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Dusk Survey Results

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Former Penny Black Pub

Lickers Lane

Prescot

L35 3SR

National Grid Reference: SJ47569059



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Dusk Survey Results

Document Title	Dusk Survey Results
Prepared for	TJThomas Estates
Prepared by	Tyrer Ecological Consultants Ltd

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1.0 Background and Introduction

- 1.1 As part of a proposed planning application at the former Penny Black Pub off Lickers Lane in Prescott, Tyrer Ecological Consultants Ltd conducted a Preliminary Roost Assessment (PRA) during June 2021, which concluded the following:

Based upon the findings of the survey covered through sections 6.0-7.0 of the report and supported by Appendix I, whilst following best practice guidance, the disused outbuilding holds 'Moderate' bat roost suitability in accordance with the Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016).

- 1.2 Development proposals are for the demolition of the remaining outbuilding, whilst the former pub building has already been demolished.
- 1.3 Tyrer Ecological Consultants Ltd were therefore commissioned by TJThomas Estates to undertake the further bat surveys recommended in the Preliminary Survey; the surveys (two dusk emergence surveys) were carried out in June-July 2021 in accordance with current Bat Conservation Trust (BCT) Guidelines during the active season of bats (see Figure 1.1).

Table 7.1 Recommended timings 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
May to August (structures) No further surveys required (trees)	May to September ^a with at least one of surveys between May and August ^b	May to September ^a with at least two of surveys between May and August ^b

^a September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season.

^b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example, a more accurate count of a maternity colony is required but it is likely that the colony will soon disperse). If there is potential for a maternity colony then consideration should be given to detectability. A survey on 31 August followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime.

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 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 additional document to the Preliminary Ecological Appraisal (August 2021).
- 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 reasons 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.

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- 2.4 This is supported by 'Policy CS8: Green Infrastructure' of the Knowsley Local Plan: Core Strategy (Adopted January 2016) which states:

"Approach to Green Infrastructure and New Development

6) New development must be served by Green Infrastructure to meet the needs of residents and the local environment, in a manner which will:

- a) Contribute to the creation of a high quality residential environment;*
- b) Provide access to high quality open space for leisure and recreational purposes;*
- c) Seek to protect, maintain and where possible enhance biodiversity within and around new developments according to their designation and significance to provide space for nature; and*
- d) Provide adequate mitigation and/or, as a last resort, compensation for Green Infrastructure or biodiversity loss, in circumstances where harm resulting from the development is otherwise unavoidable."*

3.0 Bats in Merseyside

- 3.1 Up to nine bat species have been regularly recorded in Merseyside most of which use built structures, notably occupied residential properties for roosting. The most frequently encountered species is the Pipistrelle bat; its abundant status in Merseyside is reflected throughout the UK.

4.0 Survey Methods

- 4.1 Prior to the first dusk emergence survey an inspection of the outbuilding was conducted with the aid of high-powered torchlight; the objective of which was to establish the nature and conditions within it relative to bat roost potential and identify if any evidence of bat use was apparent.
- 4.2 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

- 4.3 The timing of the surveys was in June-July; 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).

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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 the former Penny Black Pub 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 the former Penny Black Pub 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 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.

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

- 4.4 The number of surveys and surveyors was adequate relative to the roost potential that was identified on attendance of the site i.e. ‘Moderate’, and requiring two surveyors to accurately monitor potential roost features (PRF’s) on the buildings at any one time
- 4.5 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.

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5.0 Results

Internal Inspection

- 5.1 During inspection of the building no evidence of bat use was encountered; the interior indicated use as a worker's hut; the space was partially illuminated though warm despite the roof and cavity ceiling having been broken through; the roof but not the plasterboard had been temporarily repaired and was supported by props and there were also a number of other holes in the plasterboard observed from missing light fittings.
- 5.2 Based upon the light ingress into the building it is considered broadly unsuitable for the breeding requirements of loft-dwelling species such as Brown Long-eared (*Plecotus auritus*); however, this does not discount use of the building by such species for other purposes than breeding, and the building could support populations of crevice-dwelling bat such as those of the *Pipistrellus* genus.

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- 5.3 Two dusk emergence surveys were undertaken on the 24th June 2021 and the 08th July 2021 by two surveyors at any one occasion. Surveyor credentials have been given within Table 5.1. Tables 5.2 and 5.3, alongside Figures 5.1 and 5.2 document the results of the dusk surveys.

