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## Bat Scoping Report

### Combe Bank Farm

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## **Report Summary**

1. Fluid Planning commissioned the Ecology Co-op to undertake a bat scoping survey of a small stable block and the surrounding land on Combe Bank Farm, Sundridge. The purpose of this report is to present the findings of the survey and identify potential ecological constraints to the proposed redevelopment of the site into a residential dwelling.
2. An assessment of the site was carried out by Dan Bennett BSc, MCIEEM on 8<sup>th</sup> December 2020. This included a ground-based external and internal inspection of the building, and an appraisal of the surrounding habitats, to evaluate the site for notable habitats and their potential to support EU and UK protected/notable species.
3. The survey considered the old stable block, comprising of a red brick work base and timber paneling, a shallow pitched roof with a modern timber frame and a single skin of corrugated metal. The stable faces the south eastern corner with an open front onto a fenced hard standing paddock area.
4. The building structure was assessed to have negligible bat roosting potential; while there is plenty of access points, the lack of roof voids, and wall crevices together with the thermal instability of the interior, means that there are no suitable features for roosting bats.
5. The surrounding landscape offers potentially valuable habitat for foraging bats. A few discarded moth wings were found on the barn floor and one bat dropping indicated that the building is occasionally used as a feeding shelter by bats. The hedgerow and scrub/trees bordering the site form a linear feature that is potentially important for foraging and commuting bats. This feature also potentially supports common nesting birds.
6. Evidence that the barn is used occasionally by barn owls was found comprising three owl pellets, one of which very fresh. These were found at the base of a dividing wall near the open entrance to the stable. There were no signs of breeding and the barn lacks suitable ledges or boxes for this purpose, however, it is likely to be used as a day roost.
7. No surveys are considered necessary, but it is recommended that the building is re-checked immediately prior to works and is dismantled with care as a precaution. In the unlikely event that a bat is discovered, the works should cease immediately, and the advice of a bat ecologist sought.



**8. Since the stable, hedgerows and scrub within the site has the potential to support nesting birds, it is recommended that demolition and/or construction work upon the building should be timed outside of nesting bird season (typically March-September inclusive). If this is not possible, the building should be subject to nesting bird checks by a suitably qualified ecologist in advance of demolition, and works must be postponed if there are active nests found.**

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*We disclaim responsibility to the client and others in respect of any matters outside the scope of the above.*

