

Oakdale,
Pant Road, Gresford, Wrexham, LL12 8HB

Proposed demolition of existing bungalow and
construction of new dwellings

Bat Survey and Mitigation Plan

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26 June 2018

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1.0 INTRODUCTION

1.1 Background – Gerald Longley

Gerald Longley Ecological Consultants (GLEC Ltd) has been commissioned to undertake a Bat Survey on a bungalow at Oakdale, Pant Lane, Gresford, Wrexham, LL12 8HB (national grid reference SJ3530455149). Gerald Longley has two decades of experience of wildlife surveying and, prior to working as an independent ecological consultant, held posts as Conservation Officer with Montgomeryshire Wildlife Trust and Head of Shrewsbury Countryside Unit.

1.2 Background – This survey

Works to demolish an existing bungalow and construct a new dwelling in its place plus a second new dwelling on the north part of the site are proposed.

The request for this bat survey comes from the client's need to ensure that if the building is being used by protected species, notably bats or nesting birds, their conservation needs are met and the law is not broken.

Under the law, a bat roost is any structure or place used for shelter or protection. "Structure" could be any building, wall, well, cave or mature tree. Bats use many roost sites and feeding areas throughout the year. These vary according to bat age, condition, gender and species, as well as season and weather. Since bats tend to re-use the same roosts for generations, the roost may be protected whether the bats are present or not. A full citation of the law with regard to bats and birds is given in the Appendices.

1.3 Report Summary

Oakdale, Pant Lane, Gresford, Wrexham, LL12 8HB Bat Survey with Mitigation Plan



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A Bat Survey based on Bat Conservation Trust guidelines (BCT, 2016) was carried out by GLEC Ltd at Oakdale, Pant Lane, Gresford, Wrexham, LL12 8HB. The survey consisted of a thorough daytime inspection followed by two evening and one pre-dawn bat activity surveys between 29 May and 26 June 2018. Works to demolish the existing bungalow and construct a new dwelling in its place plus a second new dwelling on the north part of the site are proposed.

Maximum counts of 5 soprano pipistrelle and 1 common pipistrelle bats were recorded roosting in the roof of the bungalow at Oakdale. All numbers are approximate. These surveys establish that Oakdale is a bat roost and the bats' presence is therefore a material consideration for any works or planning application.

The Mitigation Plan approach is to carry out demolition works in the period when bats are least likely to be present (October to April inclusive) and incorporate suitable access and roosting space for the species of bats recorded into the new building to be built into the North part of the garden.

It is recommended that:

1. The presence of roosting bats in the bungalow at Oakdale is a constraint to the proposed works. If works were to go ahead without approved mitigation, it is likely that bats would be negatively affected, especially if works were carried out in the spring or summer.
2. For the works to be carried out, a Mitigation (European Protected Species) Licence with regard to bats will need to be applied for from Natural Resources Wales, once planning consent has been granted.
3. A brief Bat Mitigation Plan, including a Method Statement, has been drawn up and is presented in this report. It includes such matters as:
 - a) Timing of works
 - b) Worker/contractor induction on bat presence.
 - c) Contingency for discovering bats.
 - d) Provision of bat boxes.
 - e) Protection of existing/creation of new bat roosts and entry/exit points.
 - f) Applicant to provide details of the mitigation with their application.
 - g) Monitoring

