



ENVIRONMENTAL CONSULTANTS

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Bat Emergence Survey Report

19 & 21 Nyewood Lane, Bognor Regis

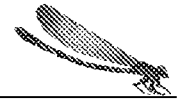
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Report Summary

1. The Ecology Co-op undertook a bat scoping assessment of two semi-detached residential dwellings of 19 & 21 Nyewood Lane on 9th October 2018. Whilst the dwelling of No. 21 Nyewood Lane was assessed as having 'negligible' bat roost potential, the dwelling of No. 19 was as having 'low' potential to support roosting bats, based on the presence of external gaps beneath roof/hanging tiles and gaps at the eaves.
2. Based on the above assessment and in line with Bat Conservation Trust Guidelines, one bat emergence survey of the dwelling at No. 19 was carried out under suitable weather conditions on 1st May 2019; to determine the presence/likely absence of roosting bats and evaluate the conservation importance of the site for bats. The purpose of this survey work was to identify potential impacts on bat roosts (if any), in order to inform a planning application for demolition of both dwellings.
3. No bats were seen to emerge from the dwelling (No. 19) during the emergence survey and bat activity over all in this locality was very low.
4. The survey results indicate a likely absence of roosting bats from the building.
5. No further surveys are recommended.
6. A European Protected Species (EPS) licence is not considered necessary for the proposed demolition works to proceed. Recommendations are made with regard to careful work practices, steps to be taken in the unlikely event bats are encountered during works, and measures to enhance the site for roosting bats.

This report has been prepared by The Ecology Co-operation Ltd, with all reasonable skill, care and diligence within the terms of the Contract with the client. This report only becomes the property of the client once payment for it has been received in full.

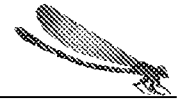
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This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.



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1 INTRODUCTION

1.1 Background

In relation to a proposed development, The Ecology Co-op undertook a bat scoping assessment of two adjacent dwellings (19 & 21 Nyewood Lane) in October 2018, during which several features were identified on the exterior of the No. 19 dwelling that were suitable to support roosting bats¹.

The proposed development involves the demolition of the two dwellings at 19 & 21 Nyewood Lane, Bognor Regis and replacement with a block of residential flats.

Whilst the dwelling of No. 21 Nyewood Lane was assessed to have 'negligible' bat roost potential, the dwelling of No. 19 was recorded to have 'low' potential to support roosting bats, based on the presence of external gaps beneath roof/hanging tiles and gaps at the eaves. In accordance with current best practice guidelines², a single bat emergence survey of No. 19 was recommended to determine the presence/likely absence of roosting bats within the building.

1.2 Purpose of the Report

In accordance with the recommendations described in Section 1.1, this report presents the results of a single bat emergence surveys carried out on 1st May 2019. The survey was led by Paul Whitby BSc, a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM), Chartered Ecologist and licensed bat surveyor (Natural England Licence Number: 2015-15959-CLS-CLS). The grid reference for this site is SZ 92563 98768.

The purpose of this survey work was to determine presence of roosting bats and where necessary prescribe further surveys where necessary and/or appropriate mitigation advice to inform the planning application for the proposed development at the site.

The survey and reporting was carried out at the request of Mr P. Breskal.

2 LEGAL PROTECTION

Details of legislation and legal protection afforded to all species of British bats are given in Appendix 1.

The results of this survey will be used to determine the need for an appropriate mitigation strategy to ensure compliance with UK and EU wildlife legislation.

3 METHODOLOGY

A single bat emergence survey was undertaken on the 1st May 2019, using the methodology set out in the best practice guidelines prepared by the Bat Conservation Trust.

¹ The Ecology Co-op (2018) Bat Scoping Report – 19 & 21 Nyewood Lane, Bognor Regis.

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



The surveys focused upon the hanging tiles and roof tiles on the eastern and western aspects of the roof, as well as gaps in the eaves of the northern elevations. Positioning of the three surveyors and an infrared camera during the survey is shown in Figure 1. From these positions surveyors (and the camera) could view almost all features potentially suitable for roosting bats that were identified during the initial bat scoping survey.

The surveyors recorded any bat activity on or around the potential roosting entry/exit features identified during the scoping survey, using full spectrum hand held bat detectors to identify species through call frequencies. The bat calls were logged and recorded as sonograms for later confirmation of species where necessary.



