Bat and Barn Owl Survey Report

ecologybydesign

Chawley Green Farm

On behalf of Edgars Ltd

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Contents

1 Executive Summary

Report purpose	This report identifies the usage of the building by bats and barn owl, potential impacts of the proposals and mitigation, compensation and enhancement measures required.
Date and methods of survey	A preliminary roost assessment of the building was conducted in October 2020 which identified historical evidence of roosting barn owl and the need for further surveys for bats comprising three emergence/re-entry surveys.
Key findings	The garage building under study is situated within the front garden of Chawley Green Farm, Lower Radnage, Buckinghamshire, HP14 4EQ (grid reference: SU 81451 95574). The building was found to support: • a day/occasional roost of common pipistrelle (max four bats recorded); and • a previously-used barn owl roost (not recorded in use during 2021).
Potential impacts	The proposals include renovation and conversion of the existing garage to residential space. In the absence of mitigation, development within the site may result in: • injury/harm to roosting bats; • damage/destruction/obstruction of a common pipistrelle roost; • impacts on foraging/commuting bats; and • loss of historical barn owl roost.
Further survey / licensing	No further survey work is required to inform the proposals. A Natural England European Protected Species Licence (EPSL) will be required to facilitate the proposals following granting of planning consent. Update/verification surveys will be required if works do not commence prior to August 2022.
Measures to avoid and/or reduce impacts and deliver biodiversity enhancements	There are no obligatory timing constraints to works; however, it is recommended that works which could impact roosting bats are scheduled to avoid the winter months when bats are more sensitive to disturbance and should not be moved if found hibernating. Works to the building must be preceded by a pre-works check and must be undertaken under ecological supervision and in a sensitive manner. Compensatory roost provision for bats and barn owl must be made through inclusion of bat boxes and a barn owl box as part of the proposals

2 Introduction

2.1 Background

2.1.1 Ecology by Design were commissioned to conduct a bat and barn owl survey of a garage building within the front garden of Chawley Green Farm, Lower Radnage, Buckinghamshire, HP14 4EQ (grid reference: SU 81451 95574). The proposed development is for conversion works to an existing garage. This will involve works to the roof and conversion of the existing roof void.

2.1.2 The owner of the garage was aware of the presence of roosting barn owl (*Tyto alba*) within previous years.

2.2 Aims of Report

2.2.1 This report presents an appraisal of the potential impacts of the proposed development works on bats and barn owl. The report outlines recommendations for avoidance, mitigation, compensation and enhancement measures.

2.3 Personnel

2.3.1 Details of personnel undertaking each survey, alongside qualifications for such, are outlined in the relevant sections below. All surveys were undertaken by or under the direct supervision of appropriately qualified, competent and experienced ecologists.

3 Methods

3.1 Desk Study

3.1.1 Records of bats were requested from within a 2 km radius of central OS national grid reference SU8145195574. MAGIC (www.magic.gov.uk) was also used to identify presence of granted bat European Protected Species Mitigation licences or sites with statutory designations for bat importance within the local area.

3.2 Preliminary Roost Assessment (PRA) and Barn Owl Inspection

3.2.1 The survey was conducted by senior ecologists James Howsam (Natural England level 1 bat licence: 2019- 43198-CLS-CLS) and Tristan Carlyle (Natural England level 1 bat licence: 2020-46305-CLS-CLS) of Ecology by Design in clear conditions on 9th October 2020. The assessment was based on guidance specified by the Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn) (Collins. J, 2016) and UK Government Guidance (Gov.uk, 2015).

3.2.2 The building was inspected for potential bat use by examining all accessible internal areas for active roosts or roosting sites, suitable entry and exit points on the outside of the building, and by searching for other evidence of bat activity such as droppings, smells, sounds, carcasses or food remains. A high-powered torch was used to illuminate dark recesses to carefully inspect any features of potential suitability for roosting bats.

3.2.3 Equipment used included:

- clulite lamp;
- head torches;
- close-focusing 10 x 50 mm binoculars; and
- a telescopic 3.4 m ladder.

3.2.4 During the survey the building was thoroughly inspected, with particular attention paid to the existing loft space, including:

- roof structure – gaps in tiles, under and over wall plates where accessible, between tile roof and ridge;
- walls – gaps in walls, between beams and the walls; and
- doors, windows and dormers – gaps around edges of frames, joinery and flashing.

