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## **Bat Scoping Report**

**19 & 21 Nyewood Lane, Bognor Regis**

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## **Report Summary**

1. The Ecology Co-op was commissioned to undertake a bat scoping assessment of 19 and 21 Nyewood Lane, Bognor Regis (hereafter referred to as 'the site') by Peter Breskal. This report presents the findings of the survey and identifies any potential ecological constraints to a planning application for the proposed alterations of buildings on the site.
2. An assessment of the site was carried out by Nick Gray on the 9th October 2018 to evaluate the site for its potential to support roosting bats.
3. The site comprises two adjacent detached two-storey houses, each with small gardens, located within an urban environment, which is approximately 150 m from the sea. The buildings on the site were inspected to assess their potential to support roosting bats. One of the buildings was found to have low potential to support roosting bats and the other to have negligible potential to support roosting bats, though no physical signs of bats were identified at the site during the assessment.
4. In accordance with current guidelines, the No 19 property will require one emergence/re-entry survey. If bats are found to be using the site, further mitigation measures may be required during the development.
5. It is recommended that the proposed development should include an ecologically sensitive lighting scheme and that the use of breathable roofing membranes (BRM), such as 'Tyvec,' within the building should be avoided, along with other modern types of bitumen felt that contain polypropylene filaments (for example type 5U), all of which can cause serious harm to bats.
6. During construction, any European hedgehogs found on site should be relocated away from the area and care should be taken to cover any temporary unattended ground holes.
7. An opportunity exists on the site to use planting schemes to encourage insect diversity and to include integral bat roosting opportunities into the building fabric.

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*This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.*



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## **1 INTRODUCTION**

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

The Ecology Co-op was commissioned to undertake a bat scoping assessment of 19 and 21 Nyewood Lane, Bognor Regis (hereafter referred to as ‘the site’) by Peter Breskal. This report presents the findings of a walkover survey and building inspection to assess the properties for their potential occupation by bats. The survey was undertaken by Nick Gray BSc (Hons), Grad CIEEM (bat licence WML CL18 number 2017-32546-CLS-CLS) on the 9th October 2018. It provides details on the potential for any protected species and/or habitats to be present on the site and provides an assessment of the potential ecological constraints to the proposed redevelopment of the site. Additional recommendations for further surveys that are likely to be required to inform a planning application are provided where necessary. Where appropriate, measures to avoid, mitigate and/or compensate for negative ecological impacts are also outlined.

### ***1.2 Background***

The site is located at 19 and 21 Nyewood Lane, Bognor Regis, West Sussex PO21 2QB. The central grid reference for the site is SZ 92563 98768 (see location map, Figure 1).

The site comprises two adjacent detached two-storey houses, each with small gardens, located within an urban environment, which is approximately 150m from the sea.

The survey area is taken to be the curtilage of each property, which includes the gardens within the site.

It is understood that the proposed development seeks to demolish the existing buildings and replace them with a single block of apartment homes.



**Figure 1.** Site location. Images produced courtesy of Google maps (Map data ©2018 Google).

### 1.3 Policy and Legislation

Details of planning policy and legal protection applying to all UK bat species are 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 methodologies used for this survey are in accordance with the bat survey guidelines produced by the Bat Conservation Trust<sup>1</sup>.

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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.



## *2.1 Desk Study*

A search of on-line mapping resources was undertaken to identify the location of any features of potential ecological interest and connectivity to woodland, scrub, and hedgerow networks (relevant to bats, dormice, great crested newts, reptiles etc) in the wider landscape around the site.

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 and European Protected Species Licences (EPSLs) granted within a 2 km radius of the survey site.

## *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 natural structures, such as trees with holes, splits, cracks, cavities, ivy, and loose bark.

A detailed buildings 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 within the buildings, such as rub marks, staining or faecal pellets (droppings). This included a ground-based external inspection around the buildings and an internal inspection of any enclosed loft spaces or roof voids, where safe access was possible.

The external inspection was undertaken during daylight hours from ground-level using binoculars, an endoscope and a high-powered torch. Evidence was sought for the presence of potential access and egress routes for bats into and out of PRFs, and for evidence of their use by bats, such as scattered droppings, urine staining or scratching around openings.

