ACP

Balancing Growth with Green

# Bat Emergence Survey Report

Fergus Harradence
88 Eastern Avenue, Reading RG1 5SF

June 2026

# Project Information

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# 1. Introduction

## 1.1. Background

The client, Fergus Harradence, has instructed ACP Consultants Ltd to conduct a Bat Emergence Survey (BES). The survey was commissioned to accompany the planning application to the Reading Borough Council for a "rear one-storey extension" (hereafter referred to as 'the proposed development') at 88 Eastern Avenue, RG1 5SF (hereafter referred to as 'the site'). The site is currently classed as residential and will remain as such. The proposed development plan is provided in **Appendix 1**.

This report should be read in conjunction with the Preliminary Ecological Appraisal (ACP, 2026). To summarise the findings of the report, one building (B1) was surveyed, which was assigned a low value for roosting bats. As such, one bat emergence survey was recommended with two surveyors.

## 1.2. Scope of Report

A Bat Emergence Survey (BES) report records the bat activity observed and recorded during a BES. The aim of the survey(s) is to determine the presence or likely-absence of bats. In the event bats are identified as roosting at the site, the aim is then to characterise any roosts present, identify the number and location of roost access points, identify bat species, determine the number of individuals, and to understand how bats are using the site. The report details possible ecological constraints resulting from the proposed development as a result of bats being present, and recommendations for further survey or mitigation required, such as a European Protected Species Licence, to obtain planning permission or other statutory consent, and to comply with wildlife legislation.

The following actions were undertaken to achieve these aims:

- Built structures and/or trees were surveyed to determine the presence or likely-absence of bat roosts.
- Identified potential impacts of the proposed development on roosts.
- Recommendations were made for mitigation, and advice given on the requirements for attaining a European Protected Species Licence (EPSL) where appropriate.
- Enhancement opportunities for the site for bats have been advised.

This assessment has been conducted in accordance with good practice guidelines, the National Planning Policy Framework (2025) and relevant local supplementary guidance.

Relevant planning policy and legislation can be found in **Appendix 4**.

## 1.3. Proportionality

BS 42020:2013 – 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.

This approach is enshrined in Government planning guidance, for example, paragraph 193 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.

## 1.4. Validity Statement

The survey results and recommendations contained within this report are valid for 18 months for the purposes of planning, unless works have taken place since the production of this report (CIEEM, 2019). With regards to bats, this report is only considered up to date for a licence application until the start of the next bat activity season. Some level of update surveys will be required outside of this, and will depend on the site itself.

## 2. Methodology

To achieve the objectives set out in the scope of the report, a desk study was completed as part of the PEA or PRA, followed by a site survey as recommended.

The number of evening emergence surveys for each survey was determined using Table 7.1 from the 4th edition of Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023). Further survey and mitigation recommendations were based on the above considerations, as well as Tables 7.1 and 7.2 of the bat survey guidance.

Dusk emergence surveys begin 15 minutes before sunset and continue for 1.5 to 2 hours after sunset, depending on bat activity, the nature of the suspected roost, and surveyor visibility. Surveys are conducted under optimal weather conditions, with temperatures above 10°C, with no rain or strong winds (exceeding 5 m/s), as adverse conditions can affect bat emergence and foraging behaviour. Where possible, periods of high moon illuminance (over 80%) were avoided, as this can reduce bat activity. When multiple surveys are required, they are spaced at least three weeks apart, and one survey may have been undertaken in sub-optimal weather conditions, where bat activity was still recorded.

During each survey, surveyors are positioned around each relevant building or tree to ensure all elevations, roof sections, and sides with potential roosting features are clearly observable by surveyors and/or infrared cameras. Particular focus is given to areas identified as providing suitable access points for bat roosts. Each surveyor is paired with a night vision aid camera and is assigned a specific section of the building or tree to monitor for the duration of the survey.

Surveyors use full-spectrum recording bat detectors. Bat echolocation calls recorded during surveys are analysed after the survey using acoustic analysis software when necessary. While the Echo Meter Touch 2 includes an auto-ID function for bat species, this is not entirely reliable, and further post-survey sound analysis is often required to confirm species that could not be identified during the survey.

