



Bat Survey Report



111a Watlington Street

On behalf of Napier Clarke

September 2020

Ecology by Design Ltd,

Hampden House, Monument Park, Chalgrove, Oxfordshire, OX44 7RW

Tel 01865 893346 www.ecologybydesign.co.uk

Project Code	Title	Date of Issue
EBD001447	Watlington Street Bat Surveys	10 th September 2020

	Name	Date
Prepared by	Emily Bartlett BSc (Hons) MSc ACIEEM	10 th September 2020
Checked by	Ben Gardner BSc (Hons) MCIEEM CEnv	10 th September 2020

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1 Executive Summary

Report purpose	This report identifies the potential ecological impacts, mitigation and compensation measures in relation to the proposed development of 111a Watlington Street, Reading.
Date and methods of survey	Surveys of the site were conducted during July and August 2020 including: • A preliminary roost assessment; and • One dusk emergence bat survey and one dawn return to roost survey.
Key findings	• The building on site had a number of potential roosting features and was assessed as having moderate potential to support roosting bats. • No bats or evidence of bats was identified during the preliminary roost assessment of the building. • No bats were recorded roosting within the building during the dusk emergence and dawn return to roost surveys. • Roosting bats do not pose a constraint in relation to the proposed development. • Three species of bats were recorded commuting and foraging within the vicinity of the site during the surveys.
Potential impacts	In the absence of mitigation the proposed development may result in the disturbance of bats through increased light spill.
Measures to avoid and/or reduce impacts	A sensitive lighting scheme should be designed and implemented around the site to reduce disturbance to the local bat population.
Enhancements	In line with planning policy, it is recommended that a bat box is integrated into the design or installed on the exterior wall of the new building on completion to provide an additional roosting opportunity.

2 Introduction

2.1 Background and Survey

2.1.1 Ecology by Design Ltd was commissioned by Napier Clarke to undertake a preliminary roost assessment (PRA) and dusk emergence/dawn return to roost surveys of the existing industrial building at 111a Watlington Street, Reading, RG1 4RQ (central grid reference SU 72355 73053).

2.1.2 The objectives of this report are:

- Identify any potential ecological constraints that may affect the proposed works;
- Identify the species of bat using the surveyed area;
- Assess the levels of activity of bats utilising the site; and
- Inform mitigation measures, where required, to ensure the favourable conservation status of bats is maintained.

2.2 Site Description

2.2.1 The site is located within the town of Reading in Berkshire. The site is immediately surrounded by residential development and hospital facilities while the wider landscape is dominated by similarly urban development with a couple of sports fields to the south of the site. The River Kennet is located approximately 300m to the north of the site and there is a railway line located approximately 700m the north of the site.

2.3 Proposed Works

2.3.1 Napier Clarke seeks to secure planning permission for the demolition of the existing industrial building on the site and construction of residential dwellings.

2.4 Limitation and Constraints

2.4.1 The wildlife and wider ecological interest of a site can change. The report presented here is a statement of the findings of the surveys carried out during July to August 2020.

2.4.2 Any appreciable delay in making reference to this report may necessitate a re-survey.

2.4.3 Weather conditions were considered suitable to conduct the surveys.

2.4.4 The building is a semi-detached structure therefore one aspect, the northern elevation, was obstructed and not visible during the surveys. This is not considered a significant constraint due to the level of survey effort undertaken and the absence of activity within this area during the surveys.

3 Methods

3.1 Desk Study

- 3.1.1 Biological records were requested from Thames Valley Ecological Records Centre (TVERC) with records were returned on 17th August 2020.
- 3.1.2 A search of MAGIC (Magic.gov.uk, accessed 10th September 2020) was undertaken for granted European Protected Species Mitigation (EPSM) licences granted for bats within 2km of the site.

3.2 Preliminary Roost Assessment

- 3.2.1 An external and internal Preliminary Roost Assessment was conducted of the industrial building at 111a Watlington Street on the 22nd July 2020 by Ecology by Design. The assessment was based on the guidance in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) and government guidance (Gov.uk., 2015).
- 3.2.2 The survey was conducted by licensed bat ecologist Emily Bartlett (Natural England Class 1 Bat Licence 2019-43526-CLS-CLS). Emily has over four years of experience undertaking bat roost surveys and preliminary roost assessments of buildings. Conditions during the survey were warm and dry (23°C, cloud 6/8 oktas¹, wind Beaufort 1² and no rain) and preceding weather was optimal for bats.
- 3.2.3 The surveyor used a high-power torch and binoculars to inspect features of interest. Where bat droppings were found a sample was collected to enable DNA analysis to identify the species at a future date, if required. All external areas of the buildings were inspected as well as internal areas. Equipment used included:
- LEDLenser Lamp
 - 10x42mm close focusing binoculars
- 3.2.4 Evidence searched for included the presence of free hanging bats and bats within gaps and crevices, bat droppings, urine stains, rub marks, scratch marks and feeding remains.

