



ecosupport

Phase II Bat Report

Beacon Lodge, West End

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Client:

Mr and Mrs Fleetwood

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Report	Phase II Bat Survey & Mitigation Strategy
Site Name	Beacon Lodge
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1.0 INTRODUCTION

1.1 Background

This document outlines the results of the Phase II bat surveys carried out by Ecosupport Ltd during May-June 2022 of the property otherwise known as Beacon Lodge, Beacon Mews, Beacon Rd, West End, Southampton SO30 3JX. These surveys were required to support a planning application for the renovation of the dwelling site the PRA conducted by Phillips Ecology in January 2022 identified the building as to be of ***moderate potential*** to support roosting bats, therefore highlighting the requirement to undertake two Phase II bat surveys (Phillips Ecology 2022).

1.2 Site Description & Location

The site comprises of the main dwelling, driveway, and associated garden area at Beacon Lodge, Beacon Mews, Beacon Rd, West End, Southampton SO30 3JX (centred on OS grid reference SU 46995 13783) (**Fig 1**). The northern and western aspects of the site are bound by residential dwellings whilst the eastern and southern aspect is bound by Beacon Mews. The immediate surrounding environ is largely urban predominantly comprising of residential dwellings and associated gardens.

Figure 1. Approximate redline boundary of the dwelling (Google 2022)



1.3 Brief Description of the Proposals

It is understood that the current development plan entails the extension of the existing property.

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019)*

This instrument makes changes to the three existing instruments which transpose the Habitats and Wild Birds Directives so that they continue to work (are operable) upon the UK's exit from the European Union (EU). These include The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Marine Habitats and Species Regulations 2017. This instrument also amends section 27 of the Wildlife and Countryside Act 1981 to ensure existing protections continue. The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU.

This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.2 *The Wildlife and Countryside Act (1981) (as amended)*

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 part II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrot's Feather (*Myriophyllum aquaticum*).

2.1.3 *The Countryside and Rights of Way Act (2000)*

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 Natural Environment and Rural Communities Act (2006)

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the *UK Post – 2010 Biodiversity Framework*.

2.2 Policy

2.2.1 National Planning Policy Framework (NPPF) 2021

Section 15 of the National Planning Policy Framework (NPPF) 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural environment. They should do this by protecting and enhancing sites of biodiversity and minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks.

The plan states to protect and enhance biodiversity plans should identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks. This includes the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them. Plans should identify the protection and recovery of priority species and opportunities for securing measurable net gains for biodiversity.

When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should

be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

2.3 Local Policy Eastleigh Borough Council

The Eastleigh Borough Local Plan 2016 – 2036 has a number of policies relating to ecology with the relevant ones listed below;

‘General Approach

1. The Council will work with statutory and voluntary agencies and developers, and will determine planning applications, to:

a. protect, conserve and enhance all:

i. international, national and local nature conservation designations;

and

ii. networks of natural habitats and features, including the Local Ecological Network, Priority Biodiversity Areas and Priority Biodiversity Links, watercourses, wetland complexes, woodland trees, and trees and hedgerows important to biodiversity and local character; and facilitate their adaptation to climate change wherever possible;

b. assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);

c. seek a net gain of biodiversity on all development sites (including sites for redevelopment) through the protection, enhancement and connection of existing and provision of new habitats and features of nature conservation interest compatible with the native biodiversity characteristics of the Borough, having regard to local geodiversity and soils; and

d. contribute to major elements of the PFSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes, ecological networks and biodiversity enhancements (see strategic policy S9).

International Designations

2. Development which is likely (either individually or in combination with other developments) to adversely affect the integrity of an international or European nature conservation site will not be permitted subject only to imperative reasons of overriding public interest and securing any necessary compensatory measures in the absence of alternative solutions. A ‘project level’ Habitat Regulations Assessment will be required where there are likely significant effects or uncertainty. Any mitigation measures required to ensure no adverse impact must be implemented at the appropriate time.

3. The Council will work with PfSH, Natural England, the Environment Agency and other wildlife organisations to develop and implement with developers a strategic approach to the protection and enhancement of international and European sites from the direct and indirect effects of development. Within Eastleigh Borough this will include:

a. implementing:

i. the Solent Recreation Mitigation Strategy (requiring contributions from residential developments within 5.6 kilometres of the Solent Special Protection Area to the Strategy); and

ii. the interim and any future New Forest Recreation Mitigation Strategy if required; or alternative agreed site specific measures to address recreational disturbance;

b. preserving the water quality and flows within the Itchen and Hamble, Southampton Water and Solent;

c. protecting the River Itchen SAC, in particular the maintenance and where appropriate restoration of habitats and qualifying species to favourable conservation status (as defined by article 1 of the Habitats Directive); and

d. seek contributions towards measures set out in the Southern Damselfly Conservation Strategy (or other strategy) specifically to deliver biodiversity net gain.

