

BAT SURVEY REPORT

WALNUT TREE COTTAGE, DINEDOR,
HEREFORDSHIRE, HR2 6PD

for

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CONTROL SHEET

Mr Glenn Mannion
Walnut Tree Cottage, Dinedor, Herefordshire, HR2 6PD
Bat Survey Report

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1. RECOMMENDATIONS

Walnut Tree Cottage has been confirmed as an active bat roost for an individual soprano pipistrelle bat. Current proposals will retain the roost *in situ*. The following recommendations are made to ensure compliance with wildlife legislation, government guidance and best practice.

1. A detailed Reasonable Avoidance Measures (RAMs) Method Statement of works must be produced and implemented by a suitably qualified (bat-licensed) ecologist to demonstrate due diligence and legal compliance during the development works proposed at Walnut Tree Cottage. The report will provide details on the following:

- Timing (e.g. works in vicinity to the existing roost should ideally be carried out between September and April, inclusive, to avoid disturbing bats when they are most likely to be utilising summer roosts (Mitchell-Jones, 2004)), appropriate weather conditions and sensitive operations requiring direct supervision by a licensed ecologist (such as the removal of roofing materials).
- Pre-start dusk or dawn survey immediately preceding the start of works to identify any changes in roost status and bat activity.
- Appropriate compensation and enhancement measures.
- Strict plan of action if roosting bats are unexpectedly discovered or suspected during works.

Notes:

- In the event that roosting bats are discovered within the areas to be impacted on by the proposals, works must cease immediately and the appointed ecologist be contacted. They will liaise with Natural England (as required) and advise on any licensing requirements to allow lawful completion of the work.**

ii. If proposals change and the roost identified is to be directly impacted upon by the proposed development, a bat mitigation (development) licence from Natural England will be required for the works.

2. A sensitive scheme of artificial night-lighting to prevent unnecessary illumination of the identified bat roost within the property, as well as adjacent wildlife habitats (e.g. hedgerows, mature trees, adjacent woodland and common land *etc.*), must be implemented on site during construction and post-development. Lighting must be low-level and of the minimum wattage, as recommended by the Bat Conservation Trust & Institute of Lighting Professionals (2018). PIR motion-sensitive lights are beneficial to ensure that lights do not remain active when not required.

3. In line with Government policy on biodiversity, the following opportunities to compensate for development impacts and enhance the site for bats should be realised:

- Installation of a bat box suitable for crevice-dwelling species (e.g. pipistrelles) within the landownership of Walnut Tree Cottage. The box should be integrated within / installed on an existing or newly built structure (e.g. Schwegler Wall-mounted Bat Shelter, Ibstock Enclosed Bat Box Unit, Low Profile Woodstone Bat Box, Eco Kent Bat Box) or installed on a suitable mature tree (e.g. Schwegler 2F-DFP Bat Box, Low Profile WoodStone Bat Box, Eco Kent Bat Box, Beaumaris Woodstone Bat Box). The box should be installed at least 4m above ground-level, and not placed above windows.
- New fascia boarding (if required) on the proposed new extension could be modified (via pegs or similar) to create small spaces under the boarding to replicate existing roost features and provide opportunities for crevice-dwelling species.

4. This report is considered valid for 12 months for planning purposes (CIEEM, 2019). Update surveys may be required to reassess the condition of the site

(and its suitability for bats) should this 12-month period be exceeded. In this scenario, a reduced level of survey effort would normally be considered appropriate in line with published best practice guidelines on proportionality of survey effort (see e.g. Collins, 2016; Mitchell-Jones, 2004).

2. SUMMARY OF RESULTS

1. Development proposals are to extend the upper floor of the property to build a dormer extension above an existing extensive area of flat roof attached to the western elevation of the property. Focus Environmental Consultants have been appointed by Mr Glenn Mannion to provide advice on the potential impact of the proposals upon bats and make recommendations as appropriate to ensure compliance with wildlife legislation and recognised best practice.
2. A Preliminary Roost Assessment of Walnut Tree Cottage, Dinedor, Herefordshire, HR2 6PD (centred on Ordnance Survey grid reference SO 5217 3648) was undertaken on the 8 May 2022 (Focus Environmental Consultants, 2020). The survey site comprises a residential property, an extended semi-detached dwelling with a hipped roof and flat-roofed extension, with a garden. The site lies immediate adjacent to broadleaved woodland in the form of Camp Wood, with Dinedor Common and Dinedor Camp Fort also situated nearby.
3. The property was identified as supporting a confirmed bat roost due to the discovery of evidence of roosting bats (droppings) using the southern and western aspects of the flat-roofed extension. Further Potential Roost Features (PRFs) were also identified. Therefore, further specialist bat surveys were recommended to ascertain the nature of bat roosting activity at the site.
4. An update Preliminary Roost Assessment of the property was undertaken on the 24 June 2022. Two dusk emergence surveys were undertaken of the dwelling on the 24 June and 8 July 2022 by two experienced and / or appropriately licensed surveyors.
5. The surveys have confirmed the presence of a day roost within the property used by an individual soprano pipistrelle bat.
6. Bat foraging and commuting activity was observed on site during all of the surveys. The following bat species were recorded on / passing through the site;