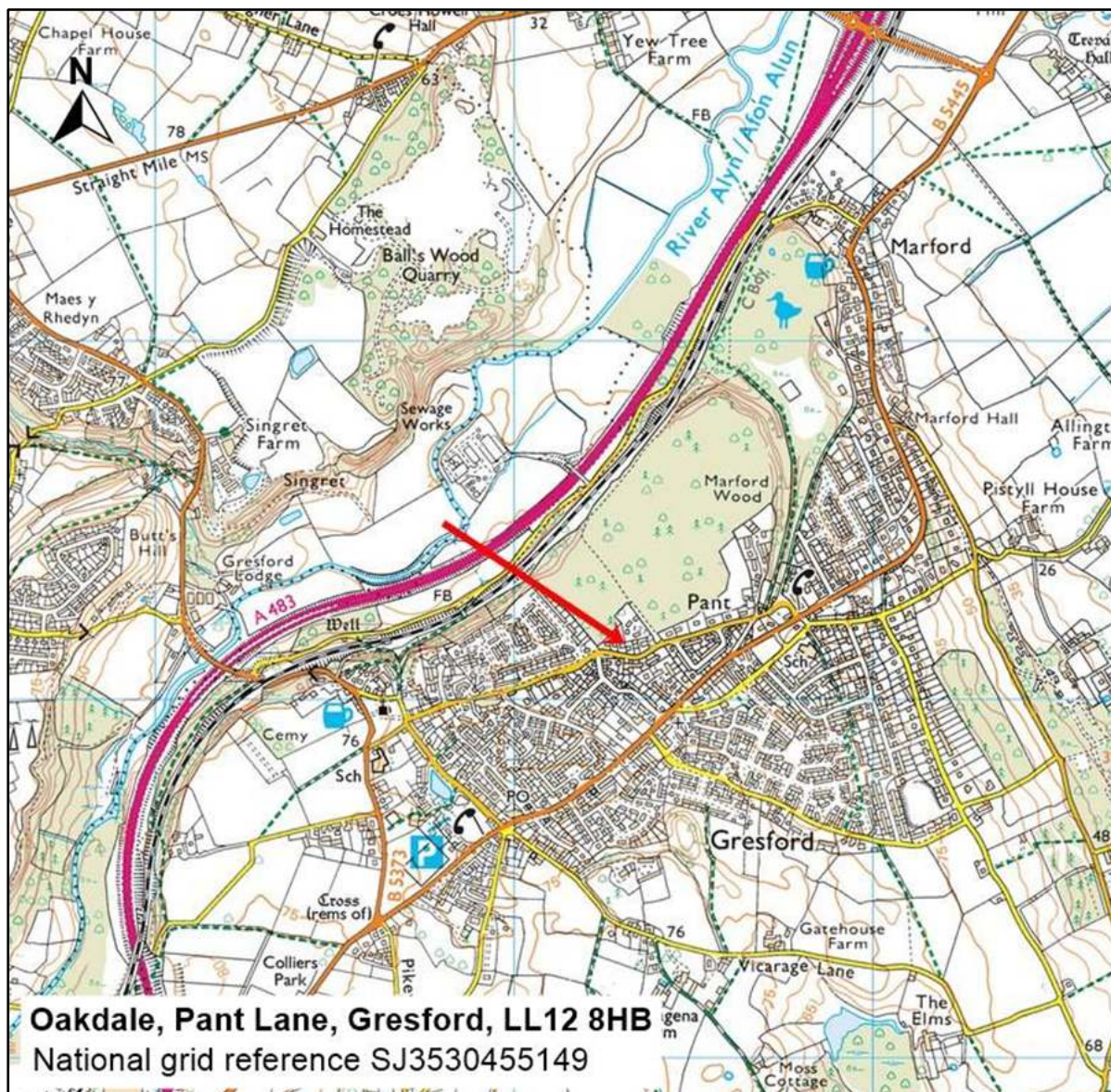
2.0 METHODOLOGY

2.1 Aims of the survey

- To establish the actual or likely presence or absence of bat roosts and/or bat species in the bungalow at Oakdale.
- To establish the presence of any nesting birds in or on the building.
- To make recommendations accordingly.

2.2 Desk Study

The 1:25000 Ordnance Survey map covering the site, and aerial photos accessed from the internet, were scrutinised to initially assess the wildlife value of the proposed development site and surrounding habitat at a crude level. This looked for any semi-natural habitat that may be of value to wildlife, for example ponds, hedges, parkland, wetland, and woodland with interconnecting habitat links. Searches were made on MAGIC and the NBN Atlas for statutory designated sites coincident with or adjacent to the area of search and existing records of the keynote species within two kilometres.



2.3 Site Surveys

Surveys were designed by Gerald Longley using standard techniques based on the guidance and information in the Bat Conservation Trust Bat Survey Guidelines (2016). The surveys of the building consisted of a thorough daytime inspection followed by two evening and one pre-dawn bat activity surveys (not necessarily in that order). See the Appendices for a full list of equipment used. The pre-dawn bat detector survey looked for possible re-entry into the building by bats and the evening activity surveys looked for emergence from the building. The visits also provided checks to assess whether nesting birds used the building. The surveyors were Gerald Longley (Natural Resources Wales (NRW) Licence no. 75004:OTH:CSAB:2017) and Mary Thornton (NRW licence no. 77895:OTH:CSAB:2017).

