ATW ECOLOGY

129 Hinton Road, Hereford, HR2 6BN

for Dean & Emma Wyatt

BAT SURVEY REPORT

September 2023

5367 V2

ATW Ecology Ltd.

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Report control

Site address	129 Hinton Road, Hereford, HR2 6BN
Survey date	01 June 2023, 10 July 2023, 24 July 2023, and 07 August 2023
Surveyor	Andrew Tillson-Willis MRSB MCIEEM MIFM Mem.RES, Dr Giles King-Salter, Jacob Bellew

Version	Date	Ecologist	Action
1.0	03 June 2023	Andrew Tillson-Willis	Document created
1.0	18 June 2023	Andrew Tillson-Willis	Document completed & issued
2.0	19 August 2023	Andrew Tillson-Willis	Update following survey
2.0	11 September 2023	Andrew Tillson-Willis	Document completed & issued

Signed Disclosure

The information/ data/ evidence/ advice/ opinion which we have prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology & Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Andrew Tillson-Willis MRSB MCIEEM MIFM Mem.RES
Director & Principal Consultant
ATW Ecology, Malvern Hills Science Park, Geraldine Road, Malvern, Worcestershire, WR14 3SZ

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IMPORTANT

Please note, due to the dynamic nature of the natural environment, our reports can only provide a snap-shot of what was present at the time of survey and as such often have a limited period of validity. Many statutory authorities regard one year as the maximum time that should elapse before a report will need to be updated. Where a protected species licence is required, a walk-over of the site should be conducted within three months of an application being submitted to check that the habitats have not changed significantly since the survey was conducted. Any information relating to legal matters in this report is provided in good faith but does not purport in any way to give any advice on or interpretation of the law whatsoever. Professional legal advice should always be sought. Any designs, specifications, advice, suggestions, or comments written or verbal relating to construction or supervision of building-related work of any kind are provided for consideration only and under no circumstances are to be interpreted as provision of design, management or supervision *sensu* the Construction (Design and Management) Regulations 2007.

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Methods & Objectives

Methods

A thorough inspection was undertaken of 129 Hinton Road, Hereford, HR2 6BN on 01 June 2023 for any bat field signs or evidence of, or potential for bat roosting. The inspection was conducted by Andrew Tillson-Willis MRSB MCIEEM MIFM Mem.RES, a suitably experienced and licensed (Natural England Level 2 Bat Class Licence registration number 2020-48784-CLS-CLS) ecologist.

An inspection was made of all interiors and exterior using 8x42 binoculars, LEDLenser P7 torch, CentBest Red LED torch, telescopic mirror, AlpKit Gamma 111 headtorch, Ridgid CA-350x endoscopic inspection camera, telescopic ladder, and Panasonic Lumix camera for any bat field signs or evidence of, or potential for, bat roosting such as faeces, feeding remains, oil staining, scratch marks, access points, loose claddings, cavities, and hollows, etc.

Bat droppings retained from the preliminary appraisal were sent to EcoType Genetics Ltd for DNA analysis.

The building was subject to dusk emergence surveys on 10 July 2023, 24 July 2023, and 07 August 2023; these dates fall within the optimal survey period for surveys to locate maternity roosts. Each survey was conducted by one licensed surveyor Andrew Tillson-Willis (Natural England CL18 Level 2 Bat Class Licence registration number 2020-48784-CLS-CLS), and one or two appropriately experienced assistants Dr Giles King-Salter, and Jacob Bellew. Each surveyor was equipped with one full spectrum bat detector (Echo Meter Touch 2 Pro or Anabat Scout).

In addition to surveyors IR cameras were deployed to record the full survey to ensure clear footage capture covering possible emergence points. Two Sannce DE41N CCTV systems with Sannce C51ER cameras were deployed to record 1080p high-definition infrared footage at 30fps, on each occasion four cameras were deployed each with additional JC 15-LED 90° wide angle high-powered 850nm illuminators and Nightfox XB5 850nm illuminators. Software of cameras are forced into permanent IR mode and daylight sensors on illuminators are covered to ensure continual IR filming with no loss of coverage. Cameras recorded for the whole duration of the survey and footage was reviewed at 1:1 speed or below to confirm surveyors' observations and identify any emerging bats not witnessed by surveyors.

Dusk emergence surveys recorded all bats seen or heard 15 minutes before sunset to 1.5 – 2 hours after sunset. The species of bat, type of activity, direction of flight and time of observation were noted. The surveyors were positioned on site to gather the most accurate data on bat roosts and the use of the site by bats. Weather conditions for each dusk survey were optimal.