Surveyors also use red-light head torches, survey record sheets, and pens to document all observed activity. Each surveyor is equipped with a handheld radio to facilitate communication and help clarify ambiguous bat activity, such as distinguishing between bat emergence and bats passing over the building or tree.

# 3. Results

## 3.1. Site context

The site is located at National Grid Reference SU 73400 72568 and has an approximate area of 0.03ha.

## 3.2. Field Survey

The suite of surveys was designed and project managed by Ayan Chakravarty (Natural England Level 2 Bat Licence).

### 3.2.1. Dusk Survey – visit 1

Date: 28/05/2026

Start-End time: 20:50 – 22:40

Sunset time: 21:06

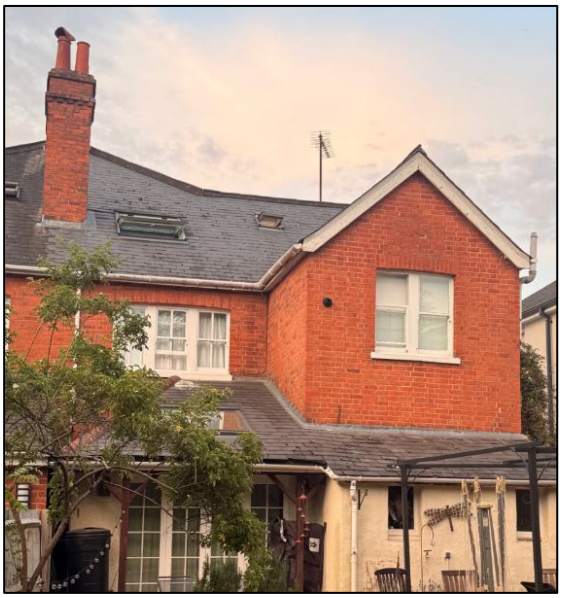
| Factor | Start | End |
|---|---|---|
| Temperature (° Celsius) | 23 | 21 |
| Relative Humidity (%) | 50 | 80 |
| Wind (m/s) | 3 | 3 |
| Cloud Cover (%) | 50 | 60 |
| Precipitation | None | None |

**Building B1**

| Position | Name | Years of Experience | Observing |
|---|---|---|---|
| 1 - Lead | Anna Smith | 6 years | Southern elevation |
| 2 | Connor Ling | 2 years | Northern elevation |

**Surveyor Observations**

| | | |
|---|---|---|
| **Surveyor 1**<br><br>*1x EMT2* | Bat activity, consisting primarily of isolated Common Pipistrelle (CP) passes with a single Soprano Pipistrelle (SP) record. A<br><br>•A Common Pipistrelle was first recorded at 21:28, followed by a Soprano Pipistrelle at 21:54.<br><br>•Further Common Pipistrelle activity was recorded intermittently throughout the survey period at 21:57, 22:07, 22:11, 22:13 and 22:26.<br><br>•All records consisted of individual passes, with no significant concentrations of activity, repeated commuting routes or notable foraging behaviour observed.<br><br>•This reduction in activity is likely attributable to local environmental constraints, including the presence of a busy main road and associated street lighting in close proximity to the survey position. These features are likely to reduce | |

