

Ecological Design Strategy

Liley Farm, Millhouse Green

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1. Summary

1.1.1 The Ecological Design Strategy was commissioned on 28th November 2025 by Scott Dunwell (SYPA Ltd) on behalf of the client, Ben Marsden of Marsden Farms Ltd, to inform discharge of Condition 6 of planning consent 2025/0772 for the conversion of an existing barn into two holiday lets. The strategy draws upon findings from the 2025 bat survey of the building and provides a scheme of biodiversity mitigation and enhancement measures to be implemented prior to completion and retained permanently.

1.1.2 The following ecological measures form the required biodiversity scheme:

Barn owl

- A **pre-construction barn owl check** by a licensed surveyor within 72 hours of works starting.
- Installation of **one Eco Barn Owl Nest Box** on the **northwest gable**, close to the apex.

Bats

- Installation of one integrated **Vivara Pro UK Build-in WoodStone® Bat Box** within the wall near wall-top height.
- Use of only **SIGA Majcoat 200 SOB 'bat-safe' roofing membrane** during the reroofing works.
- A **sensitive lighting** scheme, limited to two warm-white (2700K), low-output (3.5W) PIR-triggered downlighters positioned below 2 m, with timers <5 minutes.

Swallow

- Installation of **two Vivara Pro WoodStone® Swallow Bowls** inside the modern open-fronted barn on the northwest gable, positioned approximately 10 cm below the roof.

1.1.3 Implementation responsibility rests with the client, and photographic evidence of installed measures must be provided to the project ecologist. No ongoing aftercare is required, though it is recommended that barn owl occupation is reported to the project ecologist to allow for potential ringing of chicks.

2. Introduction

2.1.1 The Ecological Design Strategy for Liley Farm was commissioned by Scott Dunwell of SYPA Ltd on behalf of the client Ben Marsden of Marsden Farms Ltd on 28th November 2025.

2.1.2 The scheme comprises re-development of an existing barn as two holiday lets. The scheme received planning consent (Application No. 2025/0772) on 12th November 2025. The Ecological Design Strategy is required to inform the discharge of Condition 6, the wording of which is set out below:

The development shall be carried out in accordance with the following additional biodiversity mitigation and enhancement measures, for which a scheme shall be submitted to and approved in writing by the local planning authority, prior to the commencement of the development. The scheme will include the measures listed below and shall be implemented prior to completion. The features shall thereafter be permanently retained.

- Integrated bat boxes and swallow nests to be installed in suitable locations within the dwelling,
- Barn owl box to be located within the grounds of the farm;
- Bat safe membranes to be used within the roof lining;
- A sensitive lighting scheme; and
- A pre works barn own check.

2.1.3 The scheme is located within the centre of the Liley Farm building complex in Millhouse Green at Ordnance Survey Grid Reference: SE 21501 02358 (Figure 1).

Figure 1. Location plan



2.1.4 Knowledge of the site was obtained from a 2025 bat survey of the building, with the field survey undertaken by Robert Bell of Middleton Bell Ecology during Summer 2025 (MBE, 2025).

3. Species Enhancement Measures

Barn owl

- 3.1.1 Immediately prior to construction works commencing on each site building and regardless of time of year, an update barn owl survey will be undertaken by a licensed barn owl surveyor. This work has already been commissioned for Middleton Bell Ecology to undertake.
- 3.1.2 A single [Eco Barn Owl Nest Box](#) is to be fitted to the exterior of the northeast gable of the converted barn, to be fitted close to the apex (Figures 1 & 2). The Eco Barn Owl Nest Box is constructed almost entirely out of recycled plastic with the exception of the wooden base. The recycled plastic means that this nest box is extremely robust, requires virtually no maintenance and has a long life expectancy.