Due to the 100% coverage achieved during dusk surveys, and improved data collection achieved through the consistent use of night vision aids, on this occasion a dawn survey was not considered to offer any advantage. In addition, a 2017 literature review conducted by Henry Andrews and Louis Pearson of Andrews Ecology found average return times for common pipistrelle to be 2 hours 57.8 minutes before sunrise, and average return times for soprano pipistrelle to be 4 hours and 28 minutes before sunrise, indicating that dawn surveys conducted following current guidelines are likely to miss a much larger proportion of bats compared to dusk emergence surveys.

Methods followed those outlined in the Bat Conservation Trust's 2016 survey guidelines (Collins 2016) and the latest BCT interim guidance note on the use of night vision aids for bat emergence surveys and further comment on dawn surveys:

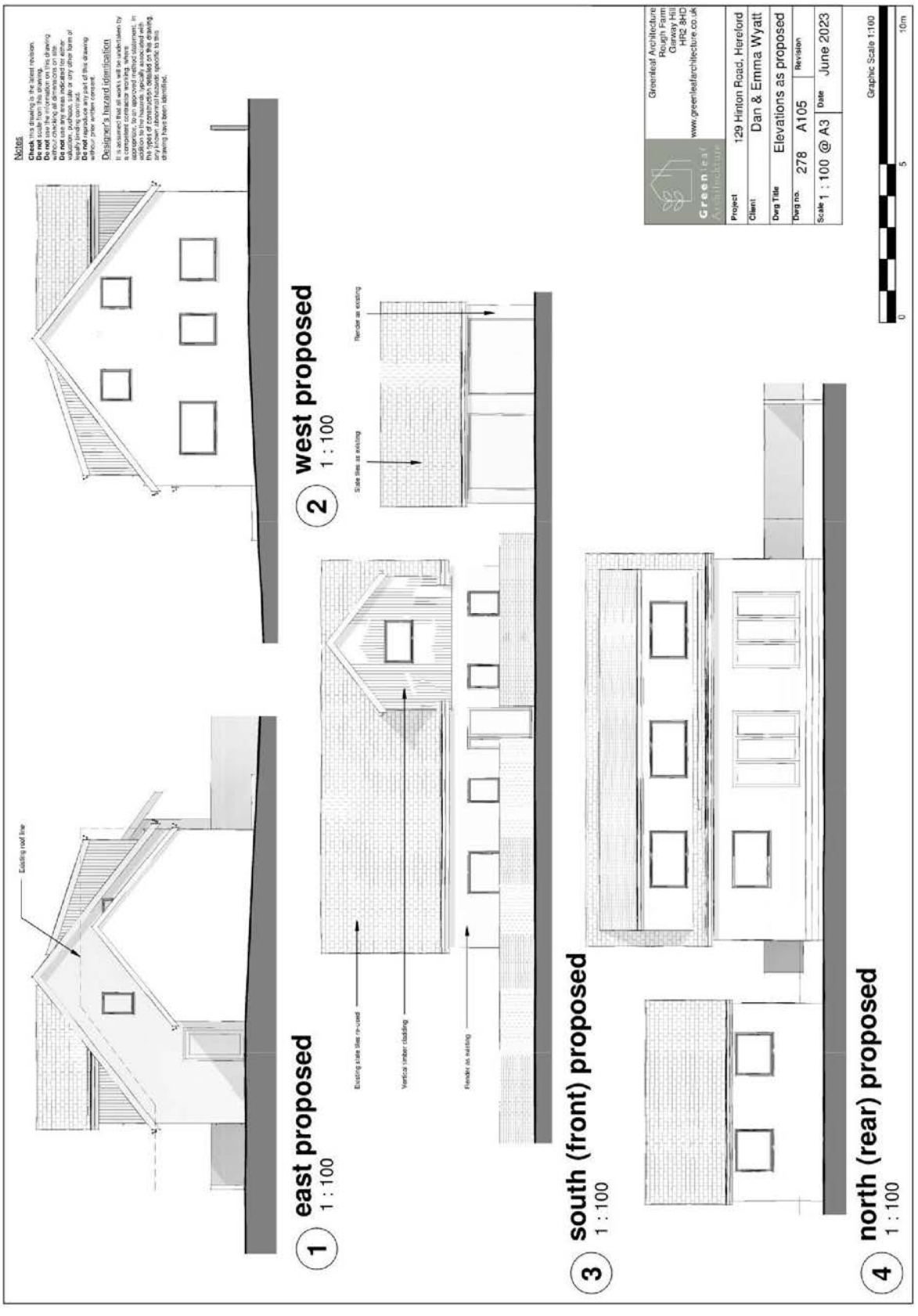
> *"Radio tracking studies show that dawn return times are significantly variable both between and within species (Andrews & Pearson, 2022 provides a detailed review of the literature). The average return times quoted in the study are more than two hours before sunrise (the timing advised for dawn surveys in the current guidelines) for many species (Andrews & Pearson, 2022). Froidevaux et al. (2020) found that bat detection probability was not affected by whether a survey was carried out at dusk or dawn.*
>
> *The research outlined above creates questions about the efficacy of dawn surveys for determining the presence or likely absence of bats and the value of these over dusk surveys for this specific purpose.*
>
> *The use of NVAs has the potential to improve the quality of dusk surveys, providing clarity on exact emergence points and bat counts that might not otherwise be available because of the limitations of the human eye. Whilst dawn surveys can reward surveyors with displays of dawn swarming behaviour, there is a concern that bats that have returned early will be missed."*

