

Bat Emergence and Re-entry Surveys

The Tudor Close Pub, Ferringham Lane, Ferring, West Sussex BN12 5NQ

Trevor Baker

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Updated	2	Natalie Evans BA (Hons), MA, MRSB, Senior Consultant	22/09/20

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Executive summary

Arbtech were commissioned by Trevor Baker to undertake bat emergence and re-entry surveys at The Tudor Close Pub, Ferringham Lane, Ferring, West Sussex BN12 5NQ. The surveys were completed on 18th May and 10th June 2020. The aim of the assessment was to confirm the presence/likely-absence of a bat roost in the building and characterise any roosts present. This includes providing evidence for species, numbers and levels of activity, to identify any entrance and egress points, and to gain an understanding of the activity of bats using the site in the local landscape.

The plans are to convert the pub into residential units. A planning application is being prepared for submission to Arun District Council.

Recommendations

The surveys have concluded that there is a likely absence of bat roosts within the survey building. No further surveys are required. See section 4.2 for further details.

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1.0 Introduction and Context

1.1 Background

Arbtech were commissioned by Trevor Baker to undertake bat emergence and re-entry surveys at The Tudor Close Pub, Ferringham Lane, Ferring, West Sussex BN12 5NQ. The surveys were completed on 18th May and 10th June 2020. The assessment is informed by the Bat Conservation Trust publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

These surveys were completed following recommendations made in the Preliminary Roost Assessment (Arbtech 2020).

1.2 Site Context

The survey area is located at National Grid Reference TQ 0924 0197 and has an area of approximately 0.18ha. The site lies in a residential area with housing to the north south and west and local amenities to the east.

1.3 Scope of the report

This report provides a description of the bat activity observed and recorded during each survey. The aim of the assessment was to characterise any roosts present including species, number of individuals, number and location of roost access points, and to gain an understanding of how bats use the site.

Robust data has been collected, following good practice guidelines, to inform an assessment of the potential impacts of the proposed development on bats, and inform mitigation and enhancements. This report provides information on constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve planning permission, and statutory consent to comply with wildlife legislation.

To achieve the aims of the assessment, the following steps have been taken:

- A desk study has been carried out, including a request for information from the local bat group or records centre - please refer to the Preliminary Roost Assessment (Arbtech 2020)
- Field survey(s) has been undertaken, including an external survey and internal inspection.
- An outline of likely impacts on any known roosts has been provided, based on current development proposals.
- Recommendations for further survey and assessment have been made, along with advice on the requirements of a European protected species mitigation licence (EPSML) application if appropriate.

A survey plan is presented in Appendix 1 showing the location of each surveyor and the bat activity observed and recorded during each survey, proposed plans in Appendix 2 and a summary of relevant legislation is presented in Appendix 3.

1.4 Project Description

The plans are to convert the pub into residential units. A planning application is being prepared for submission to Arun District Council.

2.0 Methodology

2.1 Desk Study methodology

The desk study included a 1km radius review of statutory and non-statutory designated sites, Biodiversity Action Plan (BAP) Priority Habitats and granted EPSML records for bats held on Magic database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

Existing bat records relating to the site and a surrounding 2km radius are required to conform to national guidelines. The data search is confidential information that is not suitable for public release and was analysed and summarised in the preliminary roost assessment survey. Please refer to the Preliminary Roost Assessment (Arbtech 2020).

2.2 Site Survey methodology

The survey methods were informed by the recommendations presented in the Preliminary Roost Assessment (Arbtech 2020). This survey identified the following survey requirements in line with best practice:

Table 1: Recommended surveys

Ref	Survey assessment conclusions (with justification)	Recommendations
Bats	B1 has suitable roosting features around the building that have moderate habitat value for crevice dwelling bats.	In order to proceed with the development following best practice and in line with planning policy, a suite of dusk emergence and dawn re-entry surveys will need to be carried out between May and September. Two surveys are required; one at dusk and one at dawn with at least 2-3 weeks between them. At least 1 of the surveys should be within the optimal survey season which is mid-May-August. Two surveyors are required to provide full coverage of all elevations. The surveys will determine the presence or likely absence of bat roosts in the building, and if present which bat species, in what number and roost type. If bats are identified roosting the development will need to be permitted by a European protected species mitigation licence which can be obtained once planning permission has been granted.

