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Dusk Survey Results

August 2020

Lovely Hall,
Lovely Hall Lane,
Blackburn,
BB1 9EQ

National Grid Ref: SD67833351

Document Title	Dusk Survey Results
Prepared for	PPY Design Ltd
Prepared by	Tyrer Ecological Consultants Ltd

Surveyors	Mr. M. Pritchard; Mr. J. Pescod	
Authors	Mr. J. Pescod	
Survey Dates	Dusk: 25/05/2020	Dusk: 09/06/2020
	Dawn: 24/06/2020	
Reviewed by	Mrs. K. Wilding	
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Appendix I: *Inspection & Assessment in Relation to Bats & Breeding Birds* (Tyrer Ecological Consultants Ltd, April 2020)

1.0 Background and Introduction

1.1 As part of a proposed planning application in relation to Lovely Hall, Blackburn, Tyrer Ecological Consultants Ltd conducted a preliminary roost assessment (PRA) during March 2020, which concluded the following:

> 8.1 Due to reasons outlined and contained within this assessment, the existing dwelling has been concluded to pertain to a high' bat roost suitability categorisation relative to current BCT guidelines 3rd edition (2016) (see Figure 6 below) and additional surveys will be necessary to establish presence/absence of bats prior to work commencing at the property in the form of dusk emergence or/and dawn re-entry surveys between the months May-August inclusive; surveys will need to be suitably spaced apart, (at least two weeks).
>
> Based upon this categorisation, it is recommended that two dusk/dawn emergence and one dawn re-entry survey are conducted in the main active season of bats (May - August) in order to establish if/how the building is being used by bats and if so identify the species, abundance, roost locations and flight lines following emergence/re-entry.

Figure 1 - Extract from *Inspection & Assessment in Relation to Bats & Breeding Birds (Tyrer Ecological Consultants Ltd, March 2020*)

1.2 Development proposals for the site involve the re-roofing of the property to address remedial / maintenance issues which in turn will restore the building to a more favourable and habitable condition.

1.3 Tyrer Ecological Consultants Ltd were therefore re-commissioned by PPY Design Ltd to undertake the further bat surveys recommended in the PEA; the surveys (two dusk surveys and one dawn survey) were carried out in May-July 2020 in accordance with current Bat Conservation Trust (BCT) Guidelines during the active season of bats.

1.4 The results, conclusions and recommendations following the surveys, including any indicative mitigation to inform an application to Natural England for a European protected species mitigation licence (EPSML), where necessary, will be supplied within this report.

1.5 This report should be read, understood and presented to the local authority as an addendum document to Appendix I (see Contents page).

1.6 In accordance with *Biodiversity Net Gain: Good practice principles for development* (CIEEM *et al*, 2019), measures have been recommended proportionate to anticipated impacts to ensure that the proposed development results in a biodiversity net gain.

2.0 Bats - Legislation & Policy

2.1 All British bats and their **roosts [1]are afforded protection under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579). When dealing with cases where a European Protected Species (EPS) (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the Regulations, that has a statutory duty as the local authority to have due regard to the provisions of the Regulations in the exercise of its functions.

2.2 Use of Buildings by Bats

a) Summer breeding roost (May-August)
b) Hibernation roost (October-March)
c) Transitional or temporary roost (Mainly spring/summer months)

Roost selection is often closely correlated to suitable foraging habitat within a reasonable commuting distance from the roost and different sites are used depending upon insect densities and abundance, climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

Policy

2.3 The National Planning Policy Framework (NPPF) has replaced the Planning Policy Guidelines (PPG's). In relation to wildlife, PPG 9 was one of the documents to which Planning Authorities referred to, particularly where a specially protected species is or may be present and will be affected by a development for which a Planning application seeks consent. The aims of the NPPF, in relation to species and habitats, are that it places a clear responsibility on Local Planning Authorities to conserve and enhance biodiversity and to encourage on the consideration that should be given to Protected Species where they may be affected by development.

Paragraph 175 of the National Policy Planning Framework (as revised in 2019) stipulates:

"*if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused*".

... whilst Paragraph 174 states:

"To protect and enhance biodiversity and geodiversity, plans should… promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

[1] **The term roost is generically referred to as a place that bat/s use for the any of the above reasons, however it should be noted that under the Conservation of Habitats and Species Regulations (2019) (EU Exit) (Regulation 43 (d) the term roost is not used but refers to "*a breeding site or resting place of such an animal"* and is afforded legal protection. The roost, breeding site or resting place of bats, which ever terminology is used is legally protected whether or not bats are in occupation.

2.4 The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation:

"*It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision."*

2.5 This is supported by a guide to good practice entitled 'Planning for Biodiversity and Geological Conservation: Building in Biodiversity' in which paragraphs 5.34 and 5.35 identify that species such as bats are highly dependent upon built structures for survival and that roosts can be easily incorporated into existing and new developments to benefit these species.