Objectives

The objectives of this survey were:

- to provide specialist advice on the possible presence of protected species (bats) in relation to planning requirements;
- to inspect all built structures proposed for development for evidence of roosting bats;
- to report the survey findings, make any appropriate recommendations and point out actions that may be required to ensure compliance with wildlife law and recognised best practice;

Project details



Survey findings

Known history of bats

None known.

Habitat description

Located at OS grid reference SO 51358 38814, the building subject to planning is a detached residential bungalow located in the Portfields area of Hereford, approximately 1.6km south of the city centre.

Immediate surrounding land use is suburban residential the River Wye corridor, amenity green space, and intensive agriculture.

A search using DEFRA's Magic Map online identified no other statutory designated sites within a 2km search radius.

- River Wye SSSI & SAC
- Tupsley Quarry LNR

A search for granted EPS licenses revealed one licence granted for works affecting bat roosts within a 2km radius:

- 2019 licence for destruction of a non-breeding roost of Daubenton's bats approximately 2km north-north-west.

Limitations

A third-party data search was not commissioned as part of this appraisal.

These limitations are not considered to have altered key recommendations detailed within this report.

Results – Diurnal survey 01 June 2023

The building subject to inspection is a detached residential bungalow, constructed of concrete block fully rendered creating a sealed surface.

Windows and doors are PVCu all in good condition and tight to apertures.

Facia, bargeboards and soffits are PVCu, facia at the southern façade are not finished above flat roofed southern outcrops providing access to the box structure. Facia boards of southern outcrops are set-off from the structure by approximately 2 inches forming crevices 2-3 inch deep.

PVCu cladding to gables and northern rear extension is in good condition and tightly fitted.

The building features a gable and valley roof that has been recently re-roofed with slate covering, slates are in correspondingly good condition and well seated. Ridge tiles are also slate in good condition and well seated but not pointed on the ends providing access beneath ridge tiles suitable

for crevice dwelling bats. Un-pointed verges provide further access for bats to enter beneath the slates on gable ends.

Bay window to the rear features a half-hipped roof with slate covering and folded leadwork to the hips.

Flat roofed southern outcrops feature felted roofs.

Internally the building features a single large roof void. Slates are fully lined with a modern breathable roofing membrane. Timbers are modern machine-cut rough-sawn in a fan truss arrangement with additional raised tie-beams. Floor of the void is insulated with glass fibre roll and has a low amount of rudimentary boarding.

All accessible interior and exterior surfaces were inspected for evidence of bat activity including bats live or dead, faeces, oil and urine staining, scratch marks, feeding remains etc. a low number of bat droppings were identified hung in cobwebs at the northern and eastern ends of the void.

A detached garage sits to the east, of pre-fabricated construction with timber framed doors and corrugated cement-fibre roof supported on lightweight steel truss the structure offers very limited suitable roosting opportunities.

Results –Dusk emergence survey 10 July 2023

No bats were observed emerging from, or entering to roost within, the building.

Low numbers of soprano pipistrelle were actively foraging in gardens north of the building throughout the survey and incidental passes by common pipistrelle and noctule were also recorded.

Detailed observations

Time	Surveyor	Observation
21:14	Survey start. Air temperature was measured at 16.2˚C, relative humidity 80%, cloud cover almost 100%, 6.15kph NW wind, light precipitation for first 20 minutes.	
21:29	Sunset	
21:44	2	Soprano pipistrelle foraging in garden, from riverside
21:54	1	Noctule heard not seen
21:56	2	Soprano pipistrelle foraging in garden
22:03	2	Soprano pipistrelle foraging in garden, intermittent for three minutes
22:05	2	Soprano pipistrelle foraging in garden, continual for twenty minutes
22:08	1	Soprano pipistrelle pass south to north over house
22:10	1	Soprano pipistrelle pass south to north, east of house
22:13	2	Common pipistrelle pass north of house
22:19	1	Non-echolocating bat pass east of house, south to north
22:28	1	Noctule heard not seen
22:34	1	Soprano pipistrelle heard not seen
22:59	Survey finish.	

