

Report : Bat and Nesting Bird Assessment:  
House at The Brooches,  
Craven Arms SY7 9AG

Reference : IL/2998/22.1

Date : 2 January 2024

Client : Mr. & Mrs. M. Alderson

Agent : Inklines Limited  
Two Roofs  
School Road  
Clun  
Craven Arms  
SY7 8JQ

Proposed development : Extension of the House

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Dr R. M. Jones.

Client:  
Mr. & Mrs. M. Alderson  
The Brooches  
Craven Arms  
SY7 9AG

Dr. R. M. Jones MCIEEM  
Star Farm  
Colebatch  
Bishop's Castle  
Shropshire  
SY9 5JY

Agent:  
Inklines Limited  
Two Roofs  
School Road  
Clun  
Craven Arms  
SY7 8JQ

Mobile: 078 66 44 0915  
Email: info@starecology.co.uk

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**Bat and Nesting Bird Assessment:  
House at The Brooches,  
Craven Arms SY7 9AG.**

## **1. Introduction**

The House is a single- and two-storey structure with an approximate footprint of 95m<sup>2</sup> (0.0095 hectare) that stands at approximate National Grid Reference (NGR) 341660, 282360.

There is a proposal to construct a two-storey extension onto parts of the northeast and southeast elevations of the House. The proposed extension will require the alteration of existing two-storey sections of the House and to parts of the roof structure.

Full details of the proposed development may be obtained from Inklines Limited.

On 13 December 2023 the House was surveyed for:

- a) the potential for Bats to roost on and/or in the House;
- b) the potential for Small Breeding Birds to construct their nests on and/or in the House;
- c) physical evidence of Bats and their roosts on and within the House; and,
- d) physical evidence of nesting birds on the exterior and within the interior of the House.

The survey was carried out by Dr. R. M. Jones MCIEEM, Natural England Bat Licensed surveyor 2015-11179-CLS-CLS.

Surveyor attention was focused on the areas the House that are to be materially altered by the construction of the proposed extension.

An assessment was made of the affect of the proposed development on Bats and nesting birds.

A photographic record of the Bat and Nesting Bird Assessment is provided in Appendix 1.

The survey/assessment has been carried out with regard to the following published guidance:

- 'Bat surveys for Professional Ecologists – Good Practice Guidelines'<sup>(1)</sup>
- the gov.uk website<sup>(2)</sup>
- BS42020:2013 'Biodiversity – Code of practice for planning and development'<sup>(3)</sup>

## **2. Legislation and Policy**

### **2.1 Bat**

All bat species (*Rhinolophidae* and *Vespertilionidae*) are protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2017 (amended).

Under the Conservation of Habitats and Species Regulations 2017 (as amended) legislation it is illegal to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats. This includes in particular, disturbance in a way any such which is likely to (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young; (ii) impair their ability to hibernate or migrate; or (iii) to affect significantly the local distribution or abundance of the species to which they belong
- damage or destroy a breeding site or resting place of a bat;
- to be in possession or control, to keep, transport, to sell or exchange, or to offer for sale or exchange, any live or dead bat, or any part of, or anything derived from such a wild animal.

Under the Wildlife and Countryside Act 1981, it is illegal to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection.
- intentionally or recklessly obstruct access to any structure or place which a bat uses for shelter or protection.

A bat resting place may be a structure a bat uses for breeding, resting, shelter or protection. Resting place sites are protected whether or not bats are in occupation, as they may be re-used by bats.

All species of bat are priority species in the UK Biodiversity Action Plan (HM Government 1994 et seq.) and are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

A European Protected Species (EPS) Development Licence from Natural England may be required for development works triggering Conservation of Habitats and Species Regulations 2017 (as amended) offences against bats.

### **2.2 Nesting Bird**

Nesting birds are protected by the Wildlife and Countryside Act 1981.

Under the Wildlife and Countryside Act 1981, all birds are protected while breeding. It is an offence, with certain exceptions to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- intentionally take or destroy the egg of any wild bird.

## **3. Historical records of bat**

A formal search of historical records of bat within the vicinity of the House was not commissioned.

Considering the nature, scale and location of the proposed development; the constraint of not carrying out an historical biodiversity record search is considered negligible.

The owners of The Brooches are not aware of bats roosting within the House, or elsewhere within The Brooches property.