3.3 Bat Surveys

- 3.3.1 Dusk emergence and pre-dawn re-entry surveys were conducted of the building which had suitability for roosting bats to confirm presence or likely absence of roosting bats, and where

¹ Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

² The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. . 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze, 6- Strong breeze, 7- Moderate gale, 8- Fresh gale, 9- Strong gale, 10- Whole gale, 11- Storm, 12- Hurricane force.

present, enable characterisation of the roost(s). The surveys undertaken within the site are detailed in Table 1.

Table 1: *Details of bat roost surveys completed in 2020*

Date	Surveyors	Type
18 th August 2020	Emily Power (Natural England Licence 2017-32544-CLS-CLS) and Tony Wells	Dusk
30 th August 2020	Tony Wells and Dr Stacey Waring (Natural England Licence 2015-6768-CLS-CLS)	Dawn

3.3.2 The surveys were based on the guidance included in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016). Bat detectors utilized included Elekon Batlogger M detectors to record any bats emerging from or re-entering the buildings.

3.3.3 The emergence surveys commenced approximately 15 minutes before sunset and lasted until 1.5 hours after sunset. The pre-dawn re-entry surveys commenced 1.5 hours before sunrise and finished just after sunrise.

3.3.4 Surveyors were located on each aspect of the building, focused on features identified during the preliminary roost assessment as being suitable for roosting bats. During the surveys, emergence and/or re-entry points were mapped, species were identified (where possible) and flight lines were noted. The results of the survey are detailed in the photos in Appendix 1 and the map in Appendix 2.

3.4 Site/ Species Valuation for Roosting Bats

3.4.1 Based upon the framework for valuing bats in Ecological Impact Assessment designed by Wray *et al.* (2010), the site's roost is categorised and valued from District Level to International. These different bat roosts can be assigned to a geographic frame of reference as detailed in Appendix 3.

4 Results

4.1 Desk Study

4.1.1 Records of at least nine bat species within 2km of the site were returned by TVERC and nine European Protected Species Mitigation Licences which have been granted within 2km of the site were located during a search of MAGIC. See details in Tables 2 and 3. The site is located within the Core Sustenance Zones³ of all bat species recorded with the desk study (see Appendix 4).

Table 2: Details of bat records located within 2km of the site

Species of Bat	Latin Name	Date of Most Recent Record	Distance of Closest Record	Records
Western barbastelle	<i>Barbastella barbastellus</i>	2018	1.0km NE	2
Serotine bat	<i>Eptesicus serotinus</i>	2018	1.0km NE	10
Daubenton's bat	<i>Myotis daubentonii</i>	2016	0.3km W	12
Leisler's bat	<i>Nyctalus leisleri</i>	2016	1.0km NE	2
Noctule bat	<i>Nyctalus noctula</i>	2018	0.1km SW	74
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>	2018	0.1km SW	13
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	2019	0.1km SW	127
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	2019	0.1km SW	93
Brown long-eared bat	<i>Plecotus auritus</i>	2017	1.2km SE	4

³ Core Sustenance Zones are the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost

Table 3: Details of granted EPSM licences for bats located within 2km of the site

Species of Bat	Date	Distance	Resting Place	Breeding Place
Common pipistrelle	2016	0.3km SW	Y	N
Soprano pipistrelle & common pipistrelle	2014	0.8km SE	Y	N
Common pipistrelle	2013	0.8km NW	Y	N
Daubenton's bat	2017	1.0km NW	Y	N
Common pipistrelle	2010	1.3km SE	Y	N
Common pipistrelle	2017	1.5km W	Y	N
Common pipistrelle & brown long-eared bat	2010	1.8km SE	Y	Y
Soprano pipistrelle & common pipistrelle	2014	2.0km SE	Y	N
Soprano pipistrelle & common pipistrelle	2012	2.0km SE	Y	N

