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Dusk Survey Results

June 2024

Coach Road Farm
Cut Lane
Kirkby
Knowsley
L33 3AJ

National Grid Ref: SJ45559739



'The Piggeries', Coach Road Farm, Cut Lane, Kirkby, Knowsley, L33 3AJ
Dusk Survey Results in Relation to Bats

Document Title	Dusk Survey Results
Prepared for	Mr. B. Leonard
Prepared by	Tyrer Ecological Consultants Ltd

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Executive Summary

As part of a proposed planning application at Coach Road Farm, Tyrer Ecological Consultants conducted emergence surveys at The Piggeries as an updated request from the local authority following completed dusk emergence surveys carried out in 2022 at an adjacent barn at Coach Road Farm. The previous surveys were undertaken based on the recommendations provided within a completed Preliminary Roost Assessment conducted by ADAS in April 2022.

Bats:

The building known as The Piggeries, was categorised as pertaining to Moderate bat roost suitability in line with current Bat Conservation Trust Guidelines (2023), and therefore two dusk emergence surveys were undertaken at the site in May and June 2024.

From the dusk survey results, it can be concluded that whilst using best practice survey methodology, emergence of bats was absent at The Piggeries, and activity consisted of mostly foraging and commuting of up to one Common pipistrelle and occasional commuting from one Soprano pipistrelle and one Myotis species. There was an incidental emergence from the adjacent barn on site and it is suspected that it may have been using the integrated bat boxes that are in place following a granted mitigation scheme in accordance with a Natural England European Protected Species Mitigation License at site. There are no further recommendations in relation to bats for The Piggeries, Coach Road Farm.

Survey Validity:

Bat emergence/re-entry surveys are typically **valid for a period of 12-18 months**; Ideally, the survey data should be from the most recent optimal survey season before a planning or licence application is submitted, however this is 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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1.0 Background and Introduction

- 1.1 As part of a proposed planning application at The Piggeries, Coach Road Farm, Kirkby, Knowsley, Tyrer Ecological Consultants Ltd conducted two dusk emergence surveys following a Preliminary Roost Assessment (PRA) in April 2022 carried out by ADAS. The PRA concluded the following:

"Stone Barns A and B and the Piggery were each considered to have 'moderate' bat roost potential. This was due to the good quality habitat surrounding the site, the occasional bat droppings within the Stone barns and piggery, the number of features available for crevice-dwelling bats within the stone barns and the piggery. To confirm the presence of likely absence of bat roosts within Stone Barn A, Stone Barn B and the Piggery, further surveys are recommended prior to commencement of the application."

- 1.2 Proposals for the site comprise of the conversion of one former agricultural barn into a new dwelling with associated access. The application and the dusk surveys were understood to only involve The Piggeries; surveys and planning consent have been previously provided for the stone barns A and B as referenced in the daytime PRA report.
- 1.3 Tyrer Ecological Consultants Ltd were therefore re-commissioned by Mr. B. Leonard to undertake updated bat surveys recommended by the local planning authority; the surveys (two dusk emergence surveys) were carried out in May and June 2024 in accordance with current Bat Conservation Trust (BCT) Guidelines during the active season of bats (see **Figure 1.1**). A pre-survey commencement check was undertaken before the updated surveys a determined the results from the ADAS report were still correct and up to date.

Table 7.2. 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 or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey ^a (structures). No further surveys required (trees).	Two separate dusk emergence survey visits ^b .	Three separate dusk emergence survey visits ^b .

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

- 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.

2.3 Up to ten bat species have been recorded in Merseyside to date, most of which use built structures notably residential properties for roosting. The most frequently encountered bat species is the Common Pipistrelle (*Pipistrellus pipistrellus*) and its abundant status in Merseyside is reflected throughout the UK.

Policy

2.4 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,

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.

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 Knowsley Council's Planning Policy, reflects the above in Policy CS2:

"Recognise environmental limits, protect and enhance environmental assets, enhance local character and promote quality of place by:

- a) Understanding and respecting the character and distinctiveness of places and landscapes;*
- b) Protecting and enhancing the historic environment;*
- c) Promoting good quality design and ensuring that development respects its setting taking into account relevant design requirements, and best practice;*
- d) Maximising opportunities for the regeneration of previously developed land, including derelict or unsightly areas to improve the image of Knowsley and use land resources efficiently;*
- e) Mitigating potential negative impacts of traffic growth and road traffic on highway safety, air quality, noise and health;*
- f) Supporting policies relating to Green Infrastructure and the greening of towns and cities;*
- g) Maintaining or enhancing the tranquillity of open countryside and rural areas;*
- h) Maintaining or enhancing the quantity and quality of biodiversity and habitats, including potential impacts on nationally and internationally important sites for biodiversity."*

3.0 Survey Methods

- 3.1 Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023) 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

- 3.2 The timing of the surveys took place in May and 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, 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 considered the most optimal owing to the likelihood of detecting a greater range of roost types namely Maternity and Summer roosts; typically only surveys within this period are accepted by licensing authorities as the results of these surveys are used to inform an EPS licence application or a non-licensable Precautionary Working Method Statement (PWMS).