| | | |
|---|---|---|
| | the suitability of the immediate area for bat commuting and foraging when compared with the more sheltered habitats observed elsewhere on site.<br><br>**No emergence or re-entry events were observed during the survey.** | |
| **IR position 1**<br><br>*1x Nightfox Whisker* | The footage reflected the view and observations of surveyor 1. **No additional activity was recorded.** | |
| **Surveyor 2**<br><br>*1x EMT2* | Surveyor 2 recorded relatively high level of bat activity throughout the survey period. Activity was dominated by Common Pipistrelle (CP) bats, with both commuting and foraging behaviour observed across the site. A single Soprano Pipistrelle (SP) was also recorded early in the survey.<br><br>•Activity commenced at 21:45 with a Soprano Pipistrelle and a Common Pipistrelle recorded commuting from south-west to north-east.<br><br>•Between 21:47 and 21:53, several Common Pipistrelles were observed passing north-east to south-west and vice versa suggesting a commuting pathway. One individual was noted foraging underneath and around mature trees and garden features.<br><br>•At 21:58 and 21:59, further Common Pipistrelle passes were recorded, including three individuals commuting from north-east to south-west and another group of three travelling in the opposite direction.<br><br>•Activity continued between 22:01 and 22:08, with repeated Common Pipistrelle passes and commuting movements. A notable concentration of activity was recorded around the garden, where approximately three individuals were observed foraging around the back garden.<br><br>•Foraging activity remained consistent until 22:15 when a Common pipistrelle was “heard not seen”.<br><br>**No emergence or re-entry events were observed during the survey.** |  |

| | | |
|---|---|---|
| **IR position 2**<br><br>*1x Nightfox Nova* | The footage reflected the view and observations of surveyor 1. **No additional activity was recorded.** | |

**Limitations**

Glare from neighbouring window on the eastern side.

# 4. Conclusion, Impact Assessment, and Recommendations

This section includes further work to commission (if any) to obtain planning permission or comply with legislation for other consent. Impacts as a result of the proposed development are assessed, and recommendations for mitigation and further survey work are given below.

## 4.1. Conclusion

In comparison to Position 2, where multiple commuting and foraging Common Pipistrelles were recorded around garden habitats and mature trees, bat activity at Position 1 was considerably reduced. The repeated commuting movements and observations from Position 2 of bats feeding around mature vegetation indicate that the site and surrounding gardens provide both commuting corridors and valuable foraging habitat for Common Pipistrelles.

A likely-absence of roosting bats is concluded from the building B1.

## 4.2. Impact Assessment

No impacts are expected on roosting bats. In the unlikely event that a bat or evidence of bats is discovered during the development, all work must stop and a bat licensed ecologist contacted for further advice.

The proposed development will increase the amount of lighting on site, which could spill onto bat foraging and commuting habitats within the rear garden of the building and deter bats from using these areas.

## 4.3. Recommendations

A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures:

- Light spill on to *retained habitats of bat value including retained trees* should be avoided.
- Use high-pressure sodium or LED luminaires, ideally warm white (2700Kelvin or lower) as this has a low relative attractiveness of invertebrates.
- Use UV filters to reduce the attractiveness of the lamp to invertebrates, so as not to attract invertebrates away from bat foraging habitat.
- The use of directional lighting by using luminaires with rear shields and an upwards lighting ratio of zero. The spread of light will be kept in line with or below the horizontal.
- Careful selection and spacing out of luminaires to avoid over-lighting.
- Wall lights and security lights will be ‘dimmable’ and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.

## 4.4. Incidental Finds

A stag beetle (*Lucanus cervus*) was observed at the time of the survey, within the rear garden. Stag beetles are uk protected species Listed under Schedule 5 of the Wildlife & Countryside Act 1981.

**Recommendations:**

As the site is suitable for stag beetles, a protected species, it is recommended that a precautionary working method is applied:

- Any dead wood and log piles will be dismantled by hand, and new wood for the proposal will be stored on pallets or removed from the site to prevent beetles from utilising these areas.
- Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. Avoiding the use of pesticides.
- Where possible, the log piles on site should be retained, particularly those remaining in shady and undisturbed places.
- An additional 'loggery' or log pile should be created in a shady and undisturbed place that can be used for the translocation of any species found on site. More information can be found on the People's Trust for Endangered Species website (https://ptes.org/my-garden/how-to-build-a-log-pyramid-for-stag-beetles/#:~:text=Make%20a%20log%20pyramid&text=The%20logs%20should%20be%20at,retain%20moisture%20and%20provide%20shade. )
- If stag beetle, including larva, are found while excavating soil surrounding tree stumps or removing dead wood, this should be translocated to a new secure log pile with soil covering and surrounding it.