Table 5.1 - Surveyor Credentials

Surveyor(s)	Experience	Surveyor Credentials
Mr. M. Pritchard ACIEEM	5 years	Senior Ecologist who holds a range of protected species licences, with extensive training and experience. Holds a Class 1 Natural England bat licence (2020-5039-CLS-CLS) and is an accredited agent on the (Class 2) Natural England bat licence of Mrs. K. Wilding (CLS-14227).
Miss. A Russell Qualifying CIEEM	5 years	A Junior Ecologist with Tyrer Ecological Consultants Ltd.
Mr. D. Ney	4 years	A seasonal ecological consultant with experience of undertaking professional bat surveys; Chair of Merseyside West Lancashire Bat Group (MWLBG)
Mrs. K. Pritchard	1 year	A seasonal ecological consultant with experience of undertaking professional bat surveys

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Table 5.2 – Survey dates, times and weather conditions

Times of Survey	Date	Weather Conditions
Dusk survey 1 2110 – 2315	24 th June 2021	Sunset: 2144: Drizzle, humid, light air, 100% cloud cover Start temp: 18°C End temp: 16.5°C
Dusk survey 2 2118 – 2300	8 th July 2021	Sunset: 2138: Mild, dry, light breeze, 70% cloud cover Start temp: 17°C End temp: 17°C

Table 5.3 – Dusk Survey Results

Dusk Survey	Time	Activity
24/06/2021	2110 – 2315	Summary: No bat emergence for the duration of the survey. 2210 hrs: A Soprano Pipistrelle foraged along the west of the building 2214 – 2222 hrs: Up to one Soprano Pipistrelle at a time foraging frequently along the treeline to the south of the site and the brownfield land to the west of the site. General activity comprised of sporadic commuting and foraging by up to one Soprano Pipistrelle at a time.
08/07/2021	2118 – 2300	Summary: No bat emergence for the duration of the survey. 2211 – 2233 hrs: A single Common pipistrelle at a time recorded but not observed commuting and foraging along the treeline to the south of the site. 2229 hrs: A Soprano Pipistrelle recorded but not observed commuting and foraging along the treeline to the south of the site General activity comprised of sporadic foraging and commuting by up to one Common Pipistrelle and one Soprano Pipistrelle at a time.

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Dusk Survey 1 – 24/06/2021

Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
	Directional compass		

Figure 5.1 - Visual Aid - Dusk Survey 1 Results with Key

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Dusk Survey 2 – 08/07/2021

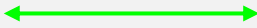
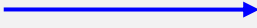
Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
	Directional compass		

Figure 5.2 - Visual Aid - Dusk Survey 2 Results with Key

6.0 Dusk 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 from the outbuilding at the former Penny Black Pub; general activity comprised of occasional commuting and foraging along the treeline to the south of the site and along the brownfield land at the west of the site by up to one Common Pipistrelle (*Pipistrellus pipistrellus*) and one Soprano Pipistrelle (*Pipistrellus pygmaeus*) bat at a time.
- 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 at the former Penny Black pub during the development of the site.

Enhancing a development site for Bats

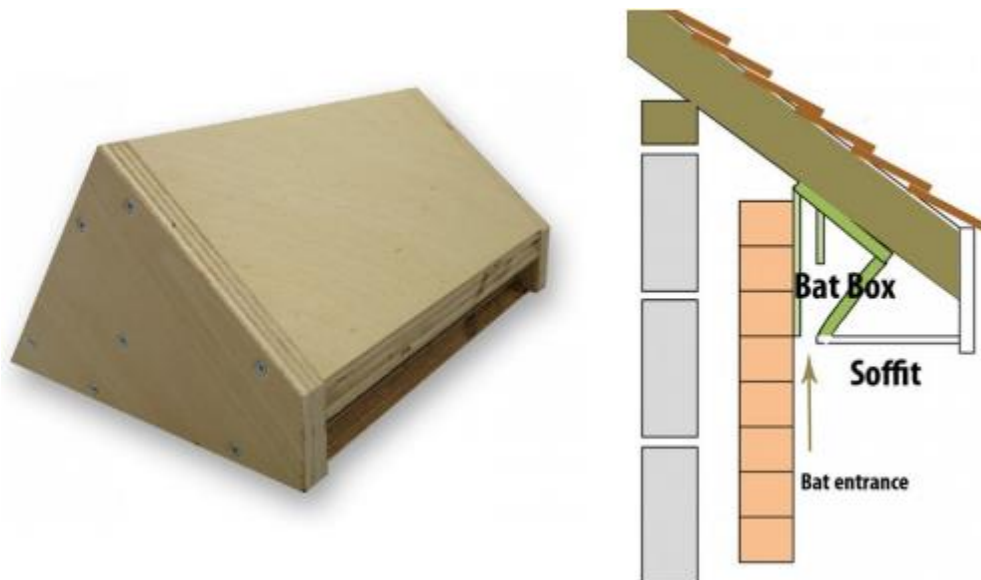
Integrated bat box

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.



