ASTUTE ECOLOGY

Ecological Consultants

BAT EMERGENCE AND RE-ENTRY SURVEY

22 RIVERBANK, SHOREHAM-BY-SEA, BN43 5YH

Report Reference: AE21.188

August 2021

Client	Howard Carter	
Site:	22 Riverbank, Shoreham-By-Sea, BN43 5YH	
Grid Ref:	TQ 21309 04685	
Report Ref:	AE21.188	
Prepared by:	Andrew Bird BSc (Hons).	25/08/2021
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1 Summary

- Astute Ecology were commissioned by Howard Carter to undertake a bat emergence and separate dawn re-entry survey to confirm presence or likely absence of roosting bats within features of a Houseboat previously assessed as having potential to support a bat roost located at 22 Riverbank, Shoreham-On-Sea, BN43 5YH.

- No active bat roosts were recorded on or within the Houseboat during the survey undertaken in accordance with Bat Conservation Trust Guidelines (BCT 2016). No significant foraging and commuting was recorded within the local area and activity was low.

- Due to the absence of any roosting bats recorded during the surveys, impacts to roosting bats as a result of the proposed plans are highly unlikely. A Natural England bat development licence is not required in order for the development works to proceed.

- No further surveys or mitigation are required.

- In the event, any evidence of a bat roost is found after this report, works must cease while the advice of Natural England or a suitably qualified and licensed bat ecologist is sought

- All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally, or recklessly disturb a bat, or intentionally kill, injure, or take any bat.

2 Introduction

2.1 Astute Ecology were commissioned by Howard Carter to undertake a bat emergence and separate dawn re-entry survey to confirm presence or likely absence of roosting bats within features of a Houseboat previously assessed as having potential to support a bat roost located at 22 Riverbank, Shoreham-On-Sea, BN43 5YH.

2.2 It is understood that a Preliminary Ecological Appraisal (PEA) was previously undertaken at the site in 2021, however the full details of this report have not been made available to Astute Ecology. The client subsequently requested that a single Dusk emergence and separate dawn re-entry survey in accordance with BCT Bat Survey Guidelines (Collins 2016) was undertaken to confirm presence or likely absence of bats roosting within the Houseboat.

2.3 This report details the outcome of the presence/absence survey of the Houseboat, including an analysis of the results to inform recommendations and mitigation, where relevant, in order to prevent any breaches in legislation relevant to protected British bat species.

2.4 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Astute Ecology. The surveys are based on information provided by our client, the development proposals, and our survey of the site. This report pertains to this information only. The legislation relevant to protected species within the United Kingdom is summarised within Appendix 2.

3 Methodology

3.1 Emergence and Re-entry Surveys

A Dusk Emergence and separate Dawn Re-entry survey was undertaken by three experienced bat surveyors on the in optimal conditions (Table 1). During the survey, all elevations and aspects of the Houseboat considered to hold potential roost features were visually observed by surveyors whilst using handheld, static bat detectors and thermal cameras to identify any bats potentially emerging from the Houseboat and to record activity, species and call type. A map of surveyor and equipment positions is included within Appendix 3. The surveys were undertaken in accordance with BCT Bat Survey Guidelines (Collins 2016).

Table 1. *Survey conditions*

Date **Survey Type**	**Sunset**	**Start**	**Finish**
03/08/2021 – Dusk Emergence	20:42	20:20	22:39
Weather:	Temperature:	19ºC	17ºC
	Humidity:	65%	78%
	Cloud cover:	0/8	0/8
	Wind:	None	None
	Precipitation:	None	None
Date **Survey Type**	**Sunrise**	**Start**	**Finish**
20/08/2021 – Dawn Re-entry	05:57	04:00	06:19
Weather:	Temperature:	16ºC	17ºC
	Humidity:	75%	88%
	Cloud cover:	2/8	2/8
	Wind:	Light	None
	Precipitation:	None	None

3.2 Surveyors

Survey carried out by Clare Lusher BSc. (Hons.). MSc. Ecological Consultant: Astute Ecology Ltd, Alex Goldman Assistant Ecologist, and Andrew Bird BSc. (Hons.) Senior Ecologist, Natural England WML-A34 – Level 2 Bat Licence Number: 2018-37905-CLS-CLS.

3.3 Reporting

This report was prepared in accordance with the Chartered Institute of Ecology and Environmental Management; Guidelines on Ecological Report Writing. CIEEM (2017).

3.4 **Equipment used:**

- 3 x Echometer Touch 2 Pro with iPad Mini 4
- 3 x Bat Box Duet
- 2 x SM4BATFS with SMM-U2 microphone
- 2 X Seek Thermal camera
- Torches, Thermometers, and Hygrometers

3.5 **Limitations**

It should be noted that whilst every effort has been made to provide a comprehensive description and survey of the site, no investigation could ensure the complete characterisation and prediction of the natural environment during a 'snapshot' study.

3.6 **Report Lifespan**

Given the transient nature of the subject, we would consider the survey results contained to be accurate for 18 months.