Figure 1. Barn owl, bat and swallow enhancement plan

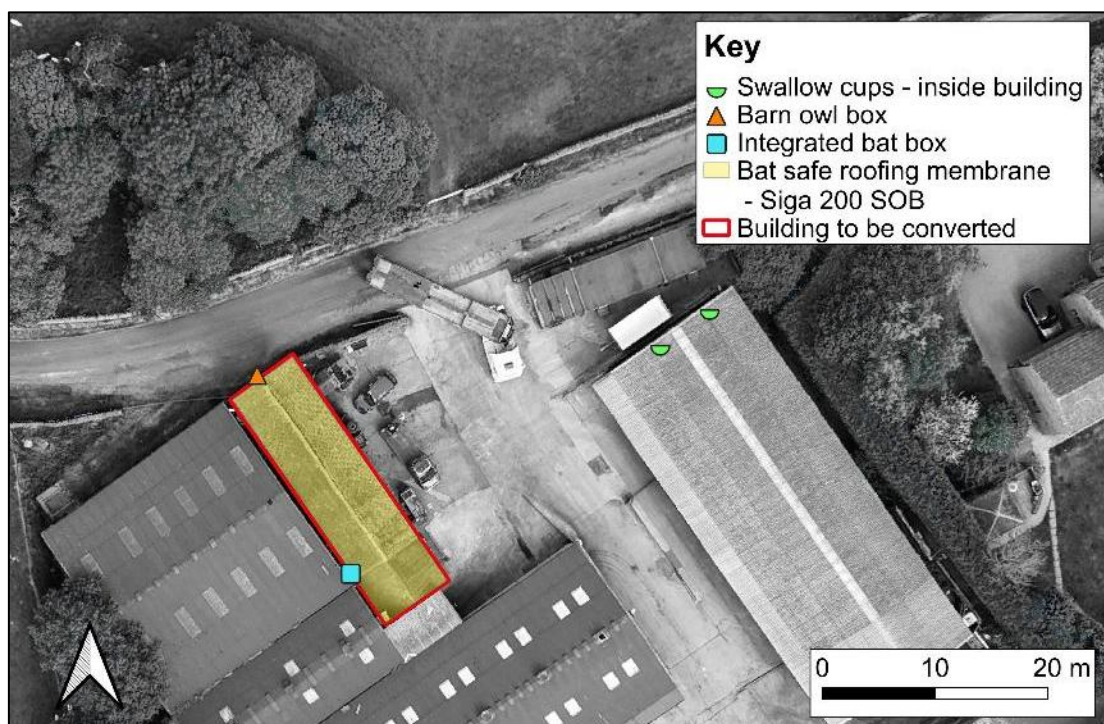
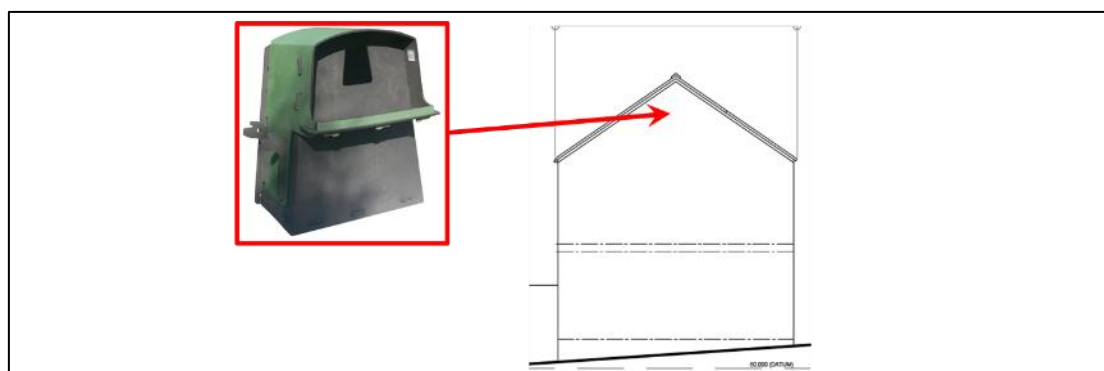


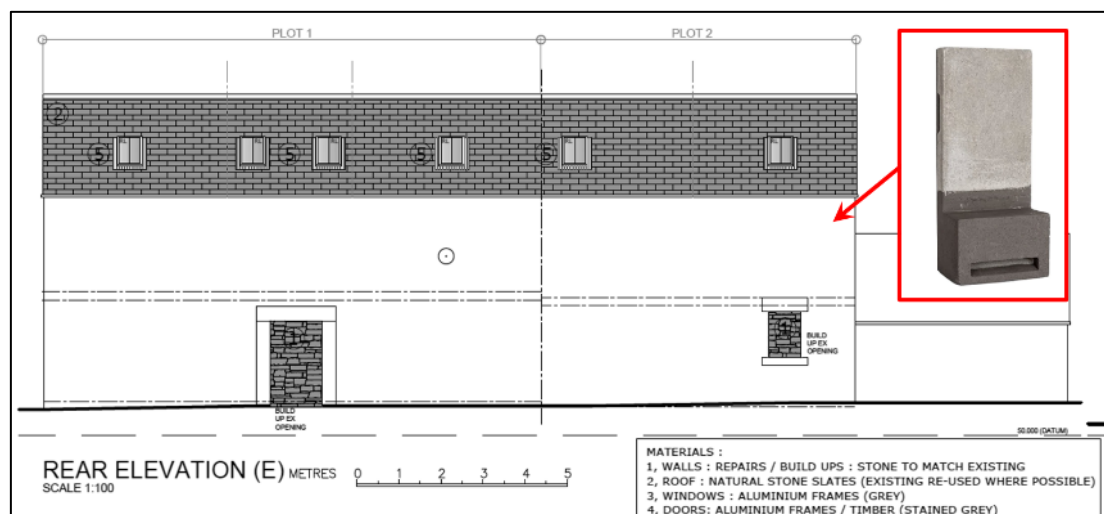
Figure 2. Proposed location of barn owl box on the exterior of the northwest gable



