

Ecological Impact Assessment at
Potter's Cottage, Bettisfield,
Whitchurch, Wrexham,
SY13 2LB
Grid Ref. SJ 4659 3605

On 17th August and 13th September 2023

Report completed 2nd February 2024
Ref: POT170823

Survey by:
Susan Worsfold BSc (Hons) ACIEEM
Lyngarth,
Ellesmere Road,
St. Martins,
Oswestry,
Shropshire
SY11 3HT

01691 772310
or 07752 105600
s.worsfold@hotmail.co.uk

Requested by:
Initial Designs,
Business Hub,
Hadley Park East,
Telford,
TF1 6QJ.

alex.colley@initial-designs.co.uk
www.initial-designs.co.uk

Contents

Section	Title	Page
1	Summary	3
2	Introduction	4
3	Methodology	4
3.1	Scope	4
3.2	Desk Study	5
3.3	Field Survey	5
4	Baseline Ecological Conditions/Results	6
4.1	Designated Sites	6
4.2	Habitats	6
4.3	Species and Species Groups	6
5	Description of the Development	7
6	Assessment of Effects and Mitigation Measures	7
7	Compensation	8
8	Enhancement Recommendations	8
9	Ecological Constraints	8
10	Monitoring	8
11	Conclusions	8
12	Bibliography	9
13	Appendices	10
13.1	Emergence Surveys	10
13.2	Aerial Photographs Showing Positions of Observers	12
13.3	Map Showing Designated Sites and Zones of Influence	12
13.4	Plans	13
13:5	Photographs	15
13:6	Legislation Relating to Bats	17
13:7	Legislation Relating to Birds	18

1. Summary

The purpose of the report is to assess the potential ecological impacts of a proposed development at Potter's Cottage, Bettisfield, and advise on any mitigation measures to comply with local planning policy and government legislation.

The proposed scheme involves the addition of a two storey extension to the south west gable end of the house. A dormer and roof light will also be added to the existing roof.

The building and adjacent land were examined to establish the presence of or evidence of use by protected species of animals. A visual inspection was carried out to assess the potential or actual use by bats and birds, of the exterior and interior of the building. Two dusk emergence surveys were carried out. No evidence of current use by bats or birds was found.

If any birds should gain access to the house and begin constructing nests during the development, then the work in that area must stop until the young have left the nests.

No crevices should be filled which cannot be seen to be free from bats. If bats are found at any stage then work in that area must stop and a licensed bat worker contacted for advice. The site is suitable for foraging and commuting bats.

A lighting plan should be designed in accordance with the Bat Conservation Trust guidelines: <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

Bat and bird boxes will be needed as enhancement (page 8)

If the recommended mitigation and enhancement measures are taken there should be a net gain in biodiversity and no net loss of roosting or nesting sites, nor any danger of harm to any species.

2. Introduction

Susan Worsfold BSc (Hons) ACIEEM is an experienced wildlife surveyor, licensed bat worker and voluntary bat roost visitor. Registration number CLS0895 2015-12555-CLS-CLS (CL15 Bat Roost Visitor Level 1) and registration number CLS 0895 2015-12556-CLS-CLS (CL18 Bat Survey Level 2) (Natural England) and S086005/1 (Natural Resources Wales);
Licensed great crested newt worker, registration number 2016-19947-CLS-CLS (NE) and S086057/1 (NRW)

This report was commissioned by Initial Designs for the owner.

The site, at Potter's Cottage, Bettisfield comprises a detached house surrounded by hard standing and domestic garden.

The proposed scheme involves the addition of a two storey extension, dormer and rooflights.

The purpose of the report is to identify and address any significant ecological effects which are likely to occur as a result of the proposed development. This is necessary to comply with local planning policy and government legislation and avoid any offence being committed. Also, to describe any compensation, mitigation and enhancement measures which should be taken.

