



BROWN FISHER ENVIRONMENTAL REPORTS 4 PLANNING

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STATIC BAT RECORDING ASSESSMENT

Land adjacent to Telephone Exchange
Middle Stoke
Limpley Stoke
Wiltshire
BA2 7GF

Consultant:

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Ecological Consultant

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SUMMARY

Purpose

Further to completion in September 2024 of a Preliminary Ecological Appraisal at this proposed residential development site, a Static Bat Recording Assessment has been undertaken between June 2025 and September 2025 to further investigate activity patterns in the general area during the main active season for bats.

Methodology

One automated full-spectrum static detector (Wildlife Acoustics Song Meter Mini 2) was deployed within the site for a period of at least 7 nights per deployment (each month). The detectors were programmed to begin recording at least 30 minutes before sunset and finish recording 30 minutes after sunrise each night and logged bat passes at the static detector location. In total the static detector surveys covered 35 survey nights at each deployment location through June to September 2025.

The deployment and subsequent analysis were conducted by Dr. Stefan Bodnar MCIEEM. Dr. Bodnar holds a Natural England bat survey license (survey level 2), which he has held for a number of years (over 20) and with 40 years experience of bat surveys.

Key Issues & Conclusions

- The previous Preliminary Ecological Appraisal stated that the site has 'high' bat foraging and commuting potential. Following the deployment of this static detector, this is confirmed.
- The levels of bat activity recorded on the site varied considerably between each survey and were highest in June July and August. Overall, a moderate level of bat activity was recorded.
- Greater horseshoe bats, *Myotis* spp., soprano pipistrelles and common pipistrelles dominated the bat activity across all surveys and in all locations on the site, making up 88% of the recorded bat passes collectively. This confirms the significance of the woodland corridors for Greater Horseshoe bats in the area. There were also significant recordings of Lesser Horseshoe bats. Brown long-eared bat, serotines, Leisler's bats, and noctules were regularly recorded during the surveys but at low densities only.
- In light of the results obtained, detailed recommendations and proposed measures at this stage are included in the body of the report.

1.0. INTRODUCTION

1.1. Background

At the request of Chris Foulkes, a Static Bat Recording Assessment has been carried out at a site at Middle Stoke, Limpley Stoke, Wiltshire, BA2 7GF. The assessment works were completed between June 2025 and September 2025.

The assessment follows on from a Preliminary Ecological Appraisal produced in September 2024 (R4P 247103PEA) and this report should be read in conjunction with the PEA report.

The original PEA assessed the site as follows:

Bat Foraging Potential of the Site:

The site has high bat foraging potential, located within a semi-rural landscape, dark and partially sheltered by trees which provide foraging opportunities or shelter for bats.

Bat Roost Potential of Trees:

There are no mature trees on site, with features suitable for bat roost formation. Although the on site ash tree (TN1) is dying, it has not formed significant decay features yet, that are likely to support bat roosts . No further bat surveys are required.

Bat Roost Potential of Buildings:

There are no buildings on site, No further bat surveys are required.

Following submission of the PEA, correspondence from the Local Planning Authority indicated the following:

Bath and Bradford-on-Avon Bats SAC Habitat Regulations Assessment

The site is located within Wiltshire Council's 'consultation zones' for greater and lesser

horseshoe bats and Bechstein's bats associated with Bath and Bradford-on-Avon Bat Special Area of Conservation (SAC). No bat surveys have been undertaken and in the absence of bat surveys the LPA will assume the site is important for commuting and foraging bats, including the bats associated with the SAC. The closest core roost is within 150m (significant lesser horseshoe bat roost and small numbers of greater horseshoe bats) west of the site. In addition, Winsley Mines Site of Special Scientific Interest (SSSI) and a component of the Bath and Bradford-on-Avon Bats SAC is located approx.1.5 km to the east.

Therefore, the application is screened into Appropriate Assessment due to the potential likely significant effects on the Bath and Bradford-on-Avon SAC. Bat surveys are required in accordance with Wiltshire's Planning Bat SAC Guidance to inform the design/location of the development. As it is assumed SAC bats (light sensitive species) are using the site/some of the site, a lighting impact assessment will be required to inform/feed into the Appropriate Assessment.