The surveys involved surveyors positioned around the building ensuring that all elevations and roof sections with suitable roosting features could be clearly observed. Particular attention was paid to the areas of the building identified as providing suitable access points to bat roosts. The location of each surveyor during each survey is shown in Appendix 1. Each surveyor was assigned an area of the building to observe for the duration of the survey. Surveyors used heterodyne and frequency division bat detectors, and Wildlife Acoustics EM3+ and Echo Meter Touch detectors connected to iPads. Bat echolocation calls recorded during the surveys were analysed using Wildlife Acoustics sound analysis software Kaleidoscope V3.1.7 when required. The Echo Meter Touch includes an auto ID function for bat species; however, this is not 100% accurate and further post-survey sound analysis is often required to confirm species that could not be

identified by the auto ID software during the survey. Surveyors also used head torches, survey record sheets and pens/pencils for recording all activity observed during the surveys. Each surveyor was also provided with a handheld radio for communication between surveyors to assist with confirming ambiguous bat activity e.g. a bat emergence or a bat passing over the building.

In accordance with the latest bat survey guidelines (Collins, J. 2016) dusk emergence surveys commenced 15 minutes before sunset and continued for 1½ - 2 hours after sunset – depending upon bat activity and surveyor visibility. Dawn re-entry surveys commenced 2 hours before sunrise and continued until 15 minutes after sunrise.

Surveys were completed during optimal weather conditions i.e. when temperatures were above 10°C, with no rain or strong winds, as these adverse weather conditions can impact upon bat emergence and foraging behaviour.

2.3 Surveyors

The lead surveyor is Natalie Evans, (Natural England Bat Licence Number: 2018-37888-CLS-CLS) and was assisted by experienced surveyors with several years of bat survey experience. Three surveyors were used to provide sufficient cover of the building during each survey. The designated position of each surveyor during each survey is detailed in the tables in Section 3.1 below and shown on the plan in Appendix 1.

2.4 Limitations

These surveys follow best practice guidance to confirm presence or likely absence of roosting bats and where present, characterise the roost. However, this information is collected at finite dates and times, and provides an indication of the conditions on site only. The use of the building and the site as a whole by bats, at all times cannot be established based on this information. There were no specific limitations to the surveys.

3.0 Results and Evaluation

3.1 Survey Results

The results of each survey are provided in the tables below.

Table 2: Survey results

Date		18/05/20
Start and End Times		20:30 – 22:30 Sunset: 20:49
Weather Conditions		Start: Temp: 13.7°C Relative Humidity: 71% Cloud Cover: 90% Wind: 7mph Rain: none End: Temp: 12°C Relative Humidity: 88% Cloud Cover: 80% Wind: 4mph Rain: none
Surveyor (position) As shown in Appendix 1		Natalie Evans - Natural England Bat Licence Number: 2018-37888-CLS-CLS (Position 1 – observing the south east and south west elevations and roof structures of B1) Jonathan Kewell – 6 years' survey experience (Position 2 – observing the south east and north east elevations and roof structures of B1) Joe Crook – second year surveyor (Position 3 – observing the north west and south west elevations and roof structures of B1)
Building Reference	Surveyor Position	Notes/observations:
B1	1	A common pipistrelle <i>Pipistrellus pipistrellus</i> was heard but not seen at 21:38.
B1	2	Common pipistrelles passed regularly between 21:19 and 21:45 passing around the north east side of the building, two bats were seen playing at 21:21.
B1	3	A common pipistrelle passed north east to south west down the road at 21:16.

