

Ecological Impact Assessment at
Knolton Chapel, Knolton,
Overton on Dee,
Wrexham LL13 0LE
Grid Ref. SJ 3784 3897

On 9th and 14th August and 9th September 2022

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1. Summary

The purpose of the report is to assess the potential ecological impacts of a proposed development at Knolton Methodist Chapel, Knolton, Overton and advise on any mitigation measures to comply with local planning policy and government legislation.

The proposed scheme involves renovation of the building and conversion to a dwelling. 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. Two dusk emergence surveys were carried out. No evidence of use by bats or birds was found.

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 are recommended as enhancement (page 8)

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

If the recommended mitigation and enhancement measures are taken there should be 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 Paul Scott-Davies, the owner.

The site, at Knolton Methodist Chapel, Knolton comprises a detached former chapel surrounded by short vegetation, trees and grass.

The proposed scheme involves renovation of the building and conversion to a dwelling.

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, great crested newt 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

Two dusk emergence surveys were carried out in accordance with *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)* (Collins 2016) 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 building was examined to establish the presence of or evidence of use by protected species of animals. A risk assessment was made before entering the building. 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 9th August 2022 by Susan Worsfold.

A dusk emergence survey was carried out on 14th August 2022 by Susan Worsfold and Craig Thomas, an experienced assistant. Another dusk emergence survey was carried out on 9th September 2022 by Susan Worsfold and Craig Thomas.

These were done in accordance with *Bat surveys for professional ecologists: Good Practice Guidelines (3rd Edn)* (Collins 2016) 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*)

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

Infrared night vision aids (NVAs) were used alongside observers. These were Nightfox Red night vision goggles, mounted on tripods, with Nightfox XB5 IR torches.

4. Baseline Ecological Conditions/Results

4.1 Designated Sites

The nearest designated site is Shell Brook Pastures (SSSI) 900 m west.

4.2 Habitats

Site: Rural hamlet location. The building is unoccupied. It is surrounded by short vegetation and trees on all sides. The A528 is adjacent.

Walls were of brick with no cavity. The door was of wood, in a good state of repair. Windows were glazed and intact. The roof was of slate with a wood frame, pitched, with a bitumastic hessian lining. There was a large loft space comprising two rooms. One room was boarded and in use as storage. The other, in the older part of the building, was smaller and the floor was covered with insulation. There were no soffits but there were verge boards at both gable ends. Adjacent land: There were 18 ponds within 500 m of the site, the nearest being 122 m south west. There was no significant woodland within 500 m but there was a good network of hedgerows surrounding the site, with several trees. Shell Brook is 600 m south west.

4.3 Species and Species Groups

Birds

No evidence of use by birds was found.

Bats

No evidence of use by bats was seen. The building was considered to have moderate potential for use by bats. The adjacent trees did not have any potential roost features.

Great Crested Newts (GCN)

There were no ponds within 100 m according to maps. No GCN were seen on site. The nearest pond was on the opposite side of a busy road.

Plants

Closely mown grasses and semi mature native and non-native trees surrounded the building. The adjoining garden contained several fruit trees and there were more trees and plants in the adjacent garden centre.

No evidence of use by badgers, dormice or other protected species was found and the site was not considered suitable for use by them. No important or rare species of plants were found.

5. Description of the Development

The proposed scheme involves the renovation of the building and conversion to a dwelling. Access details to be decided but the development will entail the loss of at least one tree and some vegetation which is predominantly domestic garden.

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. Very little vegetation is to be lost.

Species:

Birds

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

Bats

Since the first bat to be seen did not come from the building, and no bats were seen to emerge from the building later, it is reasonable to conclude that bats were not using the building. This is supported by the lack of any signs or evidence of use by bats in the building, either physical or recorded on the detectors. There is not considered to be any threat to the conservation status of bats or danger of harm to individuals. The site is suitable for foraging and commuting bats.

No crevices should be filled which cannot be seen to be empty. If any bats are found during the development then work in that area must stop and a licensed bat worker must be contacted for advice.

