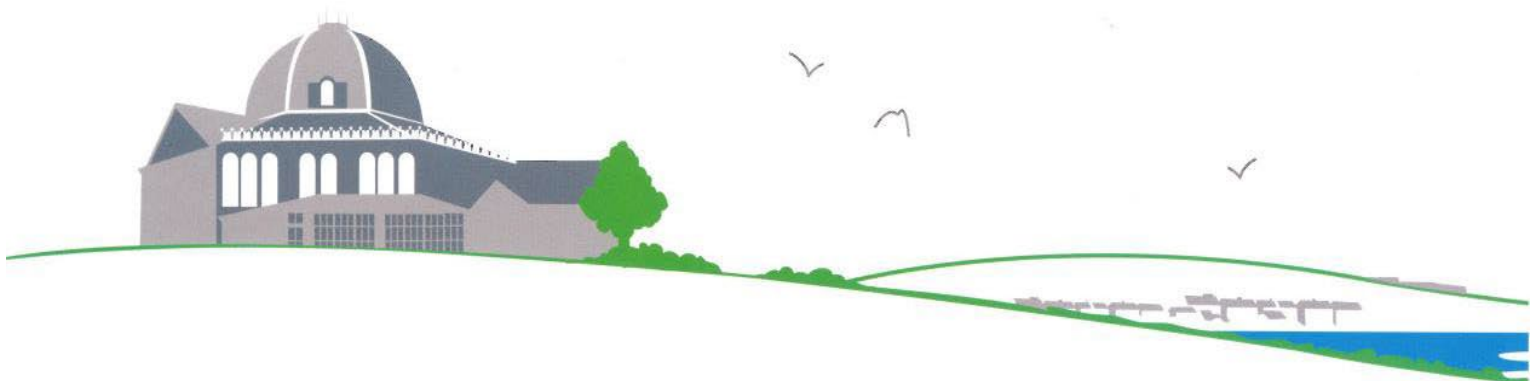




WREXHAM COUNTY BOROUGH COUNCIL
MAES Y CAPEL
BAT ACTIVITY SURVEY REPORT





WREXHAM COUNTY BOROUGH COUNCIL

MAES Y CAPEL

BAT ACTIVITY SURVEY REPORT

Penny Anderson Associates Limited
'Park Lea'
60 Park Road
Buxton
Derbyshire
SK17 6SN

Project Manager and Author
Rob Lamb BSc (Hons) MSc ACIEEM (Senior Ecologist)

May 2023

This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Signed: Sarah Ross

CONTENTS

	Page
1. INTRODUCTION	1
Legislative Context	1
Bat Biology	2
Protected Species	2
2. METHODS	3
Bat Activity Survey.....	3
Limitations.....	3
3. RESULTS	4
Bat Activity Survey.....	4
Activity on Site.....	4
4. RECOMMENDATIONS.....	5
Survey Summary	5
Bats	5
Nesting Starling.....	5
Recommendations.....	5
Bats	5
Nesting Starling.....	5
Survey Validity	5
5. REFERENCES	6
6. ABBREVIATIONS	7

TABLE

1	Dusk Emergence Survey Results, 11 th May 2023	4
---	--	---

APPENDIX

1	Summary of the Legislation Relating to Bats
---	---

1. INTRODUCTION

- 1.1 Penny Anderson Associates Ltd (PAA) was commissioned by Wrexham County Borough Council and Ellis Williams Architects Ltd to carry out an ecological assessment of land at Maes Y Capel, Wrexham. This included an inspection of the building on site for potential to support roosting bats. The results of the building inspection is presented in a separate report (*Extended Phase 1 Habitat Survey and Preliminary Roost Inspection for Bats*, PAA 2023).
- 1.2 Following the results of the building inspection, which found the main structure to have Low potential to support roosting bats, a further bat activity survey was recommended. This report details the methods and results of this further activity survey and makes any further recommendations as required.