The external and internal survey of the building included an assessment for potential for nesting birds and bats and a search for evidence, such as pellets, dead bats, prey remains, droppings, urine marks and staining. Close-focusing binoculars were used immediately below potential roost areas. Droppings around the bases of and/or stuck to walls, on shelves, wall plates, purlins, etc. were searched for with the aid of a high-powered torch. Holes and cracks in the walls, purlins, beams etc. and behind any cladding were inspected with the colour video endoscope where they could be safely reached.



3.0 RESULTS

3.1 Desk Study

No specific records of bats were found for the site itself and no statutory protected wildlife sites were coincident with the site.

Recent records (2016 and 2017) for common and soprano pipistrelle, Daubenton's, lesser horseshoe and noctule bats were found for the same 10km grid square as the site. Less recent records (2008 and 1983) for brown long-eared and Natterer's bats were also found for the same 10km grid square as the site.

There were three SSSIs within 2km of the site. They were Marford Quarry SSSI, approximately 0.5km northeast and notified for its rare insects, Vicarage Moss SSSI, approximately 1.1km southeast and notified for its geomorphological and botanical interest as a kettle hole, and Chwarel Singret SSSI approximately 1.3km northwest and notified for its geology.

It should be noted that the lack of records for a particular species in a particular location does not confirm that the species is absent.

3.2 Site Surveys

The building

The single storey 1920s bungalow had solid brick walls with a mix of painted and pebble-dashed render. The wood-framed hipped roof was of slate with clay ridge tiles and torching beneath the slates. The original building had been extended to the north in the same style.

There were potential access points for bats through gaps under the ridge tiles, slates and chimney flashings. Gaps where verge mortar was crumbling and barge boards were broken also offered potential access points for bats. Roof timbers were small with no obvious cracks or crevices and brickwork visible inside the loft was in good condition with no crumbling or missing mortar to create possible hibernation or roosting sites between bricks.

The surroundings

Features of the landscape around Oakdale are shown on the aerial photograph below. Solid yellow lines indicate good habitat connectivity (i.e. vegetation links) and dashed lines moderate habitat connectivity. There was moderately good connectivity along a hedgerow between gardens to the east, and north across the mown lawn of Oakdale to an area of long grass at the rear of the garden and the large area of mixed woodland beyond. The edges of the woodland provided excellent connectivity and foraging habitat. To the south, east and west the wider landscape was the built up area of Gresford; mainly residential properties and gardens. To the north was an extensive area of mixed woodland, Marford Wood, with the A483 road and Shrewsbury – Chester rail line beyond.



Daytime inspection – 29 May 2018

No bats or signs of bats were found on the outside of the building or in the loft space. Timbers in the loft, particularly along the ridges, were covered with cobwebs.

No birds or bird nests were found on or in the building.

First evening survey

29 May 2018 – 20.59 to 22.24 (sunset 21.24 BST)

A warm, dry and bright evening with a light westerly breeze. 19°C. 6/8 oktas cloud cover. The surveyors were placed so as to view all elevations of the building.

At 21.41 a single soprano pipistrelle bat (*Pipistrellus pygmaeus*) (55 KHz) emerged from a gap under roof slates on the east elevation of the extension and flew away to the north across the garden. From 21.56 until 22.02 approximately 4 soprano pipistrelle bats emerged from underneath a ridge tile on the north-south ridge of the extension and made passes around the north and east sides of the building before dispersing to the north.

From 22.02 until 22.10 common pipistrelle bat (*Pipistrellus pipistrellus*) (45 KHz) passes and feeding buzzes were recorded around the north and east sides of the building. No common pipistrelles were recorded emerging from the building.

At 22.15 a single noctule bat (*Nyctalus noctula*) passed overhead.

Total emergence counts for the evening survey:

5 soprano pipistrelle

Dawn survey

13 June 2018 – 03.33 to 04.30 (sunrise 04.44 BST)

A still, mild and cloudy morning. 14°C, 7/8 oktas. The surveyors were placed so as to view all elevations of the building.

From 03.55 until 04.08 common pipistrelle passes around the building were recorded but no bats were seen to enter.

At 03.59 a single noctule bat passed overhead.

Total entry counts for the dawn survey

No entry recorded.