The internal inspection was undertaken during daylight hours and was aided by a high-powered torch, a bat detector/recorder, a telescopic ladder and an endoscope. All accessible areas were searched for evidence of bats. Bats regularly utilise specific areas within buildings, such as dividing walls/chimney breasts, underneath ridge beams, beneath hip joints and junctions and timber/wall joints etc. The type of evidence sought included bat droppings, staining above/around gaps, feeding remains and other signs of use by bats including the presence of bats themselves. Internal signs of roost access and egress points were also identified, for example light shining into internal building spaces from the exterior of the building or damage to the internal lining of the roof. Roosting bats and signs of their presence are not always visible, so any potential bat roosting locations were also noted during the survey.

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

Habitats and features at the site were also evaluated for their potential to support other legally protected species. In addition, observations of any important plant communities, bird assemblages or other potentially valuable ecological features were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern (Eaton et al. 2015)<sup>2</sup> and those species afforded special protection under the Wildlife and Countryside Act 1981 (as amended)<sup>3</sup>.

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.

## 3 RESULTS/OBSERVATIONS

### 3.1 Desk Study

No statutory designated sites were found to be present within 2 km of the site. The site does fall within the impact risk zone for Bognor Reef Site of Special Scientific Interest (SSSI) (see Table 1 below).

**Table 1.** Designated sites within 2 km of the site.

| Site Name                              | Habitat/Species Designation                                                                     | Distance from Site      |
|----------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------|
| Impact Risk Zones for Bognor Reef SSSI | To assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England), | 150 m south of the site |

No priority habitats or ancient woodland, which are listed as habitats of principal importance, were identified within 2 km of the site.

Habitats of principal importance are listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006<sup>4</sup>, which places a duty on Local Planning Authorities to have due regard to biodiversity.

Habitats of principal importance and ancient woodland are also afforded protection through the National Planning Policy Framework (NPPF) 2018<sup>5</sup>, Paragraph 174b, which states that council policies should “*promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing*

<sup>2</sup> Eaton et al. 2015. *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*. British Birds 108. December 2015 pp. 708 – 746. Available online at: <https://britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf>.

<sup>3</sup> HM Government (1981). Wildlife and Countryside Act 1981 (as amended). Available online at: <http://www.legislation.gov.uk/ukpga/1981/69/contents>.

<sup>4</sup> HM Government (2006). Natural Environment and Rural Communities Act 2006. Available online at: <https://www.legislation.gov.uk/ukpga/2006/16/section/41>.

<sup>5</sup> HM Government (2018). National Planning Policy Framework. Department for Communities and Local Government. Available online at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/728643/Revised\\_NPPF\\_2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728643/Revised_NPPF_2018.pdf).



*measurable net gains for biodiversity.*” The Office of the Deputy Prime Minister (ODPM) Circular 06/05<sup>6</sup> also states that the potential effects of a development on nearby habitats or species listed as priorities in the UK Biodiversity Action Plan (BAP) (now Habitats and Species of Principal Importance) can be a material consideration in planning decisions.

Providing the recommendations made within this report are followed, the proposed activities within the site are considered unlikely to have a negative impact on these habitats.

No EPSLs granted for mitigation projects concerning bats within 2 km of the site were shown on the Magic Maps website. One EPSL (reference 2016-26860-EPS-AD2) for the destruction of a resting place for common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* bat species was shown to have been granted in 2017, approximately 2.2 km to the east of the site.

### 3.2 Site context and surrounding habitats

The site comprises two adjacent detached two-storey houses, each with small rear gardens. The rear gardens of adjacent properties to the west of the site, form a small contiguous and isolated area of mature shrubs and scattered trees. There is a road immediately to the east of the site. A row of buildings extends to the north and to the south of the site. The surrounding area is mainly dominated by residential streets. The site is located approximately 150m north from the sea. Poor habitat connectivity exists between the site and the wider landscape of agricultural fields and hedgerows, which are located 1.7km to the north-west.

### 3.3 Building inspection for bats

An external and internal inspection of both buildings was undertaken to look for evidence of bats.