Legislative Context

- 1.3 A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (amended).
- 1.4 Other international conventions include: the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA), 1981 (as amended) and Countryside and Rights of Way (CROW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).
- 1.5 Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales. The S6 duty requires that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems.
- 1.6 Section 7 goes on to deal with biodiversity lists and duty to take steps to maintain and enhance biodiversity. This section replaces the duty in Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 in Wales. The Welsh Ministers publish, review and revise lists of living organisms and types of habitat in Wales that they consider are of key significance to sustain and improve biodiversity in relation to Wales. These are known as Priority Species and Priority Habitats¹.
- 1.7 Finally, Planning Policy Wales (PPW 2021²) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes³ (TAN), Welsh

¹ www.biodiversitywales.org.uk/environment-wales-act

² https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf

³ <https://gov.wales/technical-advice-note-tan-5-nature-conservation-and-planning>

Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales.

- 1.8 The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation.
- 1.9 The Environment (Wales) Act 2016 also introduces the Sustainable Management of Natural Resources (SMNR) and sets out a framework to achieve this as part of decision-making. The relevant key features of the SMNR approach to which the planning system can contribute are:
- Improving the resilience of ecosystems and ecological networks;
 - Halting and reversing the loss of biodiversity;
 - Maintaining and enhancing green infrastructure based on seeking multiple ecosystem benefits and solutions; and
 - Ensuring resilient locational choices for infrastructure and built development, taking into account water supplies, water quality and reducing, wherever possible, air and noise pollution and environmental risks, such as those posed by flood risk, coastal change, land contamination and instability.

Bat Biology

- 1.10 There are 17 species of native bats known to be resident (i.e. breed) in the British Isles. British bats feed entirely on insects and have developed a complex sonar system, known as echolocation, which enables them to find prey and navigate around their environment at night.
- 1.11 Habitat requirements vary widely, both on an individual and species level, although certain features, such as woodland, parkland, traditional pasture, marshes and areas of freshwater, are often focal points for foraging, as insects are plentiful in these areas (Mitchell-Jones 2004). Bats use linear features such as rivers, hedgerows, roads and woodland edges as landmarks in order to commute from one location to another (Schofield and Mitchell-Jones 2003).
- 1.12 Bats utilise different roosts at different times of the year. Between late October and March, bats hibernate; this requires an unexposed roost with a stable temperature, typically a cave, cellar or tunnel. Around March, the bats emerge and gradually move to their summer roosts, typically within man-made structures or suitable crevices in trees. During the spring and summer period female bats gather together at maternity roosts to give birth and rear their young. Most births occur between late June and mid-July, with the young able to fly within three to five weeks (Altringham 2003; Waters and Warren 2003). By the end of August, most of the young bats are independent and the colony begins to break up (Schofield and Mitchell-Jones 2003). Mating takes place between August and December, either at the winter hibernation site or at autumn breeding sites. The numbers of bats utilising these roosts can vary from single bats to hundreds of bats in a nursery colony or hibernation site (Altringham 2003).
- 1.13 Bats play an important role in many environments around the world, including pollination and insect control. In the UK, bats can tell us a lot about the state of the environment because they are top predators of common nocturnal insects and are extremely sensitive to changes in their surroundings, e.g. climate, landscape, agricultural intensification, development and habitat fragmentation. Populations of British bats have suffered severe declines in the past century, influenced by these factors.

Protected Species

- 1.14 Details of the protected species legislation relevant to this report can be found in Appendix 1.

2. METHODS

- 2.1 The building within the site was previously inspected for bats, as detailed in PAA 2023 report.
- 2.2 The structure was assessed as having Low potential to support roosting bats and, therefore, a further bat activity survey was recommended to establish presence/likely absence of roosting bats.

Bat Activity Survey

- 2.3 The survey was undertaken by Senior Ecologist Rob Lamb (RL) as an Accredited Agent of Dr Sarah Ross' Natural Resources Wales Bat Survey Class 1 Licence (S092150/1), Ecologists Beth Howes (BH) and Joe Walters (JW), and Assistant Ecologists Stephen Griffith (SG) and Alexandra Bull (AB). All members of the survey team have the necessary experience of surveys for protected species, including bats, and are appropriately qualified to carry out this work based on the CIEEM⁴ competencies for survey (CIEEM 2013).
- 2.4 The surveyors were positioned at vantage points in view of potential roost features and recorded any bat activity heard or seen. Each surveyor carried either an Anabat Walkabout, or a combination of Batbox Duet and Anabat SD1 to record echolocation for sonogram analysis.
- 2.5 A night-vision camera (Nightfox Red), in combination with infrared lighting equipment (Nightfox XB5 and XC5) was also used to aid the survey.
- 2.6 Following good practice guidance (Collins 2016), the dusk survey commenced 25 minutes prior to sunset, and continued until 1h 30m after sunset, taking into account the typical emergence times for the species considered likely to be present.
- 2.7 Survey times and weather conditions are detailed in the Results section of this report.
- 2.8 Any bat calls recorded by detectors were analysed using specialist sound analysis software 'Analook W' and 'Anabat Insight' to identify any bat species present.