Table 3: Survey results

Date		10/06/20
Start and End Times		03:15 – 05:00 Sunrise 04:48
Weather Conditions		Start: Temp: 14°C Relative Humidity: 60% Cloud Cover: 100% Wind: 3mph Rain: none End: Temp: 12.9°C Relative Humidity: 85% Cloud Cover: 100% Wind: 3mph Rain: none
Surveyor (position) As shown in Appendix 1		Natalie Evans - Natural England Bat Licence Number: 2018-37888-CLS-CLS (Position 1 – observing the south east and south west elevations and roof structures of B1) Jonathan Kewell – 6 years' survey experience (Position 2 – observing the south east and north east elevations and roof structures of B1) Joe Crook – second year surveyor (Position 3 – observing the north west and south west elevations and roof structures of B1)
Building Reference	Surveyor Position	Notes/observations:
B1	1	There were seven common pipistrelle passes between 03:57 and 04:22 all thought to be the same single bat following the same flight path around the tree and to the line of houses to the south from the direction of surveyor 2.
B1	2	There were seven common pipistrelle passes between 03:57 and 04:22 all thought to be the same single bat following the same flight path towards surveyor 1, around the tree and to the houses to the south.
B1	3	Common pipistrelle passed distant and unseen at 03:57 and 04:23.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

When bat roosts are present, the bat surveys undertaken at a site facilitate the characterisation of the roost type. This allows for appropriate mitigation and compensation to be designed to inform a European Protected Species Mitigation Licence (EPSML) application to Natural England.

The definitions of bat roost types are provided below, taken from the *Bat Mitigation Guidelines* (English Nature, 2004) and the Bat Conservation Trust publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

Day roost: a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.

Night roost: a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.

Feeding roost: a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.

Transitional / occasional roost: used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.

Swarming site: where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites

Mating sites: sites where mating takes place from later summer and can continue through winter.

Maternity roost: where female bats give birth and raise their young to independence.

Hibernation roost: where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats have been confirmed by appropriate survey effort should be classed as 'hibernation confirmed'.

Satellite roost: an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Other: roost types are interchangeable and not always easy to classify according to the nuances of certain species.

4.2 Evaluation

The following recommendations are provided taking the desk-based assessment and site survey results into account.

