fascia boards)
- Setting
- Night time light levels
- Disturbance levels
- Proximity of suitable foraging habitat and commuting routes (e.g. ponds, streams, woodland, large gardens, hedgerows)

2.6 The categories used to classify buildings and trees and the survey effort required to determine the presence or absence of bats (as per the Bat Conservation Trust's Bat Survey Guidelines[2], referred to by Natural England in their standing advice to planning officers) are described in Table 1, and factors affecting habitat suitability in Table 2.

Surveyor details

2.7 The survey was undertaken by Ryan Davies BSc (Hons) ACIEEM (ecologist) of GS Ecology Ltd. Ryan is an associate member of the Chartered Institute of Ecology and Environmental Management and an accredited agent under Natural England WML A34 Level 2 bat survey licence.

2.8 This report has been reviewed by Giles Sutton BSc (Hons) MSc MCIEEM CEnv of GS Ecology Ltd. Giles holds a Natural England WML A34 Level 2 bat survey licence, is registered to use Natural England's Bat Mitigation Class Licence WML-CL21, is a full member of the Chartered Institute of Ecology and

[1] http://www.natureonthemap.naturalengland.org.uk/

[2] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn) Bat Conservation Trust

Environmental Management (CIEEM) and is a Chartered Environmentalist with more than 15 years' experience as professional ecologist.

Table 1 – Description of the categories used to assess a building or tree's bat roost potential and the survey effort required to determine the likely presence or absence of bats

	Roost status	Description	Survey effort required to determine the likely presence or absence of bats
Bat Roost Potential	Confirmed	Bats or evidence of bats found.	Surveys would be required to establish the status of the roost. Generally three dusk emergence and/or pre-dawn re-entry surveys between May and September. Optimum period May – August (two surveys should be undertaken during the optimal period and at least one survey should be a pre-dawn survey).
	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.	Three dusk emergence and/or pre-dawn re-entry surveys between May and September. Optimum period May – August. Two surveys should be undertaken during the optimal period and at least one survey should be a pre-dawn survey.
	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 i.e. irrespective of species conservation status, which is established after presence is confirmed).	Two surveys, comprising one dusk emergence and a separate pre-dawn re-entry survey between May and September (one of the surveys needs to be carried out between May and the end of August).
	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) A tree of sufficient size and age to contain features but with none seen from the ground or features seen with only very limited roosting potential	One dusk emergence or pre-dawn re-entry survey between May and the end of August (but only if features will be affected by the proposals). May not be required for trees with low roost suitability (dependent on case-specific conditions) as a precautionary approach to tree works can be taken to minimise the risk of harming bats.
	Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further surveys required.

Table 2 – Habitat suitability scale for commuting and foraging bats

	Habitat Suitability	Description
Suitability of habitat for commuting and foraging	High	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, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts
	Moderate	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
	Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated 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.
	Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats

3.0 Results

Weather conditions

3.1 Weather conditions during the survey were 13^{O}C, 2/8ths cloud cover and no rain.

Desk study

Statutory sites of importance for nature conservation

3.2 There are no statutory sites of importance for nature conservation or areas of woodland listed on Natural England's Ancient Woodland Inventory within 500m of the site.

3.3 The nearest such site, located 1.7km east of the application site, is Wytham Woods Site of Special Scientific Interest (SSSI). There are no identified ecological links between the application site and the SSSI, and it is very unlikely that there will be any adverse effect on this site as a result of the proposals (for example as a result in increased recreational use).

Protected and notable species records

3.4 Within 2km of the site there is a single record of a license issued by Natural England for works affecting bat roosts on The MAGIC website. This record, for a site located approximately 600m west of the application site, is for works affecting a breeding roost containing brown long-eared bat and common pipistrelle.

Surrounding land use

3.5 Lords Farm Barn is located at the southern end of Queens Street, a residential street running through Eynsham in Oxfordshire. Directly adjacent to the site in all directions are residential properties, some of which have associated gardens with trees. The properties to the east and south have larger gardens with numerous trees, which form continuous tracts of vegetation across the nearby landscape. Further to the east and south are fields of amenity and agricultural grassland, with trees and hedgerows along their boundaries. Beyond to the south (approx. 350m) is a watercourse, with numerous trees along its banks.

