



Elite Ecology

Passionate about Ecology

Bridgeman Coach House, Bangor-on-Dee



Bat and Bird Statement

November 2020



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1 Introduction

1.1 Report rationale

This method statement has been prepared at the request of Mr. Julius Cox (Proprietor). It relates to the potential presence of bats and birds at the proposed re-development site located at Bridgeman Coach House, High Street, Bangor-on-Dee, LL13 0BU (Central OS Grid Reference: SJ 38854 45627).

This report should be read in conjunction with the Bat Activity Survey undertaken by Elite Ecology. The site survey was undertaken in July 2019. An additional letter statement should also be read in conjunction with this report, with this document dated 15th October 2019.

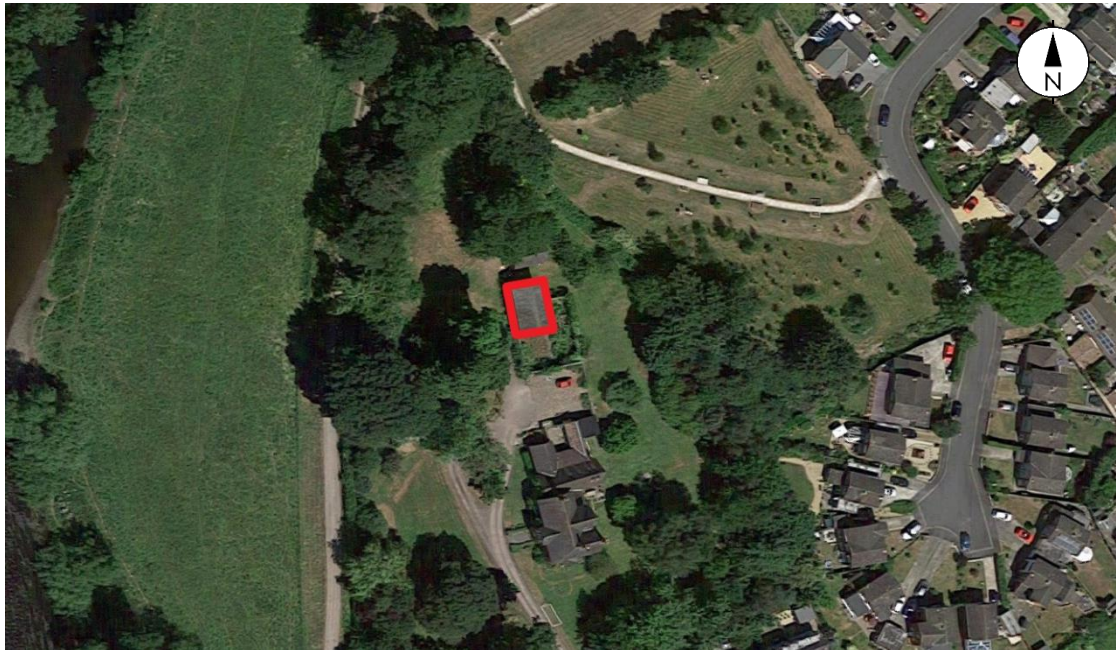
This document has been prepared to discharge Condition 3, which states:

“Development shall not commence until a scheme of mitigation in respect of bats and nesting birds, including a lighting scheme and a timescale for implementation, has been submitted to and approved in writing by the Local Planning Authority. The development shall thereafter be carried out in strict accordance with the scheme of mitigation as approved.”

1.2 Site description

The site itself is situated within a rural setting within the Wrexham County Borough village of Bangor-on-Dee. Hard-standing ground, amenity grassland, scattered trees, woodland, and a residential dwelling are situated in the immediate vicinity of the building. Within the wider landscape further habitats are present. These include arable land, hedgerows, residential dwellings (and their associated gardens), farm buildings, riparian vegetation, running water (the River Dee), and woodland. This report relates to one old barn to the rear of Bridgeman House. This structure measures approximately 81m². The habitats on site are considered to have potential to support the local bat and bird populations by offering roosting/nesting, commuting and foraging opportunities.

