RESULTS OF FURTHER BAT SURVEY WORK

on

KENYN PEDER, BOUNDER TREATH, COVERACK, CORNWALL

May and July 2023

Wheal Grey Ecology Ltd
Admiralty House, 2 Bank Place,
Falmouth, Cornwall. TR11 4AT

Email: info@whealgreyecology.co.uk
Web: www.whealgreyecology.co.uk
Tel: 01326 761092 [redacted]

RESULTS OF FURTHER BAT SURVEY WORK ON KENYN PEDER, BOUNDER TREATH, COVERACK, CORNWALL

O.S. Grid Ref:	SW 78061 18894
Survey dates:	Emergence surveys –30th May and 17th July 2023 Remote Detector survey – 30th May to 6th June 2023
Lead Surveyor:	Simon Barnard BSc (Hons) MSc CEcol MCIEEM Class Survey Licence Reg. Nos. 2017-32208-CLS-CLS (Level 3) & 2015-13541-CLS-CLS (Level 4) Barn Owl Class Survey Licence CL29/00170
Time spent on site:	2 x (3 x 1 ¾ hours) – Emergence surveys 2 x ½ hour to deploy and collect remote detector
Taxonomic groups covered:	Bats
Report author:	Simon Barnard BSc (Hons) MSc CEcol MCIEEM
Filename & issue number:	FB_Kenyn Peder, Coverack_Final 1
Report for:	Mr & Mrs Measham
Report No:	22-311/PC/Kenyn Peder, Coverack_FB
Report completed:	9th September 2023

Report Sign off

Document checked and approved for issue by:	Debra Barnard MBBCh Director
Signature:	[redacted]
Date:	11th September 2023

1. SUMMARY

Wheal Grey Ecology Ltd was instructed by Mr & Mrs Measham to carry out further bat survey work on a detached dwelling known as Kenyn Peder, Bounder Treath, Coverack, Cornwall. The proposal is to apply for planning permission to add a second storey to the main part of the house.

A visual survey was carried out by Wheal Grey Ecology Ltd on 26th October 2022. During this survey a number of small accumulations of bat droppings, with light scatterings elsewhere, (believed to belong to Brown Long-eared bats) were found to be present on top of insulation or boarding within the roof void over the house. This indicates that this roof void either is or has recently been used by small numbers of day roosting Brown Long-eared bats. Externally there are a number of vented ridge tiles with openings in the felt below which create potential access for bats into the ridge tunnels and roof void below. As a result, as all the features will be lost, further survey work was recommended. The further survey work was to take the form of a pair of emergence surveys, using three surveyors, and the deployment of a remote detector into the roof void for 7 consecutive nights.

The results of the further survey work have shown that the building is used for day roosting by single Common Pipistrelles and Whiskered bats and by small numbers of Brown Long-eared bats. The proposal is to apply for planning permission to add a second storey to the main part of the house.

The proposal will result in all the existing roosting sites being permanently destroyed.

As the works will result in all of the existing roosting sites being destroyed, and with any bats present being disturbed, a Bat Mitigation Licence from Natural England will need to be obtained, prior to works commencing. As there are only small numbers of three common species the site should qualify to be registered under the Bat Mitigation Class Licence. The site registration can only be submitted once planning has been granted and works cannot commence until the licence is in place.

As the proposed works will result in all the existing roosting sites being destroyed replacement roosting sites will need to be created onsite to ensure the conservation status of bats on the site is maintained. This should take the form of building at least three integrated bat boxes into the extended dwelling at 1st floor eaves height, away from windows. One should be built into south eastern elevations, one into the south western elevations and the last into a north facing elevation. In addition, it would be desirable to create a new bat loft 1.8metres high, 4 metres wide and 4 metres deep accessible via a lead crawl-in access slate built into the slope of the roof. The underside of the roof in this area would need to be lined with bitumen based type 1F roofing felt. In discussions with the client it was proposed that this could be incorporated into the roof space of the garage.

The stripping of the roof will need to be done carefully under the direct supervision of the named ecologist to ensure no bats are harmed when this work is carried out and allow any bats found to be caught and relocated out of harms way into bat boxes erected onsite. A pair of bat boxes will also need to be erected onsite shortly before the works commence, to provide alternative roosting sites for the duration of the works and a safe place to relocate any cavity roosting species of bats found.