19 Nyewood Lane (Building A in Table 3) was found to have two attic voids, which were identified and marked as V1 and V2 in Figure 2, below. Several PRFs were observed during the external inspection, mainly associated with gaps under clay roof tiles. During the internal inspection, no evidence of bats was found within either of the two attic voids. The findings from the inspection are described in more detail in Table 3 below and illustrated in the photographs in section 3.6.

21 Nyewood Lane (Building B in Table 3) was found to have no PRFs and no evidence of bats was found during the building inspection.

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<sup>6</sup> HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7692/147570.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf).

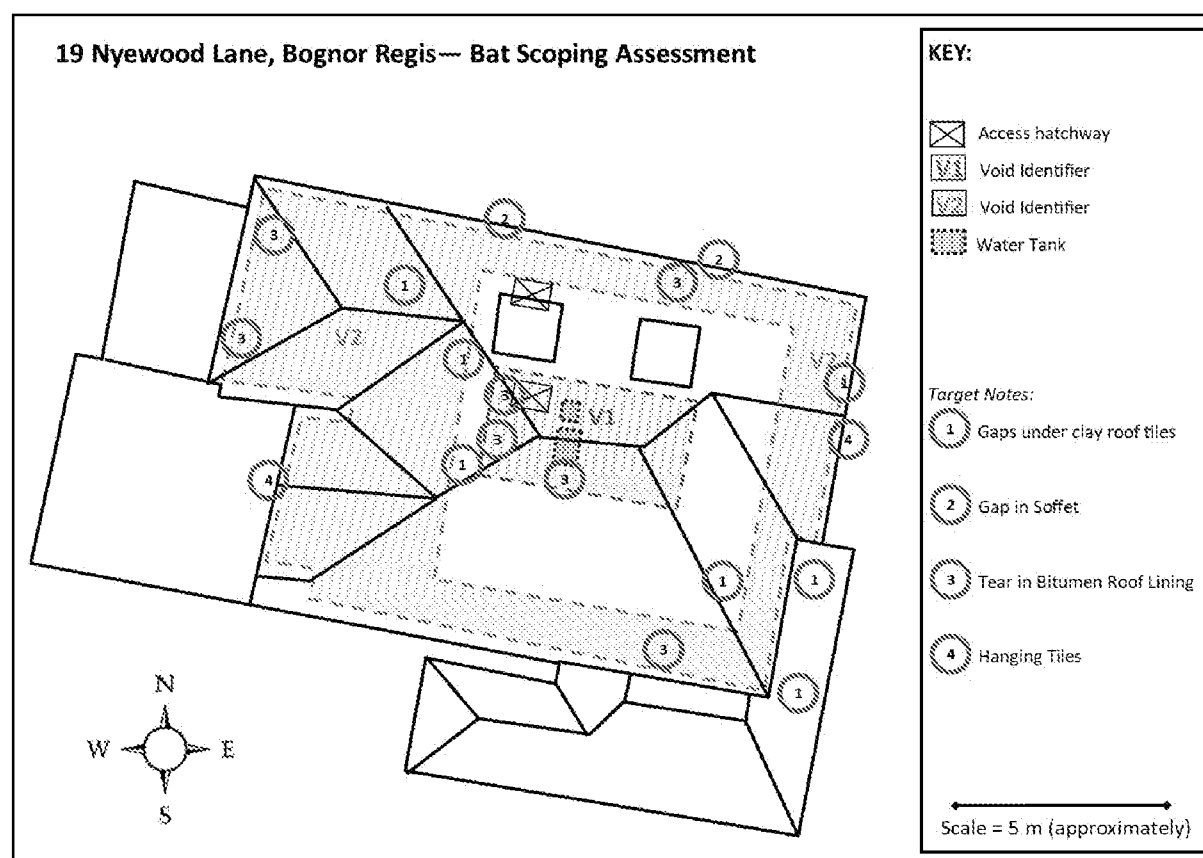


**Figure 2.** A plan view of voids V1 and V2 within Building A. Red circles indicate the location PRF found during the building inspection.