Second evening survey

26 June 2018 – 21.22 to 22.43 (sunrise 21.42 BST)

A warm, still and largely clear evening after a very warm day (30°C). 22°C. 2/8 oktas. The surveyors were placed so as to view all elevations of the building.

From 22.10 until 22.24 a single common pipistrelle bat emerged from under a ridge tile on the north-south ridge of the extension and made passes around the garden before dispersing to the north.

At 22.20 a single noctule bat passed overhead.

Total emergence counts for the second evening survey

1 common pipistrelle

See 8.0 SITE PICTURES for entry and emergence points

3.3 Constraints of this survey

As with all wildlife surveys conducted, the data collected is only a representation of the species and species presence markers found during the actual dates of the survey. There are other seasons and many species are mobile or transitory.

There were no weather constraints. It was dry and calm with temperatures above 10°C for all the survey visits and bats were recorded on each visit.

Evidence for some crevice-dwelling bats, e.g. *Myotis* species, can be difficult to find. Brown long-eared bats are notoriously difficult to pick up on a bat detector as they call very quietly or not at all. They are also difficult to see during evening emergence, as it is getting very dark when they emerge. All counts of bats should be regarded as good estimates rather than precise numbers.

3.4 Interpretation/evaluation of survey results

The bungalow at Oakdale offered potential roosting places for bats among the roof timbers of the loft, under slates, ridge tiles and flashing, behind crumbling verge mortar and behind broken barge boards and soffits. There was good foraging habitat in nearby woodland and this was moderately well connected to the building by unlit hedgerow and garden. From aerial photographs and observation on the ground it was evident that stretches of tall, cherry laurel hedge along the east and west boundaries of Oakdale's garden had been removed and replaced with new wooden panel fences. Three trees visible on the aerial photograph were also no longer present. This removal of vegetation meant the building was less well connected to the good bat foraging habitat in the woodland than it had once been making it less favourable as a roosting place.

Only small numbers of bats were recorded during the surveys. A maximum count of 5 soprano pipistrelle bats was recorded emerging from the building during the first evening survey. No soprano pipistrelle bats were recorded at all during the second and third surveys.

A maximum count of 1 common pipistrelle bat was recorded emerging from the building during the second evening survey. Common pipistrelle passes from two or three bats were recorded during both of the other surveys but no entry or emergence was recorded.

Pipistrelle bats are known to often use more than one roost site during the summer and it was considered that individuals and small groups of non-breeding adult and juvenile common and soprano pipistrelle bats were roosting under the ridge tiles and slates of Oakdale from time to time.

Maximum counts of 5 soprano pipistrelle and 1 common pipistrelle bats were recorded roosting in the roof of the bungalow at Oakdale. All numbers are approximate. These surveys establish that Oakdale is a bat roost and the bats' presence is therefore a material consideration for any works or planning application.

All the bat species recorded and their roosts are legally protected in the UK and all bats are listed as European protected species under the Habitats Directive. In addition, common and soprano pipistrelles are among the eight bat species included on the Welsh list of Species of Principal Importance for the Conservation of Biological Diversity (sometimes called Priority Species).

An assessment of the likely impact of the proposed works on bats if they were to go ahead without mitigation is in section 6 along with an outline Mitigation Plan.

The Mitigation Plan approach is to carry out works in the period when bats are least likely to be present (October to April inclusive) and incorporate suitable access and roosting space for the species of bats recorded into the new building. A European Protected Species (EPS) Mitigation licence will be required from Natural Resources Wales to carry out the works once planning consent has been granted.

4.0 RECOMMENDATIONS

It is recommended that:

1. The presence of roosting bats in the bungalow at Oakdale is a constraint to the proposed works. If works were to go ahead without approved mitigation, it is likely that bats would be negatively affected, especially if works were carried out in the spring or summer.
2. For the works to be carried out, a Mitigation (European Protected Species) Licence with regard to bats will need to be applied for from Natural Resources Wales, once planning consent has been granted.
3. A brief Bat Mitigation Plan, including a Method Statement, has been drawn up and is presented in this report. It includes such matters as:
 - a) Timing of works
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 - c) Contingency for discovering bats.
 - d) Provision of bat boxes.
 - e) Protection of existing/creation of new bat roosts and entry/exit points.
 - f) Applicant to provide details of the mitigation with their application.
 - g) Monitoring

5.0 REFERENCES

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6.0 MITIGATION PLAN

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Bat Survey

Common pipistrelle bat summer day roost (max. count 1 bat)

Soprano pipistrelle bat summer day roost (max. count 5 bats)

Objective: To ensure the bats remain at a favourable conservation status.