As no evidence of the use of the building by breeding bats was found and the building does not support features likely to be used by hibernating bats, works could commence at any time of year.

2. INTRODUCTION AND BACKGROUND

Wheal Grey Ecology Ltd was instructed by Mr & Mrs Measham to carry out further bat survey work on detached dwelling known as Kenyn Peder, Bounder Treath, Coverack, Cornwall. The proposal is to apply for planning permission to add a second storey to the main part of the house.

A visual survey was carried out by Wheal Grey Ecology Ltd on 26th October 2022. During this survey a number of small accumulations of bat droppings, with light scatterings elsewhere, (believed to belong to Brown Long-eared bats) were found to be present on top of insulation or boarding within the roof void over the house. This indicates that this roof void either is or has recently been used by small numbers of day roosting Brown Long-eared bats. Externally there are a number of vented ridge tiles with openings in the felt below which create potential access for bats into the ridge tunnels and roof void below. As a result, as all the features will be lost, further survey work was recommended.

The further survey work was to take the form of a pair of emergence surveys, using three surveyors, and the deployment of a remote detector into the roof void for 7 consecutive nights. The further survey work can only be undertaken during the active bat survey season, May to September, with at least one of the surveys being undertaken during the peak survey period before the end of August. The surveys should be undertaken at least 3 to 4 weeks apart.

2.1. Description of buildings

The building subject to this survey is a detached L-shaped bungalow set in the centre of a large garden with a projecting extension to the south east and a double garage built onto its north eastern end. The building is built from rendered blockwork and has a hip ended slate covered roof with clay ridge tiles, see photos 1, 2 and 3.

Photo 1. Showing the house from the south west

Photo 2. Showing the house from the south east

Photo 3. Showing the house from the west

Internally there is a single L shaped roof space over the building which is partially divided into more open and more cluttered sections by heavy cross braced trusses, see photo 4. There is a second roof space over the garage which is partially portioned off from the main roof void, this roof void is very cluttered with crossing timbers. The roof voids are open from the floor of the roof void to the underside of the roof which is lined with bitumen felt.

Photo 4. Showing the roof void over the main part of the building

Externally there are deep overhanging soffits which appear to be very well sealed as is the majority of the roof. However, there are a number of vented ridge tiles with opening in the felt below which create potential access for bats into the ridge tunnels and roof void below.

2.2. Surrounding landscape

Kenyn Peder is located within a group of similar buildings, on the north western edge of the village of Coverack which is located on the eastern side of the Lizard Peninsula in South West Cornwall. These houses are set in fairly large gardens beyond which is open countryside. The surrounding countryside comprises large blocks of woodland, to the east and west, with fields laid to pasture bounded by tree lined Cornish hedges nearby, the coast is to the east, see Figure 1.

Figure 1. Google Earth image showing the location of the property (red arrow) and surrounding landscape

The habitats surrounding the site represent good bat foraging habitat which is well linked into the surrounding landscape. The surrounding area is known to be well used by a range of species of bat including Common Pipistrelles, Brown Long-eared bats, Whiskered bats, Natterer's and Lesser Horseshoes. A number of these species are known to roost in small numbers nearby.

3. METHODS

3.1. Emergence surveys

Emergence surveys aim to establish if the building being surveyed is used for day roosting by bats, and if so, to establish the levels of use, confirm the species present, identify the number of individuals present and identify the access points. In this instance a pair of emergence surveys were carried out, using three trained and experienced bat surveyors all equipped with night vison aids.

An emergence survey involves positioning surveyors, experienced with the use of bat detectors and undertaking emergence surveys, around the outside of the building identified as having the potential to support roosting bats. These surveyors watch the roof line, openings and other features identified as having the potential to support roosting bats or which would allow access into the building from a quarter of an hour before sunset until at least an hour afterwards for emerging bats. The emergence times, locations any bats are seen to emerge from and the time are recorded along with the time the first bat was heard or seen. Any interesting behaviour observed from bats either relating to the building or passing within the range detectable by the surveyors is also noted down along with the weather conditions and any other relevant information. Each surveyor was equipped with a Canon XA Professional Camcorder in infra-red mode paired with a pair of Nightfox XC5 Infrared torches to illuminate the outside of the building to allow better detection of late emerging bats.