3.6 The majority of the habitats surrounding the site are therefore of "high" suitability for commuting and foraging bats.

Habitats within the application site

3.7 The application site comprises a stonewalled barn, which adjoins the residential properties directly to the north and south, a stone walled stable which is located to the rear of the barn, and, the hardstanding yard between the two buildings. Adjacent to the south of the stables, but beyond the application site boundary, are several fruit trees, within the garden of the neighbouring property.

Bat survey (preliminary roost assessment)

Lords Farm Barn

3.8 Lords Farm Barn is a two-storey, stone walled barn, adjoined to residential properties at its northern and southern elevations. The building has a pitched roof, clad with slate roof tiles, with clay tiles along the ridge. At the rear of the building the walls and roof are starting to be overgrown by Boston ivy (*Parthenocissus tricuspidata*). At the front elevation, the roof does not overhang the wall, and there are tightly fitted facia boards directly below the end of the roof. On the rear elevation there is a slight overhang, however stonework is tightly fitted to the underside of the roof with no gaps at the eaves.

3.9 Lords Farm Barn has a number of features, potentially suitable for use by roosting bats, including:

- Numerous gaps under raised roof slates on the front and rear elevations.
- Gaps at the side of the front elevation barn door.

- Large gap along the top of the rear elevation barn door

3.10 Inside Lords Farm Barn the building is open to the roof, with a mezzanine level at its northern end. Below the mezzanine level there are gaps in the stonework where the supporting timbers lead into the wall. The roof has large oak timbers, with sections of ridge board, in places, along the roof pitch. The roof is lined with bituminous felt across the western elevation and breathable membrane across the eastern elevation. Through gaps in the felt roof lining it was possible to see gaps under the clad ridge tiles.

3.11 Approximately 10 bat droppings, akin to those of pipistrelle bats, were observed scattered throughout the barn. In addition, a tawny owl box was observed on a central roof joist, however, this was inspected during the survey and found to be completely empty.

3.12 Lords Farm Barn is assessed as having "high" potential to host a bat roost (see Table 1).

The Stables

3.13 Directly east of Lord Farm Barn are the Stables, a smaller, detached, two-storey building with stone walls. The roof of the building is pitched and clad with roof slates, with clay ridge tiles. It was not possible to access the interior of the building during the survey. The Stables has a number of features potentially suitable for use by roosting bats, including:

- Gaps in the stonework, where a number of wooden timbers protrude through the southern wall.
- Gaps under raised roof slates.
- Gaps under ridge tiles.

3.14 The Stables at Lords Farm Barn is assessed as having "high" potential to host a bat roost (see Table 1).

4.0 Assessment

Survey constraints

4.1 The survey was undertaken at a time of year suitable for undertaking preliminary bat roost assessments. It was not possible to access the interior of the stables, however, since in any case further surveys would need to be carried out to determine the presence or likely absence of roosting bats, it is not considered that this represents a significant constraint to the survey. Nevertheless, it is recommended that access is obtained when the further surveys are carried out.

Site status

4.2 Bat droppings were found in Lords Farm Barn suggesting that it has hosted roosting bats in the past and it is likely still to do so. The Stables have been assessed as having "high" potential to host a bat roost (see Table 1) due to the presence of numerous features (e.g. gaps under roof slates and holes in the stonework) potentially suitable for use by crevice dwelling bat species (such as common pipistrelle), its location in habitat of predominantly "high" suitability for commuting and foraging bats, and, its close proximity to a known breeding roost of crevice-dwelling bat species (see section 3.4 above).

4.3 As such, to determine if either of the buildings host a bat roost and, if they do, its size and status, further surveys (see below) would need to be undertaken.

Further survey requirements

4.4 The Bat Conservation Trust's Bat Survey Guidelines (referred to by Natural England in their advice to planning officers) state that to confirm if a building hosts a bat roost, where it has "high" potential to host roosting bats (as is the case for Lords Farm Barn and Stables), three dusk emergence and/or pre-dawn re-entry surveys should be carried out between May and the end of August(sub-optimally from April until mid-October). At least two of these should be carried out between May and the end of August and at least one should be a dawn re-entry survey.

