



Bat Emergence and Re-entry Surveys

Great Brighams Mead, Vastern Road, Reading, Berkshire, RG1 8DJ

Kings Oak Miami LLP

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation, and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary, and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Ltd was instructed by Kings Oak Miami LLP to undertake Bat Emergence and Re-entry Surveys (BERS) at Great Brighams Mead, Vastern Road, Reading, Berkshire RG1 8DJ (hereafter referred to as “the site”). The survey was required to inform a planning application for ‘*Construction of a two-storey roof (third and fourth floor) extension to accommodate 100 aparthotel rooms (Use Class C1) with associated parking, cycle stores and bin stores*’ (hereafter referred to as “the proposed development”).

The following bat roosts with a peak count of 14 common pipistrelles were identified at the site:

1. One maternity roost of common pipistrelles across the southwest roof (including the roof tiles and lead flashing around the base of the clock tower).
2. One day roost of common pipistrelles at the top of the clock tower.
3. One day roost of common pipistrelles in a join in the concrete base of the southeast turret.
4. One day roost of common pipistrelles in a join in the concrete at soffit level on the southwest elevation of B1.

An EPSL application to Natural England will be required to legally permit the proposed works. The EPSL application requires that surveys have been undertaken within the most recent active bat season (May to September) and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission, where possible. The EPSL will deal with any mitigation and compensation measures that will be required for the proposed development to comply with the standing advice and will be designed to reduce any impacts to an acceptably low level so as to maintain (or enhance) the Favourable Conservation Status (FCS) of the local bat population.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Ltd was instructed by Kings Oak Miami LLP to undertake Bat Emergence and Re-entry Surveys (BERS) at Great Brighams Mead, Vastern Road, Reading, Berkshire RG1 8DJ (hereafter referred to as “the site”). The survey was required to inform a planning application for ‘*Construction of a two-storey roof (third and fourth floor) extension to accommodate 100 aparthotel rooms (Use Class C1) with associated parking, cycle stores and bin stores*’ (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in **Appendix 1**.

The aim of the BERS was to determine the presence or likely absence of roosting bats and to characterise any roosts present. This has been undertaken with due consideration to the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2016).

The BERS have been informed by a Preliminary Roost Assessment (PRA) which was completed by Arbtech Consulting Ltd on 30th June 2023. The PRA assessed the building to have ‘moderate’ roosting value for bats. Due to the presence of external roosting features such as raised ridge tiles, which could provide opportunities for crevice dwelling bat species such as common pipistrelle. A review of the MAGIC database revealed four EPSLs for bats which have been granted within a 1km search radius of the site. The River Thames is located approximately 50m north of the site and it is therefore likely that bats will frequently commute and forage in the area.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference SU 71370 74217 and has an area of approximately 1ha comprising buildings, hard standing, broadleaf trees and shrubs. It is surrounded by residential and commercial areas and associated infrastructure, with the River Thames located approximately 50m north of the site. A site location plan is provided in **Appendix 2**.

1.3 Scope of the Report

This report provides a description of the bat activity observed and recorded during BERS. The aim of the surveys was to determine the presence or likely absence of bats and 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. The report provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any mitigation proposals, including a European Protected Species Licence (EPSL), where appropriate, to achieve planning or other statutory consent and to comply with wildlife legislation. To achieve this, the following steps have been taken:

- BERS of built structures has been undertaken to determine the presence or likely absence of bat roosts.
- An outline of potential impacts on any confirmed or unidentified roosts has been provided, based on the proposed development.
- Recommendations for mitigation have been made, along with advice on the requirements for a European Protected Species Licence (EPSL) application if appropriate.

- Opportunities for the enhancement of the site for roosting, foraging and commuting bats have been set out.

2.0 Methodology

2.1 BERS

Three BERS, comprising three dusk emergence and re-entry surveys, were undertaken of B1, as per the recommendations from the Preliminary Roost Assessment. 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. 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 Echo Meter Touch detectors connected to iPads or Android tablets. 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/tree/structure.

Four infrared recording kits were set up to monitor the building during the BERS. This comprised Nightfox Red or Nightfox Whisker Goggles set up on a tripod with two separate infrared lamps on a second tripod to provide additional illumination. Analysis of the footage was subsequently undertaken to detect roosting activity.

Dusk emergence surveys commenced 15 minutes before sunset and continued for 1½ - 2 hours after sunset – depending upon bat activity and surveyor visibility. Surveys were a minimum of two weeks apart.

Surveys were completed during optimal weather conditions i.e., when temperatures were above 10°C, with no rain or strong winds (greater than 5m/s), as these adverse weather conditions can impact upon bat emergence and foraging behaviour. Periods of high moon illuminance (>80%) were also avoided insofar as possible as this can reduce bat activity.

