3 Meadowlands, Low Moor, Clitheroe. Lancashire. BB7 2ND
Office: 01200 425113 Email: earthworksuk@yahoo.co.uk

Daniel Bowe
Stanton Andrews Architects
44 York Street
Clitheroe
BB7 2DL

29 August 2017
Job ref: B 1848

Dear Daniel

Re: EPS – Scoping and dusk emergence survey: Eatough's Farm, Fleet Street Lane, Ribchester, PR3 3XE

You have requested a European Protected Species scoping survey as a condition of a planning application to Ribble Valley Borough Council (RVBC) for building alterations at the above property.

The Local Planning Authority is required to take account of the impact of a development on protected species in accordance with current planning policy (National Planning Policy Framework). RVBC requires an appraisal of the likely impact of the proposed development on bats and other protected species that are present or likely to be present at the site, in addition to any mitigation and enhancement works that may be necessary.

As a consequence of the historical declines in bat populations during the second half of the twentieth century, all bats and their roosts are protected by UK law. The depletion of natural habitats throughout the UK means that some bat species are now more than ever dependent on houses and other structures as roosting sites. It is this dependence that makes them vulnerable to redevelopments that can result in damage or destruction of a roost, particularly maternity roosts, resulting in negative impacts on a local bat population.

A protected species survey (bats and barn owls) has found evidence of roosting bats, albeit in relatively low numbers, inside the barn in addition to roosting barn swallows and barn owl; previous surveys in 2014 also found evidence of roosting bats.

Since the impact of the proposed works is likely to result in some degree of disturbance to protected species, mitigation measures will be required in addition to bat-friendly design adaptations to provide additional roosts for bats and barn owls which are designed to offset loss of roosting opportunities caused by the development.

Please find a copy of the survey report now attached.

Yours sincerely

David Fisher
Director (EED Surveys)

(European Protected Species – roosting bats)

DAYLIGHT SCOPING AND DUSK EMERGENCE SURVEY

Eatough's Farm barn, Fleet Street Lane, Ribchester, PR3 3XE

29 August 2017

Introduction

A daylight scoping inspection and dusk emergence survey was undertaken on Tuesday 15 August 2017 as a condition of a planning application (Ribble Valley Borough Council) for building alterations to the property.

This is a two-part survey requiring a preliminary roost assessment (or scoping survey) of the external / internal features of the building to look for signs of access and flight activity by bats and other protected species; this is followed by a dusk / evening survey to determine the level of bat activity within and around the building.

The principle aim of the survey is to determine the presence of European Protected Species and to establish whether bats, barn owls and other nesting birds have been active within any part of the property that is likely to be affected by the proposed development.

The local planning authority (LPA) is required to take account of the impact of a development on protected species in accordance with the National Planning Policy Framework (NPPF). Ribble Valley Borough Council requires an appraisal of the likely impact of the proposed development on all bat species that are present or likely to be present at the site, in addition to any mitigation and enhancement works that may be necessary.

From the developer's perspective, the primary objective of a survey for protected species is to ensure that a development can proceed lawfully without breaching the Habitats Regulations.

Aims of the survey

Collect robust data to provide an assessment of the potential impacts of the proposed development on bat populations and other protected species at the property.

Provide baseline information with which the results of post-development monitoring can be compared.

Facilitate the design of mitigation, enhancement and monitoring strategies for bats and all protected species.

Provide a clear assessment of risk to bats and other protected species enabling the Local Planning Authority and licensing authority to reach an informed and robust planning decision.

Assist clients in meeting their statutory obligations.

Facilitate the conservation of bat populations and other protected species.

Adapted from 'Defining aims and objectives', p15 BCT Bat Surveys for Professional Ecologists - Good Practice Guidelines, 3rd Edition

Definition of terms

Mitigation:

In the strictest sense, mitigation refers to practices which reduce or remove damage (eg. by changing the layout of a scheme, or altering the timing of the work).

Compensation / enhancement:

This refers to works which offset the damage caused by activities (eg. by the creation of new roosts); this may include habitat enhancements for bats where appropriate.

