John Drewett
Ecology

Bat Survey Report:

Burgate Farm, Harwood Dale, Scarborough, YO13 0DS

Report prepared: 5 May 2017

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1 Executive summary

A bat emergence survey of a building at Burgate Farm was commissioned in connection with the proposed conversion of the building to form an annexe to the main house. The survey was required as a condition of planning permission granted for the development where a previous scoping survey had shown the building to have low bat roost potential.

The emergence survey was carried out by John Drewett and Val Kirk on 3rd May 2017.

During the survey small numbers of Common Pipistrelle and Noctule bats were recorded in flight at the site, but no bats emerged from the surveyed building.

It is concluded that the building does not support roosting bats. Therefore, the proposed works will not adversely affect bats and no special mitigation measures are necessary.

Nesting birds were located at the site which could be affected by the works. The methods detailed in 9.1 should be followed. 10.3 summarises legislation relating to nesting birds.

2 The survey site

2.1 Location

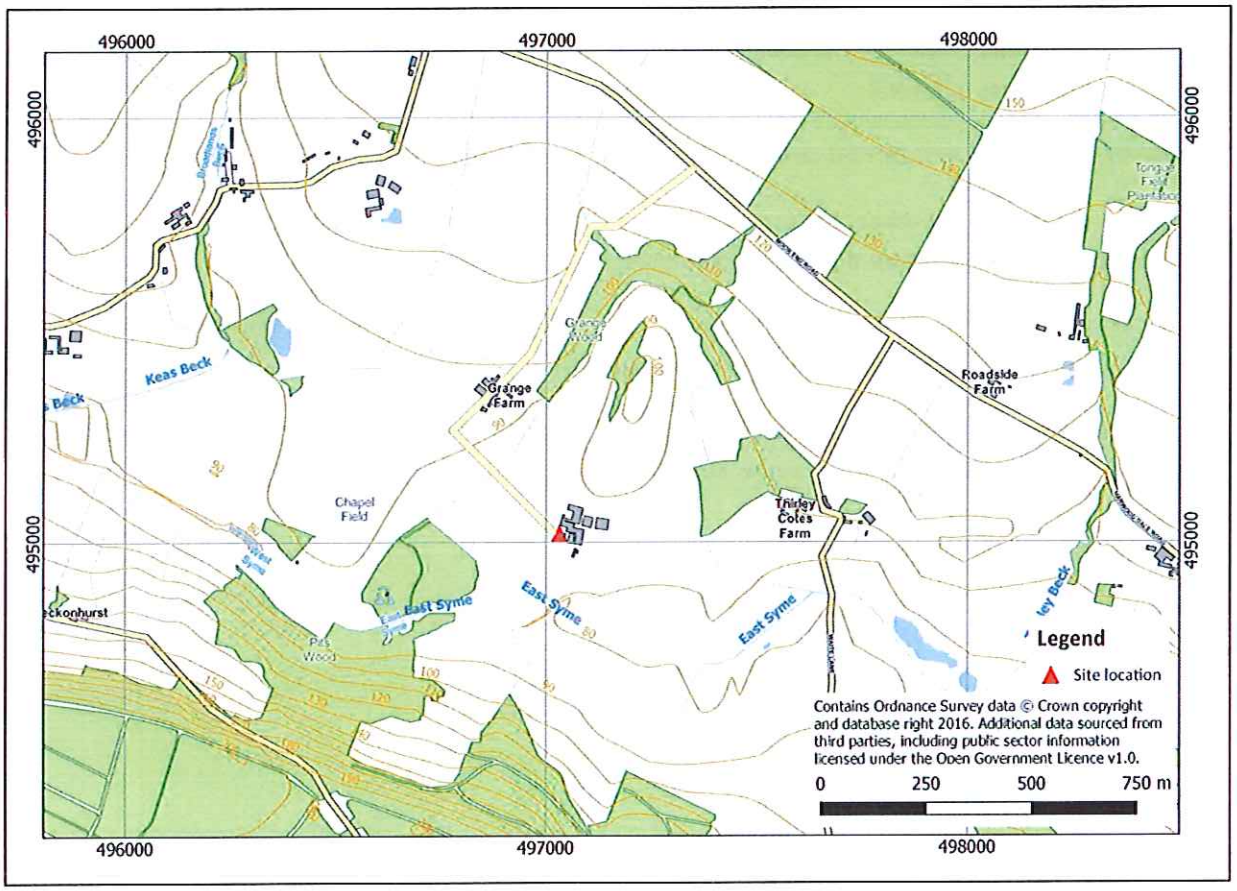

Figure 1: Location map for Burgate Farm survey, OS Grid Ref. SE970950

2.2 Site layout

Figure 2: Aerial view of Burgate Farm with surveyed building outlined

2.3 Site description

The surveyed building is a stone barn at the south-western corner of a large range of farm buildings.

2.4 Surroundings

The survey site is located in a rural location in Harwood Dale, approximately 9km north-west of Scarborough, North Yorkshire. The farm buildings are mainly surrounded by grass fields, separated by hedges. Some field boundaries include hedgerow trees.

The farm is located just to the north of Broxa Forest, an extensive area of conifer plantation, but incorporating some broad-leaved woodland. There are several other broad-leaved woodlands in the vicinity of the farm, particularly along the East Syme and West Syme watercourses.

There are several lakes within 2km of the site, both within fields and within woodlands.

Figure 3: Aerial view of surveyed building (marked in red) and surrounding area

3 Proposed works

The proposal is for alterations and extensions to an existing barn in order to enable its conversion to a residential annexe. The proposals were considered by North York Moors National Park Authority in 2016 and conditional approval was granted (NYM/2016/0315/FL).

A bat scoping survey was carried out by MAB Environment & Ecology Ltd. as part of the planning application process. This found no evidence of use by bats and identified the building as only having low bat roost potential. One of the planning conditions requires a bat mitigation plan to be submitted to the planning authority including a bat survey of the building detailing any use by bats.

