

Bat Emergence Survey Report



September 2026

12 Lancaster Gardens,
Earley,
Reading,
RG6 7PA



EchoWood

BAT EMERGENCE SURVEY

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This report sets out the findings of one bat (dusk) emergence survey undertaken on 25 August 2026.

The Preliminary Roost Assessment was undertaken on 28 July 2026 by Arbtech Consulting Ltd.

This report has been prepared exclusively for the use of the client in connection with the development project described herein. This report may not be disclosed, reproduced, or used for any purpose other than that for which it was originally prepared without the prior written consent of the author.

The content and findings of this report are valid for a maximum period of 12 months from the date of the final review. However, this validity period may be reduced if there are significant changes to the site conditions or proposed development plans.

The information presented in this report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. I confirm that the opinions expressed herein are my genuine and professional views, provided in good faith based on my expertise and the information available at the time of assessment.

STATUTORY AND NON-STATUTORY DISCLOSURE

If the author becomes aware of any actual or potential breach of legislation relating to wildlife or the environment by the client, the author shall be entitled to report such information to the relevant authority, including but not limited to governmental bodies and law enforcement agencies.

In the interest of nature conservation, the author reserves the right to share any bat records obtained through this project with the relevant Local Environmental Records Centre (LERC) and local Bat Group, where appropriate. This information may contribute to broader conservation efforts and the protection of bat species.

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EXECUTIVE SUMMARY

EchoWood Ecology was commissioned to undertake a dusk emergence survey of 12 Lancaster Gardens, Earley, Reading, RG6 7PA, in relation to proposals for a two-storey side/front extension and single-storey rear extension. The Site comprises a residential dwelling (B1), attached garage and associated gardens.

A Preliminary Roost Assessment, undertaken by Arbtech Consulting Ltd on 28 July 2026, identified several potential bat access/roosting features associated with B1, including lifted lead flashing around the chimney, lifted roof tiles and tears within the internal roofing felt. B1 was classified as having low suitability for roosting bats. One dusk emergence survey was therefore recommended to determine the presence or likely absence of a bat roost.

The dusk emergence survey was undertaken on 25 August 2026. No bats were recorded emerging from or returning to B1, and subsequent review of thermal footage provided no evidence of roosting. Moderate bat activity was recorded across the Site. Common pipistrelle activity predominated, with regular foraging and commuting around the front garden and south elevation of B1. Soprano pipistrelles were recorded intermittently foraging within and commuting through the Site.

The survey therefore provides no evidence of a current bat roost within B1, and roosting bats are considered likely to be absent. **The proposed works are consequently considered unlikely to result in the modification or destruction of a bat roost or injury or mortality of bats. No further bat surveys are considered necessary and a European Protected Species Mitigation Licence from Natural England is not required for the proposed works.** B1 is also considered to have low suitability for hibernating bats.

As the gardens were regularly used by foraging and commuting bats, appropriate lighting precautions should be incorporated into the development. External night-time lighting should be avoided where possible, with any necessary lighting designed to minimise illumination and light spill onto surrounding gardens and other green habitat.

As a precaution, should a bat or evidence of bats be discovered during the works, works within the affected area must cease immediately and a licenced bat ecologist must be consulted.

No evidence of nesting birds was identified during the survey. However, if works affecting suitable nesting habitat are undertaken during the main nesting bird season (March–August inclusive), checks for active nests should be undertaken prior to works. Any active nest identified must be protected from disturbance and retained until the young have fledged.

Overall, subject to implementation of the precautionary lighting, bat discovery and nesting bird measures, no ecological constraints to the proposed development have been identified.

1 INTRODUCTION

12 Lancaster Gardens, Earley, Reading, RG6 7PA (hereafter ‘the Site’) is centred on Ordnance Survey Grid Reference SU 74646 71523. The site comprises a residential dwelling of traditional brick construction (B1), supporting a pitched roof finished with clay tiles. The roof incorporates projecting eaves finished with uPVC fascia and barge boards. An attached garage is present, comprising brick elevations beneath a flat bituminous felt roof. The remainder of the Site comprises a predominantly vegetated residential garden, with managed lawns to the front and rear of the property and a mature boundary hedgerow along the eastern boundary.