3. Methodology

3.1. Scope of the Assessment

The report incorporates a bat roost and nesting bird assessment, while also searching for use or potential use by any rare, threatened, endemic and non-native invasive species which might be associated with such a site in accordance with:

The Conservation of Habitats and Species Regulations 2017 and listed in:

Schedule 2. European protected species of animals

Schedule 5. European protected species of plants

The protection of Badgers Act 1992

Protected species which might be associated with such a site include bats, reptiles and amphibians, badgers and birds.

Two dusk emergence surveys were carried out in accordance with *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)* (Collins 2016); UK Bat Mitigation Guidelines (Reason, P.F. and Wray, S. 2023) and the Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys (*Bat Conservation Trust, May 2022*)

3.2. Desk Study

Wrexham Planning Portal was consulted for a review of previous ecological surveys carried out in the area. Magic Maps was consulted for the presence of designated sites and protected habitats.

3.3. Field Survey

The house was examined to establish the presence of or evidence of use by protected species of animals. A risk assessment was made before entering. A visual inspection was carried out to assess the potential or actual use by bats, of the exterior and interior of the building. It was searched systematically for any signs of bats, including droppings, rub marks and urine stains at entrances to roosts and insect remains, such as moth or butterfly wings. Crevices were checked where possible.

Powerful lamps (LED Lenser H14 and P7) were used for examination under eaves. Binoculars were used to examine parts which were not otherwise accessible. Photographs were taken of all areas and those of relevance are shown in the appendices.

The preliminary survey was carried out on 17th August 2023 by Susan Worsfold.

Dusk emergence surveys were carried out on 17th August and 13th September 2023 by Susan Worsfold and Anne Thackwell, an experienced observer.

Frequency division detectors were used to record any bat sounds around the building for later analysis on the computer. These were Peersonic RPA3.

The whole building was in view of the observers for the duration of the survey and infrared night vision aids (NVAs) were used alongside observers or to provide extra detail on areas of interest. These were Nightfox Red night vision goggles, mounted on tripods, with Nightfox XB5 IR torches. Footage from these was examined after light had deteriorated to a point where observers could no longer rely on their vision, and also to reinforce certainty about potential emergences noted by observers.

4. Baseline Ecological Conditions/Results

4.1 Designated Sites

The nearest designated site is Fenn's, Whixall and Bettisfield Mosses (NNR), Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (SAC) and Midlands Meres and Mosses Phase 2 (Ramsar) 650 m south west.

4.2 Habitats

Site: Rural, village location. The building is surrounded by hard standing and domestic garden on all sides.

House and garage: The house was of two storeys, walls were of brick, doors and windows were intact. It is in use as a dwelling. The roof of the house was of slate, pitched, lined with wood. There were no verge boards or soffits. The verges at the south west gable end were intact but there were several misaligned slates at each pitch, near the verges.

Adjacent land: The nearest ponds are both 140 m from the site, south east and south west. There were nine water bodies within 500 m. There is no significant woodland within 500 m but there is a good network of hedgerows surrounding the site, with several trees. There are no rivers or streams within 500 m but there is a canal 470 m south.

4.3 Species and Species Groups

Birds

No evidence of use by birds was found.

Bats

The house was considered to have moderate potential for use by bats but there was no evidence of use by them. No bats were seen to emerge from the house. Bats were seen and recorded foraging on and near the site.

Great Crested Newts

None seen on site at the time of the surveys. The nearest ponds were 140 m from the site.

5. Description of the Development

The proposed scheme involves the addition of a two storey extension to the south west gable end of the house. A dormer and roof light will also be added to the existing roof. This will involve intrusive work to the roof, i.e. removal of slates and continuation of roof line at the gable end. An area of lawn will be lost.

6. Assessment of Effects and Mitigation Measures

Designated Sites:

It is not considered that the proposal will have any significant impact on any designated sites due to the small scale of the development and distance from the sites.

Habitats:

No priority habitat is affected by the proposal. Some lawn will be lost.