3.2.5 Barn owls or evidence of barn owl roosting and nesting were searched for alongside the bat inspection with particular attention paid to the presence/absence of any:

- suitable access holes (usually >80 mm diameter);
- pellets;
- feathers;
- droppings;
- feeding remains;
- nesting material/eggshells; or
- active nests/eggs.

3.3 Emergence and Re-Entry Surveys

3.3.1 Since the building was determined to be of moderate suitability for roosting bats, two emergence/re-entry surveys were recommended, this was extended to three surveys in accordance with Collins (2016) following the recorded presence of roosting bats during the first survey in order to inform a roost characterisation assessment.

Table 1: Emergence and re-entry survey details

Date	Start and end times and time of sunset	Structure reference / location	Equipment used	Weather
13/07/21	21:01-22:46; 21:16	Building 1	Batlogger M	Start: 19°C, Cloud 1/8[1], Wind 0[2] End: 19°C, Cloud 1/8, Wind 0
Comments: 4 surveyors – • Kate Philpot BSc (hons), MSc Grad CIEEM; Class 2 survey licence no.: 2020-47515-CLS-CLS • Olyvia Hall BSc (hons) • Karl Lofthouse; Class 2 survey licence no.: 2015-15163-CLS-CLS • Tony Wells Additional weather details: warm and humid with high numbers of flying insects noted				

[1] Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).
[2] The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. . 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze, 6- Strong breeze, 7- Moderate gale, 8- Fresh gale, 9- Strong gale, 10- Whole gale, 11- Storm, 12- Hurricane force.

29/07/21	03:38-05:23; 05:23	Building 1	Batlogger M	Start: 17°C, Cloud 0/8[3], Wind 0[4] End: 13°C, Cloud 0/8, Wind 1
Comments: 4 surveyors - • James Howsam BSc (hons) MSc, ACIEEM; class 1 survey licence no.: 2019-43198-CLS-CLS • Alys Cervetto BSc (hons) • Deqa Mohamed • George Graham Additional weather details: Warm and still conditions				
24/08/21	04:19-06:04; 06:04	Building 1	Batlogger M	Start: 13°C, Cloud 7/8[5], Wind 3[6] End: 13°C, Cloud 5/8, Wind 2
Comments: 4 surveyors – • Emily Power BSc (hons) MSc ACIEEM; class 2 survey licence no.: 2017-32544-CLS-CLS • Emily Bartlett BSc (hons) MSc ACIEEM; class 1 survey licence no.: 2019-43526-CLS-CLS • George Graham • Olyvia Hall BSc (hons) Additional weather details: Bright moonlight during survey				

3.4 Site/Species Valuation for Roosting Bats

3.4.1 Valuation of the bat roost was based on the framework for valuing bats in Ecological Impact Assessment designed by Wray *et al.* (2010) whereby a roost is categorised and valued from 'District' level to 'International'. These different bat roosts can be assigned to a geographic frame of reference as detailed in Appendix 3. The valuation of roosts reflects the importance of bats.

[3] Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).
[4] The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. . 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze, 6- Strong breeze, 7- Moderate gale, 8- Fresh gale, 9- Strong gale, 10- Whole gale, 11- Storm, 12- Hurricane force.
[5] Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).
[6] The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. . 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze, 6- Strong breeze, 7- Moderate gale, 8- Fresh gale, 9- Strong gale, 10- Whole gale, 11- Storm, 12- Hurricane force.

3.5 Barn Owl Nocturnal Surveys

3.5.1 Barn owl nocturnal surveys were undertaken alongside the bat emergence/re-entry surveys. All barn owl activity within and around the study area (single garage building) was noted including:

- flights;
- foraging behaviour;
- audible calls; and
- emergence/re-entry to the building.

3.6 Limitations/Constraints

3.6.1 All surveys were undertaken by suitably qualified personnel and during suitable weather conditions. No surveys were constrained by inexperienced surveyors or unsuitable weather conditions.

3.6.2 Visibility to the north-western roof aspect was limited due to access not being granted to survey from the neighbour's property. However, surveyors on the northern and western aspects stayed in touch throughout surveys and the origin/destination of all observed bats was accounted for thusly. No observed bat activity flying towards or away from this aspect was unaccounted for and therefore it is not considered that the limited visibility to this aspect was a constraint.