common pipistrelle, soprano pipistrelle, noctule, *Myotis* sp. and brown long-eared bat.

3. DISCUSSION & CONCLUSIONS

3.1 Interpretation of Results

The bat activity surveys carried out at Walnut Tree Cottage have confirmed the presence of a day roost used by an individual soprano pipistrelle bat. The bat roost is located under the fascia boarding on the southern aspect of the flat-roofed extension. Although bat droppings were recorded under the fascia on the western aspect of the extension in 2020, no evidence of bats using this aspect were recorded during the surveys in 2022.

No evidence of a large or significant roost of bats (e.g. maternity roost) has been recorded.

Taking the results collectively and applying the guidelines of Natural England (see Mitchell-Jones, 2004, p 39 Figure 4) the conservation significance of the identified roost is **low** based on the presence of: '*individual bats of common species*' (soprano pipistrelle).

3.2 Predicted Impact in Absence of Mitigation

The proposals are to extend the upper floor of the property to build a dormer extension above an existing extensive area of flat roof attached to the western elevation of the property.

Short-term impacts: the proposed extension will be built over the existing flat roof that forms the northern part of the properties' extensions. It is understood (through client communication and viewing proposals / plans) that the southern flat-roofed extension will largely remain unaffected by the development proposals, and more specifically the southern aspect (including roofing materials and fascia boarding) will remain intact. As such, no direct short-term impacts on bat species at the site (e.g. through killing/injuring of individual bats, physical disturbance) are predicted. However, in the absence of mitigation, the proposed works do have the potential to cause associated indirect impacts (e.g. noise, dust, vibration) on bats utilising the property as a roost site at the time of the work.

Long-term impacts: no direct long-term impacts on bat species roosting at the site (e.g. destruction / damage to a roost) are predicted as the identified roost will be retained *in situ*.

No fragmentation or isolation is predicted as there will be no loss of mature vegetation associated with the proposed works. Given the nature and small-scale of the proposals, it is unlikely that there would be a significant increase in artificial night-lighting associated with the proposed development works. As such, the development proposals are considered unlikely to result in any significant impact upon foraging and commuting bats.

Taken collectively, in the absence of mitigation and based on the survey results obtained, the impact of the proposed works on the bat species presently roosting within Walnut Tree Cottage is **low** (see page 37 of Mitchell-Jones, 2004 and Natural England and DEFRA's Standing Advice (Natural England & DEFRA, 2015)). This assessment is based on '*post-development interference*' / '*modified management, such as changes to light, temperature or noise which will affect bats*'.

3.3 Predicted Scale of Impact

Based on the information collected during nocturnal surveys carried out at the site and current proposals supplied by the client (Existing and Proposed Elevations (drawing no. 863/PL04) & Existing and Proposed Block Plan (drawing no. 863/PL02)), the proposed works will not be impacting directly upon the bat roost identified within the property.

The predicted scale of impact will be reduced by undertaking the works under the auspices of a specific Reasonable Avoidance Measures (RAMs) Method Statement and implementation of a sensitive lighting scheme during the works and within the post-development site to minimise / avoid indirect impacts upon bats roosting within the property (see recommendations, above).

3.4 Compliance with Three Licensing Tests

It is the opinion of the author of this report that based on the current proposals, providing that the development is carried out in strict accordance with a written Method

Statement (as recommended), the proposed works are considered highly unlikely to impact upon the 'favourable conservation status test' of bat species at the site or give rise to any offence under the relevant legislation (Wildlife and Countryside Act 1981; The Conservation of Habitats and Species Regulations 2017) that would otherwise require a licence from Natural England.