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## **1 INTRODUCTION**

### ***1.1 Purpose of the Report***

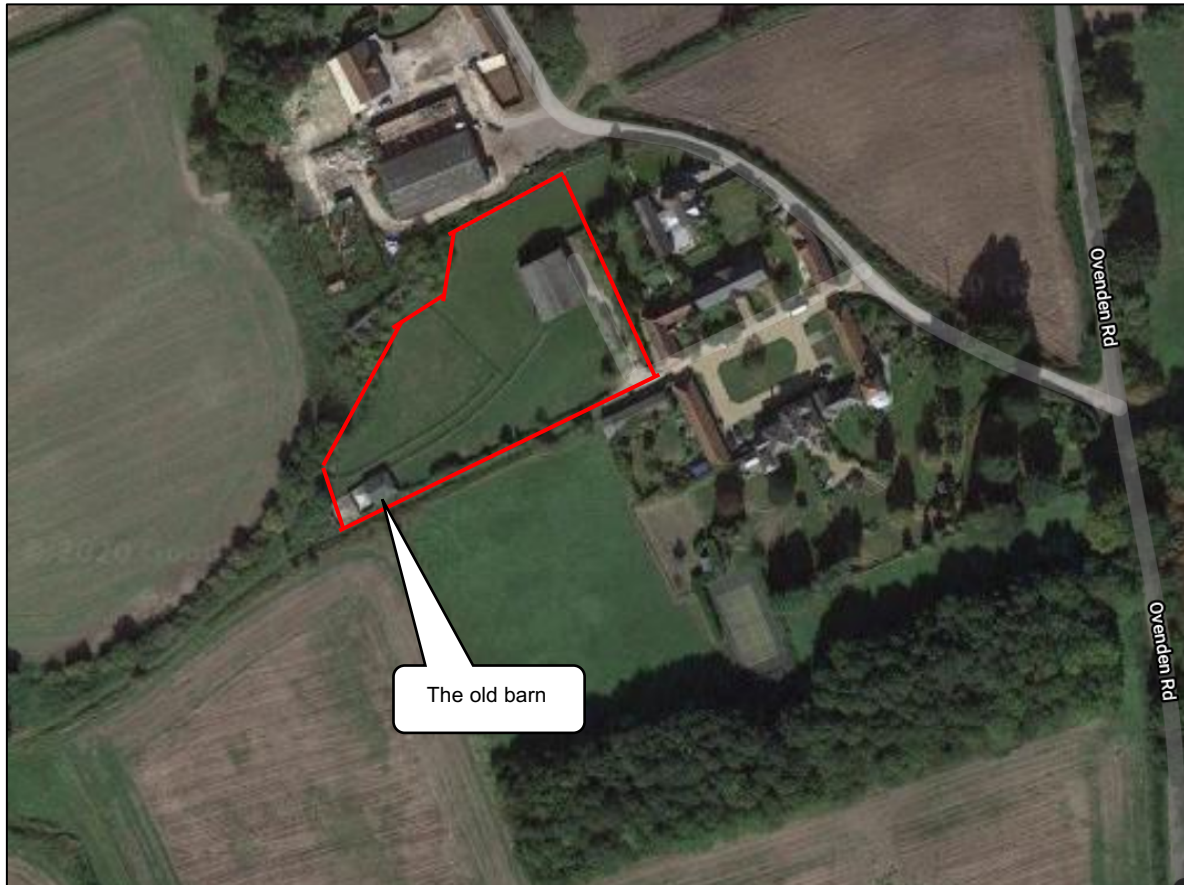
The Ecology Co-op has been commissioned by Fluid Planning to undertake a bat scoping assessment of a small stable block and the land surrounding it on Combe Bank Farm, Sundridge. This report presents the findings of a walkover survey and building inspection for occupation by bats, undertaken by Dan Bennett BSc, MCIEEM on 9<sup>th</sup> December 2020. It also provides details of the potential for any protected species and/or habitats to be present at the site, and an assessment of the potential ecological constraints to the proposed redevelopment of the site into a residential dwelling. Recommendations for further surveys that are likely to be required to inform a planning application are provided, if necessary. Where appropriate, measures to avoid, mitigate and/or compensate for impacts are outlined.

### ***1.2 Background***

The site is located on Combe Bank Farm, Sundridge, Kent TN14 6AH. The central grid reference for the site is TQ 4771 5667.

Combe Bank Farm is within the Kent Downs Area of Outstanding Natural Beauty (AONB). The surrounding landscape is predominantly mixed farmland with arable and pastoral fields, woodland, hedgerows, and scattered trees. The M25 is situated 430 meters south of the property. The building is located in the south west corner of the application site. The old stable block comprises of a red brick work base with timber paneling, and a shallow pitched roof with a modern timber frame and a single skin of corrugated Chrysotile. The stable faces the south eastern corner with an open front onto a fenced hard standing, with a large, unsealed timber barn door.

No detailed plans were available for the proposals for the site, but it is understood that the intention is to redevelop it into a single detached residential dwelling on the same footprint as the existing structure.



**Figure 1.** An aerial view of the site (indicated by a red box) and local context. Image produced courtesy of Google maps (Map data ©2020 Google).

### 1.3 Policy and Legislation

Legal protection applying to all species in the UK is outlined in Appendix 1 of this report. The results of this survey will be used to determine the need for further surveys, impact avoidance measures and/or an appropriate mitigation strategy to ensure compliance with UK and EU wildlife legislation.

## 2 METHODOLOGY

The methodology used for this survey is in accordance with the bat survey guidelines produced by the Bat Conservation Trust<sup>1</sup>.

### 2.1 Desk Study

A search of on-line mapping resources was undertaken to characterise the local context of the site with respect to semi-natural habitats and linear features of value to foraging and commuting bats.

