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Dusk Survey Results

November 2023

Alick's House
Glovers Brow
Knowsley
Kirkby
L32 2AF

National Grid Ref: SJ 40263 99671



Alick's House, Glovers Brow, Knowsley, Kirkby, L32 2AF
Dusk Survey Results

Document Title	Dusk Survey Results
Issue no.	1.0
Prepared for	Architectural Emporium Ltd
Prepared by	Tyrer Ecological Consultants Ltd

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Survey Date	27/08/2023
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Review Date	29/11/2023
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Date of Issue	29/11/2023

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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.*

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Appendix I: *Inspection & Assessment in relation to Bats & Breeding Birds* (Tyrer Ecological Consultants, October 2023)

1.0 Background & Introduction

- 1.1 As part of an ongoing planning application regarding Alick's House in Kirkby, Tyrer Ecological Consultants Ltd carried out a daytime preliminary roost assessment in relation to bats with an inclusive inspection for breeding birds in August 2023, which concluded the following:

Bats: Based upon the findings of the survey, covered through sections 6.0 – 7.0 of the report and supported by **Appendix I, B1** at Alick's House is determined to offer '**None**' bat roost suitability whilst B2 presents '**Low**' bat roost suitability in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016), warranting the requirement for further survey effort at the site before an impact assessment can be concluded.

- 1.2 Proposals are understood to involve the erection of a single-storey extension adjoining the main dwelling with an outhouse.
- 1.3 Based on the recommendations of the diurnal assessment, Tyrer Ecological Consultants Ltd were therefore commissioned by Architectural Emporium to carry out the recommended further survey on B2 (**See Figure 5.1**) in August 2023, thus within the active season of bats (May – August); the single dusk survey was carried out in accordance with the Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023) edition – 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 where other methods such as PRF inspection are not possible, but unlikely to give confidence in a negative result). To be used in tandem with Table 7.2.

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
May to August (structures)	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
No further surveys required (trees)		

Figure 1.1 – Extract from Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023)

- 1.4 The survey aimed to identify the presence or reasonably conclude the absence of bats within the building. 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).

2.0 Bats – Legislation and Policy

2.1 All British bats and their **roosts are afforded full protection under the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of the Conservation of Habitats and Species Regulations (2019) (EU Exit). 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 (other months)

2.3 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.

*** 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.*

Policy

2.4 Paragraph 180 of the National Policy Planning Framework (as revised in July 2021) states:

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.

2.5 Policy CS8 of the Adopted Knowsley Local Plan, titled Green Infrastructure, echoes this national focus on preservation of biodiversity, stating:

1) Knowsley's existing Green Infrastructure and its beneficial functions will be protected, managed and/or enhanced, primarily to:

- a) Ensure more attractive and cleaner residential neighbourhoods;*
- b) Sustain and promote biodiversity (including designated sites, priority habitats and protected and endangered species) in accordance with importance and contribution to ecological networks;*
- c) Preserve the character and function of historic environments and valued landscapes;*
- d) Mitigate the effects of climate change and flood risk;*
- e) Mitigate air, water and noise pollution;*
- f) Provide local opportunities for sport, recreation and allotments; and*
- g) Provide sustainable transport linkages between residential neighbourhoods and easy access to employment and services.*

Point 5.87 delves further into the priorities of the council, and states:

The key priorities for natural assets and geology in the Liverpool City Region are:

- To manage the natural assets better – to protect the integrity of nature sites of international importance, and to protect the city region's nature and geodiversity assets; and*
- To make sure there is no net loss of these natural assets and to extend and enhance the city region's Ecological Network and natural assets.*

3.0 Bats in Merseyside

- 3.1 Up to nine bat species have been recorded in Merseyside, most of which use built structures for roosting. All bats (*Chiroptera*) feature on the Merseyside Local Biodiversity Action Plan (LBAP) and all are fully protected by UK legislation. The most frequently encountered bat species is the common pipistrelle (*Pipistrellus pipistrellus*) and its abundant status in Merseyside is reflected throughout the UK.

4.0 Survey Methodology

4.1 The survey was carried out in advance of the imminent release of Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023), and as such has followed the guidance set out in the 2016 edition.

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.”

4.3 Relative to the above, the survey methods and protocol adopted were determined using the collective and long standing experience of Tyrer Ecological Consultants Ltd and knowledge of the specific nature of the site.

Survey Protocol

4.4 In accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023), 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 species development licences in relation to bats.

4.5 The timing of the survey was in August, at a time when bats are within their active season and a period of the year when maternity colonies are within established bat roosts, albeit towards the end of the breeding season. The active season of bats is generally accepted as May – August across the industry.