4. ANNEXES

- 4.1 Photographs
- 4.2 Survey Data
- 4.3 Plans
- 4.4 Survey Objectives
- 4.5 Limitations
- 4.6 Methods & Parameters
- 4.7 Background Data
- 4.8 References & Bibliography
- 4.9 Bat Ecology & Legislation

4.1 Photographs

All photographs taken on the 8 May 2020.



Plate 1: view of the eastern aspect of Walnut Tree Cottage.



Plate 2: view across existing flat-roofed 'balcony' feature to be impacted upon.



Plate 3: view of gap behind fascia board.



Plate 4: adhered [pipistrelle] bat dropping below fascia board.



Plate 5: example of crevice along line of lifted tiles on dormer.

4.2 Survey Data

4.2.1 Nocturnal Surveys

A brief summary of the results of each nocturnal survey is provided below. Field survey recording sheets are held by Focus Environmental Consultants and are available on request.

Dusk Emergence Survey I (24 June 2022):

Surveyor 1 was positioned to the west of the property.

Surveyor 2 was located to the east of the property.

The survey started at 21:20. The first bat recorded was a soprano pipistrelle bat at 21:49, observed commuting over the garden and along the adjacent lane. At 22:10, a soprano pipistrelle bat was observed emerging from under the fascia board on the southern aspect of the flat-roofed extension, before flying towards woodland in the east. Low levels of bat activity by common pipistrelle and soprano pipistrelle bats were recorded during the survey. The survey ended at 23:05.

Dusk Survey Count:

Soprano pipistrelle: 1

Dusk Emergence Survey II (8 July 2022):

Surveyor 1 was positioned to the west of the property.

Surveyor 2 was located to the east of the property.

The survey started at 21:16. The first bat recorded was a noctule bat, heard at 21:45. During the survey bat activity was predominantly from common pipistrelle and soprano pipistrelle bats, with a small number of passes by noctule, *Myotis* sp. and brown long-eared bats. Bats appeared to be frequently using the adjacent lane as a key commuting / foraging route. No bats were observed emerging from the property. The survey ended at 23:01.

Dusk Survey Count: 0 bats

4.3 Plans

Plans:

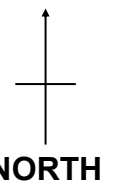
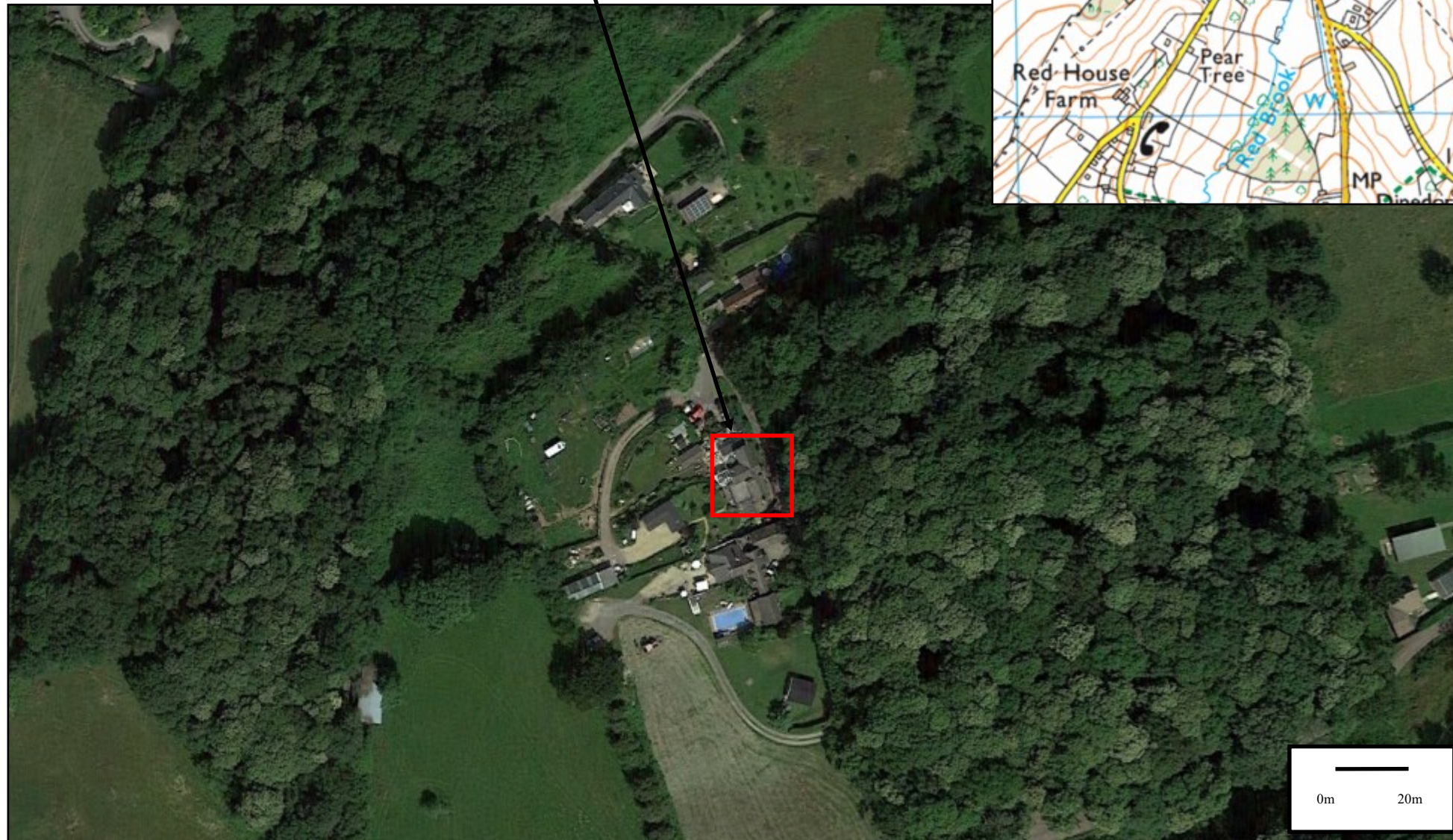
4.3.1 Location Plan