National and Local Designations

4. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI), Site of Importance for Nature Conservation (SINC) or Local Nature Reserve (LNR) as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre) unless it can be demonstrated that:

a. there are no alternative solutions;

b. the adverse effects are unavoidable;

c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;

d. there is an overall biodiversity net gain; and

e. if there are any residual adverse effects which cannot be avoided, mitigated or compensated, the benefits of the development must clearly outweigh the adverse effects on the nature conservation value of the site and any broader impacts on national and local designations.

Priority habitats, protected and priority species and the local ecological network

5. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on priority

habitats, protected or priority species, or on the local ecological network unless it

can be demonstrated that:

- a. there are no alternative solutions;
- b. the adverse effects are unavoidable;
- c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;
- d. there is an overall biodiversity net gain; and
- e. if there are any residual adverse effects, the benefits of the development clearly outweigh the adverse effects on priority habitats, priority and protected species, and the local ecological network.

Irreplaceable habitats

6. Development will not be permitted if it results in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees), unless there are wholly exceptional reasons and a suitable compensation strategy exists.

Buffers

7. Buffers free from development will be provided to designated sites to avoid/mitigate impacts, including recreational impact and impacts on edge habitats, and to maintain dark skies.

Surveys

8. Development will not be permitted unless it can be demonstrated that:

- a. there have been thorough habitat and species surveys;
- b. the great crested newt strategic survey and strategy have been considered in all developments within 500m of a great crested newt pond; and
- c. the strategic bat trapping survey has been considered in all developments within the locality of a woodland or connected habitat networks.'

3.0 METHODS

3.1 Emergence Surveys

The bat surveys conducted on the dwelling were led by Lyndsey McBean BSc (Hons) PGCert ACIEEM (level 1 bat licence number 2018-38386-CLS-CLS) and Gareth Ainscough assistance from Karen Niven, Sue Waight, Nichola Windebank, Harry Horn, Louise Davies, and Laurie Daglish (with the approximate locations of the surveyors indicated in **Fig 2**). Both heterodyne (Bat Box Duet, Peterson D230 and Elkon Batscanner) and time expansion (Elekon Batlogger) detectors were used for identifying species calls / analysis of calls via sonogram (where required), and the use of two infrared cameras was also implemented (model: HDV-514km) on the second survey. The emergence surveys began approximately 15 minutes prior to sunset and continued until approximately an hour and 25 minutes after. Survey sheets were used to record the following information:

- Time of call registration
- Species (if possible to identify using heterodyne detector)
- Location / activity
- Direction of flight (if seen)

Figure 2. Approximate locations of the surveyors (red Diamonds) located around property during the bat surveys (Google Maps 2022)



3.2 Limitations

The second survey conducted was a dusk survey instead of a dawn survey due to poor prevailing weather conditions, however, infrared cameras and recording equipment (Elekon Batlogger) were used to supplement the use of detectors. It is considered any late emerging or potentially emerging bats that would have been identified with a dawn survey would have been identified any later emerging bat species. This approach was approved via discussions with the EBC ecologist (**Appendix 1**).

4.0 RESULTS

4.1 Emergence Surveys

The results of the bat emergence survey along with other relevant information of survey conditions are provided in **Tables 1** and **2** below.

Table 1. Relevant information on survey conditions recorded.

Date	Temp (°C)	Cloud Cover (%)	Wind (beaufort scale)	Start Time	Sunset Time	Finish Time	Additional Information
16/05/2022	15	15	1	20:34	20:49	22:19	Dry
31/05/2022	16	0	1	20:54	21:09	22:39	dry

Table 2. Results from dusk emergence survey on the dwelling. HNS = Heard Not Seen

Survey Date	Recorded Bat Roost(s)?	Bat Activity on Site		
16 th May 2022 (dusk)	No emergences	Species	First Pass	Last Pass
		Common Pipistrelle	20:49	21:42
		Long-eared Bat	21:19	21:38
		Soprano Pipistrelle	21:26	21:59
		<u>Summary:</u> Activity during this survey was moderate with activity focused to the rear of the property. The first species recorded was a Common Pipistrelle (<i>Pipistrellus pipistrellus</i>) which was first recorded at 20:49 as emerging from a neighbouring house and continuous individuals were recorded throughout the survey as either emerging from the neighbour's house, as HNS, or foraging. The last recording of this species was at 21:57. A total of three Long-eared Bat records were noted between 21:19 and 21:38. The first was observed commuting from a neighbouring property, and the subsequent two registrations were foraging along the hedgerow bordering the south of the property. Several registrations of Soprano Pipistrelles were noted HNS to the rear of the dwelling between 21:32 and 21:59.		