3.6.3 During the original PRA in October 2020, the single loft space was thoroughly inspected; however, during subsequent surveys in 2021 the floor in the loft space was noted to have degraded and an internal inspection was deemed un-safe. Consequently, the precise roosting location of the bats was not possible to determine. The assessment of value and recommendations for sensitive working procedure was made with this limitation in mind and the entire roof structure associated with this wing (including the interior space and crevices beneath tiles which bats may have crawled through to from the inside) was treated as the roosting location of the bats.

4 Results and Interpretation

4.1 Desk Study

4.1.1 No sites designated for bats or barn owl or noted to support exceptional numbers of bats or barn owl were returned within 2 km by the data search.

4.2 Preliminary Roost Assessment

4.2.1 The site comprises a detached garage building within an expansive garden of a residential property in a countryside setting. The single building within the site is a single-storey garage of mixed construction, predominantly comprising a traditional timber frame with localised brick/stone plinths and variable cladding. The building is roughly 'L'-shaped in footprint, comprising two sections of dual-pitched and gabled roof with flat clay tiles. The eastern aspect of the northern section is mostly open in nature and the eastern and western gables are clad in a single layer of traditional timber weatherboarding. Overall, the building is in a poor/moderate state of repair.

4.2.2 Internally, the northern section is open to the underside of the roof. The roof is of aged timber construction (albeit lacking any large mortice gaps or similar), open to the underside of fibrous felt roof tile lining with no insulation and no sarking. The southern section is in current use as a garage, accessed by large garage doors on the eastern and western frontages. This section, while enclosed, remains draughty due to the presence of multiple large gaps in external walls and weatherboarding. An enclosed loft space is present within the southern portion of the building; this space is of identical construction to the northern section; it is relatively well-lit and very draughty due to a poorly fitted window and large gaps in the gable weatherboarding.

4.2.3 Several potential roosting features are supported by the building including:

- numerous slipped, lifted and missing tiles on all roof aspects;
- gaps between timber weatherboarding;
- minor stepped cracks in localised brickwork (not apparently leading to cavities); and
- open sheltered areas likely to be suitable as feeding perches.

4.2.4 None of the features recorded above were recorded to support evidence of roosting bats. No evidence of roosting bats was recorded within the building interior. The single enclosed loft space was poorly-sealed from the exterior at the time of survey and was therefore highly draughty and unlikely to maintain a rigidly constant thermal environment. Regardless, the presence of roosting bats within crevices that were not visible during the inspection could not

be ruled out and the building supports several external features with suitability for roosting bats such as lifted tiles.

4.2.5 Overall, the building is considered to be suitable for roosting bats. At the time of the PRA, the building was assessed to be of moderate suitability for roosting bats.

4.3 Barn Owl Inspection

4.3.1 Evidence of a historical barn owl roost (a number of old pellets) was recorded within the loft space of the southern section. No evidence of nesting was recorded and the building lacks obviously suitable nesting features/cavities; as such, it is considered likely to have been a historical roost site.

4.4 Emergence and Re-Entry Surveys

4.4.1 A limited level of bat activity was observed throughout all surveys mostly comprising common pipistrelle with occasional soprano pipistrelle and infrequent long-eared bats. No barn owls were observed flying into or out of the building or indeed flying within close proximity to the building during any of the surveys. Survey results are provided in Table 1 below.

Table 2: Survey results

Date	Start and end times	Species and numbers	Roost type	Structure reference	Access points	Dimensions of existing roosts or explanation of where it is
13/07/21	21:01 – 22:46	Emergences: Common pipistrelle x2 Re-entries: none	Day / occasional	Building 1	A – damaged single-skin weatherboarding on eastern gable	Within loft-space (unknown location due to unsafe structure preventing internal inspection)
Notes / Observations: Emergences / re-entries: Two common pipistrelle emergences from western gable (see details above) at 21:40 and 21:47. Other activity: First bat detected (seen but not heard): common pipistrelle at 21:37. Generally very limited levels of common pipistrelle activity only throughout survey with exception of repeated occasional common pipistrelle foraging around trees in off-site adjacent garden to north-west. Species recorded during survey: common pipistrelle, soprano pipistrelle (very occasionally).						
14/07/20	03:38-05:23	Emergences: None Re-entries:	Day / Occasional	Building 1	A – damaged single-skin weatherboarding on eastern gable B – damaged single-skin weatherboarding	Within loft-space or directly under tiles (unknown location due to unsafe structure

Date	Start and end times	Species and numbers	Roost type	Structure reference	Access points	Dimensions of existing roosts or explanation of where it is
		Common pipistrelle x 4			on western gable at join with bargeboard	preventing internal inspection)

Notes / Observations:

Emergences / re-entries: Three common pipistrelle re-entries (see details above) at 04:27, 04:37*, 04:45 and 04:49.