4 Results

4.1 Survey Results

The position of each surveyor, equipment and any observed bat movements over a map are provided within Appendix 3. There was no evidence of bat roosts identified during the survey, and no bats were seen flying out of or entering the Houseboat at any time during the survey. No significant foraging and commuting was recorded or associated with the site. Activity in the local area was low with only occasional individual species of Common Pipistrelle (*Pipistrellus pipistrellus)* (CP), Soprano Pipistrelle (*Pipistrellus pygmaeus*) (SP) recorded foraging and commuting within the local area. Table 2 and 3 below summarise the results of the survey undertaken.

Table 2: *Summary of Dawn Re-entry Survey*

Time	Activity
	Activity in the local area was low.
05:02	Brief CP call. Heard Not Seen (HNS)
05:12	Brief CP call. HNS
05:20	Brief CP call. HNS
05:30	Brief CP Call HNS.
	The SM4BATFS recordings correlated with those of the surveyors. stage. No bat movements were observed using thermal cameras.
	No bats emerged from or entered the Houseboat and none were recorded flying close to it.

Table 3: *Summary of Dusk Emergence Survey*

Time	Activity
	Activity in the local area was low.
21:00	Brief SP call. Heard Not Seen (HNS)
21:12	Brief CP call. HNS
21:15	Brief call. HNS
21:25	Single SP Observed commuting south of site east to west along illuminated walkway.
21:45	Brief CP Call.
	The SM4BATFS recordings correlated with those of the surveyors. stage. No bat movements were observed using thermal cameras.
	No bats emerged from or entered the Houseboat and none were recorded flying close to it.

5 Evaluation and Recommendations

5.1 **Roosting bats**

- The bat activity surveys did not reveal any bats roosting within the Houseboat surveyed.

- There was no significant foraging and commuting associated with the site and activity within the local area was considered as low.

- Due to the unlikelihood of negative impacts to roosting bats, a Natural England bat development licence is not required for the development works to proceed. No further surveys or mitigation are required.

- In the event, any evidence of a bat roost is found after this report, works must cease while the advice of Natural England or a suitably qualified and licensed bat ecologist is sought, for alternative mitigation can be arranged.

- To enhance roosting opportunities for bats within the local area, the following are recommended with any future proposed site buildings/Houseboats:

    - 1 x 1FF Schwegler Bat Box (or similar) placed on site.

- The following measures could be implemented within the development to reduce impacts on foraging and commuting bats caused by artificial lighting (ILE/BCT, 2007; BCT 2014):
    - Direct any task lighting used during construction away from any vegetation or linear habitat.
    - Set any necessary security lighting on short timers with a sensitivity to large moving objects only.
    - Use hoods, cowls, or directional lighting to avoid light being directed at the sky or towards any boundary vegetation.
    - Limit lighting times to provide dark periods; and low-pressure sodium security lights with glass glazing are recommended, as these produce the least amount of UV light. Avoid white and blue wavelengths of the light spectrum. The brightness of the lamps should be kept as low as feasibly possible (ILE/BCT, 2007; BCT interim guidance 2014).

- All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally, or recklessly disturb a bat, or intentionally kill, injure, or take any bat.

Appendix 1. References

Bat Conservation Trust's '*Good Practice Survey Guidelines*' (Rev 2012).

Bell, S. McGillivary, D. (2006) *Environmental Law*. 6th ed. Oxford University Press.

Byron, H (2000) *Biodiversity and Environmental Impact Assessment: A Good Practice Guide for Road Schemes*. The RSPB, WWF-UK, English Nature and the Wildlife Trusts, Sandy.

CIEEM (2017) Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester

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

Ethos Environmental Planning (2018) Bat Survey Report: Greenway Farm, Wick

Mitchell-Jones A.J. McLeish, A.P. (2004) *Bat Workers Manual* (3rd Edition). Joint Nature Conservation Committee.

Mitchell-Jones A.J. *Bat Mitigation Guidelines* 2004. English Nature.

National Planning Policy Framework, (2012). http://www.communities.gov.uk/publications/planningandbuilding/nppf

Treweek, J. (1999) *Ecological Impact Assessment*. Blackwell Science.

Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing.

Appendix 2. Legislation, Guidance and Methodology

Roosting Bats

All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended).

It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally, or recklessly disturb a bat or intentionally kill, injure or take any bat.

Ecological Enhancement

In March 2012, the Department for Communities and Local Government published the National Planning Policy Framework. This sets out planning policies on protection of biodiversity through the planning system. The document states - *opportunities to incorporate biodiversity in and around developments should be encouraged*.

Usually when reviewing how ecological enhancements can be implemented the Local Biodiversity Action Plan for the area is considered.

For new buildings guidance such as in the following will be used:

Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing

Designated Protected Areas

Designated areas are Sites of Special Scientific Interest (SSSI) while others have been designated as having European protection status. Local authorities can also designate areas for nature conservation and in doing so may impose local authority byelaws to support local nature conservation objectives.

European designated status includes Special Protection Areas (SPAs) that preserve areas for birds and Special Areas of Conservation (SACs) which provides protection for habitats and the species which these habitats supports. Laws stipulate that SSSIs, SPAs and SACs have to be maintained in a ‘favourable condition’ which requires efforts to preventing any potential impacts to these sites.

Appendix 3. Surveyor and Equipment Positions