4.5 Dusk surveys commence fifteen minutes before dusk and continue for up to an hour and a half after sunset and dawn surveys commence an hour and a half before dawn and finish fifteen minutes after dawn. Surveys should be spread over the survey season as much as practicable with at least two weeks between surveys and sufficient surveyors to cover all features potentially suitable for use by roosting bats need to be present.

4.6 In this case two surveyors would be needed to survey the barn and two surveyors to survey the stables.

Legislation relating to bats

4.7 All species of bats receive special protection under UK law and it is a criminal offence under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (The Habitat Regulations), deliberately or recklessly to destroy or damage their roosts, or to disturb, kill or injure them without first having obtained the relevant licence for derogation from the regulations from the Statutory Nature Conservation Organisation (the SNCO - Natural England in England).

4.8 In order to obtain such a licence, the SNCO must apply the requirements of the Regulations and, in particular, the three tests set out in sub-paragraphs 53(2)(e), (9)(a) and (9)(b). These are as follows:

(1) Regulation 55(2)(e) states that a licence can be granted for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment".

(2) Regulation 55(9)(a) states that the appropriate authority (the SNCO) shall not grant a licence unless they are satisfied "that there is no satisfactory alternative".

(3) Regulation 55(9)(b) states that the appropriate authority (the SNCO) shall not grant a licence unless they are satisfied "that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range."

The licensing process

4.9 If a building hosts a bat roost and the roost will be affected by the works (as is the case here), a licence and for development works affecting bats (i.e. for derogation from the provisions of the Habitat Regulations) will need to be obtained before works commence. This involves submitting a licence application to Natural England with a detailed mitigation plan informed by surveys undertaken in accordance with national guidelines. Natural England takes 30 working days to process a licence application (although for low conservation status roosts it is possible to register sites under the low impact class licence which takes up to three weeks).

4.10 The licensing process is separate and distinct from planning permission, but the Local Planning Authority has statutory obligations under the Habitat Regulations. This means that the Local Planning Authority needs to be satisfied that the proposals are likely to meet the three tests of the Habitat Regulations (see above) and that a licence is likely to be obtained from Natural England before they can issue planning permission[3].

Mitigation

4.11 To comply with planning policy and wildlife legislation it will be necessary to ensure that following development the "favourable conservation status" of bats will be maintained. This means that if a building does host a bat roost, and if this will be affected, lost or made unsuitable for use by bats, then appropriate mitigation (including a replacement roost) will need to be provided. The type of mitigation required will depend on the species of bat(s) using the roost and the status of the roost but normally comprises the provision of bat boxes, bricks or tiles

Planning policy

4.12 Paragraph 99 of the Government Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within The Planning System (NB this document has not been revoked by the National Planning Policy Framework) states that:

"*It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted.* "

In this case, because the extent to which bats (a protected species) has not been established, the local planning authority may not issue planning permission until the further surveys detailed above have been carried out.

[3] The courts have considered the application of a planning authority's duty under the Habitat Regulations (and therefore the Habitat Directive) in the cases of Woolley vs Cheshire Borough Council (2009) and Morge vs Hampshire County Council (2010). In the Morge vs Hampshire County Council case the supreme court has ruled that it cannot see why planning permission should not be granted unless the proposed development:

- Would be likely to offend the prohibitions in Article 12(1) and
- Would be unlikely to be licensed as a derogation from those provisions

Nesting birds

4.13 All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). Section 1 of this Act makes it an offence to kill, injure or take any wild bird, or intentionally to take, damage or destroy the nest of any wild bird while that nest is in use or being built.

4.14 Lords Farm Barn and Stables are likely host nesting birds. As such, conversion and extension works should be undertaken outside of the bird nesting season (April – August inclusive depending on weather conditions). If this is not practicable then areas to be worked on will need to be first checked by a suitably qualified ecologist for nesting birds and, if any nests are found, works that would disturb the nest must be postponed until all young have fledged the nest and it is no longer in use.

5.0 Summary

5.1 Lords Farm Barn has hosted roosting bats in the past (bat droppings were found in the building) and The Stables is assessed as having "high" potential to host a bat roost due to the presence of a number of features potentially suitable for use by crevice dwelling bat species, the sites location in habitat of predominantly "high" suitability for commuting and foraging bats, and, its close proximity to a known breeding roost of crevice-dwelling bat species.