Also, as detailed in Wiltshire's Bat SAC Guidance, as the application is outline, an Ecological Parameters Plan is required to inform any detailed application. In carrying out its statutory function, the LPA must be reasonably sure that the proposal will not result in significant adverse effects on protected habitats or species. The information outlined above must therefore be submitted and reviewed by the LPA's ecology team prior to determination of the application.

It was therefore recommended that to satisfy this requirement, the deployment of a single static bat detector (Wildlife Acoustics Song Meter Mini 2) at the site from June to September was arranged to enable a series of monthly surveys to be carried out during the main active season for bats.

It is understood current proposals are for erection of a self-build split level dwelling with detached garage. This report provides an assessment of the status of foraging and commuting bats within the site, providing information on their presence/likely absence

and distribution. Potential impacts of the proposed development are identified and measures to mitigate the effects of the proposed development on foraging and commuting bats are discussed in outline.

1.2. Site Location

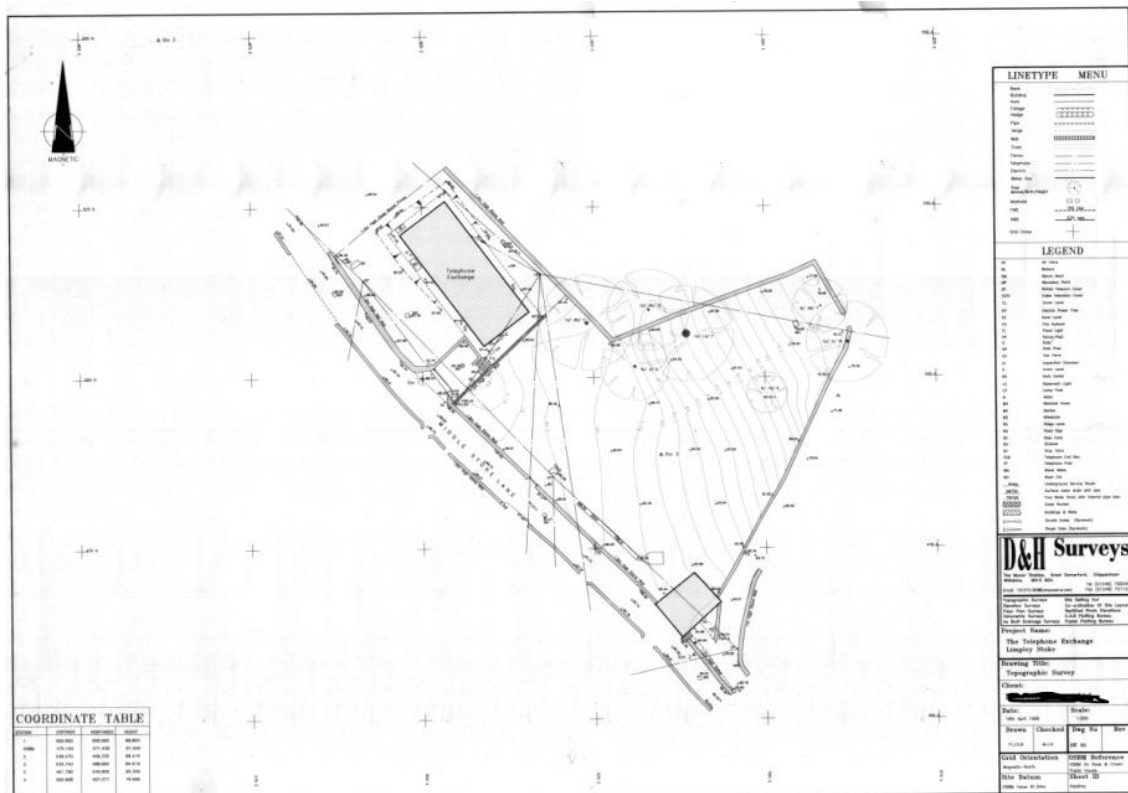
The site is an area of land adjacent to the Telephone Exchange, Middle Stoke, Limpley Stoke, Wiltshire, BA2 7GF. The site location is described in Figures 1 and 2 below.