**Table 3.** Assessment of Potential roost features

| Building Inspected | Description of features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Assessment of potential (Collins 2016) |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Building A         | <p>The building is constructed from rendered clay brick, with a complex multi-faceted clay tiled roof (Photo 1, Section 3.6). The roof was comprised of a combination of hipped and gabled styles, with dormer windows. Hanging tiles were present on the front and rear elevations. The windows were framed with wood. A single-storey, flat-roofed extension was present on the west side of the building. The roof covering on the extension was of bitumen.</p> <p>The interior of the building was found to have two discrete roof voids. V1 (Figure 2) was found to have an open wooden frame lined with bitumen roofing felt. Some tears to the lining were noted. Fibreglass insulation was present throughout. Two water tanks were present. No evidence of bats was found within V1.</p> <p>V2 (Figure 2) was of a similar construction to V1. V2 comprised a much larger space and encircled the inside of the lower part of the roof. Several tears were noted within the roof lining in V2 (Photo 2, Section 3.6). No</p> | Low bat roost potential                |



| Building Inspected | Description of features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Assessment of potential (Collins 2016) |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                    | <p>evidence of bats was found within V2. Some bird dropping were noted within V2.</p> <p>Several PRFs were found during the external inspection of the building. These were mainly associated with missing and broken roof tiles (Photo 3, Section 3.6) and gaps behind hanging tiles (Photo 4, Section 3.6). There were notable gaps between the soffit box and the wall on the north elevation. A hole was present in the render between the window and the underside of the soffit on the north elevation (Photo 5, Section 3.6). No evidence of bats was found during the external inspection.</p>                                                                                                                                                                                                                                                                                                        |                                        |
| Building B         | <p>The building is constructed from clay brick, with a wooden shingle tiled roof. The roof was constructed in a hipped style, with a dormer window located on the eastern elevation. The windows soffits and fascia were framed with uPVC. A single-storey, flat-roofed extension was present on the east side of the building. The roof covering on the extension was of bitumen. Two brick chimney stacks were present.</p> <p>The interior of the building was found to have on large roof void, constructed with an open wooden frame, which was lined with bitumen roofing felt. The void was partially boarded. Deep fibreglass insulation was present throughout. Two water tanks were present. No holes were visible to the outside or within the roof lining. No evidence of bats was found within the void.</p> <p>No PRFs or evidence of bats was found during the inspection of the building.</p> | Negligible bat roost potential         |

When considering the evidence found, the potential BRFs within the buildings and the buildings proximity to nearby habitat and features likely to be used by bats for foraging, commuting and navigation (which affects the potential for bats to establish and favour roosts at this site), the bat roost potential at this site for Building A is rated as 'Low' and for Building B as 'Negligible' in accordance with the bat survey guidelines produced by the Bat Conservation Trust<sup>1</sup>.

### 3.4 Other protected and/or notable species

A lack of mature woodland, hedgerows and tree-lines within and surrounding the site (photo 6, Section 3.6), indicated that there was negligible potential within the site to support hazel dormice *Muscardinus avellanarius*. There were a few potential features in the building that might potentially accommodate house sparrow *Passer domesticus* and starling *Sturnus vulgaris*, which commonly nest in buildings. No evidence of active bird nests was found within the building.

There was no sign of badger *Meles meles* activity within the site.



The site has very low potential to support European hedgehog *Erinaceus europaeus*. The European hedgehog is a species of principal importance, as listed under Section 41 of the NERC Act 2006<sup>4</sup>.

The site has negligible potential to support common and widespread amphibians and reptiles, such as common toad *Bufo bufo* and slow worm *Anguis fragilis*. Both species are Species of Principal Importance as listed under Section 41 of the NERC Act, 2006<sup>4</sup>.

The potential for great crested newt to be present within the site is considered negligible, due to the lack of suitable habitat within the site itself and the barriers to great crested newts presented by the roadway and walled gardens.

No protected or designated invertebrates or plants were recorded on the site during the survey. Very little habitat was found to exist within the site to support these species.

No non-native invasive species listed under Schedule 9, Section 2 of the Wildlife and Countryside Act, 1981 (as amended)<sup>3</sup> were observed on site during the survey.

### 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 some species, even where no direct evidence (such as droppings) has been found.

The desk study and data search should not be taken as a definitive list of the protected species and species of conservation concern that occur within the search area.

