

Ecological Impact Assessment at
Old Mill Welsh Shop,
Llanarmon Dyffryn Ceiriog,
Wrexham
LL20 7LD
Grid Ref. SJ 1565 3281

On 1st, 6th and 28th August 2022

Report completed 9th October 2022
Ref: OLD010822

Survey by:
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1. Summary

The purpose of the report is to assess the potential ecological impacts of a proposed development at Old Mill Welsh Shop, Llanarmon DC and advise on any mitigation measures to comply with local planning policy and government legislation.

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

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 for bats were carried out.

A licensed bat worker should be present during filling of crevices, which will be checked with an endoscope and/or torch by the bat worker immediately prior to filling, or blocked temporarily until filling.

Work should take place between the months of April and October to minimise the risk of disturbing hibernating bats.

A bat box should be fitted to the converted building as described on page 8.

If bats are found at any stage of the development then work in that area must stop and a licensed bat worker 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/>

A bird box should be fitted to the converted building as described on page 8.

If any birds should gain access to the building 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, compensation and enhancement measures are taken there should be minimal impact on the conservation status or 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 RF Davies Architectural Services.

The site, at Old Mill Welsh Shop, Llanarmon DC, comprises a three storey detached building surrounded by hard standing.

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

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. 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 1st August 2022 by Susan Worsfold.

Dusk emergence surveys were carried out on 6th and 28th August 2022 by Susan Worsfold and Craig Thomas, an experienced assistant.

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 River Dee and Bala Lake (SSSI and SAC) 138 m north east.

4.2 Habitats

Site: Rural, pastoral, village location. The building is in use as storage. It is surrounded by hard standing on all sides.

It is two storeys plus a large loft. Walls were of stone with no cavity, but many large crevices. The door is of wood and glass, windows were glazed and intact. The roof was slate, pitched, unlined with a timber frame. There were large gaps at the eaves and wooden verge boards at each gable end.

Adjacent land: There are no ponds apparent within 500 m. The river Dee is 138 m north east. There is also a stream 18 m south east. The nearest significant woodland is 300 m north west. There is a good network of hedgerows surrounding the site, with several trees.

4.3 Species and Species Groups

Birds

A small passerine was seen to enter under the verge board at the south gable end on the 6th August, and a corvid nest was seen in the eaves on the east side at the northern end during the initial survey.

Bats

Approximately 15 droppings were found in the loft. These appeared to be old but it is not possible to accurately determine age since environmental factors play a large part in preservation. No bats were seen to emerge from the building and no bat sounds were recorded inside during the first survey on the 6th August.

Great Crested Newts (GCN), Reptiles or other Amphibians

There were no ponds within influencing distance of the site. It is unlikely that the site would be used by reptiles or amphibians.

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 a former flax mill and, more recently, shop, and conversion to a holiday let. A three storey extension enclosing a staircase will be added to the southern gable end. The development will involve removal and replacement of roof slates and filling and obstruction of some crevices in walls.

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. Minimal vegetation is to be lost.

Species:

Birds

The building was being used by birds at the time of the surveys. If any birds should gain access to the building and begin constructing nests during the work, then work in that area must stop until the young have left the nests. An artificial nest should be fitted to the converted building as described on page 8.

Bats

There is not considered to be any threat to the conservation status of bats but there is potentially some danger of harm to individuals if any choose to use the crevices in the walls as temporary shelter. The proposed work will entail the loss of many such crevices. However, with appropriate mitigation and compensation the risks and effects can be reduced to an acceptable level.

A licensed bat worker should be present during filling of crevices. These will be checked with an endoscope and/or torch by the bat worker immediately prior to filling, or blocked temporarily until filling.

Work should take place between the months of April and October to minimise the risk of disturbing hibernating bats.

A bat box should be fitted as described on page 8.

If bats are found at any stage of the development then work in that area must stop and a licensed bat worker 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/>

Residual Effects

No significant residual effects anticipated.

7. Compensation

One woodcrete nest suitable for small birds such as robin, blackbird, tit species and sparrow to be fitted to the converted building at the north gable end or east side of the building:

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.

8. Enhancement Recommendations

1 woodcrete crevice dwelling bat box to be placed at the south gable end or east side of the converted building. e.g. Schwegler 2F or 1FF or similar.

9. Ecological Constraints

None identified.

10. Monitoring

Not considered necessary.

11. Conclusions

If the recommended mitigation, compensation and enhancement measures are taken there should be minimal impact on the conservation status or 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. (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 Resources Wales available at: <https://naturalresources.wales/?lang=en>

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

6/8/22

Observer or area

Sue Worsfold (SW) north west corner

Craig Thomas (CT) south east corner

Loft

Equipment

Peersonic RPA3 + Nightfox Red NVA

Peersonic RPA3 + Nightfox Red NVA

Anabat Express

Bats recorded:

Common pipistrelle (*Pipistrellus pipistrellus*)

Soprano pipistrelle (*Pipistrellus pygmaeus*)

Myotis sp., Probably Whiskered (*Myotis mystacinus*)

No bat calls were recorded in the loft.