Results –Dusk emergence survey 24 July 2023

No bats were observed emerging from, or entering to roost within, the building.

Low numbers of soprano pipistrelle were actively foraging and commuting in gardens north of the building throughout the survey and incidental passes by common pipistrelle and noctule were also recorded.

Detailed observations

Time	Surveyor	Observation
20:58	Survey start. Air temperature was measured at 17.2˚C, relative humidity 63%, cloud cover approx. 75%, 4.24kph NW wind, no precipitation, insects observed in flight.	
21:13	Sunset	
21:36	2	Soprano pipistrelle commuting along boundary hedgerow north of house
21:38	2	Soprano pipistrelle commuting along boundary hedgerow
21:41	2	Soprano pipistrelle commuting along boundary hedgerow
21:46	2	Soprano pipistrelle commuting along boundary hedgerow
21:48	2	Soprano pipistrelle commuting along boundary hedgerow
21:49	1 & 2	Noctule heard not seen
21:50	1	Soprano pipistrelle heard not seen, brief and feint
	2	Soprano pipistrelle pass north of house
21:52	2	Soprano pipistrelle pass north of house
21:55	2	Soprano pipistrelle pass north of house
21:59	2	Soprano pipistrelle pass north of house
22:00	2	Soprano pipistrelle pass north of house
22:02	1	Soprano pipistrelle pass around neighbouring house to north-west
22:03	2	Soprano pipistrelle foraging in garden
22:10	1	Soprano pipistrelle heard not seen, feint
	2	Soprano pipistrelle foraging in garden
22:24	2	Soprano pipistrelle foraging in garden
22:27	2	Soprano pipistrelle foraging in garden
22:32	2	Common pipistrelle pass north of house
22:39	2	Soprano pipistrelle foraging in garden
22:43	Survey finish.	

Results –Dusk emergence survey 07 August 2023

No bats were observed emerging from, or entering to roost within, the building.

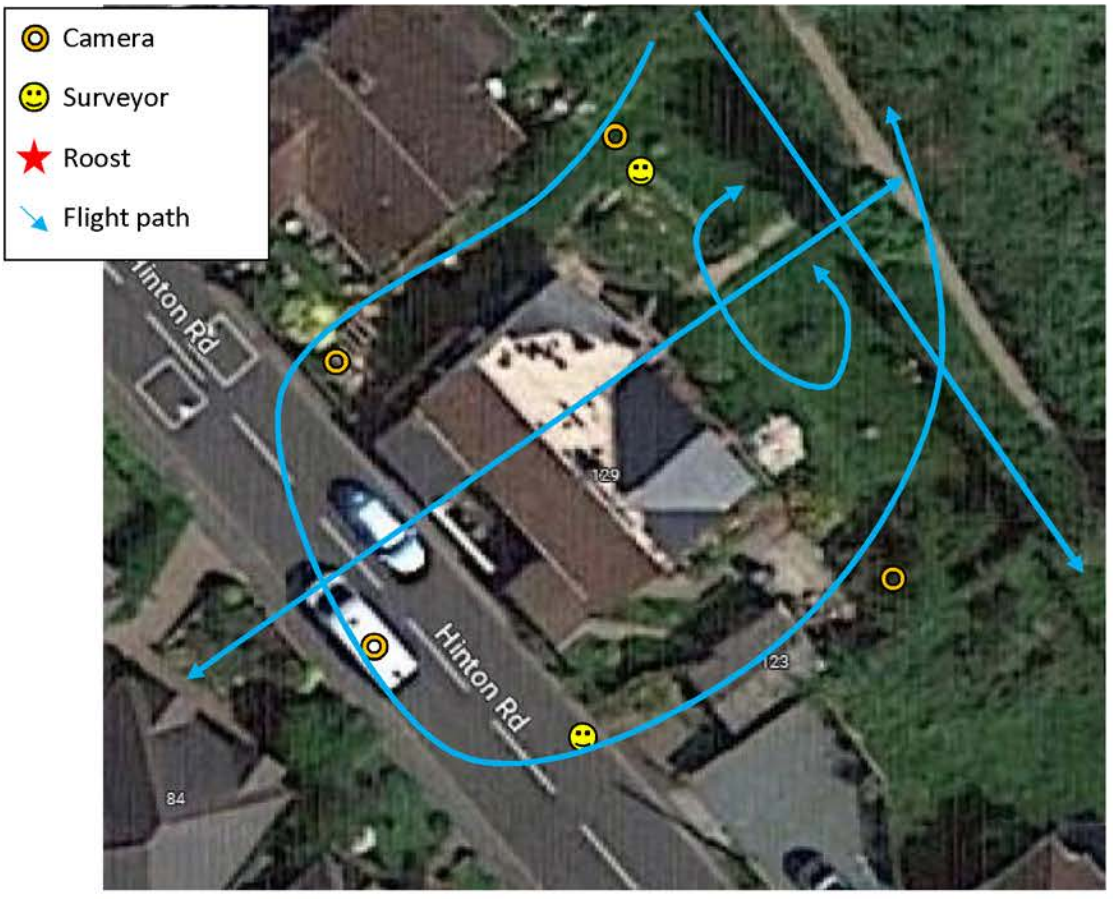
Low numbers of soprano pipistrelle were actively foraging in gardens north of the building throughout the survey and incidental passes by common pipistrelle and noctule were also recorded.

