

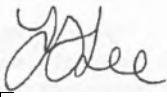
DAVID CLEMENTS ECOLOGY LTD

PONTYGWAITH FARM, TREHARRIS

BAT SURVEY REPORT

July 2021

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SUMMARY

This report has been prepared by David Clements Ecology Ltd (DCE) on the instructions of Thora Walton and John Stephens. It sets out the results of bat surveys carried out at Pontygwaith Farm, Treharris (ST 08071 97661).

The current site consists of a stables block, which is attached to a farmhouse. The building lies northeast of Treharris in a rural location. The site sits between the A470 and A4054. The River Taff is situated within 20m of the site. The surrounding habitat provides good foraging habitat for bats, with good connectivity to the river corridor and large areas of woodland.

Proposed development plans for the site comprise conversion of the stables into holiday letting accommodation. Currently no works are planned for the main farmhouse building.

There are no existing bat records from the site itself, but there are various records for roosts, foraging and commuting within 2km of the site for several bat species. The data search returned a small number of records of roof nesting birds within 600m.

A preliminary bat roost and nesting bird assessment was previously conducted by Acer Ecology (2021) where bat droppings, indicative of brown long-eared bat, were found in the main farmhouse building. Acer Ecology found evidence of nesting birds within the stables which included two defunct swallow nests and a further undetermined nest.

Two dusk emergence surveys were undertaken by DCE in May and June 2021 of the stables building only. A single soprano pipistrelle bat was seen to exit the building on the southern elevation, from under a lifted tile. The stable building is therefore assessed as being a summer day roost for individual/low numbers of soprano pipistrelles. No further nesting bird activity was observed during either flight survey or during a daytime site inspection.

Works will require a derogation licence from NRW, along with detailed mitigation. Appropriate mitigation and enhancement measures are recommended.

1.0 INTRODUCTION

- 1.1 This report has been prepared by David Clements Ecology Ltd (DCE) on the instructions of Thora Walton and John Stephens. It sets out the recommendations following a previous survey conducted by Acer Ecology of Pontygwaith Farm, Treharris (ST 08071 97661). The site location and context is shown at Plan 1 (Acer Ecology 2021).
- 1.2 The current site consists of a stables block, which is attached to a farmhouse. The building lies north-east of Treharris in a rural location. The site sits between the A470 and A4054. The River Taff is situated within 20m of the site. The surrounding habitat provides good foraging habitat for bats, with good connectivity to the river corridor and large areas of woodland.
- 1.3 The current development plans for the site propose conversion of the stables only into holiday letting accommodation. Currently no works are planned for the main farmhouse building. At the time of the previous report (Acer Ecology 2021), additional development of the site was planned and further surveys for reptiles and great-crested newt were recommended in light of this. There are no current plans in place for new building work in the area immediately surrounding the building, but in order to establish whether great-crested newt (GCN) is present in either of the ponds on the wider site, an eDNA survey for GCN was carried out by DCE in May 2021. Both ponds tested negative for GCN, so it unlikely that this species is present on the site (DCE 2021).
- 1.4 A previous preliminary bat and roof nesting bird survey conducted by Acer Ecology on 10th December 2020 found evidence of bats roosting in the main section of the farmhouse building, and nesting birds in the stables.
- 1.5 The remainder of this report sets out the results of bat flight survey work undertaken in 2021 at the site. It also assesses the likely impact of the proposed works on bats and nesting birds and makes recommendations regarding appropriate mitigation for any potentially adverse biodiversity impacts.

1.6 Designated Sites of Biodiversity Interest

Statutory Sites

- 1.6.1 The site does not contain or lie immediately adjacent to any statutory sites of nature conservation interest such as Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) or Local Nature Reserves (LNRs). There are no sites designated for bats within 10km of the site.

Non-Statutory Sites

- 1.6.2 A search for non-statutory sites was not undertaken owing to the small size and extent of the site.