Timing of survey / weather conditions

The scoping survey was carried out between 19.45 and 20.30. The weather was mild, dry and calm (temperature: 12.9ºC; wind: nil; cloud: 10%, rain: nil).

A dusk emergence survey was undertaken on the same evening between 20.30 and 22.00. The weather remained mild (minimum 10ºC) providing optimal survey conditions.

Sunset was approximately 21.38 with extended twilight.

Personnel

The inspection was carried out by David Fisher (EED Surveys) - an ecological consultant with more than 25 years of experience in field survey work and development issues relating to protected species. The surveyor has held a licence since 1989 and is a volunteer bat worker with Natural England (via the BCT), a participating member of several UK bat groups and founder member of the Bowland Kilns and Caves Research Group.

Natural England Class Licence WML-A34 - Level 1 (Registration Number: 2015 – 17599-CLS-CLS)

Natural England Class Licence WML-A34 – Level 2 (Registration Number: 2015 – 12106-CLS-CLS)

Survey methodology

The survey methodology is designed to determine the likely presence of bats within the property and does not necessarily prove absence.

The survey protocol requires that a full visual inspection of the property is carried out. The survey aims to cover all internal and external features of the building including any accessible roof voids and out-buildings that are likely to be affected by the proposed works.

The survey methodology follows the recommended guidelines published by the Bat Conservation Trust - *Bat Surveys: Good Practice Guidelines, 2nd Edition, Hundt, L (2012),* Natural England *(Survey Objectives, Methods and Standards as outlined in the Bat Mitigation Guidelines, 2004)* and Chapter 3 - Survey and Monitoring Methods, *(Bat Worker's Manual, JNCC, Mitchell-Jones AJ and McLeish, AP, 3rd Edition 2004).*

The search was made using a high-powered lamp *(Clu-lite CB2 - 1,000,000 candle power),* close-focussing binoculars *(Leica Trinovid 10 x 32 BN)* and digital camera *(Sony Cyber-shot HX300)* were used to view all likely areas of the building for the presence of bats - ie. droppings and urine spots, bat corpses, bat fly larvae, roost staining or evidence of feeding remains such as discarded moth and butterfly wings or other insects fragments typically found in a perching and feeding area.

Non-invasive survey methods were used to assess the use of the property by protected species.

Survey limitations

Crevice-roosting bat species are able to roost within very narrow gaps, frequently less than 25mm wide; solitary roosting bats are sometimes overlooked during daylight inspections, particularly in situations where bats have gained access within rubble infill walls and beneath roof materials and other significant structural features.

Evidence of bat activity such as bat droppings, feeding signs and other indicative evidence such as staining on external walls and surfaces is frequently removed by the action of wind and rain; as a cautionary principle

it should be assumed that the absence of evidence of bats is not necessarily evidence that bats are not present.

National Biodiversity Network (NBN) and other data sources, whilst indicative of the bat species likely to occur within a 10km-grid square, do not confirm presence or absence of a species or habitat. Local bat records are compiled from a number of reliable sources but may also include unverified public data.

Pre-survey data search (Site location: NGR: SD 629 358)

The pre-survey data search includes the following sources:

(1) European Protected Species (EPS) - ie. species records of local, regional or national significance.

(2) National Biodiversity Network (NBN*) terrestrial mammal records (chiroptera).

(3) Local bat / bird records (i) East Lancashire Bat Group (ii) North Lancashire Bat Group (iii) EED Surveys (iv) other ecological consultants (v) ecological reports available online.

(4) Interactive maps: *Natureonthemap* (Natural England) and *Magic.gov.uk*.

*National Biodiversity Network (NBN) and other data sources whilst indicative of the bat species likely to occur within a 10km-grid square, do not confirm presence or absence of a species or habitat.