#### **4. House Description**

A brief description of the House, relevant to bats and nesting birds and the extent of the proposed development, is provided here.

Full details on the structural fabric and layout of the House may be obtained from Inklines Limited.

At the time of survey, the House was in a good and maintained condition and was occupied by a tenant.

The House is comprised of two distinct structural sections:

- Section A: the original two-storey section, at the northwest.
- Section B: a more recently constructed single- and two-storey section, at the southeast.

According to Inklines Limited; Section B was constructed during the 1980's and, during this time, the Section A roof structures were stripped and re-covered.

Section A has two inter-linked apex roof structures.

Section B has a single apex roof structure, that is subordinate (lower in height) to the Section A roof structures.

The Section A and Section B roof structures are covered with machine-made, uniform profile. clay peg tiles.

All roof apexes are covered with machine-made, uniform profile, inter-locking ridge tiles bedded on mortar.

Two flush/under-boarded lead-lined roof valleys are present between the two Section A roof structures.

The Section A roof structures overhang gables and (gable) soffit boxes are present. Mortared roof tile verges oversail barge boards by approximately 40mm and are supported by composite board under-cloaking.

The Section B roof structure overhangs the southeast elevation gable and is supported by exterior common rafters attached direct to the exterior gable wall. Plastic (or similar) barge boards are attached direct to the exterior common rafters.

Mortared roof tile verges oversail the plastic barge boards by approximately 80mm and are supported by composite board under-cloaking.

Lead flashings are present between the Section B roof structure and the adjoining southeast Section A southeast elevation wall.

Eaves overhang the Section A and Section B roof structures and are enclosed with (eave) soffit boxes.

Two brick chimney stacks, with lead abutments, are present within the Section A roof structures.

A dormer window structure is present within the Section B northeast elevation roof-slope. The dormer has a clay peg tile covered apex roof with inter-locking ridge tiles.

Mortared roof tile verges oversail plastic (or similar) barge boards that are attached direct to the (rendered) dormer gable. The verges oversail the barge boards by approximately 20mm and are supported by composite board under-cloaking.

Dormer cheeks are covered with lead (sheet) and a lead flashing is present between the dormer window sill and the (main Section B northeast elevation) roof-slope below.

Section A first-floor rooms are partly within the roof structure, have vaulted ceilings, and no roof-space(s) is/are present.

The Section B first-floor room is within the roof structure, has a vaulted ceiling, and no roof-space(s) is/are present.

## **5. Bat Assessment**

### **5.1 Method**

#### **5.1.1 Bat roosting potential**

The House was assessed for its potential to support bats and the type and number of bat roosts.

This involves consideration of a number of abiotic factors including:

- Access to the interior of the House
- Age
- Construction fabric
- Habitat context
- Light levels
- Previous use of, and activity within, the House
- Temperature regime and protection from weather

#### **5.1.2 Physical evidence of bat occupation**

The House was searched for the presence of bats and their roosts.

Search methods included the use of mirrors, torches (including a Fenix RC40 3800 lumen torch and a DeWalt DCL043 1000 lumen torch), binoculars (Zeiss 10x42), borescope (Visual Optics VO18 5.8mm Fibre Optic), fibrescope (Provision PV2636-21 5.8mm), video-scope (Draper 05163 Recording Flexi Inspection Camera), thermal imaging binoculars (Pulsar Accolade 2 LRF XP50 Pro Thermal Binocular (50Hz)), thermal imaging monocular (Zeiss DTI 3/25 Thermal Monocular), a night vision scope (Sytong HT-66 with infrared illuminator), a 3.8m Telescopic ladder, 4.1m Telescopic ladder, 8.15m Combination ladder, 3.6m Double Extending Roof Ladder; and combinations of these.

A search was also made for notable signs of past and/or present bat roost activity, including bat urine stains, fur oil stains, scratch marks and faeces. These may be found around a bat roost entrance, within a roost, and within flight/foraging areas.

The following list explains how the survey equipment was used to inspect the House:

- torches are portable battery powered (artificial) light emitting devices that were used to illuminate areas/features to aid the surveyor's inspection for physical evidence of bat.
- mirrors are portable reflective pieces of equipment that can aid the visual perception of features that may otherwise be inaccessible.
- binoculars are portable pieces of equipment that consist of two magnification telescopes, mounted side-by-side, and were used to aid the visual perception of distant and/or small objects.