<i>Observer or Area</i>	<i>Time</i>	<i>No. Bats</i>	<i>Number of Bats and Observation</i>	<i>Identification from visual or correlation with sonograms</i>
SW	20:40	1	Foraging above	Common pipistrelle
SW	21:47	1	Foraging above	Common pipistrelle
SW	21:49-22.40	1	Frequent intermittent foraging above and nearby	Common pipistrelle and whiskered bat
CT	20:40	3	Foraging nearby and above	Common pipistrelle
CT	20:59	2	Flew E to W	Common pipistrelle
CT	21:02	1	Arrived from the NE, circled around building then flew NW	Common pipistrelle
CT	21:05	1	Above S end of building	Common pipistrelle
CT	21.11-22.40	1	Frequent intermittent foraging above and nearby	Common and soprano pipistrelle

28/8/22

Observer or area

Sue Worsfold (SW) north west corner

Craig Thomas (CT) south east corner

Equipment

Peersonic RPA3 + Nightfox Red NVA

Peersonic RPA3 + Nightfox Red NVA

Bats recorded:

Common pipistrelle (*Pipistrellus pipistrellus*)

Soprano pipistrelle (*Pipistrellus pygmaeus*)

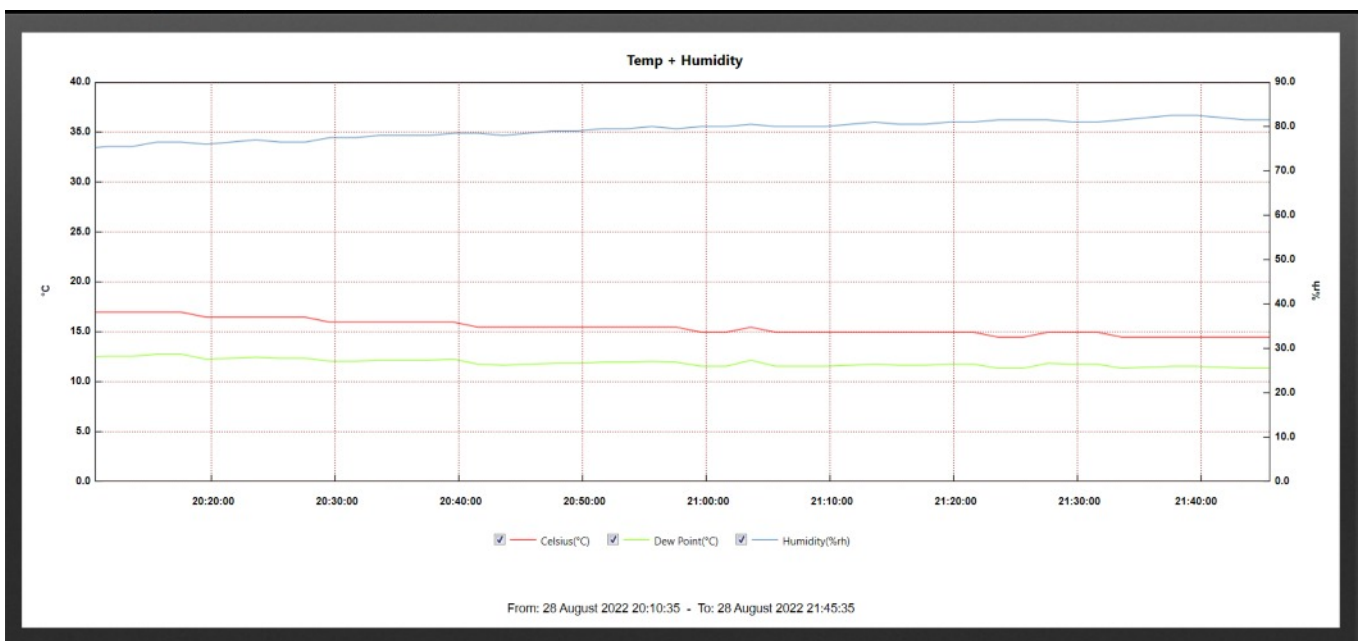
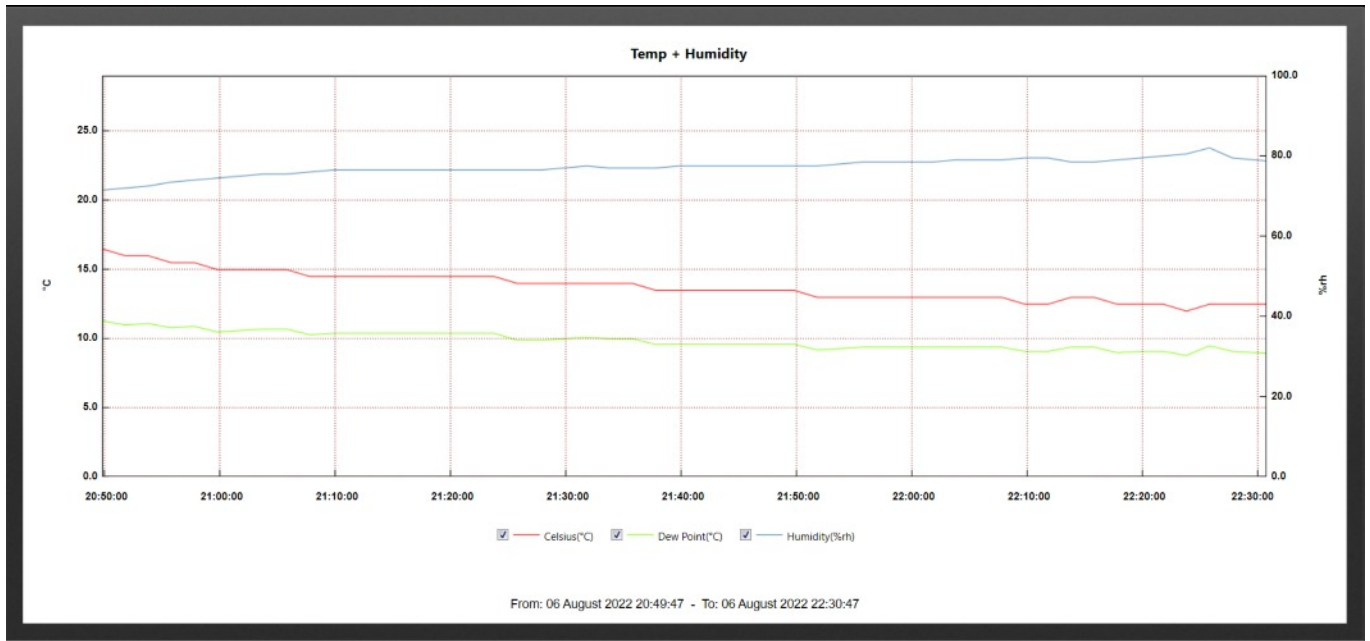
Noctule (*Nyctalus noctula*)