In this case the bat roost potential that exists at Coach Road Farm 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 where appropriate. At Coach Road Farm there are no visual constraints and to date there is no evidence to suggest the presence of such species.

Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023), it is specified that:

"Roost re-entry visits prior to dawn are no longer routinely recommended for presence/absence surveys due to the risk of bats returning early and being missed ... As return times appear to be far more variable (Andrews & Pearson, 2022)."

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.

- 3.3 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.

- 3.4 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) or Nightfox Whisker Night Vision Binoculars – recordings would be subject to review the following day to identify emergences / flight lines and species / abundance.

4.0 Results

Two dusk emergence surveys were undertaken on 20th May 2024 and the 19th June 2024 by two surveyors; surveyor credentials have been given within **Table 4.1**. **Tables 4.2-4.3** alongside **Figure 4.1-4.2** document the results of the dusk survey.

Table 4.1 - Surveyor Credentials

Surveyor(s)	Experience	Surveyor Credentials
Miss. C. Rimmer	1 year	Junior Ecologist with one year training and experience, currently undergoing further extensive survey training - BSc Hons in Wildlife and Conservation
Miss J. Collins	1 year	A Junior Ecologist with a range of training and experience; holds a BSc in Wildlife Conservation and MSc in Wildlife Conservation and Drone Applications.
Mrs. K. Wilding CEnv MIEMA ACIEEM	16 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.
Mr. L. Wilding	2 years	A seasonal ecological consultant with 2 years' experience of undertaking professional bat surveys

Table 4.2 – Survey date, times and weather conditions

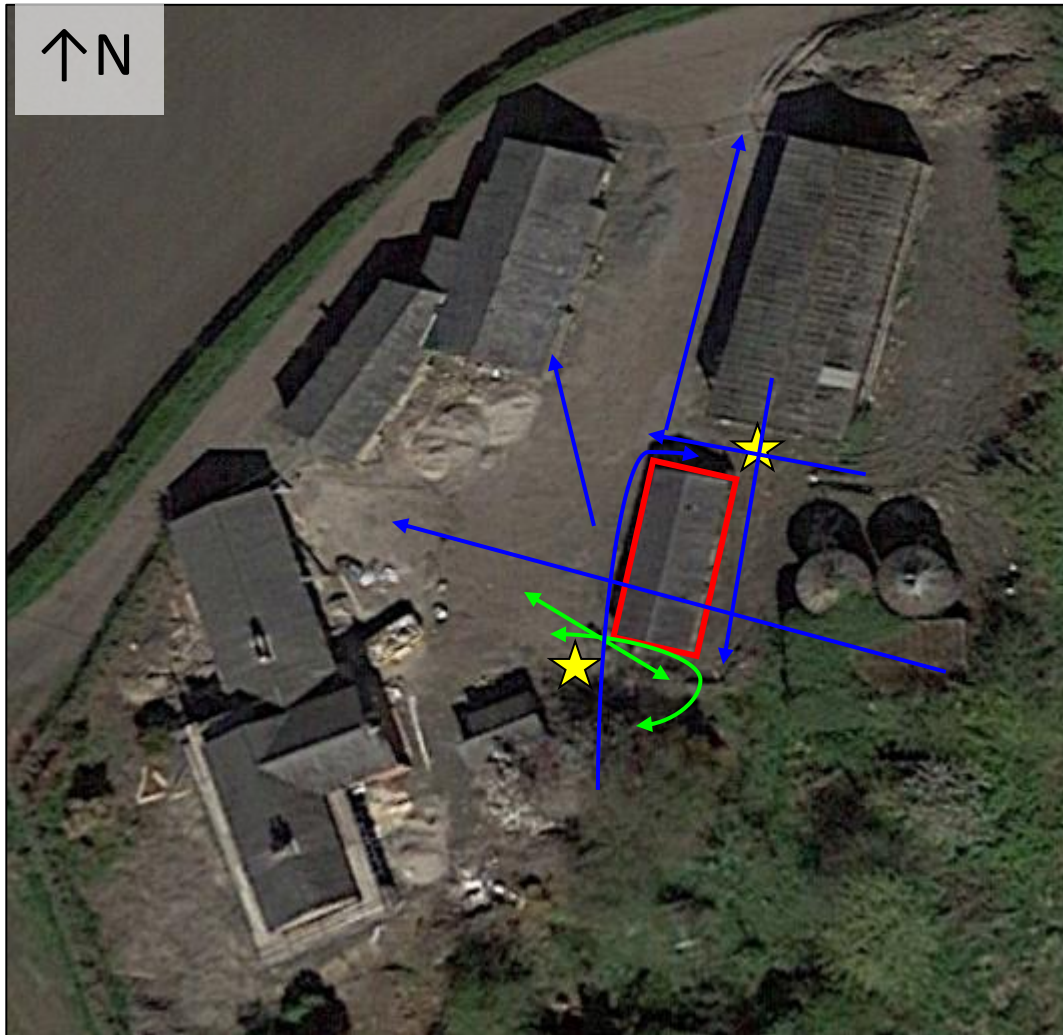
Times of Survey	Date	Weather Conditions
Dusk survey 2053-2245	20 th May 2024	Sunset: 2113: Dry, overcast, 90% cloud cover Start temp: 16 ° C End temp: 15 ° C
Dusk survey 2124-2315	19 th June 2024	Sunset: 2144: Dry, 0% cloud cover Start temp: 13 ° C End temp: 13 ° C