4.3.2 Dusk Emergence Survey Plan I (24 June 2022)

4.3.3 Dusk Emergence Survey Plan II (8 July 2022)

4.3.1. Location Plan

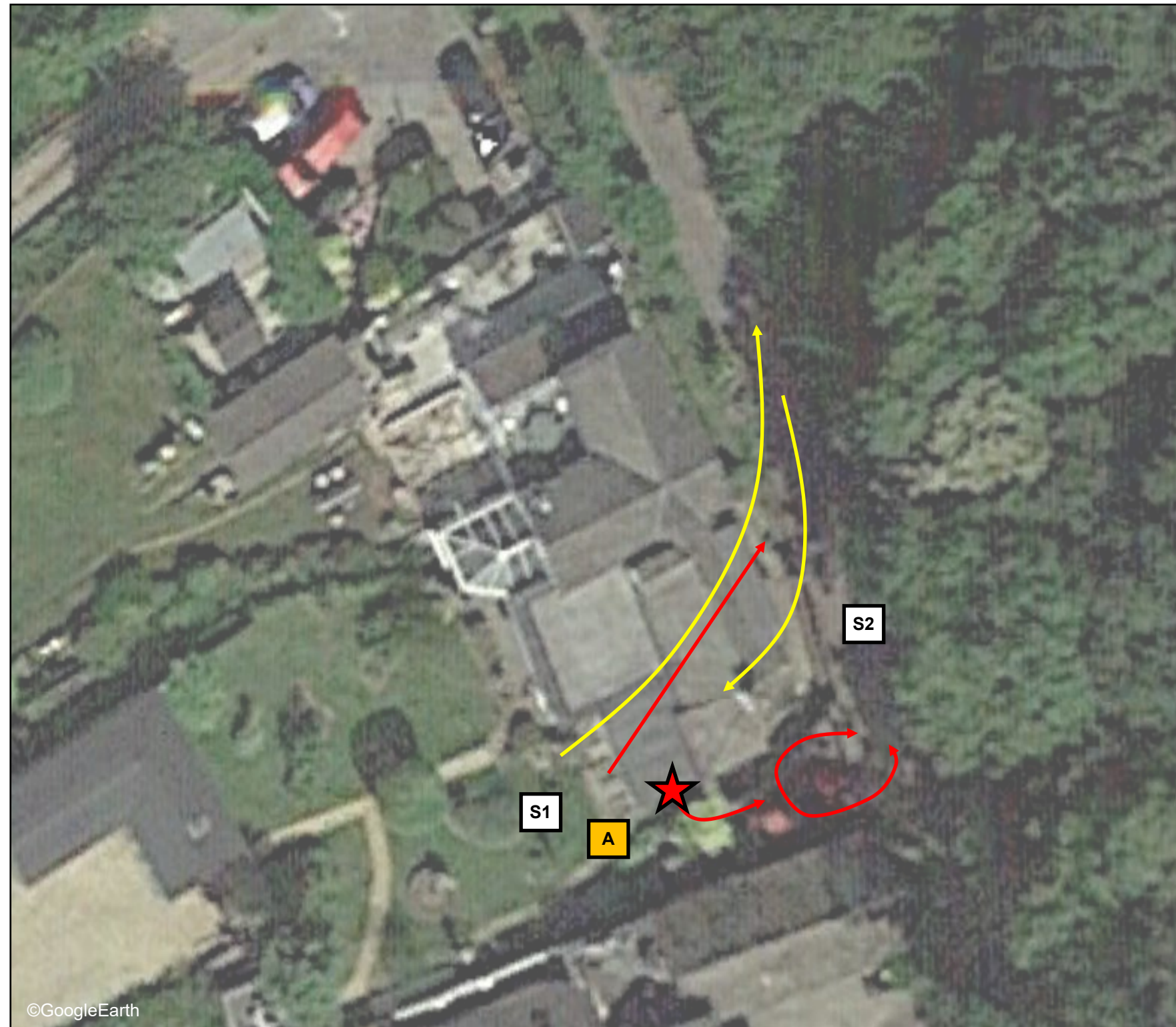
Site



Client: Mr Glenn Mannion
Site: Walnut Tree Cottage, Dinedor, Herefordshire, HR2 6PD
Title: Location Plan
Contract: 1931
Date: July 2022

