# 30 Stone House

## Inspection for the Presence/Absence of Bats & Birds



08/01982/FUL 21 NOV 2008 - SMD

**Evolution Ecology**
**Paul Keeling BSc (Hons) MIEEM**
**7 Park Hall Farm**
**Adderley Road**
**Cheadle**
**Staffordshire**
**ST10 2NJ**
**Tel: 01782 367848 or 07838 377 612**
**E-mail: paul@evoloutionecology.com**
**Web Site: www.evolution-ecology.com**



**Evolution Ecology**

**Protected Wildlife Surveys,**

**Habitat Evaluation and Bespoke Mitigation**

Bat and Bird Survey for the Proposed Redevelopment
Of the Dwelling

At

**30 Stone House, Basnett's Wood Road, Endon**

For

**Peter Leopard (Proprietor)**

**Evolution Ecology Reference: 135**

**Printed on Recycled Paper**

# Bat and Bird Survey

## Executive Summary

This report has been prepared at the request of Mr Peter Leopard in relation to the identification and location of protected bat and bird species at the proposed redevelopment of a dwelling at 30 Stone House. The area surrounding the dwelling consists of housing with a significant number of mature trees and garden boundary hedgerows.

An initial site inspection was undertaken to evaluate the dwelling suitability for bats and birds, by inspecting the exterior and interior of the building to identify suitable entry points and in the case of bats suitable hibernation sites. During the interior inspection time was also spent searching for signs to confirm bat and bird use such as nests and insect remains in the case of birds and oil staining, droppings, and insect remains for bats.

During the internal inspection there was no evidence of bat or bird habitation. Therefore the redevelopment of the dwelling has no potential to impact upon any birds or bats.

A bat detector survey (emergence survey) was undertaken on the site to confirm the findings from the interior and exterior inspection. While there was some bat activity shortly after dusk in the form of five commuting/foraging pipistrelle bats these individuals did not emerge from the dwelling but flew in from the east of the proposed redevelopment site, possible emerging from an adjacent building.

Bat and Bird Survey

**Contents**

**1 Introduction**

1.1 Background
1.2 Surveyor Details
1.3 Legislation Considerations
1.4 Site Description
1.5 Aims and Objectives

**2 Survey Methodology**

2.1 Weather Conditions
2.2 Walkover Survey
2.3 External Inspection of the Building/s Elevations
2.4 Internal Inspection of the Building/s and Elevations
2.5 Bat Detector Survey (Emergence Survey)

**3 Results**

3.1 Weather Conditions
3.2 Walkover Survey
3.3 External Inspection of the Building/s Elevations
3.4 Internal Inspection of the Building/s and Elevations
3.5 Bat Detector Survey (Emergence Survey)