Bat species recorded within the 10km national grid squares: Ribble Valley SD63 and SD73:

Common name	**Scientific name**	**Status of local population**
Natterer's bat	(*Myotis nattereri*)* [1] [2]	widespread/common
Whiskered bat	*(M. mystacinus)* [1]	widespread/uncommon
Brandt's bat	*(M. brandtii)*	widespread/uncommon
Daubenton's bat	(*M. daubentonii*) * [1] [2]	widespread/common
Brown long-eared bat	(*Plecotus auritus*)* [1] [2]	widespread/uncommon
Common pipistrelle	(*Pipistrellus pipistrellus*)* [1] [2]	widespread/common
Soprano pipistrelle	(*P. pygmaeus*) [1] [2]	widespread/common
Noctule bat	*(Nyctalus noctula)* [1] [2]	widespread/uncommon
Nathusius's pipistrelle	*(P. nathusii)* [2]	local distribution unknown
Lesser horseshoe bat	*(Rhinolophus hipposideros)* [1] [2]	rare / last recorded in 2012

*NBN data [1]East Lancashire Bat Group [2]EED surveys

Pre-existing information

A number of protected species have previously been completed on the barn:

(1) A daylight scoping survey was carried out on 03/11/12 by Denis Lambert; this survey report found *'no evidence of previous or present occupation by bats in any of the buildings'* although the barn *'had potential for foraging and roosting bats'.* The survey found no evidence of barn owl activity.

(2) A scoping survey and site inspection was carried out by this surveyor on 30/08/14; bat droppings and discarded insect prey was recorded inside the barn triggering the requirement further additional surveys at dusk and dawn *(EED Surveys B1485).*

(3) A dusk survey on 30/08/14 recorded 3 bats emerging from inside the barn and at least one bat perched inside. Two species were recorded in flight inside the barn ie. common pipistrelle and brown long-eared bat *(EED Surveys B1485).*

(4) A dawn re-entry survey on 06/09/14 recorded one lekking male flying in and out of the main wagon door on several occasions, one common pipistrelle entering the barn just before dawn and one brown long-eared bat also flying inside the barn *(EED Surveys B1485).*

Proposed works

Conversion to a dwelling - details not provided (Stanton Andrews Architects).

Location of property

NGR: SD 629 358 - (10km grid square SD 63) - elevation: approximately 75 metres.

Eatough's Farm is located 2km WNW of Ribchester and 1.1km north of the River Ribble at Hothersall Hall. The site is surrounded by agricultural land comprising mainly improved grassland *(category B4 - Phase 1 habitat)* or semi-improved neutral grassland *(category B2.2 Phase 1 habitat).*

The barn is adjacent to a broadleaved hedgerow and a wet ditch at the rear (west) with extensive open countryside beyond. The hedge comprises mainly: common ash *(Fraxinus),* hawthorn *(Crataegus),* blackthorn *(Prunus),* damson *(Prunus),* honeysuckle *(Lonicera) and* bramble *(Rubus).*

Although there is no extensive woodland or plantation adjacent to the barn, there are several small wooded copses and well-established broadleaved hedgerows throughout the district. There are mature boundary hedges adjacent to the site of mostly hawthorn *(Crataegus*), blackthorn *(Prunus spinosa),* Hazel *(Corylus),* willow *(Salix)* and sycamore *(Acer)* and within the garden a number of damson trees *(Prunus domestica).*

There are no areas of open standing water adjacent to the site although there are a number of small ponds in the area; Alston Reservoir at Longridge is the nearest large water body and is located 1.5km from the site. Similarly, there are no significant water channels nearby, the River Ribble is 1.1km SE of Eatough's Farm.

A local data search has been undertaken to identify designated nature conservation sites within the 2.5 km of the property – ie. Sites of Special Scientific Interest (SSSI), Biological Heritage Sites (BHS), National Nature Reserves (NNR's), Local Nature reserves (LNR's) or Regionally Important Geological and Geo-morphological Sites (RIGS).

Description of the property

The detached stone barn is a substantial two storey structure with well-pointed external stonework and block-lined cavity wall construction. The barn has been re-roofed (date unknown) with a timber-trussed duo-pitched slate roof lined with a breathable membrane (figures 6 and 7).

