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Dusk Survey Results

September 2022

Greenhill

4 'The Orchard'

Huyton

Liverpool

L36 9UZ

National Grid Ref: SJ44179049



Greenhill, 4 The Orchard, Huyton, Liverpool, L36 9UZ
Dusk Survey Results

Document Title	Dusk Survey Results
Prepared for	pHpc (peter Hamilton planning consultancy)
Prepared by	Tyrer Ecological Consultants Ltd

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Survey Dates	Dusk: 23/08/2022
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Review date	16/09/2022
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Date of Issue	16/09/2022

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N.B. Bat emergence/re-entry surveys are typically valid for a period of 12-18 months, at the discretion of the Local Planning Authority and/or Natural England. Should your planning application not achieve consent, or a licence application (where required) not be applied for within this time period, updated surveys may be required.

Table of Contents

1.0 Background and Introduction

2.0 Bats - Legislation & Policy

3.0 Bats in Merseyside

4.0 Survey Methods

5.0 Survey Results

6.0 Survey Conclusions & Recommendations

7.0 References

Appendix I: *Inspection & Assessment in Relation to Bats & Breeding Birds* (Tyrer Ecological Consultants Ltd, June 2022)

1.0 Background and Introduction

- 1.1 As part of a proposed planning application at Greenhill, 4 The Orchard in Huyton, Liverpool (see Figure 5.1 for building layout), Tyrer Ecological Consultants Ltd conducted a daytime assessment in relation to bats and breeding birds during May 2022. As part of this survey a Preliminary Roost Assessment (PRA) was carried out, which concluded the following:

“Based upon the findings of the survey covered through section 6.0 - 7.0 in the report the Garage is determined to offer “Low” bat roost potential in accordance with current Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) (see Figure 8.1). It is recommended that One dusk or dawn survey is conducted between the months of May-August with the aim to establish if the surveyed building is being used by bats for roost use and if so, identify the species, abundance, roost locations and flight lines following emergence or preceding re-entry.”

- 1.2 Development proposals for the site involve the conversion and extension of an existing listed garage for residential use.
- 1.3 Tyrer Ecological Consultants Ltd were therefore re-commissioned by pHpc (Peter Hamilton Planning Consultancy) to undertake the further bat survey recommended in the Preliminary Survey; the survey (one dusk emergence survey) was carried out in August 2022 in accordance with current Bat Conservation Trust (BCT) Guidelines during the active season of bats (see Figure 1.1).

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).		
Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey ^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. ^b

Figure 1.1 - Extract from *Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016)*

- 1.4 The results, conclusions and recommendations following the survey, 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 additional 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 Paragraph 180 of the National Policy Planning Framework (as revised in July 2021) states:

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

- a) 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;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶³ and a suitable compensation strategy exists; and,*
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*

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 This is supported in The Knowsley Local Plan Core Strategy (2016), which stipulates:

“...the design of development will be expected to support and integrate biodiversity enhancements, flood risk mitigation, energy/resource efficiency and waste recycling requirements, to accord with Policy CS8: Green Infrastructure, Policy CS24: Managing Flood Risk and Policy CS26: Waste Management.”

and in section 5.91:

“In some circumstances, adequate mitigation and/or compensation for biodiversity loss may be acceptable but incapable of being provided within the application site. In such cases where appropriate, priority will be given to equivalent off site opportunities for such mitigation or, as a last resort, compensation. Such opportunities shall be prioritised in the following order:

- Firstly sites in the immediate locality of and/or within any Core Biodiversity Area near to the application site,*
- Secondly, sites in a Nature Improvement Area identified within the borough,*
- Lastly, sites in a Nature Improvement Area identified outside the borough.”*

3.0 Protected Species in Lancashire

3.1 Up to nine bat species have been recorded in Merseyside, most of which use built structures, notably occupied residential properties, for roosting. All bats feature on the local biodiversity action plan for the area; the most frequently encountered bat species is the Common Pipistrelle (*Pipistrellus pipistrellus*) which will roost in building crevices, and its abundant status in Merseyside is reflected throughout the UK.

4.0 Survey Methods

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 survey took place in August 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 Greenhill presents no problems for dusk observations; 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 Greenhill there are no visual constraints and to date there is no evidence to suggest the presence of such species.

It should also be noted that at dawn temperatures are usually lower than at dusk and as a result bat activity can, in some locations, be less frequent. Additionally, where singular/small numbers of bats are present and there are no survey constraints then dawn surveys are of no more value than dusk surveys; singular bats can and do return to a roost before dawn and as a result a dawn survey would not record them anyway. Dawn surveys are more productive when “back tracking” bat to a roost from foraging grounds. BCT issued an Interim Guidance Note in May 2022 in advance of a 4th edition of bat survey guidelines to be published in Summer 2022, which supersedes existing guidelines and states in relation to dawn surveys that:

“Whilst dawn surveys can reward surveyors with displays of dawn swarming behaviour, there is a concern that bats that have returned earlier will be missed...”

