

Ecological Impact Assessment at

Pant y Garn, Penycae,

Wrexham LL14 1UH

Grid Ref. SJ 2675 4761

on 24th August 2020

Report Completed 14th October 2020
Ref: PAN240820

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

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

Requested by:
Greenspace Architects
The Old Town Hall
The Square
Ellesmere
Shropshire
SY12 0EP

01691 623889

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	5
4.1	Designated Sites	5
4.2	Habitats	5
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	Habitat Suitability Index for Great Crested Newts	10
13.2	Reasonable Avoidance Measures with Regard to Great Crested Newts	11
13.3	Survey Diagram	12
13.4	OS Location Map	13
13.5	Map Showing Zones of Influence and Designated Sites	13
13.6	Aerial Photograph	14
13.7	Site Plans as Existing and Proposed	15
13.8	Photographs	16
13.9	Legislation Relating to Great Crested Newts	18
13.10	Legislation Relating to Birds	19

1. Summary

The purpose of the report is to assess the potential ecological impacts of a proposed development at Pant y Garn, Penrycae and advise on any mitigation measures to comply with local planning policy and government legislation.

The proposed scheme entails the construction of a dog kennel and associated access and parking.

The land was 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 of the site by great crested newts (GCN), bats, badgers, dormice and birds.

Impacts during the development should be low with respect to birds provided that no bird nests are constructed or occupied while work is taking place. If birds are building nests or any are occupied at any stage of the development work in that area must stop until the young have left the nest. Impacts with respect to badgers, bats, birds and dormice are also considered to be low.

Reasonable avoidance measures should be taken with respect to great crested newts to avoid harm to individuals due to the presence of nearby waterbodies.

No rare or threatened species of plants or animals were found on site or near the site.

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 Greenspace Architects, Ellesmere.

The site, at Pant y Garn, Penycae, comprises approximately 0.07 ha of overgrown domestic garden.

The proposed scheme entails the construction of a dog kennel and associated access and parking.

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 an preliminary 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, owls and other breeding birds. The area around the site might be used by badgers, dormice, amphibians and reptiles, and might contain protected plant species. Zones of influence for great crested newts (GCN) were considered using the rapid risk assessment tool, which forms part of the method statement template for GCN mitigation licence (NE), as guidance to evaluate the impacts of the development in the absence of any licensed mitigation.

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 site was examined to establish the presence of any protected species or habitats, and for evidence of use by protected species of animals. Trees and/or buildings were assessed for suitability for use by bats. The site and surrounding habitat was examined for signs of use by badgers and dormice. Maps of the site and surrounding environment were examined to identify any nearby waterbodies suitable for use by great crested newts within an influencing distance of the site. The variety of plant species was mapped according to the convention of Phase 1 habitat surveys as described by the JNCC (2010). Photographs were taken of all areas and those of relevance are shown in the appendices.

The visual assessment of the site was carried out in accordance with CIEEM guidelines (CIEEM 2017) on 24th August 2020 by Susan Worsfold BSc (Hons) ACIEEM.

4. Baseline Ecological Conditions/Results

4.1 Designated Sites

The nearest designated site is Berwyn and South Clwyd Mountains, (Site of Special Scientific Interest and Special Area of Conservation) 200 m west.

4.2 Habitats

Site: The site is in a secluded rural location, near two reservoirs to the north east. The total area of the site is approximately 0.07 ha. There is a disused greenhouse and polytunnel, and also a chicken coop. The ground flora is not very diverse, being dominated by grasses, nettles, brambles and the remains of the old garden, mainly what appear to be non-fruiting raspberry suckers. A full species list follows.

Adjacent land: Mainly pastoral with few hedgerows but several trees. The nearest woodland is 200 m north east. There are no rivers within 500 m. There are two ponds and a ditch within 250 m of the site. The nearest pond is 10 m away and has below average potential for use by great crested newts. The stream/ditch is 30 m from the site but does not appear suitable for use by GCN due to its fluctuating water levels and lack of any emergent vegetation. The other pond was 110 m east and not accessible as not on the client's land.