A Preliminary Roost Assessment (PRA) was undertaken on 28 July 2026 (Arbtech Consulting Ltd, 2026). The assessment comprised an internal and external inspection of the building for bats, evidence of bat use and Potential Roost Features (PRFs).

The preceding PRA identified several features considered capable of supporting roosting bats. Externally, these principally comprised lifted lead flashing around the base of the chimney on the northern roof elevation, together with two lifted clay roof tiles, one on the northern elevation and one on the southern elevation. These features were considered to provide potential access beneath the roof covering and/or into the internal roof structure, with opportunities for small numbers of crevice-roosting bats.

The internal roof void comprises timber rafters lined with bituminous roofing felt. The PRA also recorded several tears within the felt lining, providing potential connectivity between the external roof covering and the internal roof void and therefore increasing the potential for bats to access and utilise the roof structure. No evidence was identified that confirmed the presence of a bat roost; however, the presence or likely absence of roosting bats could not be determined through visual inspection alone.

Taking account of the building features and surrounding landscape, **the previous assessment classified the building as having low suitability for roosting bats**. In accordance with current best-practice survey guidance, one dusk emergence survey was recommended.

EchoWood Ecology was subsequently commissioned to undertake the recommended emergence survey and assess the findings in relation to the proposed works. This report details the findings of the bat emergence survey.

1.1 Site and Project Context

The Site is situated within an urban residential area dominated by housing and associated gardens. Despite the developed character of the immediate surroundings, the wider landscape retains a network of semi-natural habitats, including woodland, lakes, mature trees, hedgerows and vegetated gardens. Seven Priority Habitat types occur within 2 km, including traditional orchard, deciduous woodland, wood-pasture and parkland, ancient woodland, lowland heathland and coastal and floodplain grazing marsh. The closest Priority Habitat is traditional orchard, approximately 295 m west of the Site. Maiden Erlegh Park Local Nature Reserve (LNR) and Highwood LNR are also located approximately 390 m southeast and 930 m northeast, respectively. The Thames Basin Heaths Special Protection Area (SPA) is situated approximately 8.3 km to the south.

Collectively, the surrounding woodland, mature vegetation, gardens and other semi-natural habitats provide suitable foraging resources for bats, particularly through their capacity to support abundant and diverse invertebrate prey. The network of gardens, hedgerows and scattered trees also provides stepping-stone and linear habitat through the otherwise urban landscape, allowing bats to commute between potential roosting and foraging areas. The Site is therefore considered to occur within a locally suitable and functionally connected landscape for bats, despite the extent of surrounding residential development.

This report should be considered in conjunction with the PRA report which contains further details from the desk study such as local bat roost records and details from the July 2026 site survey (Arbtech Consulting Ltd, 2026).