**4 Implications**

**5 Impact Assessment**

**6 Mitigation**

6.1 Advanced Works
6.2 Post Construction

**7 Recommendations**

**8 References**

**9 Appendix**

**10 LIMITING CONDITIONS/DISCLAIMERS** (Unless stated otherwise)

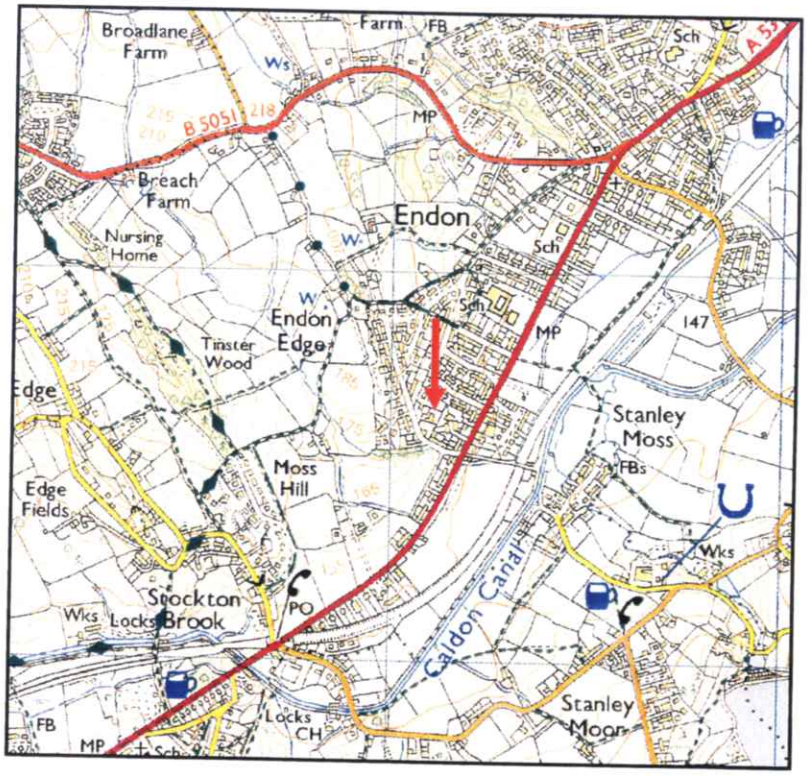
# 1 Introduction

## 1.1 Background

This report has been prepared at the request of Mr Peter Leopard (Proprietor) in relation to the identification and location of protected bat and bird species at the proposed redevelopment of a housing complex at 30 Stone House, Basnetts Wood Road, Endon, Staffordshire, ST9 9DQ

The survey commenced at 20.00 on the 19th of May 2008 and concluded at 22:00

Figure 1: Location of the proposed redevelopment site at 30 Stone House



Bat and Bird Presence Absence Survey

## 1.2 Surveyors Details

Mr Mathew Haydock. Ecologist. Natural England Surveyors licence number 20062238.

Mr Paul Keeling. Ecologist. Natural England Surveyors licence number 20070469

## 1.3 Legislation Considerations

Planning Policy Statement 9 makes it a requirement for local authorities to consider biodiversity and geological conservation when determining planning applications.

All species of bat are fully protected under the Wildlife and countryside Act 1981, the European Conservation (Natural Habitats &c.) Regulations 1994 and the Countryside and Rights of Way Act 2000. This legislation makes it illegal to possess or control any live or dead specimens, to damage, destroy or obstruct access to any structure or place used for shelter, protection or breeding, and to intentionally disturb a bat while it is occupying a structure or place which it uses for that purpose.

Most resident nesting birds are protected under the Wildlife and Countryside Act 1981 which protects the birds, nests, eggs and nestlings. Some rarer species are afforded extra protection.

If bat species are present at the proposed re/development site, the purpose of this report will only summarise the potential requirements for a bat mitigation/package project. A separate mitigation report/project will be required, which will include the necessary compensation measures to maintain the conservation status of a European Protected Species.

## 1.4 Site Description

The pre-20th century dwelling site comprises of a garden, mature trees and hedgerows. (Please refer to appendix A for aerial photographs of the proposed redevelopment site). The surrounding landscape is composed of housing and gardens. There are also a large number of mature trees within the site and in the vicinity.

## 1.5 Aims and Objectives

The aims and objectives of the documented survey were to determine the following information

**Bats**

- Establish the probability of roost sites and bats being present at the proposed redevelopment of the buildings
- The roost status.
- Suitable food resources and habitat requirements.
- If roost site found provide an impact assessment.

**Barn Owls**

- Establish whether or not barn owls were using the site.
- Locate nest sites if present.
- What types of activities were shown within the redevelopment site.
- Suitable food resources and habitat requirements.
- Provide an impact assessment if Barn Owls are present.

**Birds**

- Establish whether or not birds were using the site.
- Locate nest sites.
- What types of activities were shown within the redevelopment site.
- Suitable food resources and habitat requirements.
- Provide impact assessment.

The information was subsequently used in conjunction with the knowledge of the proposed redevelopment at the site to determine:

- What impact the redevelopment is likely to have on any protected species found at the site.
- The need for any licence application to be made in respect of activities concerning protected species.
- Recommendations for any mitigation measures that would be required.

## 2 Survey Methodology

### 2.1 Weather Conditions and Timing

Bat activity surveys should be carried out in dry weather as bats may not leave their roost site if it is raining heavily, making any survey results suspect. Bat activity surveys should be carried out between May and September and winter hibernation surveys between October and April. The months can vary a little, depending on seasonal variations.

### 2.2 Walkover Survey

A walkover survey of the site and visual inspections of trees and the building/s was undertaken. This was to determine the availability of required resources for the protected species in the immediate area.

### 2.3 External Inspection of the Building/s Elevations

The objective of this survey was to locate areas of suitable entry and exit points that protected species could use to fly into the buildings and use areas within, to roost and/or nest. The survey method used to inspect the external walls and roof of the building was to use a visual assessment with the use of binoculars, torch, endoscope and ladders in full daylight.

- Inspect for missing roof tiles.
- Broken windows, missing windows and doors.
- Look for suitable entry and exit points around the ridges and apex of the buildings.
- Look for bat droppings on the ground and stuck to the walls.
- Locate bird nests.