4.3 Species and Species Groups

Plants: Species found on site:

(*Alchemilla mollis*) lady's mantle
(*Anthriscus sylvestris*) Cow parsley
(*Cirsium vulgare*) Spear thistle
(*Digitalis purpurea*) Foxglove
(*Epilobium angustifolium*) rosebay willowherb
(*Lolium perenne*) Perennial ryegrass
(*Phleum pratense*) Timothy grass
(*Ranunculus repens*) Creeping buttercup
(*Rubus fruticosus*) Bramble
(*Rumex* sp.) Dock
(*Urtica dioica*) Common nettle

No rare or threatened species of plants were found on site or near the site.

Amphibians and Reptiles

None seen during the initial survey. There are two ponds and a ditch within 250 m of the site. The nearest pond is 10 m away and has below average potential for use by great crested newts. The stream/ditch is 30 m from the site but does not appear suitable for use by GCN due to its fluctuating water levels and lack of any emergent vegetation. The other pond was 110 m east and not accessible as not on the client's land.

Birds

There are no trees on site suitable for use by nesting birds but there are several adjacent to the site.

Bats

The site is suitable for use by foraging and commuting bats.

Badgers

There were no badger setts, tracks or latrines found on the site or within 30 m of the site.

Dormice

No evidence of use by dormice was found, nor was the site suitable for use by them.

No species of conservation value or Schedule 9 species were seen on site.

5. Description of the Development

The proposed scheme entails the construction of a dog kennel with parking and turning area, and associated access. A dilapidated polytunnel and greenhouse will be removed. A sewage treatment plant will discharge into the pond.

6. Assessment of Effects and Mitigation Measures

Designated Sites:

It is not considered that the development will have any significant impact on any nearby designated sites due to its small size and low ecological impact.

Habitats:

No priority habitat is affected by the proposal. The loss of vegetation will have a low impact on some invertebrate and small mammal species.

Species:

Amphibians and Reptiles

There are two ponds within 250 m from the site which may be suitable for use by great crested newts. Although the area of ground to be lost or disturbed is small (approximately 0.07 ha), reasonable avoidance measures should be taken to avoid an offence being committed through harm to these animals.

Birds

Trees and shrubs should not be felled between March and September to prevent harm to nesting birds. If birds should gain access to any trees or shrubs, and begin building nests during the work, then the work in that area must stop until the young have left the nests.

Bats

No evidence of use by bats was found, however the site is suitable for use by 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/>

Residual Effects

The loss of low quality habitat will have a small effect on future foraging and commuting for some species, however the adjacent land has greater biodiversity, with flowering ground flora, shrubs and trees and is to be retained.

7. Compensation

None considered necessary.

8. Enhancement Recommendations

Bats: A bat box e.g. Schwegler 1FF to be fitted externally to the new building. Further information is given in the bat box information pack available at <http://www.bats.org.uk/index.php>. Bat boxes should be placed in a south east to south west facing position if possible.

Birds: One woodcrete nests suitable for small birds such as robin, blackbird, tit species and sparrow to be incorporated into the new building.

House Sparrow Terrace - Wooden (or woodcrete) nest box with 3 sub-divisions to support 3 nesting pairs. To be placed under the eaves of buildings or incorporated into walls. 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

None identified.

10. Monitoring

None considered necessary.

11. Conclusions

If the recommended mitigation, compensation and enhancement measures are taken the overall ecological impacts of the proposed development will be low due to its small scale and lack of evidence of any rare or threatened species or priority habitat.

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/>

CIEEM (2017) *Guidelines on Ecological Report Writing*. Winchester: Chartered Institute of Ecology and Environmental Management

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

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

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

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

The National Vegetation Classification available at: jncc.defra.gov.uk

Natural Resources Wales available at: <https://naturalresources.wales/?lang=en>

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.

