



www.cherryfieldecology.co.uk

Report prepared for: Jason Kitchener

For the Site of: The Old Forge, Park Street, Baldock, Hertfordshire, SG7 6DY

Version:	Written by:	Checked by:	Final:
Draft	Heather Stuckey 16/08/2022		
Final	Heather Stuckey 16/08/2022	Tanya O'Connor 18/08/2022	Heather Stuckey 18/08/2022

Cherryfield Ecology has prepared this report for the named clients use only.

Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be from the most recent or current season. Therefore, should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

Heather Stuckey BA (Hons), CIEEM (Qualifying Member)

heather@cherryfieldecology.co.uk

www.cherryfieldecology.co.uk

07421 833 512

Contents

0.0 Non-Technical Summary	3
0.1 Background	3
0.2 Results and Findings	3
0.3 Impact Assessment and Recommendations	4
1.0 Introduction	5
1.1 Aim	5
1.2 Background Information	5
2.0 Methods	7
2.1 Limitations	8
3.0 Results	10
3.1 Desk Study	10
3.2 MAGIC	11
3.3 Biological Records Data	12
3.4 Site Location and Surrounds	12
3.5 Building, Tree or Other Structure	12
3.6 Observations	13
4.0 Conclusions, Discussion, Impacts and Recommendations	18
4.1 Conclusion and Discussion	18
4.2 Potential Impact	18
4.3 Recommendations	19
5.0 References	23

Emergence and Activity Bat Survey (EBS)

0.0 Non-Technical Summary

0.1 Background

This report follows national guidelines Collins (2016) allowing for dusk and dawn surveys and recommends mitigation and compensation if considered necessary. If a deviation from the guidelines has been made, this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of The Old Forge, Park Street, Baldock, Hertfordshire, SG7 6DY.

The client commissioned Cherryfield Ecology to undertake an EBS as the proposals include for the conversion of the barn (B1) into a residential dwelling.

0.2 Results and Findings

Following a Stage 1 Ecological Assessment undertaken on 24/01/2018 (Green Environmental Consultants Ltd, 2018) where droppings were found in the loft void of the barn, further surveys were recommended. This included for three dusk emergence surveys which were carried out in July 2019.

The findings of the dusk emergence surveys carried out in July 2019 were of a bat roost for two single day roosting Common Pipistrelles and a day roost of three Brown Long-eared bats.

The emergence surveys were updated in July and August 2022.

The surveys have shown that B1 supports a day roost for two Brown long-eared bats, and three day roosts each of a single Common pipistrelle bat.

All the surveys show that the surrounding garden are used by foraging and commuting bats.

0.3 Impact Assessment and Recommendations

Four bat roosts will be lost when works are carried out.

Alternate roosts will need to be provided before development on B1 commences. **A bat licence (Standard) will be required** post-grant of planning in order to allow the demolition to proceed lawfully. (Please refer to **Section 4.3** of this report for further details).

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4.3 for further details).

1.0 Introduction

1.1 Aim

The aim of this survey is to gather additional information from the site to establish species, population and entry/exit points of bats to aid in the design of mitigation and compensation for bats in the development. The information is used to help inform a licence application (if required) and to inform the client and their architect/planner of necessary changes in the design that may be required to ensure bats are protected during works. It should be read in conjunction with any Stage 1 survey such as a Preliminary Roost Assessment (PRA) that may have been undertaken.

1.2 Background Information

The client, Jason Kitchener, has commissioned Cherryfield Ecology to undertake an update EBS for the site of The Old Forge, Park Street, Baldock, Hertfordshire, SG7 6DY, as planning permission is being sought to convert the barn on site into a residential dwelling.

Droppings were found during the Stage 1 Ecological Assessment undertaken on 24/01/2018 (Green Environmental Consultants Ltd, 2018) and the initial Stage 2 Emergence Surveys were carried out in July 2019. These resulted in the confirmation of the barn as a bat roost for two single day roosting Common Pipistrelles *Pipistrellus pipistrellus* and a day roost of three Brown Long-eared bats *Plecotus auratus*.

This survey has checked all buildings, trees (from ground level only) or structures due to be affected by the proposals for bats, signs of bats or habitat value e.g. crevices, gaps or holes that cannot be checked for a variety of reasons. In addition, surveyors have been positioned around the building, tree or structure to allow for emerging/re-entering bats to be watched for.