## 2.4 Internal Inspection of the Building/s Elevations and Rooms

The object of this survey was to locate and focus on areas which provide appropriate environmental conditions for bats, barn owls and birds.

- Look for warm dark areas, joints, crevices, beams and cavities for possible bat roost sites and nest sites
- Locate roost/nest sites.
- Listen for bats and birds.
- Examine floors, walls and structural elements for droppings, corpses, skeletons and dead insects.

## 2.5 Bat Detector Survey (Emergence survey)

The object of this survey was to detect active bats leaving possible roost sites identified in the external and internal surveys.

- Be at the site 1 hour before sunset.
- Listen for social calls at potential roost sites
- Stand at different transect points around the buildings, using the bat detector to hear the bats plus try and see the first bats emerge.
- Stand at different transect points at foraging areas.
- Carry out this survey up to 2 hours after first bats emerge as this will cover the emergence period and possible the first returning bats to the roost site for some bat species.

# 3 Results

## 3.1 Weather Conditions

The survey commenced at 20.00 and concluded at 22.00. At the time of the survey the weather was dry with 65% cloud cover. The air temperature was 9 °C with a relative humidity of 48.1%.

## 3.2 Walkover Survey

The immediate landscape around the dwelling consists of residential buildings and large gardens; beyond this is open countryside with a considerable number of standard and mature trees within the landscape. Due to it's intrinsically semi rural nature the area has considerable potential to provide bats with the necessary resources to survive.

## 3.3 External Inspection of the Building/s Elevations

Dwelling

The dwelling is of pre-20th century built, with red brick used for the construction of the building which has been rendered and tile cladding is located to the northeast elevation of the dwelling. The rendering section of the dwelling showed no potential for access for roosting bats or nesting birds as there were no cracks or crevices for these species to inhabit, however the northeast elevation is constructed with a clad tiling design which did show potential for bat access and roosting opportunities behind the cladding tiles (*Please see APPENDIX B Photographic Records*).

The roof showed some lose/missing tiles and ridge tiles that could provide access points for bats and/or birds. The doors and windows are all intact showing no visible signs for potential access for bats and/or birds to gain entry. There were no visible access points along the soffits for birds or bats to gain access to the internal of the dwelling.

## 3.4 Internal Inspections of the Buildings Elevations and Rooms

Dwelling

The dwelling is still in use by the occupants, this will significantly reduce the likelihood of bats and birds being present within the living quarters. Therefore the survey effort was concentrated within the roof spaces. The roof space is divided into 4 sections by chimney stacks. All four sections consisted of rafters and roof felt with a king post design. All four sections were dusty with a small number of cobwebs hanging from the roof beams, indicative of little or no passing bird or bat activity. No evidence of bat habitation (droppings, food remains or oil staining) was seen in any of the four sections of the loft, though there were a small number of mouse droppings recorded.

No signs of barn owls were recorded (nests/roosts, pellets, presence of chalky white droppings and/or the noise of the chicks).

## 3.5 Bat Detector Survey (Emergence Survey)

The bat detector survey identified five foraging bats flying onto the site at 21.05, 21:10, 21:15, 21:25 and 21:3. Their flight patterns were consistent with pipistrelle bats and their echolocation was recorded at 45 KHz. The bat activity was concentrated mainly in the east section of the garden premises and it was noted that a bat roost could be located in one of the adjacent dwellings.

During this survey there was no sign of any bats emerging from the dwelling.

*(Please APPENDIX A for foraging commuting routes)*

## 4 Implications

The lack of bat evidence in the building combined with the results of the bat detector survey indicates that any redevelopment works is unlikely to impact upon any individual bat species or the local bat populations. This is because only foraging individuals of bats were identified

## 5 Impact Assessment

With the redevelopment of the site, minimal loss of existing vegetation will occur and the impact on potential commuting and foraging bats will be low because bats use a number of foraging areas within their territory throughout the evening.

The proposed redevelopment has no potential to disturb nesting birds. Also during the survey no evidence of barn owl activity was recorded (nests/roosts, pellets, presence of chalky white droppings and/or the noise of the chicks which is a bit like loud snoring).

## 6 Mitigation

### 6.1 Advance Works

Because no bat or bird activity was recorded within the dwelling no further works will be necessary.

### 6.2 Post Construction

The erection of bat and bird boxes could be incorporated into the redevelopment, which would help maintain and even enhance the conservation status of the local bat and bird population. Bat and bird boxes can be supplied and/or erected by Evolution Ecology or can be brought from Jacobi Jayne and Company

## 7 Recommendations

The erection of bat and bird boxes could be incorporated into the redevelopment, which would help maintain and even enhance the conservation status of the local bat and bird populations. Bat and bird boxes can be supplied from Jacobi Jayne and Company (Living with birds and bats) web sites or www.livingwithbirds.com

Examples of a bat roost and a swallow nest.