Impact assessment (in absence of this mitigation plan)

Proposed works

Works to demolish the existing bungalow and construct a new dwelling in its place plus a second new dwelling on the north part of the site are proposed. Plans described indicate that the new dwellings will have metal clad roofs and wood cladding on the walls.

Short-term impacts: disturbance

Adult and juvenile bats could be killed or abandon their roosts if works to demolish the bungalow start while they are present in spring and summer. The walls in the loft did not offer suitable cracks for bat hibernation so it was considered extremely unlikely that there would be any bats hibernating in cracks in walls that could be killed or injured if works started during the winter.

Long-term impacts: roost modification

The proposed works will result in loss rather than modification of roosts as the existing building is to be demolished.

Long-term impacts: roost loss that is relevant

Roosts under ridge tiles and slates and in the loft will be lost when the building is demolished.

Long-term impacts: fragmentation and isolation

Any loss of linear features such as hedges or tree lines, loss of foraging areas such as woodland and long grass, increased lighting, or severance of flight lines by open spaces would be negative. Some hedgerows and trees close to the building have already been removed and the second new dwelling between the bungalow and the woodland will be in the flight line currently used by bats moving to and from the bungalow.

Post-development interference impacts

The building was in use as a family home at the time of the survey. There will be two dwellings on the site instead of one so there will likely be a doubling in the amount of human and vehicle activity. New lighting on and around the new buildings could have an impact on any roosting, commuting and foraging bats.

Predicted scale of impact

The impact on the individual bats of all species concerned would be high and the impact on the numbers in the locality would be:

Common pipistrelle bat – low

Soprano pipistrelle bat - low

Land ownership – Oakdale is in the ownership of Stephen McKinlay.

Method Statement

Oakdale, Pant Lane, Gresford, Wrexham, LL12 8HB

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Bat Survey

Common pipistrelle bat summer day roost (max. count 1 bat)

Soprano pipistrelle bat summer day roost (max. count 5 bats)

a) Timing of works

Carry out all the works to demolish the existing bungalow to include all roof stripping and taking down of walls in a single period **01 October to 30 April**. Internal fitment works can continue after this period.

The bat mitigation replacement works described below must be built into the new building on a new footprint marked as 'Oakdale House' on the proposed site plan - **by the 30 April in the same year that the demolition of the old bungalow takes place**. The construction of new walls and roofs, installation of any roof and dormer windows, construction of soffits and barge boards, application of any verge mortar, wall cladding, creation of bat access points and installation of built-in bat boxes, any rendering and removal of all scaffolding **must be complete by that 30 April**.

b) Worker/contractor induction on bat presence

Provide a "Tool Box Talk", Method Statement and summary sheet of guidance about bats in old buildings to site owners and all workers/contractors before demolition works begin.

