

Report : Bat and Nesting Bird Assessment:
House at Park Farm,
The Fish, Hopesay, Craven Arms SY7 8HG

Reference : SA/2942/23.1

Date : 18 September 2023

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Proposed development : Construction of an extension on to part of the northwest elevation of the House

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1. Introduction

There is a proposal to construct a two-storey extension on to part of the northwest elevation of the House within the Park Farm property.

The House has an approximate footprint of 130m² (0.013 hectare) and stands at approximate National Grid Reference (NGR) 339730, 284095.

The proposed extension will be constructed onto the northeast part of the northwest elevation and will require the demolition (or alternation) of an existing single-storey 'lean-to' structure. The roof line of the new extension will be below the existing roof line of the existing main, two-storey, section of the House.

Full details of the proposed development may be obtained from Mr. N. Dummer RIBA of Spacescape Architects + Landscape Architects.

On 1 September 2023 the parts of the House to be structurally altered by the proposed development were 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 northeast part of the northwest section of the House that is to be structurally altered by the proposed development.

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'⁽¹⁾
- the gov.uk website⁽²⁾
- BS42020:2013 'Biodiversity – Code of practice for planning and development'⁽³⁾

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 Park Farm are not aware of bats roosting within the House, or elsewhere within the Park Farm property or its immediate environs.

4. House Description

The House is predominantly a two-storey stone structure with inter-locking apex roofs.

Two small single-storey structures are present; a 'lean-to' coal-store and back-kitchen that is to be demolished or altered as part of the proposed development and a small enclosed 'porch'. The 'porch' is structurally separate to the area of the House to be affected by the proposed development and no work is required to it; as such, the 'porch' is not considered further.

4.1 Two-storey section

Roof-slopes of the two-storey section are covered with slates and are underlined with reinforced plastic (such as Monarflex, or similar). The roof apex is covered with abutting ridge tiles bedded on mortar.

Gables overhang (by roughly 120mm) and are supported by exterior common rafters attached direct to exterior wall surfaces. Barge boards, with top architraves, are attached direct to the exterior common rafters. Roof slate verges oversail the barge boards/top architraves by roughly 15mm.

Eaves overhang and are enclosed with soffit boxes.

First-floor rooms are partly with the roof structure and narrow-height roof-spaces are present beneath the roof apex. The roof-spaces have an approximate internal height of 0.5m and width (at the base) of 1m. The floors of the roof-spaces are lined with quilt (fibre-glass, or similar) insulation. Otherwise, the roof-spaces are empty and are not in use (for storage purposes, or similar).

4.2 Single-storey 'lean-to'

A small single-storey stone 'lean-to' (probably a previous extension) is present on the northeast part of the northwest elevation.

The roof structure is covered with slate and is underlined with reinforced plastic (such as Monarflex, or similar).

A lead apron is present between the roof apex and the abutting part of the northwest elevation wall of the main, two-storey, section of the House.

Gables overhang and are enclosed with soffit boxes. Roof slate verges oversail barge boards by roughly 20mm.

Eaves overhang and are enclosed by soffit boxes.

The underside of the roof structure is exposed and no ceiling structure or roof-space is present.

5. Bat Assessment

5.1 Method

5.1.1 Bat roosting potential

The northeast part of the northwest section of 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 northeast part of the northwest section of 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 situated in a rural landscape comprising intensively managed agricultural fields, non-intensively managed agricultural fields, small copses and woodlands.

A treed minor watercourse flows roughly north-to-south approximately 50m west of the House.

Hopesay Common, an area of rough grassland, is situated approximately 250m east.

The surrounding landscape is well connected by agricultural hedges, the minor watercourse and its riparian trees, small copses, woodlands and highways.

All matters considered, the surrounding environs provide good bat commuting and foraging habitat.

5.2.2.2 Structural fabric

The northeast area of the House that is to be structurally altered by the proposed development does not provide bat roost habitat.

The House overall, is in a good and maintained condition and there is no potential bat access to roof structures or to the interior of the House.

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

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

Exterior common rafters and barge boards of the two-storey section are intact, close-fitting and *in situ* and do not provide bat roost habitat.

All (gable and eave) soffit boxes are intact, close-fitting and *in situ* and do not provide bat roost habitat.

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

The lead apron (between the single-storey 'lean-to' and the main, two-storey, section) is intact, close-fitting and *in situ* and does not provide bat roost habitat.

There are no missing-mortar crevices (or similar) within exterior walls (in which bats may roost).