2.6 The policies contained within the NPPF are echoed within part 3 of Blackburn with Darwen's Core Strategy (2011) which states that:

"*The unique landscape setting will have been preserved and its upland areas in ways which promote biodiversity and protect important habitats. This will have been complemented by projects enhancing environmental quality within the built-up areas.*"

2.7 Furthermore, in the Blackburn with Darwen local plan part 2, policy 9.8 states:

"*Development likely to damage or destroy habitats or species of local importance will not be permitted unless the harm caused is outweighed by other planning considerations and an appropriate mitigation strategy can be secured."*

3.0 Bats in West Lancashire

3.1 Up to eleven bat species have been recorded in Lancashire, most of which use built structures, notably occupied residential properties for roosting. The most frequently encountered species is the common pipistrelle bat (*Pipistrellus pipistrellus*); its abundant status in Lancashire is mirrored throughout the UK.

3.2 The number of breeding Barn owls (*Tyto alba*) within rural Lancashire is moderately high across areas of countryside where suitable environs exist; they are constantly under threat from loss of habitat and nesting opportunities.

4.0 Dusk Survey Results

4.1 Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) edition states:-

"*The guidelines do not aim to either override or replace knowledge and experience. It is accepted that departures from the guidelines (e.g. either decreasing or increasing the number of surveys carried out or using alternative methods) are often appropriate. The guidance should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. Where examples are used in the guidelines, they are descriptive rather than prescriptive."*

Relative to the above the survey protocol has been determined using the collective and long standing experience of Tyrer Ecological Consultants Ltd and knowledge of the specific nature of the site.

Survey Protocol

4.2 The timing of the surveys took place in May - June thus within the main active period of bats, at a time when maternity colonies have formed / returned to summer roosts and bats are in a highly active and social stage.

In accordance with Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016), it is specified that:

"*The bat active period is generally considered to be between April and October inclusive*", though the period of May - August is the optimal most productive period that Natural England accept bat surveys and grant European Protected Species Mitigation licences (EPSML).

When considering survey protocol the decisions about whether dusk or dawn surveys are selected are based on the extensive experience of the Tyrer Ecological Consultants Ltd, the nature of the building and species that can be anticipated as being present either at the property or in the locality and how complex a building is relative to observations.

In this case the bat roost potential that exists at Lovely Hall is spread across all elevations of the property; if a building is complex, or observations were restricted, or species that are difficult to detect at dusk are suspected then dawn surveys would be conducted. At Lovely Hall, due the nature and the distribution of the potential roost features, dusk and dawn surveys were conducted to ensure a robust survey methodology was adhered to.

Survey protocol should not be determined by parties who are 1) not familiar with the site 2) do not have a sufficient level or experience in relation to the undertaking of dusk/dawn bat surveys.

4.3 The number of surveys and surveyors was adequate relative to the roost potential that was identified i.e. 'High', and requiring four surveyors to accurately monitor potential roost features (PRF's) at any one time.

4.4 Surveyors were strategically positioned so that all elevations with bat roost potential, as described in the daytime report, could be observed without limitations. The surveys were aided with Anabat electronic bat detectors that enable the locating and recording of the high frequency calls that are emitted by bats; echolocation calls were analysed the next day using Analook computer software to verify field observations

4.5 See the following tables for Raw Data.

Survey Results

4.6 Two dusk emergence and one dawn re-entry surveys were undertaken on the 25th May 2020, 9th June 2020 and 24th June 2020 by a combination of four of the five surveyors as per Tables 1-3 below:

Table 1 - Surveyor Credentials

Surveyor(s)	Experience	Surveyor Credentials
Mrs. K. Wilding	12 years	Director of Tyrer Ecological Consultants Ltd who holds a Natural England Class 2 License (CLS-14227).
Ms. H. Taylor-Boyd	6 years	A highly experience bat surveyor with several years' experience with Tyrer Ecological Consultants Ltd.
Mr. D. Boyd	6 years	A highly experienced surveyor currently working as a sub-contractor for Tyrer Ecological Consultants Ltd.
Mr. P. Harrison	4 years	A seasonal ecological consultant with experience of undertaking professional bat surveys.
Mr. G. Harrison	8 years	A seasonal ecological consultant with experience of undertaking professional bat surveys.