- borescopes, fibrescopes and video-scopes are portable battery powered optical devices with flexible (light emitting) tubes that were used to aid the internal visual inspection - for physical evidence of bat - of small (structural) features and crevices that would otherwise be inaccessible.
- thermal imaging binoculars and monoculars are handheld electronic devices with an integrated visual display, designed for detecting heat energy, that were used to aid the external and internal visual inspection for bat presence.
- night vision binoculars, monoculars and (spotting) scopes are electro-optical devices that are used to detect visible and infrared energy and provide a visible image. The night vision scope was used to aid internal inspection for bat presence.
- a rigid ladder is a portable piece of equipment used for climbing up and/or down, which consists of two vertical stiles (bars) that are joined together by a series of horizontal rungs. Rigid ladders are self-supporting and may be leaned against (vertical) structures (such as walls) and/or on gradients (such as roof-slopes). The ladder was used to aid access to otherwise inaccessible spaces/features and therefore allow the close inspection of spaces/features for physical evidence of bat.

Combinations of survey equipment were used throughout the survey to enable the survey of spaces/features and inspections for physical evidence of bat.

For example; a surveyor used unaided visual perception from the ground to establish that there may be gaps between the lower edges of (roof apex) ridge cappings. The surveyor may then use binoculars and a torch to confirm or not, from the ground, if gaps are present and if these gaps are likely to provide bats with potential access to voids beneath the ridge cappings (i.e. within ridge tile voids - above the roof apex and beneath the undersides of ridge cappings).

### **5.1.3** Limitations

Considering the structural fabric of the House and the results of the survey (no evidence of bat found); it is not considered that there are any significant constraints on the survey.

## **5.2** Results

### **5.2.1** Weather conditions

The survey was carried out in bright and fine conditions with little or no breeze.

### **5.2.2** Potential for Bats

#### 5.2.2.1 Setting

The House is remotely positioned within a rural landscape dominated by intensively managed agricultural fields.

An agricultural yard and building complex is situated to the southwest of the House. Mixed tree species copses and woodlands are present approximately 300m southeast, and the Craven Arms to Broome trainline is approximately 200m northwest.

The habitat in the immediate vicinity of the House is sub-optimal for bats to use for commuting and/or foraging. However, optimal habitat is situated in the locality.

#### 5.2.2.2 Structural fabric

The House does not provide bat roost habitat.

All roof-tiles are intact, *in situ* and close-fitting and do not provide bat roost habitat.  
All ridge tiles are intact, *in situ* and close-fitting and do not provide bat roost habitat.

There is no potential bat access to gable or eave wall-plates.

Section A gable soffit boxes are intact, *in situ* and close-fitting and do not provide bat roost habitat.

The Section B southeast elevation gable exterior common rafters and barge boards are intact, *in situ*, close-fitting and do not provide bat roost habitat.

Mortared roof tile verges are intact, *in situ* and close-fitting and do not provide bat roost habitat.

Eave soffit boxes are intact, *in situ* and close-fitting and do not provide bat roost habitat.

Exterior walls are intact and there are no missing-mortar crevices (or similar) in which bats may roost.

Lead abutments are intact, *in situ*, and close-fitting and do not provide bat roost habitat.

Exterior doors and windows and their frames are intact, *in situ* and close-fitting and do not provide bat roost habitat.

#### **5.2.3 Physical evidence of Bats**

No physical evidence of bat was found on the exterior of the House.  
No physical evidence of bat was found within the House.

### **6. Nesting Bird Assessment**

#### **6.1 Method**

The House was searched for the presence of bird nests.

#### **6.2 Results**

One old and unused probable House sparrow (*Passer domesticus*) nest was found within a hole associated with the northeast Section A roof valley.

## **7. Conclusion**

### **7.1 Bat**

#### **7.1.1 Survey results**

The House does not provide bat roost habitat.  
No physical evidence of bat was found on or within the House.

Bats do not impose a constraint on the proposed development.

It is not considered necessary for further bat survey work to be carried out to inform the proposed development.

It is not necessary for a European Protected Species Licence for bats to be issued by Natural England to allow the proposed development to lawfully proceed.

#### **7.1.2 Mitigation**

Bats do not impose timing or work method constraints on the proposed development.

#### **7.1.3 Enhancement**

New bat roost opportunity may be installed during or after the proposed development.

The Brooches property and its environs are likely to be used by bats for commuting and/or foraging.