Detailed observations

Time	Surveyor	Observation
20:36	Survey start. Air temperature was measured at 16.5˚C, relative humidity 62.5%, cloud cover approx. 20%, 2.5kph NW wind, no precipitation, insects observed in flight.	
20:51	Sunset	
21:01	2	Soprano pipistrelle commuting along boundary hedgerow north of house
21:07	2	Soprano pipistrelle north of house
21:12	2	Soprano pipistrelle north of house

21:14	2	Soprano pipistrelle north of house
21:16	2	Soprano pipistrelle north of house
21:18	2	Soprano pipistrelle north of house
21:24	2	Soprano pipistrelle foraging in garden north of house
21:26	1 & 2	Soprano pipistrelle foraging in garden
21:31	1	Soprano pipistrelle foraging in garden
21:35	1 & 2	Soprano pipistrelle foraging in garden
21:38	1	Soprano pipistrelle foraging in garden
21:40	2	Common pipistrelle pass north of house
21:41	1 & 2	Soprano pipistrelle pass over house from north to south
21:42	1	Soprano pipistrelle pass around south side of house
21:45	2	Soprano pipistrelle north of house
21:47	2	Soprano pipistrelle north of house
21:52	2	Soprano pipistrelle north of house
21:55	2	Common pipistrelle pass north of house
21:56	2	Soprano pipistrelle north of house
21:58	2	Soprano pipistrelle north of house
22:07	1	Soprano pipistrelle heard not seen
22:11	2	Soprano pipistrelle north of house
22:16	2	Soprano pipistrelle north of house
22:18	2	Soprano pipistrelle north of house
22:21	Survey finish. Air temperature was measured at 16˚C, relative humidity 64.3%, 1.5kph N wind, no precipitation.	

Activity plan



Legislation & protection

Bats and their habitats are protected under The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulation 2010. Formal policies and recognised best practice include the UK Post-2010 Biodiversity Framework (former UK Biodiversity Action Plan), PAS2010 Planning to Halt the Loss of Biodiversity, Circular 06/2005 Biodiversity and Geological Conservation, BS 42020: 2013 and BS 8583: 2015 on Biodiversity, the National Planning Policy Framework.

All bat species are designated and protected as European protected species (EPS). EPS are protected under the Conservation of Habitats and Species Regulations 2017.

It is an offence to:

- deliberately kill, injure, disturb or capture them
- damage or destroy their breeding sites and resting places (even when bats are not present)
- possess, control or transport them (alive or dead)

It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly:

- disturb bats while they occupy a structure or place used for shelter or protection
- obstruct access to a place of shelter or protection

Several species of bats are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). You must have regard for the conservation of Section 41 species as part of your planning decision.

Bats may use a variety of structures for roosting including but not limited to buildings (including modern and ancient structures), caves, mines, tree hollows, and purpose-built bat boxes. Bats change roosts seasonally with different roosts serving different purposes (breeding, hibernating, maternity) and some roosts such as day roosts and transitional roosts may only be used briefly and infrequently, however unoccupied roosts are still protected by law. Due to multiple factors including loss of roost sites, loss or degradation of foraging habitat, predation by domestic pets, and persecution by humans, UK bat populations have suffered significant decline leading to them being considered of conservation concern.

National Planning Policy

In accordance with the National Planning Policy Framework 2012, the planning system should contribute to and enhance the natural environment by minimising impacts on biodiversity and providing biodiversity net gain where possible, promote the preservation, restoration and re-creation of priority habitats, and the protection and recovery of priority species populations and ecological networks.

Local planning authorities should aim to conserve and enhance biodiversity by applying the following principles when determining planning applications:

- Planning permission should be refused if harm resulting from a development cannot be avoided, adequately mitigated, or compensated.

- Opportunities to incorporate biodiversity in and around developments should be encouraged.
- Planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes, and nature conservation.