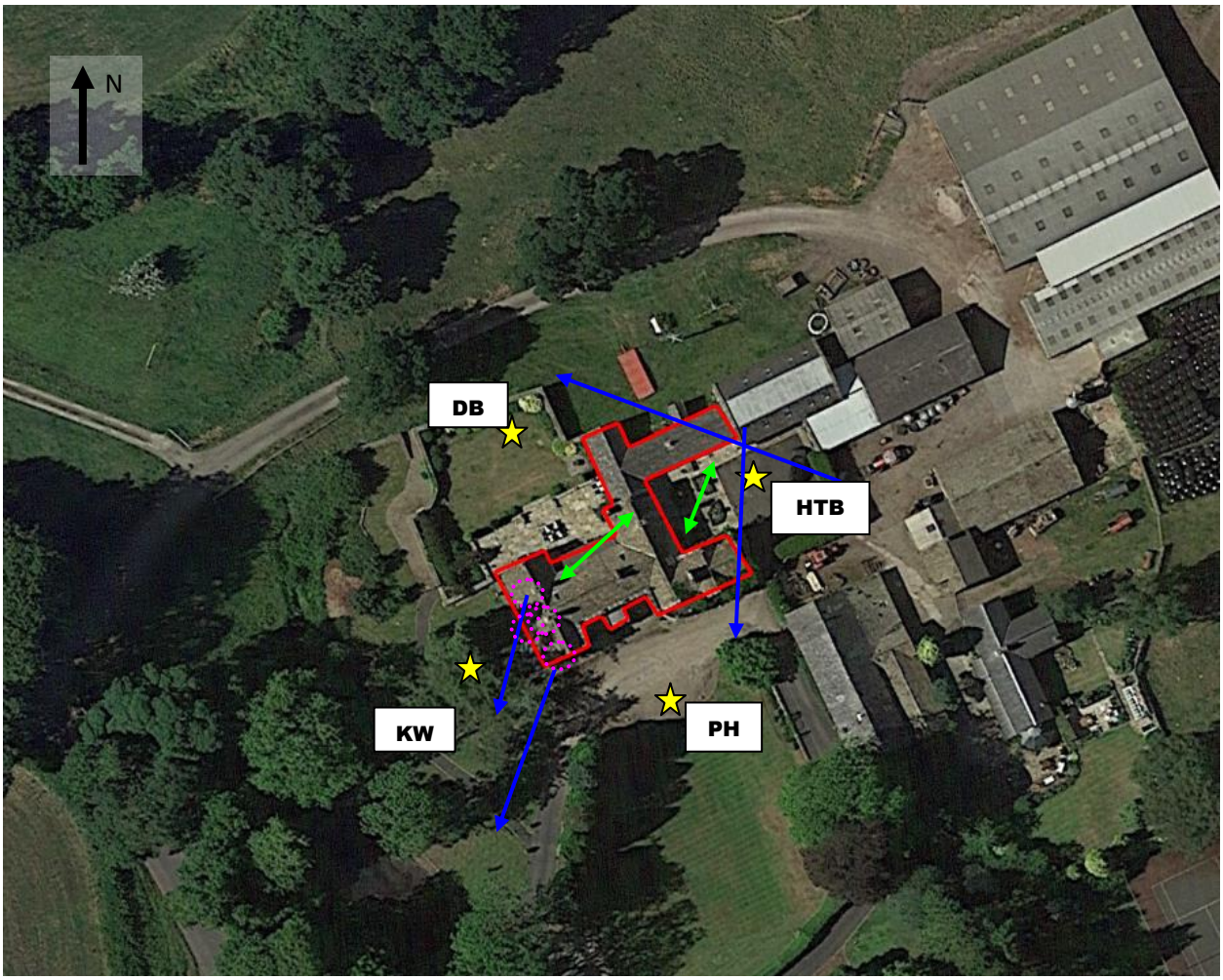
Table 2 – Survey dates, times and weather conditions

Times of Survey	Date	Weather Conditions
Dusk survey 2100 - 2245	25th May 2020	**Sunset: 2122**: Dry, Calm, 100% cloud cover Start temp: 13 º C End temp: 12 º C
Dusk survey 2119 - 2239	09th June 2020	**Sunset: 2139**: Dry, Calm, 100% cloud cover Start temp: 12 º C End temp: 12 º C
Dawn survey 0310 - 0455	24th June 2020	**Sunset: 0439**: Dry, Light Air, 60% cloud cover Start temp: 15 º C End temp: 14 º C

Table 3 – Dusk Survey Results

Dawn / Dusk Survey	Time	Activity
25/05/2020	2100 - 2245	**Summary: Emergence of four Common Pipistrelle bats from the target building.** 2122 hrs: a Common Pipistrelle emerged from the north-western gable roof pitch. 2123 hrs: a Barn Owl passed the building. 2131 hrs: a Common Pipistrelle emerged from the roof plate / a low tile on the western side. 2136 hrs: a Soprano Pipistrelle passed from the East to the South over the building. 2145 hrs: a Common Pipistrelle emerged from the western elevation from under a stone tile in the mid roof. 2147 hrs: a Common Pipistrelle passed from North-East to South over the building. 2150 hrs: a Common Pipistrelle emerged from under a lifted tile near the chimney on the western elevation. 2151 hrs: a Soprano Pipistrelle was recorded but not observed. 2158 hrs: a Soprano Pipistrelle and a Common Pipistrelle foraged frequently. 2233 hrs: a Myotis bat was recorded but not observed. Activity comprised of emergence and foraging by up to six bats in total.
09/06/2020	2119 - 2239	**Summary: Emergence of six Common Pipistrelle bats from the target building.** 2137 hrs: a Common Pipistrelle emerged from the southern elevation of the western outrigger roof, emergence point not visible. 2140 hrs: a Common Pipistrelle emerged from between roof tiles on the western elevation. 2150 hrs: a Common Pipistrelle emerged from the base of the western chimney. 2153 hrs: a Common Pipistrelle emerged from the eaves on the southern elevation. 2156 hrs: a Common Pipistrelle passed from the East to the South over the building.