To avoid having a negative impact on commuting or foraging bats; external lighting that may be installed as part of the proposed development should be sensitive to bats.

Suggested enhancement measures for bats are contained in Appendix 2.

### **7.2 Nesting Bird**

Historic evidence of bird nesting was found within the external fabric of the House and it is possible that birds may nest on the House in the future.

Proposed development work will need to be carried out when there are no nesting birds present.

Bird nesting habitat may be created, post-development, to encourage birds to nest within The Brooches property in the future.

Recommended mitigation and enhancement measures for nesting birds are contained in Appendix 3.



## **8. Relevant publications**

- 1: Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust.
- 2: 'Bats: advice for making planning decisions' (14 January 2022). United Kingdom Government Website:  
<https://www.gov.uk/guidance/bats-advice-for-making-planning-decisions>
- 3: BS42020:2013 'Biodiversity – Code of practice for planning and development.' British Standards Limited.

**Appendix 1. Assessment photographs**



**Photograph 1. Exterior.**

Left: Southeast elevation of Section B.  
Left-of-centre: Northeast elevation of Section B.  
Right: Southeast elevation of Section A.  
Far right: Northeast elevation of Section A.



**Photograph 2. Exterior.**

Upper far left: part of the Southwest elevation of Section A.  
Left: Southwest elevation of Section B.  
Right: Southeast elevation of Section B.



**Photograph 3. Exterior.**  
Left: Southwest elevation of Section A.  
Right: Southwest elevation of Section B.



**Photograph 4. Exterior.**  
Left: parts of the Northwest elevation of Section A.  
Centre and right: Southwest elevation of Section A.  
Right: Southwest elevation of Section B.



**Photograph 5. Exterior.**  
Left: Northeast elevation of Section A.  
Centre and right: Northwest elevation of Section A.



**Photograph 6. Exterior.**  
Far left: part of the Northeast elevation of Section B.  
Centre and right: Northeast elevation of Section A.

## **Appendix 2. Enhancement for Bat**

### **Bat roost boxes**

In order to encourage bats to reside within The Brooches property in the future: it is recommended that woodcrete (or similar) purpose-made bat roost boxes are installed.

Ideally Bat Boxes should be positioned in areas of low future disturbance and the Bat Boxes should be installed more than 3m height above the ground.

Specially designed Bat Boxes are available that may be built into walls or encased by exterior weather boarding.

Recommended designs are the Schwegler 1FR and 2FR Bat Tubes which provide maintenance-free roosting opportunities, Istock Enclosed Bat Boxes and Wienerberger Habibat Bat Boxes.

These Bat Tubes and Boxes may be aesthetically unobtrusive if sympathetically integrated into the finished design of the proposed development.

It is recommended that a minimum of either:

- one Schwegler 1FF Bat Box;
- or,
- one Schwegler 1FD Bat Box (or similar alternatives)

is installed within The Brooches property (and/or within its immediate vicinity) post-development.

### **Ridge tile bat roosts**

Ridge tiles on the apex of the roof of the post-development House may be permanently raised to potentially allow bats to roost on the underside of them.

It is recommended that a minimum of two ridge tile bat roosts be created during the development.

#### Purposely raised ridge tiles

Raised ridge tiles may be created by:

- a) narrowing the gap between tiles and resting the middle tiles on their neighbours, or by packing the ends of tiles with an excess amount of mortar (or similar).
- b) laying all ridge tiles onto a 20mm deep bed of mortar and at approximately every 1.5m, leaving gaps between 30 and 150mm without mortar. (A temporary support, such as a piece of roof tile, may be required to support ridge tiles until mortar has set).
- c) securing ridge tiles on the roof with mortar placed on the inner lower half of the ends of ridge tiles only. The height of bat openings will be between 18mm and 22mm.

Where possible, fixing ridge tiles with mortar on their inner lower half only - rather than in the apex - would create long voids favoured by crevice dwelling bats.

It may be possible to avoid using any mortar at all.