Figure 1. Site Location



Map data 2025© Google

Figure 2. Topographical Survey



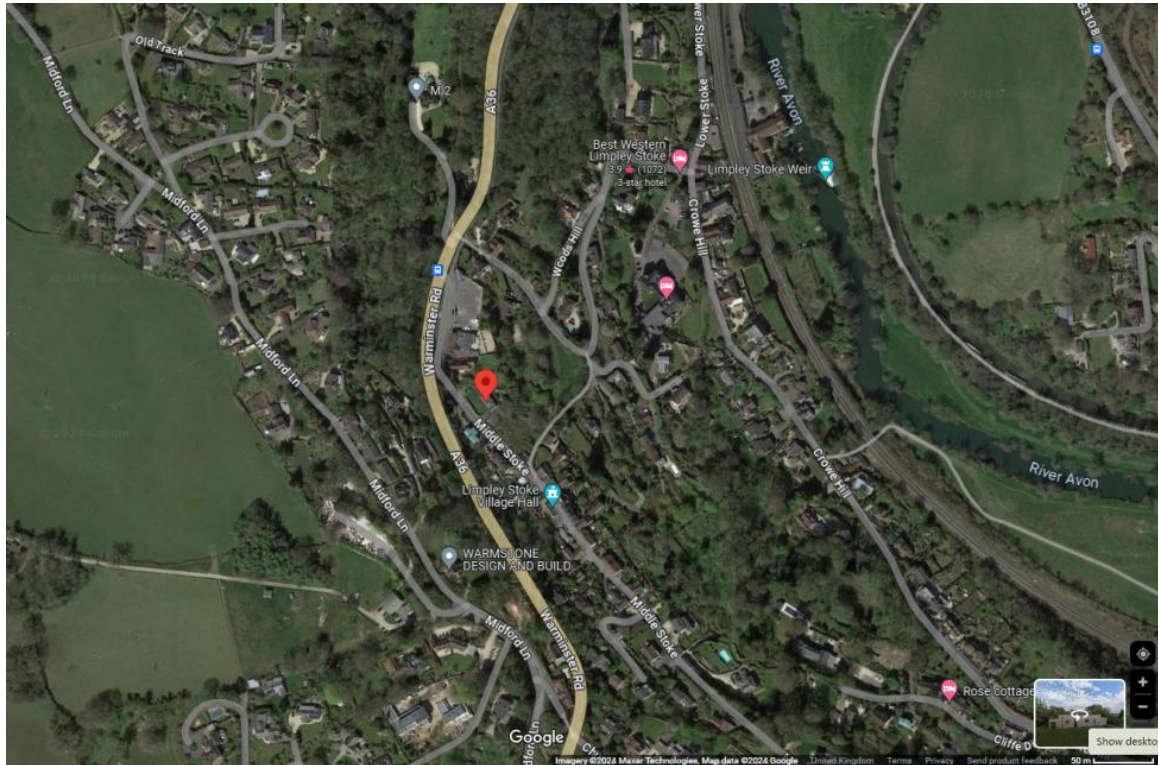
1.3. Site Description

The site consists of an area of sloping land, with mainly bramble and tall ruderal herb dominated vegetation, primarily stinging nettle and hemp agrimony. It lies on the northern side of Middle Stoke, and is surrounded by residential plots. On the edges are remnant hazel coppices and there is a large, dying ash tree in the lower part of the site. The site is developing to scrub dominated by sycamore and ash.

The site is located in the small settlement of Limpley Stoke, with many woodland blocks in the immediate environment. It is sheltered and dark. The site and surrounding areas represents good foraging habitat for bat species.

See satellite image below:

Figure 3. Satellite image of local area around proposed development site.