		2204 hrs: a Common Pipistrelle emerged from near the chimney on the southern elevation 2205 hrs: One Common Pipistrelle was recorded emerging from the centre of the southern elevation of the roof. 2208 hrs: a Myotis bat foraged in the woodland to the West. 2212-2237 hrs: a Common Pipistrelle and a Soprano Pipistrelle foraged and socialised to the East of the building. Activity comprised of foraging and emergence by up to eight bats in total.
24/06/2020	0310 - 0455	**Summary: Re-entry of four Common Pipistrelle and one Myotis bat into the target building.** 0317 hrs: a Common Pipistrelle was recorded but not observed. 0319 hrs: a Common Pipistrelle foraged around the eastern elevation. 0320-0353 hrs: a Soprano Pipistrelle foraged continuously around the northern elevation of the building and around the trees to the West. 0326 hrs: a Myotis bat re-entered the building from the West into the tiles around the western chimney. 0348 hrs: a Soprano Pipistrelle re-entered the roof in the North-East wing under the eaves above the door. 0355 hrs: a Soprano Pipistrelle re-entered the building via a tile on the garage roof in the North-East. 0404 hrs: a Soprano Pipistrelle re-entered the building above the eastern window of the North-East wing. 0411 hrs: a Common Pipistrelle re-entered the roof from the west into the tiles by the chimney. Activity comprised of foraging and re-entry by up to five bats in total.



Dusk Survey 1 - 25/05/2020

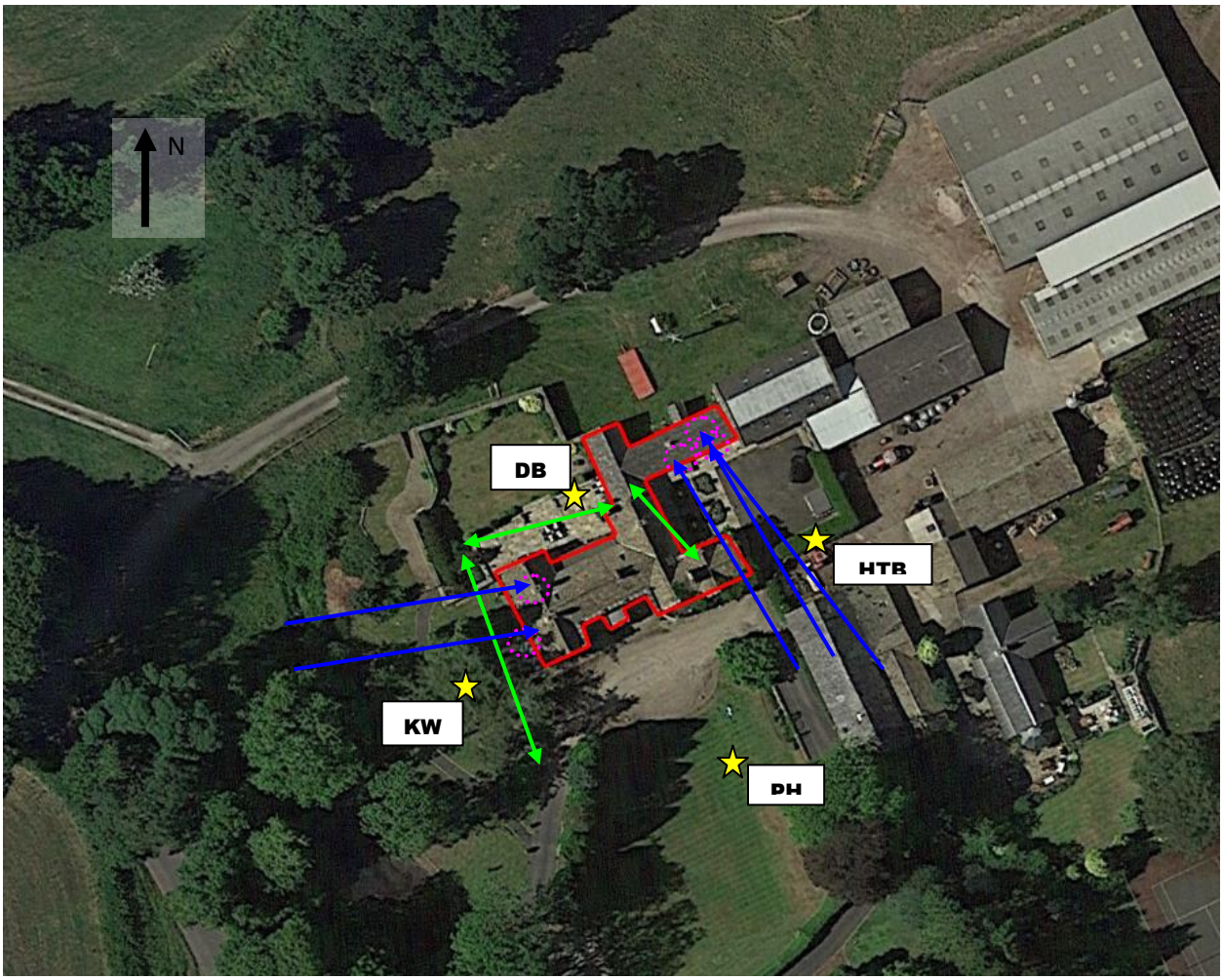
Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
N	Directional compass	AZ	Surveyor initials
	Emergence location		