4.2 Preliminary Roost Assessment

- 4.2.1 The building is a former industrial building which is currently vacant. The building is a two storey structure which is constructed from red brick and partly clad with wooden weatherboard on the western and southern elevations. The building is in two sections; the western section has a pitched roof of modern interlocking composite tiles with two large roof windows and a chimney. The eastern section has a sloping roof of composite tiles with a chimney. The north east corner of the building is covered in the remains of a dead climbing plant.
- 4.2.2 Externally, there are gaps under the weatherboarding to the west and south. There are areas of missing mortar and gaps between the brickwork of the building on the southern elevation. There are gaps under the edge of the roof window to the south and raised tiles on the southern elevation. On the east elevation there are further raised tiles, a gap between the mortar and tiles and missing mortar under the ridge tiles. There is a gap between the wooden fascia and

the wall of the building on the southern elevation. There is also a gap between the walls of the western and eastern sections of the building.

4.2.3 Internally, the building has no loft space. The rooms of the upper storey are open to the roof rafters and are well lit due to windows present in the upper storey and roof. The roof is lined with a mixture of modern breathable roofing membrane and traditional bitumen roofing felt and there are exposed wooden roof beams and rafters. There is a hole in the roofing membrane which shows wooden sarking below the tiles. There are gaps between the wooden beams and internal brickwork and there is a pipe accessing the blocked up chimney.

4.2.4 No bats or evidence of bats was recorded in or around the building. A number of features suitable to support roosting bats were recorded within the garage complex which was assessed as having moderate potential to support roosting bats. See photos in Appendix 1 and map in Appendix 2.

4.3 Roost Surveys

4.3.1 The survey timings and weather conditions for the dusk emergence survey is detailed in Table 4 below.

Table 4: Survey weather conditions

Date	Sunset/ Sunrise	Start	End	Weather
18 th August 2020	20:19	20:04	21:49	21°C to 19°C, Cloud 4/8 ⁴ , 2 Beaufort ⁵
30 th August 2020	06:14	04:44	06:20	11°C to 12°C, Cloud 5/8, 2 Beaufort

Dusk emergence 18th August 2020

4.3.1 No bats were seen emerging from or returning to roost within the building during the survey.

4.3.2 Frequent common pipistrelle (*Pipistrellus pipistrellus*) activity was recorded during the survey from 20:41 until 21:27 with 130 passes recorded and periods of continuous foraging. Frequent common pipistrelle foraging was observed around the garden and tree immediately to the south east of the site. Two passes of noctule bats (*Nyctalus noctula*) were recorded at 21:03

⁴ Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

⁵ The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze, 6- Strong breeze, 7- Moderate gale, 8- Fresh gale, 9- Strong gale, 10- Whole gale, 11- Storm, 12- Hurricane force.

and 21:42, respectively, and a single soprano pipistrelle (*Pipistrellus pygmaeus*) pass was recorded at 20:52.

Dawn return to roost emergence 30th August 2020

- 4.3.1 No bats were seen emerging from or returning to roost within the building during the survey.
- 4.3.2 Activity levels were very low during the dawn survey with a total of three commons pipistrelle passes recorded, at 05:36, 05:43 and 06:05, and two soprano pipistrelle passes at 05:14 and 05:30 respectively.

5 Discussion

- 5.1.1 No bats or evidence of bats were recorded during the preliminary roost assessment of the building however, a number of potential roosting features were identified. One dusk emergence survey and one dawn return to roost survey were undertaken to ascertain whether bats were roosting within the building. No emergence or re-entries were recorded during the surveys therefore roosting bats are not considered to pose a constraint in relation to the demolition of the building.
- 5.1.2 Three species of bat were recorded within the vicinity of the site during the surveys including common pipistrelle, soprano pipistrelle and noctule bats. Frequent common pipistrelle foraging was observed around the tree to the south east of the building. Increased or altered lighting within the new development could disturb commuting and foraging bats around the site although it should be noted that the street to the east of the site is already well lit by street lights.