Additional advice set out in the National Planning Practice Guidance (2014) section 'Natural Environment' emphasizes the need for biodiversity to be taken into account when preparing a planning application, as detailed above, and sets out how biodiversity can be protected and enhanced by: seeking to include habitat restoration; re-creation and expansion; improved links between existing sites; buffering of existing important sites; new biodiversity features within a development; and securing management for long term enhancement.

Evaluation, impact assessment, and recommendations

- A preliminary bat roost appraisal was conducted on 01 June 2023.
    - Potential roosting features were identified:
        - Unfinished facia / soffits on southern aspect above flat-roofed outcrops.
        - Un-pointed verges and ridge tiles on eastern, northern, and western gables.
        - Crevices behind facia boards of southern outcrops.
    - Low numbers of bat droppings were found hung in cobwebs within northern and eastern ends of the interior roof void.
        - Bat droppings were sent to EcoType Genetics Ltd for DNA analysis which returned an inconclusive result.
    - The building had been subject to full re-roofing prior to assessment including the use of modern breathable roofing membrane.
- In line with currently accepted guidelines the building was subject to roost characterisation surveys.
    - Dusk emergence surveys were conducted on 10 July 2023, 24 July 2023, and 07 August 2023.
        - No bats were observed emerging from, or entering to roost within, the building.
    - Due to the improved data collection achieved through the consistent use of night vision aids, on this occasion a dawn survey was not considered to offer any advantage.
- No active bat roosts have been identified.
- It is considered likely that roofing works conducted prior to survey, and prior to purchase by our client, have resulted in the exclusion of bats from the roost(s).
- As no active roosting has been observed works may proceed on a precautionary basis without the need for a European Protected Species Mitigation Licence.
    - Prior to works beginning a tool-box talk will be delivered to contractors about bats and what to do if one is unexpectedly encountered during works.
    - A suitably licenced ecologist shall undertake a pre-works inspection of the interior and supervise sensitive destructive works.
    - Roofing materials shall be removed by hand and checked for the presence of bats before being discarded.
    - Works shall not be subject to timing restrictions, however it is recommended that the initial roof strip is conducted between mid-October and mid-April.
    - In the unlikely event that bats are discovered during works all work shall halt immediately while the project ecologist is consulted.
- As compensation for the lost roost and as general enhancement for local bat populations two bat access slates shall be provided on the north-eastern aspect of the property.
    - Bat access slates have been chosen as suitable for soprano pipistrelle, the most active species recorded during the dusk emergence surveys.

- The north-eastern aspect has been chosen as the most suitable on this occasion as facing ideal foraging habitats of the River Wye, the south-western façade is illuminated by street lighting making it unsuitable.
- Areas provided for bat roosting shall use traditional bituminous felt (Formerly type 1F), no breathable roofing membranes shall be permitted where access is available for bats.
- Timber battens shall be used to restrict roosting to areas of bituminous felt.

Conclusion

129 Hinton Road was subject to a preliminary bat roost appraisal on 01 June 2023, a low number of bat droppings were identified within the interior roof void. Subsequent DNA analysis of these droppings was inconclusive.

The building was subject to a suite of roost characterisation surveys during July and August 2023 during which no bat roosting activity was observed.

No active bat roosts have been identified. In such circumstances Natural England advise that a precautionary Method of Working / Reasonable Avoidance Measures should be carried out with suitable mitigation or compensation provided where necessary.

- Prior to works beginning a tool-box talk will be delivered to contractors about bats and what to do if one is unexpectedly encountered during works.
- A suitably licenced ecologist shall undertake a pre-works inspection of the interior and supervise sensitive destructive works.
- Roofing materials shall be removed by hand and checked for the presence of bats before being discarded.
- Works shall not be subject to timing restrictions, however it is recommended that the initial roof strip is conducted between mid-October and mid-April.
- In the unlikely event that bats are discovered during works in the absence of the supervising ecologist all work shall halt while the ecologist is consulted.

As compensation / enhancement two bat access slates shall be installed on the north-eastern aspect, access slates shall allow pipistrelles to roost between slates and sarking membrane, traditional bitumen coated felt (Type 1F) shall be used beneath access slates with battens arranged to restrict roosting to these areas.

Photographs

All photographs taken 01 June 2023.

Plate 1. Southern aspect as viewed from the south-east.

Plate 2. Southern aspect as viewed from the south-west.

Plate 3. Crevice behind facia board on southern outcrop extension.

Plate 4. Unfinished soffit boards on south-eastern corner.

Plate 5. Gap between facia and flat roof on southern aspect, soffits are unfinished in these locations.

Plate 6. Western gable.

Plate 7. Un-pointed gable verges provide access to beneath slates.

Plate 8. Un-pointed ridge tiles on gable ends provide access to beneath ridge tiles.

Plate 9. Northern rear aspect.