Species:

Birds

There should be no impact on birds as long as none gain access to the house and begin building nests while work is in progress. If this happens, work in that area must stop until the young have left the nests.

Bats

There is not considered to be any threat to the conservation status of bats or danger of harm to individuals. However, no crevices should be filled which cannot be seen to be free from bats. If bats are found at any stage then work in that area must stop and a licensed bat worker contacted for advice. The site is suitable for foraging and commuting bats. Four species of bats were recorded around the building.

A lighting plan should be designed in accordance with the Bat Conservation Trust guidelines: <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

Great Crested Newts

It is unlikely that there would be any significant risk to individuals or effect on their conservation status due to the distance of the nearest pond and the small scale of the proposal.

Residual Effects

No significant residual effects anticipated.

7. Compensation

n/a

8. Enhancement Recommendations

An integrated crevice dwelling bat box to be incorporated into the new extension at the gable end. Further information is given in the bat box information pack available at <https://www.bats.org.uk/our-work/buildings-planning-and-development/bat-boxes>.

One integrated woodcrete nest suitable for small birds such as robin, blackbird, tit species and sparrow to be fitted to the new dwelling, on the north west side.

Bat and bird boxes area available at NHBS and Wildcare, as well as other suppliers.

9. Ecological Constraints

None identified.

10. Monitoring

Not considered necessary.

11. Conclusions

If the recommended mitigation and enhancement measures are taken there will be a net gain in biodiversity and no net loss of roosting or nesting sites, nor any danger of harm to any species.

12. Bibliography

Bat Conservation Trust available at: <http://www.bats.org.uk>

BCT and ILP Guidance Note 8 Bats and Artificial Lighting available at:
<https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

Collins J. (Ed) (2016) *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)*. The Bat Conservation Trust, London

Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora available at: jncc.defra.gov.uk

English Nature (2001) *Great Crested Newt Mitigation Guidelines* Peterborough: English Nature

Google Maps available at: <https://maps.google.com/maps>

Magic Maps available at: <http://magic.defra.gov.uk>

Mitchell-Jones, A. J. and McLeish, A. P. (2004) *Bat Worker's Manual*, Peterborough: Joint Nature Conservation Committee

Natural England available at: <https://www.gov.uk/government/organisations/natural-england>

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield

Wildlife and Habitat Conservation available at: <https://www.gov.uk/topic/environmental-management/wildlife-habitat-conservation>

Wrexham Council Planning Portal available at:
<http://planning.wrexham.gov.uk/Planning/lg/GFPlanningSearch.page>

Appendix 13.1: Emergence Surveys

Survey Conditions

Date	Sunset/ Sunrise	Start Time	End Time	Temp. Start °C	Relative Humidity Start %	Temp. End °C	Relative Humidity End %	Cloud %	Wind 0-6	Rain
17/8/23	20:34	20:15	22:05	20	72	17	81	20	1	None
13/9/23	19:32	19:15	21:05	17	75	14	80	50	1	None

17/8/23

Observer or area

Susan Worsfold (SW) north west corner

Anne Thackwell (AT) south west corner

Equipment

Peersonic RPA3 + Nightfox Red NVA

Peersonic RPA3 + Nightfox Red NVA

Bats recorded:

1st bat: Common pipistrelle (*Pipistrellus pipistrellus*) 21.00 AT station

Other species:

Soprano pipistrelle (*Pipistrellus pygmaeus*)

Myotis sp. Probably Daubenton's bat (*Myotis daubentonii*)

Noctule (*Nyctalus noctula*)

<i>Observer or Area</i>	<i>Time</i>	<i>Number of Bats and Observation</i>	<i>Identification from visual or correlation with sonograms</i>
SW	21.08	1 flew NE to SW	Unidentified
SW	22:01	1 came round SW corner (heard not seen but seen on IR video footage)	Common pipistrelle
AT	21:00	1 flew past far end of house into trees	Common pipistrelle
AT	21:02	1 flew past far end of house into trees	Unidentified
AT	21:05	2 above roof, went S and N	Unidentified