Figure 2 - *Visual Aid - Dusk Survey 1 Results with Key*

Dusk Survey 2 - 09/06/2020

Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
N	Directional compass	AZ	Surveyor initials
	Emergence location		

Figure 3 - *Visual Aid - Dusk Survey 2 Results with Key*



Dawn Survey - 24/06/2020

Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
N	Directional compass	AZ	Surveyor initials
	Re entry location		

Figure 4 - *Visual Aid - Dawn Survey Results with Key*

Figure 5 - *Visual Aid - Emergence locations at chimney base/flashing at southern elevation from which Common Pipistrelle bats emerged during dusk surveys*

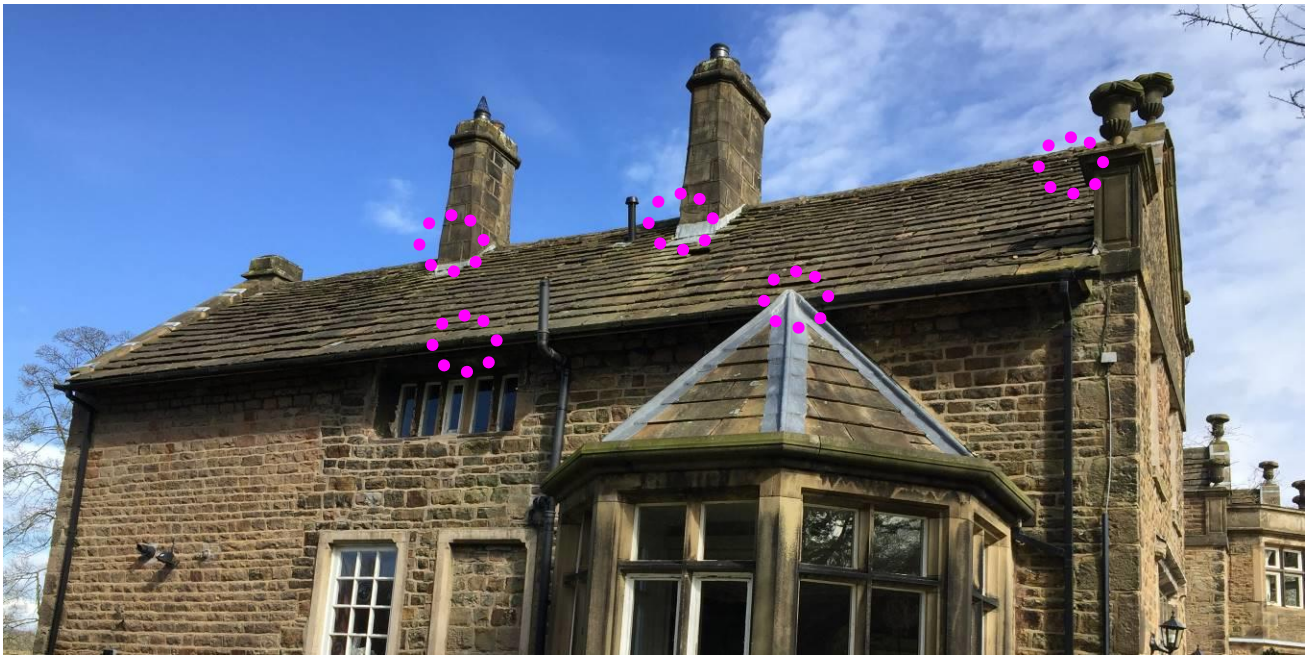


Figure 6 - *Visual Aid – Indicative emergence/re entry locations on west-facing elevation from which Common Pipistrelle bats emerged - returned during surveys*

Figure 7 - *Visual Aid – Re-entry locations at roof verge/barge board on the north-east wing into which Common Pipistrelle bats returned during the dawn survey*

Figure 8 - *Visual Aid – Re-entry location under a tile in the north-east wing into which a Common Pipistrelle bat returned during the dawn survey*

5.0 Dusk Survey Conclusions & Recommendations

5.1 The survey results gathered by Tyrer Ecological Consultants Ltd conclude that Lovely Hall is being used by up to six Common Pipistrelle bats and one Myotis bat for roosting purposes. Based upon the evidence, the building is host to a 'Day roost' for the named species in singular/small numbers, with the majority of bats observed emerging from the west-facing elevation at roof verge and from under tiles, and further emergence from the southern elevation at chimney flashing, with re-entry at the aforementioned features on the west-facing elevation and further re-entry in the south-facing elevation of the North-East wing.