3.1.1. 1st emergence survey, 30th May 2023

On 30th May 2023, Matthew Thurlow, James Walker and Felicity Thurlow were positioned around the outside of the house so that all aspects could be watched, see Figure 2. for the locations of the surveyors.

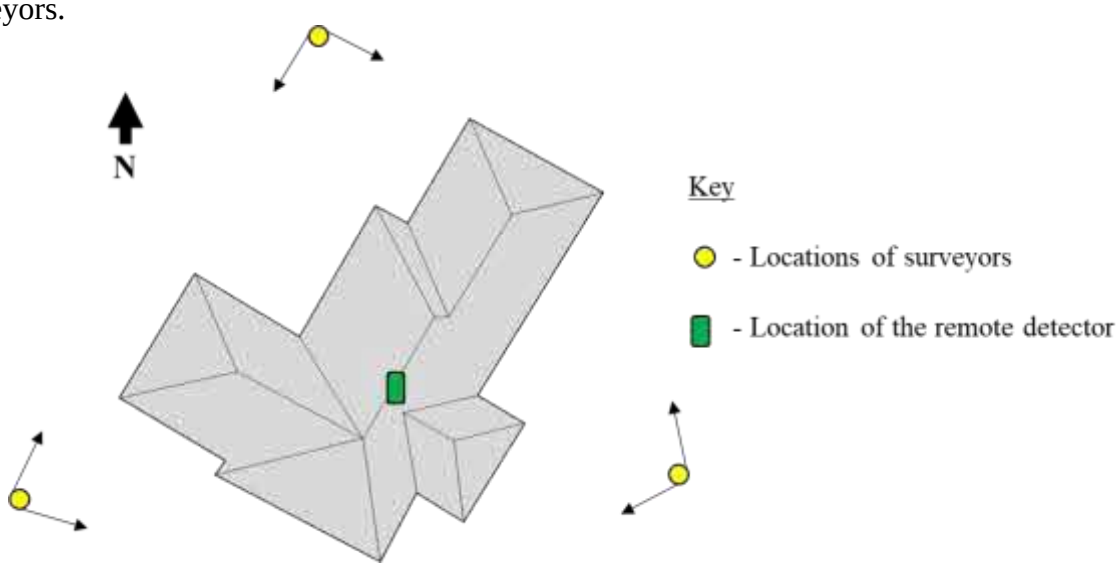

Figure 2. The locations of the surveyors during the emergence surveys and the remote detector

The survey was carried out during suitable weather conditions for bat activity with the weather being clear and dry with 0% cloud cover, a gentle breeze and a steady temperature of 15ºC. The survey started at 21:03 and continued until 22:48, with sunset being at 21:18.

Bat activity was monitored and recorded using three Batlogger M2's.

3.1.2. 2nd emergence survey, 17th July 2023

On 17th July 2023, Simon Barnard, Rebecca Haines and James Walker were positioned around the outside of house so that all aspects could be watched, see Figure 2 for the locations of the surveyors.

The survey was carried out during suitable weather conditions for bat activity with the weather being slightly overcast with a 30% cloud cover, dry, still, and a steady temperature of 18ºC, that dropped to 12ºC by the end of the survey. The survey started at 21:08 and continued until 22:53, with sunset being at 21:23.

3.2. Remote detector survey

A remote detector survey involves the deployment of a remote or static detector into the building subject to the survey for a set number of nights. As the detectors can record through the night, and if required the day, they can be used to gain further information on the use of the building by bats, in particular by species which may only visit the building during the night (for night roosting or as a feeding perch) or reveal the presence of late emerging species of bat which could be missed otherwise. The detector is triggered by bat calls and records and time stamps it allowing the species, regularity of use of the structure at night and time of the call to be logged.

In this instance an Anabat Express detector was deployed into the roof void of the building on 30th May to 6th June 2023.

3.3. Limitations

There were a number of valleys in the roof which were partially obscured by other parts of the building.