The bat scoping survey was undertaken at the optimal time of the year. There were no limitations to the survey in terms of the following:

- Available specialist survey equipment.
- Weather conditions (dry and sunny).
- Personal competence (qualifications, training, skills and experience).
- Time spent surveying.

There were no access limitations encountered during the survey.



### 3.6 Photographs



**Photograph 1.** Showing the west elevation of Building A.



**Photograph 2.** Showing torn roof lining in V2.



**Photograph 3.** Showing gaps under missing, broken and lifted roof tiles on Building A.



**Photograph 4.** Gaps associated with hanging tiles on Building A.



**Photograph 5.** Showing hole in render between wall and soffit on the north elevation of Building A.



**Photograph 6.** Looking north from the site, showing surrounding habitat.



## 4 ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES

### 4.1 Bats

In accordance with the Bat Conservation Trust guidelines, **the overall potential for Building A to support bats is rated as 'Low' and therefore, one bat emergence/re-entry survey is required to determine the importance of this building for bats.** To ensure adequate coverage of all potential roost features, it is estimated that **three observers will be required for the survey visit.**

The survey should be undertaken between the 1st of May and 31st of August at dusk or at dawn, to observe any bats emerging or re-entering any PRFs within the building according to best practice guidance. Ultrasonic recording equipment will also be used to try and help establish the identity of any bat species, should they be present. If bats are found to be using the building, further surveys and mitigation measures may be required during the development. Measures may include careful timing of the works to avoid or minimize impacts on bats, a precautionary 'soft strip' of roof coverings and other identified features under the direct supervision of a licenced bat worker, and the provision of permanent bat roosting features into the development, which will need to be proportionate to the number and species of bats found. An EPSL will be required for any actions that would directly disturb, modify or destroy a bat roost. This would include measures to replace any existing roosting habitat, which might include designing integral bat roosting opportunities into the building fabric, such as bat tiles and internal voids and/or access points for bats, depending on the scale of impact.

It is important that the potential for disturbance from artificial lighting is considered. The proposed development should include an 'ecologically sensitive lighting scheme' in accordance with guidance produced by the Bat Conservation Trust and Institute of Lighting Professionals<sup>7</sup> (summarised in Appendix 2). Careful consideration of this should be made where the new building is proposed, to avoid the increased use of external lighting. Data on bat species present in the locality will be gathered during the bat emergence surveys and used to help inform the site design.

During building works, care should be taken to avoid using breathable roofing membranes, such as 'Tyvec,' along with other modern types of bitumen felt that contain polypropylene filaments (for example type 5U), where any roof or hanging tiles with gaps may be used, as these can cause serious harm to bats through entanglement.

### 4.2 Other protected and/or notable species

The site comprises the building, hard standing, small shrubs and short mown amenity grassland. With the exception of birds, the risk of impact from this proposed development on reptiles, amphibians, hazel dormice and badgers is considered negligible and no other surveys are considered necessary.

It is recommended that habitats within the site are carefully searched to ensure that any European

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<sup>7</sup> Bat Conservation Trust and Institute of Lighting Professionals 2018. Guidance Note 08/18 - *Bats and artificial lighting in the UK*. Available online at: <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/> (accessed September 2018).



hedgehogs, if present, can be safely relocated away from the construction areas or move away into surrounding habitats of their own accord. Care should be taken to cover any temporary ground holes when left unattended, to ensure that hedgehogs and other ground dwelling animals do not become accidentally trapped.

Since the buildings and shrubs have potential to support nesting birds, such as house sparrow and blackbird *Turdus merula*, demolition and/or construction work on the site should be timed to take place outside of the nesting bird season (1st March – 31st August). If this is not possible, the building and any shrubs to be disturbed should be subject to nesting bird checks by a suitably qualified ecologist, immediately before work is begun, as is appropriate to the proposed works. If an active nest is identified, a minimum exclusion zone for all works within 5 meters radius of the nest must be established to protect it from disturbance until the young have fledged. Further consideration should be given to minimise excessive noise within the site and for restricting the use of artificial lighting during construction (see Appendix 2).