2.2 Surveyors

A total of eight surveyors were used to cover B1. The name, bat licence details or level of bat survey experience and 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 3**.

2.3 Bat Roost Characterisation

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 Licence (EPSL) application to Natural England.

Bat Emergence and Re-entry Surveys

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

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. Bats are highly mobile creatures that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time.

There was no clear view of the full extent of the roof structure, owing to the height of the building. The rear of the turrets could not be seen from any side of the building. Trees northeast of B1 hindered visibility.

During the third and final emergence survey, there was light rain from the start (18:47) until 19:40.

Bat Emergence and Re-entry Surveys

3.0 Results and Evaluation

3.1 Survey Results

The results of each survey are provided in the tables below and shown on the plan in **Appendix 3**.

Table 1: Survey results (first visit)

Date	16/08/2023	
Start and end times	20:10 – 21:55 Sunset: 20:25	
Weather conditions	Start: Temp: 22.3°C Relative Humidity: 63% Cloud Cover: 5% Wind: 2.9mph Rain: None	End: Temp: 19.5°C Relative Humidity: 67% Cloud Cover: 80% Wind: 6mph Rain: None
Surveyor (position) As shown in Appendix 3	Thomas Drew – two years bat survey experience - Position 1 – observing the south elevation and roof structure of B1. Chris Drew - two years bat survey experience - Position 2 – observing the south and southeast elevation and roof structure of B1. Anna Smith – three years bat survey experience - Position 3 – observing the east elevation and roof structure of B1. Inez Daly – one year bat survey experience - Position 4 – observing the north elevation and roof structure of B1. Matt Halligan – one year bat survey experience - Position 5 – observing the north and northwest elevation and roof structure of B1. Emily Hill – one year bat survey experience - Position 6 – observing the north and northwest elevation and roof structure of B1. Oli Drew – one year bat survey experience - Position 7 – observing the west elevation and roof structure of B1. Jamie-Lee Anderson – one year bat survey experience - Position 8 – observing the south and southwest elevation and roof structure of B1.	
IR position As shown in Appendix 3	Position 1 - observing the east elevation and roof structure of B1. Position 2 – observing the south and southwest elevation and roof structure of B1.	
Building reference	Surveyor position	Notes/observations:

B1	1	Summary: no emergences or re-entries were seen. At 20:41 three common pipistrelles were foraging in the central courtyard area in front of B1, until 21:03. At 21:06 a noctule was heard but not seen, constantly until 21:35. At 21:12 a common pipistrelle was heard but not seen, this re-occurred at 21:50.	
B1	2	Summary: no emergences or re-entries were seen. At 20:41 two common pipistrelles were foraging from behind surveyor two and toward the courtyard, this re-occurred at 20:42. At 20:44 a common pipistrelle was foraging in front of B1. At 20:45 a common pipistrelle was foraging from behind surveyor two and toward the courtyard. At 20:52 a common pipistrelle was heard but not seen, this re-occurred at 21:02, 21:11, 21:13 and 21:37. At 21:06 a noctule was heard but not seen. At 21:47 a soprano pipistrelle was heard but not seen.	

B1	3	Summary: no emergences or re-entries were seen. At 20:42 a common pipistrelle was heard but not seen, this re-occurred at 20:45, 20:49, 20:50, 20:51, 20:54, 20:58 and 21:00. At 21:13 a soprano pipistrelle was heard but not seen, this re-occurred at 21:29.	
B1	4	Summary: no emergences or re-entries were seen. At 20:46 until 20:56 approximately five common pipistrelles were foraging constantly in the courtyard at the rear of the building. At 20:55 a noctule was heard but not seen, this re-occurred at 21:00. At 21:02 a common pipistrelle passed NE → SW. At 21:02 a soprano pipistrelle was heard but not seen, this re-occurred at 21:46 and 21:53. At 21:32 a common pipistrelle was heard but not seen.	

B1	5	Summary: no emergences or re-entries were seen. At 20:45 a common pipistrelle was heard but not seen, this re-occurred at 21:21, 21:32 and 21:34. At 20:46 a common pipistrelle was foraging. At 20:56 two common pipistrelles passed from the courtyard at the rear of the building. At 20:59 a noctule was heard but not seen, this re-occurred at 21:04. At 21:18 a soprano pipistrelle passed along the rear of the building.	
B1	6	Summary: no emergences or re-entries seen. At 20:45 a common pipistrelle passed along the treeline and was foraging until 20:55. At 20:48 a common pipistrelle passed over the building. At 20:53 a common pipistrelle was heard but not seen, this re-occurred at 21:04, 21:05, 21:15, 21:17, 21:33 and 21:34. At 20:59 a noctule was heard but not seen, this re-occurred at 21:21, 21:23, 21:29 and 21:44. At 21:18 a soprano pipistrelle was heard but not seen, this re-occurred at 21:19.	