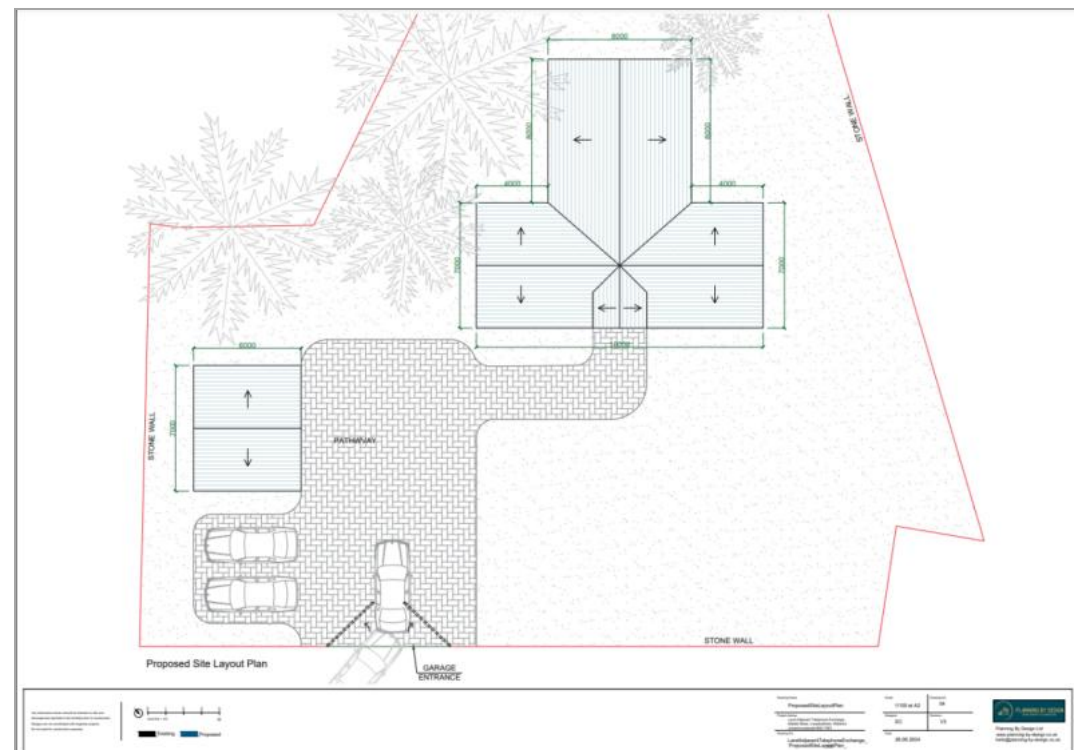


Map data 2025 © Google¹⁵

1.4. Brief Description of Project

The project is understood to involve an outline planning application for the development of the site through the construction of a split level dwelling.

See plans below and refer to planning application for full details:



1.5. Background and Rationale for Survey

See further comments from the LPA ecologist in relation to the Preliminary Ecological Appraisal (2024), below:

	Issue	Policy / Legislative compliance	Date information requested & Further information required	Satisfactorily addressed (Document & Date)
1	Bats	Habs Regs	14/04/2025. Application is within a core zone for bats associated with the Bath and Bradford-on-Avon Bats SAC. Therefore, bat surveys required. <i>Wiltshire Bat SAC Planning Guidance (2015) provides advice on surveys required to support any application in this area.</i>	NO
2	Bats & Lighting	Habs Regs	14/04/2025. A Lighting Impact Assessment is required to assess the impacts on the likely foraging commuting habitat (scrub and grassland).	NO
3	Bats	Habs Regs	14/04/2025. Ecological Parameters Plan required. This will be informed by ecological constraints once all bat surveys and lighting assessment has	NO



			been completed. <i>Further details below and in Wiltshire's Planning Bat SAC Guidance (2015).</i>	
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2.0. METHODOLOGY