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<sup>1</sup> Collins, J.(ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> edn). The Bat Conservation Trust, London.



The MAGIC website resource ([www.magic.gov.uk](http://www.magic.gov.uk)) was used to identify the location of designated sites for nature conservation within 2km and EPS licences granted within a 1km radius of the survey site. Priority habitats and ancient woodland sites upon or adjacent to the site have also been identified, due to their ecological value and potential to act as important foraging resources for bats.

Priority habitats and ancient woodland are classified as habitats of principal importance. Habitats of principal importance are listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006<sup>2</sup>, which places a duty on Local Planning Authorities to have due regard to biodiversity.

## 2.2 Field Survey

Bats can use a wide range of features including loft spaces, cavity walls, loose tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with holes, splits, cracks, cavities, ivy, and loose bark.

A detailed building inspection was carried out, looking for potential access points and 'potential roosting features (PRFs)' that bats could use and any evidence indicating the presence of bats using the building, such as rub marks, staining or droppings. This included a ground-based inspection of the barn and internal inspection, together with full external inspection of the surrounding habitat and Brewers Street access road. Binoculars were used to aid the inspection.

The potential for roosting bats for each feature, or group of features was assessed as either negligible, low, moderate, or high, in accordance with best practice. Any evidence confirming the presence of bats that was found was clearly recorded including photos and samples taken (e.g. droppings) where appropriate.

The habitats surrounding the site and wider landscape were broadly assessed for their potential to support foraging and commuting bats.

## 2.3 Other Protected and/or Notable Species

Any birds identified, or evidence of nesting birds discovered during the site visit were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern (Eaton et al. 2015) and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981).

Whilst this survey focussed on bats and no specific searches were made with respect to other protected species, any evidence of other protected species that was encountered during the site visit was also recorded.

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<sup>2</sup> HM Government (2006). Natural Environment and Rural Communities Act 2006. Available online at: <https://www.legislation.gov.uk/ukpga/2006/16/section/41>.



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### 3 RESULTS/OBSERVATIONS

#### 3.1 Desk Study

Combe Bank Farm falls within the Kent Downs Area of Outstanding Natural Beauty. This designation recognizes the highly distinctive natural landscapes of the two ridges of chalk and greensand that runs in parallel with each other to the coast. The chalk ridge has characteristic dipping slopes and dry valleys and supports habitats of high wildlife importance including unimproved calcareous grasslands, scrub and broadleaved woodland. The greensand ridge supports heathlands and acidic woodlands. The AONB runs from Surrey to the white cliffs of Dover, rising to 240 metres at its highest point and crosses three main river valleys; the Darent, Medway and the Stour.

There are no designated sites that include bats as a qualifying feature within the zone of influence from the site. There are a number small parcels of ancient and semi natural woodland within the 2km search area that are listed on Natural England's inventory.

The closest granted EPS licenses for mitigation projects within 1km of the site boundary (reference: 2017-30011-EPS-MIT) lies 1.5km south west and is located on the other side of the M25. It concerns the destruction of a resting place for brown long eared *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* bats, dated 2017.



**Figure 2.** Designated sites within a radius of 2km of the application site. Granted EPS licences within the locality are shown as dark blue squares. Priority broadleaved woodland (solid green) with ancient semi-natural woodland (vertical hatch), a young tree woodland (yellow hatch), and wood pasture and parkland are also displayed. Opportunity Area is indicated with a red outline. Non-priority broadleaved woodland is shown in light green. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