4 Survey methods

4.1 Desk study

- Consulted the Multi-Agency Geographic Information for the Countryside (MAGIC) website at http://magic.defra.gov.uk to check if there are any statutory nature conservation designations relating to the site or nearby.
- Asked North Yorkshire Bat Group for records of bats previously recorded within 2km of the survey site to gather any previous information about bats at the site and to put our findings in the context of existing information.
- Researched the features and habitats of the area through the use of maps and aerial photographs.
- Consulted the bat scoping survey report prepared by MAB Environment and Ecology Ltd. in April 2016.

4.2 Field work

- Undertook a survey of habitats and landscape features on the site and within 300m
- Examined the building to record its main features especially those that may be suitable for roosting bats or other protected species.
- Carried out a detailed check of the interior and exterior of buildings to look for bat droppings; feeding remains such as moth & butterfly wings; live bats; dead bats; stains and marks on surfaces indicating regular use by bats; urine marks; and areas devoid of cobwebs
- Carried out a bat activity survey at dusk to record bats flying over or past the site, feeding at the site and leaving or entering buildings.
- Recorded weather conditions.

4.3 Surveyors working on the project

Name	Natural England licences held	Survey dates
John Drewett BSc (Hons), MCIEEM	WML-CL20 (Bats); WML-CL21 (Bats Low Impact); WML-CL08 (Great Crested Newts)	3 May 2017
Val Kirk	WML-CL18 (Bats)	3 May 2017

4.4 Equipment used

A Clulite 0.5 million candlepower torch was used to aid the examination of the building and photographs of the site were taken using a Nikon Coolpix digital camera. Both observers used a Bat Box Duet bat detector throughout the survey. Two Anabat Express bat detectors were located on either side of the building to record bat calls. The Anabat Express recordings were analysed using AnalookW software.

5 Existing information

5.1 Designated statutory sites

The survey site is located within the North York Moors National Park.

There are no statutory nature conservation designations applicable to the survey site or its immediate surroundings.

5.2 Existing records of protected species

The following records of bats previously recorded within 2km of the site were supplied by North Yorkshire Bat Group. This information has largely been assembled as a result of responding to enquiries from the public about bats. Some recent records have also been supplied by consultants carrying out survey work in connection with proposed developments. It does not, therefore, represent a comprehensive assessment of the local bat fauna.