Figure 1: An aerial photograph of the surveyed structure at Bridgeman House, Bangor-on-Dee (as shown by the red outline).



1.3 Proposed works

The proposed works involve the conversion of the existing structure for residential purposes.

2 Survey Methodology

2.1 Desktop Survey Methodology

- 2.1.1 A variety of resources were independently consulted to assess the known local records within the nearby area and the importance of the site within the local landscape from an ecological perspective. The resources used were the Local Records Centre, www.naturalengland.org.uk, www.ordnancesurvey.co.uk, Google Maps, Google Earth and Bing Maps. A search of other relevant nature conservation information was made through the use of the Multi-Agency Geographic Information for the Countryside (MAGIC) database.
- 2.1.2 The local records centre was contacted to provide data on all protected species and sites within 2km of the proposed development site. Cofnod were the relevant local record centre for this project.

2.2 Field Survey Methodology

- 2.2.1 All site surveys were undertaken in accordance with the industry accepted good practice guidelines for Bat Activity Surveys.

2.3 Surveyors Information

- 2.3.1 The survey was undertaken by licensed bat ecologist/s and members of the Chartered Institute of Ecology & Environmental Management (CIEEM) and Elite Ecology staff members:

Mr. Matthew Hodgson, Ecologist, Natural England Bat Survey Licence Number: 2019-41695-CLS-CLS Bat Survey Level 2.

Mr. Alex Fitzroy BSc (Hons), Assistant Ecologist.

3 Results

3.1 Desktop Survey Results

Please refer to the Bat Activity Survey for a summary of all of the desktop data obtained for the site from the local records centre.

3.2 Field surveys

3.2.1 Building Inspection:

External Inspection:

The survey site consists of a single barn building to the rear (north) of Bridgeman House.

The surveyed structure is gable-ended and constructed of solid brick walls, with a pitched slate tile roof. Several tiles are missing, with others slipped or dislodged. Further gaps are apparent under the tiles and ridge tiles where the roof appears to have dropped slightly. Various cracks and crevices in the walls are apparent, including around the eaves where the mortar has worn away between the bricks. Most of the 14 windows around the structure are missing frames, and none contain glass, this makes the structure accessible. No evidence of nesting birds was found externally.

Internal Inspection:

Internally, the structure is split into a ground and upper floor. The lower floor is split into two main rooms which are not accessible from one to another. The southern room contains stairs which lead to the two rooms found on the upper floor. The roof is supported by timber frames that consist of purlins, rafters and a ridge board. Limited torching is present on the roof. Several sets of butterfly and moth wings are found on the upper southern room of the barn, along with several bat droppings. Cobwebs are also present, particularly within the cavity of the walls accessible within the frameless windows. Mouse droppings are also present on the ground floor. A dead Pigeon (*Columba livia*) was found within a gap on the ceiling of the ground floor. Evidence of nesting birds was also apparent. This came in the form of the remains of two swallow (*Hirundo rustica*) nests. The remains of another nest of a larger bird species was also recorded but could not be fully identified by the remains.

3.2.2 Summary of the building inspection

Due to the amount of potential ingress/egress points and suitable roosting features, the structure at the rear of Bridgeman House was deemed as having '**low**' potential for bats to roost and '**high**' potential for birds to nest.

Therefore, a minimum of one further activity survey is required during the bat survey season (May to September, inclusive).

3.2.3 Activity survey

One activity survey was undertaken on the building on July 31st 2019.