Myotis sp., Probably Whiskered (*Myotis mystacinus*)

<i>Observer or Area</i>	<i>Time</i>	<i>No. Bats</i>	<i>Number of Bats and Observation</i>	<i>Identification from visual or correlation with sonograms</i>
SW	20:28	1	Flew NW to SE	Common pipistrelle
SW	20:29	1	Flew S to N	Common pipistrelle
SW	20:31	2	Flew S to N, one each side of building	Common pipistrelle
SW	20:36	1	Flew E to W	Whiskered bat
SW	20:51	2	Flew E to W	Whiskered bat
CT	20:05	1	Foraging to the E	Common pipistrelle
CT	20:14	1	Foraging to the SW heading W	Unidentified
CT	20:25	1	Foraging to the SW heading W	Common pipistrelle
CT	20:31	1	Flew NE to SW	Common pipistrelle

Appendix 13.2: Survey Conditions

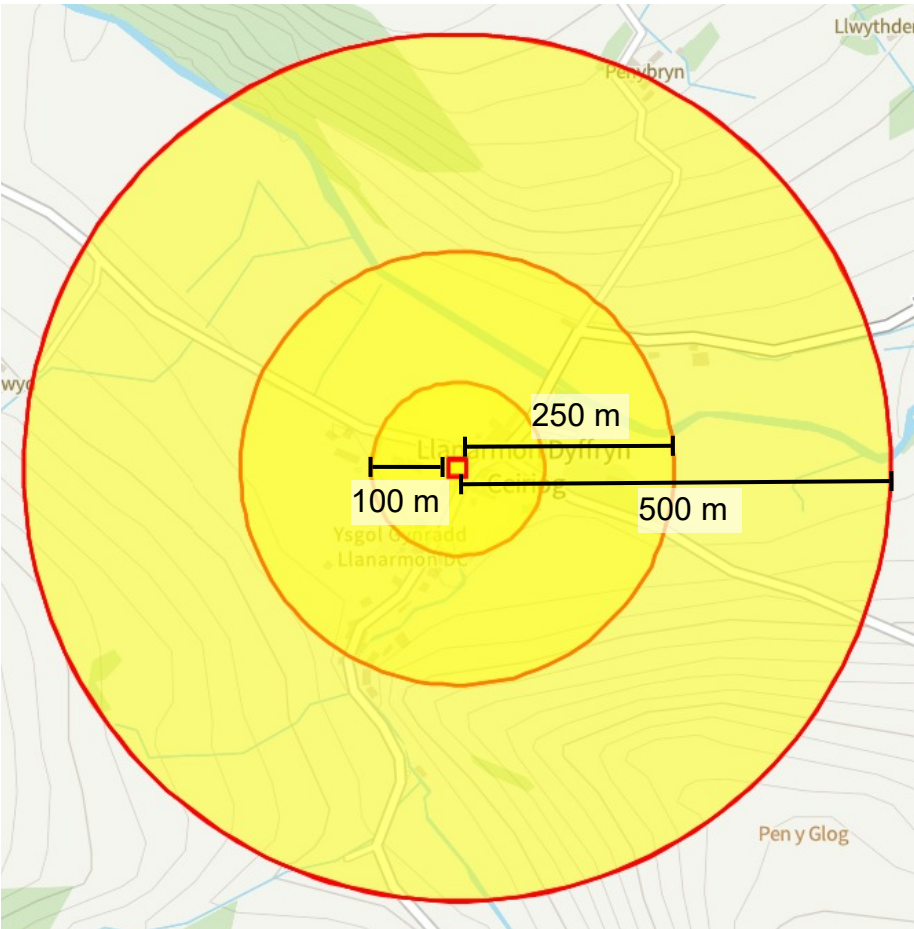
Date	Sunset/ Sunrise	Start Time	End Time	Temp. Start °C	Relative Humidity Start %	Temp. End °C	Relative Humidity End %	Cloud %	Wind 0-6
6/8/22	20:55	20:40	22:40	18	69	12	79	10	0
28/8/22	20:10	19.55	21:40	18	71	94	62	80	0



Appendix 13.3: Aerial Photograph Showing Position of Observers



Appendix 13.4: Designated Sites and Zones of Influence

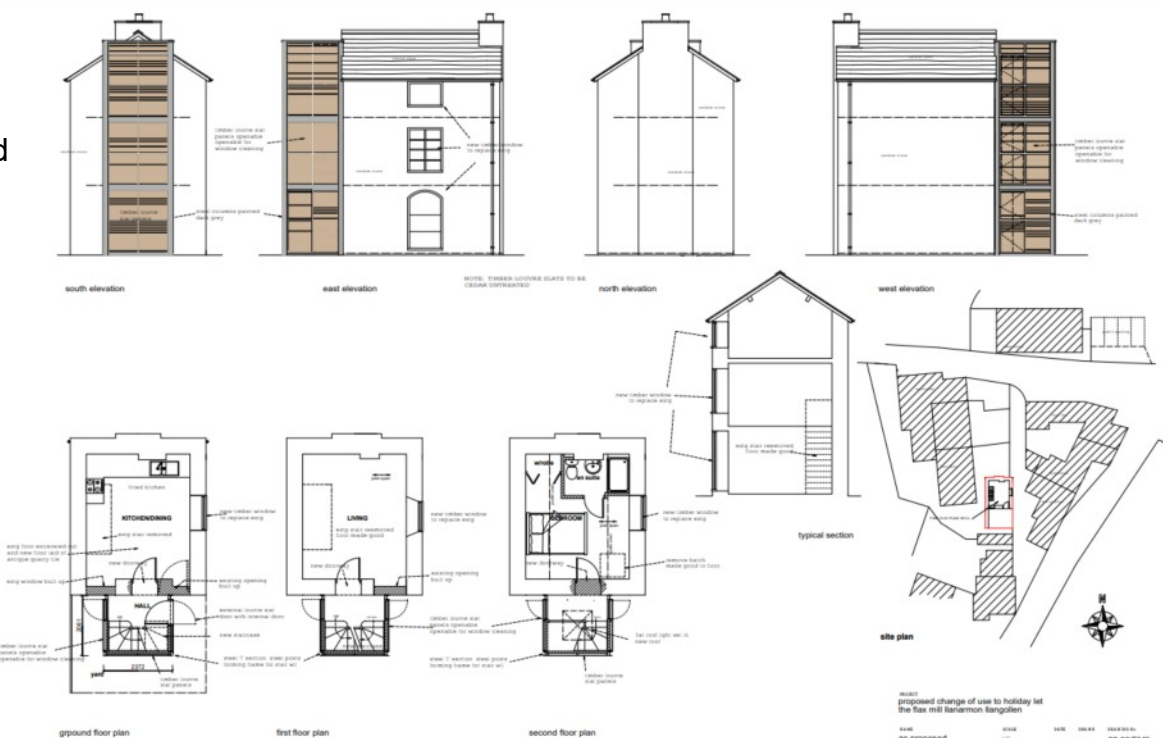


Appendix 13.5: Plans

As Existing



As Proposed



Appendix 13.6: Photographs



Appendix 13.6: Photographs



Appendix 13.7: 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 13.8: 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.