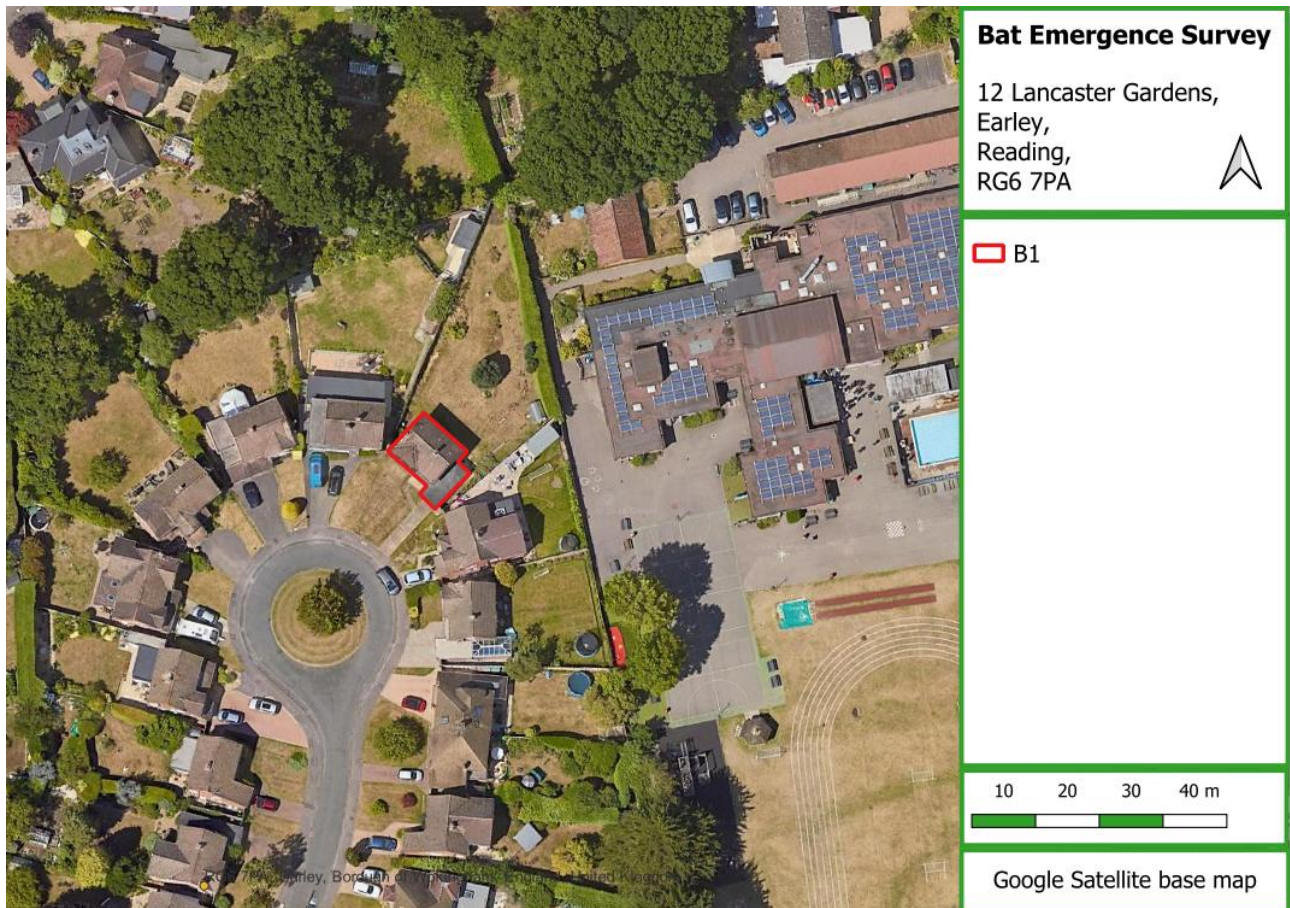
1.2 Scope of Assessment

The key objectives of the emergence survey are to:

- Confirm the presence or likely absence of bats within B1;
- Identify any bat species present, along with the number of individuals and the nature of any roosts;
- Assess patterns of bat activity around the structures, including any entry or exit points used by bats;
- Inform the need for further survey effort or mitigation;

- Ensure compliance with relevant wildlife legislation and planning policy, to support an informed planning decision regarding the proposed development.

Figure 1: 12 Lancaster Gardens



2 METHODOLOGY

2.1 Dusk Emergence Survey

One dusk emergence survey was undertaken on 25 August 2026. The survey involved two surveyors and four night vision cameras, positioned to observe the entirety of B1.

Each surveyor was equipped with an Echo Meter Touch (EMT) 2 Pro bat detector to record bat echolocation calls, and thermal cameras to record the building elevations after dark. The footage was reviewed within the following days by the same surveyors. Each surveyor also used a survey record sheet to record all real-time bat activity observed during the survey.

The dusk emergence survey started 20 minutes before sunset and continued for 1.5 hours after sunset. The survey was carried out during optimal weather conditions, with dusk air temperatures exceeding 10°C and avoiding heavy rain or strong wind, as adverse weather conditions can impact upon bat emergence and foraging behaviour.

The work, analysis and reporting were undertaken in line with CIEEM's Code of Professional Conduct, the Bat Conservation Trust's Good Practice Guidelines and other relevant guidelines and legislation as listed in the Appendices of this report.

Surveyor Details

Surveyor 1: Nathaniel Dove – 5 years bat surveying experience and CL18 bat licenced

Camera 1: Guide TK162 thermal camera

Camera 2: Pixfra Arc A613 thermal camera

Surveyor 2: Kristina Wood – 5 years bat surveying experience and CL18 bat licenced

Camera 3: Guide TK162 thermal camera

Camera 4: Pixfra Arc A613 thermal camera

Thermal images from the survey can be found in the Appendices of this report.