B1	7	Summary: no emergences or re-entries were seen. At 20:42 two common pipistrelles were foraging between the building and the site boundary. At 21:19 a common pipistrelle was heard but not seen, this re-occurred at 21:34. At 21:30 a soprano pipistrelle was heard but not seen. At 21:35 a noctule was heard but not seen.	
B1	8	Summary: no emergences or re-entries were seen. At 20:41 a common pipistrelle was heard but not seen, this re-occurred at 20:53, 20:58, 21:03, 21:30, 21:37 and 21:50. At 20:42 a common pipistrelle passed from the east of the building and flew west. At 20:44 a common pipistrelle passed from above the building and flew southwest. At 20:45 two common pipistrelles were foraging in front of the building, this re-occurred at 20:48, and was consistent from 20:49 until 20:52. At 20:55 a common pipistrelle passed from above the building and flew southwest. At 20:56 a common pipistrelle passed from the east of the building and flew west. At 21:01 a common pipistrelle was foraging amongst the trees in the southeast of the site.	
Building reference	IR position	Notes/observations:	

B1	1	No emergence or re-entries were recorded.	
B1	2	No emergence or re-entries were recorded.	

Other observations	A hedgehog was observed commuting across the site by surveyor three at the base of B1.	
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Table 2: Survey results (second visit)

Date		31/08/2023	
Start and end times		19:38 – 21:23 Sunset: 19:53	
Weather conditions		Start: Temp: 14.7°C Relative Humidity: 93% Cloud Cover: 100% Wind: 6.9mph Rain: Light drizzle	End: Temp: 14°C Relative Humidity: 93% Cloud Cover: 90% Wind: 6mph Rain: None
Surveyor (position) As shown in Appendix 3		Jamie-Lee Anderson – one year bat survey experience - Position 1 – observing the south elevation and roof structure of B1. Chris Drew - two years bat survey experience - Position 2 – observing the south and southeast elevation and roof structure of B1. Andrew Lee – three years bat survey experience - Position 3 – observing the east elevation and roof structure of B1. Remy St John-Reid – three years bat survey experience - Position 4 – observing the north elevation and roof structure of B1. Matt Halligan – one year bat survey experience - Position 5 – observing the north and northwest elevation and roof structure of B1. Harvey Yates – one year bat survey experience - Position 6 – observing the north and northwest elevation and roof structure of B1. Oli Drew – one year bat survey experience - Position 7 – observing the west elevation and roof structure of B1. Thomas Drew – two years bat survey experience - Position 8 – observing the south and southwest elevation and roof structure of B1.	
IR position As shown in Appendix 3		Position 1 – observing the south elevation and roof structure of B1. Position 2 – observing the west elevation and roof structure of B1. Position 3 – observing the east elevation and roof structure of B1.	
Building reference	Surveyor position	Notes/observations:	

B1	1	Summary: 10-12 CP emergences. At 20:03 a common pipistrelle emerged from the roof tiles behind the northwest turret and flew west (see red arrow). At 20:04 approximately 8-10 common pipistrelles emerged from the roof tiles behind the northwest turret and flew north and east (see red arrow). At 20:04, approximately 4-6 common pipistrelles were constantly active and foraging in front of B1 until 20:16. At 20:15 two common pipistrelles emerged from the west side of the central clocktower (circled in red). At 20:17 a common pipistrelle was heard but not seen, this re-occurred at 20:22. At 20:21 an unidentified bat emerged from a roof tile between the clock tower and southeast turret, the bat flew east (circled in yellow). At 20:24 an unidentified bat passed from the east over the building and flew west over the building.	
B1	2	Summary: nine CP emergences. At 20:02 a common pipistrelle passed from the courtyard and flew south. At 20:03 four common pipistrelles emerged from the roof tiles behind the northwest turret (same as P1) (see red circle). At 20:07 two common pipistrelles emerged from roof tiles between the clock tower and the southeast turret (circled in yellow). At 20:11 two common pipistrelles emerged from the west side of the central clock tower (circled in green). At 20:15 one common pipistrelle emerged from the east side of the central clock tower (circled in blue). At 20:21 a common pipistrelle was heard but not seen, this re-occurred at 21:12 and 21:23.	

B1	3	Summary: no emergences or re-entries were seen. At 20:02 a common pipistrelle flew along the western elevation of the building. At 20:06 a common pipistrelle passed across and over the building. At 20:06 a common pipistrelle flew along the eastern elevation of the building, this activity re-occurred frequently throughout the duration of the survey, with the last activity being recorded at 20:39. At 20:39 a noctule was heard, but not seen, every few minutes until 20:58.	
B1	4	Summary: no emergences or re-entries were seen. From 19:54 until 21:12 there was continuous common pipistrelle foraging and intermittent commuting activity. Common pipistrelle bats were observed foraging in the courtyard at the rear of the building and were seen passing over and across the building.	