**Bat Box**



**Swallow Nest**



## 8 REFERENCES

English Nature (2004) *Bat Mitigation Guidelines*. English Nature

RSPB (2002) The population Status of Birds in the UK 2002-2007

The Conservation (Natural Habitats, &c.) Regulations 1994. HMSO

Wildlife and Countryside Act (1981)

Countryside Rights of Way Act (2000)

## 9 APPENDICES

APPENDIX A: Aerial Photograph of the proposed redevelopment site. Also showing the bat commuting/foraging activity recorded.

APPENDIX B: Photographic Records.

APPENDIX C: The Bat Year.

**Appendix A:** Aerial photograph of the proposed redevelopment site indicated by red square. The bat commuting/foraging activity indicated by the blue arrows. The potential bat roost sites are indicated by the yellow circles.

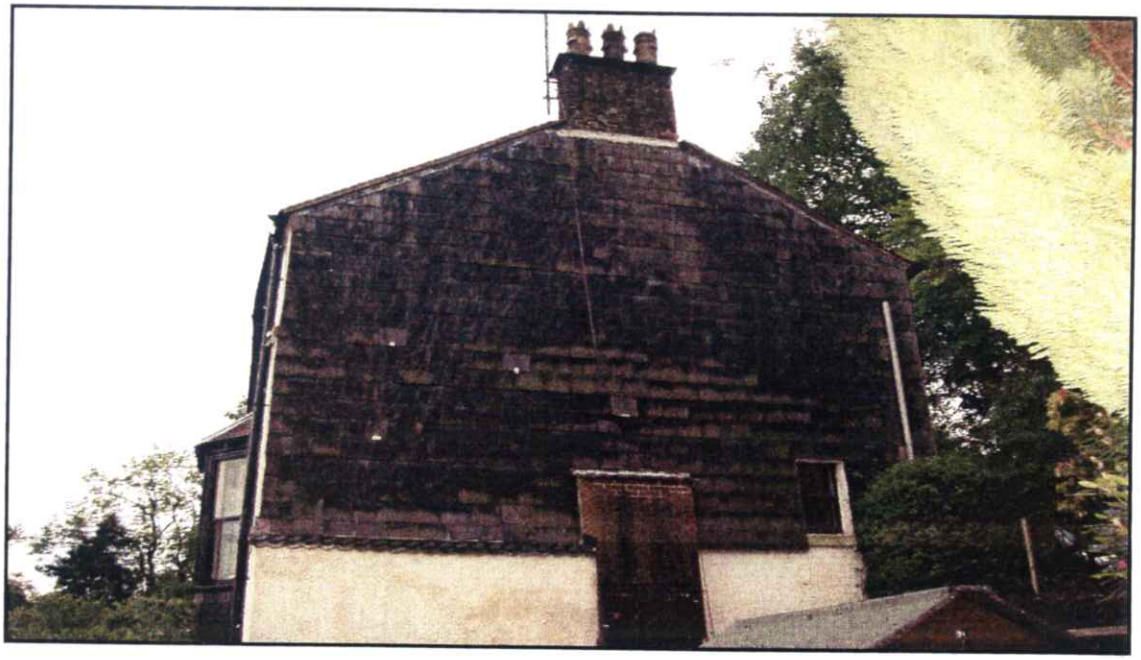


## Appendix B: Photographic Records

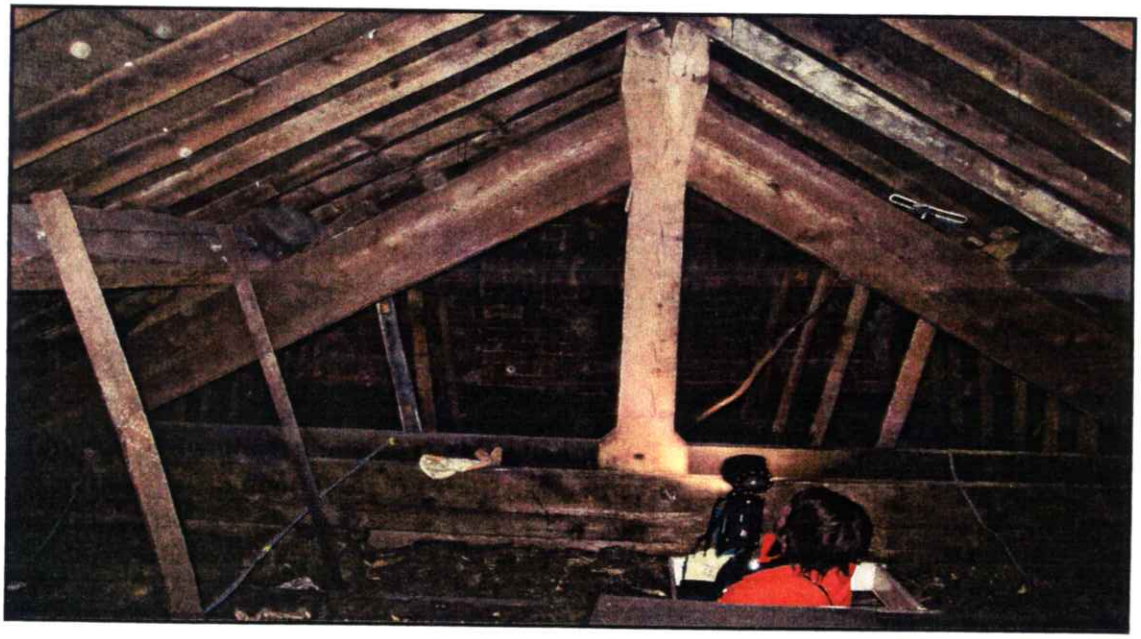
### Front elevation



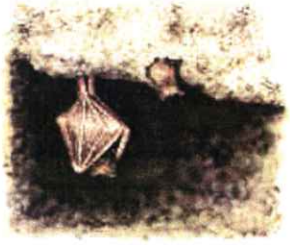
**Northeast cladding elevation**



**Interior of dwelling, showing the design and layout of the roof space showing some potential for roosting bats indicated by the red arrow**



## APPENDIX C: The Bat Year

| The Bat Year | | |
|---|---|---|
|  | **January** | Hibernating, using up fat reserves. |
|  | **February** | Still hibernating, few fat reserves left. |
|  | **March** | Some activity, occasional bat seen feeding. |
|  | **April** | Awake and feeding at night. |
|  | **May** | Females looking for nursery sites. |
|  | **June** | Young born, usually only one. |

Bat and Bird Presence Absence Survey



**July** Young still suckling.



**August** Young start catching insects, females leave nursery to find males.



**September** Mating season begins, start building fat reserves for hibernation.



**October** Search for suitable hibernation site.



**November** Hibernation begins although still some activity in warm weather.



**December** Hibernating.

## 10 LIMITING CONDITIONS/DISCLAIMERS (Unless stated otherwise)

### 1 The Service

1.1 Evolution Ecology agrees to supply ecological consulting services of a preliminary nature or a more thorough service as advised or as commissioned