Table 4.3 – Dusk Survey Results

Dusk Survey	Time	Activity
20/05/2024	2053-2245	Summary: No bat emergence for the duration of the survey. 2143 hrs: Noctule heard not seen. 2146 hrs: Common pipistrelle (CP) seen foraging around the southern wall of the pigsty, coming from the tree line behind surveyor.

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		2147 hrs: CP seen commuting from tree line in the south along the western wall heading north and disappearing from view around the pigsty. 2148 hrs: CP seen commuting along southern facing elevation of the barn structure then heading north. 2155 hrs: Soprano pipistrelle (SP) seen foraging along the southern facing elevation of the pigsty heading west. 2203 hrs: CP seen commuting along the western wall of the pigsty heading north. 2206 hrs: Myotis species seen commuting north to south along the eastern wall of the pigsty. 2206 hrs: CP seen commuting from agricultural fields in the east heading west across the building. 2208 hrs: CP seen foraging around tree line in the south around surveyor. General activity consisted of commuting and foraging of up to one Common pipistrelle, foraging from one Soprano pipistrelle and commuting from a Myotis species.
19/06/2024	2124-2315	Summary: No bat emergence for the duration of the survey. 2220 hrs: Common pipistrelle (CP) incidental emergence from adjacent barn on site currently undergoing work and subject to planning consent and granted EPSML. 2220-2315 hrs: Continual foraging activity of up to one CP for the duration of the survey. Activity was limited to foraging of up to one Common pipistrelle.