B1	5	Summary: no emergences or re-entries were seen. At 20:14 a common pipistrelle passed over the building. At 20:16 a common pipistrelle was heard but not seen. At 20:17 a common pipistrelle was observed foraging in the courtyard at the rear of the building. At 20:47 a soprano pipistrelle was heard but not seen. At 21:17 a noctule was heard but not seen.	
B1	6	Summary: no emergences or re-entries were seen. At 20:05 a common pipistrelle was heard but not seen, this re-occurred at 20:16. At 20:30 a noctule was heard but not seen, this re-occurred occasionally throughout the survey and was recorded for the last time at 20:54. At 21:12 a myotis was heard but not seen.	

B1	7	Summary: no emergences or re-entries were seen. At 20:00 a common pipistrelle was heard but not seen, this re-occurred at 20:10 and 20:58. At 20:30 a common pipistrelle was foraging between the building and the trees. At 20:47 a soprano pipistrelle passed behind surveyor seven along the site boundary. At 21:04 a soprano pipistrelle was heard but not seen.	
B1	8	Summary: One CP emergence. At 20:00 a common pipistrelle passed W → N. At 20:04 a common pipistrelle was heard but not seen, this re-occurred at 21:22. At 20:06 approximately seven common pipistrelles flew south across the building. At 20:10 a common pipistrelle flew E → W over the building. At 20:16 a common pipistrelle was observed emerging from a join in the concrete on the southeast turret (circled in red). At 20:16 four common pipistrelles flew south across the building. At 20:43 a noctule was heard but not seen.	
Building reference	IR position	Notes/observations:	

B1	1	Approximately 14 bats were recorded emerging from seven different locations on the south elevation of B1, not all emergences were observed by the surveyors in positions 1, 2, and 8. The locations are circled in red.	
B1	2	No emergences or re-entries were recorded.	
B1	3	No emergences or re-entries were recorded.	

Other observations	The surveyor in position 3 noted the presence of a hedgehog throughout most of the survey, emerging occasionally from the bushes.	
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Table 3: Survey results (third visit)

Date		22/09/2023
Building inspection prior to survey		The roost features identified during the PRA were subject to an inspection prior to the BERS to check for evidence of roosting bats. An internal inspection of the building was also completed. No droppings or feeding remains were found inside the building. For health and safety reasons, the full extent of the building could not be inspected.
Start and end times		18:47 – 20:32 Sunset: 19:02
Weather conditions		Start: Temp: 14.6°C Relative Humidity: 72% Cloud Cover: 100% Wind: 2.9mph Rain: Light drizzle End: Temp: 11.6°C Relative Humidity: 88% Cloud Cover: 90% Wind: 4.9mph Rain: None
Surveyor (position) As shown in Appendix 3		Chris Drew – two years bat survey experience - Position 1 – observing the south and southeast elevation and roof structure of B1. Ari Billig – one year bat survey experience - Position 2 – observing the east elevation and roof structure of B1. Georgia Chapman – four years bat survey experience [Natural England bat licence number: 2023-11290-CL17-BAT. Class Level 1 and Accredited Agent on Natural England bat licence number: 2019-41480-CLS-CLS. Class Level 2] - Position 3 – observing the northeast and southeast elevation and roof structure of B1. Jamie-Lee Anderson – one year bat survey experience - Position 4 – observing the north elevation and roof structure of B1. George Smith – one year bat survey experience - Position 5 – observing the north and northwest elevation and roof structure of B1. Harvey Yates – one year bat survey experience - Position 6 – observing the north and northwest elevation and roof structure of B1. Oli Drew – one year bat survey experience - Position 7 – observing the west elevation and roof structure of B1. Thomas Drew – two years bat survey experience - Position 8 – observing the south and southwest elevation and roof structure of B1.
IR position As shown in Appendix 3		Position 1 – observing the south elevation and roof structure of B1. Position 2 – observing the southeast elevation and roof structure of B1. Position 3 – observing the north elevation and roof structure of B1. Position 4 – observing the east elevation and roof structure of B1.
Building reference	Surveyor position	Notes/observations:

B1	1	Summary: no emergences or re-entries were seen. At 20:14 a common pipistrelle was heard but not seen, this re-occurred at 20:15, 20:23 and 20:26.	
B1	2	Summary: no emergences or re-entries were seen. At 19:52 a common pipistrelle was heard but not seen, this re-occurred frequently throughout the night and the final recording was noted at 20:26.	