Species	Site	Grid ref.	Date	Comment
Natterer's Bat	Thirley Cotes Farm, Harwood Dale	SE9758195071	Aug 2010	Roost in outbuildings
Natterer's Bat	Kirkless Farm, Harwood Dale	SE985938	Jul 2010	Solitary bats roosting in various outbuildings
Noctule Bat	Kirkless Farm, Harwood Dale	SE985938	Jul 2010	In flight
Common Pipistrelle	Thirley Cotes Farm, Harwood Dale	SE9758195071	Aug 2010	Roost in outbuildings and house
Common Pipistrelle	Kirkless Farm, Harwood Dale	SE985938	Jul 2010	Solitary bats roosting in various outbuildings
Brown Long-eared Bat	Thirley Cotes Farm, Harwood Dale	SE9758195071	Aug 2010	Roost in outbuildings
Unknown	Brooklands Farm, Harwood Dale	SE966963	17 Feb 2004	Probable roost

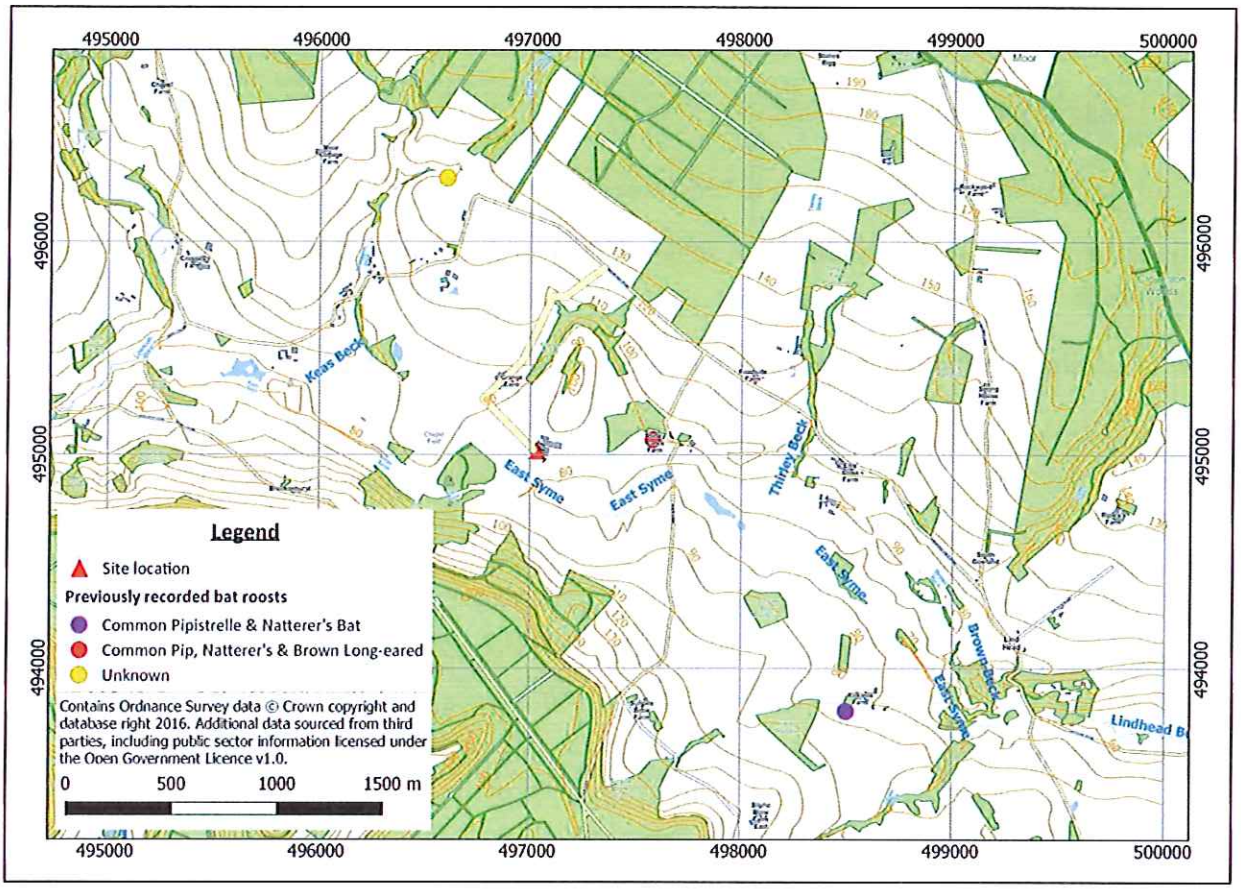

Figure 4: Previously recorded bat roosts within 2km of survey site

6 Buildings

6.1.1 Description

The surveyed building was described and illustrated in the MAB Environment & Ecology report dated 19 April 2016.

At the start of the current survey the building was re-examined to check if there had been any substantive changes since the previous survey. The building was as previously recorded, so reference should be made to the previous survey report for this information.

6.1.2 Evidence of bats

No bats, bat droppings, feeding remains or other evidence of bats was found in or around the building during the survey on 3 May 2017.

6.1.3 Bat roost potential

The building is considered to have only low bat roost potential.

6.1.4 Other protected species

A Swallow was present inside the building during the current survey and some House Sparrows were nesting between the pantiles and underfelt.

7 Bat survey results

7.1 Introduction to bat activity surveys

These surveys record bats entering or emerging from buildings, trees or other structures, flying inside and outside of buildings and flying over the site. This supplements the data in the previous chapters that rely on existing records, finding signs of bats and assessments of roost potential based on characteristics of the buildings.

7.2 Weather and timing of activity surveys