The 4th edition of the survey guidelines will therefore transition away from the standard use of dawn surveys, particularly as a method for presence/absence surveys...”

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 on attendance of the site i.e. ‘Low’ and requiring two surveyors to accurately monitor potential roost features (PRF’s) on the buildings 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 surveyors were aided with Anabat or equivalent 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 or equivalent computer software to verify field observations.

5.0 Results

One dusk emergence survey was undertaken on 23rd August 2022 by two surveyors; surveyor credentials have been given within Table 5.1. Tables 5.2-5.3 alongside Figure 5.1 document the results of the dusk survey.

Table 5.1 - Surveyor Credentials

Surveyor(s)	Experience	Surveyor Credentials
Mrs. K. Wilding CEnv MIEMA ACIEEM	15 years	Principal level Ecologist and Director of Tyrer Ecological Consultants Ltd who holds a Natural England Class 2 License (CLS-14227). Has a large portfolio of successful granted mitigation licences in England and Wales.
Miss. R. Brown	1 year	A seasonal ecological consultant with experience of undertaking professional bat surveys

Table 5.2 – Survey dates, times and weather conditions

Times of Survey	Date	Weather Conditions
Dusk survey 1 2000 – 2200	23 rd August 2022	Sunset: 2023: Dry, Still, 100% cloud cover Start temp: 19 ° C End temp: 18 ° C

Table 5.3 – Dusk Survey Results

Dusk Survey	Time	Activity
23/08/2022	2000 - 2200	Summary: No bat emergence for the duration of the survey. 2033 hrs: Common Pipistrelle (CP) commuting from main house at south to west of building 2050 hrs: Two CP foraging along treeline at west of site 2058 hrs: CP commuting south towards main house Activity consisted of occasional foraging by two Common Pipistrelle



Dusk Survey – 23/08/2022

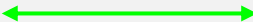
Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
	Directional compass		

Figure 5.1 - Visual Aid - Dusk Survey Results with Key

6.0 Survey Conclusions & Recommendations

- 6.1 From the dusk survey results, it can be concluded that whilst using best practice survey methodology, emergence of bats was absent at Greenhill; activity was limited to occasional foraging activity by two Common Pipistrelle (*Pipistrellus pipistrellus*) bats on the survey.
- 6.2 As bats are highly transient species and can use buildings that offer potential roost features at any time of the year, it should be stated that if bats, or evidence of bats (see Figure 6.1), is found at any stage during the works then as a legal requirement the work at the site should immediately cease and a bat ecologist contacted for further advice.



Figure 6.1 - Bat droppings (left) and pipistrelle bat (right)

- 6.3 If bat(s) or their roost will be affected then a Natural England Mitigation licence will be required to legally continue with the work. Notwithstanding the granting of a licence works that would affect a roost cannot take place if a maternity colony is in occupation.
- 6.4 Notwithstanding absence of roost behaviour observed, the proposed development scheme might consider enhancement for bats as part of its biodiversity net-gain goals, in accordance with local and national planning policy.

See Figures overleaf for indicative ideas which could be integrated during the proposed development at Greenhill.

Enhancing a development site for Bats

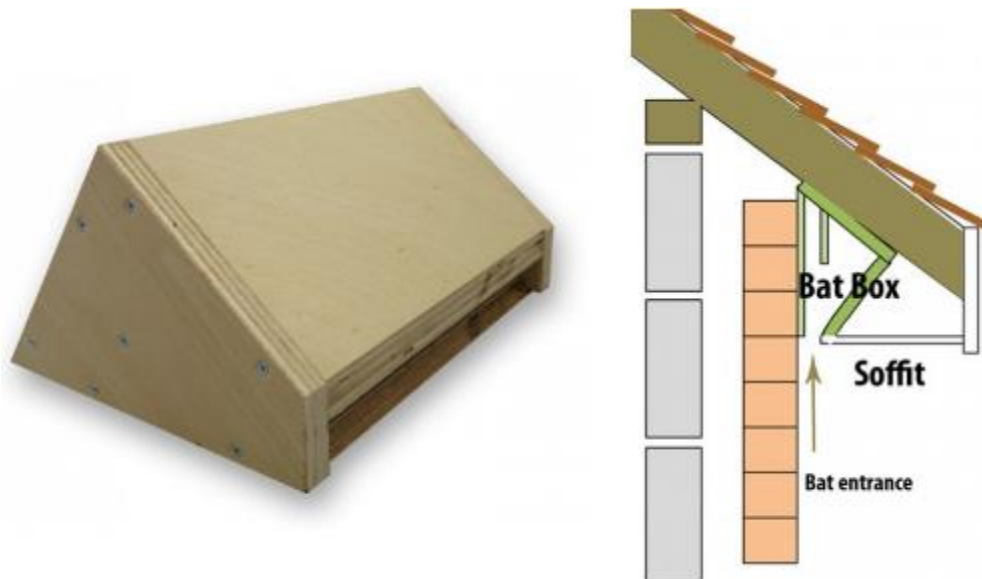
Integrated bat box

The Habibat Bat Box is a solid box made of insulating concrete with internal roosting space. The box blends seamlessly into brick-built properties and may be incorporated into the fabric of buildings, being best placed on gable elevations.