5.2 Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) describes a 'Day roost' as:

"*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*'.

5.3 The modification of a bat roost will therefore need to be addressed from both a conservation and legal perspective along with the application of appropriate mitigation. A European Protected Species Mitigation Licence (EPSML) will be required to legally destroy a place that is actively used for breeding, rest or shelter (roost) by bats, however, before a licence can be applied for all planning issues need to be resolved.

5.4 In order that the LPA can implement its obligations under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), appropriate and proportionate mitigation will need to accompany the planning application which will demonstrate that the "*favourable conservation"* of the species concerned can be maintained.

5.5 Installation of new lighting as part of a development scheme that exceeds current levels may have a negative impact upon foraging/commuting bats confirmed as present in the vicinity, particularly if increased light spillage occurs in areas currently free from illumination such as illumination of boundary features. There are several measures that can be used to offset impacts upon bats, where lighting is unavoidable; these include, however are not limited to, the light source used and luminaire design, and accessories to direct light at its intended target. Numerous software programmes are currently available which can be used inform lighting plans, demonstrating how lighting decisions will illuminate a site. Refer to the Bat Conservation Lighting Guidelines for further strategic information if applicable.

6.0 Indicative Mitigation

6.1 From the evidence gained during the dusk surveys, the use of Lovely Hall by bats is considered to be of 'low' level significance relatable to Common Pipistrelle and Myotis bats and their current status (as according to - English Nature: Bat Mitigation Guidelines 2004); the proposed mitigation is proportionate to that use. However, if at any time that assessment is revised to a higher level, then the mitigation will also be accordingly revised.

6.2 The following procedures and mitigation recommendations are designed to allow the Local Planning Authority (LPA), in association with their ecological advisers, to determine a Planning Application where a European Protected Species has been identified and will be affected by the work for which the Planning Application seeks consent.

In addition Local Planning Authorities in accordance with the obligations placed upon them by way of their duties under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579) have to take into consideration the presence of a European Protected species (EPS) before determination of an application where it/they have been identified.

6.3 The LPA need to consider the mitigation in relation to the potential success of a Natural England licence application and/or if in their opinion the mitigation is considered as being appropriate, or if it is over and above what is required; if they determine that the mitigation is appropriate then a Planning Condition should be attached requiring the roost provision to be implemented.

If the LPA consider that the mitigation is over what is necessary but require "enhancement" as part of their Local Biodiversity/Net-Gain Planning Policies this should be included in the terms of Consent. The acting bat ecologist deems the proposed new roost creation as appropriate and not over and above what is required.

6.4 Notwithstanding that Planning Consent is granted or equally if the work is undertaken outside of the planning system, whereby projects that do not require planning consent may affect bats or their roost, including disturbance, it does not absolve the applicant, site owner, developer or any other party involved with the work from ensuring that an application is made for a Natural England development licence, to legally undertake work that will affect bat(s) or their roost(s).

If work is undertaken without a licence and bat(s) or their roost(s) is/are affected then a breach of current wildlife legislation will occur for which penalties are high.

6.5 Under Regulation 53(1) and 56(3)(a) of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), a licence is required prior to disturbing bats or destroying/damaging or obstructing any place that is used by bats as a resting place or breeding site. The licence is issued by the EPS Licensing Team of Natural England.

Summary of Mitigation

6.6 The reroofing of Lovely Hall is the key component of the applicant's plans for the site; however it is acknowledged that the presence of roosting bats needs to be addressed from both a legal and conservation perspective.

The mitigation proposals outlined in this report are seen to be the most productive way forward that will retain long term roosting opportunities for bats.

6.7 Existing habitat retention (minimising impacts on habitat) due to the confinement of works to the existing footprint of the building will mean habitat loss is temporary only, and all proposed new roost(s) will not be at any further distance from identified valuable foraging areas of the site.

6.8 To ensure that bats are not left without a roost while reroofing works take place two Schwegler 2F bat boxes (or equivalent if not available) will be erected on a suitable tree in the west of the site, prior to any works. See Figure 9.

The receptor bat boxes will act as a receiver if bats have to be captured by hand and relocated to it by the ecologist during the work schedule; it will be retained permanently post-development to provide a long term roost opportunity for bats.