The inspections were conducted on the 14/07/2022, 28/07/2022 and 12/08/2022.

The survey can only ever provide a 'snapshot' of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find or see emergence, re-entry and/or evidence. Biological records have been requested to give the report context and allow a study of the surrounds. The information is often sensitive and, therefore, a synopsis is provided.

The survey can be conducted between May and September with the optimal season for surveying maternity colonies limited to mid-May to August inclusive, however it can also be limited due to bad weather, when bats are less active.

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule V of the Act. All bat species in the UK are also included in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“Habitats Directive”) which defines United Kingdom protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

A bat roost is well-defined by the legislation as the ‘resting place’ of a bat. However, the word roost is used to describe this resting place and is generally accepted as the word describing where a bat or bats rest, feed or sleep.

2.0 Methods

The survey follows the national guidelines Collins (2016) and Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys (Bat Conservation Trust, May 2022) the following equipment is available for the inspection:

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting dropping and feeding evidence.
- Echo Meter Touch, EM3, and Pettersson D240X.
- IR night vision HD Camcorder, 12v IR flood lights.
- FLIR one Thermal Imaging Camera (when required).

Night Vision Aids (NVA's) are used to cover the building alongside surveyors. These are not designed to replace surveyors, rather provide night vision, allowing for more accurate survey effort and when found, roost locations. The cameras may not always capture bats entering/exiting roosts due to the size of the building, terrain and other factors. Video is processed in Openshot video editor and checked in the office after the survey is completed, stills and snapshots are taken and used in reports, as per the guidelines.

Surveyors are positioned around the building(s), tree or structure in order to cover all elevations. The survey then observes for emerging or entering bats from suitable features such as holes, cracks and crevices. Notes on commuting and foraging bats are also made in the surrounds.

If a deviation from the guidelines has been made, the reason and justification will be explained below:

No deviation from the standard guidelines has been made for this survey set.

2.1 Limitations

This survey provides a snapshot of the site at the time of the survey(s) only. Bats are highly mobile and can turn up from time to time unexpectedly. All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys.

Table 1: Habitat value (likelihood) of bat presence assessed against Collins (2016) guidelines *Source: Adapted from Collins (2016) pp 35, Table 4.1.*

Likelihood of bat presence (Habitat Value)	Features that bats can and will use, regardless of evidence being present.
Confirmed Bat Presence	Bats are found to be present during the survey. Evidence of bats is found to be present during the survey.
Higher likelihood of bat presence.	Pre-20th century or early 20th century construction. Agricultural buildings of traditional brick, stone or timber construction. Large and complicated roof void with unobstructed flying spaces. Large (>20 cm) roof timbers with mortice joints, cracks and holes. Entrances for bats to fly through. Poorly maintained fabric providing ready access points for bats into roofs, walls, bridges, but at the same time not too draughty and cool. Roof warmed by the sun, in particular south facing roofs. Weatherboarding and/or hanging tiles with gaps. Low level of disturbance by humans. Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.
Moderate and Lower likelihood of bat presence.	Modern, well-maintained buildings or built structures that provide few opportunities for access by bats. Small, cluttered roof space. Buildings and built structures comprised primarily of prefabricated steel and sheet materials. Cool, shaded, light or draughty roof voids. Roof voids with a dense cover of cobwebs and no sections of clean ridge board. High level of regular disturbance. Highly urbanised location with few or no mature trees, parkland, woodland or wetland.

	High levels of external lighting.
Negligible likelihood of bat presence.	No features suitable for roosting, minor foraging or commuting.

Notes on using this table

1 The features listed here may not be indicative of use of the site by bats during winter or spring.

2 Pre-1914 buildings may present the greatest likelihood of providing roost space for bats due to their design, materials used and age. Pre-1990 buildings, especially when close to good foraging habitat, and with favoured features such as cavity walls and soffits, also have a high likelihood of providing roost sites for some bat species.

3 Post-1990 buildings are generally less likely than older buildings to house roosts; however, some modern designs provide access to suitable roosting spaces for bats. Pipistrelles in particular occupy modern buildings and built structures providing that there are suitable access gaps (> 8mm) and provided the structure has appropriate characteristics for roosting.

3.0 Results

The following section details the results of the desk study, inspection and survey; it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

The desk study is centred on Grid Reference - TL244337 and Postcode - SG7 6DY.