1.7 Statutory Position and Background Information

- 1.7.1 Bats are flying insectivorous mammals. There are about 17 species resident in Britain which vary from comparatively common and widespread species (eg the pipistrelles¹, brown long-eared bat) to internationally rare and endangered species (eg the horseshoe bats). Bats do not make nests but have ‘roosts’, which may be solitary or gregarious. Individual bats require a range of different roosting sites for differing purposes: in the summer, for example, daytime roosts in buildings and trees may be used, whilst for winter hibernation roosts in locations such as humid caves, basements or deep within the fabric of stone built structures are preferred. Other roosts may be used at various times for the rearing of young, mating and as temporary feeding perches etc.
- 1.7.2 All bats and their roosts require strict protection under the EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC; the ‘Habitats Directive’), which is implemented in the UK via the Conservation of Habitats & Species Regulations 2017 (the ‘Habitats Regulations’)². Some additional protection against disturbance is also conferred under the amended Wildlife & Countryside Act 1981. Bats are listed under the Bern Convention on the Conservation of European Wildlife and Natural Habitats and also under the Agreement on the Conservation of European Bats 1992 (the ‘Eurobats Agreement’), signed within the framework of the Bonn Convention on the Conservation of Migratory Species of Wild Animals 1979.
- 1.7.3 All bats are listed in Annex IV of the EC Habitats Directive, and the British species are listed on Schedule 2 of the Habitats Regulations 2017, and are therefore designated ‘European Protected Species’ by the latter. Such species are subject to enhanced protection and more stringent licensing provisions than those which are protected under the Wildlife & Countryside Act alone.
- 1.7.4 Both the animals themselves and any structures or places used for breeding or shelter are fully protected against both intentional or unintended but ‘reckless’ disturbance or harm, the latter irrespective of whether or not bats are present in them at the time. Where works are allowed to affect such places there is a legal requirement to obtain a licence (or ‘derogation’) in advance and to ensure that the works do not result in any avoidable harm to bats. The bats should also enjoy continued ‘favourable conservation status’ once the works are completed, through the incorporation of suitable mitigation and enhancement measures.

¹ ‘Pipistrelle bats’ are now known to comprise an aggregate of two distinct species which can be distinguished in the field by their echolocation calls. These species are identified as ‘common pipistrelle’ and ‘soprano pipistrelle’ respectively. Both species are comparatively common and widespread in the UK.

² The European legislation cited herewith is that which was applicable at the time of survey, but it should be noted that new arrangements have become applicable after 31 Jan 2020 as a result of ‘Brexit’. At the time of writing these comprise a continuance of the current legal and protection arrangements by means of Statutory Instrument No. 579 (*The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations*, 2019) but the longer term arrangements which will apply after the end of the Brexit ‘Transition Period’ are still to be confirmed and may differ in detail from those which previously applied.

- 1.7.5 The issuing of licences which allow the disturbance of European Protected Species by development, or for any other reason, is the responsibility of Natural Resources Wales (NRW). The licensing restrictions are considerably more onerous than those of the Wildlife & Countryside Act and could potentially have significant impact on the viability of a given development proposal, irrespective of whether or not a valid planning consent has been obtained. Further details on the procedures are set out in TAN 5 (WAG 2009).
- 1.7.6 All species of bat in Britain are believed to be declining in range and numbers, with about half of the resident species classed as ‘rare’ and three classed as ‘endangered’ (Morris 1993; Richardson 2000). Several species of bat are listed as priorities for conservation on Section 7 of the Environment (Wales) Act 2016³.
- 1.7.7 Some of the rarest bat species in Europe, including the horseshoe bats, barbastelle, Bechstein’s bat and greater mouse-eared bat, are additionally listed on Annex II of the Habitats Directive. This requires the EU nation states to designate key areas of habitat used by these species as Special Areas of Conservation (SACs), and to implement policies to conserve and enhance their populations through appropriate management etc. These species are accorded enhanced conservation significance in the UK, although they are not subject to any additional protection measures.