## 4.5. Enhancements

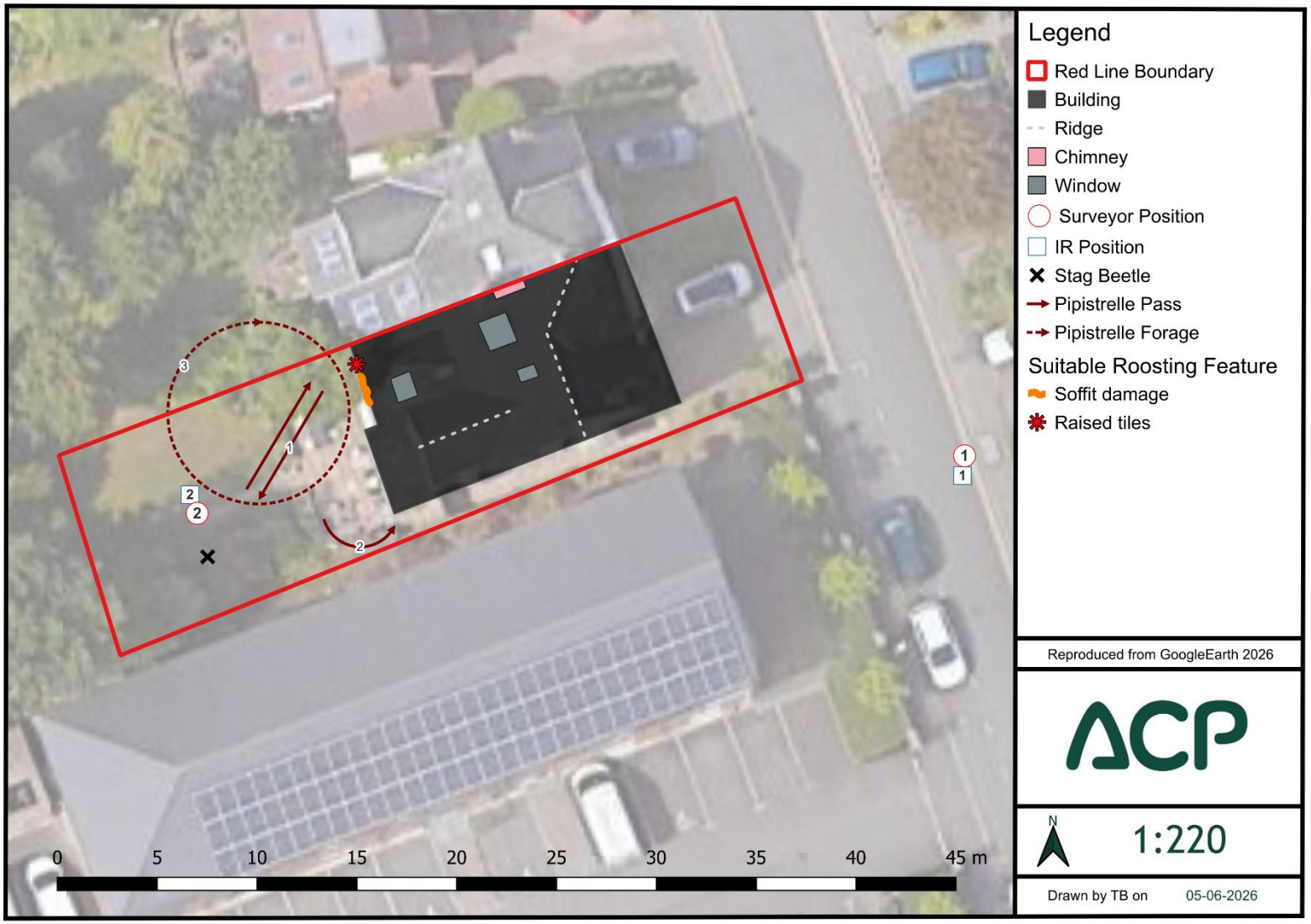
The following are opportunities for enhancement which could be incorporated into the proposed plans to improve the site's biodiversity post-development.