3.4. Surveyors

3.4.1. Simon Barnard

Simon Barnard is a very experienced bat surveyor with 15 years' experience of carrying out all aspects of professional bat survey work including activity surveys, call analysis and emergence surveys. He has held a Natural England survey licence for more than 12 years, currently being registered on the Level 3 (CL19) and level 4 (CL20) Class Survey Licence. He has been involved in designing numerous mitigation schemes and obtaining European Protected Species development licences for a large range of the species of bat found in the UK and is a registered consultant on Annex's B, C and D on Natural England's Bat Mitigation Class licence. He has a Bachelors and Master's degree in ecology related subjects.

3.4.2. Matthew Thurlow

Matthew Thurlow is an experienced bat surveyor with more than 3 years' experience with the use of bat detectors, undertaking activity surveys and emergence surveys and assisting with trapping surveys and is training towards his bat class licences. He has a Bachelors and Master's degrees in ecology related subjects.

3.4.3. James Walker

James Walker is a trained bat surveyor, trained in the use of bat detectors and undertaking emergence surveys. He has a Bachelor's and Master's degrees in ecology related subjects.

3.4.4. Rebecca Haines

Rebecca Haines is an experienced bat surveyor with two years of experience in the use of bat detectors and undertaking emergence surveys. She has a Bachelor's degree in ecology related subjects.

3.4.5. Felicity Thurlow

Felicity Thurlow is a trained bat surveyor with three years of experience, trained in the use of bat detectors and undertaking emergence surveys.

4. RESULTS

4.1. Emergence surveys

4.2. 1st Emergence survey, 30th May 2023

The first bat activity was recorded was from Common Pipistrelle which was seen to emerge from the eastern-most vented ridge tile of the north-west hipped roof at 21:39. At 22:20 and 22:31 single Brown Long-eared bats were seen to emerge from the vented ridge tiles on the southwest facing dormer.

Additional activity noted included feeding and commuting activity from Common Pipistrelle and Whiskered bats.

A single Common Pipistrelle and two Brown Long-eared bat were seen to emerge from this building during this survey, see Figure 3.

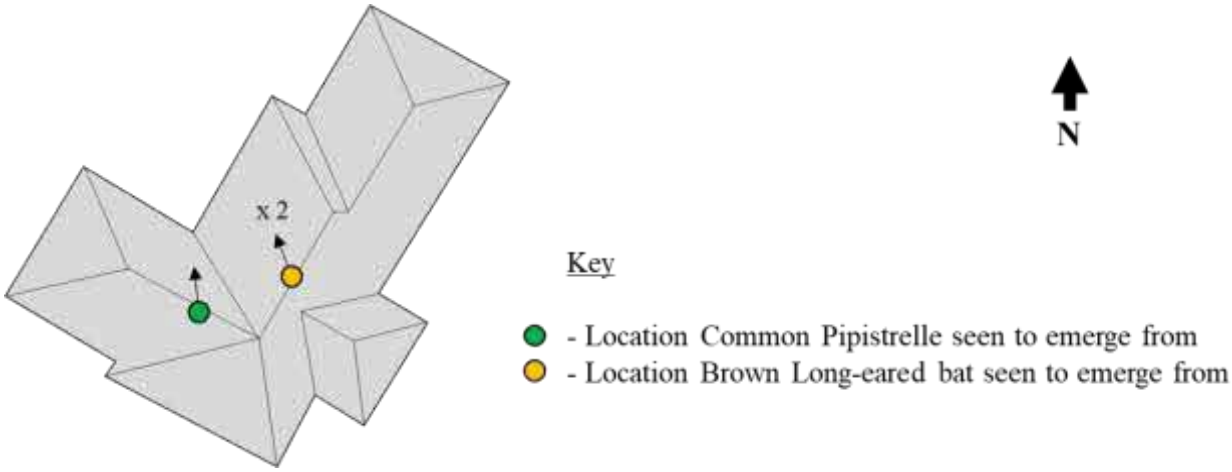

Figure 3. Summary of the location's bats were seen to emerge from during the 1st emergence survey

4.2.1. 2nd Emergence survey, 17th July 2023

The first bat activity recorded was at 21:39 when a single Common Pipistrelle was seen to enter the site from the north. At 22:00 a single Whiskered bat was seen to emerge from the eastern-most vented ridge tile of the north-west hipped roof extension, same location as the Common Pipistrelle was seen to emerge from during the 1st survey.