Derogations

- 1.7.8 Amongst other things, the Habitats Regulations make it an offence to:
- capture or kill;
 - disturb;
 - take or destroy eggs or young, or;
 - damage or destroy a breeding site or resting place of;
- a European Protected Species, except under certain narrowly defined circumstances. New developments which would contravene the protection afforded to such species require derogation, in the form of a licence, from the Habitats Directive which must be issued by NRW.
- 1.7.9 Before such a licence can be issued, NRW must be satisfied that:
- the derogation would not be detrimental to the ‘favourable conservation status’ of populations of the species concerned within its natural range.
 - the derogation is in the interests of public health and public safety, or for other imperative reasons of over-riding public interest, including those of a social or economic nature, or will have beneficial consequences of primary importance to the environment.
 - there is no satisfactory alternative to the derogation which would allow the

³ In Wales the s.7 list of the EWA 2016 supersedes the s.42 list of the Natural Environment & Rural Communities Act 2006, which in turn replaced the ‘Priority Species’ lists of the UK Biodiversity Action Plan.

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development to proceed but which would avoid, or reduce, the need for adverse impact to the species.

- 1.7.10 Failure to obtain a derogation would render any actions which cause harm or disturbance to bats illegal, including any activities which might be undertaken under a valid planning consent. The possession of planning consent in no way alleviates or over-rides the requirements of the Habitats Regulations, and neither does it automatically ensure that a derogation may be obtained.
- 1.7.11 Current planning guidance in Wales requires that local planning authorities are in possession of all of the survey information which is necessary in order to determine the probability of impact to European Protected Species, and the likely viability and success of any required mitigation measures, before determining any given planning application. As of 1 October 2008, planning authorities cannot register a new planning application until all of the necessary survey information has been made available. NRW will not consider any application for licences in relation to a proposed development until after it has received notice of the planning consent.

Nesting Birds

- 1.7.12 Almost all species of birds native to the British Isles are afforded at least some level of statutory protection under the Wildlife & Countryside Act 1981, the only exceptions being a handful of pest and game species which may be killed under certain specified and licensed conditions. In the great majority of cases, birds are protected against injury or killing, and this protection extends to their nests, eggs and young. Certain rare species, which include barn owl, are subject to enhanced protection against disturbance whilst nesting, by virtue of their listing on Schedule 1 of the Act.
- 1.7.13 The protection of common nesting birds (ie those not listed on Schedule 1) typically applies only to the animals themselves and to the site of their nests *whilst they are in use*. The nesting site *per se* is not protected once nesting has ceased and the nest is no longer occupied by the adults, eggs or young. More stringent regulations may apply to the nesting sites of Schedule 1 species, however.

2.0 APPROACH AND METHODS

2.1 Survey Methodology

Bats

2.1.1 Flight surveys were undertaken in accordance with the BCT good practice guidance (2016). Dusk emergence surveys were undertaken on the 19th May and 23rd June 2021. Three surveyors were stationed around the building. All surveyors were equipped with Anabat SD1, SD 2 frequency-division bat detectors or Peersonic RPA3 full spectrum detectors, supplemented by a mixture of Petterson D200 and BatBox duet heterodyne detectors. Bat calls were logged and recorded to SD cards for subsequent analysis using the AnalookW software (Corben, 2006) and Kaleidoscope software.

2.1.2 Works are proposed for the stables section to the southwest end of the building only, therefore dusk emergence surveys were carried out on the affected elevations only and surveys were not undertaken of the parts of the building that will be unaffected by the proposed works.

2.2 Data Trawl

2.2.1 In addition to original survey, a data trawl was carried out with the Southeast Wales Biodiversity Record Centre (SEWBReC) in order to obtain access to any existing ecological information or records from the site. SEWBReC is the main repository for biodiversity and wildlife records in the south-east Wales region. Relevant records are referred to in the text.

2.3 Survey Constraints

2.3.1 The current surveys were undertaken in the recommended time period and under appropriate weather conditions; therefore the survey was not considered to be constrained in this respect.