		There were no emergences during this survey.		
31 st May 2022	No emergences	Species	First Pass	Last Pass
		Common Pipistrelle	20:49	21:42
		Soprano Pipistrelle	21:26	21:59
		<u>Summary:</u>		
		Activity during this survey was once again moderate with activity focused on to the hedgerow to the south of the dwelling. Despite this, species diversity was limited to two bat species. The first species recorded was a Common Pipistrelle which was first recorded at 20:59 as HNS. Several registrations of Common Pipistrelles were once again recorded coming from a neighbouring property shortly after sunset and travelling southwards via the bounding hedgerow with some later foraging concentrated to this area 20:49 and 21:42. A total of 3 Soprano Pipistrelles registrations were HNS to the rear of the property between 21:26 and 21:59. There were no emergences during this survey		

4.2 Summary & Evaluation of Results

4.2.1 Foraging and Commuting

Overall, the levels of foraging and commuting bats recorded on site during the surveys was moderate and comprised of common species (Common Pipistrelle, Soprano Pipistrelle, Long-eared Bats).

4.2.2 Roosting

Based on the results of the PRA and follow up emergence surveys, the building on site is considered unlikely to be used by roosting bats and no further survey work in regards to roosting bats within buildings is considered necessary.

5.0 MITIGATION AND COMPENSATION

5.1 Introduction

In order to fully comply with applicable legislation and planning policy, it is necessary to mitigate or compensate for any significant ecological impacts. The chapter is divided into two sections, dealing with mitigation and compensation, with chapter 7 covering suggested ecological enhancements. Mitigation refers to measures that can be undertaken to avoid or reduce ecological impacts, for example by timing works to avoid periods when bats are roosting.

Compensation refers to measures taken in order to offset potential significant impacts, for example by providing alternative roost sites to replace roost sites lost as a result of the works.

5.2 Minimisation of Disturbance to Nocturnal Wildlife

While it is not expected that new lighting will be used, in the case that lighting is added to the site in future it should use sensitive lighting for bats.

A document (*Guidance Note 08/18 Bats and Artificial Lighting in the UK*) has been produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. The key recommendations within this document have been outlined below and will be implemented provided there are no conflicts with any legal limits of illumination (in which case a suitable compromise should be reached).

‘Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires:

- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used. LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by the lighting professional.
- Column heights should be carefully considered to minimise light spill. ^[SEP]
- Only luminaires with an upward light ratio of 0% and with good optical control should be used – See ILP Guidance for the Reduction of Obtrusive Light. ^[SEP]

- Luminaires should always be mounted on the horizontal, i.e. no upward tilt. 
- Any external security lighting should be set on motion-sensors and short (1min) timers.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed (**Fig 3**).

Figure 3. (a) Shield 'barn doors' (b) cowl hood; (c) shield and; (d) external louvre Images from ILP (2011).



6.0 RECOMMENDATIONS & ECOLOGICAL ENHANCEMENTS

A series of ecological enhancements have been recommended within the accompanying PRA report including the provision of bat boxes and bird boxes. Please refer to the PRA report for further details (Phillips Ecology, 2022).

7.0 REFERENCES

Bat Conservation Trust & Institute of Lighting Professionals (2018) *Bats and Artificial Lighting in the UK*

Collins (ed) (2016) *Bat Surveys for Professional Ecologists: Best Practice Guidelines*. Bat Conservation Trust

Institute of Lighting Professionals & Bat Conservation Trust (2018) *Guidance Note 08/18: Bats and Artificial Lighting in the UK*

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1004408/NPPF_JULY_2021.pdf

Phillips Ecology (2022) *Preliminary Bat Roost Assessment- Beacon Lodge, Beacon Road, West End, Southampton SO30 3BR*

Wray, S., Wells, D., Long, E. & Mitchell-Jones, T. (2010). Valuing Bats in Ecological Impact Assessment. *In Practice*. **70**. 23-25.

APPENDIX 1- CORRESPONDANCE WITH EBC ECOLOGIST

LM

Malter, Lisa
RE: H/21/92109
To: Lyndsey Mcbean

9 June 2022 at 09:38

Hi Lyndsey,
Yes, that is fine. I do surveys myself and understand about the weather. The use of cameras is very helpful and included in the updated CIEEM guidance.
Kind regards,
Lisa

Lisa Malter
Ecologist (Mon, Tue, Thu)
Service Delivery - Specialist Services - Environment



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