At 22:15 a single Brown Long-eared bat emerged from the southern-most roof vented ridge tile along the southwestern facing hipped end. At 22:15 and 22:16, two further Brown Long-eared bats were seen to emerge from the same ridge vent.

Additional activity noted included feeding and commuting activity from Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared bats and Whiskered bats.

1 Whiskered bat and three Brown Long-eared bat was seen to emerge from this building during this survey, see Figure 4.

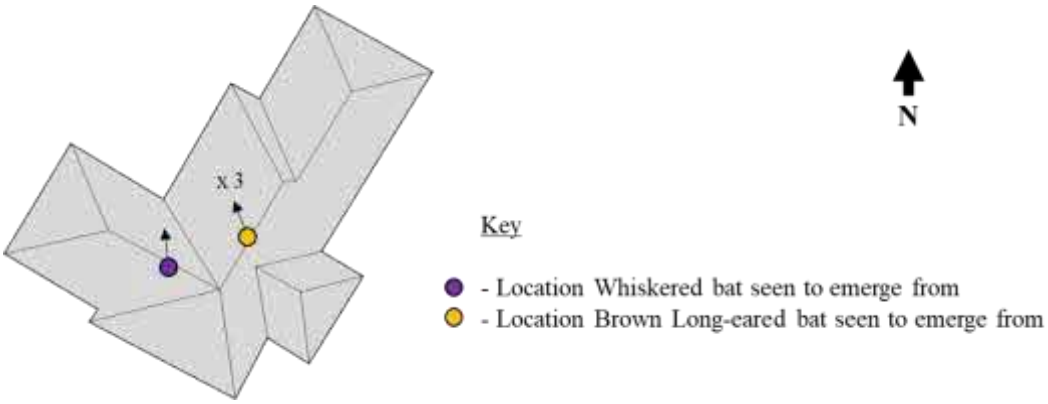

Figure 4. Summary of the location's bats were seen to emerge from during the 2nd emergence survey

4.3. Remote detector survey

No bat calls were recorded in the roof void during the remote detector deployment.

4.4. Summary of survey results

The results of the further survey work have shown that the building is used for day roosting by single Common Pipistrelle and Whiskered bats and by small numbers of Brown Long-eared bats.

4.5. Status of the roost

4.5.1. Status at local, county and regional levels

Species	UK Conservation Status (Wray *et al.* 2010)	UK distribution, population estimate and trends Matthews etal 2018)	County occurrence	Local occurrence
Common Pipistrelle *Pipistrellus pipistrellus*	Common	Found throughout the UK Approx 3,040,000 in UK Populations believed to be increasing.	Common and widespread	Common bat in the locality.
Brown Long-eared bat *Plecotus auritus*	Common	Found throughout the UK 934,000 in UK. No significant trend, population considered to be stable.	Common and widespread except in the most exposed areas.	Likely to be common in locality.
Whiskered Bat *Myotis mystacinus*	Common in north and west rare elsewhere	Probably found throughout England and Wales with a few records from southern Scotland. 30,000 to 40,000 individuals. Upward trend but to be treated with caution	Widespread but infrequent	Likely to be frequent

4.5.2. Status at site level

Common Pipistrelles

A single Common Pipistrelle was seen to emerge from a vented ridge tile during the 1st emergence survey.

This indicates that this building is used for day roosting by a single non-breeding Common Pipistrelle.

Estimated population in any given year: One Common Pipistrelle

Whiskered bat

A single Whiskered bat was seen to emerge from a vented ridge tile during the 2nd emergence survey.

This indicates that this building is used for day roosting by a single non-breeding Whiskered bat.

Estimated population in any given year: One Whiskered bat

Brown Long-eared bat

Up to three Brown Long-eared bats were seen to emerge from a vented ridge tile during each emergence survey with evidence of them using the roof void below.

This indicates that this building is used for regular day roosting by small numbers of non-breeding Brown Long-eared bats.

Estimated population in any given year: up to three Brown Long-eared bats

3.1.1. Roost Status

Based on the building supporting "Small numbers of common species", it would be classified as being of low conservation significance*

* Bat Mitigation Guidelines, p. 39 Fig. 4.

5. PROPOSAL, POTENTIAL IMPACTS ON BATS AND REQUIRED MITIGATION

5.1. Proposal

The proposal is to apply for planning permission to add a second storey to the main part of the house.