Other activity: Semi-continuous common pipistrelle foraging/commuting up and down unlit road to immediate south of site; Continuous common pipistrelle foraging within off-site garden to north-west between 04:36 and 04:46. Otherwise generally very limited levels of common pipistrelle activity only throughout survey with exception of observed exploratory flights prior to re-entries.

Species recorded during survey: common pipistrelle, soprano pipistrelle, brown long-eared bat (very occasionally).

*No bat registrations were recorded at 04:37 – this bat has been presumed as a common pipistrelle due to:

- Observed flight characteristics;
- Lack of other species recorded throughout survey around that time typically associated with quiet calls (e.g. brown long-eared bat); and
- Recorded common pipistrelle activity shortly prior to re-entry (including at 04:37) from nearby surveyor's locations.

24/08/21	04:19-06:04	Emergences: None Re-entries: Common pipistrelle x 1	Day / Occasional	Building 3	A – damaged single-skin weatherboarding on eastern gable	Within loft-space (unknown location due to unsafe structure preventing internal inspection)

Notes / Observations:

Emergences / re-entries: one common pipistrelle re-entry at 05:18.

Other activity: Generally very limited levels of throughout survey with exception of observed common pipistrelle exploratory flights prior to re-entries, occasional foraging/commuting flights up and down road to south, and occasional common pipistrelle activity within survey area.

Species recorded during survey: common pipistrelle, brown long-eared bat (occasionally).

4.5 Evaluation

4.5.1 The building supports a small number of common species and does not support rare species or an important roosting. As such, and in accordance with the methodology outlined by Wray *et al.*, (2010) and the criteria at Appendix 3, the site is therefore considered to be of no more than local ecological importance for roosting bats.

4.5.2 The building does not currently support roosting or nesting barn owl and is therefore of negligible importance for barn owl. However, the historical and potential presence of barn owl should be considered within working methodologies and as an opportunity for ecological enhancement.

4.5.3 The building was incidentally noted to support an old cup-like bird nest during the PRA, indicating likely historical usage of the building by nesting swallow (*Hirundo rustica*), swift (*Apus apus*) or house martin (*Delichon urbica*). While of negligible ecological importance, presence of nesting birds within the building may have legislative implications (see Section 6).

5 Potential Impacts and Recommendations

5.1 Bats

5.1.1 In the absence of mitigation measures, the proposals will result in the following impacts on roosting bats: loss/damage of an existing common pipistrelle day roost and potential injury/harm to common pipistrelle. All bats and their roosts are protected under relevant legislation (see Section 6). As such, any such impacts would constitute a contravention of relevant legislation and result in an adverse ecological impact of significance within a local geographic context.

Recommendation R1: Licence Application

5.1.2 A European Protected Species Licence (EPSL) will be required to enable the proposals to lawfully proceed. Precise implementation of avoidance, mitigation and compensation measures in respect of roosting bats will be detailed within the method statement to accompany the EPSL application; an outline of the strategy is provided below.

Receptor Roost

5.1.3 Prior to works proceeding, a single roost feature (bat box, see Appendix 4) will be erected in a suitable secluded location within the wider land ownership boundary. This location will either comprise the exterior of an existing building or a suitable tree, to be identified by a suitably qualified ecologist. This compensatory roost feature will act as a receptor site to any bats which are encountered and need to be moved by the supervising ecologist during works.

Timing of Works

5.1.4 There are no specific timing requirements for works. However, ideally works would take place between April and October inclusive.

Toolbox Talk for Contractors

5.1.5 Contractors will receive a toolbox talk. The toolbox talk will ensure the contractors understand the legal status of the bats potentially present, describe the locations of the known roosts on site, agree sensitive working protocols and give emergency contact details for the licensed ecologist in case a bat is found during the works while an ecologist is not in attendance.