Bats

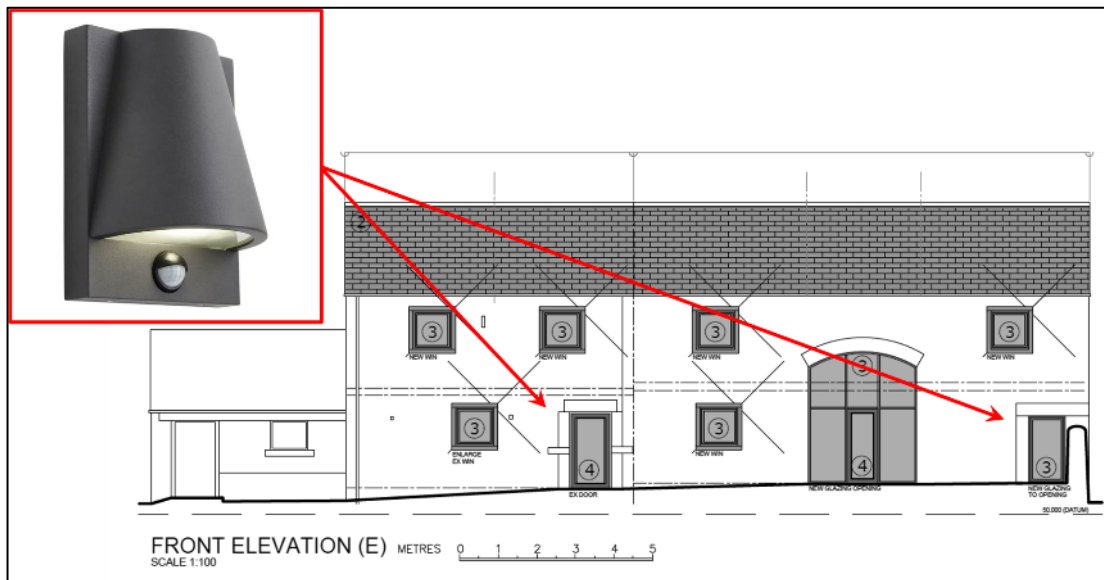
- 3.1.3 A single integrated [Vivara Pro UK Build-in WoodStone® Bat Box](#) is to be installed in the location shown on Figures 1 & 3. This box will be integrated into the fabric of the wall close to wall top height. This box design has been shown to be effective in attracting roosting bats, as can be seen [here](#). The box is expected to last for the lifespan of the re-developed building.
- 3.1.4 Over time bats will often get into redeveloped traditional buildings, accessing roofing materials. Bats have been shown to regularly become entangled and die in the component filaments of standard modern woven roofing membranes. More information on this topic can be read [here](#). The developer has committed to use only [SIGA Majcoat 200 SOB Diffusion](#) membrane (Figure 1), which has been shown to be 'bat safe' on its upper surface.

Figure 3. Integrated bat box location on southwest elevation of barn



- 3.1.5 New external lighting is to be limited to a maximum of two new external downlighters, to be installed beside doors in the building's façade (northeast elevation)(Figure 4). These units will be set on PIR sensor/movement triggers only, put on timers of less than 5 minutes and fitted at heights below 2 m. The bulbs within the lights will be low output (3.5 W) and warm white in colour (2700K). [Philips 3.5W GU10 bulbs](#) will be fitted within the lights. These can be fitted in a range of downlighters, with the [Zink VESOUL Downlight with PIR sensor unit](#) recommended.

Figure 4. External downlight locations



Swallow cup

- 3.1.6 Two swallow cups are to be fitted inside an existing open-fronted modern barn on the wider site (Figures 1 & 5). The two [Vivara Pro WoodStone® Swallow Bowl](#) units will be attached high on the timber cladding of the internal face of the barn's northwest gable, with boxes to be positioned c. 10 cm below the roof.

Figure 5. Swallow cup locations



4. Timetable of Works

Table 1. Works timetable

Development activities and timing		
Activity	Timing	Notes
Pre-construction barn owl check	To be undertaken regardless of time of year – to take place within 72 hours of works commencing on building.	Contact project ecologist when date known for works to commence. Work commissioned.
Installation of barn owl box	Following any re-pointing works on northwest gable.	To take place before scaffold taken down.
Installation of integrated bat box	To take place following strip of existing roof, prior to installation of new roof.	Needs to be fitted within wall, not externally mounted.
Installation of 'bat safe' membrane	To be fitted during re-roofing.	No other standard roof membrane to be used.
Fitting of new external lighting	One completion of scheme.	
Fitting of swallow cups	At any time, but before completion of scheme.	

Persons responsible for implementation of works

- 4.1.1 The client (Ben Marsden) is responsible for the installation of all measures detailed in this document. Pictures of the installed enhancement measures should be sent to the project ecologist Robert Bell at robert@middletonbellecology.co.uk, to save on file in the event of any future queries from the Local Planning Authority.

Aftercare and long-term maintenance

- 4.1.2 No aftercare or long-term management is recommended in connection with the installed enhancement measures.
- 4.1.3 If the barn owl box is taken up by nesting barn owl then the client is encouraged to let the project ecologist (Robert Bell) know as local bird ringers may be interested in ringing the chicks to enhance knowledge of this species in the local area.

5. References

MBE (2025) MBE/BAT/2025/056/01 Barn at Liley Farm, Millhouse Green – Bat Survey Report. Middleton Bell Ecology.