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 (GCN)

There is not considered to be any risk of harm to individuals or to the conservation status of GCN due to the small scale of the development and distance from the nearest ponds.

Plants

Some of the adjacent trees will need to be pruned or felled. None were of a significant age or importance or possessed any potential bat roost features but should be checked for nesting birds before any work is done on them.

Residual Effects

No significant residual effects anticipated.

7. Compensation

N/A

8. Enhancement Recommendations

A woodcrete crevice dwelling bat box to be fitted externally to the south east 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 woodcrete nest suitable for small birds such as robin, blackbird, tit species and sparrow to be fitted to the north west gable end:

House Sparrow Terrace - Wooden (or woodcrete) nest box with 3 sub-divisions to support 3 nesting pairs. To be placed under the eaves. Entrance holes: 32mm diameter. Dimensions: H310 x W370 x D185mm. Also suitable for tits, redstarts and spotted flycatchers. Place at least 2 m from the ground.

9. Ecological Constraints

The building was partially obscured by trees on the north east side. However, no bats were seen to emerge from the trees which hadn't been previously seen on the other side.

10. Monitoring

Not considered necessary.

11. Conclusions

If the recommended mitigation and enhancement measures are taken there will be 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

Gent A.H, Gibson S.D (eds) (1998) *Herpetofauna Workers' Manual*. Peterborough: Joint Nature Conservation Committee

Great crested newts: surveys and mitigation for development projects available at:
<https://www.gov.uk/great-crested-newts-surveys-and-mitigation-for-development-projects>

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

Langton, T., Beckett, C., Foster, J. (2001) *Great Crested Newt Conservation Handbook*. Halesworth: Froglife

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

Mitchell-Jones, A. J. (2004) *Bat Mitigation Guidelines*, Peterborough: English Nature

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>

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*) *Herpetological Journal* 10 (4), 143-155.

UK BAP Priority Habitats available at: jncc.defra.gov.uk

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: Activity Surveys

14/8/22

Observer or area

Sue Worsfold (SW) north corner

Craig Thomas (CT) south corner

Loft

Equipment

Peersonic RPA3 + Nightfox Red NVA

Peersonic RPA3 + Nightfox Red NVA

Anabat Express

Bats recorded:

Soprano pipistrelle (*Pipistrellus pygmaeus*)

Common pipistrelle (*Pipistrellus pipistrellus*)

Noctule (*Nyctalus noctula*)

Myotis species, probably Daubenton's bat (*Myotis daubentonii*)

No bats were recorded internally

<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+CT	20:54	1 bat flew from the east, over the roof then flew north west	Common pipistrelle
SW	20:57	1 bat flew from the east, then foraged briefly near building	Common pipistrelle
SW	21:00	1 bat flew from the east, then foraged briefly near building	Common pipistrelle
SW	21:01	1 bat foraging in garden	Common pipistrelle
CT	21:29	1 bat near N gable end	Soprano pipistrelle
CT	21:34	1 bat near NW corner	Common pipistrelle

9/9/22

Observer or area

Sue Worsfold (SW) south east corner

Craig Thomas (CT) north west corner

Equipment

Peersonic RPA3 + Nightfox Red NVA

Peersonic RPA3 + Nightfox Red NVA

Bats recorded:

Soprano pipistrelle (*Pipistrellus pygmaeus*)

Common pipistrelle (*Pipistrellus pipistrellus*)

Noctule (*Nyctalus noctula*)