Figure 2: Surveyor and camera positions during the survey



2.2 Limitations

DEFRA's MAGIC mapping system has recently been updated, and as a result, European Protected Species licences are not always displayed accurately or in full. It is possible that data contained within the PRA report is incomplete.

The surveys were conducted in accordance with current best practice guidelines (Collins, 2023). However, the data collected represents a snapshot in time, based on conditions observed during specific survey dates. As such, it provides an indication of site use by bats at the time of assessment only.

All survey techniques for bats are subject to bias and bat detector surveys may under-record species with weak echolocation calls, such as brown long-eared bats.

Thermal cameras were used during the survey to aid in the detection of bat activity under low-light conditions. While these technologies can enhance the visibility of heat signatures and movement in darkness, they are not conclusive tools. Environmental factors such as ambient temperature, background heat sources (e.g., warm walls or rooftops), and vegetation cover can interfere with image clarity and detection accuracy. As a result, observations made using thermal imaging were supported by visual confirmation and acoustic recordings wherever possible. The use of these tools should be considered supplementary rather than definitive.

Bats are highly mobile and can change roosting sites frequently in response to environmental conditions, availability of resources, and life cycle requirements. Therefore, even where no evidence of roosting is recorded during a survey, it is not possible to definitively rule out the use of those features by bats at other times of the year. Consequently, the findings of the survey should be considered within the context of these temporal limitations.

The results of this report are valid up to 12 months and/or if the conditions of the site change significantly, as per the Advice Note on the lifespan of ecological reports and surveys produced by CIEEM in 2019.

3 RESULTS

	Survey Start	Survey Finish
Time	19:45	21:35
Sunset: 20:05		
Temperature	23 °C	21 °C
Wind (Beaufort) ¹	2	2
Cloud cover	35%	75 %
Humidity	32 %	54 %
Precipitation	0	0

Survey Summary: Moderate levels of bat activity were recorded across the Site. Common pipistrelle activity predominated, with regular foraging and commuting activity recorded around the front garden and across the south elevation of B1. Between 20:35 and 20:54, common pipistrelle activity was almost continuous within the front garden, with a peak count of two bats recorded simultaneously. Social calls were also recorded during this period.

Soprano pipistrelle activity was recorded intermittently throughout the survey, principally comprising foraging within the front and rear gardens.

Overall, the Site was used regularly by low numbers of common and soprano pipistrelle bats for foraging and commuting, with no evidence of roosting within B1 recorded during the survey. The survey findings were subsequently verified through a full review of footage from all four thermal imaging cameras.

Time	Surveyor 1	Surveyor 2
20:28	Common pipistrelle commuted southwest over the garage	
20:30	Soprano pipistrelle foraged over the front garden	
20:30 – 20:33		Soprano pipistrelle foraged around the rear garden
20:31	Common pipistrelle was HNS	
20:33	Common pipistrelle flew from north to southeast on east side of B1	
20:35 – 20:54	Common pipistrelle foraged around the front garden almost constantly within this period. At 20:46, a peak count of 2x common pipistrelle bats were foraging here, making regular passes across the south elevation of B1. Some social calls were recorded.	Common pipistrelle was HNS several times between 20:35 and 20:37
20:37 – 20:43		Soprano pipistrelle foraged around the rear garden
20:45		Common pipistrelle was HNS
20:50	Soprano pipistrelle flew between houses from north to south	Soprano pipistrelle flew between houses from north to south
20:53 – 20:59		Soprano pipistrelle was HNS passing on several occasions
21:01	Common pipistrelle was HNS passing	
21:02	Common pipistrelle foraged around the front garden	
21:07	Soprano pipistrelle was HNS foraging	Soprano pipistrelle was HNS foraging
21:09 – 21:27	Common pipistrelle was HNS foraging regularly in this period	Common pipistrelle was HNS foraging regularly in this period

4 EVALUATION

The quality and connectivity of the surrounding landscape, together with the presence of multiple potential roosting features identified on B1, resulted in the building being classified as having low suitability for roosting bats at the PRA stage (Arbtech, 2026).