Figure 1. An aerial image of the site, showing the positions of surveyors (red dots) and the infrared camera (orange dot) during the bat emergence survey of 19 Nyewood Lane, Bognor Regis. Images produced courtesy of Google maps (Map data ©2019 Google).

3.1 Survey Constraints

In accordance with best practice guidelines, three survey visits were undertaken during the peak period in bat activity and during good weather conditions. The results presented here are therefore considered to be an accurate representation of the general use of the property by roosting bats.

Nevertheless, bats can use roosting features intermittently throughout the year and may be present in larger or smaller numbers depending on their breeding cycle, weather conditions, and in response to disturbance. These surveys record the emergence of bats at the time of the survey visits and therefore only provide a snapshot of bat roosting activity at the site at that time. Bats may be present at other times and the results should therefore be viewed with caution.



4 RESULTS

4.1 Bat Emergence Surveys

4.1.1 Survey Conditions

The dates, times, weather conditions, temperatures and personnel for each survey visit is presented in Table 1 below:

Table 1: Details of the bat emergence survey of 19 Nyewood Lane including: timings weather conditions and personnel.

Date	Survey start time/end time	Temp. degrees centigrade, weather conditions throughout survey	Surveyors
01/05/19	19:55 – 21:49	Warm (14°C down to 13°C), dry, overcast (cloud cover 100%), calm (Beaufort Scale 0)	Paul Whitby Jess Burkitt Kate Lewis + 1 infrared camera

4.1.2 Bat Emergence Results

No bats were observed/recorded emerging from the dwelling of 19 Nyewood Lane by surveyors or the infrared camera during the emergence survey of 1st May 2019.

Bat activity was described as 'very low' during the survey: with two common pipistrelles *Pipistrellus pipistrellus* being the only bats recorded. The first of these was recorded at 20:50 and was observed commuting south to north to the western side of the property. The second of these bats was recorded at 21:02 and was observed commuting east to west along the southern elevation of the dwelling.

No other bat activity was recorded during the survey.

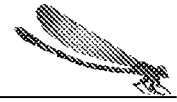
5 DISCUSSION AND RECOMMENDATIONS

The combined results of the bat scoping assessment¹ and bat emergence survey indicate that roosting bats are likely to be absent from the dwelling at 19 Nyewood Lane.

The highly transitory nature of many bat species means that it is extremely difficult to confirm absence completely and therefore as a precautionary measure, the following precautionary measures should be put in place:

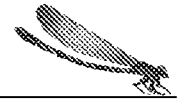
- Removal of roof tiles and hanging tiles should be undertaken by hand in a careful and controlled manner with each tile being inspected for sheltering bats. If all tiles are not being removed by hand, then a quick inspection of the identified potential bat roosting features should be made prior to demolition by an ecologist to establish if these features have been colonised by bats.
- In the unlikely event that bats are encountered during the demolition works, works will stop immediately, and advice sought from a suitably qualified ecologist. Works may be able to recommence once a mitigation licence has been secured from Natural England.

It is recommended that new bat roosting features are integrated into the new building to create an enhancement for roosting bats within the developed site. Examples of integrated features and features



suitable for external mounting are provided in Appendix 2. It is considered that a minimum of two features would be a suitable level of enhancement for the site. Bat roost features should be installed as high as possible within or on southern facing aspects (so they receive maximum warming by the sun). Light spillage onto new bat roosting features must be avoided.

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



6 APPENDIX 1 – LEGISLATION AND POLICY

All species of British bat are fully protected under the Wildlife and Countryside Act 1981 as amended through inclusion in Schedule V. All bat species in the UK are also included in Schedule II of the Habitats Regulations 2010 which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("EC Habitats Directive") which defines European protected species of animals.

Bat species are afforded further protection by the Natural Environment and Rural Communities Act 2006.

Under the above legislation it is an offence to:

- kill, injure or take an individual;
- possess any part of an individual either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by these species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb these species whilst using any place of shelter or protection; or
- deliberate disturbance in such a way as to be likely to impair their ability to:
 - survive, to breed or reproduce, or to rear or nurture their young; or
 - in the case of animals of a hibernating or migratory species, 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. In the case all species of British bat there is also protection under Schedule 6 of The Wildlife and Countryside Act 1981 (as amended) relating specifically to trapping and direct pursuit of these species.

A European Protected Species Mitigation License (EPSM) 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 of 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 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 can include all summer roosts,



used for breeding, resting or sheltering and all winter roosts used for hibernating.