B1	3	Summary: no emergences or re-entries were seen. At 19:47 a Soprano pipistrelle was heard but no seen, likely commuting northwest of the site. At 19:56 a common pipistrelle was heard but not seen, this reoccurred at 20:02, 20:07, and 20:11.	
B1	4	Summary: no emergences or re-entries were seen. At 19:47 a common pipistrelle was heard but not seen, this re-occurred at 19:53, 20:07, 20:10 and 20:24.	

B1	5	Summary: no emergences or re-entries were seen. At 19:46 a soprano pipistrelle was heard but not seen.	
B1	6	Summary: no emergences or re-entries were seen. At 20:11 a common pipistrelle was heard but not seen, this re-occurred at 20:15, 20:20 and 20:25.	

B1	7	Summary: no emergences or re-entries were seen. At 20:16 a common pipistrelle was heard but not seen, this re-occurred at 20:18, 20:20 and 20:26.	
B1	8	Summary: no emergences or re-entries were seen. At 20:15 a common pipistrelle was heard but not seen, this re-occurred at 20:17 and 20:23.	
Building reference	IR position	Notes/observations:	

B1	1	No emergencies or re-entries were recorded.	
B1	2	No emergencies or re-entries were recorded.	
B1	3	No emergencies or re-entries were recorded.	

B1	4	No emergences or re-entries were recorded.	
Other observations		Nesting birds were observed by the surveyor in position 4 in a tree north of building B1 (marked in Appendix 3).	

	The surveyor in position 5 observed a hedgehog commuting continuously through the site.	
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4.0 Conclusions, Impacts and Recommendations

Taking the field survey results into account, **Table 4** presents an evaluation of the value of the building for roosting bats in relation to the proposed development which will comprise the construction of a two-storey roof (third and fourth floor) extension to accommodate 100 aparthotel rooms (Use Class C1) with associated parking, cycle stores and bin stores.

Table 4: Evaluation of building on site for roosting bats.

Building	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
B1	A total of four roosts with a peak count of 14 bats were identified in B1. One maternity roost is present across the southwest roof (including the roof tiles and lead flashing around the base of the clock tower) and three-day roosts of common pipistrelles are present including at the top of the clock tower, in a join in the concrete base of the southeast turret, and in a join in the concrete at soffit level on the southwest elevation of B1. This roosts are considered to have high conservation value, in line with the Bat Mitigation Guidelines (English Nature, 2004).	The proposed development will result in the removal of the roof and extension of the third and fourth floors to accommodate 100 aparthotel rooms. This will result in the destruction of the bat roosts present and injure or kill any bats present at the time of the works. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	An EPSL application to Natural England will be required to legally permit the proposed works. The EPSL application requires that surveys have been undertaken within the most recent active bat season (optimal May to August, suboptimal September). Planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission, where possible to do so. The survey effort should include at least one survey between May and June when the detection rate of bat roosts is highest. A Material Changes Check will be required within three months of the EPSL submission, if no survey work has been undertaken within that period. The EPSL will detail any mitigation and compensation measures that will be required for the proposed development to comply with the standing advice and will be designed to reduce any impacts to an acceptably low level so as to maintain (or	The installation of two bat boxes (in addition to the two receptor bat boxes required for the licence) on buildings or trees will provide additional roosting habitat for bats. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. The bat boxes will be a specification suitable for buildings or trees such as • Beaumaris Woodstone Bat Box – (buildings) • Habibat Bat Access Slate (buildings) • General Purpose Bat Box (trees) • Small Bat Crevice Bat Box - Bark Boxes (trees) or a similar alternative brand.