5.2 As such, to determine the status of the known bat roost and to confirm of other bat roosts exist on the site three dusk emergence/ dawn re-entry bat surveys, between May and the end of August(sub-optimally from April until mid-October), would need to be undertaken and the local planning authority may not issue planning permission until the further surveys have been carried out.

5.3 Other than bats, if the recommendations given in this report regarding nesting birds are adhered to, there are unlikely to be any other ecological constraints to the proposals.

Appendix 1 - Photographs

Photos 1 and 2 – Lords Farm Barn viewed from the front and rear

Photos 3 and 4 – Gaps under raised roof slates

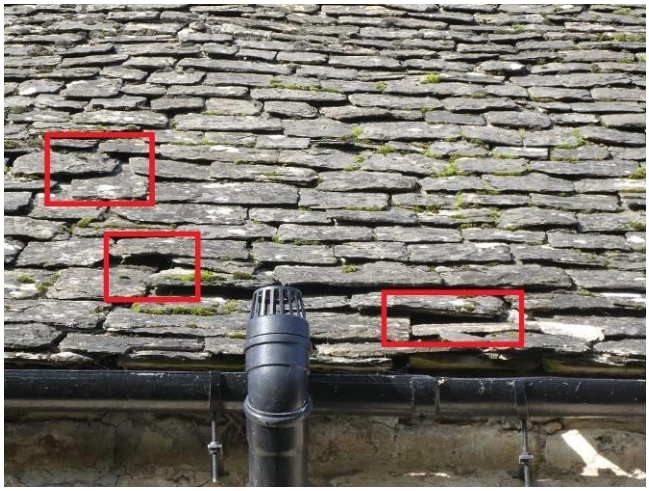


Photo 5 – Gaps at the side of the front elevation barn door, and, Photo 6 – Inside Lords Farm Barn

Photo 7 – Gap in roof lining below clay ridge tiles, and, Photo 8 - Gap in the stonework where the mezzanine timber leads into the wall


Photos 9 and 10 – Scattered, bat droppings (pipistrelle type) inside the barn


Photo 11 – The Stables viewed from the south west, and, Photo 12 – Gaps in the stonework


Photos 13 and 14 – Gaps under roof slates and clay ridge tiles

Appendix 2 – Bat ecology and conservation status

Background

Bats are the only true flying mammals and belong to their own taxonomic group, the *Chiroptera*. Worldwide there are almost 1,000 species, with 16 in the UK. All species in the UK are insectivorous. They have a highly sophisticated echolocation system that allows them to avoid obstacles and catch invertebrates, either in flight or by picking them off water, the ground or foliage.

Bat species in the UK

There are 16 species of bat that are known to exist in the UK mainland, with a further two - the greater mouse eared bat *Myotis myotis*, and the parti-coloured bat *Vespertilio murinus* - that are thought to occur as rare migrants or to have small populations in the UK. Bats in the UK belong to one of two taxonomic families, the Rhinolophidae (horseshoe bats) and the Vespertilionidae (all other UK bats).

Bat Conservation Status

Bat populations have undergone a significant decline in the past sixty years. For example, estimates from the National Bat Colony Survey suggest that the UK pipistrelle population (one of our commonest bat species), declined by approximately 70% between 1978 and 1993. Factors contributing to this decline include:

- Loss of, and damage to, roosting sites, including buildings, trees, and underground structures (mines, tunnels, ice-houses, cellars, etc).
- Loss and fragmentation of suitable insect-rich feeding habitats such as wetlands and deciduous woodland.
- Reduction in the abundance and diversity of insect prey due to intensive agriculture, particularly over-grazing and the use of pesticides.
- Loss of linear features such as tree-lines and hedgerows, depriving bats of commuting routes between roosts and feeding areas.
- Loss of winter roosting sites in buildings and old trees.
- Disturbance and destruction of roosts, including the loss of maternity roosts due to the use of toxic timber treatment chemicals.

Roosts

Bats use a variety of roosts of different types including trees, buildings, caves, mines and other structures. Most species are colonial and roost in groups. This can make populations particularly vulnerable to loss of roosts as the loss of a single roost may affect the whole population. Some species hang in obvious locations, such as the timbers near to the apex of a roof, others roost in cracks and crevices, such as the gaps under tiles, and as such can be very difficult to locate.