Table 2: Weather Records

Date	Survey	Time: from/to	Weather: Start	Weather: Finish
14/07/2022	Dusk Emergence	21:00 to 22:45 SS: 21:15	Temp: 18 °C Humidity: 48% Cloudy: 40% Wind: 1/12 Rain: None	Temp: 16 °C Humidity: 56% Cloudy: 20% Wind: 1/12 Rain: None
28/07/2022	Dusk Emergence	20:43 to 22:28 SS: 20:58	Temp: 18 °C Humidity: 56% Cloudy: 100% Wind: 1/12 Rain: None	Temp: 16 °C Humidity: 63% Cloudy: 90% Wind: 1/12 Rain: None
12/08/2022	Pre-Dawn	04:09 to 05:54 SR: 05:39	Temp: 15 °C Humidity: 70% Cloudy: 0% Wind: 0/12 Rain: None	Temp: 15 °C Humidity: 74% Cloudy: 0% Wind: 0/12 Rain: None

3.2 MAGIC

The following statutory sites and Natural England Protected Species (NEPS) have been located within the 2km search area (Figure 1):

- There are 2 statutory sites located within the search area:
 - Ivel Springs LNR
 - Weston Hill LNR
- There are 2 NEPS licences granted for bats within the search area:
 - Brown Long-Eared *Plecotus auritus* and Common Pipistrelle *Pipistrellus pipistrellus* approx. 130m southwest of the site (Licence 2011-3393).
 - Common Pipistrelle *Pipistrellus pipistrellus*, approx. 270m southeast of the site (Licence 2015-8048).

MAGiC

Magic Map

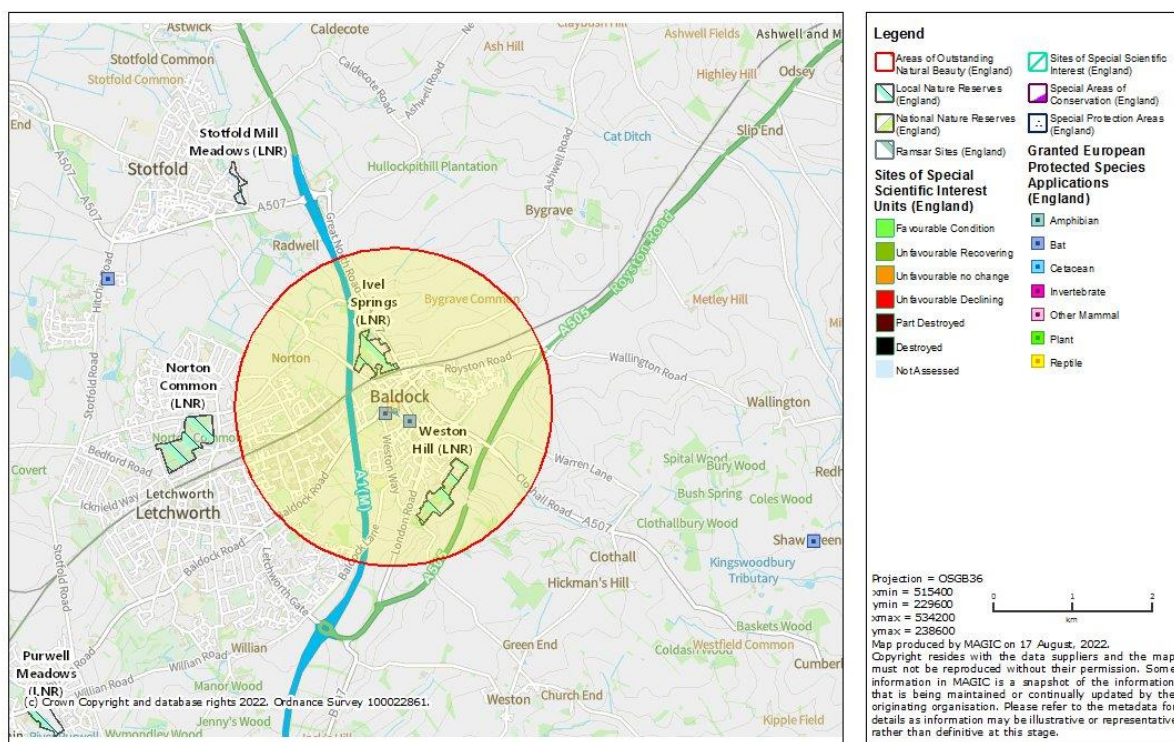


Figure 1: Magic Map Search

3.3 Biological Records Data

A search of the records kept by the Hertfordshire Bat Group, undertaken by Green Environmental Consultants Ltd in 2018 found:

- Common Pipistrelle *Pipistrellus pipistrellus* with 1km of the site.
- Records of Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared *Plecotus auritus*, Noctule *Nyctalus noctula*, Daubenton's *Myotis daubentonii*, Serotine *Eptesicus serotinus* and Barbastelle *Barbastellus barbastellus* were found between 1km and 2km of the site.