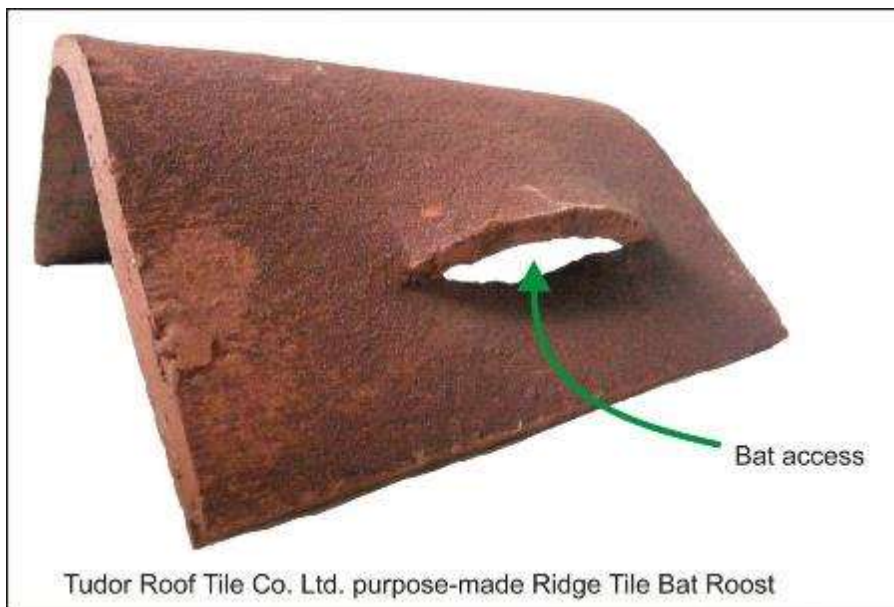
### Reclaimed and/or misshaped ridge tiles

Should re-claimed and/or misshaped ridge tiles be used during roofing work, it is possible that not all of the ridge tile will fit closely with roof tiles underneath them. Should these gaps be between approximately 12mm and 22mm in height – there is potential that crevice dwelling bats may use them to gain access to the undersides of ridge tiles. The 'natural' gap of misshaped ridge tiles may be exaggerated by packing with mortar and the undersides of the ridge tile should not be completely filled with mortar to provide a potential roosting space for bats.

### Purpose-made ridge tile bat roosts

Purpose-made ridge tiles with bat-access openings are available commercially. For example, the handmade 'bat access ridge tile' produced Tudor Roof Tile Co. Limited, Dengemarsh Road, Lydd, Kent, TN29 9JH.

A picture of the Tudor Roof Co. Limited purpose-made ridge tile bat roost is shown below:



Please note: Star Ecology has no association with Tudor Roof Tile Co. Limited.

### **External Lighting**

In order to avoid any unnecessary disturbance to bats in the future, any external lighting to be installed should:

- use Light emitting diodes (LED) luminaries
- have a warm white spectrum <2700° Kelvin (degrees colour temperature)
- have peak wavelengths higher than 550nm
- be set on motion-sensors
- use short duration (e.g. one minute) timers
- not be in the vicinity of, or shine towards, bat roost openings
- not shine towards (the) roof structure(s)
- not be in the vicinity of, or shine towards, boundary vegetation

### **Appendix 3. Recommendations for Nesting Bird**

#### Mitigation

Ideally, development work should not be started between 1 March and 1 October (inclusive).

Should it not be possible to time development work to avoid disturbance to nesting birds, potential access points to bird nesting locations should be closed off with mesh or fabric barriers, in order to prevent birds from nesting.

Should it be required that development work commences between March and September, the House should be inspected by a suitably qualified ecologist for evidence of nesting birds.

No works may commence if birds have started to build, or if they already occupy, nests. If birds start nesting on/within the House - prior to or during demolition work - delays will be inevitable up to the moment when the young birds leave the nest.

#### Compensation and enhancement

In order to encourage small nesting birds to nest within The Brooches property: it is recommended that woodcrete (or similar) purpose-made bird nest boxes be installed.

Ideally nest box placement and construction of nesting features should be undertaken outside the bird breeding season (March-September inclusive).

Nest boxes may be placed under the eaves of the House, on other nearby buildings and/or on nearby trees. Ideally nest boxes should be positioned in areas of low future disturbance.

It is recommended that a minimum of:

- a) two Swift nest boxes (e.g. Schwegler No. 16 Swift box)
- b) one Sparrow nest box (Schwegler 1SP Sparrow Terrace's)
- c) one generic bird species nest box (e.g. Schwegler 1B bird nest box)
- d) one Tit nest box (e.g. Schwegler 2M woodcrete bird box)

be installed within The Brooches post-development.