There is a large open portal on the front elevation (figure 8), all windows are currently boarded (figures 1 to 4).

Although the ridge tiles and roof verges appears to be relatively well-sealed, there are narrow gaps between the timber fascia boards and stonework. Internally there are gaps between the roofing spars and the blockwork walls at both gable ends.

There is some evidence of fresh bat droppings on sills, block walls and timber spars throughout the building.

Urine spotting is visible within the building indicating regular flight by bats.

This barn has moderate to high potential for attracting feeding and foraging bats and moderate potential for roosting bats inside the building.

Barn owl roosting opportunities exist on top of the wall plate where the roof spars are attached.

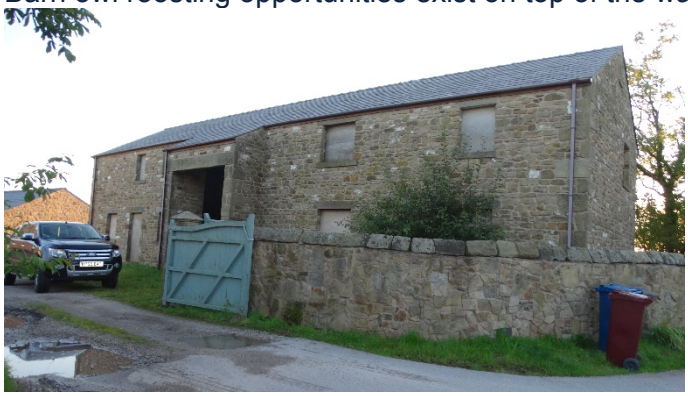

Figure 1: Front (east) elevation