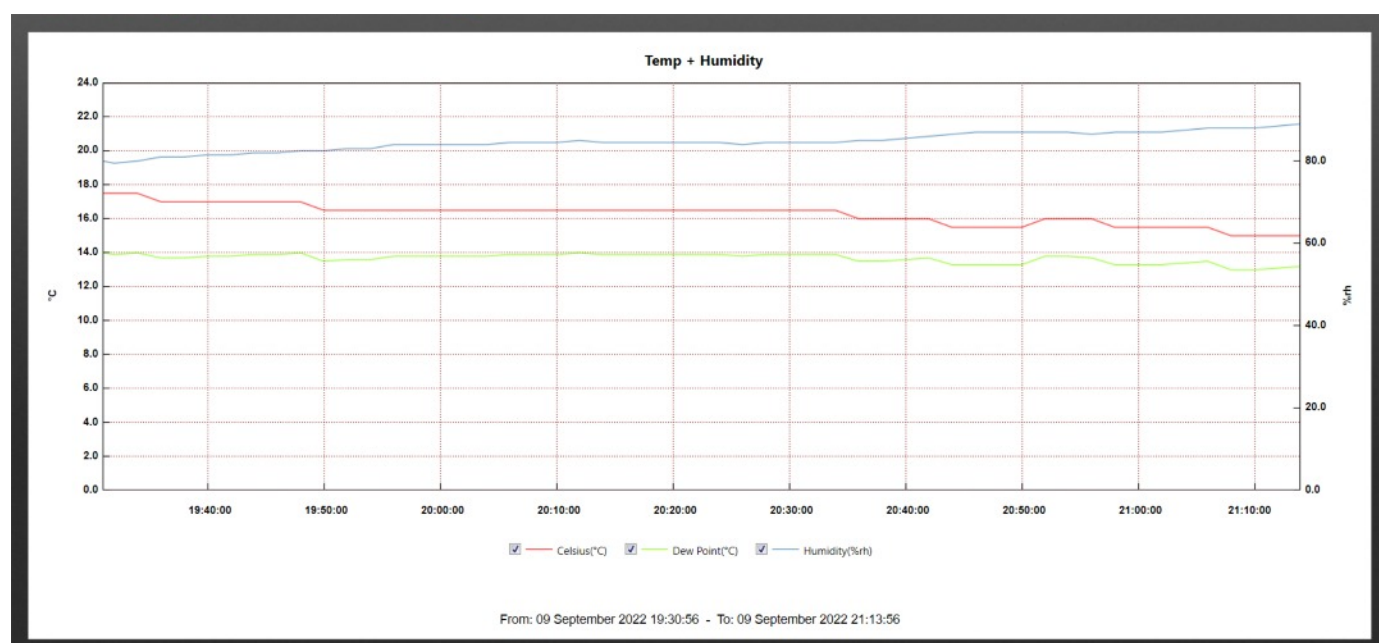
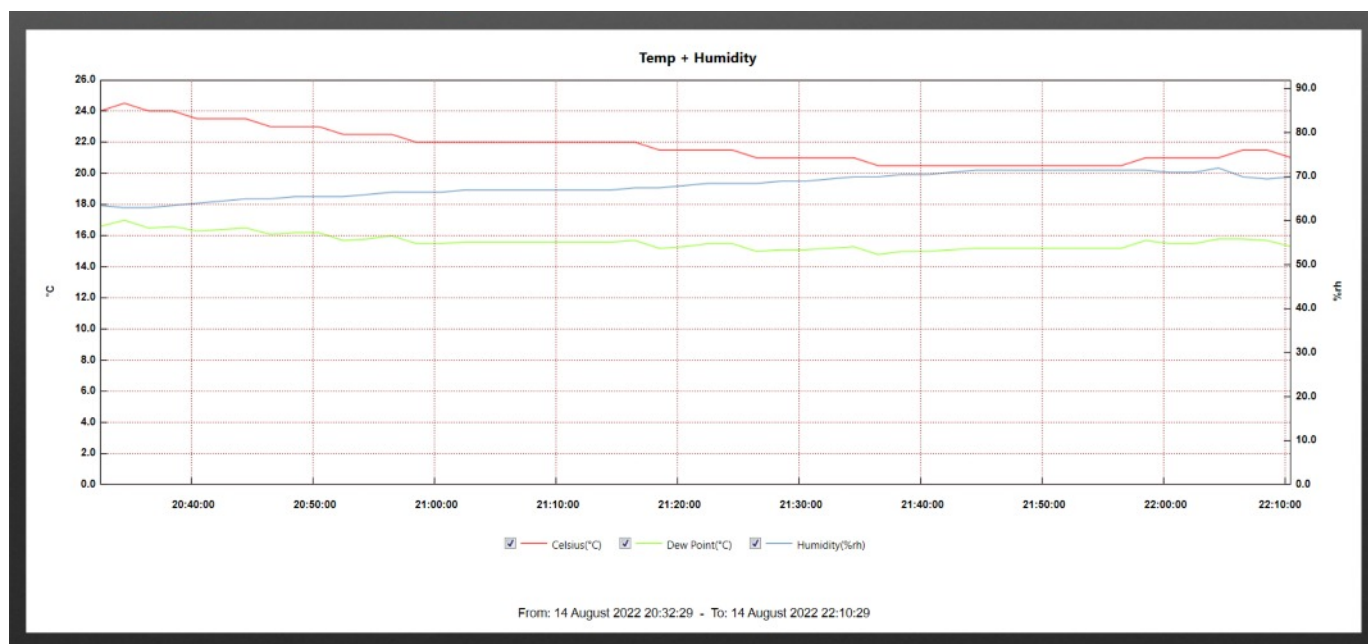
Myotis species, probably Daubenton's bat (*Myotis daubentonii*)