Plate 10. General view of interior roof void, note the use of breathable roofing membrane.

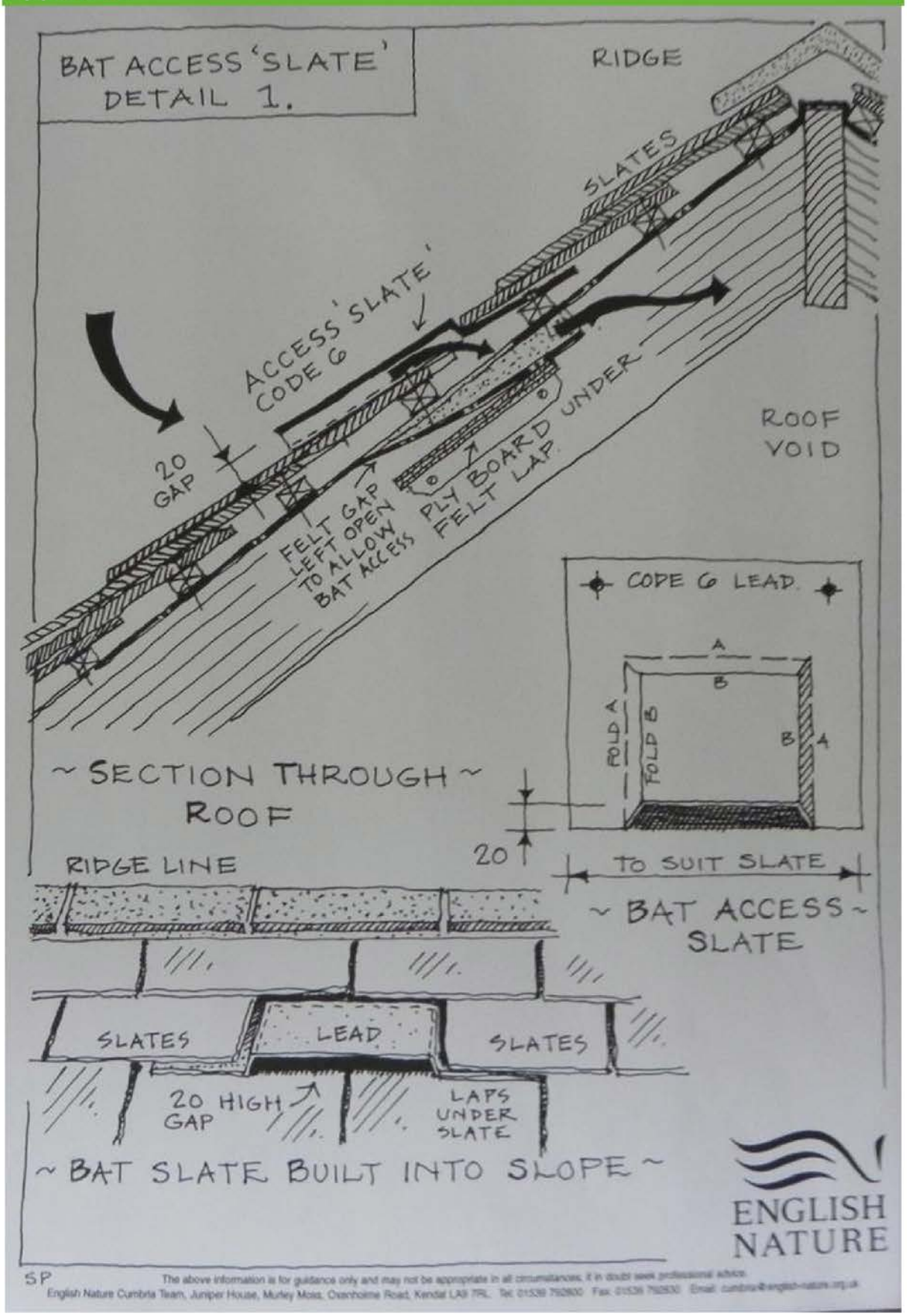
Plate 11. Remnants of bituminous felt attached to the underside of rafters.

Plate 12. General view of interior roof void.

Plate 13. Bat dropping hung in cobwebs at northern end of the void.

Plate 14. Bat dropping hung in cobwebs at eastern end of the void.

Appendix.