Limitations

- 2.9 The emergence survey was undertaken within the peak active bat survey season, in suitable weather and temperature conditions. There were no significant constraints to the survey and the results are considered robust.

⁴ Chartered Institute of Ecology and Environmental Management

3. RESULTS

Bat Activity Survey

- 3.1 The dusk emergence survey was undertaken on the evening of 11th May 2023. The findings and conditions of the survey are summarised in Table 1.

Table 1 Dusk Emergence Survey Results, 11th May 2023

Species	First Recorded	Notes
N/A	N/A	No bats were recorded by surveyors, camera or bat recorders. Starling (<i>Sturnus vulgaris</i>) was recorded nesting on the building.
Surveyors and Location: RL and camera (south-west of building), AB (south), JW (south), BH (east), SG (north)		
Start time: 20:22	Sunset: 20:57	End time: 22:27
Conditions: Dry with light wind with 20 to 30% cloud cover throughout survey.		
Temperature: 11.4°C decreasing to 9.4°C. Humidity: 34% increasing to 74%.		

Activity on Site

- 3.2 No bat activity was recorded by any surveyors or recording equipment. It was noted that security and street lighting nearby the structure may limit use of the area by bats.
- 3.3 Starling was incidentally recorded nesting on the north side of the building under loose decorative tiling.
- 3.4 No bats were seen to emerge or interact with the structure during the survey. Based on the survey findings, it is assessed that bat roosts are likely absent.

4. RECOMMENDATIONS

Survey Summary

Bats

- 4.1 The survey did not pick up any bat foraging or commuting activity within the site boundary.
- 4.2 No bats were seen to emerge from or interact with the building during the activity survey.

Nesting Starling

- 4.3 Starling was recorded nesting on the northern side of the structure under decorative tiling. Starling is a red listed species on *Birds of Conservation Concern 5* (Stanbury *et al.* 2021) and *Birds of Conservation Concern Wales* (Johnstone *et al.* 2022).

Recommendations

Bats

- 4.4 Based on the survey findings, it is assessed that bat roosts are likely absent on the building. Therefore, no further recommendations are made in respect of roosting bats at this time.
- 4.5 In the unlikely event that bats are found during future works to the building, works should stop immediately, and advice be sought from a professional bat Ecologist.

Nesting Starling

- 4.6 With nesting starling confirmed present on the building, destructive works to the exterior of the building should be avoided during the bird nesting season (March to August inclusive). If this isn't possible, an Ecologist should confirm no nests are present prior to any destructive works to the external of the building taking place.
- 4.7 The Biodiversity Enhancement Plan has been updated to include provision of two compensatory nest boxes designed for starling to be fixed to the structure once development is completed.

Survey Validity

- 4.8 The findings of the survey should be considered valid for a period of two years from the date of survey (May 2023). If works have not commenced by April 2025 (the start of the 2025 bat survey season), then the need for update survey should be considered. This would ensure the surveys do not become outdated and that the ecological advice given is based on up-to-date information.

5. REFERENCES

- Altringham, J.D., 2003. *British Bats*. New Naturalist Series 93, Harper Collins.
- CIEEM, 2013. *Competencies for Species Survey: Bats*. Chartered Institute of Ecology and Environmental Management.
- Collins, J., (ed.) 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn.)*. The Bat Conservation Trust.
- Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. & Taylor, R.C. (2022). *Birds of Conservation Concern Wales 4*. British Trust for Ornithology.
- Mitchell-Jones, A.J., 2004. *Bat Mitigation Guidelines*. English Nature.
- PAA, 2023. *Extended Phase 1 Habitat Survey and Preliminary Roost Inspection for Bats*. Report produced for Wrexham County Borough Council.
- Schofield, H.W., and Mitchell-Jones, A.J., 2003. *The Bats of Britain and Ireland*. The Vincent Wildlife Trust.
- Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. 2021. Birds of Conservation Concern 5: The Status of All Regularly Occurring Birds in the UK, Channel Islands and Isle of Man. *British Birds*. **114**: 723-747.
- Waters, D. and Warren, R., 2003. *Bats*. The Mammal Society.