c) Creation of temporary roosts for any bats found during conversion

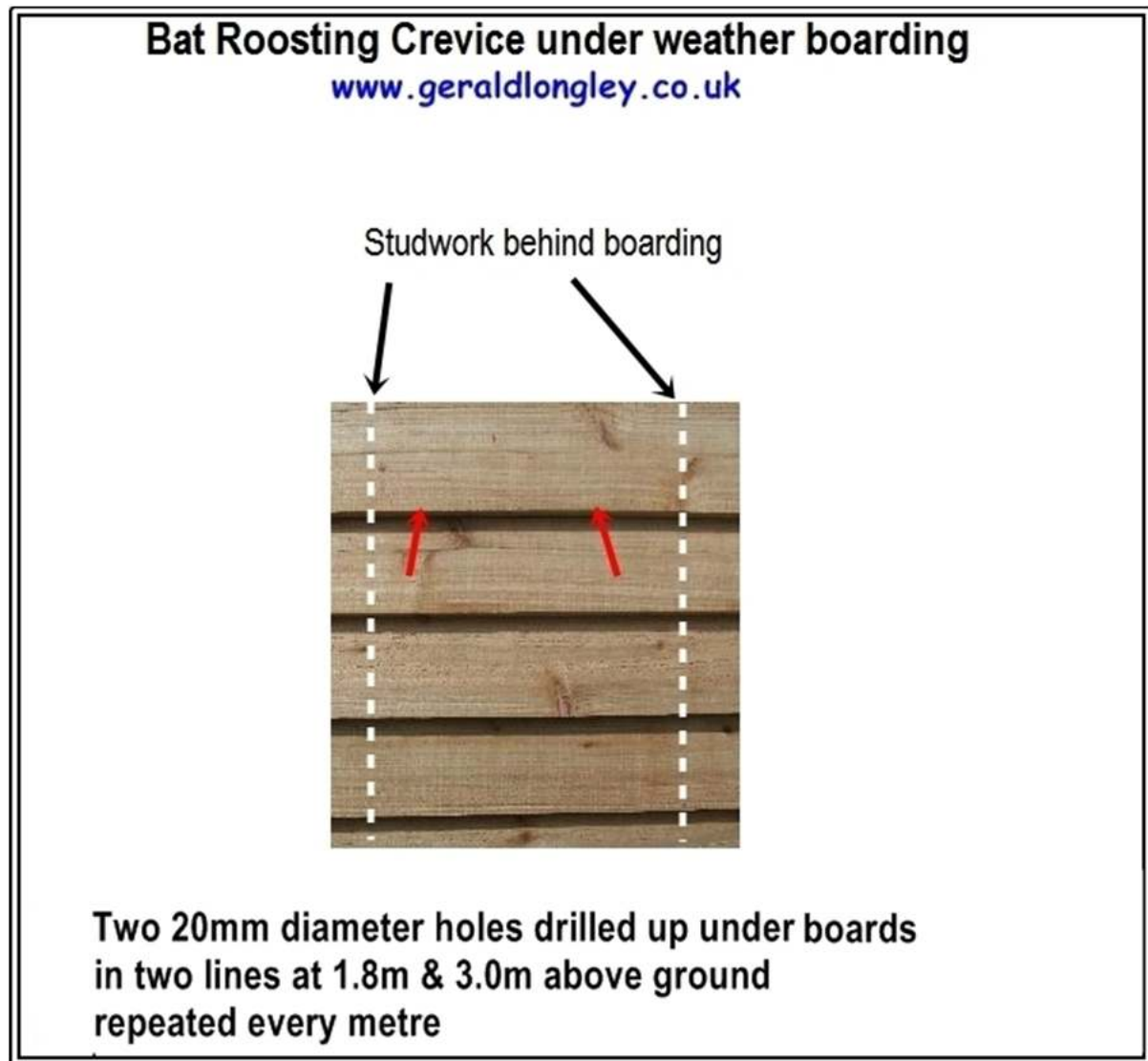
Erect at 3m to 4m height, prior to any works, three untreated timber bat boxes to BCT design, with a slot width 16 - 17mm within 20m of the building. They will be primarily a safe, temporary roosting site for the licensed ecologist to place bats in if any are found at the searches prior to and during the demolition works.

d) Contingency for discovering bats

The licensed bat ecologist will carry out a thorough search of the existing building for bats with an endoscope etc. immediately prior to any demolition work starting and, if bats are found, consider delaying the works until the bats are not present. They will also provide a "watching brief" of work to strip and dismantle the roof and dismantle the top part of the gable walls. This will be by hand. If any bats are found, work will stop and the licensed ecologist will be contacted and will attend the site. Any bats found that do not fly will be released immediately at the site into the bat boxes already erected by the licensed ecologist. If this is not possible they will be rehabilitated at a suitable centre with later release at site.

e) New/existing bat roosting habitat to be provided in new dwelling 'Oakdale House' on the proposed site plan

- (i) The timber cladding will be horizontal only, on battens approx. 50mm deep and will have two lines of holes, 20mm in diameter, at approx. 1m spacing, drilled up vertically at the bottom edge of a cladding board, at approx. 1.8m and 3.0m from the ground on each elevation to allow access for bats behind the cladding into the cavity between battens. See diagram 'Bat Roosting Crevice under weather boarding' below. **The cladding will NOT be lined with breathable felt as bats get trapped in the fibres.**