5.2. Potential impacts

The results of the further survey work have shown that the building is used for day roosting by single Common Pipistrelles and Whiskered bats and by small numbers of Brown Long-eared bats.

The proposal will result in all the existing roosting sites being permanently destroyed.

As the works will result in all of the existing roosting sites being destroyed, and with any bats present being disturbed, a Bat Mitigation Licence from Natural England will need to be obtained, prior to works commencing. As there are only small numbers of three common species the site should qualify to be registered under the Bat Mitigation Class Licence. The site registration can only be submitted once planning has been granted and works cannot commence until the licence is in place.

5.3. Mitigation

The aim of the mitigation should be to minimise the potential impacts of the works, and any harm or significant disturbance, to bats and ensure that adequate and appropriate roosting provisions are maintained/recreated onsite to allow bats to continue to roost onsite in the same way following the completion of the works as before they commenced, preserving their conservation status.

As the proposed works will result in all the existing roosting sites being destroyed replacement roosting sites will need to be created onsite to ensure the conservation status of bats on the site is maintained. This should take the form of building at least three integrated bat boxes into the extended dwelling at 1st floor eaves height, away from windows. One should be built into south eastern elevation, one into the south western elevation and the last into a north facing elevation. In addition, it would be desirable to create a new bat loft 1.8metres high, 4 metres wide and 4 metres deep accessible via a lead crawl-in access slate built into the slope of the roof. The underside of the roof in this area would need to be lined with bitumen based type 1F roofing felt. In discussions with the client it was proposed that this could be incorporated into the roof space of the garage.

The stripping of the roof will need to be done carefully under the direct supervision of the named ecologist to ensure no bats are harmed when this work is carried out and allow any bats found to be caught and relocated out of harms way into bat boxes erected onsite.

A pair of bat boxes will also need to be erected onsite shortly before the works commence, to provide alternative roosting sites for the duration of the works and a safe place to relocate any cavity roosting species of bats found.

As no evidence of the use of the building by breeding bats was found and the building does not support features likely to be used by hibernating bats, works could commence at any time of year.

5.3.1. Exclusions and on-site supervision

Immediately before any works commence onsite, the building will need to be carefully inspected for the presence of roosting bats by the Ecologist named on the Licence, where access allows. Any bats that are found will be carefully caught and moved out of harm's way into one of the bat boxes erected onsite.

The stripping of the roof coverings will need to be done carefully under the direct supervision of the named ecologist to ensure no bats are harmed when this work is carried out and allow any bats found to be relocated out of harms way into bat boxes erected onsite.

A short briefing will be given to the contractor undertaking the works at the start of the works on the status of the building with regards to bats, the mitigation measures to be followed and implemented and on what to do if a bat were to be found unexpectedly during the works.

5.3.2. Provision of temporary roosting sites

A nest box company double chamber bat box and a 2F Schwegler Bat Box (or an equivalent) will need to be erected onsite shortly before the works commence to provide an alternative roosting site and a safe place to relocate any bats found. These should be erected onto trees or a post onsite between 3 and 5 metres above the ground close to the building and facing different directions.

5.3.3. Creation of new replacement roosting sites.

As the proposed works will result in all the existing roosting sites being destroyed replacement roosting sites will need to be installed into the extended building to ensure the conservation status of bats on the site is maintained. This should take the form of building three integrated bat boxes (we would recommend using Green & Blue Bat Blocks) into the new building (away from windows). One should be built into south eastern elevation, one into the south western elevations and the last into a north facing elevation, see figure 5.

In addition, it would be desirable to create a new bat loft 1.8metres high, 4 metres wide and 4 metres deep accessible via a lead crawl-in access slate built into the slope of the roof. The underside of the roof in this area would need to be lined with bitumen based type 1F roofing felt. In discussions with the client it was proposed that this could be incorporated into the roof space of the garage.

Figure 5. Showing a Green & Blue Bat Blocks

5.3.4. Timing

As no evidence of the use of the building by breeding bats was found and the building does not support features likely to be used by hibernating bats, works could commence at any time of year.

6. CONCLUSIONS AND RECOMMENDATIONS

The results of the further survey work have shown that the building is used for day roosting by single Common Pipistrelles and Whiskered bats and by small numbers of Brown Long-eared bats. The proposal is to apply for planning permission to add a second storey to the main part of the house.