### 3.2 Site Context and Surrounding Habitats

The landscape surrounding Combe Bank Farm is rural, consisting of arable and pastoral fields bisected with broadleaved species-rich hedgerows, small woodland blocks, wood pasture and parkland offering good quality foraging habitat for a range of bat species. The M25 passes east to west approximately 430 meters south of the site. The application site is an old square stable block positioned in the south western corner of the plot, surrounded by improved grassland on the north and the east sides, which has been used as horse pasture in the past but more recently have been maintained short by regular mowing. Perennial rye grass *Lolium perenne* dominates, with creeping buttercup *Ranunculus repens* and common nettle *Urtica dioica* also present (Photograph 1). A public right of way crosses from the north eastern corner and exits along the short western boundary, which is predominantly a gated area leading off from an overgrown hard standing (Photograph 2), some willow *Salix sp.* are growing over the fence. The diagonal northern boundary is an unmaintained hedge predominately made up of bramble *Rubus fruticosus*, interspersed with willow herb *Epilobium sp.* and ivy *Hedera helix*, an unhealthy willow grows through the bramble (Photograph 3), bordering this boundary is an agricultural property. The





southern boundary is fenced, with hawthorn *Crataegus monogyna* and bramble growing at irregular intervals along the outside (Photograph 4). Current access is gained through a gated entrance in the south eastern corner, the immediate area has a hard standing bordered with a defunct hedge dominated by beech *Fagus sylvatica* (Photograph 5) partitioning the improved grassland to the west and a wooden fence along the eastern boundary of the site (Photograph 6). From here access to the stable block is on foot through another gate and across the pasture.

### 3.3 Building Inspection for Bats

The old stable block comprises a red brick work base with timber paneling, (Photograph 7). The shallow pitched roof has a modern timber frame with a single skin of corrugated metal (Photograph 8). The stable faces the south eastern corner with an open front onto a fenced hard standing (Photograph 9), with a large, unsealed timber barn door (Photograph 10). There is no insulation or windows, but the open front does allow it to be illuminated by natural light. The building measures approximately 10m in length and 10m wide. The barn is no longer used for stabling horses, but there are remains from previous use (Photograph 11), it is seldom visited by people. There are regular gaps along the timber paneling on the sides of the building, allowing access for bats, however the timber framed roof is well sealed with the walls, (Photograph 12). The building interior space is draughty and not thermally stable as it is open on one side. The timber framing does not offer suitable crevices often favored by *Myotis* sp. bats and a substantial amount of cobwebbing covers the corners indicating a lack of activity (Photograph 13). The remains of one moth – discarded wings was found on the floor, together with one dropping.

Due to poor thermal stability and a distinct lack of roosting crevices, the barn is classified as having negligible potential for roosting bats but is likely to be used as an occasional feeding roost by bats whilst foraging the surrounding habitat.

### 3.4 Other Protected and/or Notable Species

The stable has an open side providing free access to nesting birds such as house sparrow *Passer domesticus*, starling *Sturnus vulgaris*, swallow *Hirundo rustica* and house martin *Delichon urbicum*, all of which commonly nest in buildings. There was evidence of a swallow's nest on the roof rafters and during the visit the presence of dunnocks *Prunella modularis*, robins *Erithacus rubecula*, blackbirds *Turdus merula*, blue tits *Cyanistes caeruleus* as well as a fieldfare *Turdus pilaris*, were recorded. However, the site is unlikely to support important bird assemblages. The hedgerow and scrub within the site along the northern boundary have high potential to support common breeding birds and their nests.

Evidence that the barn is used occasionally by barn owls was found comprising three owl pellets, one of which very fresh (Photograph 14). These were found at the base of a dividing wall near the open entrance to the stable.

Barn owls are listed on schedule 1 of the Wildlife and Countryside Act 1981, affording them special protection from disturbance while breeding. However, there were no signs of breeding and the barn lacks suitable ledges or boxes for this purpose; the evidence indicates that the barn is likely to be used as a day roost only.



### 3.5 Survey Limitations

An initial site assessment such as this is only able to act like a 'snapshot' to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey but may be evident at other times of the year. For this reason, habitats are assessed for their potential to support bats.