6 Recommendations and Enhancements

6.1 Site Design

Sensitive Use of Artificial Lighting

- 6.1.1 Increased levels of artificial light can cause disturbance to bats. Though several bat species can take advantage of artificial lighting systems for foraging, feeding off the insects they attract, other species avoid them as foraging within an illuminated area increases the risk of predation by nocturnal birds of prey or even domestic cats. If lighting is intensive and widespread, particularly lighting from lamps, which emit UV light (such as mercury vapour); it can deter some bats from utilising the site and in some instances can act as a barrier across commuting lines. Research has also shown that certain types of artificial lighting have been proven to disturb the emergence patterns of bats when they are placed within the vicinity of entrances to a bat roost.
- 6.1.2 The lighting scheme for the site will be designed sensitively in accordance with industry standard guidance (BCT & ILP, 2018). Where practicable, particularly around trees, lighting will be directional or shrouds or baffles fitted so that the lights will not illuminate surrounding vegetation or adjacent housing. Lighting will be sensor activated and set to a sensitivity that will not be triggered by small mammals. Only the minimum light levels required to meet health and safety standards will be used within the site.

6.2 Enhancements

Bat Box

- 6.2.1 In line with planning policy, which aims for a net gain in biodiversity, a bat box will be incorporated into the design of the new building or installed on the exterior following completion. A new roost feature will be created in the form of a Habibat Box (or equivalent) integrated within the walls of the completed building or a Midi Beaumaris Woodstone Bat Box (or equivalent) could be erected on the exterior of the new building on completion. The bat box should not be placed above windows, doors and wall climbing plants. The box will be installed on the wall at a height of 2m to 4m metres above ground on the southern or western aspect of the building away from direct sources of illumination and where the rain cannot directly access the box. See example boxes in Appendix 5.

7 Legislation and Policy

7.1 Bats

Bats and their roost sites are protected by UK and European legislation.

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose.

Additionally, the Conservation of Habitats and Species Regulations 2017 make it an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat;
- Damage or destroy a breeding site or a resting place of a bat; and
- Keep, transport, sell or exchange or offer for sale or exchange alive or dead bat or any part of a bat.

7.2 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was updated in February 2019 thereby replacing the older version of July 2018. The new framework sets out in section 15 that to protect and enhance biodiversity and geodiversity, plans should:

Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and

promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

When determining planning applications, local planning authorities should apply the following principles:

if significant harm to biodiversity 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;

development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally

be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

The following should be given the same protection as habitats sites:

- *potential Special Protection Areas and possible Special Areas of Conservation;*
- *listed or proposed Ramsar sites; and*
- *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

7.3 Government Circular ODPM 06/2005 Biodiversity and Geological Conservation

Paragraph 98 of Government Circular 06/2005 advises that “the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult Natural England before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species’ protection provisions affecting the site concerned...”

Paragraph 99 of Government Circular 06/2005 advises that “it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out

should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted”.

7.4 Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance (England)

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act require the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England as required by the Act. In accordance with the Act the Secretary of State keeps this list under review and will publish a revised list if necessary, in consultation with Natural England.

The S41 list is used to guide decision-makers such as public bodies, including local authorities and utilities companies, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions, including development control and planning. This is commonly referred to as the ‘Biodiversity Duty.’

Guidance for public authorities on implementing the Biodiversity Duty has been published by Defra. One of the key messages in this document is that ‘conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them.’ In England the administration of the planning system and licensing schemes are highlighted as having a ‘profound influence on biodiversity conservation.’ Local authorities are required to take measures to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species. The guidance states that ‘the duty aims to raise the profile and visibility of biodiversity, clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy and decision making.’

In 2007, the UK Biodiversity Action Plan (BAP) Partnership published an updated list of priority UK species and habitats covering terrestrial, freshwater and marine biodiversity to focus conservation action for rarer species and habitats in the UK. The UK Post-2010 Biodiversity Framework , which covers the period from 2011 to 2020, now succeeds the UK BAP. The UK priority list contained 1150 species and 65 habitats requiring special protection and has been used as a reference to draw up the lists of species and habitats of principal importance in England.

In England, there are 56 habitats of principal importance and 943 species of principal importance on the S41 list. These are all the habitats and species found in England that were identified as requiring action in

the UK BAP and which continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.

7.5 Local Planning Policy

Below is relevant information taken from Reading Borough Council's Reading Borough Local Plan which was adopted in November 2019.

Policy EN12: Biodiversity and the Green Network

b) On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should:

- Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and
- Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.

In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is "no net loss" of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.

8 References

BCT & ILP (2018). *Guidance Note 08/18 Bats and artificial lighting in the UK*. Bats and the Built Environment series

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

Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines* version January 2004, English Nature, Peterborough.

Reading Borough Council (2019). *Reading Borough Local Plan*

Wray, S., Wells, D., Long, E. and Mitchell-Jones, T. (2010). *Framework for valuing bats in Ecological Impact Assessment*, CIEEM journal.