13/9/23

Observer or area

Sue Worsfold (SW) north west corner

Anne Thackwell (CT) south east corner

Equipment

Peersonic RPA3 + Nightfox Red NVA

Peersonic RPA3 + Nightfox Red NVA

Bats recorded:

1st bat: Noctule (*Nyctalus noctula*) 19.39 (not seen)

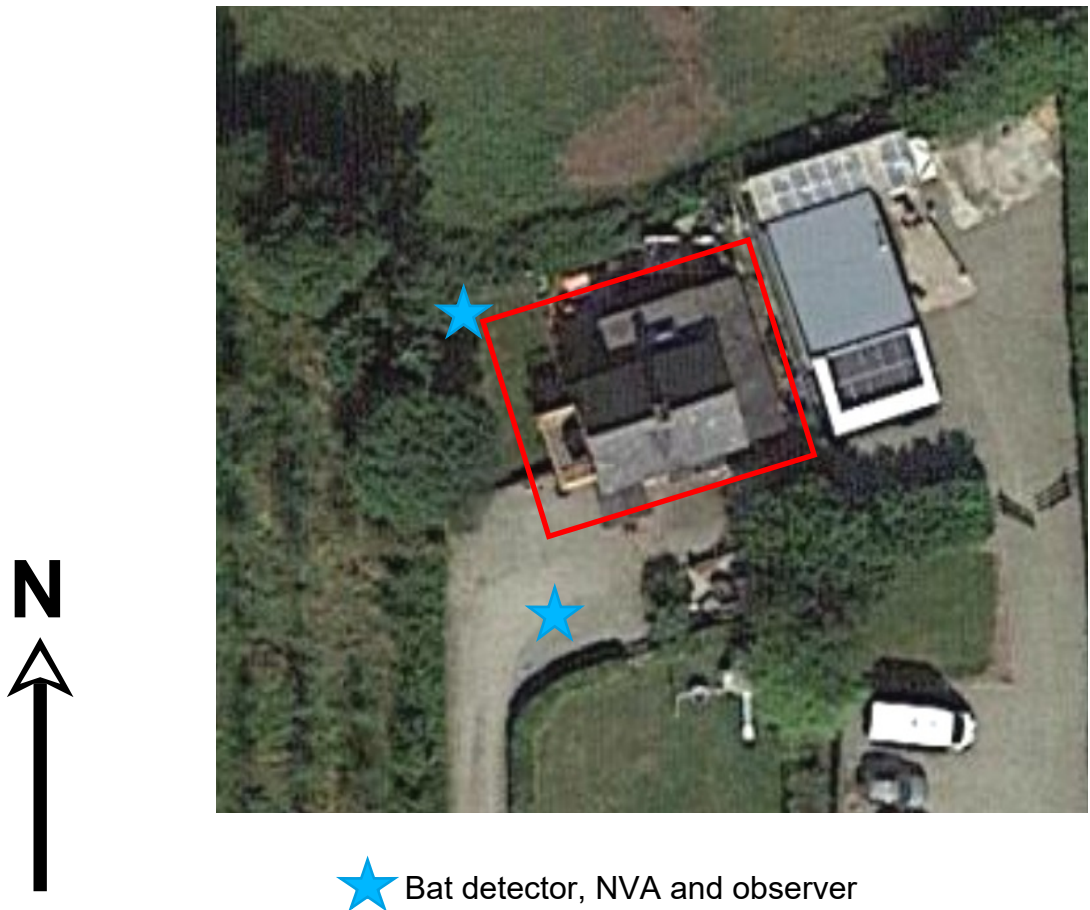
Other species:

Soprano pipistrelle (*Pipistrellus pygmaeus*)