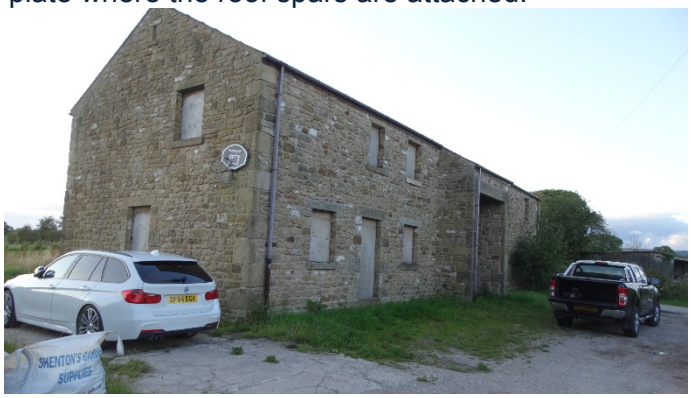

Figure 2: south elevation

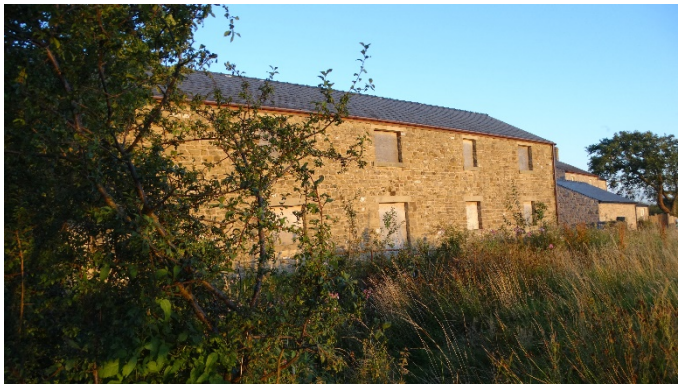

Figure 3: west elevation

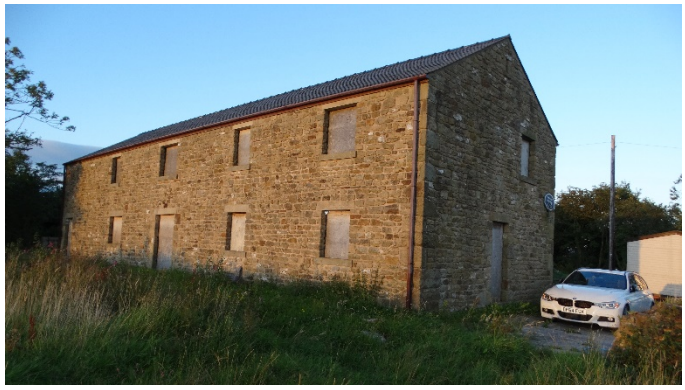

Figure 4: west / south elevations

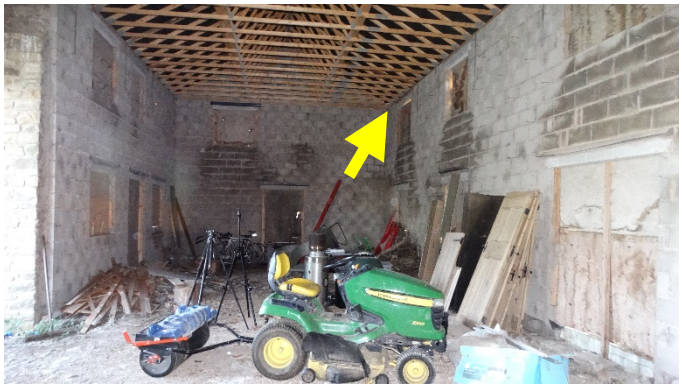

Figure 5: Internal view to south-west gable end

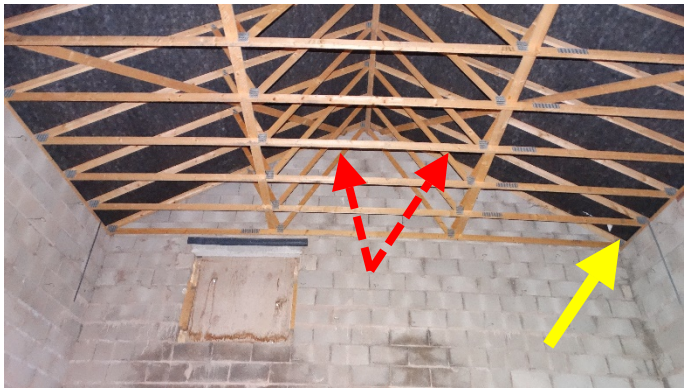

Figure 6: Detail south-west gable apex wall

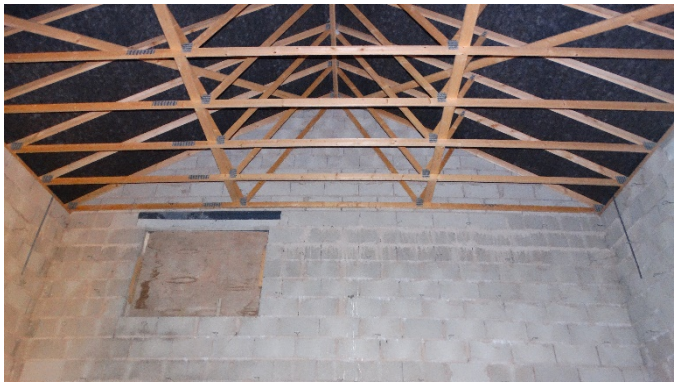

Figure 7: Front elevation (detail)

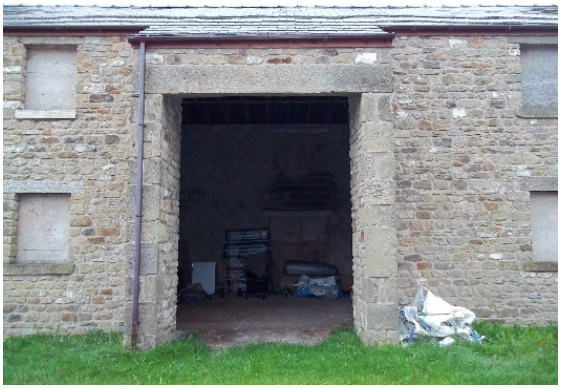

Figure 8: Wagon door entrance

Results - daylight scoping inspection

Scattered bat droppings were noted throughout the barn on walls and on stored materials although there were no significant accumulations; most of the droppings and urine spots were clearly indicative of flight within the barn rather than regular roosting activity.