### 3.6 Photographs



**Photograph 1.** Improved grassland surrounding the stable block on two sides.



**Photograph 2.** Western boundary and overgrown hard standing.



**Photograph 3.** Northern Boundary and public access gate.



**Photograph 4.** Southern boundary showing fence and hawthorn.





**Photograph 5.** Hard standing at entrance with defunct hedge.



**Photograph 6.** Eastern fenced boundary.



**Photograph 7.** The eastern elevation of old stable block



**Photograph 8.** Interior view of timber framed roof.



**Photograph 9.** Open sided entrance



**Photograph 10.** Interior view of the of barn door.





**Photograph 11.** Interior view of old stables.



**Photograph 12.** Sealed between timber roof and wooden panelled sides.



**Photograph 13.** Cobwebbing over crevices between the roof and frame.



**Photograph 14.** Fresh barn owl pellet

## 4 ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES

### 4.1 Bats

Based on the findings of the site visit, the building is classified as having negligible bat roosting potential, although evidence was found that indicate that it is used as an occasional feeding shelter by a small number of foraging bats.

In accordance with the best practice guidance, emergence surveys are not considered necessary and demolition or redevelopment of the barn is not considered likely to impact upon roosting bats. However, as a precautionary measure it is recommended that the building is re-checked by a qualified ecologist prior to commencing works and that the building is disassembled carefully. In the unlikely event that a bat is discovered, the works should cease immediately, and the advice of a bat ecologist sought. It is recommended that existing tree and shrubs, and the hedgerow are retained where possible during the development. If tree and shrub removal cannot be avoided, these should be first checked for presence



of roosting bats.

The developer is encouraged to consider the following in the design of the proposed development to introduce habitat enhancements for bats:

1. An ecologically sensitive lighting plan in accordance with the Bat Conservation Trust guidance (see Appendix 2) to prevent artificial light spillage from the completed development and maintain a 'dark corridor' for flight lines across the local landscape.
2. Provision of permanent bat roosting features into new properties of the development to replace the existing roosting habitat such as designing integral bat roosting opportunities into the building fabric such as bat tiles and dedicated access points/ void spaces specifically for roosting bats. As shown in Appendix 3.
3. Soft landscaping for the proposed development to include a planting scheme that is beneficial to biodiversity, targeted at encouraging invertebrates as a food source for foraging bats.

## 4.2 Other Protected and/or Notable Species

Since the stable, hedgerows and scrub within the site and the access to it have the potential to support nesting birds and roosting barn owls, demolition and/or construction work upon the building should be timed outside of the nesting bird season (bird breeding season is typically from March – September inclusive). If this is not possible, the building should be subject to nesting bird checks by a suitably qualified ecologist in advance of demolition, which must be postponed if there are active nests found. Furthermore, the provision of barn owl nesting boxes somewhere into the new development is recommended to replace the existing roosting habitat, and encourage them to breed. It is important that the barn owl box is sited carefully and confirms to the appropriate design in accordance with the advice provided by the Barn Owl Trust<sup>3</sup>.

**If any protected species are found during the proposed work, work should be stopped immediately, and an ecologist must be contacted immediately for advice.**

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.

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<sup>3</sup> <https://www.barnowltrust.org.uk/barn-owl-nestbox/>



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## **APPENDIX 1 – Wildlife Legislation and National Planning Policy**

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to bats.

All bat species in the UK are included in Schedule II of the Habitats Regulations 2017, which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("The EC Habitats Directive"). As such all bat species in the UK are defined as 'European Protected Species (EPS).

Four species of bat (Bechstein's bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus*, greater and lesser horseshoe bats, *Rhinolophus ferrumequinum* and *R. hipposideros*) are also listed on Annex IV of the EC Habitats Directive. This requires the designation of a series of sites which contain important populations of these species as Special Areas of Conservation (SACs).

All species of British bat are also fully protected under the Wildlife and Countryside Act (1981), as amended, through inclusion in Schedule V.

All species of bat are listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Section 41 of the NERC Act lists the habitats and species of principle importance. This places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of habitats and species of principal importance for the conservation of biodiversity in England (commonly referred to as the 'Biodiversity Duty'). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers.