3.0 SURVEY RESULTS

3.1 *Data Trawl*

- 3.1.1 No records for bats or birds were recorded for the site itself, nor were any sites designated for bats located within the vicinity.
- 3.1.2 Several bat roost records were returned with the data trawl within 2km of the site, with the closest situated approximately 120m away, where an undetermined bat species was found in a roof. A record also exists for a possible maternity roost of a pipistrelle bat species located 1.5km away from the site. Another significant roost record exists for an undetermined bat species about 1.8km away, where over eighty bats were noted to be roosting in an attic. Other roost records include Natterer's bat, brown long-eared bat, Daubenton's bat, soprano pipistrelle, and common pipistrelle (LERC reference: 0201-842).
- 3.1.3 Records for bat foraging and commuting were also included in the data trawl, the closest of which pertains to soprano pipistrelle documented approximately 140m away from the site. Nathusius' pipistrelle has also been recorded around 1.9km from the site. Other foraging/commuting records include whiskered bat, Natterer's bat, noctule, Daubenton's bat, brown long-eared bat, common pipistrelle, and undetermined myotis species (LERC reference: 0201-842).
- 3.1.4 There are several records for roof nesting birds within 500m of the site, which includes peregrine falcon, a 'Schedule 1' species, and spotted flycatcher, a 'Section 7' species. Other records returned with the data trawl within 600m of the site include swallow, swift, great tit, pied wagtail, blue tit, and redstart (LERC reference: 0201-842).

Bats

3.2 *Building Inspection*

- 3.2.1 The previous ecological assessment identified bat droppings indicative of brown long-eared bat within the main farmhouse building. For a detailed description of the building inspection survey results refer to Acer Ecology (2021).

3.3 *Flight Surveys*

19th May 2021 Emergence Survey

- 3.3.1 A dusk emergence survey was completed on 19th May 2021. Three surveyors were positioned around the building. The weather conditions were dry, calm and clear. Temperatures were approximately 11°C at the start of the survey and sunset was at 21:05.

- 3.3.2 No bats were seen emerging from the stables building; however, at least 5 soprano pipistrelles were observed exiting from the western elevation of the farmhouse at 20:55. The bats exited from a point directly above the security camera at the roof apex, above the front entrance to the farmhouse. Bat activity levels during the survey were generally low, with common pipistrelle, soprano pipistrelle and noctule recorded commuting or foraging. See Plan 1 for further details.

23rd June 2021 Emergence Survey

- 3.3.3 A second dusk emergence survey was completed on 23rd June 2021. Three surveyors were positioned around the building. The weather conditions were dry with light wind and 100 % cloud cover. Temperatures were approximately 14°C at the start of the survey and sunset was at 21:35.
- 3.3.4 A single pipistrelle bat emerged at 21:30 from under a lifted tile on the south elevation of the stables block. This bat did not appear to echolocate on emerging, but then flew round to the west elevation, where it was recorded echolocating and confirmed as a soprano pipistrelle. No other bats were recorded emerging from the stables or the farmhouse during the survey. Bat activity levels were moderate-high, with frequent noctule, common pipistrelle and soprano pipistrelle recorded foraging or commuting. See Plan 1 for further details.

3.4 Nesting Birds

- 3.4.1 Two old swallow nests and another unidentified nest were found inside the stables building during the previous ecological assessment (Acer 2021). A daytime site inspection was carried out on 14th May 2021; no further evidence of nesting birds using the stables was found. Eleven bird species were recorded on the wider site, including sand martin. Bullfinch, blackbird, great tit, wren, blackcap, song thrush and goldfinch. Canada goose, moorhen and mallard were noted in and around the large pond.
- 3.4.2 No birds were seen entering the stables buildings during the two dusk emergence bat surveys, but several swifts were seen foraging overhead.

4.0 ASSESSMENT OF DEVELOPMENT IMPACTS

4.1 Bats

- 4.1.1 Plans for the site involve the conversion of the stables for holiday let accommodation. The present survey indicates that individual/low numbers of soprano pipistrelle use the stables section of the building for summer day roosting. No evidence was found of other species, such as brown long-eared bat, using the stables for roosting.
- 4.1.2 Any works to the building will require a derogation licence from Natural Resources Wales which will include a detailed method statement and mitigation provisions.
- 4.1.3 Given that individuals of a common species are present, it is considered that the loss or alteration to the building can easily be mitigated/compensated for within the site.