Soft-stripping and Roof Works

5.1.6 All works to the existing roost feature (the southern roof/loft) and any works involving removal of roof tiles throughout the entire building, will be supervised by a suitably qualified ecologist and immediately preceded by a pre-works check for roosting bats. Tiles will be lifted off

vertically, by hand and in a unilateral direction under close ecological supervision. Other works will take place on a case-by-case basis, as directed by the supervising ecologist, favouring use of hand tools where practicable, to ensure minimal risk to any bats that may be present in visually obscured areas. In order to comply with licensing requirements, any re-roofing must make use of bitumen 1F felt or wooden sarking only; modern permeable or breathable roof membranes must be avoided to prevent entanglement of bats returning to the building after works are completed.

Compensatory and Enhancement Roost Features

5.1.7 It is recommended that inclusion of at least three bat boxes are secured as part of the proposed development: one compensatory receptor box to be erected prior to works commencing (see Section 5.3.1), and two enhancement boxes. These will increase the opportunities currently presented by the site to roosting bats; particularly once works are completed as many of the exterior features on the building (such as gaps under the clay tiles) will likely persist. Specified boxes should target common pipistrelle and other UK Species of Principal Importance for which records were incidentally recorded during the surveys: brown long-eared bats and soprano pipistrelle. Example specifications are provided in Appendix 4.

5.1.8 The boxes must be incorporated into the design of proposed building, erected on another building within the site (e.g. the main residential building) or erected on suitable trees within the wider land ownership boundary. Boxes must be positioned at a minimum height of 3 m with a clear flight path to the entrance. Boxes will ideally be placed on a south-western, south-eastern or southern aspect. Any boxes affixed to trees must be affixed using aluminium nails/screws only, stainless steel, zinc or copper affixers in particular must be avoided.

5.1.9 A suitably qualified ecologist must direct and/or approve the installation of bat boxes to ensure their suitable placement; this can be achieved by:

- signing off on detailed design plans showing inclusion within architectural drawings; and
- providing detailed instruction and signing off on evidence of installation such as photos; or
- attending site to direct installation.

Residual Impacts

5.1.10 Provided that recommendations R1 and R2 above are implemented, adverse impacts on bats as a result of construction would be temporary only and residual impacts would be beneficial, resulting in a net ecological gain for bats with significance within a local geographic context.

5.2 Barn Owl and Nesting Birds

Potential Impacts

Barn Owl

5.2.1 The proposals will result in no impacts to barn owl (as they are considered currently likely absent from the building) but will entail the loss of a historical barn owl roost site. The building is not used by barn owl for nesting so no impacts on nesting barn owl are anticipated as a result of the proposals.

Other Birds

5.2.2 In the absence of avoidance/mitigation measures, the proposals will result in the removal of suitable bird nesting habitats (the interior of the garage building). Inactive nests are not protected; however, if active nests are present at the time of works and these are lost/damaged/obstructed as a result, this would contravene relevant wildlife legislation (see Section 6) and result in an adverse ecological impact of significance within a local geographic context.

Recommendation R3 – Safeguarding Nesting Birds

5.2.3 Any birds' nests are protected whilst in use. If any active birds' nests are found prior to the works, then these must be left alone until they cease to be in use. Ideally, works to the building should be scheduled to avoid the bird nesting season (March to August inclusive). Should such works take place during March-August inclusive, they must be immediately preceded by a check for any active nests by a suitably qualified ecologist. Any active nests identified during works (regardless of time of year) would need to be protected and left with a suitable buffer (to be defined by the ecologist) until the nest is no longer active.

Recommendation R4 – Barn owl box

5.2.4 It is recommended that erection of a barn owl box is secured as part of the proposals.

5.2.5 The barn owl box must be erected on a suitable tree, well-removed from any road and at a height of at least 3 m. Fixture to any part of a living tree must be made using aluminium screws/nails only, the use of copper, zinc or steel affixers in particular must be avoided.

5.2.6 A suitably qualified ecologist must direct and/or approve the installation of the barn owl box to ensure its suitable placement; this will be achieved via a walkover of land within the land ownership boundary to identify a suitable tree and directly supervising and signing off on installation. An example specification of a barn owl box is provided at Appendix 4.

5.2.7 Should they be desired, nest boxes may also be erected on the building for cup-nesting species as part of the proposals; some example specifications are provided at Appendix 4.