3.4 Site Location and Surrounds

The site is located in Baldock, Hertfordshire and is surrounded by high density housing in the immediate local. Table 4 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 3: Habitat features suitable for bat use.

Feature	Description
Water course	There are no significant water courses within the search area.
Water bodies	Small water bodies are found approx. 1km to the north of the site.
Woodland	Areas of woodland are found approx. 550m to the north of the site, within the Ivel Springs nature reserve. Areas of woodland are found approx. 1.15km to the south of the site, within the Weston Hills nature reserve.
Linear e.g. hedgerows	Garden hedging dominates the immediate surroundings.
Pasture/arable/grassland	Amenity grassland within residential gardens dominates the immediate surroundings with arable fields found further afield. The nature reserves of Ivel Springs to the north and Weston Hills to the south have areas of grassland.
Other	n/a

3.5 Building, Tree or Other Structure

The following section details the structure(s) reference, bats located, evidence located and observed emergence/re-entry (see Figure 7 for Site Plan).

Building/tree/structure reference - B1 (Barn)

3.6 Observations

Table 4: Results and observations of the building, tree or structure.

Surveyor	Building, Tree or Structure	Dates, Times and Survey Type	Bat Activity Observed
PH	B1	14/07/2022 21:00 to 22:45 Dusk Emergence	Common pipistrelle (CP) <i>Pipistrellus pipistrellus</i> was observed at 21:46 emerging from under the eaves at the rear of B1 on the southwest elevation, before entering again under the eaves a little further down. CP was further observed at 21:56, flying from the site entrance along the southwestern elevation of B1 and around the rear of B1. At 21:58 a Brown long-eared (BLE) <i>Plecotus auritus</i> was observed emerging from under the eaves at the rear of B1 on the southwest elevation and flying west. At 22:05 a second BLE was observed emerging from the rear corner of B1 on the southwest elevation and flying south.  Figure 2: Locations of emergence and re-entry
HS	B1	14/07/2022 21:00 to 22:45	Soprano pipistrelle (SP) <i>Pipistrellus pygmaeus</i> was recorded at 22:11, foraging over the front of B1.

		Dusk Emergence	Two distant passes of Leisler (LEI) <i>Nyctalus leisleri</i> were heard but not seen at 22:16 and 22:22.  Figure 3: View of infrared camera
DR	B1	14/07/2022 21:00 to 22:45 Dusk Emergence	At 21:44 a CP was observed emerging from the eaves at the rear of B1 on the northeastern elevation, circled round and re-entered at the same spot, before emerging again at 21:45. A further pass of CP was heard at 21:56, flying from the rear of B1 and to the west, likely the same bat that surveyor PH recorded flying round the rear of B1.  Figure 4: Location of CP emergence
LU	B1	28/07/2022 20:43 to 22:28 Dusk Emergence	CP was heard between 21:23 and 21:38, passing west to east over the site. A distant pass of Noctule (NOC) <i>Nyctalus noctule</i> was heard but not seen at 21:26.

PH	B1	28/07/2022 20:43 to 22:28 Dusk Emergence	A CP was observed emerging from under the ridge tiles on the southwest elevation of B1 before flying north. Distant passes of CP were further heard between 21:31 and 21:58.  Figure 5: Location of CP emergence
DR	B1	28/07/2022 20:43 to 22:28 Dusk Emergence	CP was heard between 21:25 and 21:38, flying north to southwest over B1 and west to east over B1.
JP	B1	12/08/2022 04:09 to 05:54 Pre-Dawn	NOC was heard but not seen at 04:31 BLE was observed dawn swarming around the rear corner of B1 on the southwest elevation (the same location of the observed emergence on 14/07/2022), before flying towards the southwest. A distant pass of LEI was heard but not seen at 04:57.