4.2 Nesting Birds

- 4.2.1 There is no evidence that nesting birds are currently using the building, although old nests of swallow and possibly other species were found in the stables. It is likely that various roof nesting birds continue to use the building on occasion, including swallow. There is no evidence of any Schedule 1 species, such as barn owl using the site.
- 4.2.2 All nesting birds are afforded protection under the Wildlife & Countryside Act 1981 (as amended), and therefore the presence of nesting birds must be taken into account when carrying out demolition and conversion works. No further bird surveys are considered necessary, although a precautionary approach to works is advised and replacement of any nesting sites that are destroyed should be mitigated using nest boxes (see Section 5.2 below).

5.0 RECOMMENDATIONS

5.1 Bats

- 5.1.1 The use of the building by bats is confirmed. It will be necessary to obtain a licence from NRW to carry out the works. The obtaining of this licence will require the formulation of a detailed method statement and mitigation provisions. Derogation licences can only be obtained where detailed planning consent is in place and will require the submission of a detailed method statement based on the actual redevelopment/refurbishment details. The following aspects are likely to be included in the method statement.
- 5.1.2 Works should ideally be undertaken during the autumn months (September to October), so as to avoid the bird nesting season (March to August inclusive) and to avoid sensitive periods for bats (maternity and hibernation).
- 5.1.3 All on site contractors will receive a toolbox talk from a suitably experienced bat ecologist covering the legal protection of bats and working methodologies to be used. An appropriately licenced and experienced ecologist will supervise works of high sensitivity to bats.
- 5.1.4 Temporary mitigation features should be installed to house any bats displaced by the works. This is likely to consist of one or more bat boxes being installed on suitable trees nearby. Should any bats be found during the works, they can be moved by the supervising ecologist to the bat boxes.
- 5.1.5 Consideration should be given to providing further opportunities for bats to roost on any new buildings through the provision of appropriate bat-boxes on the exterior walls, such as Schwegler 1FR bat tubes (or similar design). These should ideally be incorporated into the wall structures in suitable locations, and should be of woodcrete or ABS plastic construction, rather than timber. Suitable examples are shown at Appendix 1.
- 5.1.6 To provide ecological enhancement following the works, consideration should be given to the erection of additional bat roosting boxes in suitable trees around the site. All bat boxes should be sited in such a manner that predators such as cats cannot reach them, and be at least 4m (preferably 5m) above ground level. The entrances to bat boxes should not be illuminated at night. Bat boxes should ideally be of 'woodcrete' construction (such as those manufactured by Schwegler Ltd), since these are much more robust and longer-lived than traditional wooden boxes and require less after-maintenance. Further examples are given at Appendix 2
- 5.1.7 Should any tree works be necessary, as part of the development, it is recommended that a bat survey of the trees is undertaken prior to any tree works. Any tree works should be undertaken outside the nesting bird season (March- August inclusive) to minimise the risk to nesting birds (see Section 5.2.1, below).
- 5.1.8 Should any new roof lining be installed, it must be of a hessian matrix bituminous Type 1F roofing felt only. No breathable roofing membranes are to be used anywhere within the building.

- 5.1.9 Any new lighting scheme within the newly developed site must be designed in liaison with an ecologist, following the advice set out by BCT (2018).

5.2 **Nesting Birds**

- 5.2.1 Works affecting the buildings or trees of the site must have regard to the possible presence of nesting birds. The bird nesting season runs approximately between March and August inclusive, and therefore it is recommended that any building work, felling or tree-works are undertaken outside of this period. Undertaking works outside the bird nesting season minimises the risk of causing avoidable harm or disturbance to nesting birds, which is a statutory obligation. If this timing is not possible, however, then the works must be preceded by a survey by an appropriately qualified person to ascertain that no nesting birds are present.
- 5.2.2 In the event that nesting birds are found to be present during works, all works in the immediate vicinity must cease immediately and appropriate expert advice sought as a matter of urgency. The 'immediate vicinity' would comprise any nesting bird-occupied void in its entirety, plus an area of at least 5m radius around the find site. Nesting birds must not be harmed or disturbed, and should be left undisturbed until the young have fledged. This is a statutory requirement.
- 5.2.3 As with bats (above) consideration should be given to the incorporation of bird-boxes on the developed site, either on the new buildings or on any suitable trees in the vicinity. Suitable examples are shown at Appendix 2.