Rapid Risk Assessment Tool available at: <https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence>

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>

13.1 Habitat Suitability Index for Great Crested Newts

	Score	SI
Location	A	1
Pond Area	80	0.2
Pond drying	never	0.9
Water quality (invertebrate density & character)	moderate	0.67
Shade perimeter shaded to 1m from shore	30	1
Fowl	0.67	1
Fish	probable	0.67
Number of ponds within 1km	2	0.1
Terrestrial Habitat	moderate	0.67
Macrophytes % surface area occupied by macrophyte cover	40	0.7
Product		0.0037896
HSI score		0.573

Pond suitability for great crested newts is

below average

HSI Pond suitability

<0.5 = poor

0.5 – 0.59 = below average

0.6 – 0.69 = average

0.7 – 0.79 = good

> 0.8 = excellent

13.2 Reasonable Avoidance Measures with Regard to Great Crested Newts

It is a criminal offence to harm a great crested newt.

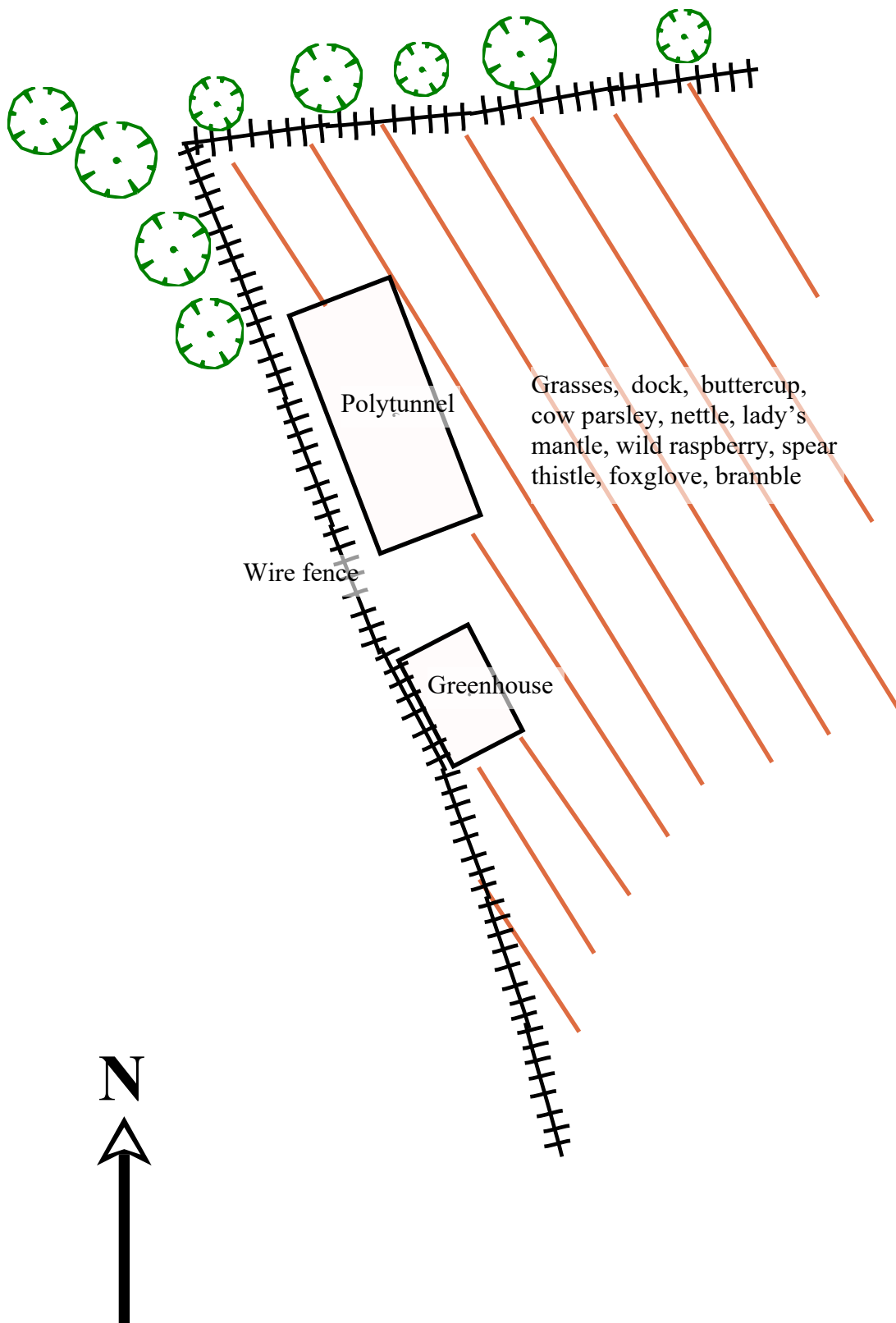
Great crested newts (GCN) spend most of their time on land, returning to still water only to breed once they are mature at about 3-4 years of age.