### 4.3 Biodiversity Enhancement Opportunities

The proposed development represents an opportunity for habitat enhancement to benefit insects, birds, and bats. Any landscaping or planting scheme could include native shrub species and flowering species known to encourage insect diversity. Such enhancement measures are in line with the recommendations of the NPPF (2018)<sup>5</sup> and are also imbedded within Policy ENV SP1 of the Adoption Arun Local Plan 2011-2031 (July 2018), Arun District Council (2018)<sup>8</sup>, and would therefore be considered favourably when determining the planning application.

In accordance with Section 4.1 of this report, the developer is also encouraged to consider including integral bat roosting opportunities into the fabric of the new building, such as bat tiles and internal voids/access points for bats (once further surveys have been completed additional and more specific recommendations can be provided, which will be targeted to take account of the species of any bats identified and the manner in which they are currently using the site).

**If any protected species are found during the proposed work, all work should be stopped 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>8</sup> Arun District Council (2018). Adoption Arun Local Plan 2011-2031 (July 2018). Available online at: <https://www.arun.gov.uk/download.cfm?doc=docm93jlm4n12844.pdf&ver=12984> (accessed October 2018).



## APPENDIX 1 –Wildlife Legislation and 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 Conservation of Habitats and Species Regulations 2017<sup>9</sup>, 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”)<sup>10</sup>. As such all bat species in the UK are defined as ‘European Protected Species.

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)<sup>3</sup>, through inclusion in Schedule V.

All species of bat are listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006)<sup>4</sup>. 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<sup>11</sup>, 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

<sup>9</sup> Conservation of Habitats and Species Regulations 2017. Available online at: <https://www.legislation.gov.uk/uksl/2017/1012/contents/made>.

<sup>10</sup> Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora. Available online at: [http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index\\_en.htm](http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm).

<sup>11</sup> Countryside and Rights of Way (CROW) Act 2000. Available online at: <https://www.legislation.gov.uk/ukpga/2000/37/contents>.



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)<sup>3</sup>, relating specifically to trapping and direct pursuit of bats.

An 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 3rd 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 breeding; or winter roosts, used for hibernating.

The NPPF (2018)<sup>5</sup> sets out government policy on biodiversity in planning decisions. Under the NPPF, the presence of a protected species is a material consideration when a planning authority is considering a development proposal. The NPPF (2018)<sup>5</sup> is implemented through local planning policy under the Adoption Arun Local Plan 2011-2031 (July 2018), Arun District Council (2018)<sup>8</sup>.



## ***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 and Institute of Lighting Professionals<sup>7</sup> should be considered while designing the lighting scheme. This includes the following measures:

### **Do not:**

- provide excessive lighting. Use only the minimum amount of light needed for the task.
- directly illuminate bat roosts or important areas for nesting birds

### **Avoid:**

- installing lighting in ecologically sensitive areas such as: near ponds, lakes, rivers, areas of high conservation value; sites supporting particularly light-sensitive species of conservation significance (e.g. glow worms, rare moths, slow-flying bats) and habitat used by protected species.
- using reflective surfaces under lights.

### **Do:**

- consider employing a competent lighting designer who will apply the principals of providing the right light, in the right place, at the right time and controlled by the right system.
- minimise the spread of light to at, or near horizontal and ensure 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 cat's 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.
- use temporary close-boarded fencing until vegetation matures, to shield sensitive areas from lighting.
- limit the times that lights are on to provide some dark periods. The task being lit often varies, for example roads are less used after 23.00hrs and car parks are empty. A lighting designer can vary the lighting levels as the use of the area changes reducing lighting levels or perhaps even switching installations off after certain times. This use of adaptive lighting can tailor the installation to suit human health and safety as well as wildlife needs.



**Further reading:**

Buglife (2011) *A review of the impact of artificial light on invertebrates*. Available online at: [https://www.buglife.org.uk/sites/default/files/A%20Review%20of%20the%20Impact%20of%20Artificial%20Light%20on%20Invertebrates%20docx\\_0.pdf](https://www.buglife.org.uk/sites/default/files/A%20Review%20of%20the%20Impact%20of%20Artificial%20Light%20on%20Invertebrates%20docx_0.pdf)

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

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