The proposal will result in all the existing roosting sites being permanently destroyed.

As the works will result in all of the existing roosting sites being destroyed, and with any bats present being disturbed, a Bat Mitigation Licence from Natural England will need to be obtained, prior to works commencing. As there are only small numbers of three common species the site should qualify to be registered under the Bat Mitigation Class Licence. The site registration can only be submitted once planning has been granted and works cannot commence until the licence is in place.

As the proposed works will result in all the existing roosting sites being destroyed replacement roosting sites will need to be created onsite to ensure the conservation status of bats on the site is maintained. This should take the form of building at least three integrated bat boxes into the extended dwelling at 1st floor eaves height, away from windows. One should be built into south eastern elevation, one into the south western elevation and the last into a north facing elevation. In addition, it would be desirable to create a new bat loft, 1.8metres high, 4 metres wide and 4 metres deep accessible via a lead crawl-in access slate built into the slope of the roof. The underside of the roof in this area would need to be lined with bitumen based type 1F roofing felt. In discussions with the client it was proposed that this could be incorporated into the roof space of the garage.

The stripping of the roof will need to be done carefully under the direct supervision of the named ecologist to ensure no bats are harmed when this work is carried out and allow any bats found to be caught and relocated out of harms way into bat boxes erected onsite. A pair of bat boxes will also need to be erected onsite shortly before the works commence, to provide alternative roosting sites for the duration of the works and a safe place to relocate any cavity roosting species of bats found.

As no evidence of the use of the building by breeding bats was found and the building does not support features likely to be used by hibernating bats, works could commence at any time of year.

7. LEGISLATION

Bats in England have been protected under a number of regulations and amendments but the most up-to-date and relevant are:

The Conservation of Habitats and Species Regulations 2017
Wildlife and Countryside Act 1981 (Section 9)

The result of Regulations and Acts is that all species of bat and their breeding sites or resting places (roosts) are protected under law. It is an offence to:

Deliberately capture, injure or kill a bat
Deliberately disturb a bat in a way that would affect its ability to survive, breed or rear young or significantly affect the local distribution or abundance of the species
Intentionally or recklessly disturb a bat at a roost
Intentionally or recklessly obstruct access to a roost whether bats are present or not
Damage or destroy a roost whether bats are present or not
Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat

Through the Conservation (Natural Habitats &c.) Regulations 1994 (this has been updated and consolidated with subsequent amendments by the Conservation of Habitats and Species Regulations 2017 mentioned above) bats were designated a European protected species as part of Europe wide effort to conserve certain plant and animal species.

Any development which is likely to result in the disturbance of a European protected species, or damage to its habitat usually requires a European protected species licence from Natural England. 'Development' is interpreted broadly to include projects involving demolition of buildings, rebuilding, structural alterations and additions to buildings.

REFERENCES

A. J. Mitchell-Jones (2004) *Bat Mitigation Guidelines version 1.* External Relations Team English Nature, Northminster House, Peterborough PE1 1UA.

A. J. Mitchell-Jones & A. P. McLeish (2004) *Bat Workers' Manual (3rd edn).* Joint Nature Conservation Committee, JNCC, Monkstone House, City Road, Peterborough PE1 1JY.

Bat Conservation Trust, 2021. The National Bat Monitoring Programme Annual Report 2020. Bat Conservation Trust, London.

BTHK 2018. *Bat Roosts in Trees – A Guide to Identification and Assessment for Tree-Care and Ecology Professionals.* Exeter: Pelagic Publishing.

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).* The Bat Conservation Trust, London.

Mathews F, Kubasiewicz LM, Gurnell J, Harrower CA, McDonald RA, Shore RF. (2018) A Review of the Population and Conservation Status of British Mammals: Technical Summary. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough.

Russ, J. (2012). British Bat Calls a Guide to species Identification. Pelagic Publishing.

Schofield, H.W. (2008) *The Lesser Horseshoe Bat Conservation Handbook*. Vincent Wildlife Trust.

Wray, S., Wells, D., Long, E. & Mitchell-Jones, T. (2010) Valuing Bats in Ecological Impact Assessment. IEEM In-Practice p. 23-2.