They may travel more than kilometre from their breeding pond.

They move about mostly at night, and by day creep underground or beneath shelter such as stones or logs. They hibernate during the winter, which is generally from the beginning of November until late March, depending on the weather. Hibernation is underground in burrows made by other small animals or beneath substantial cover such as large stones or piles of logs.

1. The greenhouse and any large stones or logs which are present on site are potential refuges for GCN. Any vegetation should be kept below 10 cm in order to make it less attractive to GCN and other small animals. Vegetation removal will begin in the centre of the site and continue to the outer edges so that any animals present are able to move away. Demolition of the greenhouse should be done with care and by hand.
2. Any trenches should have a ramp of earth at each end to enable any animals to escape. All trenches must be inspected carefully before infilling, and any animals carefully removed and removed from the area to a place of safety.
3. Building materials should be stored clear of the ground (say, on pallets) so as to avoid crushing any animals which might seek refuge under them, when the materials are lifted.
4. Any open pipework will be capped overnight. All open trenches and pipework should be inspected at the start of each working day to ensure no animal is trapped.
5. Any excavated material which is not replaced on the same day should either be removed from the site or stored on a hard surface and covered with an impermeable membrane, such as a plastic sheet or tarpaulin, and the edges of the sheet secured so that no amphibians can gain access.
6. If any great crested newt is discovered in the area of the work, then work in that area must stop and a licensed great crest newt worker contacted immediately for advice.