Barn owl urine / faeces splashes were noted by the wagon door and at the SW gable end wall, although no evidence of castings, feathers, egg shells or nesting materials was found inside the building.

Barn swallows were active around the building and noted entering the barn occasionally to perch and roost.

Dusk emergence protocol

To comply with current guidance the survey began approximately 20 minutes before sunset (sunset 20.38) and continued for up to 90 minutes after sunset. The surveyor was located close to the eastern and southern elevations of the barn and a video recorder was situated inside the barn.

Bat activity was assessed using a Petterrson D230 ultrasonic bat detector with stereo headphones. Additional recordings were made using an Anabat SD2 device (Frequency Division) with an attached Hewlett Packard iPAQ PDA to view spectrograms of bat calls.

A video recorder (SONY Cybershot HX300) with tripod and 4 No. infra-red lamps was used to record activity inside the building.

Results - dusk emergence survey

One common pipistrelle *(Pipistrellus pipistrellus)* was recorded flying inside the barn at 21.06 emerging through the open portal wagon door. Solitary pipistrelles were also noted foraging inside and outside the building on two further occasions.

Three bat species were recorded in flight over the site during the survey, these were both common and soprano pipistrelles feeding and foraging over the yard and several commuting noctule bats *(Nyctalus noctula)*.

A single barn owl (Tyto alba) was seen flying from a perch in the SW corner of the barn (yellow arrow figure 6) flying through the wagon door and feeding over nearby fields after sunset and seen again briefly re-entering the barn through the wagon door twenty minutes later.

Evaluation of survey results

The barn has remained open and accessible to wildlife via the wagon door entrance for a number of years; consequently, a small number of bats, barn swallows and at least one barn owl are currently using the building to roost during the summer months.

The presence of protected species within a building requires some level of caution where building alterations are proposed. Mitigation measures will be necessary to reduce or eliminate risk of disturbance injury or death to protected species and further surveys are sometime required prior to works being carried out.

The most effective mitigation measure normally involves careful timing of the works to avoid critical periods when bats and wild birds are most vulnerable to disturbance, in the case of roosting bats, swallows and to some extent barn owls this is normally during the late spring and summer period (May to September).

Developers should adopt effective forward planning and scheduling of works to avoid likely disturbance to protected species and to programme-in compensatory works that are designed to offset the loss of roosting and nesting opportunities as a result of the development.

Impact assessment

Risk of disturbing roosting bats and wild birds – Eatough's Farm barn	
Removal of any roofing materials	Caution required: roosting solitary bats may be present under roof materials especially between roofing membranes and slates; other high risk areas include areas close to the roof apexes and between timber rafters and the blockwork walls at each gable end as shown in figure 6 of this report. The optimal time for roofing operations is during the autumn period (September to mid-November) or during spring (March / April).
Closure of the barn before any works begin	CAUTION REQUIRED: Roosting / nesting barn swallows, barn owls and bats may have been active within the barn for some considerable time; all species are protected by law. Any proposed works that are likely to cause disturbance to protected species must be carefully considered and the level of risk taken into account before works are due to begin. Mitigation measures will be required to significantly reduce or remove the risk of disturbance, injury or death to protected species. Careful planning and timing are usually the most effective way of avoiding conflict with roosting bats and wild birds. **RECOMMENDED ACTIONS** **BARN OWLS:** Be aware that roosting barn owls have been active in the building; individual birds can be difficult to see during the day if they are roosting above the wall plate. Since the permanent closure of the wagon door entrance would result in exclusion of birds from the building, a barn owl box located on the outside wall of the west elevation (rear wall) is first recommended. **BATS:** Avoid disturbance to roosting bats during the optimal period 1 May to 31 August. Bats tend to use buildings only seasonally; in this case the barn offers summer roosting, perching and feeding opportunities to low numbers of (probably solitary bats) during the period May to September. Exclusion / building operations inside the barn should not take place during this period if the barn has remained open throughout the spring (ie April / early May).