Residual Impacts

5.2.8 Provided the recommendations above are implemented, nesting birds and their nests will be safeguarded during works. Following completion of works, the new building will continue to present opportunities to small nesting birds in addition to the new nesting opportunities secured for barn owl under Recommendation R4. As such, the proposals will have a minor positive residual impact on nesting birds with significance within a local geographic context.

5.3 Conclusions

5.3.1 In the absence of mitigation, the proposals will result in impacts on protected species: common pipistrelle and nesting birds and have the potential to breach relevant wildlife legislation. The proposals have been designed to avoid impacts wherever possible and this report has made multiple recommendations to mitigate and/or compensate for all residual impacts as required and ensure compliance with all relevant legislation and planning policy (see Section 6). No residual legal or policy non-compliance issues are identified, and the surveys and assessments undertaken to date are considered thorough and reliable; they have not required an assessment of non-ecological issues for which the assessors are unqualified or inexperienced.

5.3.2 All residual impacts, provided recommendations R1-R4 are implemented, will be beneficial; as such, the proposals are considered likely to result in a net gain for biodiversity.

6 Relevant Legislation and Policy

6.1 National Planning Policy Framework

6.1.1 The National Planning Policy Framework (NPPF) was updated in July 2021 (MHCLG, 2021) thereby replacing the older version of February 2019. The new framework sets out in section 15 that 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.

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

- 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;
- 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;
- 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 incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

6.1.3 The following should be given the same protection as habitats sites:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

6.1.4 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.

6.2 Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and Species of Principal Importance (England)

6.2.1 The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act require the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England as required by the Act. In accordance with the Act the Secretary of State keeps this list under review and will publish a revised list if necessary, in consultation with Natural England.

6.2.2 The S41 list is used to guide decision-makers such as public bodies, including local authorities and utilities companies, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions, including development control and planning. This is commonly referred to as the 'Biodiversity Duty.'

6.2.3 Guidance for public authorities on implementing the Biodiversity Duty has been published by Defra. One of the key messages in this document is that 'conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them.' In England the administration of the planning system and licensing schemes are highlighted as having a 'profound influence on biodiversity conservation.' Local authorities are required to take measures to "promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species. The guidance states that 'the duty aims to raise the profile and visibility of biodiversity, clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy and decision making.'

6.2.4 In 2007, the UK Biodiversity Action Plan (BAP) Partnership published an updated list of priority UK species and habitats covering terrestrial, freshwater and marine biodiversity to focus conservation action for rarer species and habitats in the UK. The UK Post-2010 Biodiversity Framework, which covers the period from 2011 to 2020, now succeeds the UK BAP. The UK priority list contained 1150 species and 65 habitats requiring special protection and has been used as a reference to draw up the lists of species and habitats of principal importance in England.

6.2.5 In England, there are 56 habitats of principal importance and 943 species of principal importance on the S41 list. These are all the habitats and species found in England that were identified as requiring action in the UK BAP and which continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.

6.3 Exist from European Union

6.3.1 The Conservation of Habitats and Species Regulations 2017 (as amended), referred to as the '2017 Regulations,' are one of the pieces of domestic law that transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives). Changes to the 2017 Regulations have been made by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (referred to as the '2019 Regulations') to transfer functions from the European Commission to the appropriate authorities in England and Wales.

6.3.2 The amendments prescribed by the 2019 Regulations allow existing protections afforded by current wildlife legislation and transposed EC Council Directives to be operable from 01 January 2021.

6.3.3 The 2019 Regulations protect rare and vulnerable birds and the habitats that they depend upon. This is achieved in part through the classification of Special Protection Areas (SPAs). The Habitats Directive aims to protect plants, habitats and animals other than birds. This is achieved in part through the creation of Special Areas of Conservation (SACs). SPAs and SACs are collectively referred to as the 'National Site Network'.

6.3.4 Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the National Site Network, however, all Ramsar sites remain protected in the same was as SACs and SPAs.

6.4 European Protected Species

6.4.1 The Conservation of Habitats and Species Regulations 2017 (as amended) transpose the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.