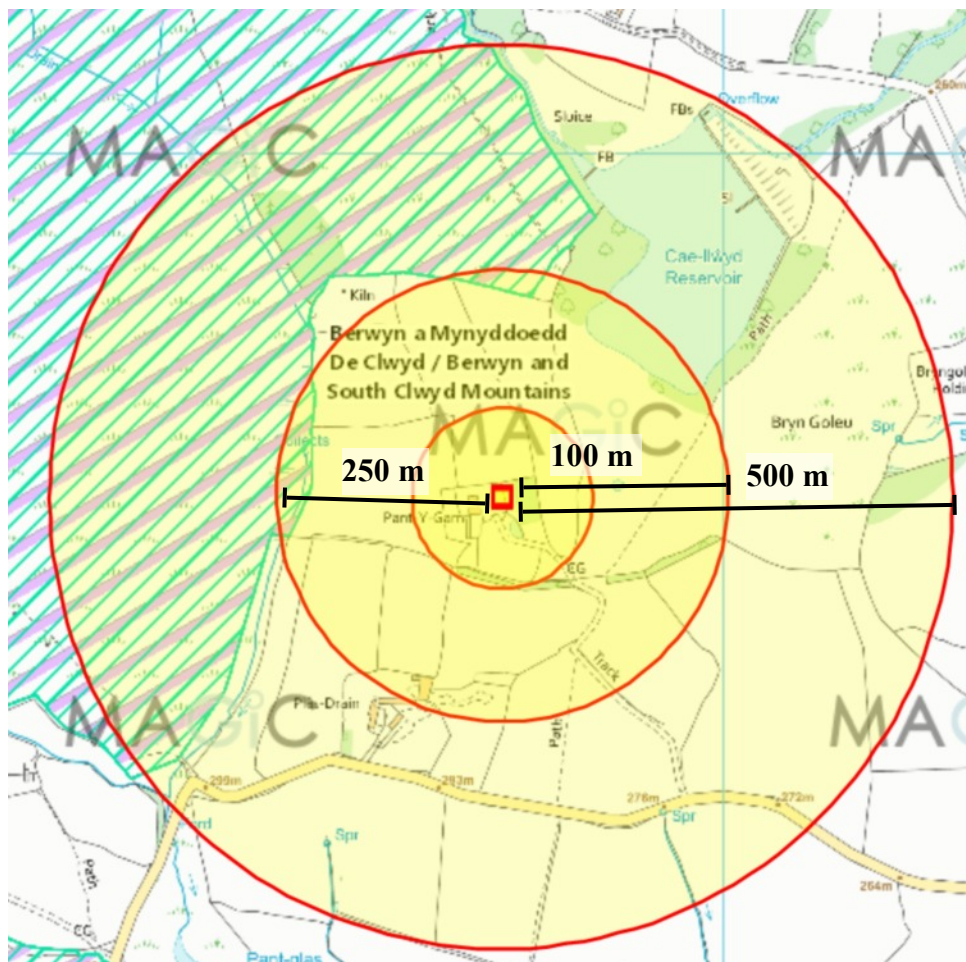
Appendix 13.3: Survey Diagram



Appendix 13.4: OS Location Map



Appendix 13.5: Map Showing Zones of Influence and Designated Sites



Appendix 13.6: Aerial Photograph





Appendix 13.8: Photographs of the Site



Appendix 13.8: Photographs of the Adjacent Land, Nearby Ditch and Pond



Appendix 13.9: Legislation Regarding Great Crested Newts

Wales is home to six amphibian species. They need fresh water in which to lay their eggs or spawn and enough suitable habitat nearby to spend the rest of their year. They have declined in recent decades as ponds have disappeared or become polluted or acidified. Pond restoration and creation (even in gardens) is a great help to amphibian conservation.

All amphibian species spend a large part of their year foraging on dry land, and they need sheltered places to hibernate. Hedgerows and other areas of semi-natural habitat are vital for their survival.

UK legislation:

The most common species are protected from sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). They are:

Common frog, *Rana temporaria*

Common toad, *Bufo bufo*

Palmate newt, *Triturus helveticus*

Smooth / common newt, *Triturus vulgaris*

The legislation protects them from being sold or offered for sale to protect them from exploitation in the pet trade or laboratory use.

European legislation:

Our rarest amphibians are protected under the Conservation of Habitats and Species Regulations 2017 (known as ‘the Habitats Regulations’). The Habitats Regulations lists the following amphibian European Protected Species (EPS):

great crested (or warty) newt, *Triturus cristatus*

natterjack toad, *Bufo calamita*

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,

deliberately take or destroy the eggs of such an animal, or

damage or destroy a breeding site or resting place of such an animal

Disturbance is defined as that which is likely to impair the ability to survive, breed, reproduce, or nurture young, or to hibernate or migrate.

There are other offences relating to possession, transport and sale. See ‘Possession and Sale of Protected Species’ for more information.

The great crested newt and natterjack toad also receive protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) from the following:

disturbing whilst occupying a place of shelter or protection,

obstructing access to a place of shelter or protection,

sale / offering for sale

Licensing for activities involving European Protected Species:

In certain circumstances Natural Resources Wales may issue licences for activities involving European protected species, that would otherwise be offences.

Appendix 13.10: Legislation Relating to

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.