	Closure of the barn should take place during the winter only when bats are unlikely to be present. Closure of the wagon door entrance should only be considered in the period November to March when bats are unlikely to be present as the barn is unlikely to support hibernating bats. **BARN SWALLOWS:** Exclusion procedure during the winter months before any birds return in late April or May.

Minimal risk	Low risk	Moderate risk	High risk

Table 1:

Summary and recommendations

BATS

Although the building is not considered to be a nursery roost for bats, a small number of roosting bats are likely to be present in summer therefore timing of the works should avoid the critical period (1 May to 31 August) when bats are particularly vulnerable to disturbance.

Compensation should include design adaptations which provide access points for small crevice-roosting bats under fascia boards in addition to providing access slates on the roof slopes and along the roof ridge. Fascia gaps should be no more than 25mm wide to discourage access by nesting birds whilst providing entry for small crevice-roosting bats such as the pipistrelles.

Additionally. A number of dedicated bat access slates should be included within the new roof slopes allowing crevice-dwelling species to enter gaps between some of the roof slates and the roofing membrane.

It is recommended that where bat access slates are located, the use of Breathable Roofing Membranes (BRM's) should be avoided; current RIBA advice is based on the considered risk posed to bats from the regular snagging of long fibres sometimes resulting in the death of bats by entanglement in the fibres.

From an industry perspective the potential damage caused to 'BRM's can lead to premature deterioration of the product.

(*Reference: p 121 – Designing for Biodiversity, RIBA Publications, Second Edition (2013).*

BARN OWLS

Provide a barn owl nesting box on the rear wall of the barn facing onto open agricultural land. There are several suitable products available from ecological equipment suppliers and the Barn Owl Trust.

Summary of advice

Action	Summary
1. Mitigation measures required	Timing constraints are required; avoid disturbance to roosting bats between 1 May to 31 August. Do not disturb nesting barn swallows; exclusion of birds must take place during

	the winter period before any birds return in spring. Caution: Careful checks should be made before excluding barn owls from the site; barn owls are extremely difficult to locate whilst roosting during the daytime.
2. Further survey effort at this site	Not required
3. Detailed method statement	REQUIRED
4. Compensatory measures	Provide access within the roof and under fascia boards for crevice-roosting bats to compensate for loss of roosting opportunities inside the barn. Provide barn owl nesting box on rear wall of barn to compensate for loss of roosting opportunities within the building.
4. Licence requirement (EPSL)	Unlikely to be required where adequate mitigation / compensation measures are adopted to avoid significant disturbance and protect roosting bats and barn owls.

ANNEX 1 - Wildlife legislation – Bats and the law

All bat species in the UK receive full protection under the Wildlife and Countryside Act 1981 (amended by the Environment Protection Act 1990). The Countryside and Rights of Way Act 2000 amends the Wildlife and Countryside Act to also make it an offence to intentionally or recklessly damage, destroy or obstruct a place that bats use for shelter or protection. All species of bats are listed on Schedule 5 of the 1981 Act, which makes it an offence to:

- *intentionally kill, injure or take any wild bat.*
- *intentionally or recklessly damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection. This is taken to mean all bat roosts whether bats are present or not.*
- *intentionally or recklessly disturb any wild bat while it is occupying a structure or place which it uses for shelter or protection.*

The protected status afforded to bats means planning authorities may require extra information (in the form of surveys, impact assessments and mitigation proposals) before determining planning applications for sites used by bats. Planning authorities may refuse planning permission solely on grounds of the predicted impact on protected species such as bats. Recent case law has underlined the importance of obtaining survey information prior to the determination of planning consent[1].

"It is essential that the presence or otherwise of protected species, and the extent that they may be affected by a development proposal, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision." [2]

All British bat species are included in Schedule 2 of the Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007, (also known as Habitats Regulations) which defines 'European Protected Species' (EPS).