During the winter (November to February), when there is a reduction in insect numbers, bats hibernate to conserve energy. They prefer sites with a constant low temperature and a high relative humidity. On mild winter's nights, bats may wake up and feed. However, bats are particularly vulnerable to disturbance at this time of year, as flying in winter uses up large quantities of energy that cannot easily be replaced.

In the spring, after emerging from hibernation, bats often move from site to site and may congregate in small groups. Female bats gather together in the summer (approximately May to August dependant on species) in maternity roosts. Once the young have stopped suckling, and the baby is independent, bats tend to disperse and use other roosts. Maternity roosts are particularly vulnerable to disturbance, as bats may have come from a wide geographical area, and have a strong tradition of returning to the same roost year after year.

During the late summer and early autumn males occupy mating roosts which are visited by several females. After mating some species gather together at swarming sites to fatten up prior to hibernation.

Habitat associations

In addition to roosts, bats also need foraging habitats to find suitable food resources, and commuting routes to get to these areas. As would be expected, the highest numbers of bats are found in areas with abundant invertebrates. Some species specialise in catching small invertebrates in flight, whilst others specialise in catching larger invertebrates such as moths and beetles. The distances that bats travel to foraging areas varies between species; records have shown some greater horseshoe bats travel up to 22km to forage, although many species will typically feed within 1km of a roost.

Bats, especially the smaller species, tend to follow linear features (such as hedgerows and tree lines) to their foraging habitats and will often not cross open spaces. A gap of 10m in a linear feature will often not be crossed by bats, and it is important that developments do not create such gaps if linear features are used by bats.

Appendix 3 - Legislation and planning policy

Planning Authorities have a legal duty to consider biodiversity when assessing planning applications. Where there is a reasonable likelihood that a planning application might affect important protected sites, species or habitats, information on the species, habitat or site likely to be affected, together with an assessment of the impacts of the proposals, will almost certainly be required.

The legal duty for Planning Authorities to have regard to the conservation of biodiversity was introduced in the 2006 Natural Environment and Rural Communities Act (The NERC Act). This act clarified existing commitments with regard to biodiversity, raised the profile of biodiversity and aimed to make the consideration of biodiversity a natural and integral part of policy and decision making.

In addition to the NERC Act there is also national and international biodiversity legislation. This includes legislation in relation to protected species and sites which operates outside of the planning system. Local Authorities and developers have a duty to comply with this legislation.

National planning policy

Paragraph 99 of the Government Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System (this document has not been revoked by the recently published National Planning Policy Framework) states that:

'It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision.'

As such, in line with national planning policy, most planning authorities will ask for this information to be provided before a planning decision is made and in many cases before it is registered.

Local planning policy

In addition to national planning policy, most councils have planning policies to protect biodiversity, and to enhance it where practicable within and adjacent to development sites.

European protected species

The United Kingdom hosts a number of European Protected Species (EPS) of animals (table 1) and plants (table 2). These species receive special protection under UK law and it is an offence under the Wildlife and Countryside Act 1981 (as amended) and the European Habitats and Species Directive (92/43/EC), enacted in the UK through The Conservation of Habitats and Species Regulations 2017, to deliberately or recklessly destroy or damage their habitat, or to disturb, kill or injure the species without first having obtained the relevant licence from Natural England.

Planning Authorities have a statutory duty under these regulations to have regard to the requirements of the Habitats Directive and need to be satisfied that the development is likely to receive a licence from Natural England, and therefore comply with the Habitats Directive, before granting planning permission.

Table 1 – European Protected Species of Animal found in the UK

Common name	Scientific name
Bats, Horseshoe (all species)	*Rhinolophidae*
Bats, Typical (all species)	*Vespertilionidae*
Butterfly, Large Blue	*Maculinea arion*
Cat, Wild	*Felis silvestris*
Dolphins, porpoises and whales (all species)	*Cetacea*
Dormouse	*Muscardinus avellanarius*
Frog, Pool	*Rana lessonae*
Lizard, Sand	*Lacerta agilis*
Moth, Fisher's Estuarine	*Gortyna borelii lunata*
Newt, Great Crested (or Warty)	*Triturus cristatus*
Otter, Common	*Lutra lutra*
Snail, Lesser Whirlpool Ram's-horn	*Anisus vorticulus*
Snake, Smooth	*Coronella austriaca*
Sturgeon	*Acipenser sturio*
Toad, Natterjack	*Bufo calamita*
Turtles, Marine	*Caretta caretta*
	Chelonia mydas
	Lepidochelys kempii
	Eretmochelys imbricata
	Dermochelys coriacea