Weather can have significant impacts on patterns of bat activity. Whenever possible, surveys are carried out during calm, mild and dry weather as these conditions are most conducive to bats.

Date	Time		Temp °C		Wind force		Cloud cover %		Rain		Sunset
	Start	End	Start	End	Start	End	Start	End	Start	End	
03/05/17	20:35	21:55	17.75	8.75	2	2	51-75	51-75	None	None	20:44

7.3 Bat activity survey results

Two observers took part in the survey. One observer was located to the north-east of the building and viewed the northern and eastern sides. The second observer was located to the south-west of the building and viewed the southern and western sides. In addition, static Anabat Express bat detectors were located outside at the north-east corner and midway along the west side of the building.

During the survey Common Pipistrelle and Noctule bats were recorded in flight. A small number of bats could not be identified. No bats emerged from, or entered the surveyed building. The table below summarises all observations.

Time	NE observer	SW observer	NE Anabat	W Anabat	Comments from observer
20:58	Common Pip.				Heard faintly
21:03		Unidentified			Heard faintly
21:05			Common Pip.		
21:06	Unidentified		Common Pip.		Heard faintly
21:07		Common Pip.	Common Pip.	Common Pip.	Heard, not seen
21:08	Common Pip.		Common Pip.	Common Pip.	Flying around buildings to E
21:09			Common Pip.		
21:10			Common Pip.		
21:11	Common Pip.		Common Pip.	Common Pip.	Two flying around buildings to E
21:16		Noctule	Noctule	Noctule	Heard
21:18	Noctule		Noctule	Noctule	Heard overhead
21:20		Unidentified	Common Pip.	Common Pip.	Heard faintly
21:21	Common Pip.				Heard, not seen
21:22		Common Pip.		Common Pip.	Flying to S. of farmhouse
21:23				Common Pip.	
21:25		Common Pip.			In flight
21:27		Common Pip.			In flight
21:38				Noctule	
21:42		Unidentified	Common Pip.	Common Pip.	Flying S to N
21:48				Common Pip.	

Time	NE observer	SW observer	NE Anabat	W Anabat	Comments from observer
21:49		Common Pip.			Heard

7.4 Other wildlife

A Barn Swallow *(Hirundo rustica)* was present inside the building during the survey. House Sparrows *(Passer domesticus)* were nesting beneath the pantiles on the east slope of the roof.