4.6 Where bats are roosting, they are likely to be detected by the ecologists who are trained in the use of bat detector hardware and call analysis software, and specifically how to detect bats and to correctly identify / disseminate bat calls.

4.7 When considering survey protocol, the decisions about whether dusk or dawn surveys are selected are based on the extensive experience of 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 as well as any visual limitations at the survey site.

4.8 In this case, the bat roost potential at the structure and the lack of visual limitations present meant that a dawn survey was considered unnecessary as it would not provide any further information when compared to a dusk emergence survey. Furthermore, at dawn, temperatures are usually lower than at dusk, and as a result bat activity can be less frequent, in some locations.

4.9 BCT issued an Interim Guidance Note in May 2022 in advance of a 4th edition of bat survey guidelines to be published in Summer 2023, 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 in favour of dusk surveys supported by NVAs. The use of NVAs has the potential to improve the quality of dusk surveys, providing clarity on exact emergence points and bat counts that might not otherwise be available because of the limitations of the human eye."

- 4.10 Survey protocol should not be determined by parties who are 1) not familiar with the site, and 2) do not have a sufficient level of experience in relation to the undertaking of dusk/dawn bat surveys.
- 4.11 The number of surveys and surveyors was adequate relative to the roost potential that was identified during the daytime appraisal – i.e. '**Low**' potential. One surveyor was required to accurately monitor potential roost features (PRF's) on the building at any one time.
- 4.12 Surveyors were strategically positioned so that all elevations with bat roost potential, as described in the daytime report, could be observed without limitation. The surveyors were aided with Anabat SD2, Batlogger M & M2, Echometer EM2, Peersonic RPA3, 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, Kaleidoscope, BatExplorer or equivalent computer software to verify field observations. Where deemed appropriate by the attending ecologists, elevations were also surveyed via the use of a Night Visual Aid (NVA) Camera (Panasonic HC-VXF990) – recordings would be subject to review the following day to identify emergences / flight lines and species / abundance.

Survey Limitations

- 4.13 Following the completion of the further survey, having carefully considered the results and conclusions derived from all surveys to date, no significant constraints were experienced that might hinder the gathering of ecological data on which to base sound conclusions and recommendations.

5.0 Survey Results

- 5.1 A dusk emergence survey was conducted at the site on 27th August by one surveyor to cover the identified roost features. The observation point could accurately view areas that were located during the daytime report. See **Table 5.1** below for surveyor credentials, **Table 5.2 – 5.3** for detailed survey results and **Figure 5.1** for a visual aid to further assist in the understanding of survey results.

Table 5.1 – Surveyor name and credentials

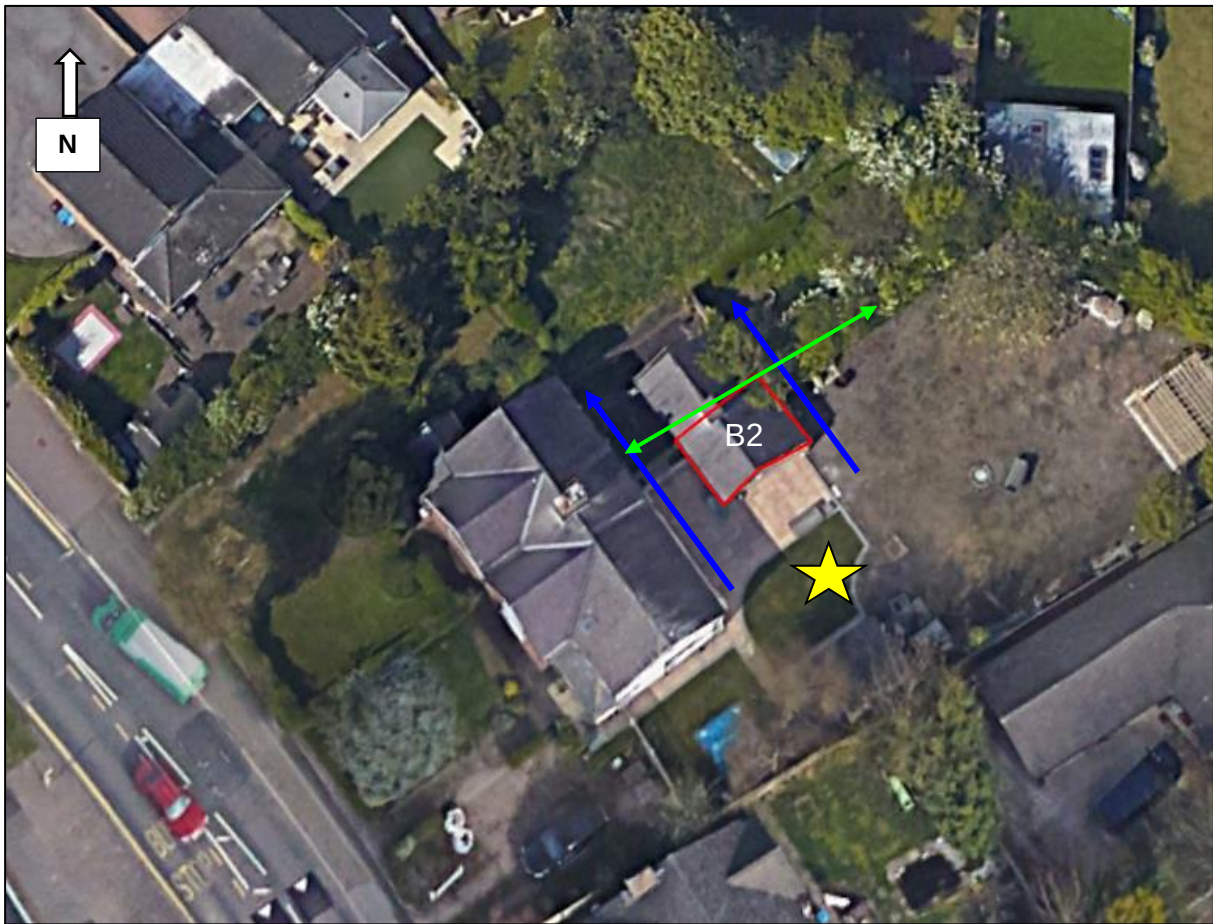
Name	Experience	Surveyor Credentials
Miss. C. Rimmer	1 year	- Trainee ecologist with experience and extensive training in bat surveying, - BSc (Hons) Wildlife & Conservation.