			
			Figure 6: Location of BLE dawn swarming
PH	B1	12/08/2022 04:09 to 05:54 Pre-Dawn	Three distant passes of CP were heard but not seen between 04:25 and 04:45.
DR	B1	12/08/2022 04:09 to 05:54 Pre-Dawn	No activity observed.
Summary of surveys and supplementary observations: 14/07/2022 - An emergence and re-entry of a CP on the southwestern elevation. An emergence, re-entry and second emergence of a CP on the northeastern elevation. Two emergences of BLE on the southwestern elevation. General bat activity observed. 28/07/2022 - An emergence of a CP from under the ridge tiles of B1. General bat activity observed. 12/08/2022 - BLE observed dawn swarming on the southwestern elevation, but no entry recorded. Very little bat activity observed. Any other species that would be affected by the development: Hedgehogs were observed on site during the two emergence surveys (three hedgehogs seen at one time). The site currently has suitable habitat for nesting and foraging hedgehogs.			



Figure 7: Site Plan

4.0 Conclusions, Discussion, Impacts and Recommendations

The following section details the conclusions, discussion and recommendations in the context of the proposed works.

Building/tree/structure reference - B1 (Barn)

4.1 Conclusion and Discussion

The proposals include for the conversion of the barn to a residential dwelling.

Droppings were found during the initial Stage 1 Ecological Assessment undertaken on 24/01/2018 (Green Environmental Consultants Ltd, 2018).

Three dusk emergence surveys were carried out in July 2019 which confirmed B1 as a bat roost for two single day roosting Common pipistrelles and a day roost of three Brown long-eared bats.

The surveys conducted in 2022 have shown that B1 supports a day roost for two Brown long-eared bats, and three day roosts each of a single Common pipistrelle bat

All the surveys show that the surrounding area is used by foraging and commuting bats.

4.2 Potential Impact

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and the following details a proportionate impact assessment based on current information.

Table 5: Impact Assessment.

Impact	A day bat roost for brown long-eared and three day roosts for common pipistrelle will be lost in the development.
Characterisation of unmitigated impact on the feature	Four bat roosts will be destroyed when works are carried out resulting in a low-level loss/impact at a local level.
Effect without mitigation	Without mitigation individual bats could be killed, injured or trapped during the works.
Mitigation	See Table 6
Significance of effects of residual impacts	If lost roosts are replaced by bat boxes, the effects would be negligible.

(after mitigation)	
--------------------	--

4.3 Recommendations

The following table details the recommended mitigation and compensation required; it also recommends for a Natural England Protected Species Licence (NEPSL) to be applied for.

License type required: Standard

Roost type: One day roost for Brown long eared bat and three day roosts for Common pipistrelle bats

Table 6: Mitigation, Compensation and Enhancement

Work	Specification
General Information	A Natural England Protected Species Licence must be applied for in order to allow the works to proceed, post-grant of planning. The Three Tests to be answered before planning can be granted (NE, 2017): <i>Test 1:</i> Regulation 53(2)(e) states: a licence can be granted for the purposes of “preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”. Test 1 can be achieved via the ‘imperative reasons of overriding public interest’. Although not for the ecologist to determine the planning officer will on grant of consent. <i>Test 2:</i> Regulation 53(9)(a) states: the appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”. Test 2 would be achieved on the grant of consent as no other sites have been considered for the development. <i>Test 3:</i> Regulation 53(9) (b) states: the appropriate authority shall not grant a licence unless they are satisfied “that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.”

	Test 3 will be achieved once full mitigation appropriate to species and population has been designed and implemented via an NEPS licence issued from the statutory authority (Natural England).
Roof and tile linings	When a bat roost is present and being mitigated/compensated we advise that the type of linear for the tiles/roof used is a bitumen type 1 traditional felt. The reasoning for this is twofold; firstly, bats can damage the Modern Roofing Membrane (MRM), meaning that the MRM will become useless allowing water to pass through from above and, secondly, bats will become trapped in the fibres and die from dehydration and starvation. There is no reason that building regulations will not allow a traditional ‘cold roof’ and, therefore, this should be designed into any project where bats will be able to access the roof/loft or hung tile/weather boarding etc. etc. However, Natural England will accept an MRM being used in a bat roost under the following circumstances - The MRM must have passed the testing regime set out in Essah et al (2020) and a certificate must be provided as proof of this.
Mitigation and compensation to be installed via a Standard Licence application	The following is recommended: Standard Licence: Works can occur as per the work schedule under a Natural England Protected Species Licence (NEPSL) once granted from Natural England. Any re-roofing will require the supervision of a bat licensed ecologist. The suitable roosting features will be stripped by hand only. All areas within the roof/wall tops will be checked for bats i.e. endoscope (were possible). If bats are found, these will be removed by hand and placed in bat boxes that will be in place before works begin. Bat boxes will be installed on retained trees or buildings on site.