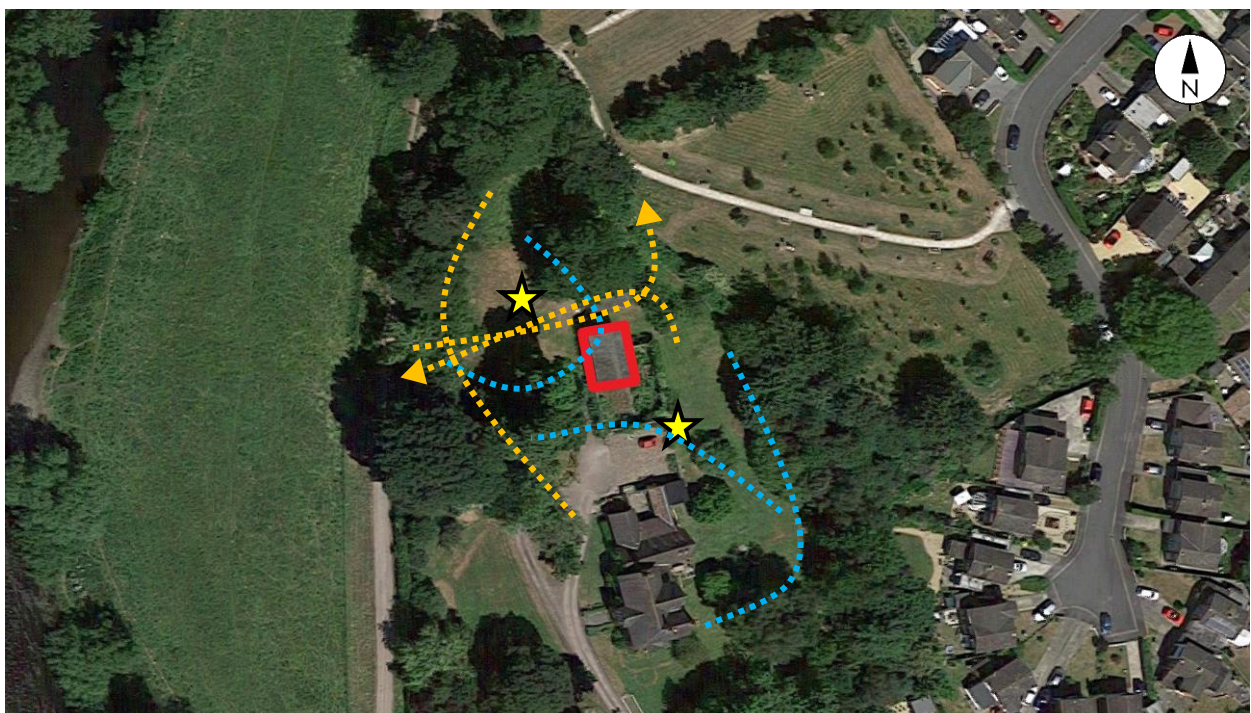
Activity Survey 1 (31st July 2019):

This survey was undertaken at dusk, with sunset being recorded at 21:08. During this survey, no roosting bats were seen to emerge from the surveyed structure. However, several Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) bats were recorded foraging in the area, including in the immediate vicinity of the structure. A single Common Pipistrelle (*Pipistrellus pipistrellus*) bat was sighted flying into the western side of the upper level of the barn and out of the northern gable end whilst foraging. A feeding buzz was recorded immediately prior, along with the sighting of an immediate change of direction into the window, so it is likely that the bat followed prey into the building. This is due to no other sightings of bats entering the building throughout the survey. No other specimens were recorded entering or emerging the building. Due to the visual identification of Pipistrelle (*Pipistrellus* sp.) specimens aerial hawking internally, it has been concluded that the droppings identified within the structure are from foraging specimens.

Summary:

In summary, the barn at Bridgeman House has **no bat roosts** present. However, foraging and commuting Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) bats were identified around the surveyed structure.

Figure 3: An aerial photograph of the surveyed buildings (red outline). This photograph illustrates the surveyor locations (yellow stars), the bat flight paths (dotted blue and dotted orange lines). The dotted orange lines depict the most active routes used throughout the survey.



4 Impact Assessment

4.1 Constraints

Constraints on:	Survey Information	Equipment Used
Constraint (Yes or No):	No	No
Explanation of Constraints:	N/A	N/A
Action Taken:	N/A	N/A

4.2 Potential Impacts of the re-development

The current planning proposal is for the coach house at Bridgeman House to be converted for residential purposes. The potential impacts of these works have been identified as follows:

4.2.1 Designated sites

As the proposed works are due to remain within the site boundary, the presence of any designated sites nearby is not applicable to this project. This, therefore, means that any building works would be of no detriment to the surrounding habitats and landscape.