The installation of two bat boxes at the site will provide additional roosting habitat for bats. The bat boxes will be incorporated into the fabric of the new extension. They will be suitable for pipistrelles (which have been identified locally through EPSL data). Suitable bat boxes include Habibat Bat Box, Ibstock Enclosed Bat Box or similar alternative brand. Boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light.

Creating log piles of deciduous wood, particularly from oak or fruit trees would provide additional habitats to stag beetles on site.

# Appendix 1: Proposed plans

# Appendix 2: PRA and BES Map



# Appendix 4: Planning Policy & Legislation

This section summarises the relevant national and local legislative and policy background, statutory and non-statutory guidelines relevant to the potential commercial development.

**National Policy**

**National Planning Policy Framework (2025)**

Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

The principal national planning policy guidance with respect to the potential development is the National Planning Policy Framework (NPPF). The most recent update of the NPPF was published in December 2024 by the Ministry of Housing, Communities and Local Government. This guidance sets out the Government's planning policies for England and how they are expected to be applied. Three dimensions to sustainable development have been identified in the NPPF: economic, social, and environmental.

The NPPF Section 187 states that:

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

*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);*

*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;*

*c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*

*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 and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;*

*e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*

*f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."*

Section 188 states that:

*"Plans should: distinguish between the hierarchy of international, national and locally 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."*

Section 189 states that:

*"Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and National Landscapes, 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 the Broads[63]. The scale and extent of development within*

*these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas."*

Section 190 states that:

*"When considering applications for development within National Parks, the Broads and National Landscapes, permission should be refused for major development[64] other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:*

*a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;*

*b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and*

*c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated."*

Section 192 states that:

*"To protect and enhance biodiversity and geodiversity, plans should:*

*a) 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 steppingstones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*

*b) 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."*

Section 193 states that:

*"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."*

Section 194 states that:

*"The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or*

*projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site."*

**Environment Act 2021**

Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents

Effective 2024, the statutory mandate for Biodiversity Net Gain (BNG), as established by Schedule 14 of the Environment Act 2021, requires all developments subject to Schedule 7A of the Town and Country Planning Act 1990 to provide a minimum +10% gain in biodiversity value. This requirement is a mandatory condition of planning permission, applicable to all new developments except those expressly excluded under the Biodiversity Gain Requirements (Exemptions) Regulations 2024.

Pursuant to the statutory framework established by Schedule 14 of the Environment Act 2021, every grant of planning permission is subject to a biodiversity gain condition under Schedule 7A of the Town and Country Planning Act 1990. This condition mandates that the biodiversity gain objective be satisfied via a minimum +10% net increase in biodiversity value relative to the pre-development baseline. This requirement serves as a condition precedent; accordingly, a Biodiversity Gain Plan must be submitted to and discharged by the Local Planning Authority (LPA) in writing prior to the commencement of development. Any material operations initiated in the absence of such approval shall constitute a breach of planning control under Section 171A of the Town and Country Planning Act 1990.

Statutory provision requires that significant on-site biodiversity enhancements be maintained for a duration of no less than 30 years following the development's conclusion. This requirement is satisfied through the imposition of a planning condition, a planning obligation, or a conservation covenant. Under the Town and Country Planning Act 1990, LPAs are empowered to utilise section 106 (s106) agreements to facilitate the delivery of on-site enhancements, the transfer of registered off-site biodiversity gains, or the use of statutory credits, while ensuring compliance through rigorous monitoring and reporting frameworks.

**Species and Habitats Legislation**

**The Conservation of Habitats and Species Regulations 2017 (as amended)**

Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidates all various amendments made to The Conservation (Natural Habitats & c.) Regulations 1994, in respect of England and Wales. The 1994 Regulations transposed the EC Habitats Directive 1992 (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) into national law.

Annexes I and II of the Habitats Directive list (respectively) habitats and species for which member states are required to establish and monitor SACs. The EC Birds Directive provides a similar network of sites (SPAs) for all rare or vulnerable species listed in Annex I and all regularly occurring migratory species, with particular focus on wetlands of international importance.

Together with SACs, SPAs form a network of pan-European protected areas known as 'NATURA 2000' sites.