Dusk Survey – 20/05/2024

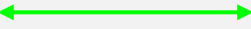
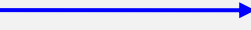
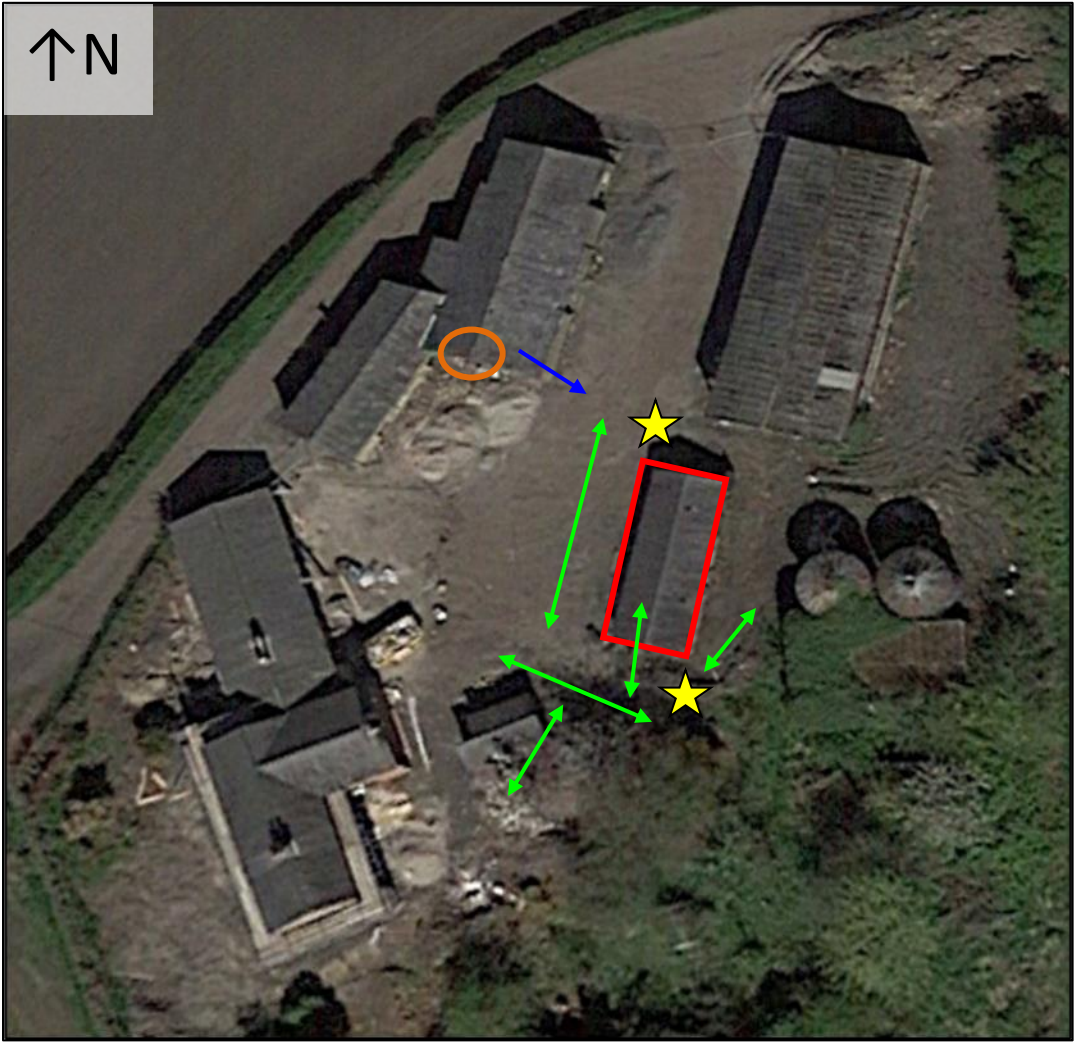
Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
	Directional compass		

Figure 4.1 - Visual Aid - Dusk Survey Results with Key



Dusk survey – 19/06/2024

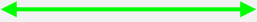
Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
	Directional compass		Approx. Incidental emergence location

Figure 4.2 - Visual Aid - Dusk Survey Results with Key

5.0 Survey Conclusions & Recommendations

- 5.1 From the dusk survey results, it can be concluded that whilst using best practice survey methodology, emergence of bats was absent at The Piggeries, Coach Road Farm and activity consisted of mostly foraging and commuting of up to one Common pipistrelle and occasional commuting from one Soprano pipistrelle and one Myotis species. There was an incidental emergence from the adjacent stone barn on site and it is suspected that it may have been using the mitigation bat boxes that are in place as part of a previously granted EPSML.
- 5.2 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 5.1), 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 5.1 - Bat droppings (left) and pipistrelle bat (right)

- 5.3 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.
- 5.4 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 The Piggeries, Coach Road Farm – however, at the request of the client a bespoke scheme can be provided to include specification and annotated on elevation drawings.