4.2.2 Bat Roosts

Impact	Short-term Impacts: Disturbance	Long-term Impacts: Roost Modification	Long-term Impacts: Roost Loss
Classification:	Negligible	Negligible	Negligible
Justification:	The structure was found to contain no roosting bats during the site survey. Therefore, it can be assumed that no bat roosts are present within the surveyed structure.	The structure was found to contain no roosting bats during the site survey. Therefore, it can be assumed that no bat roosts are present within the surveyed structure.	The structure was found to contain no roosting bats during the site survey. Therefore, it can be assumed that no bat roosts are present within the surveyed structure.
Any further action:	No further action is required.	No further action is required.	No further action is required.

4.2.3 Bird Nests

Due to evidence of several old bird nests within the surveyed structure, the proposed scheme of works will be of a '**low**' effect to the local bird populations. This is due to the loss of future nesting opportunities to the local bird populations as a direct result of the proposed works. Please see section **5 – Recommendations** for further details.

4.2.4 Foraging and commuting habitat

It is considered that the re-development of the site would have a '**negligible**' effect on potential foraging and commuting habitat. The site itself offers little foraging habitat, with the adjacent land containing better opportunities for bats and birds to use. Post development, all foraging and commuting habitats will be maintained, thus not negatively affecting the local landscape.

5 Method Statement

5.1 Summary of Results

From the site surveys, it has been established that no bat roosts are present in the surveyed structure. Despite this, foraging and commuting common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) bats are present in around the site.

From the survey visit undertaken on the site, it can be concluded that the surveyed structure contains no active birds nests. However, there was evidence of old bird nests, potentially from the current breeding season.

5.2 Timings of the Works

As no bat roosts are present, impacts will be negligible with no further time constraints in relation to the works for bats.

Due to the presence of nesting birds, no works can be undertaken on the structures during the bird breeding season (March to August, inclusive). If this timescale cannot be achieved, the structures are required to be assessed by a suitably qualified ecologist to confirm the presence or absence of active nests. If active nests are located, exclusion zones around the nest will be required until the chicks have fledged the nest

However, the proposed enhancement measures for both bats and birds should be in place by 1st March of the year works commence. This is due to this month, in favourable conditions, when bats can begin to return to their summer roosts. Additionally, the bird breeding season runs from March to August and installing the boxes by then will ensure the maximum chance of success will occur.

5.3 Avoidance Measures

At the start of the proposed works, a licenced bat ecologist is required to be on site to conduct a toolbox talk prior to works commencing with the contractors. This is deemed sufficient due to the absence of roosting bats within the structure.

A lighting plan will also be devised to ensure the impacts on bats is kept to a minimum.

5.4 Mitigation

No mitigation is prevalent for bats due to the lack of roosts. However, enhancements should be incorporated and these are described in a later section.

As evidence of nesting swallows (*Hirundo rustica*) was found in the form of the remains of two nests, an eaves/ridge overhang or easily accessible loft area is necessary. These features will require at least three [Schwegler Swallow Nest](#) cups installed per feature.

Due to evidence of nesting of a larger species of bird, one [Large Bird Nest Box](#) will be installed on the northern elevation of the structure.

5.5 Post Development Maintenance

The bat and bird boxes should be maintained indefinitely and will be inspected prior to the bat activity surveys.

5.6 Post Development Monitoring

At the completion of the works, one bat activity survey of the bat boxes will be undertaken between May and September. This should be accompanied by an inspection of the bird boxes.

5.7 Reporting

A letter statement will be produced following each site visit to report actions taken and the survey findings. Appropriate enhancement measures will be outlined within these documents.