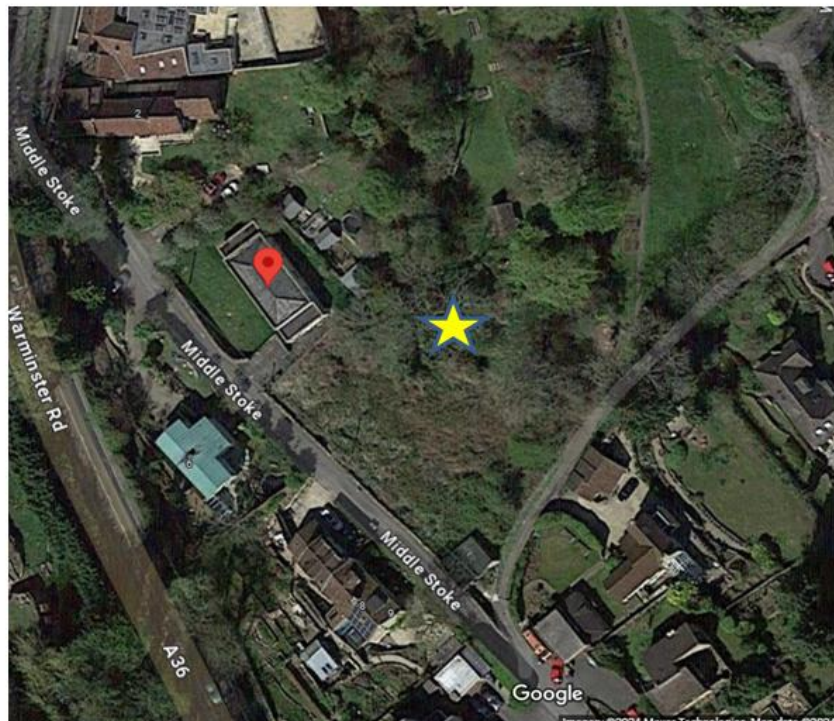
2.1. Survey Methodology

The survey consisted of the following methods:

One automated full-spectrum static detector (Wildlife Acoustics Song Meter Mini 2) was deployed within the site for a period of at least 7 nights per deployment (each month). Deployment locations are provided below.

The detectors were programmed to begin recording at least 30 minutes before sunset and finish recording 30 minutes after sunrise each night and logged bat passes at the static detector location.

In total the static detector surveys covered 35 survey nights at each deployment location through June to September 2025. The plan below shows the exact location of the detector which was attached at 3m height within a tree by zip ties. Analysis was via Kaleidoscope software.



2.2. Survey Constraints

The static detector surveys enable a much longer period of bat activity to be recorded and are therefore more likely to identify all species that typically pass over the location of the detector. However, since only bats within close proximity to the detector will be recorded, the results reflect bat activity within a small part of the site only, and bats using other parts of the site may be missed. Data from static detector surveys is also limited since there is no observational context to the recordings.

Bat activity is inherently variable from night to night and is linked to several factors including weather. As such, any given night of survey may not always be representative of average bat activity levels.

However, it is considered that the surveys carried out were sufficiently thorough to assess how the site is typically used by commuting and foraging bats.

3.0. RESULTS

The deployment and subsequent analysis were conducted by Dr. Stefan Bodnar MCIEEM. Dr. Bodnar holds a Natural England bat survey license (survey level 2), which he has held for a number of years (over 20) and with 40 years experience of bat surveys.

Deployment was on 12th June 2025. Last recording 8th September 2025

Summary of Passes:

Month	Greater horseshoe	Lesser horseshoe	Myotis sp.	Nyctalus	Common pipistrelle	Soprano pipistrelle	Brown long eared	Serotine	Total
June	322	98	233	12	125	175	19	4	988
July	251	106	195	25	459	106	28	7	1177
August	203	44	122	16	208	177	13	17	800
September	237	12	38	6	147	189	3	3	635

A total of 8no. species of bat were recorded across the static detector surveys. These were:

- soprano pipistrelle,
- common pipistrelle,
- *Myotis* spp.,
- brown long-eared bat,
- serotine bat,
- *Nyctalus* spp.,
- Greater horseshoe bat,
- Lesser horseshoe bat.

There are likely to be both Noctule and Leislars bat present and the *Myotis* spp. is likely to include at least 3-4 relatively common species (Whiskered, Brandts, Natterer's and possibly Daubentons). Bechstein's bat and Barbastelle bat were not recorded, though the former is difficult to detect on sonagrams and the latter can be mistaken for other species.

A total of 4no. species were commonly recorded (collectively making up over 88% of all bat passes for the detector):

- Greater horseshoe bats (28%)
- Common pipistrelles (26%)
- Soprano pipistrelles (18%)
- *Myotis* spp. (16%)

Lesser horseshoe bats were the fifth group by number of passes (7%). At low density were *Nyctalus* spp. (1.6%) and Brown long eared bats (1.8%). Serotines make up the rest of the passes recorded.

Due to the difficulty differentiating between the calls of *Myotis* spp. and *Nyctalus* spp. individuals, these bats were identified to genus level only.

4.0. CONCLUSIONS

The previous Preliminary Ecological Appraisal stated that the site has ‘high’ bat foraging and commuting potential. Following the deployment of this static detector, this is confirmed as an important commuting and foraging area particularly for Greater Horseshoe bats and to a lesser extent Lesser Horseshoe bats.