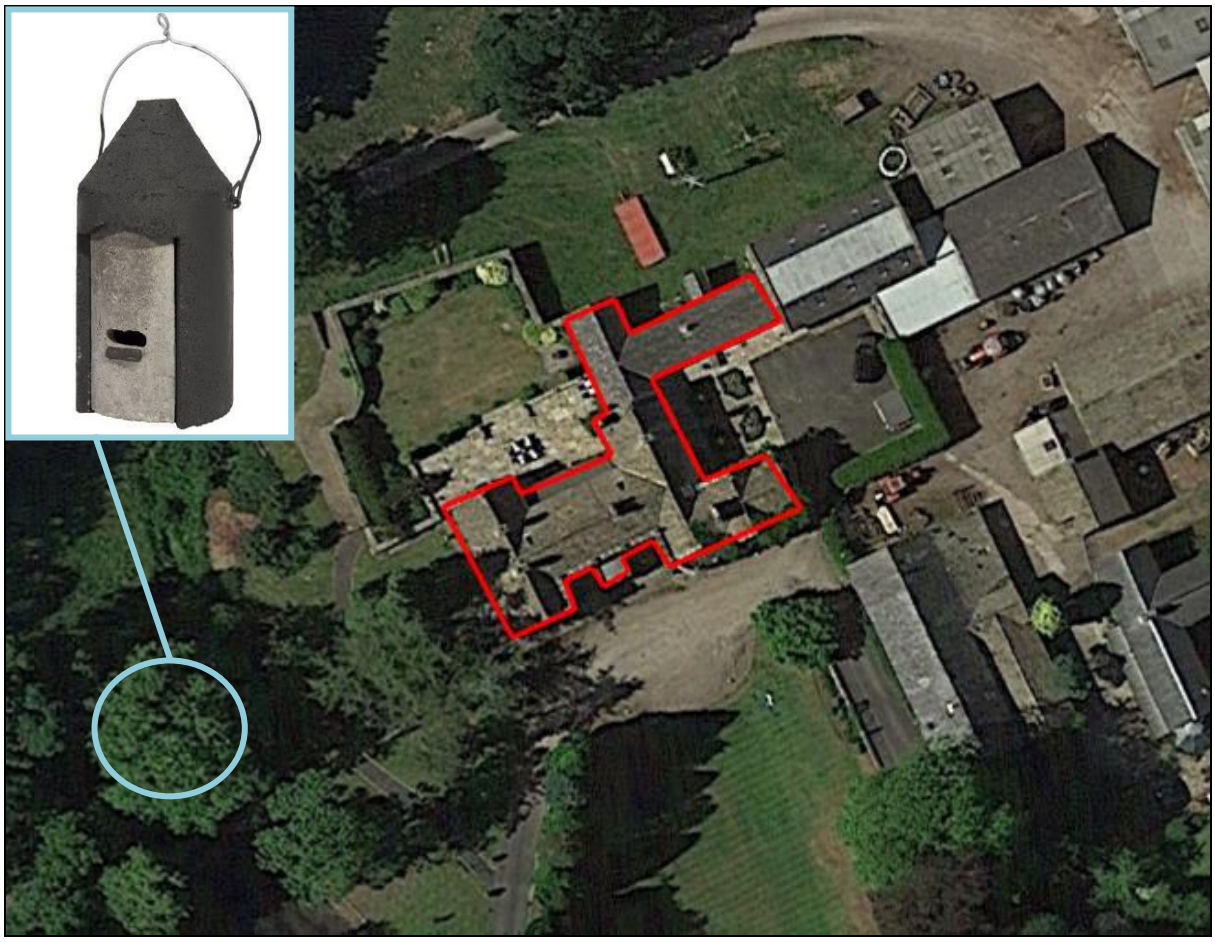


Figure 9 - *Receptor bat box to be installed on indicated or other suitable tree prior to any works* (drawn over aerial)

Assigned Ecological Clerk of Works - EcOW

6.9 At the pre-commencement stage a suitably qualified Ecologist is to undertake induction 'toolbox talk' on possible bat presence and present/discuss document features taken from the license i.e. License, Method Statement, Mitigation Figures and Work Schedule to be kept on site for the duration of the work.

Prior to any work being undertaken the presence/absence bats as far as is possible will be established by undertaking detailed investigation of the areas at which bats have been observed using the building; notably within the western and southern elevations on the main building and the southern elevation of the North-Eastern wing. The ecologist will supervise careful dismantling of all places that will be removed as part of the proposed work which have been identified as offering roost access or roost potential at the ecologist discretion. In addition wherever opportunities for bats exist in other parts of the building the supervised dismantling will extend to these areas with strategies for safely removing bat(s), as long as a maternity colony is considered not to have taken up occupancy of the building.

All dismantling of roost features will be undertaken during favourable weather conditions outside of the active season of bats, therefore within September-April inclusive, so as to avoid disturbance impacts to bats.

External lighting is likely to be greater than what currently exists; where new lighting is to be installed it should be directed away from any new bat roost access points, flight paths and foraging areas.

Mitigation proposed is subject to the approval of the Natural England EPS team; all proposed roost provisions outlined hereafter will be dedicated for bats and permanent.

6.10 Work undertaken by the Ecologist

Capture/Exclusion: Once an EPSML licence is in place the contractor will provide a safe means of access to allow the ecologist to investigate the confirmed roost area for bat presence at Lovely Hall.