- (ii) Provide two purpose-designed, wall constructed bat boxes of the integrated eco-bat box type produced by the Nestbox Company. The crevice roosting chamber model is recommended (<https://www.nestbox.co.uk/products/integrated-eco-bat-box>). They will be built into the east-facing wall at over 2.5m height and at least 5m apart.
- (iii) Any new external lighting will meet the requirements of the Bat Conservation Trust Artificial Lighting and Wildlife- Interim Guidance: recommendations to help minimise the impact of artificial lighting (BCT, 2014). A guidance sheet (GLEC Ltd Info sheet 07 Bats and Lighting) can be provided by the ecologist. Security lighting will be motion-sensitive only and on a relatively short timer (<5mins), positioned no higher than 2.5m above ground level, directed downwards only (with no up-lighting of any sort) away from bat roost access points and flight paths and motion-sensitive only to humans and not smaller animals.

f) Providing clear details and connection to Planning Permission/Listed Building Consent

The applicant will provide details of the mitigation with their Planning Application.

g) Monitoring

As the works will take place under an EPS Mitigation licence issued by Natural Resources Wales (NRW) monitoring will be:

- (i) On completion of building and installation of mitigation works, a report including photographs of the mitigation works will be written and sent to NRW by the ecologist Gerald Longley.
- (ii) Two post development bat surveys will be carried out, one in each of the two summers following completion of the works, to establish the presence or absence of bat roosts and/or bat species in the building and make recommendations accordingly. Surveys will include day time inspections and bat emergence/re-entry activity surveys of the building. They will be carried out using standard methodology as per Bat Conservation Trust (2016).
- (iii) Any remedial works identified and required will form part of recommendations made in a report on the post development monitoring of bats to NRW and the licence holder.

7.0 APPENDICES

7.1 Relevant Legislation

Bats – Legislation

All British bat species receive legal protection in the United Kingdom under the Wildlife and Countryside Act 1981 (WCA) (as amended). The WCA 1981 was amended by the Countryside and Rights of Way (CROW) Act 2000. All British bat species are listed under Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which makes it an offence to:

- Intentionally kill, injure or take a bat
- Possess or control any live or dead specimen or anything derived from a bat
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
- Intentionally or recklessly obstruct access to any structure or place which a bat uses for shelter or protection
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell a bat

Bats are also included on Annex IV of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora. As a result of the UK ratifying this directive, all British bats are also protected under the Conservation of Habitats and Species Regulations 2010. It makes it an offence to:

- Deliberately capture or kill a bat.
- Deliberately disturb a bat in such a way as to be likely to significantly affect i) the ability of any significant group of animals of that species to survive, breed or rear or nurture their young, OR ii) the local distribution of that species.
- Damage or destroy a breeding site or resting place of a bat.

Under the law, a roost is any structure or place used for shelter or protection. This could be any structure, for example any building or mature tree. Bats use many roost sites and feeding areas throughout the year. These vary according to bat age, condition, gender and species, as well as season and weather. Since bats tend to re-use the same roosts for generations, the roost may be protected whether the bats are present or not.

Birds - Legislation

Under Section 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally kill, injure, handle or remove any wild bird (with the exception of a few pest species); take or damage a nest whilst in use or being built; and take or destroy eggs. A person is not guilty of any offence if their action was the incidental result of a lawful activity and could not have been reasonably avoided.

A higher level of protection is afforded to those birds listed in Schedule 1 of the Act. It is an offence to disturb Schedule 1 species whilst it is building or sitting on a nest, in addition to damaging or destroying their nests or eggs.

It is not an offence to disturb non-Schedule 1 species whilst they are building a nest or sitting on it. However, an offence may be committed if the bird is driven away from a nest by prolonged disturbance which results in the failure of eggs or death of dependent young.

7.2 Field equipment used for the survey:

Escort mini temperature data logger
Silva compass
Leica 8 x 42 close-focusing binoculars
Cluson Clubman 1 Million candle-power lamps
Access Cam Pro-Sight colour video endoscope (1m probe).
Telescopic mirror
Suunto clinometer
3.8-metre extendable ladder
8m extendable ladder
Anabat SD2 bat detectors with GPS and HP iPaq PDAs (active monitoring)
AnalookW v3.7w (bat data analysis software)
Anapocket v2.5b (bat data analysis software)
Kaleidoscope v1.12 (sound analysis software)
Batbox Duet bat detector (frequency division and heterodyne bat detector)
SSF2 Bat – bat detector
Two-way radios

8.0 SITE PICTURES