¹ The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

	The building is not of a construction, nor does it contain roost features which would typically support hibernation roosts.		enhance) the Favourable Conservation Status (FCS) of the local bat population. The EPSL will include the following measures: • Timing of works to be undertaken during the winter months (November to March) when bats are least likely to be present. • The installation of two bat boxes at the site prior to works commencing to form a receptor site for any bats found during the works. These boxes may be installed on buildings or trees or can be pole mounted but must be in an undisturbed location and will need to be maintained in this location post-development. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. Suitable locations are shown in Appendix 5. • The provision of a toolbox talk to contractors, by the Named Ecologist or an Accredited Agent, to inform them of the presence of bat roosts. • A pre-commencement inspection of any roost features by the Named Ecologist or an Accredited Agent using a torch and an endoscope (this may be via ladders, scaffolding or a mobile elevated platform).	Proposed bat box locations are outlined in Appendix 5.
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			• The removal of bat roost features by hand under the supervision of the Named Ecologist or an Accredited Agent (where it is not possible conclude absence of bats during the pre-commencement inspection). • Avoiding the use of unnecessary lighting, particularly at night, or implementing a low impact lighting strategy to avoid illumination of retained or newly created roosts or roost features. • Avoiding excessive noise or vibration disturbance e.g. from power tools or radios, within close proximity of retained or newly created roosts or roost features. • New retained access points including raised roof tiles. You must include a certificate that proves the roofing membrane has passed a 'snagging propensity test' if you're using a non-bitumen coated roofing membrane. A snagging propensity test checks that the membrane can stand the repeated snagging actions of roosting bats. To pass, a membrane must show no change in the average number of loops per cm² as rotations are increased from 0 to 1000. You do not need a certificate for bitumen 1F felt that has a non-woven, short fibre construction. Should timber treatment be required this should follow guidance set out at the below link:	
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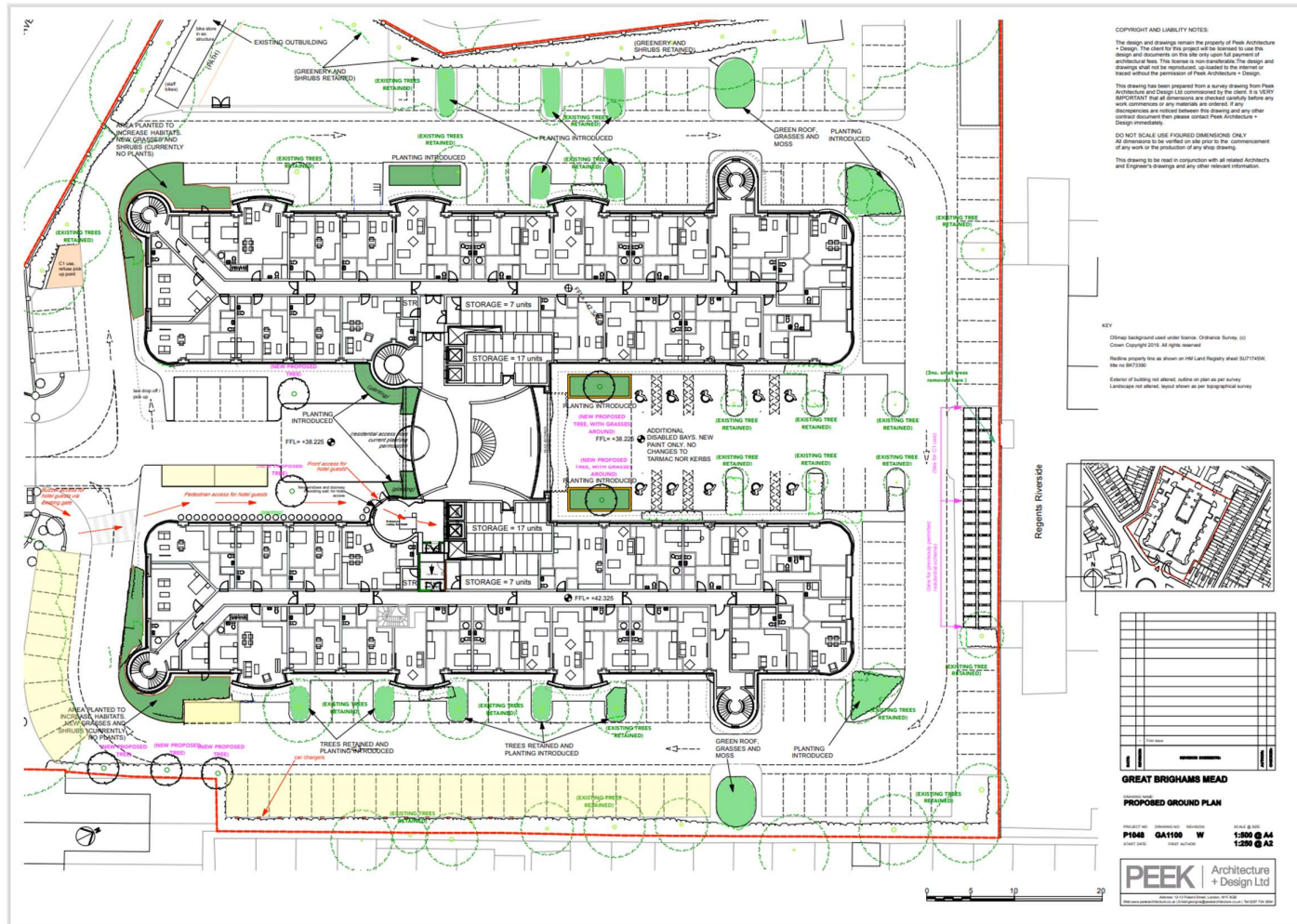
			https://www.gov.uk/government/publications/bat-roosts-insecticides-and-timber-treatments/timber-treatment-products-suitable-for-use-in-or-near-bat-roosts The EPSL will only include the bat species, numbers and roost types listed above. If bats are found during periods of adverse weather conditions, these must be left undisturbed until weather conditions become more favourable to move bats to the receptor bat box. EPSLs do not allow for the disturbance of hibernating bats. Therefore, if any bats are found during the hibernation period November to March or if any unexpected bat species or roost types are identified works must cease and advice must be sought from the Named Ecologist regarding the possible requirement for further bat surveys or a modification to the EPSL.	
Nesting birds	Nesting birds were recorded in a tree northeast of the building (see Appendix 3). No nesting birds were observed internally or externally on the survey building.	The removal of trees and hedgerows within the site could result in the loss or disturbance of nesting habitats. Furthermore, this disturbance could result in the subsequent abandonment of active bird nests.	Removal of vegetation should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the trees should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.	The installation of two bird boxes at the site will provide additional nesting habitat for birds. - Schwegler 1B Nest Boxes (trees) - Vivara Pro Seville 32mm WoodStone Nest Box (buildings or trees) Or a similar alternative brand. The bird boxes will be installed on retained trees or new buildings. Swift and sparrow boxes should be installed at the eaves of a building and