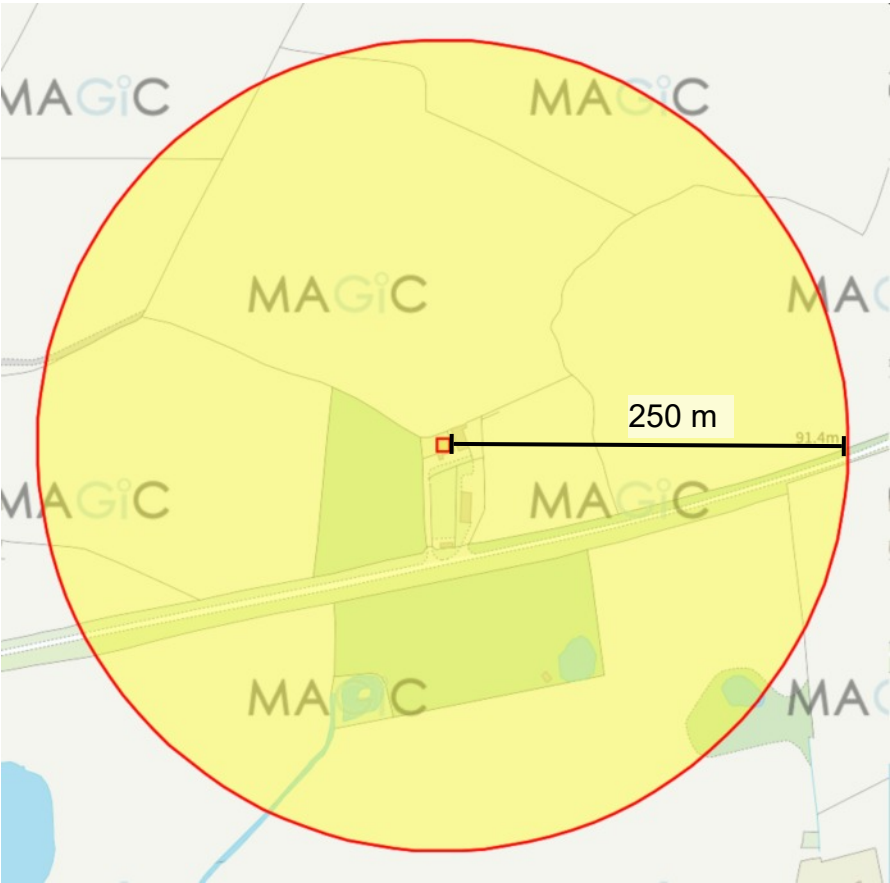
Common pipistrelle (*Pipistrellus pipistrellus*)

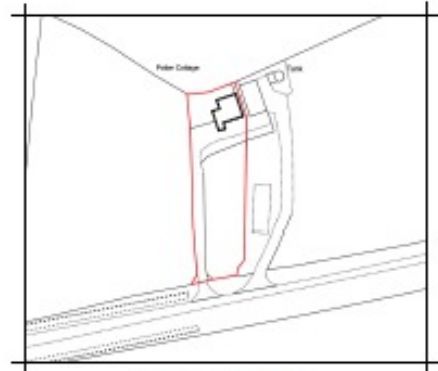
<i>Observer or Area</i>	<i>Time</i>	<i>Number of Bats and Observation</i>	<i>Identification from visual or correlation with sonograms</i>
SW	19:52	1 flew NE to S	Common pipistrelle
SW	20.01	1 seen and heard overhead	Noctule

Appendix 13.2: Aerial Photograph Showing Position of Observers

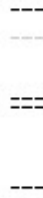


Appendix 13.3: Designated Sites and Zones of Influence





LOCATION PLAN



A stylized illustration of a red brick house. The house has a gabled roof with a chimney on the left side. The front facade features a large, dark-framed window in the center, flanked by two smaller windows. To the left of the main house is a smaller section with a double door. To the right is another section with a small window. The entire illustration is composed of a grid of small squares, giving it a pixelated or mosaic-like appearance.