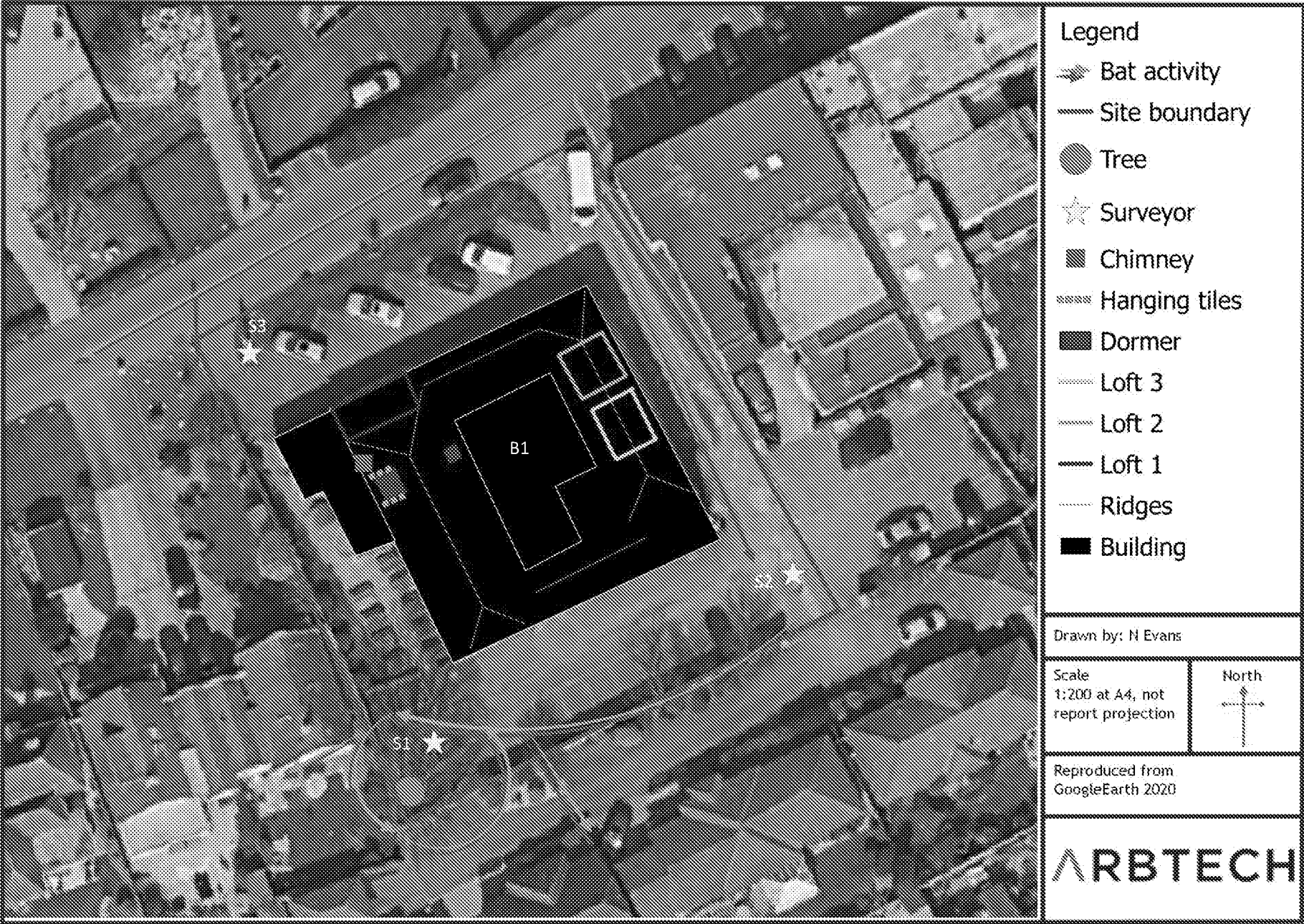
Table 5: Evaluation of building on site

Ref	Survey conclusions	Foreseen impacts	Recommendations / Mitigation
B1	The survey effort has concluded that there is a likely absence of bat roosts within the building, and a general low level of bat activity around the site with no key foraging or commuting routes present.	There will be no impact on bats or bat roosts as a result of the development.	No further surveys or mitigation required. In the unlikely event that a bat is found during the development, work must stop and Arbtech will be contacted for further advice.
B1 birds	Although no birds were seen to be currently nesting in the building, old nesting material under the eaves and in holes in the walls suggests that these have been previous nesting sites.	Active nests could be destroyed if holes or filled during nesting season.	If any holes or gaps in the walls or under the eaves are going to be repaired/filled, the nesting season should be avoided which runs March-August. If this timeframe cannot be avoided, then a nesting bird check should be carried out by a suitably qualified ecologist immediately prior to the start of work.