Table 5.2 – Survey date, time and weather conditions

Times of Survey	Date	Weather Conditions
2005 - 2145	27/08/2023	Sunset: 2014: Dry, Gentle breeze, 30% cloud cover Start temp: 16.0 ° C End temp: 15.0 ° C

Table 5.3 – Raw data from the survey

Survey	Time	Activity
27/08/2023	2005 - 2145	Summary: No emergence for the duration of the survey 2042 hrs: Common pipistrelle (CP) heard audibly but not observed 2045 hrs: CP foraging over along northern boundary 2050 hrs: CP commuting northeast into neighbouring garden 2059 hrs: CP commuting northeast along main dwelling 2101 hrs: Potential local CP emergence north of site 2103 hrs: CP heard but not observed General activity consisted of a maximum of two common pipistrelles commuting and foraging.



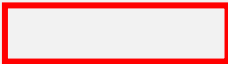
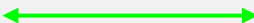
	Surveyed structure		Commuting activity
	Surveyor positions		Foraging activity

Figure 5.1 – Dusk survey results (adapted over Google Earth 2022/23)

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 the building surveyed at Alick’s House; activity on the survey was limited to foraging and commuting by two common pipistrelles.
- 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 new development at Alick's House, however, a bespoke enhancement plan can be provided by Tyrer Ecological Consultants at the clients request whereby types of provision and locations can be annotated on site plans / elevation drawings.

Enhancing a development site for Bats

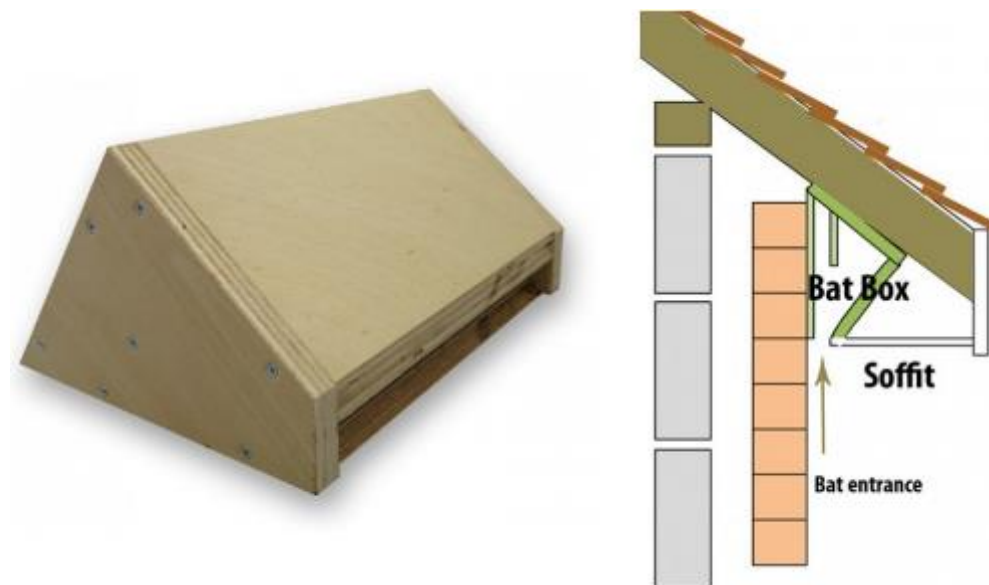
Integrated bat box

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.