Figure 8: Chillon Woodstone Bat Box (British-made)

A minimum of four Chillon Woodstone bat boxes will be hung on the trees or the building at a minimum of 3m from ground level and face south/southwesterly. These boxes are known to be used by Brown Long-Eared bats (BLEB) and crevice-dwelling species.

Commuting bats were using the grounds and surrounds; therefore, any tree, hedges or linear feature should be retained if possible.

Lighting

Any lighting near or shining onto any trees, especially those with bat boxes in or commuting routes shown to be present, will be designed to minimise the impact it has on potential bat roosting and commuting.

Lighting will be in line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2018) <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

This lighting were possible will be of low level, be on downward deflectors and be on PIR sensors. Using LED directional lighting can also be a way of minimizing the light spill affecting the habitat. No up-lighting should be used.

This will ensure that the roosting and commuting resources that the bats are likely to be using is maintained.

Hedgehog homes, highways and small mammal connectivity.

As hedgehogs were observed using the site the following is recommended:

Hedgehog Homes

Hedgehogs will build nests from moss, leaves, grass and other garden debris and favour areas such as the base of hedges, under sheds and compost heaps. Providing

suitable areas and materials for nesting within the development will encourage hedgehogs to continue using the site.

Alternatively, hedgehog boxes can be built and placed in suitable areas of the site.

Advice on providing suitable habitat for hedgehogs can be found here:

<https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/homes-for-hedgehogs/>

Hedgehog Highways

In order to allow hedgehogs and other small mammals a continuous corridor across the site, thus linking the garden and green spaces.

- A 13cm-by-13cm is sufficient for any hedgehog to pass through. This will be too small for nearly all pets (Figure 8).
- Remove a brick from the bottom of the wall, creating a 13cm-by-13cm hole.
- Cut a small hole in your fence if there are no gaps.
- Dig a channel underneath your wall, fence or gate.
- Ideally, rather than walls or fences, a hedge will provide foraging, shelter and a route along as well as through the site.



Figure 9: Hedgehog Highway, Source - Wildlife Trust -

[http://7474fab53f1b6ee92458-](http://7474fab53f1b6ee92458-8f3ac932bad207a00c83e77eaae8d15c.r12.cf1.rackcdn.com/Hedgehog%20Highway.jpg)

[8f3ac932bad207a00c83e77eaae8d15c.r12.cf1.rackcdn.com/Hedgehog%20Highway.jpg](http://7474fab53f1b6ee92458-8f3ac932bad207a00c83e77eaae8d15c.r12.cf1.rackcdn.com/Hedgehog%20Highway.jpg)

5.0 References

Green Environmental Consultants Ltd, (2018) Preliminary Bat Roost Assessment

CIEEM (2018), Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, September 2018. Chartered Institute of Ecology and Environmental Management, Winchester, online at <https://www.cieem.net/data/files/ECIA%20Guidelines.pdf>

Collins, J. (ed) (2016), Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition, BCT, London Mitchell-Jones, A. J. (2004), Bat Mitigation Guidelines. English Nature.

Eassah et al (2020), Method for evaluating the snagging propensity of roofing membranes in buildings by roosting bats, online at tandfonline

Google Earth (2022), Located on site postcode, online

MAGIC (2022): Magic maps, NEPS licences and designated sites, online <http://www.magic.gov.uk/Login.aspx?ReturnUrl=%2fMagicMap.aspx>, accessed at report date.

Mitchell-Jones, A.J. (2004), Bat Mitigation Guidelines, English Nature, Peterborough National Planning Policy Framework, 2017

<http://www.communities.gov.uk/publications/planningandbuilding/nppf>

Office of the Deputy Prime Minister (2005), Circular 06/2005: Biodiversity and Geological Conservation. Para.99

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/147570.pdf>

Records: Hertfordshire Bat Group (2018)