THE UNIVERSITY OF CHICAGO



EAST

FIRST FLOOR

13

Appendix 13.4: Plans as Proposed



SOUTH



WEST

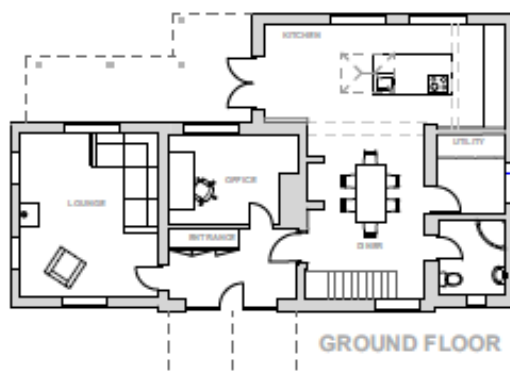


NORTH

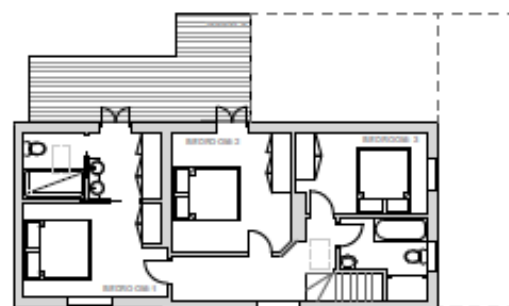


EAST

-PROPOSED-



GROUND FLOOR



FIRST FLOOR

[illegible]

Appendix 13.5: Photographs



Appendix 13.5: Photographs (Nightfox NVAs)

View from the south west



View from the north west



Appendix 13.6: Legislation Relating to Bats

All species of bats in the UK are European Protected Species (EPS). It is against the law to damage or destroy a bat's breeding site or resting place (known as a roost), or deliberately to capture, kill, injure or disturb a bat

Bats are the only mammals which can fly. They are warm blooded, they suckle their babies and are intelligent, social animals. British bats feed only on insects, of which they consume vast numbers to sustain their energetic lifestyles. A pipistrelle bat can eat up to 3000 midges in a single night!

We have 12 species of bat breeding in Wales. Many of these have suffered severe declines, not just in Britain but throughout Europe.

All British bat species are protected under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'. Bats have a unique relationship with humans, sometimes sharing our homes for part of the year. For this reason, Natural Resources Wales (NRW) deals with many hundreds of bat enquiries each year from householders.

Under the Habitats Regulations, it is an offence if you:

deliberately capture, injure or kill any wild animal of an EPS
deliberately disturb wild animals of any such species
damage or destroy a breeding site or resting place of such an animal
Disturbance includes, but is not limited to, any disturbance which is likely:

1. 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
2. to affect significantly the local distribution or abundance of the species to which they belong.

Defra and the Welsh Government will publish a joint guidance document on the interpretation of the offences relating to disturbance, and to damage and destruction of breeding sites and resting places.

There are other offences relating to possession, transport and sale.

NRW issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

If you are a householder and have concerns about bats at your property (other than queries related to planning applications or a development), contact the NRW Enquiry Line for advice, telephone 0300 065 3000

Appendix 13.7: Legislation Relating to Bats

All wild birds, their nests and eggs are protected. It is an offence to intentionally:

- kill, injure or take any wild bird,
- take, damage or destroy the nest of a Golden Eagle, White-tailed Eagle or Osprey (even if disused),
- take, damage or destroy the nest of any wild bird whilst it is in use or being built,
- take, damage or destroy an egg or any wild bird,
- possess any live or dead wild bird or the egg of any wild bird, or any derivative

Many rare birds are listed on Schedule 1, which makes it an offence to intentionally or recklessly:

- disturb a Schedule 1 bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturb dependent young of such a bird

Natural Resources Wales (NRW) issues licences for specific purposes, so that you can undertake legitimate work without breaking the law. See 'Bird licensing' for more information.