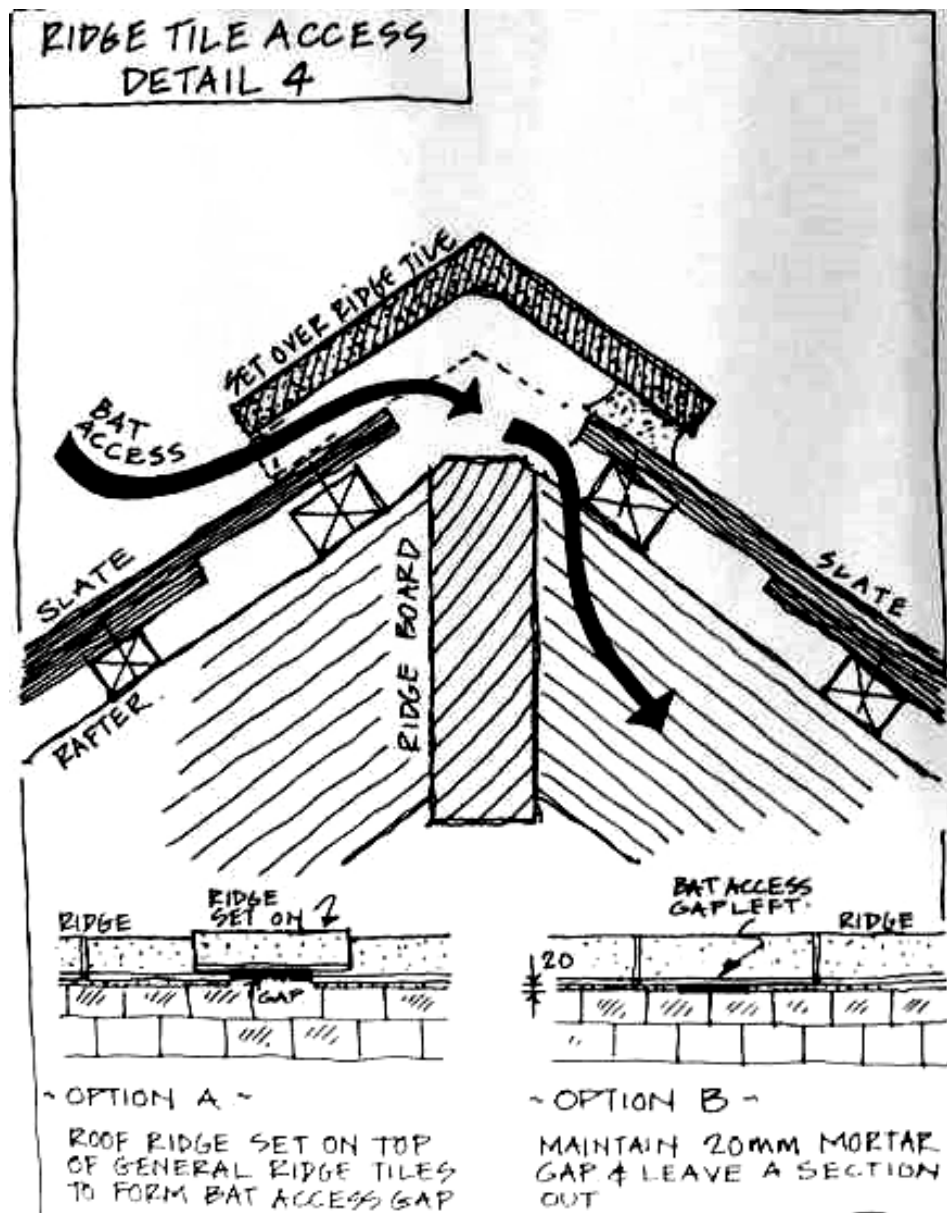


Ridge access

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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Appendix I: *Inspection & Assessment in relation to Bats & Breeding Birds* (Tyrer Ecological Consultants, October 2023)