- The levels of bat activity recorded on the site varied considerably between each survey, however there was overall a moderate level of bat activity recorded. The highest levels of activity were recorded in June, July, August, which is fairly typical of the seasonal variation in bat activity (Dietz and Kiefer, 2014).
- Greater horseshoe bats, *Myotis* spp., soprano pipistrelles and common pipistrelles dominated the bat activity across all surveys and in all locations on the site, making up 88% of the recorded bat passes collectively. This confirms the significance of the woodland corridors for Greater Horseshoe bats in the area. The pipistrelle species are common and are habitat generalists, so this is not an unexpected result. There were significant recordings of Lesser horseshoe bats.
- Brown long-eared bat, serotines, Leisler’s bats, and noctules were regularly recorded during the surveys but at low densities only.

5.0. RECOMMENDATIONS

5.1. General Guidance

The development should demonstrate:

- Maintenance of dark corridors around foraging areas and commuting corridors, with no net increase in light levels as a result of the development in areas used by bats.
- Location of potential sources of disturbance away from bat roosts and bat habitats to avoid impacts.
- Maintenance of the extent and quality of all semi-natural habitats in foraging areas and commuting routes and design of the development around existing habitats
- A mitigation plan is recommended to set out how potential impacts will be avoided as part of the detailed application.

"Glazing" in the context of bats refers to the smooth, transparent, or reflective surfaces of glass, which can trick bats into flying into them, as they rely on echolocation. The built design should avoid large expanses of smooth glass in crucial flight paths for bats (such as where this development is located).

Potential impacts associated with the construction process can be adequately addressed in a Construction Environmental Management Plan.

5.2. Specific Measures

Artificial lighting can alter bat behaviour, with many species avoiding light and some species unable to cross lit areas even with low light levels. Lighting can also create a 'vacuum effect' whereby insect prey are drawn from surrounding habitats to artificial light sources, reducing the foraging opportunities for bats. Species including brown long-eared bats, and *Myotis* spp. are particularly known to avoid lights. These species have been recorded at the site across a range of locations.

Therefore, careful lighting design is required to prevent impacting on the abundance of foraging and commuting bats at the site.

As far as possible, the site edges should be kept dark to maintain their value for foraging and commuting bats. It is recommended that dark corridors, with dark buffer zones, are maintained along all woodland edges and tree lines at the site.

During the construction period, works outside of daylight hours which would require use of flood lighting should be avoided wherever possible.

Where lighting is required for the proposed development, the following general recommendations are provided:

- The level of any artificial lighting including flood lighting should be kept to a minimum;
- Unlit open spaces should be included in the lighting design;
- LED lights are a preferred option to low pressure sodium lights or high pressure sodium or mercury lamps. LED lights do not emit UV radiation, towards which some insects are attracted, drawing them away from bat foraging areas in the surrounding landscape;
- All lights should be directed at a low angle with minimal light spillage wherever possible;
- Artificial lighting should not directly illuminate any potential bat commuting areas such as woodland edges or tree lines. Similarly, any newly planted linear features or buffer areas around important habitat features should not be directly lit;
- If security lights are required, then they will be set on a Passive Infrared (PIR) sensor and timer so that the light is only emitted for the short time period required; and
- Accessories such as hoods and baffles should be considered to reduce light spill and direct light where needed, but only as a last resort.

5.3. Habitat Retention and Enhancement

As far as practicable the site should remain part of the wooded corridor, with trees, particularly on the edges retained within the design. For any trees lost, mitigation planting on a 1:1 basis should be undertaken using UK native species wherever possible.

It is understood that a range of habitat creation and enhancements have been proposed to ensure a net biodiversity gain on site. These will serve to mitigate for the loss of a small amount of vegetated habitat that may be used by bats and improve the quality of the retained habitat for foraging and commuting bats.

5.4. Specific Additional Client Mitigation Proposals

In addition to the above, the following measures have been proposed by the client:

House Glazing Design

- Low-reflective glass with anti-reflective coatings to reduce sky-glow and confusing reflections.
- Light-attenuating glass that reduces light escaping ,specifically for wildlife-sensitive developments.

External Lighting Innovations

- Bat-friendly spectrum LEDs with warm (amber/red) LEDs or filtered luminaires.
- Directional micro-lighting instead of floodlighting, installed at ground-level or alternatively bollard lights with ultra-narrow beams that only illuminate what is essential (e.g. paths).
- Motion sensing and time controls with soft fade-in/fade-out rather than sudden switching.

Habitat-Sensitive Design

- Bespoke bat roost features integrated into building design.