Soffit access

Where soffits are instated at gable elevations, roost provision may be instated in the form of a soffit bat box with internal roosting space.



Externally fitted boxes

A large number of externally fitted box models for bats exist for buildings and trees. Suitable models for both buildings and trees may include the Eco Kent Bat Box.

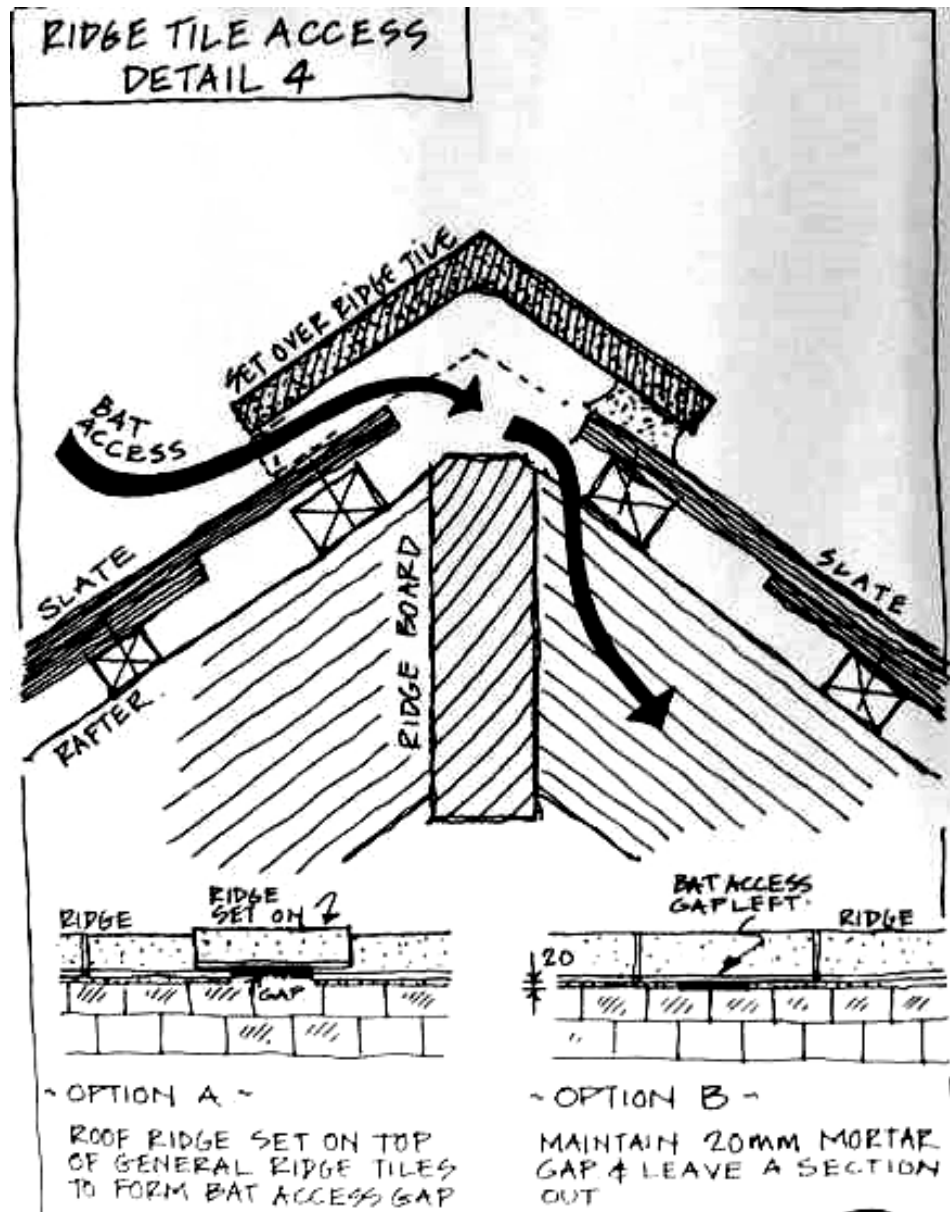


Ridge access

Where appropriated, ridge tile access should be made with the incorporation of traditional Bitumen 1F underfelt immediately beneath ridge tiles. Breathable BRM membrane can cause significant problems where bats are in contact with it, whereby their fine claws become entangled within the fibres of the membrane, entrapping and killing bats.

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7.0 References

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Appendix I: *Inspection & Assessment in Relation to Bats & Breeding Birds* (Tyrer Ecological Consultants Ltd, June 2022)