5.8 Enhancements

The proposed enhancements for the site are to incorporate one [Eco Bat Box](#) on the western elevation of the converted structure. It is recommended that this avoids any artificial lighting, with it also recommended that they avoid disturbance by any inhabitants of the structure. This box should remain for at least 5 years, unless inhabitation is proven. If bats are using the building, the box should remain for its lifespan as a minimum.

The proposed bird enhancements are to install one [Apex Bird Box](#) on the northern elevation and one [Sparrow Terrace](#) on the eastern elevation. These are illustrated in the figures below.

Figure 2: The proposed plans showing the location of the recommended Eco Bat Box on the rear, western elevation (blue shape).

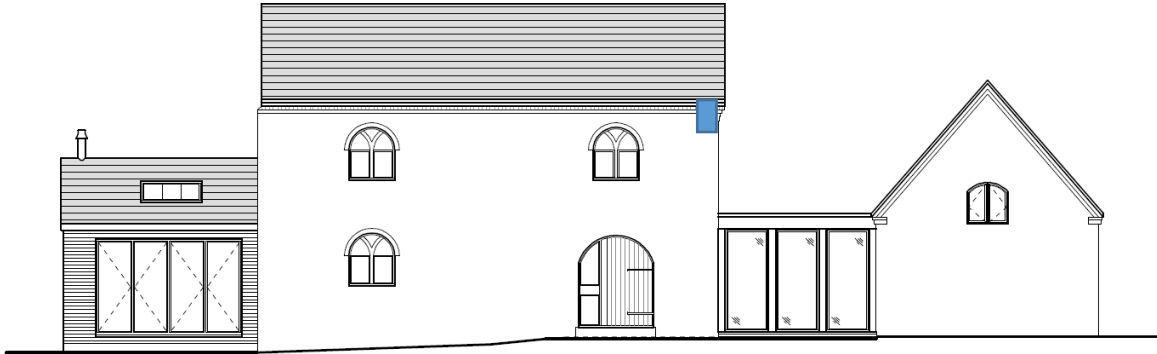


Figure 3: The proposed plans showing the location of the recommended mitigation, one Large Bird Nest Box, shown by the orange shape on the side, northern elevation. Also shown here is the recommended enhancement boxes of one Apex Bird Box (green shape).

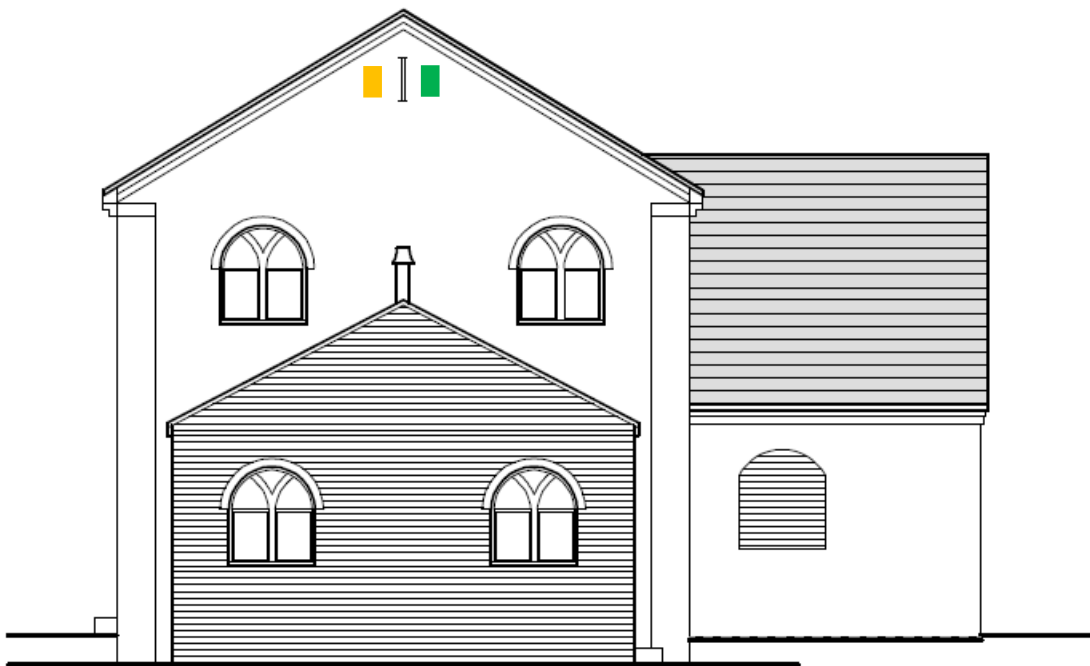
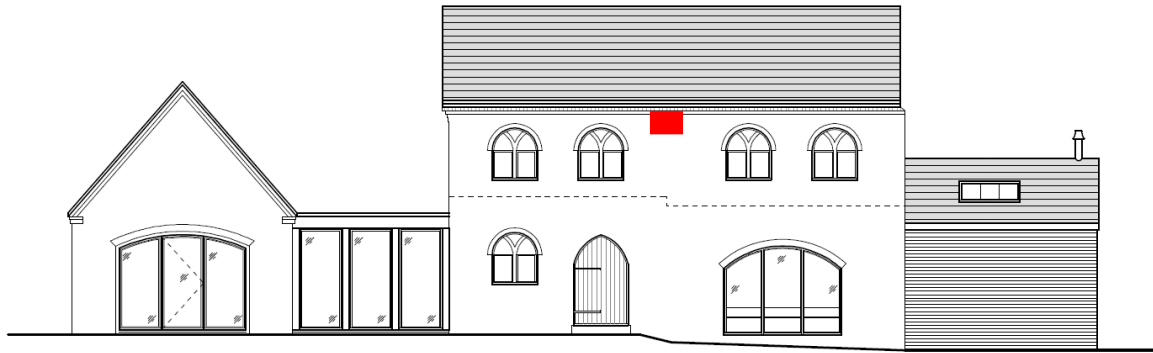