However, no bats were recorded emerging from or returning to B1 during the subsequent emergence survey. **The results provide no evidence of current roosting within B1 and indicate that roosting bats are likely to be absent. No further bat surveys are therefore considered necessary in relation to the proposed works, and a European Protected Species Mitigation Licence from Natural England is not necessary.**

It should nevertheless be recognised that bats are highly mobile and may move between roosting locations over relatively short periods. The absence of bats during the surveys therefore represents the conditions recorded during the survey period and does not preclude future occupation of suitable features.

No features typically associated with hibernation roosts, such as cellars, underground structures, deep cavities or extensive masonry crevices, were identified within B1. The limited crevice features present are unlikely to provide the stable and sheltered microclimatic conditions generally associated with hibernation roosts. B1 is therefore considered to have low suitability for hibernating bats.

4.1 Impact Assessment

Site proposals include a two-storey side/front extension and single storey rear extension.

The proposed works are considered unlikely to result in the modification or destruction of a bat roost or to cause injury or mortality to bats.

4.2 Recommendations

Most bat activity recorded during the surveys comprised bats foraging within the gardens to the north and south of B1. As such, the primary potential impact associated with the proposed works relates to the disturbance of foraging and commuting bats, particularly through changes in artificial lighting. Appropriate precautionary measures should therefore be implemented to minimise disturbance and maintain the suitability of these areas for bats.

4.2.1 [Lighting](#)

Light spillage during the construction and operational phase could negatively impact commuting and foraging bats. As such, the following recommendations should be integrated into any new lighting scheme during the construction and operational phase.

External night-time lighting should be avoided (sunset to sunrise). However, if artificial lighting is required, it should follow the following specifications

- Lighting should be directional, facing away from the surrounding green habitats and set using a steep ground-ward angle and on short columns (no higher than 3m);
- Use a lamp no greater than 2000 lumens (150 watts), using light sources that peak higher than 550 nanometres, which avoids the UV, white and blue wavelengths;
- Warm white spectrum LED (<2500 Kelvin) should be used over a cool white spectrum;
- Cowls, hoods, baffles or louvres should be used to avoid light spillage off-site;
- Use of reflective surfaces under the light should be avoided.

Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer. A one- or two-minute timer is likely to be appropriate.

4.2.2 [Protocol of Bat Discovery](#)

Should any bats or signs of bat activity be discovered during works, all activity must cease immediately, and a licenced bat ecologist should be consulted for further guidance.

Signs of bats or bat roosts may include:

- Live or dead bats
- Bat droppings (typically dark, crumbly, and similar in appearance to mouse droppings, but containing insect fragments)
- Grease or staining around potential access points (e.g., roof tiles, soffits, cracks)
- Feeding remains such as insect wings
- Audible squeaking or chittering noises, especially at dusk or dawn

If any of the above signs are found, or if a bat is discovered during works:

- All works in the immediate area must cease immediately
- The area should be left undisturbed and protected to prevent further access or damage
- A licenced bat ecologist must be contacted as soon as possible to assess the situation and provide further advice.

Works must not resume until the ecologist has completed an assessment and, if necessary, a licence has been obtained from Natural England.

If a bat is discovered during works and appears to be injured, grounded, or otherwise in distress, the following steps must be taken:

- Stop all work in the immediate area to prevent further harm or disturbance
- Do not attempt to handle the bat directly with bare hands. Use gloves or a soft cloth if it is necessary to move the bat for its safety (e.g., to prevent it from being crushed or further harmed)
- Place the bat in a secure ventilated container, such as a box with air holes, lined with a soft cloth or tissue. Keep it in a quiet, dark, and warm location away from noise and activity.
- Contact a licenced bat worker immediately for advice and assistance.

All personnel on site should be made aware of this protocol prior to works commencing to ensure legal compliance and the protection of bats, which are legally protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017.

4.3 Nesting Birds

No evidence of bird nesting was identified on, within or near B1. However, birds could potentially begin nesting anywhere on site at any time during bird nesting season. The proposed works could therefore cause disturbance, injury, or death to nesting birds.