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4.3.2 Dusk Emergence Survey Plan I (24 June 2022)



KEY:

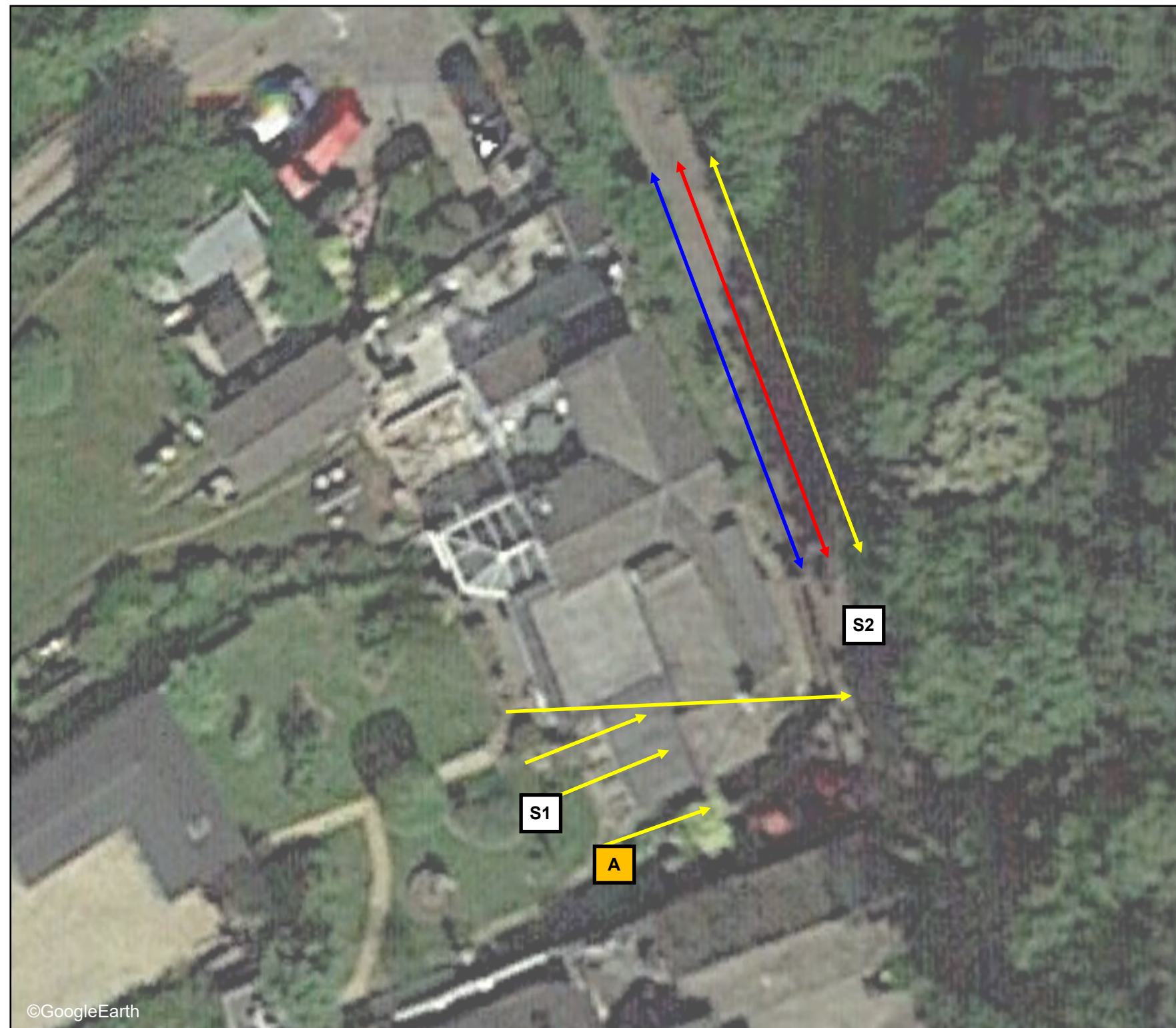
- S# Surveyor location
- A ANABAT Express location
- Soprano pipistrelle (55 kHz) activity
- Common pipistrelle (45 kHz) activity
- ★ Soprano pipistrelle (55kHz) emergence