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 northeast area of the House that is to be structurally altered by the proposed development.

No physical evidence of bat was found within the northeast area of the House that is to be structurally altered by the proposed development.

6. Nesting Bird Assessment

6.1 Method

The House was searched for the presence of bird nests.

6.2 Results

An intact (but unused) House Martin (*Delichon urbicum*) nest was found under the southeast elevation eave soffit box of the northeast area of the main, two-storey, section.

7. Conclusion

7.1 Bat

7.1.1 Survey results

The northeast area of the House that is to be structurally altered by the proposed development does not provide bat roost habitat.

No physical evidence of bat was found on or within the northeast area of the House that is to be structurally altered by the proposed development.

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.

Park Farm 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

7.2.1 Survey results

Evidence of nesting by House Martin was found on the exterior of the House and other bird species may nest on the exterior of the House in the future.

Should the proposed development receive approval; mitigation for Small Breeding Bird – provided in Section 7.2.2 - should be adhered to.

In addition, proposed development plans should include the provision of bird nesting habitat. Recommendations are provided in Section 7.2.3.

7.2.2 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 works commence 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 development work - delays will be inevitable up to the moment when the young birds leave the nest.

7.2.3 Compensation and enhancement

In order to encourage small nesting birds to nest within the Park Farm 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 gables and eaves of the post-development House. Ideally nest boxes should be positioned in areas of low future disturbance.

It is recommended that a minimum of:

- a) three House Martin nest boxes (e.g. Schwegler House martin Nest 9A)
- b) one Tit nest box (e.g. Schwegler 2M woodcrete bird box)
- c) one generic bird species nest box (e.g. Schwegler 1B bird nest box)

be installed at Park Farm (and/or within its vicinity) post-development.

8. Relevant publications

- 1: Collins, J. (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed., 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: part of the Northeast elevation of the main, two-storey, section.
Upper centre: part of the Northwest elevation of the main, two-storey, section.
Lower centre: Northeast elevation of the single-storey 'lean-to'.
Right: Northwest elevation of the single-storey 'lean-to'.



Photograph 2. Exterior.

Lower left: part of the Northwest elevation of the 'lean-to'.
Lower centre: Southwest elevation of the 'lean-to'.
Upper centre: Northwest elevation of the main, two-storey, section.
Right: Southwest elevation of the main, two-storey section.



Photograph 3. Interior.

View within the northwest-end roof-space of the main, two-storey section.
Looking northwest from southeast.

Appendix 2. Enhancement for Bat

Bat roost boxes

In order to encourage bats to reside within the Park Farm 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 Park Farm 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 dwelling 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

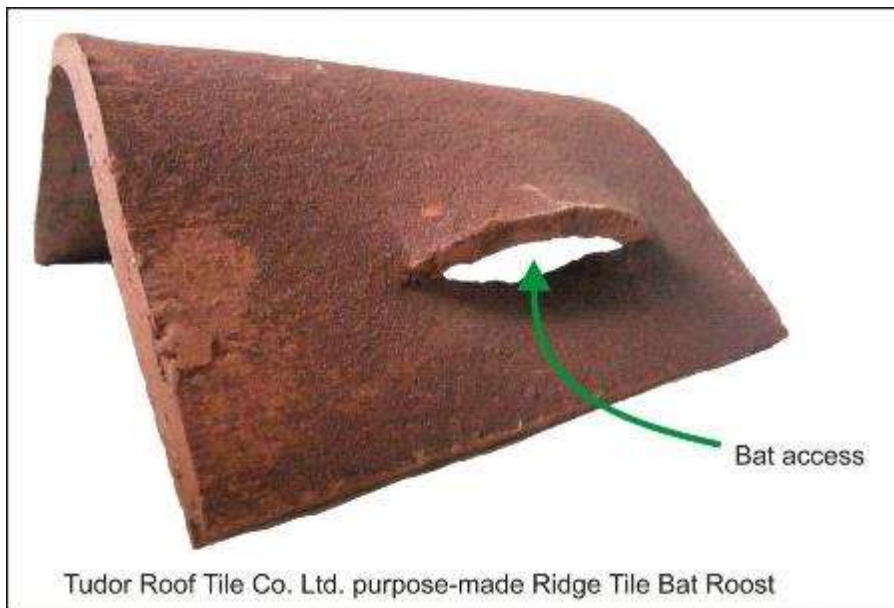
Should re-claimed and/or misshaped ridge tiles be used during roofing work, it is possible that not all of the ridge tile will fit closely with roof tiles underneath them. Should these

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