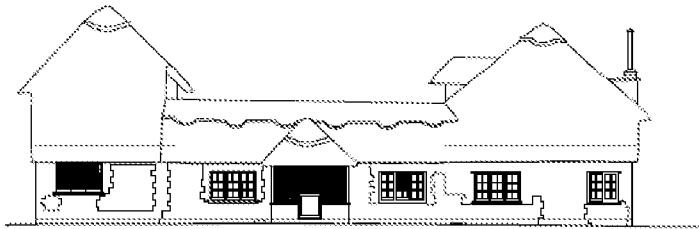
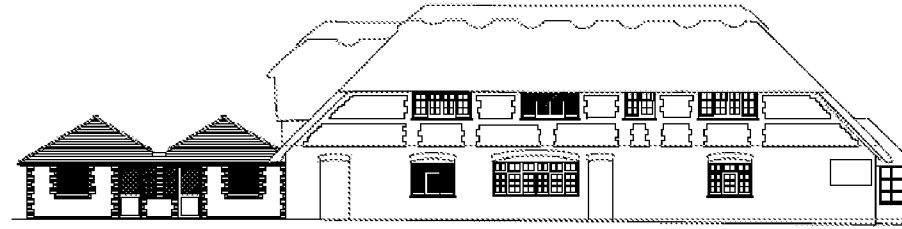
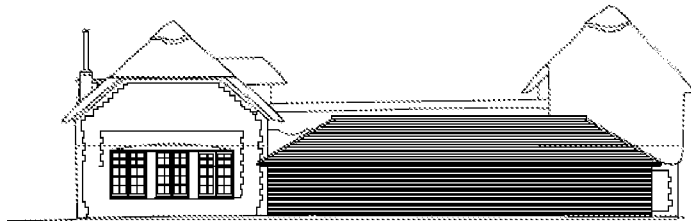
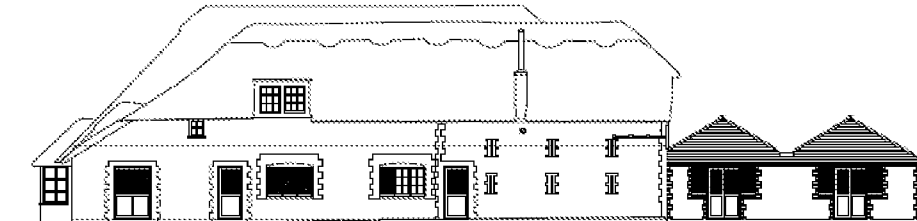
5.0 Bibliography

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- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth (2019) accessed on 10/06/20
- Magic database (2019) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 10/06/20
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Appendix 1: Survey Plan



Appendix 2: Proposed Elevations

**North Elevation**As Proposed
1:100**East Elevation**As Proposed
1:100**South Elevation**As Proposed
1:100**West Elevation**As Proposed
1:100

1:100 Scale Bar

10/10/2019 10:00:00 AM 10/10/2019 10:00:00 AM 10/10/2019 10:00:00 AM	
Project: Proposed Conversion of The Tudor Close Farringham Lane Ferring	
Drawing title: Elevations As Proposed	
Name:	
Symbols of: Chris Walker Associates Chartered Building Surveyors Garden Cottage Farn Lane Clonmel Wick, Co. Wick Tel: 01444 511000 Fax: 01444 511001 Email: info@cwawick.com	
Scale: 1:100 @ A1	
Date: Nov 2019	Sheet:
Dwg. No.: 3032-03	Rev: C

Appendix 3: Legislation and Planning Policy related to bats

LEGAL PROTECTION

All species of bat are fully protected under *The Conservation of Habitats and Species Regulations 2017* through their inclusion on Schedule 2.

Regulation 43: Protection of certain wild animals - offences

(1) A person is guilty of an offence if they:

- (a) Deliberately captures, injures or kills any wild animal of a European protected species,
- (b) Deliberately disturbs wild animals of any such species,
- (c) Deliberately takes or destroys the eggs of such an animal, or
- (d) Damages or destroys a breeding site or resting place of such an animal,

(2) For the purposes of paragraph (1) (b), disturbance of animals includes in particular any disturbance which is likely—

- (a) To impair their ability:
 - (i) To survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) To affect significantly the local distribution or abundance of the species to which they belong.

Bats are also protected under the *Wildlife and Countryside Act 1981 (as amended 01.04.1996)* through their inclusion on *Schedule 5*. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

NATIONAL PLANNING POLICY (ENGLAND)

National Planning Policy Framework 2017

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

Effect on development works:

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008).

There are 17 species of bat breeding in England and Natural England issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below);
- That there is no satisfactory alternative;
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

- ***include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;***
- scientific and educational purposes,
- ringing or marking
- conserving wild animals

Development works fall under the first purpose and Natural England issues bat mitigation licences for developments.