Client: Mr Glenn Mannion
Site: Walnut Tree Cottage, Dinedor, Herefordshire, HR2 6PD
Title: Dusk Emergence Survey Plan I
Contract: 1931
Date: 24 June 2022

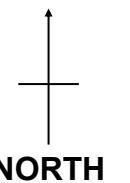
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4.3.3 Dusk Emergence Survey Plan II (8 July 2022)



KEY:

- S# Surveyor location
- A ANABAT Express location
- Soprano pipistrelle (55 kHz) activity
- Common pipistrelle (45 kHz) activity
- *Myotis* sp. activity



Client: Mr Glenn Mannion
Site: Walnut Tree Cottage, Dinedor, Herefordshire, HR2 6PD
Title: Dusk Emergence Survey Plan II
Contract: 1931
Date: 8 July 2022

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Please note: this plan is intended only to indicate the approximate location of features and should therefore, not be treated as an accurate scale plan.

4.4 Survey Objectives

The objectives of the survey were:

- to carry out nocturnal bat roost surveys based on the suitability of the building for bats and previous daytime survey work completed;
- to provide specialist advice on the possible presence of bats in relation to the planning process;
- to report survey results, likely development impacts and make appropriate recommendations for further surveys and/or works as necessary to ensure compliance with wildlife legislation and standard best practice; and
- to identify appropriate avoidance, mitigation, compensation and enhancement measures as required to demonstrate compliance with the 'mitigation hierarchy' and requirements of local and National biodiversity policies (e.g. the 'biodiversity duty' enshrined within S.40 of the NERC Act 2006, NPPF *etc*).

4.5 Limitations

The limitations of the survey were:

- a third-party data search was not commissioned by the client as part of this project;
- DNA analysis of the bat droppings collected from the property in 2020 has not been undertaken due to a change in ownership of the property and lack of droppings found for analysis in 2022.

The above limitations are not considered to be significant taking into account the results of the further survey work (*i.e.* dusk surveys) that has been carried out and the recommendations made.

4.6 Methods & Parameters

Emergence, Activity and Pre-dawn Surveys:

The nocturnal surveys were conducted by experienced and/or appropriately licensed surveyors using a variety of equipment with the aim of providing maximum confidence in the presence or absence of roosting bats. Surveyors were situated at strategic points around the site, to ensure full visual coverage of potential bat emerge/return

points and roosting locations. The property was observed for the duration of the surveys, in order to record the emergence of any bats.

With reference to interim guidance (Bat Conservation Trust, 2022) to the Bat Surveys for Professional Ecologists Good Practice Guidelines (Collins, 2016), two dusk emergence surveys with the use of night vision aids (NVAs) were considered to be appropriate survey methods for the site.

Survey Parameters:

Table 1: Details of survey parameters for Walnut Tree Cottage.