[1] Bat Mitigation Guidelines, AJ Mitchell Jones, Joint Nature Conservation Committee, (2004) ISBN 1 86107 558 8
[2] Planning Policy Statement (PPS9) (2005) , Biodiversity and Geological Conservation. ODPM.

Protected species (Bats) and the planning process

Our built environment has the potential to have major negative impacts on biodiversity. However, if done sensitively, the development and refurbishment of buildings can, in fact, increase the ecological value of the site.*

For development proposals requiring planning permission, the presence of bats, and therefore the need for a bat survey, is an important 'material planning consideration'. Adequate surveys are therefore required to establish the presence or absence of bats, to enable a prediction of the likely impact of the proposed development on them and their

breeding sites or resting places and, if necessary, to design mitigation and compensation. Similarly, adequate survey information must accompany an application for a Habitats Regulations licence (also known as a Mitigation Licence) required to ensure that a proposed development is able to proceed lawfully[1].

The term 'development' [used in these guidelines] includes all activities requiring consent under relevant planning legislation and / or demolition operations requiring building control approval under the Building Act 1984.

Natural England (Formerly English Nature) states that development in relation to bats *"covers a wide range of operations that have the potential to impact negatively on bats and bat populations. Typical examples would be the construction, modification, restoration or conversion of buildings and structures, as well as infrastructure, landfill or mineral extraction projects and demolition operations".[2]*

* Designing for Biodiversity, RIBA (second Edition - 2013) [1] Bat Surveys, Good Practice Guidelines, BCT (2007. [2]Tony Mitchell-Jones, (BMG, 2004)

Other references:

Bats, development and planning in England, (Specialist support series) - Bat Conservation Trust, 5th Floor, Quadrant House, 250 Kennington Lane, London, SE11 5RD, 0845 1300 228

Defra Circular 01/2005 (to accompany PPS 9) - Department for Environment, Food and Rural Affairs. www.defra.gov.uk

Natural England - Cheshire, Cumbria, Greater Manchester, Lancashire and Merseyside offices are located at:
Crewe: Natural England, Electra Way, Crewe business park, Crewe, Cheshire, CW1 6GJ 0300 060 2922
Kendal: Natural England, Juniper House, Murley Moss, Oxenholme Rd, Kendal, Cumbria, LA9 7RL 0300 060 2122
Manchester: Natural England, 3rd Floor, Bridgewater House, Whitworth Street, Manchester, M1 6LT 0300 060 1062
Sheffield: Natural England, 1 East Parade, City Centre, S1 2ET, Sheffield.

ANNEX 2 - Information sources

Altringham, JD., (2011) Bats, From Evolution to Conservation. OUP.

Barn Owl Trust (2009) Barn Owls and Rural Planning Applications, Natural England and Barn Owl Trust.

BCT, (2016) Bat Surveys for Professional Ecologists, Good Practice Guidelines – 3rd Edition

BSI, (2013) British Standard for Biodiversity (BS42020) Biodiversity in planning and development.

CIEEM, (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland – Second Edition.

Dietz, C., Helversen, O., Nill, D. (2009) Bats of Britain, Europe and Northwest Africa. A&C Black.

Dietz, C., Kiefer, A., (2016) Bats of Britain and Europe, Bloomsbury.

Gunnell K, Murphy B, Williams C, (2013) Designing for Biodiversity, RIBA Publishing / BCT – 2nd Edition.

JNCC, (2010), Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit.

Mitchell, AJ and McLeish, AP., (2004), JNCC Bat Workers Manual 3rd Edition.

Mitchell, AJ., (2004), English Nature Bat Mitigation Guidelines, version January 2004

Russ, J., (2012), British Bat Calls, A Guide to Species Identification. Pelagic Publishing.

Shawyer, C., (1998), The Barn Owl. Arlequin Press.

Toms, Mike., (2014) Owls, New Naturalists ~125, Harper Collins New Naturalists Series.