Figure 4: The proposed plans showing the location of the recommended enhancement, one Sparrow Terrace, shown by the red shape on the front, eastern elevation.



7 Appendices

Appendix A: Site Plans

Appendix B: Artificial Light and Bats

Appendix C: Photographic Records

Appendix D: The Annual Bat Year (BCT)

Appendix E: Legislation

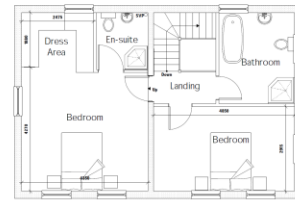
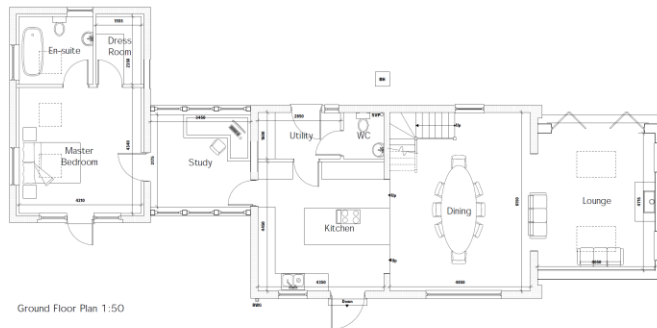
Appendix A: Site Plans



External Fencing Measures
External walls are to undergo hanging brick to Local Authority approval and to match existing.

Roofing Measures
Roof coverings are to be Shingles to Local Authority approval.

Other measures are to comprise:
Roof coverings are to be Shingles to Local Authority approval.
External walls are to undergo hanging brick to Local Authority approval and to match existing.
Roof coverings are to be Shingles to Local Authority approval.



Project:	Proposed Alterations at, Coach House, Bridgeman House, Bangor-On-Dee, Wrexham, LL13 0BU
Title:	Planning
Scale:	1:50 & 1:100
Drawn by:	J. Felgate
Date:	Sep 2019
Drawing No:	C120004
Sheet:	1 of 1

blueprint
architectural services

LABC
Office 304, Red-Label Business Tower, Wrexham, LL13 5UT
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www.bridgemanhouse.co.uk

Appendix B: Artificial Lighting and Bats

Artificial lighting is known to affect bat's roosting and foraging behaviour, with lighting resulting in a range of impacts that includes roost desertion (BCT, 2009), delayed emergence of roosting bats (Downs et al., 2003), increased activity of some bat species and decreased activity by others (Stone et al., 2012).