Date	Survey Type	Sunset / Sunrise	Survey Start & End Times	Weather Conditions	Surveyors & Licence No.	Equipment
8 May 2020	Daytime	n/a	n/a	Warm and dry.	G. Davison: 2015-13029-CLS-CLS	Ladder, high-powered torch with red filter, endoscope, binoculars, collecting pots for droppings.
24 June 2022	Daytime and Dusk Emergence	Sunset: 21:35	Start: 21:20 End: 23:05	Overcast, humid and dry with a breeze. Start: 15°C End: 12°C Relative humidity: 83% Beaufort scale: 2 Cloud cover: 100%	F. Henderson: 2015-15995-CLS-CLS G. Rudd (n/a)	Ladder, high-powered torch with red filter, endoscope, binoculars. 2x Pettersson D240X Bat Detector 1x Pulsar Helion 2 XP50 Pro thermal imaging monocular
8 July 2022	Dusk Emergence	Sunset: 21:31	Start: 21:16 End: 23:01	Dry and still. Start: 24.7°C End: 18.4°C Relative humidity: 46.7 – 64.1% Beaufort scale: 1 Cloud cover: 10%	F. Henderson: 2015-15995-CLS-CLS P. Vincent: 2020-49360-CLS-CLS	1x Anabat Walkabout 1x Pettersson D240X Bat Detector 1x Cannon XA40 Professional Camcorder with infrared.

4.7 Background Data

Pre-existing Information on the Bat Species at the Survey Site:

A Preliminary Roost Assessment was completed at the site on the 8 May 2020 by an experienced and appropriately licensed surveyor from Focus Environmental Consultants (see Focus Environmental Consultants, 2020). Please refer to this report for full descriptions of the site and scope of works.

No other pre-existing survey information for site is available.

Status of Bat Species:

Survey results have confirmed that the dwelling at Walnut Tree Cottage supports a roost of soprano pipistrelle bats.

Soprano pipistrelles are a relatively common species locally and nationally and population estimates for the UK are between 1 – 3 million individuals. Soprano pipistrelles are nevertheless listed as a species 'of importance for the purpose of conserving biodiversity' under S.41 of the Natural Environment and Rural Communities Act 2006.

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4.9 Bat Ecology & Legislation

Only two different families of bats occur in the UK, of which the most numerous are the “vesper bats” or *Vespertilionidae*. Only two members of the *Rhinolophidae* or “horseshoe bats” occur in the UK, namely the greater and lesser horseshoe bat. The UK currently supports 17 different resident species of bat from these two family assemblages. One of these, Alcathe’s bat (*Myotis alcathoe*) has only been discovered as resident in 2010. The greater mouse-eared bat (*Myotis myotis*) was previously thought to be extinct as a UK mammal species until a single individual was discovered in 2002 at a known hibernation site in Sussex, this may yet turn out to be resident species but is currently regarded by the Bat Conservation Trust as a vagrant/occasional winter visitor. Another species, the pond bat (*Myotis dasycneme*) is increasingly being identified in the UK and may currently be in the process of colonising the country from continental Europe.

British bats are entirely insectivorous, and consume a variety of invertebrate species of various shapes and sizes from the smallest gnats and midges to cockchafers, ground beetles and spiders. Bats are increasingly regarded as being species of conservation concern owing to a decline in both numbers and range. The reasons for these declines are thought to relate primarily to changing agricultural practices (in particular intensification of agriculture and increased use of pesticides) and direct loss of foraging habitats and roosts from human development such as infrastructure projects and conversion of agricultural buildings (see e.g. JNCC, 2004; www.bats.org.uk). All UK bats utilise echolocation to navigate within their environment and hunt for food. It is increasingly being discovered that echolocation calls can also have an important ‘social communication’ function between bats.

Bats are strictly nocturnal unless disturbed, diseased or starved of food due to adverse weather conditions. Consequently bats require a place of shelter and protection (commonly termed a roost) from predators during the daytime. Bat roosts can be found in a variety of both natural and anthropogenic situations including buildings (residential, agricultural, industrial, modern and ancient), mature trees, bridges, tunnels, caves and mines. Purpose built bat boxes are now commercially available and bats will use these, as well as taking advantage of unoccupied bird boxes if available.

Bats are mobile throughout the year and may use different types of roost according to the particular needs of their lifecycle. Different roost types include maternity roosts, hibernation roosts, satellite roosts, day roosts, night roosts, transitional roosts, feeding perches and mating roosts. The most significant roosts in terms of bat numbers and conservation significance are ‘maternity roosts’ and ‘hibernation roosts’. Pregnant female bats will aggregate in maternity roosts to give birth and rear their single offspring (twins occur rarely). These types of roost are normally associated with warm, protected sites. During colder months of the year, bats go into hibernation and require sites with stable temperatures high humidity levels. Bats do not always use roosts in a predictable fashion and tree-dwelling species are notoriously nomadic and will move between a variety of different tree roost sites. By contrast maternity roosts tend to be the most loyally occupied from year to year, although again this differs between the different bat species.