The Habitats Regulations also make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade on the animals listed in Schedule 2, or pick, cut, uproot, destroy or trade in the plants listed in Schedule 4.

This legislation was amended in January 2021: The main changes to the 2017 Regulations are:

- "the creation of a national site network within the UK territory comprising the protected sites already designated under the Nature Directives, and any further sites designated under these Regulations
- the establishment of management objectives for the national site network (the 'network objectives')
- a duty for appropriate authorities to manage and where necessary adapt the national site network as a whole to achieve the network objectives
- an amended process for the designation of Special Areas of Conservation (SACs)
- arrangements for reporting on the implementation of the Regulations, given that the UK no longer provides reports to the European Commission
- arrangements replacing the European Commission's functions with regard to the imperative reasons of overriding public interest (IROPI) test where a plan or project affects a priority habitat or species
- arrangements for amending the schedules to the Regulations and the annexes to the Nature *Directives that apply to the UK."*

**The Wildlife and Countryside Act 1981 (as amended) (WCA 1981)**

Available at: https://www.legislation.gov.uk/ukpga/1981/69?view=extent

The WCA is the primary UK mechanism for statutory site designation (Sites of Special Scientific Interest [SSSIs]) and the protection of individual species listed under Schedule 1,2,5 and 8 of the Act, each subject to varying levels of protection.

Bats are fully protected under Schedule 5 and as such in England and Wales it is an offence under the Wildlife & Countryside Act 1981 (as amended) to:

- Deliberately capture, injure or kill a bat
- Damage or destroy a bat roost
- Deliberately or recklessly disturb a bat
- Deliberately or intentionally obstruct access to a roost
- Possess, transport or sell a bat or parts of bats (dead or alive)

The consequences are outlined as 6 months in prison and/or an unlimited fine.

**The Countryside and Rights of Way Act 2000 (CROW 2000)**

Available at: https://www.legislation.gov.uk/ukpga/2000/37/contents

This legislation strengthens the provision of the 1981 WCA (as amended), both in respect of statutory sites such as SSSIs and protected species. It also places a statutory obligation on Local Authorities and other public bodies to further conservation of biodiversity in the exercise of their functions, thus providing a statutory basis to the Biodiversity Action Plan (BAP) process, which began in 1994. Section 74 of the Act lists the habitat types and species of principal importance in England. The UK Biodiversity action Plan has now been superseded by the 'UK Post-2010 Biodiversity Framework' (July 2012), however, many of the species and habitats in the UK and local BAPs have not been updated and are still considered relevant to date.

A Bill to amend the Countryside and Rights of Way Act 2000 to extend the right of public access to the countryside, including to woodlands, the Green Belt, waters and more grasslands; and for connected purposes is currently in second reading in the House of Commons (November 2022).

**Natural Environmental and Rural Communities Act 2006 (NERC 2006)**

Available at: https://www.legislation.gov.uk/ukpga/2006/16/contents

The act places a duty of public authorities regarding the conservation of English wildlife and biodiversity. Section 41 sets out a list of species "of principal importance for the purpose of conserving biodiversity". Such species include but are not restricted to:

- Barbastelle
- Bechstein's
- Noctule
- Brown long eared
- Greater horseshoe
- Lesser horseshoe

**Wild Mammals (Protection) Act (1996)**

Available at: https://www.legislation.gov.uk/ukpga/1996/3/enacted

Because of the Wild Mammals Act, UK mammal species are protected from any unnecessary cruel acts. Such acts include any actions which may cause unnecessary suffering to the animal. As such, all UK bat species are protected under this law.

**The Protection of Badgers Act 1992**

Available at: https://www.legislation.gov.uk/ukpga/1992/51/contents

Under the Protection of Badgers Act 1992, it is illegal to intentionally harm, injure, kill, and treat badgers with cruelty. The law also protects their setts from damage, destruction, or obstruction, and from having dogs sent into them. The Act consolidates previous laws, making it an offence to dig for badgers, sell, possess or control them without a licence, and badger baiting.

# Appendix 5: Reference List

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