<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	19:51-19:58	1 bat foraging near chapel and in garden	Common pipistrelle
SW	20:08	1 bat flew E to W	Soprano pipistrelle

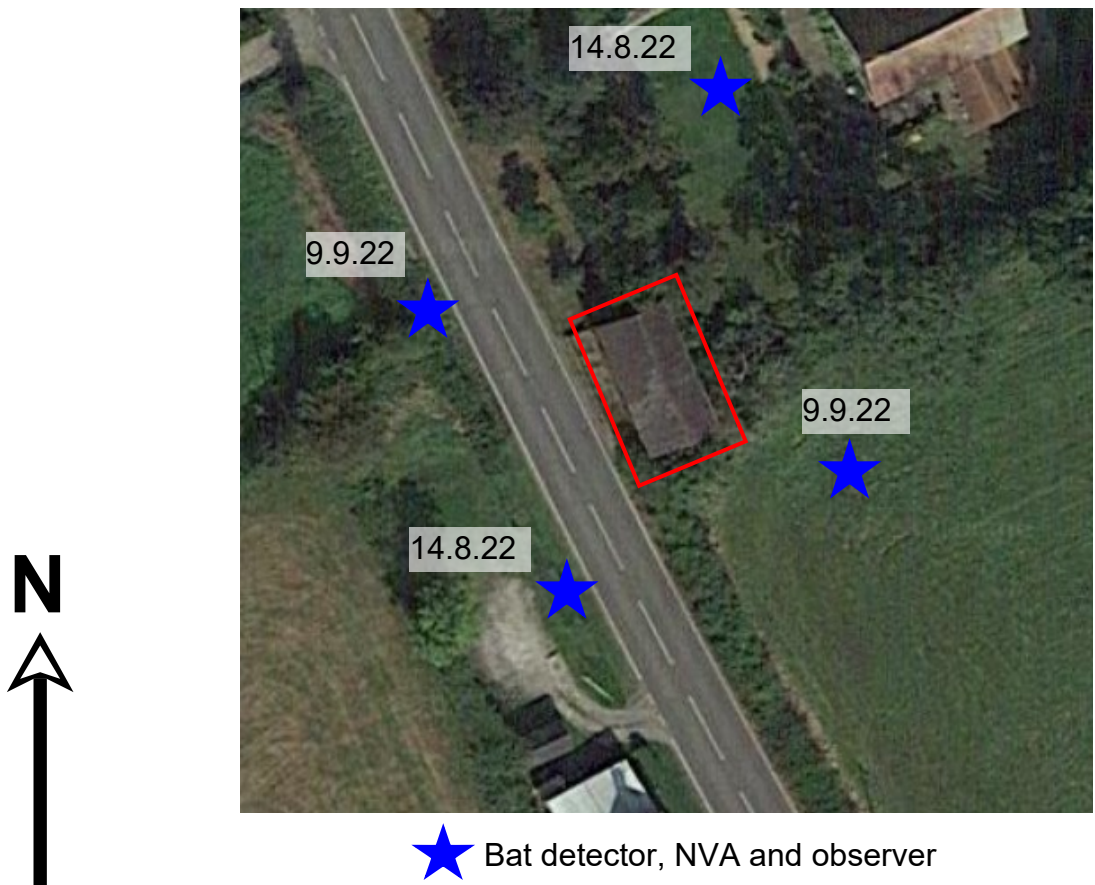
Appendix 13.2: Survey Conditions

Date	Sunset/ Sunrise	Start Time	End Time	Temp. Start °C	Relative Humidity Start %	Temp. End °C	Relative Humidity End %	Cloud %	Wind 0-6
14/8/22	20:40	20:25	22:10	24	63	21	70	20	0