Council Directive 92/43/EEC ("The Habitats Directive") is transposed into UK law through the Conservation of Habitats and Species Regulations 2017. Bats are a European Protected Species (EPS), and are listed in Annex IV of the Habitats Directive. This affords both the bats and their roosts with strict protection. Some bat species have a higher conservation concern in Europe. The habitats supporting these species can be designated as Special Areas of Conservation (SACs) and the bat species concerned are listed under Annex II of the Habitats Directive. Bats listed on Annex II include the greater and lesser horseshoe bats, the Bechstein's bat and barbastelle. Actions and activities that are prohibited by this legislation are:

- deliberate capture, injury or killing of a bat;
- deliberate disturbance of a bat and in particular disturbance which is likely to; impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate;
 - or to affect significantly the local distribution or abundance of the species to which they belong.
- damage or destruction of a breeding site or resting place;
- possessing, controlling transporting, selling or exchanging, or offering for sale or exchange, any bat or any part of a bat or anything derived from one.

Substantial penalties including fines and custodial sentences are now in place for offenders under the Conservation of Habitats and Species Regulations 2017.

The primary legislative Act covering wildlife in the UK is the Wildlife and Countryside Act 1981 (WCA), which affords protection to all bat species. The WCA has seen numerous amendments since it was brought into force, of which the most recent and arguably significant have been the Countryside and Rights of Way (CROW) Act 2000, the Natural Environment and Rural Communities (NERC) Act 2006 and the Conservation of Habitats and Species Regulations 2017 (described above). The intentional or reckless damage of roosts or disturbance of bats is specifically prohibited under the WCA as amended. The offence of 'reckless' disturbance and damage is not contained within the Conservation Regulations and has thus been retained within WCA.

Because bats are known to use many roost sites on a regular basis year on year, legal precedent indicates that these roosts should be regarded protected regardless of whether bats are present at the time they are inspected. Legislative changes and amendments have now completely removed the defence of harmful actions being "the incidental result of an otherwise lawful operation" for EPS, which was previously afforded under the Wildlife and Countryside Act 1981 (as amended).

A number of British bat are described as being of 'of principal importance for the purpose of conserving biological diversity' under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC). The NERC Act places a specific 'biodiversity duty' upon all national and local government departments to ensure the conservation of Biodiversity.

The National Planning Policy Framework (NPPF) sets out the government's planning policies for England and how they should be applied to achieve the over-arching goal of 'sustainable development'.

5. QUALIFICATIONS & EXPERIENCE

Focus Environmental Consultants® has the expertise to provide sure-fire environmental solutions to a wide range of projects. The company ethos forges the highest standards of professional scientific practice with a best value approach for our clients. Our core area of expertise is in the production of specialist environmental reports and advice to support planning applications. Our comprehensive services include Preliminary Ecological Appraisals (PEA), Ecological Impact Assessment (EclA), Habitat Regulations Assessment (HRA) and fulfilling protected species surveys, licensing and mitigation requirements. Focus Environmental Consultants is a CIEEM Registered Practice, with all ecological staff being members of this professional body. Our flexible approach, range of skills and broad project experience from major infrastructure contracts to small private developments allows us to adapt to your individual requirements. As well as offering a full suite of ecological services, Focus Environmental Consultants can provide expert arboricultural advice and reports and is building an enviable reputation for innovative habitat creation and management solutions. Focus Environmental Consultants is situated in Worcestershire, providing a convenient and central UK location.

Natalie Walsh BSc (Hons) MCIEEM

Natalie is an Associate Ecologist and has over seven years' professional experience in the field of ecology. She holds a BSc (Hons) degree in Wildlife Conservation from the University of Plymouth. Natalie is experienced in undertaking Preliminary Ecological Appraisals, Ecological Impact Assessments (EclA), Biodiversity Impact Assessments (BIA) and Habitat Regulations Assessments (HRA) as well as surveying for European Protected Species including great crested newts, bats and hazel dormice. Natalie is also a competent surveyor of badgers, reptiles, barn owls, water voles and otters. Natalie holds Natural England and Natural Resources Wales survey licences for great crested newts and bats (Class 2) and is a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Sub-Consultants

Focus Environmental Consultants occasionally employs sub-consultants to assist with survey work during the busy summer period. All of our sub-consultants are experienced ecologists, many of which are also licensed. For more details, please contact Focus Environmental Consultants on 01905 780 700.