An experimental approach using LED units, demonstrated that relatively fast-flying bat species, including the common pipistrelle, showed no significant impacts as a result of new artificial lighting, even when lighting was set at relatively high levels close to 50 lux.

In contrast, slow flying bats such as the myotis bats (*Myotis* spp.) showed sharp reductions in presence, even at low light levels of 3.6 lux (Stone et al., 2012).

Current recommendations for all bat species specifies that no bat roost should be directly illuminated.

Due to the impacts of lighting, mitigation and sensitive lighting design schemes are required for projects where bats are present. These should include bat friendly lighting plans that should aim to avoid lighting wherever possible. If this is not possible, then the minimisation of any lighting impacts is required by adopting the following measures:

➤ **To introduce lighting curfews or use of PIR sensors.**

Lighting curfews can be an effective way of avoiding impacts on bats. These curfews may involve either turning off lighting or dimming light units at specific times of the night, dimming units at key times of the year, providing the luminaire allows for this option via a control unit. Lighting to be triggered by PIR sensors can be expected to be illuminated only when required and for a low proportion of time.

➤ **To consider no lighting solutions where possible.**

Options such as white lining, good signage and LED cat's eyes should be considered as preferable. Reflective fittings may help make use of headlights to provide any necessary illumination in some areas.

➤ **To use only high pressure sodium or warm white LED lamps where possible.**

High pressure sodium and warm white LED lamps emit lower proportions of insect attracting UV light than mercury, metal halide lamps and white LED lighting. Generally, lamps should have a lower proportion of white or blue wavelengths, with a colour temperature <4200 kelvin recommended (BCT, 2014).

➤ **To minimise the spread of light.**

The light spread should be kept at or near horizontal to ensure that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Baffles, hoods, louvres and shields should be used where necessary to reduce light spill.

➤ **To consider the height of the lighting column.**

While downward facing bollard lighting is often preferable, it should be noted that a lower mounting height does not automatically reduce impacts to bats as bollard lighting can often be designed to provide up-lighting. Where bollard lighting is considered to be the most appropriate system, bollard spacing or unit density should be kept to a minimum and units should be fitted with the appropriate hoods/deflectors to reduce any up-lighting.

➤ **To avoid reflective surfaces below lights.**

The polarisation of light by shiny surfaces attracts insects increasing bat activity (BCT, 2012). Consequently, surface materials around lighting require consideration.

Appendix C: Photographic Records

Plate 1: A photograph of the ground floor ceiling showing evidence of old bird nests.

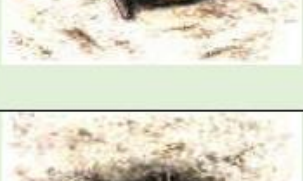


Plate 2: A photograph of some of the insect remains which show evidence of bat presence.



Appendix D: The Annual Bat Year (BCT)

A Year in the Life of a Bat		
	January	Hibernating; using up fat reserves.
	February	Still hibernating; few fat reserves left.
	March	Some activity; occasional bat seen feeding.
	April	Awake and feeding at night.
	May	Females looking for nursery sites.
	June	Young born, usually only one.
	July	Young still suckling.

	August	Young start catching insects; females leave nursery to find males.
	September	Mating season begins; start building fat reserves for hibernation.
	October	Search for suitable hibernation site.
	November	Hibernation begins although still some activity in warm weather.
	December	Hibernating.