8 Assessment

8.1 Evaluation of survey findings

MAB Environment & Ecology Ltd. carried out a bat scoping survey of the building on 13 April 2016. This identified low potential bat roosting habitat within the building. No evidence of use by any void dwelling species was found and there were limited roosting opportunities along the ridge and around roofing timbers. The building was considered to offer some suitable crevice roosting habitat due to internal crevices and gaps along the eaves. Based on that survey planning consent was granted on condition that a bat emergence survey was carried out prior to conversion to determine if any bats were present. Collins (2016) recommends one visit for buildings judged to have low bat roost potential.

To comply with the planning condition a bat emergence survey was carried out on 3 May 2017 by John Drewett Ecology. Prior to the emergence survey the building was examined to reassess its bat roost potential. The building was found to be as described by MAB and is considered to have only low bat roost potential.

During the survey a small number of Common Pipistrelle and Noctule bats were recorded in flight at the survey site. Both of these species generally emerge from their roosts around sunset. No bats emerged from the surveyed building and the first bat was not recorded until 14 minutes after sunset. Observations and the timing of first bats suggests that the bats recorded probably flew to the site from a short distance away to the east.

The survey results confirm that bats were not roosting at the building at the time of survey.

A single Swallow was present inside the building, but there was no evidence of active nests. House Sparrows were confirmed nesting in the roof beneath pantiles on the east slope of the roof.

8.2 Potential impacts in the absence of mitigation

The proposed conversion will not have any adverse impact on bats.

Nesting birds could be disturbed as a result of the works. Therefore, the precautions set out in the Method Statement overleaf should be followed during the works.

8.3 Further survey requirements

No further bat surveys are considered necessary in connection with this proposed conversion. However, if the works have not been completed within three years the building should be re-surveyed.

9 Mitigation method statement

9.1 Nesting birds

All wild birds, their nests, eggs and young are protected by law. Therefore, active nests must not be destroyed during works and disturbance should be kept to a minimum. If an active nest is present avoid works in that area until after the young have left the nest. House Sparrows nesting under the pantiles will not be affected by works to the building unless the roof is to be replaced.

10 Background information and references

10.1 Bats: legislation and policy guidance

The following is a summary and brief interpretation of the legislation relating to bats. You are advised to consult the original legislation and/or a legal professional if you have particular concerns about the legality of a planned operation.

Bats and their roost sites are protected by the Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act, 1981 (as amended). This protection applies at all times, even if the bats are absent at the time that an activity is carried out.

Although many surveys are undertaken because Local Planning Authorities must consider the impact of a development on protected species during their decision making, it should be noted that bats and their roosts are protected, whether or not a survey has been requested, and that ignorance of the presence of bats is no defence against prosecution. Fines of up to £5000 and a six month prison sentence can be imposed for each offence.

Among other things it is an offence to:-

- Deliberately capture (or take), injure or kill a bat
- Deliberately disturb bats where the disturbance is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young or
- Deliberately disturb bats which is likely to impair their ability in the case of hibernating or migratory species, to hibernate or migrate
- Deliberately disturb bats, in particular any disturbance which is likely to affect significantly the local distribution or abundance of the species to which they belong
- Intentionally or recklessly disturb any 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 any bat uses for shelter or protection
- Damage or destroy a breeding site or resting place of any bat

The National Planning Policy Framework 2012 recognises that the planning system should perform an environmental role – contributing to protecting and enhancing our natural, built and historic environment. This should include "moving from a net loss of bio-diversity to achieving net gains for nature". Planning should "promote...recovery of priority species populations". Paragraph 119 states that "if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused". This section also states that "opportunities to incorporate biodiversity in or around developments should be encouraged". Significantly, paragraph 119 states that "The presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined".

Where it is proposed to carry out works which will have an adverse impact on bats or on a bat roost, a European Protected Species (EPS) licence must first be obtained from Natural England, even if no bats are

expected to be present when the work is carried out. Granting of planning permission does not override this requirement.

Bat conservation is also part of the biodiversity action plan process. The Convention on Biological Diversity, signed in Rio de Janeiro in 1992, requires states to develop national strategies and to undertake actions aimed at maintaining or restoring a wide range of biodiversity.