6. ABBREVIATIONS

AB	Alexandra Bull
BH	Beth Howes
CIEEM	Chartered Institute of Ecology and Environmental Management
CRoW	Countryside and Rights of Way
EU	European Union
JW	Joe Walters
NERC	Natural Environment and Rural Communities
PAA	Penny Anderson Associates Ltd
PPW	Planning Policy Wales
RL	Rob Lamb
SG	Stephen Griffith
SMNR	Sustainable Management of Natural Resources
SSSI	Site(s) of Special Scientific Interest
TAN	Technical Advice Note(s)
WCA	Wildlife and Countryside Act

APPENDIX 1

Summary of the Legislation Relating to Bats

SUMMARY OF THE LEGISLATION RELATING TO BATS (WALES)

All wild species of bat are protected under the Wildlife and Countryside Act (WCA) 1981 (amended), which has also been amended by later legislation including the Countryside and Rights of Way (CROW) Act 2000 and the Conservation of Habitats and Species Regulations 2017 (amended), and this legislation is applicable to England and Wales. Bats are listed on Schedule 5 of the WCA and are therefore subject to some the provisions of Section 9 which, with the amendments, make it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection (S9:4b).
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat (S9:4c).

There are additional offences in relation to buying and selling (S9:5) any live or dead animal of this species or anything derived from them.

Bats species are also listed under Annexes IIa and IVa of EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 (amended) states that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place, whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead bat or part of such an animal.

In addition, seven native British bat species, including the soprano pipistrelle (*Pipistrellus pygmaeus*) and the brown long-eared bat (*Plecotus auritus*), that are frequently found in buildings, are listed as 'Priority Species' under the 2012 UK Post-2010 UK Biodiversity Framework¹. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in Wales within Section 7 of the Environment (Wales) Act 2016. More broadly, the Environment Act (Wales) Part 1 sets out Wales' approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory 'principles of sustainable management of natural resources' defined within the Act. Section 6 of the Act places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to

¹ <http://jncc.defra.gov.uk/page-5170>

those authorities that fell within the previous duty. Section 7 replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

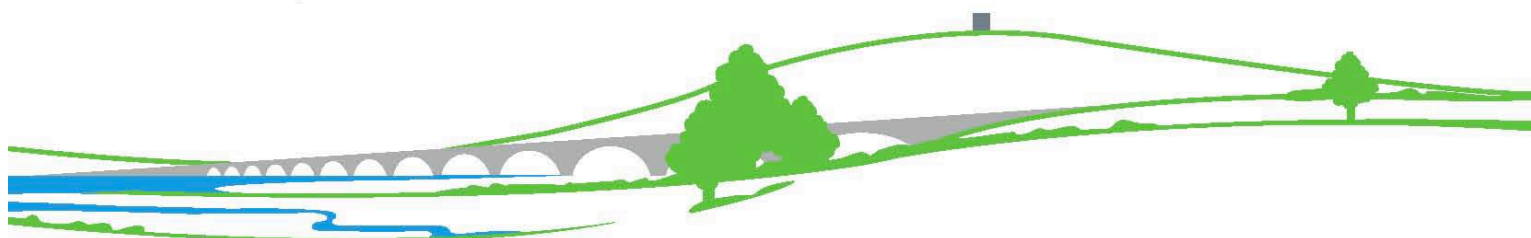
The Nature Recovery Plan for Wales aims to address the underlying causes of biodiversity loss by:

- putting nature at the heart of our decision-making;
- increasing the resilience of our natural environment; and
- taking specific action for habitats and species.

It sets out how Wales will deliver the commitments of the UN Convention on Biological Diversity and the EU Biodiversity Strategy to halt the decline in biodiversity by 2020 and then reverse that decline.

Please note: the above text provides a brief summary of the legislation in relation to bats for England and Wales and the original Acts, Regulations and any amendments should be referred to for the precise wording.

Penny Anderson
Associates Ltd
CONSULTANT ECOLOGISTS



Park Lea, 60 Park Road, Buxton, Derbyshire SK17 6SN