Appendix E: Legislation and Policy

All species of bat are fully protected under a variety of domestic, European and international legislation and conventions. These include:

- Bern Convention (Appendix II)
- Bonn Convention (Appendix II)
- Conservation Regulations (Northern Ireland) 1995
- Conservation of Habitats and Species Regulations 2017
- Countryside Rights of Way Act 2000
- Eurobats Agreement
- Habitats Directive (Annexes IV and II)
- Habitats Regulations 1994 (as amended) Scotland
- NERC Act 2006
- Wildlife and Countryside Act 1981 (as amended)
- Wild Mammals Protection Act

In addition to this, some species have additional protection by being listed on the UK Biodiversity Action Plan (UKBAP).

The legislation afforded to bats makes it illegal to possess or control any live or dead specimens, to damage, destroy or obstruct access to any structure or place used for shelter, protection or breeding, and to intentionally disturb a bat while it is occupying a structure or place which it uses for that purpose.

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which protects birds, nests, eggs and nestlings from harm. In addition to this, some rarer species, such as barn owls are afforded extra protection.

National Planning Policy Framework, Section 15:

In early 2012, the National Planning Policy Framework (NPPF) replaced much previous planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. The government circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System, which accompanied PPS9, still remains valid. A presumption towards sustainable development is at the heart of the NPPF. This presumption does not apply however where developments require appropriate assessment under the Birds or Habitats Directives. The latest National Planning Policy Framework was updated in February 2019, with the section in relation to conserving the natural environment being located within section 15.

Section 15, on conserving and enhancing the natural environment, sets out how the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and, where possible, provide net gains in biodiversity. Opportunities to incorporate biodiversity gains into a development should be encouraged.

Biodiversity 2020:

This sets out to halt overall biodiversity loss and support healthy well-functioning ecosystems by establishing coherent ecological networks, with more and better places for nature, to the benefit of wildlife and people. The government's policy is aimed at individuals, communities, local authorities, charities, business and government, which all have a role to play in delivering Biodiversity 2020.

8 Notice to Readers: Conditions of this Report

All reports are certified products and cannot be shown, copied or distributed to third parties without the written permission of Elite Ecology. No liability is accepted for the contents of the report, other than to that of the client(s). If any part of this report is altered without the written permission of Elite Ecology, then the whole report becomes invalid.

Elite Ecology agrees to supply ecological consulting services and advice of a preliminary or thorough nature as advised or commissioned. Upon commissioning Elite Ecology to undertake the work, the client(s) grant access to the site upon the agreed date. If no site access is available upon this date, Elite Ecology holds the right to charge the client(s) for lost staffing time and additional travel costs.

Elite Ecology undertake all site surveys with reasonable skill, care and diligence, within the terms of the contract that has been agreed with the client and abiding by the Elite Ecology Terms and Conditions. The actions of the surveyors on site, and during the production of the report, were undertaken in accordance with the Code of Professional Conduct for the Chartered Institute of Ecology and Environmental Management.

The latest good practice guidelines put in place by Natural England or the relevant statutory conservation bodies have been followed by the surveyors on site. If those methodologies fail to identify a protected species during the survey efforts, no responsibility can be attributed to Elite Ecology. If any of these guidelines are adapted between the date(s) of the surveys being undertaken and the submission of this report, then Elite Ecology takes no responsibility for this.

Should any equipment be damaged or lost on site at the fault of the client(s), then Elite Ecology withholds the right to charge 100% above the current market value for that exact product or the nearest similar product.

The survey results purport the current status of the site and its potential for protected species utilisation at the time of surveying. It should not be viewed as a complete list of the possible flora and fauna species that could be using the site at different times of the year.

Elite Ecology has been provided with full payment for this report and thus the product has been released to the client(s) for the purpose of their planning application. If any part of the report is lost or altered without the written permission of Elite Ecology, then the entire report becomes invalid. Due to the potential for continual change within the natural world, this report is valid for **2 years only** from the date of the last survey visit. If this report is submitted after the 2 year deadline, then a further updated inspection will be required to ascertain whether the site remains in the same condition as it was when initially inspected.

No reliance should be made on any such comments in relation to the structural integrity of the features located on the surveyed site. All information within the report is based solely on evidence that has been found on site during the service provided. No individual opinion or inference will be made other than that of the suitably qualified ecologist appointed to the project.