				other bird boxes should be positioned 3m above ground level where they will be sheltered from prevailing wind, rain, and strong sunlight. Species-specific bird boxes should be installed in line with manufacturers specifications.
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5.0 Bibliography

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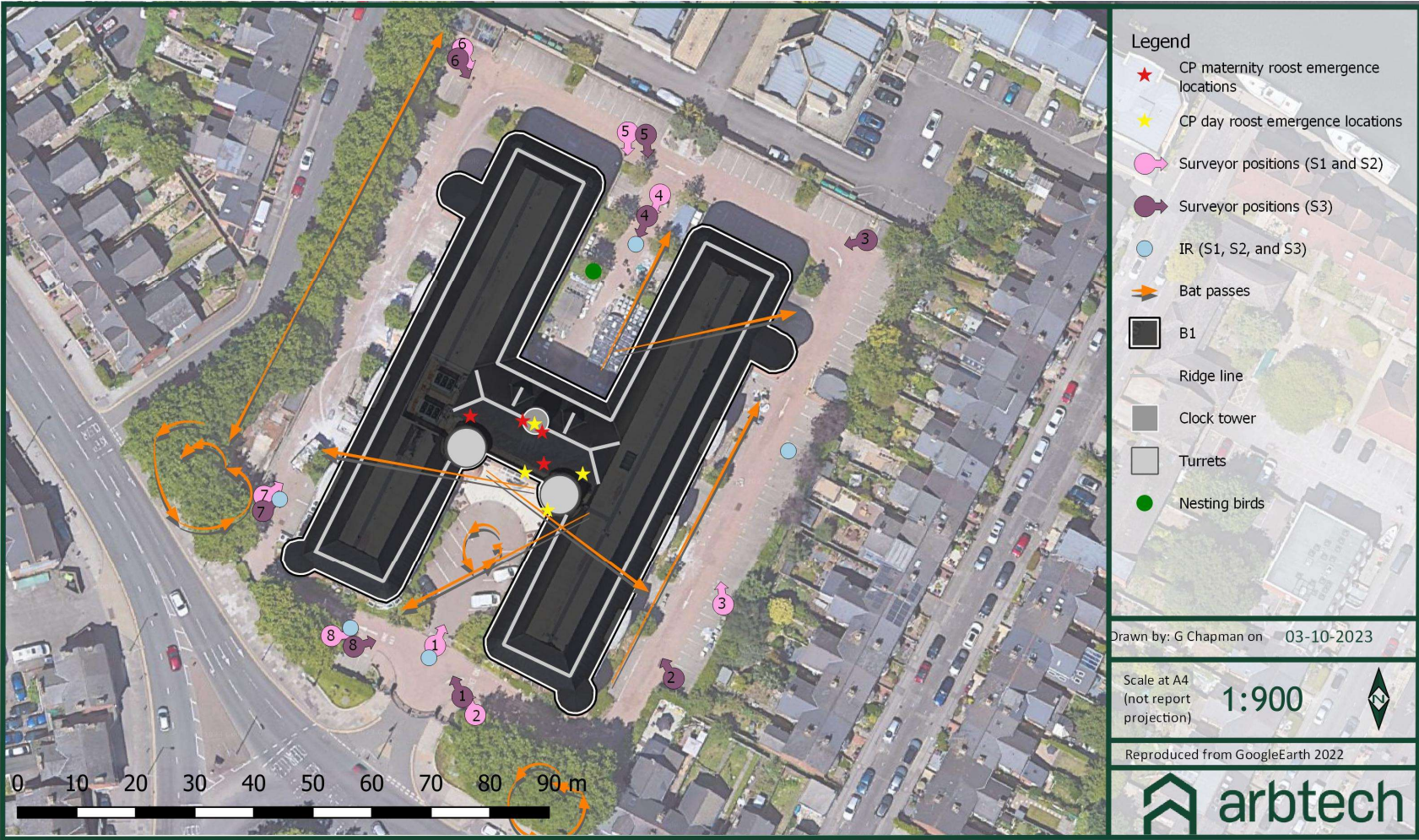
Appendix 1: Proposed Development Plan