9/9/22	19:42	19:25	21:15	18	80	15	86	80	0

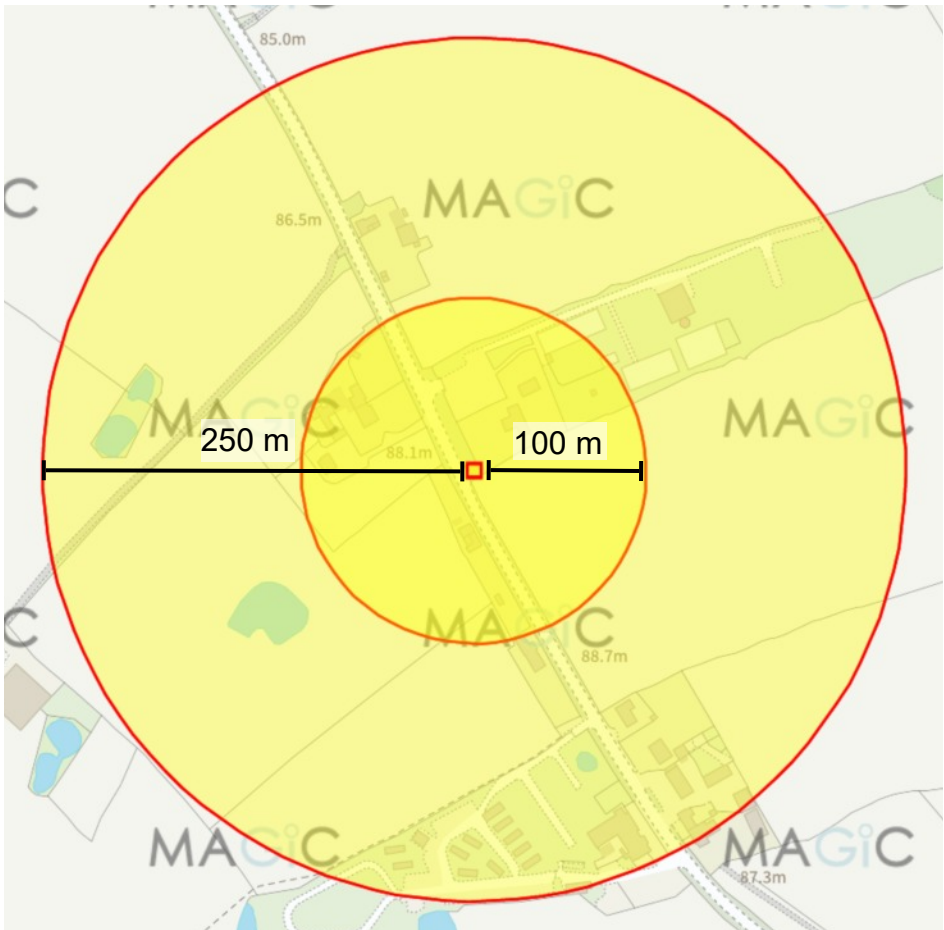
There was no rain during either survey.



Appendix 13.3: Aerial Photograph Showing Position of Observers



Appendix 13.4: Designated Sites and Zones of Influence



Appendix 13.5: Photographs



Appendix 13.5: Photographs



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 Birds

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.