In England & Wales, the Natural Environment and Rural Communities (NERC) Act, 2006 imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, *"to have due regard, as far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity"*. It notes that *"conserving biodiversity includes restoring or enhancing a population or habitat"*. Local authorities frequently require protected species surveys to be submitted with planning applications so that they can fully take conservation into account in their decision making.

An EPS licence application requires details of the proposed works, the bats which may be affected and the mitigation proposed to maintain the favourable status of bats in the region. The application is usually drawn up on behalf of the client by a specialist ecological consultant. The consultant is required to check that work is proceeding in accordance with the method statement and to also carry out monitoring of the impact on bats for some time after completion of the works – the length of monitoring is dependent on the species, development and expected impact of the development on protected species. Natural England aims to make a decision on licence applications within 30 working days of receipt. There is no guarantee that a licence will be granted and there is no fast track process to obtaining one. Applications can only be made once planning permission has already been obtained (where appropriate).

EPS licences can only be issued if Natural England is satisfied that there is no satisfactory alternative to the development and that the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

10.2 Brief summary of bat biology

Bats are the only mammals to have developed powered flight. They are the second largest group of mammals in the world, with almost 1000 different species. In Britain 17 species occur, with the range of species declining towards the north. All British bats feed solely on invertebrates.

British bats live in crevices in trees, caves, buildings, bridges, tunnels and other structures. They are long-lived animals which use roost sites to which they return year after year. In summer females are usually colonial, each species gathering together in warm maternity roosts to give birth to their single young. Males often spend the summer alone or in small groups. Several different roosts may be used over a year, the bats moving between these places depending on time of year, prevailing weather and other conditions.

In winter bats hibernate, a process of long periods of deep torpor punctuated by regular arousals. Their body temperature falls close to the ambient temperature of their chosen hibernaculum and their heart rate and metabolism drop dramatically. In this state they use little energy, allowing them to survive until spring on their fat reserves. They are very sensitive to temperature changes at this time. Changes may cause them to wake, a process which uses considerable energy reserves. Many species hibernate in cool, stable underground sites such as caves and tunnels, although individual bats may be found in almost any small crevice. Summer roosts and hibernation sites for the same bats are normally located in different places.

For more than 50 years bats suffered a major decline. The reasons are many and varied, but include destruction of roost sites, a reduction in insect prey and direct and indirect poisoning from toxic chemicals. As a result of greater protection, some are now doing better, but they are still vulnerable and threatened.

The survival of a colony of bats depends on there being a range of suitable summer roost sites, hibernation sites and feeding areas within a reasonable distance. Deep crevices in which they can roost, woodland, hedgerows and freshwater nearby all help to provide the conditions and food they need. A continuous linked network of good habitat provides ideal conditions. Some species will follow hedgerows and woodland edges and rivers where their food is concentrated whilst others fly higher and largely ignore features on the ground. Almost anywhere, even city centres, will be visited by bats at some time.

Each species of bat is different in the places it roosts, the food it eats, how it hunts and what it requires. That is just one reason why a bat survey must identify the species and numbers of bats present on a site, their roost locations, access points, feeding areas, etc., before determining any mitigation necessary.

10.3 Birds: legislation

Under the Wildlife and Countryside Act (1981), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds however are not included in this definition (except for limited parts of the Act). They are covered by the Game Acts, which fully protect them during the close season.

All birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions to: -

- intentionally kill, injure or take any wild bird
- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built
- intentionally take or destroy the egg of any wild bird
- have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954
- have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954
- use traps or similar items to kill, injure or take wild birds
- have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations
- intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

10.4 References

- Anon (2012) *National Planning Policy Framework,* Department for Communities and Local Government
- Collins J (ed.) (2016) *Bats Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition*, The Bat Conservation Trust, London
- Dietz C, Helversen O & Nill D (2009) *Bats of Britain, Europe & Northwest Africa*, A&C Black
- Mitchell-Jones A J (2004) *Bat mitigation guidelines*, English Nature.
- Mitchell-Jones A J & McLeish A P (2004) *Bat Workers' Manual*, JNCC.

- Wray S, Wells D, Long E & Mitchell-Jones A J (2010) *Valuing Bats in Ecological Impact Assessment*, In Practice No. 70, pp. 23-25