If work is to be conducted during bird nesting season (March to August, inclusive), the homeowners and site contractors must be aware of their obligations towards nesting birds and must check for them prior to commencing the works. If an active bird nest is discovered, an exclusion zone must be put in place (minimum 5 m), and works must be halted in that area.

Breeding birds and their nests are protected by law, and all active nests must be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works.

5 APPENDICES

5.1 Images from the darkest point of the survey: 25 August 2026

5.1.1 Surveyor 1, Camera 1



5.1.2 Surveyor 1, Camera 2



5.1.3 [Surveyor 2, Camera 3](#)



5.1.4 [Surveyor 2, Camera 4](#)



5.2 Legislation and Policy

5.2.1 Wildlife Legislation

Wildlife in the United Kingdom (UK) is protected through European and national legislation, supported by national and local policy and guidance. Development can contribute to conservation and enhancement goals outlined by these various legislation and policies by retaining and protecting the most valuable ecological features within a site and incorporating enhancements to provide biodiversity net gain.

It is the responsibility of those involved with development works to ensure that the relevant legislation is complied with at every stage of a project. Such legislation applies even in the absence of related planning conditions or projects outside the scope of the usual planning process.

Bats

In England and Wales, all bat species and their roosts are legally protected under the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2019) (as amended).

You will be committing a criminal offence if you:

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

Barbastelle, Bechstein's, greater horseshoe, lesser horseshoe, brown long-eared, soprano pipistrelle, and noctule bats are all priority species under the UK Biodiversity Action Plan (UK

BAP) and have also been adopted as species of principal importance in England under Section 41 of the NERC Act 2006.

5.2.2 [National Planning Policy](#)

The National Planning Policy Framework (2024) aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider regarding planning applications.

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- 174 a) Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- 174 b) Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- 174 d) Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- 175) Plans should: distinguish between the hierarchy of international, national and local designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries; Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and

Broads. The scale and extent of development within all these designated areas should be limited, while development within their settings should be sensitively located and designed to avoid or minimise adverse impacts on the designated area.

176) Specific policies regarding habitats and biodiversity comprise:

- 179) To protect and enhance biodiversity and geodiversity, plans should:
 - Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and
 - Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

180) When determining planning applications, local planning authorities should apply the following principles:

- If significant harm to biodiversity resulting from a development cannot be avoid (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;
- Development on land within or outside of Sites 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 feature of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- 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
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around development

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.

Biodiversity 2020: A strategy for England's wildlife and ecosystem services provides the UK Biodiversity Action Plan and country level biodiversity strategies for England, based on the list of habitats and species listed on Section 41 of the Natural Environment and Rural Communities Act 2006. These are considered the habitats and species of principal importance requiring conservation action.

5.3 Industry Guidance and Standards

This report has been written with consideration to:

- Bat Conservation Trust, 2025. The National Bat Monitoring Programme Annual Report 2024. Bat Conservation Trust, London. Available at www.bats.org.uk/our-work/national-batmonitoring-programme/reports/nbmp-annual-report.
- Bat Conservation Trust (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines. 4th edition.
- Bat Conservation Trust (2019). National Bat Monitoring Program Annual Report 2019.
- Mitchell-Jones, A. J., & McLeish, A. P. (Eds.). (2004). 3rd edition Bat Workers' Manual. Joint Nature Conservation Committee (JNCC), Peterborough. ISBN 1-86107-558-8
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Garland, L. & Markham, S. (2008) Is Important Bat Foraging and Commuting Habitat Legally Protected? <http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf>
- Harris, S. & Yalden, D. (2008). Mammals of the British Isles: Handbook, 4th Edition. The Mammal Society, Southampton.
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting
- Mathews F, and Harrower C. (2020). IUCN – compliant Red List for Britain’s Terrestrial Mammals. Assessment by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough ISBN 978-1-78354-485-1.
- Reason, P.F., & Wray, S. (2025). UK Bat Mitigation Guidelines: A guide to impact assessment, mitigation and compensation for developments affecting bats (Version 1.2). Chartered Institute of Ecology and Environmental Management.
- Wray, S., Wells, D., Long, E., & Mitchell-Jones, T. (2010). Valuing bats in ecological impact assessment. In In Practice (No. 70). Institute of Ecology and Environmental Management (IEEM).

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.