Table 2 – European Protected Species of Plant found in the UK

Common name	Scientific name
Dock, Shore	*Rumex rupestris*
Fern, Killarney	*Trichomanes speciosum*
Gentian, Early	*Gentianella anglica*
Lady's-slipper	*Cypripedium calceolus*
Marshwort, Creeping	*Apium repens*
Naiad, Slender	*Najas flexilis*
Orchid, Fen	*Liparis loeselii*
Plantain, Floating-leaved water	*Luronium natans*
Saxifrage, Yellow Marsh	*Saxifraga hirculus*

Nationally protected species

Many species of animal are protected under the 1981 Wildlife and Countryside Act (as amended). 'Full protection' applies to EPS and some non EPS species such as the water vole. This prohibits the intentional killing, injuring or taking (capture. etc); possession; intentional disturbance whilst occupying a 'place used for shelter or protection' and destruction of these places; sale, barter, exchange, transporting for sale and advertising to sell or to buy. Many species, such as common species of reptile and amphibian, are protected from intentional killing and injuring and trading.

Badgers

Badgers and their setts are protected under the 1992 Protection of Badgers Act and the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally or recklessly kill, injure or take badgers or to interfere with a badger sett. Interference with a sett includes blocking tunnels, or damaging the sett in any way, and could include blocking a badger pathway if it were to stop badgers entering or leaving a sett.

Penalties for offences can be severe, with fines of up to £5,000 plus up to six months' imprisonment, for each illegal sett interference, badger death or injury.

Work that disturbs badgers occupying a sett is illegal without the appropriate licence from the relevant statutory authority being held. Natural England issue licences for reasons including science, education or conservation, for development such as the building of houses and for investigation of offences against badgers. They also issue licences for the prevention of serious damage to land, crops or other form of property, as well as for agriculture, forestry, drainage operations and prevention of the spread of disease.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), whilst they are actively nesting or roosting. Section 1 of this Act makes it an offence to kill, injure or take any wild bird, and to intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built. It is also an offence to take or destroy any wild bird eggs.

In addition, bird species listed under Schedule 1 of the Act receive extra protection. The Act states that 'it is an offence to intentionally or recklessly disturb any wild bird listed in Schedule 1 while it is nest building, or at (or near) a nest containing eggs or young, or disturb the dependent young of such a bird'.

In practice this means that in areas where birds are likely to be nesting works should not be undertaken during the nesting season, which is generally considered to be March to September, although this very much depends on weather conditions, habitats and the species involved. If works cannot be avoided then areas should first be checked for nesting birds. Habitats likely to host nesting birds include trees, hedgerows and dense scrub, buildings, reedbeds and riverine habitats and open areas with tussocky vegetation.

Appendix 4 - About GS Ecology

Established in 2009, GS Ecology is an independent ecological consultancy in Berkshire. We carry-out surveys and ecological consultancy services for public and private sector clients including in Berkshire, Oxfordshire and Hampshire, London and the south of England. We can advise you on cost effective sustainable solutions for your project, whether it be a bat survey to inform a planning application, the ecology chapter of an Environmental Statement or a Woodland Management Plan.

Our work is undertaken by experienced and qualified ecologists, who are members of the Chartered Institute of Ecology and Environmental Managers. Our services include:

- Ecology surveying and reporting to inform planning applications, e.g.
  - Preliminary Ecological Appraisal
  - Extended Phase 1 Habitat Survey in Hampshire, Berkshire, Oxfordshire, London and Southern England
  - Protected species surveys, e.g. badgers, dormouse, great crested newts
  - Bat surveys in Oxfordshire, Berkshire, Hampshire, London and Southern England
- BREEAM ecology assessments – to demonstrate the sustainability of a new building
- Protected species licensing such as bat and great crested newt licences for development sites after planning permission has been obtained
- Providing advice to land managers and writing ecological management plans, such as woodland management plans and farm environmental plans for England woodland Grant Scheme and Environmental Stewardship applications
- Providing ecology advice to Local Authorities and Local Planning Authorities