### 2 Fees

2.1 The client(s) will settle the agreed fee in full, within 30 days of receiving the invoice. Reports will remain the property of Evolution Ecology until full payment has been received. No liability is accepted for the contents of a report that is not paid in full. Any queries should be notified to Evolution Ecology within 7 days of the invoice date.

2.2 If the client(s) fails to pay within the time specified in 2.1 then Evolution Ecology shall charge the client(s) interest on the outstanding fee, both before and after any judgment, at the rate of 4% above the HSBC Bank base rate, until payment is made in full (A part of a month being treated as a full month for the purposes of calculating interest)

2.3 In the event that it is necessary to recover any outstanding fees from the client(s), the client(s) will fully reimburse any costs and expenses incurred during the recovery period, including court costs. Evolution Ecology reserves the right to make a charge for every letter sent and telephone/fax call made, in connection with the recovery.

### 3. The Report

3.1 If any part of the report is lost, or altered without the written consent of Evolution Ecology, then the entire report becomes invalid.

3.2 The general format of reports is a certified product and cannot be shown, copied or distributed to third parties without the permission of Evolution Ecology. No liability is accepted for the contents of the report, other than to that of the client(s).

3.3 The report will purport not to express any opinion or comment as to the condition or structural integrity of any building and no reliance should be made on any such comments.

## 4 Insurance Cover

4.1 All work carried out by Evolution Ecology is covered by a £1,000,000 professional indemnity insurance.

## 5 Quality of Craftsmanship

5.1 When appointing an Ecologist, please use only suitably qualified and experienced companies (The Local Authority and the Institute of Ecology and Environmental Managers may be able to provide a select list of such companies)

5.2 Evolution Ecology will not accept liability for any works undertaken by any other companies, or contractors.