6.0 REFERENCES

Acer Ecology (2021) *Pontygwaith Farm, Treharris, Preliminary Bat Roost and Nesting Bird Assessment and Walkover Survey of Area Proposed for New Store*. Acer Ecology, Cardiff.

Bat Conservation Trust (BCT 2016) *Bat Surveys for Professional Ecologists. Good Practice Guidelines, 3rd Edition*. Bat Conservation Trust, London.

Bat Conservation Trust (BCT 2018) *Bats and Artificial Lighting in the UK Guidance Note. Bats and the built environment series*. Bat Conservation Trust, London.

Chartered Institute of Ecology and Environmental Management (2013) *Guidelines for Preliminary Ecological Appraisal*. CIEEM, Winchester.

David Clements Ecology (DCE 2021) *Pontygwaith Farm, Treharris eDNA Survey for Great-Crested Newt*. DCE. Unpublished Results.

Site Photos (July 2021)



1) South Elevation of Stables building



2) North elevation adjoined to farmhouse



3) North/ West elevation



4) Bat emergence point on south elevation

APPENDIX 1: INTEGRATED BAT AND BIRD BOX DESIGNS

Suitable for rendering over, leaving just the entrance exposed



Schwegler 1FR



Schwegler 1FE



Schwegler 1WI
(Hibernation box)



ACO Integrated

Brick or custom-faced boxes



Habibat Custom Face
(Can have any facing)



BirdBrickHouse
Brick-faced bat box

Wall cavity boxes



Ibstock Type B



Ibstock Type B
(Small)



Wildex Wall Cavity
(Large)



Wildex Wall Cavity
(Small)



Vivara Pro
Woodstone Built-in

Exposed at surface



Schwegler 27



Ibstock Type C

APPENDIX 2: BIRD AND BAT BOXES FOR TREES

EXAMPLES OF NON-INTEGRATED BIRD BOXES FOR TREES AND BUILDINGS

Suspended Designs



Schwegler 1B
General box



Schwegler 2H open-front
'robin' box



Schwegler 5
'large owl' box



Schwegler 1CGA
'small owl' box



Schwegler 20
'starling' box



Schwegler 28 'kestrel' box



Schwegler 5KL 'nuthatch' box

Surface-mounted Designs



Schwegler 1MR general box



Vivara Pro open-front
'robin' box



Vivara Pro ova open-front
'robin' box



Vivara Pro 'starling' box



Vivara Pro 28/32mm
general box



Vivara Pro 28/32mm
oval general box

EXAMPLES OF SURFACE-MOUNTED BAT BOXES

Tree-mounted boxes



Schwegler 2F General Box



Schwegler 1FD Nursery Box



Schwegler 1FS Nursery Box (Large)



Schwegler 1FW Winter Box
(Very large box)



Schwegler 2FN
Noctule Box



Schwegler 2F DFP
Daubenton's Bat Box



Miramar General Box

Tree or building-mounted boxes



Schwegler 1FF General Box



Schwegler 1FQ Decorative Box



Schwegler 1FFH General Box



Vivara Woodstone Low Profile Box



NHBS Cavity Box
(Brown Long-Eared Bat Box)



NHBS Crevice Box

Plan 1: Bat Flight Survey Results

Pontygwaith Farm, Treharris
(19th May 2021 & 23rd June 2021)

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Key



Surveyor position



Building surveyed



Building not surveyed



Flight line
(Soprano pipistrelle)



Flight line
(Common pipistrelle)



Flight line (Noctule)



Foraging area
(Soprano pipistrelle)