In addition, wherever opportunities for bats exist in other parts of the building the supervised dismantling will extend to these areas at the discretion of the ecologist in attendance. In the event of bat(s) being present, it/they will be removed, placed in a secure box with soft tissue and immediately transferred into the receptor bat box that will have previously been erected on a suitable tree nearby as indicated in Figure 9. Once it has been established by the ecologist that bat(s) are absent the building works will continue to completion.

In the unlikely event that bats are found outside of supervision time, then as legal requirement and conditions of the licence work will immediately cease and the ecologist contacted for further advice; contractors must not touch, handle or in any way cause bats to move.

6.11 Work undertaken by the Contractor

New like-for-like roost provision will be built into the design of the proposed new roof of the building:

- New roosting provision will be re-created in the form of seven access points for bats within the tiles, five of which will be placed on the west-facing elevation and two on the south-facing elevation, as close to the emergence points identified during the surveys (see Figure 10) as possible. Bat access vents will be integrated into the stones tiles when reroofing to create ingress points,

- It is understood the north-east wing will be unaffected by the proposed works, however, should this area of the building be affected three further access points must be created. These will be positioned on the south-facing elevation of this wing, to consist of one further access vent and two bat bricks (see Figure 10). The bat bricks will be installed under the eaves with the entry hole at the top to make an inconspicuous access point,

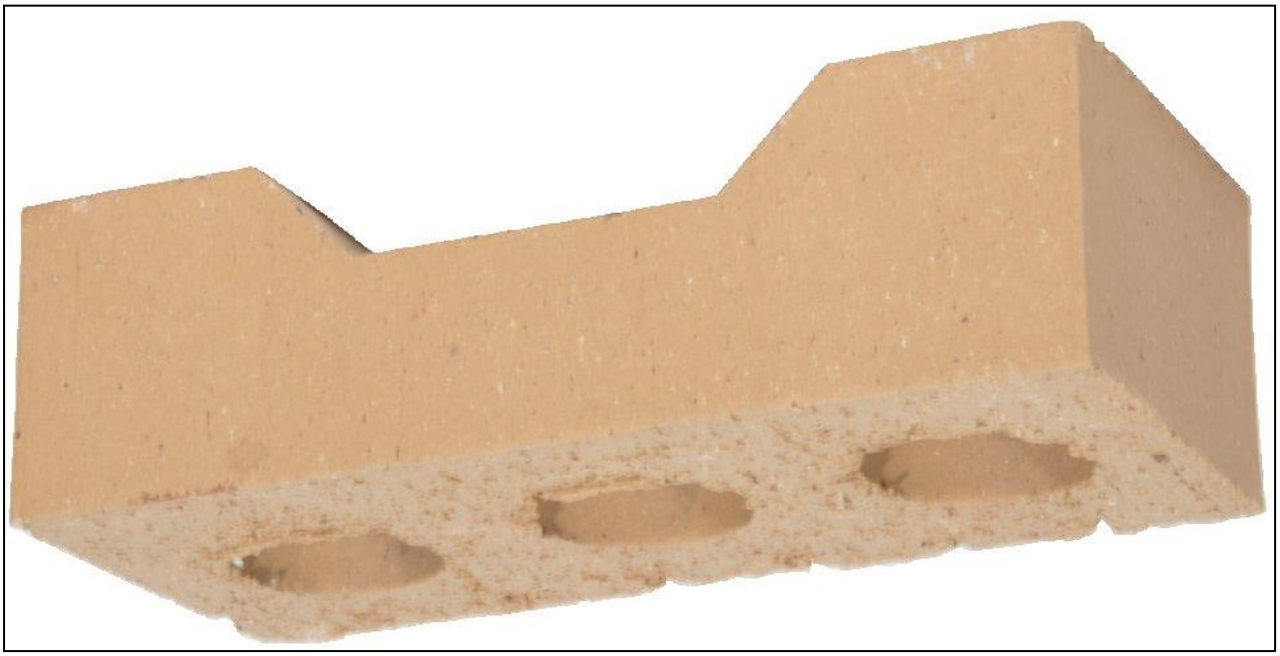
- As part of this roost creation process it is imperative that traditional bitumen 1F roofing felt will be used as the chosen local underfelt/roof lining as opposed to any breathable roofing membrane (BRM). Modern breathable roofing membranes (BRM) entrap bats through wear and tear in the synthetic polymers used to protect the breathable membrane causing injury and death to bats.

See Figures overleaf for illustrative aids.

Figure 10 - *Shows the location on the site layout of the proposed access vents (red and black) and bat brick (green) access mitigation*

Lead Access Slates create an integrated access point within stone or slate tiles. These slates should be positioned where bats have been seen emerging and re-entering the roof (see Figure 10).

https://www.leadworx.co.uk/shop/lead-roof-vents/bat-access-weathering/



The bat brick should be placed with the entrance hole at the top, at wall plate level on the southern elevation of the north-east wing.

https://www.nhbs.com/bat-brick?bkfno=197697

To be installed into the new roof in conjunction with bitumen underfelt only.

No Breathable Roofing Membranes (BRM).

7.0 References

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