Under the above legislation it is an offence to:

- Kill, injure or take any individual bat of any species;
- possess any part of an individual bat, either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by bats for shelter, rest, protection, or breeding;
- intentionally or recklessly disturb these species whilst using any place of shelter or protection; or
- deliberately disturb bats in such a way as to be likely to impair their ability to:
  - survive, to breed or reproduce, to rear or nurture their young; to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong;
- keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

It is also an offence to set and use articles capable of catching, injuring, or killing bats (for example a trap or poison), or knowingly cause or permit such an action. There is also protection under Schedule 6 of The Wildlife and Countryside Act 1981 (as amended) relating specifically to trapping and direct pursuit of bats.

A European Protected Species License (EPSL) in relation to bats is required from Natural England for any work that would result in an otherwise unlawful activity (e.g. damage to a bat roost). A license can



only be issued to permit otherwise prohibited acts if Natural England are satisfied that all the following three tests are met:

- The proposal is for ‘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’;
- There is no satisfactory alternative; and
- The action authorised by the license will not be detrimental to the maintenance of bat populations at a favourable conservation status in their natural range.

A bat roost is defined by the Bat Conservation Trust’s Bat Surveys—Good Practice Guidelines 3<sup>rd</sup> Edition as “the resting place of a bat”. In general, the word roost is interpreted as “any structure or place, which any wild bat uses for shelter or protection.”

Bats tend to re-use the same roosts; therefore, legal opinion is guided by recent case law precedents, that a roost is protected, whether or not the bats are present at the time. This includes summer roosts used for resting during the day and/or breeding; or winter roosts, used for hibernating.





## **APPENDIX 2 – Reducing Impacts of Artificial Light**

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts on other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness. Guidelines issued by the Bat Conservation Trust<sup>4</sup> should be considered while designing the lighting scheme. A simple process which should be followed where the impact on bats is being considered as part of a proposed lighting scheme. It contains techniques which can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

### **Avoid lighting on key habitats and features altogether**

there is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation. However, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species

### **Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations**

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results;

- Dark buffers, illuminance limits and zonation
- Sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill
- Consider the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consider the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cats eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times.
- Screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding
- Glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features.
- Creation of alternative valuable bat habitat on site, whereby additional or alternative bat

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<sup>4</sup> Bat Conservation Trust and Institute for Lighting Professionals (2018) Guidance note 8. Bats and Artificial Lighting. <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>



flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development.

- Dimming and part-night lighting. Depending on the pattern of bat activity across the key features identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

#### **Demonstrate compliance with illuminance limits and buffers**

- *Design and pre-planning phase*; It may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking*; as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

#### **Further reading:**

Buglife (2011) *A review of the impact of artificial light on invertebrates*.

Royal Commission on Environmental Pollution (2009) *Artificial light in the environment*. HMSO, London.  
Available at: <https://www.gov.uk/government/publications/artificial-light-in-the-environment>

Rich, C., Longcore, T., Eds. (2005) *Ecological Consequences of Artificial Night Lighting*. Island Press.  
ISBN 9781559631297.

CPRE (2014) *Shedding Light: A survey of local authority approaches to lighting in England*. Available at: <http://www.cpre.org.uk/resources/countryside/dark-skies/item/3608-shedding-light>

Planning Practice Guidance guidance (2014) When is light pollution relevant to planning? Available at: <https://www.gov.uk/guidance/light-pollution>

Institution of Lighting Professionals (2011) *Guidance Notes for the Reduction of Obtrusive Light* GN01:2011. Available at: <https://www.theilp.org.uk/resources/free-resources/>

End.



### **APPENDIX 3 – EXAMPLES OF BESPOKE BAT ROOSTING FEATURES FOR NEW BUILDINGS**



**Figure 1.** Left to right, the 2F, 2FN and the 1FS bat boxes produced by Schwegler. These and other brands are available at many on-line wildlife stores. These are constructed of 'woodcrete' (a mixture of cement and woodchip) and are designed to be durable and replicate the stable thermal properties of trees and buildings. They may be attached to trees or buildings.



**Figure 2.** Examples of integral bespoke bat roosting features that may be incorporated into buildings during construction/renovation. From left to right: 1. An example of bat access tile into loft space. 2. The 2FR bat tube; 3. An example of 2FR bat tubes installed into a house wall in a series of three. Other brands and designs are available.