Appendix 1 - Photographs

Photograph 1: West elevation of the building



Photograph 2: South elevation of the building



Photograph 3: The south east corner of the building



Photograph 4: Raised weatherboarding on the west elevation of the building



Photograph 5: Gaps between the walls of the two sections of the building



Photograph 6: Raised tiles on the southern elevation



Photograph 7: Interior of the building



Photograph 8: Roof structure of the building



Photograph 9: Gap between interior brickwork and beams



Photograph 10: Hole in roofing membrane



Appendix 2 – Survey Plan

[Next page](#)



LEGEND

- S Surveyor Locations
- Potential Roosting Feature
- Potential Roosting Feature

Location (1:25000):

Project:
Watlington Street

Client:
Napier Clarke

Drawing Title:
Bat Survey Plan

Drawing No.: EBD_1447_DR001	Scale (@A3): 1:143
Central Grid Ref.: SU 72354 73052	Date Drawn: 13/08/2020
Drawn by: EB	Approved by: BG

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Hampden House, Monument Park,
Chalgrove, Oxon,
OX44 7RW

t: 01865 893345
e: emilyb@ecologybydesign.co.uk
w: www.ecologybydesign.co.uk

Appendix 3 – Site/ Species Value

Table 5 – Valuing bat roosts

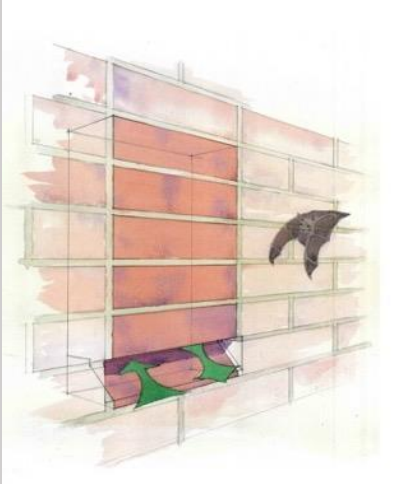
Geographic Farm of Reference	Roost Types
District, Local or Parish	-Feeding perches (common species) -Individual bats (common species) -Small numbers of non-breeding bats (common species) -Mating Sites (common species)
County	-Maternity sites (common species) -Small numbers of hibernating bats (common and rarer species) -Feeding perches (rarer/rarest species) -Individual bats (rarer/rarest species) -Small numbers of non-breeding bats (rarer/rarest species)
Regional	-Mating sites (rarer/rarest species) including well used swarming sites -Maternity sites (rarer species) -Hibernation sites (rarest species) -Significant hibernation sites for rarer/rarest species or all species assemblages
National/UK	-Maternity sites (rarest species) -Sites meeting SSSI guidelines
International	-SAC sites

Appendix 4 – Bat Core Sustenance Zones

Table adapted from Table 3.5 of the Bat Survey Guidelines (Collins, 2016)

Core Sustenance Zones	Species
1 km	Whiskered/Brandt's bat (<i>Myotis mystacinus/brandtii</i>), Bechstein's bat (<i>Myotis bechsteinii</i>)
2 km	Lesser horseshoe (<i>Rhinolophus hipposideros</i>), Daubenton's bat (<i>Myotis daubentonii</i>), common pipistrelle (<i>Pipistrellus pipistrellus</i>)
3 km	Greater horseshoe (<i>Rhinolophus hipposideros</i>), Leisler's bat (<i>Nyctalus leisleri</i>), soprano pipistrelle (<i>Pipistrellus pygmaeus</i>), Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>), brown long-eared bat (<i>Plecotus auritus</i>), grey long-eared bat (<i>Plecotus austriacus</i>)
4 km	Natterer's bat (<i>Myotis nattereri</i>), noctule (<i>Nyctalus noctula</i>), serotine (<i>Eptesicus serotinus</i>)
6 km	Barbastelle (<i>Barbastella barbastellus</i>)

Appendix 5 – Proposed Enhancement

Products	Description
 	Habibat Bat Box (or equivalent) The Habibat Bat Box is a solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built or renovated. A variety of facings can be fitted to suit any building. The box is suitable for Pipistrelle bats and other common UK species. https://www.nhbs.com/habibat-bat-box-plain-for-rendering
	Beaumaris Woodstone Bat Box (or equivalent) A standard bat box for crevice dwelling bats to be placed on the main house (Building A). https://www.nhbs.com/beaumaris-woodstone-bat-box