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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.

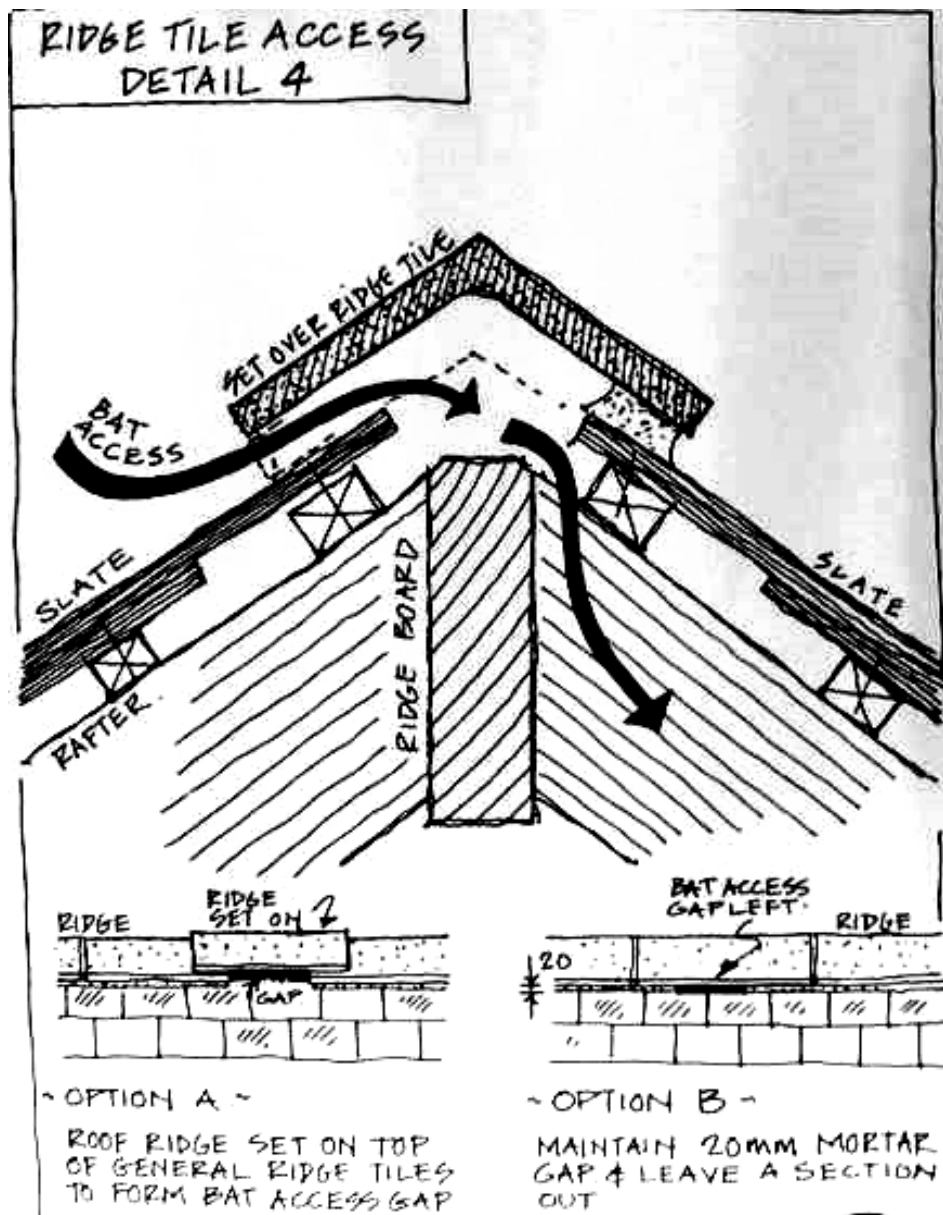


Ridge access

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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