Enhancing a development site for Bats

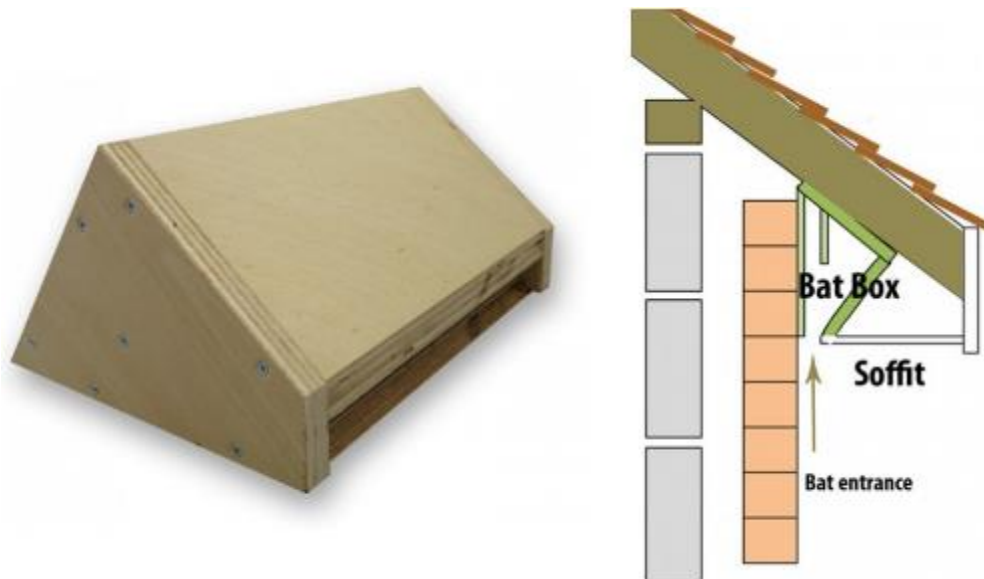
Integrated bat box

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.

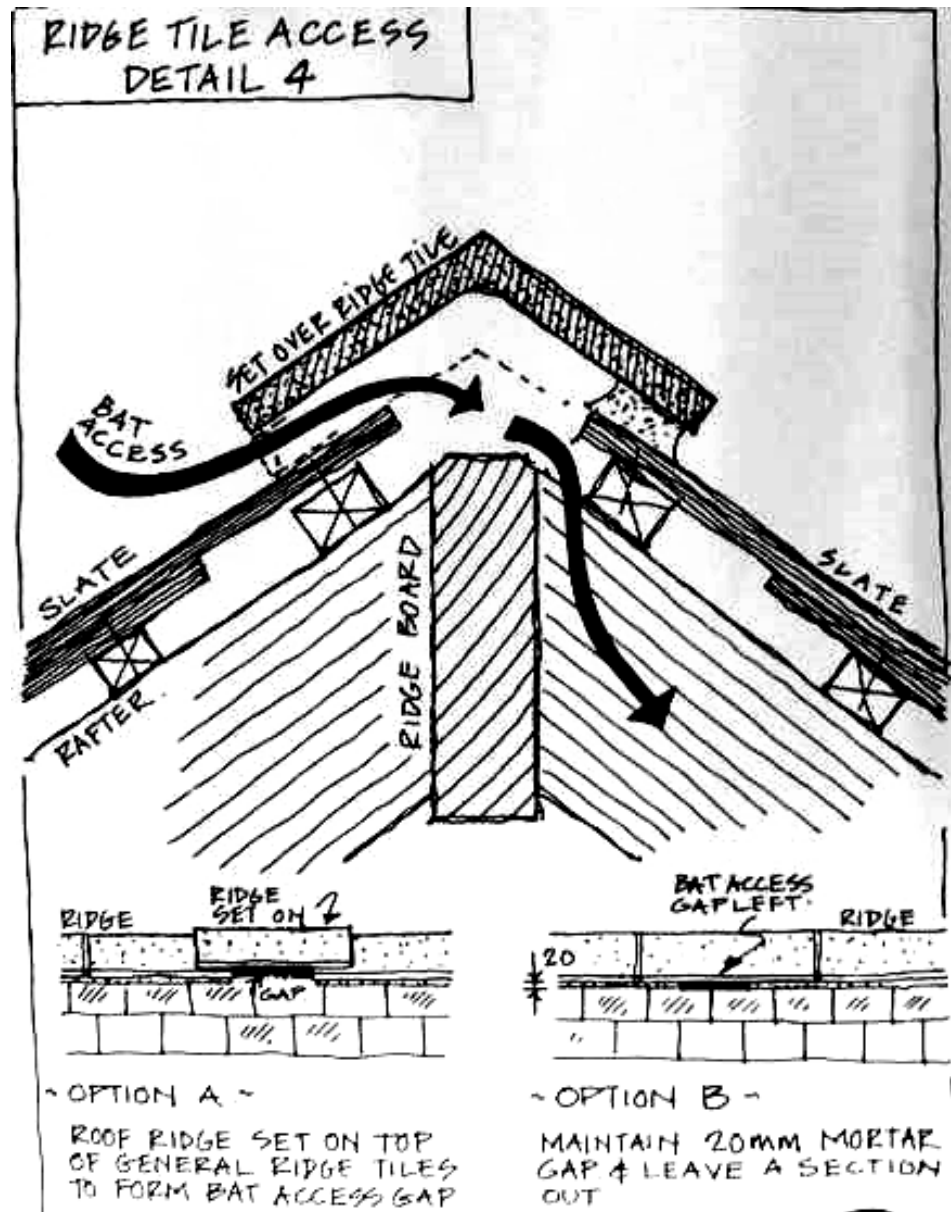


Ridge access

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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6.0 References

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