References

- BS 42020:2013 Biodiversity — Code of practice for planning and development. The British Standards Institution.
- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.
- JNCC (1994). The Bat Workers' Manual. Eds. A.J. Mitchell-Jones & A.P. McLeish. JNCC, Peterborough, UK.
- English Nature (2004). Bat Mitigation Guidelines, January 2004. English Nature, Peterborough, UK.
- Russ, J. (2012). British Bat Calls, A Guide to Species Identification. Pelagic Publishing, London.
- Eurobats publication series No.8 Guidelines for consideration of bats in lighting projects.
- Institute of Lighting Professionals and Bat Conservation Trust (2018). Guidance Note 08/18: Bats and artificial lighting in the UK, Bats and the Built Environment series. ILP, Warwickshire.
- CIEEM (2021). Bat Mitigation Guidelines: A guide to impact assessment, mitigation and compensation for developments affecting bats. Beta version. Chartered Institute of Ecology and Environmental Management.
- Bats: surveys and mitigation for development projects - GOV.UK (www.gov.uk)
- Bat Tree Habitat Key (2018). Bat Roosts in Trees. Pelagic Publishing, London.
- Middleton, N. (2020). Is That a Bat? A Guide to Non-Bat Sounds Encountered During Bat Surveys. Pelagic Publishing, London.
- Runkel, V. *et.al.* (2021). The Handbook of Acoustic Bat Detection. Pelagic Publishing.
- Chartered Institute of Ecology and Environmental Management (June 2021). Bat Mitigation Guidelines, Beta version 1.0: June 2021. CIEEM.
- Russ, J. (2021) Bat Calls of Britain and Europe. Pelagic Publishing, London.
- Bat Rock Habitat Key (2018). Bat Roosts in Rock. Pelagic Publishing, London.
- Bat Conservation Trust (May 2022). Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys. The Bat Conservation Trust, London.
- Andrews & Pearson (2022). Review of empirical data in respect of emergence and return times reported for the UK's native bat species Version 6.
- Fawcett Williams (2021). Thermal Imaging Bat Survey Guidelines. The Bat Conservation Trust, London.
- Davidson-Watts (2021). Can you see what I see? – The importance of night vision aids to conduct effective emergence surveys of tree roosting bats (presentation to UK Bat Steering Group 2021).
- Froidevaux, J. S. P., Boughey, K.L., Hawkins, C.L., Jones, G. & Collins, J. (2020) Evaluating survey methods for bat roost detection in ecological impact assessment. Animal Conservation 23 597–606.
- Crompton, R. (2021). Better bat surveys – using infrared video for bats (presentation to National Bat Conference 2021).
- https://magic.defra.gov.uk/magicmap.aspx
- https://osmaps.ordnancesurvey.co.uk/
- https://gridreferencefinder.com

Quality Assurance

ATW Ecology Ltd. Registered in England, number 1497736. Registered office: 173 Brookfarm Drive, Malvern, Worcestershire, WR14 3SL.

Originally founded in 2003 as a zoological consultancy dedicated to improving the captive husbandry and propagation of amphibia in zoological, educational, and private collections and established as the UK's leading independent batrachoculture research facility with an international reputation for advancements in herpetology. In 2013 following customer demand we began offering herpetological fieldwork services including freelance ecological surveying and supervision, these services have expanded greatly over recent years working with a network of freelance partners to cover all aspects of ecological consultancy. Other subsidiary companies within the group specialising in entomology, ichthyology, animal nutrition, and media, provide a unique and diverse base of in-house expertise.

Contracts undertaken by ATW Ecology Ltd cover a wide spectrum of projects at local and national levels in the construction, agricultural, leisure, and utilities sectors. All our scientific staff and freelance partners belong to appropriate professional institutes by whose codes of practice they abide. Due consideration of the British Standards on Biodiversity is included in relevant work and applied where appropriate.

***Andrew Tillson-Willis** MRSB MCIEEM MIFM Mem.RES — Director & principal consultant*

Andrew is an experienced ecologist, herpetologist, and entomologist with nineteen years' experience as a zoological consultant and eight years as a freelance ecological surveyor before joining full time ecological consultancy four years ago. He holds Natural England survey licences for great crested newt (personal licence), bats (level 2 class licence), and white-clawed crayfish (class licence), a Natural Resources Wales survey licence for great crested newt, is registered under the Construction Skills Certification Scheme (CSCS), is a registered member of the Royal Society of Biology, and Institute of Fisheries Management, a full member of the Chartered Institute of Ecology and Environmental Management, and Royal Entomological Society. In his spare time Andrew is co-ordinator and recorder for the Worcestershire Reptile & Amphibian Group, long-standing committee member of the Herefordshire Amphibian & Reptile Team, committee member of Worcestershire Mammal Group, steering member of the Malvern Hills Crayfish Group, and an active member of the Worcestershire Bat Group, and Herefordshire Mammal & Bat Group.

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Please note that this report is a baseline ecological site audit of factors and features that may be significant for regulatory compliance and biodiversity policies relating to change of use or other disturbance. Such reports may not, on their own, contain sufficient information for a planning application and may require further more detailed study to assure compliance.

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