7 APPENDIX 2 – EXAMPLES OF BESPOKE BAT ROOSTING FEATURES FOR NEW BUILDINGS

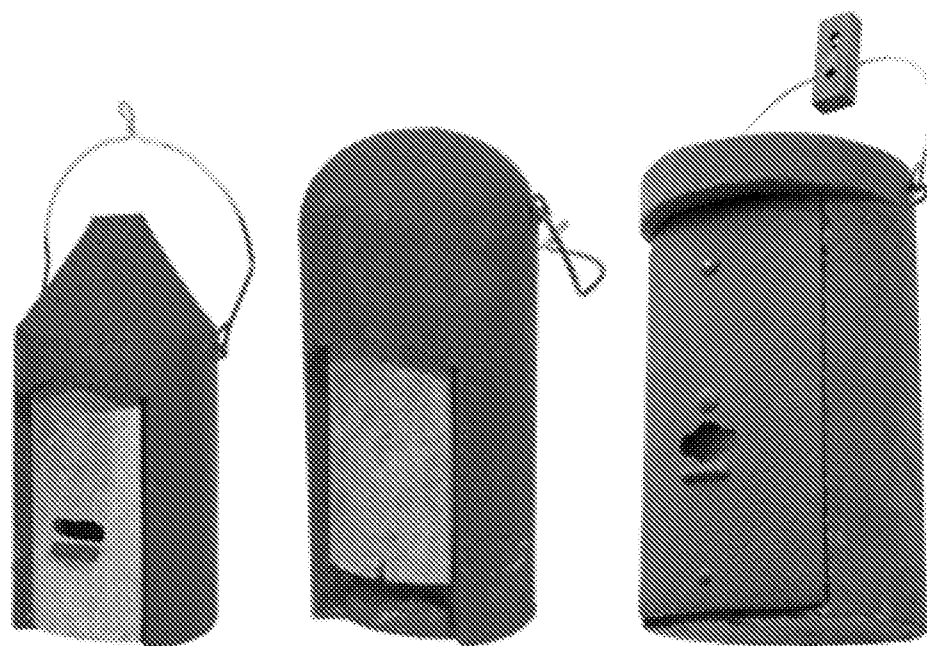


Figure 1. Left to right, the 2F, 2FN and the 1FS bat boxes produced by Schwegler. These and other brands are available at many on-line wildlife stores. These are constructed of ‘woodcrete’ (a mixture of cement and woodchip) and are designed to be durable and replicate the stable thermal properties of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

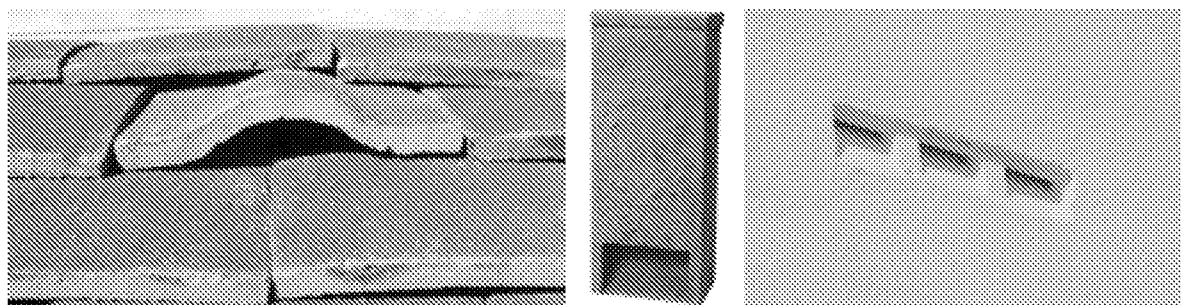
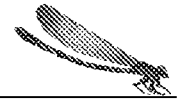


Figure 2. Examples of integral bespoke bat roosting features that may be incorporated into buildings during construction/renovation. From left to right: 1. An example of bat access tile into loft space. 2. The 2FR bat tube; 3. An example of 2FR bat tubes installed into a house wall in a series of three.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



8 APPENDIX 3 – 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 Trust³ 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

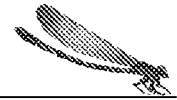
there is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, 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 flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for

³ 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/>

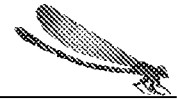


any such habitat being lost to the development.

- 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*



Further reading:

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

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CPRE (2014) *Shedding Light: A survey of local authority approaches to lighting in England*. Available
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Planning Practice Guidance guidance (2014) When is light pollution relevant to planning? Available
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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/>