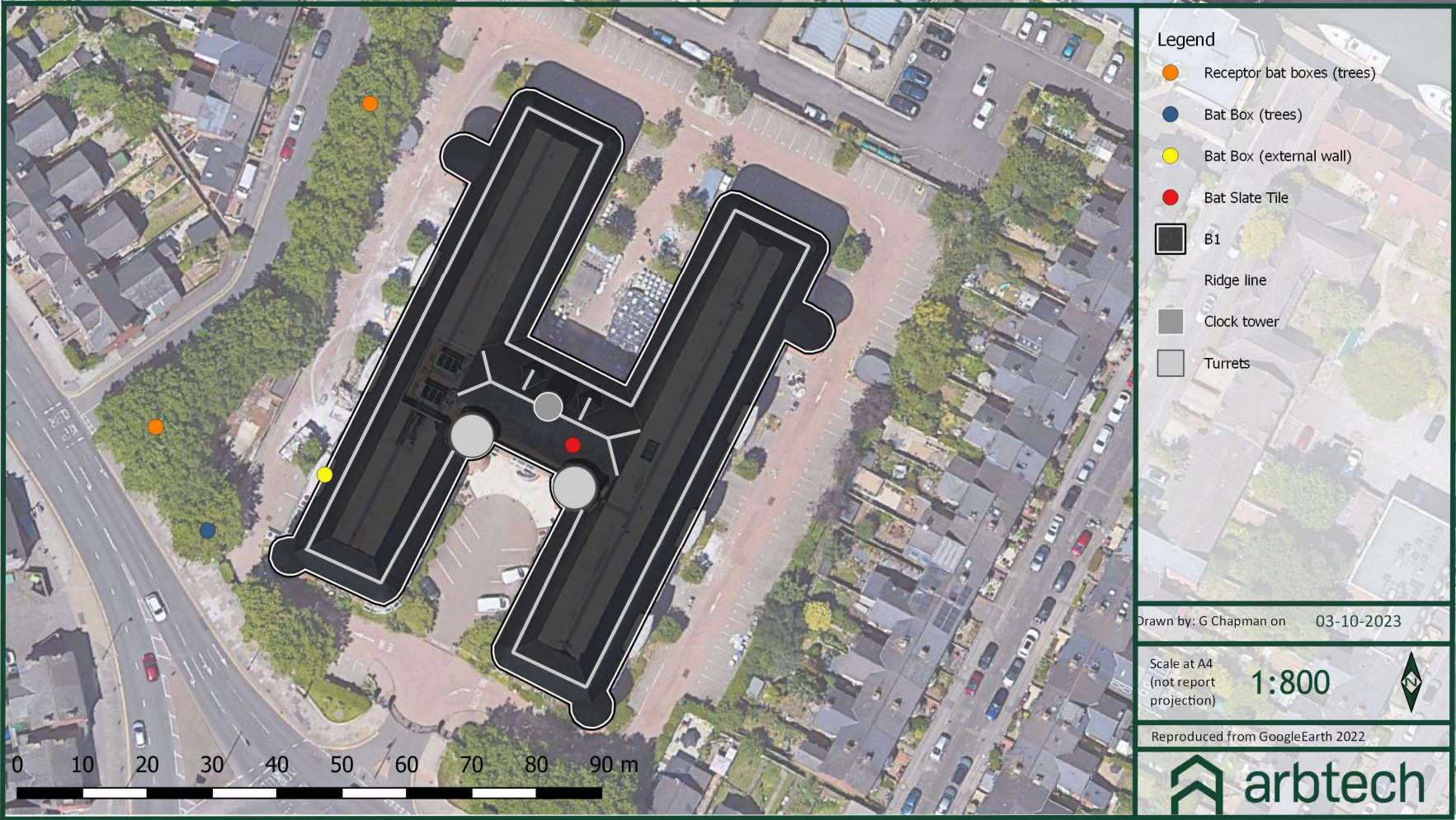
Appendix 2: Site Location Plan



Appendix 3: BERS Map



Appendix 5: Bat Mitigation and Enhancement Plan



Appendix 6: 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*** (as amended) 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) 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

National Planning Policy Framework 2021

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 species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) 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; measurable gains in biodiversity in and around developments are incorporated; 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 OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) 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; and,
- conserving wild animals.

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

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.