6.4.2 "European protected species" (EPS) of animal are those which are shown on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended). They are subject to the provisions of Regulation 43 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended)[1]. Taken together, these pieces of legislation make it an offence to:

- intentionally or deliberately capture, injure or kill any wild animal included amongst these species;
- possess or control any live or dead specimens or any part of, or anything derived from these species;
- deliberately disturb wild animals of any such species;
- deliberately take or destroy the eggs of such an animal; or
- intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place

6.4.3 For the purposes of the above, disturbance of animals includes in particular any disturbance which is likely:

- to impair their ability –
    - To survive, to breed or reproduce, or the rear or nurture their young; or
    - In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- to affect significantly the local distribution of the species to which they belong.

6.4.4 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogated) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works. In accordance with the requirements of The Conservation of Habitats and Species Regulations 2017 (as amended), a licence can only be issued where the following requirements, known as the "Three Tests", are satisfied:

- the proposal is necessary 'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment';

- ‘there is no satisfactory alternative’; and
- the proposals ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Definition of Breeding Sites and Resting Places

6.4.5 Guidance for all European Protected Species of animal, including bats and great crested newt, regarding the definition of breeding and of breeding and resting places was previously provided by The European Council (EC) which has prepared specific guidance in respect of the interpretation of various Articles of the EC Habitats Directive. Section II.3.4.b) provides definitions and examples of both breeding and resting places at paragraphs 57 and 59 respectively. This guidance states that ‘The provision in Article 12(1)(d) [of the EC Habitats Directive] should therefore be understood as aiming to safeguard the ecological functionality of breeding sites and resting places.’ Further the guidance states: ‘It thus follows from Article 12(1)(d) that such breeding sites and resting places also need to be protected when they are not being used, but where there is a reasonably high probability that the species concerned will return to these sites and places. If for example a certain cave is used every year by a number of bats for hibernation (because the species has the habit of returning to the same winter roost every year), the functionality of this cave as a hibernating site should be protected in summer as well so that the bats can re-use it in winter. On the other hand, if a certain cave is used only occasionally for breeding or resting purposes, it is very likely that the site does not qualify as a breeding site or resting place.’ Whilst England is no longer part of the European Union it is assumed such guidance remains valid until new UK guidance is published.

Bats

6.4.6 Bats and their roost sites are protected by both UK legislation and former European legislation transposed into UK law since leaving the European Union.

6.4.7 The Wildlife and Countryside Act (1981) (as amended) makes it an offence to:

- Intentionally kill, injure or take a bat;
- Possess or control any live or dead specimen or anything derived from a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; and
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose.

6.4.8 Additionally, The Conservation of Habitats and Species Regulations 2017 (as amended) make it an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat;
- Damage or destroy a breeding site or a resting place of a bat; and
- Keep, transport, sell or exchange or offer for sale or exchange a live or dead bat or any part of a bat.

6.5 Protection of Nesting Birds

6.5.1 All nesting birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species such as barn owl (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

6.5.2 The Conservation of Habitats and Species Regulations 2017 (as amended) places duties on competent authorities (including Local Authorities and National Park Authorities) in relation to wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the EC Directive on the conservation of wild birds (2009/147/EC, 'Birds Directive') (Regulation 10 (3)) requires that the objective is the 'preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive…' Regulation 10 (7) states: 'In considering which measures may be appropriate for the purpose of security or contributing to the objective in [Regulation 10 (3)] Paragraph 3, appropriate account must be taken of economic and recreational requirements'.

6.5.3 In relation to the duties placed on competent authorities under the 2017 Regulations (as amended), Regulation 10 (8) states: 'So far as lies within their powers, a competent authority in exercising any function [including in relation to town and country planning] in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the area to which the new Wild Birds Directive applies).'

7 References

Collins, J. (ed.) (2016). *Bat surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).* The Bat Conservation Trust, London.

Gov.uk (2015). *Guidance. Bats: surveys and mitigation for development projects*. Natural England and Department for Environment, Food & Rural Affairs, Worcester.

Wray, S., Wells, D., Long, E. and Mitchell-Jones, T. (2010). Valuing bats in Ecological Impacts Assessment. *In Practice* **70**, 23-26.

Appendix 1 - Photographs

Photograph 1: Eastern gable with large gaps in timber weatherboarding and gaps in roof tiles (re-entry points circled)

Photograph 2: Open loft space in southern section

Photograph 3: Southern aspect

Photograph 4: Northern gable

Photograph 5: View of western aspect, re-entry point circled

Photograph 6: Open north-eastern aspect

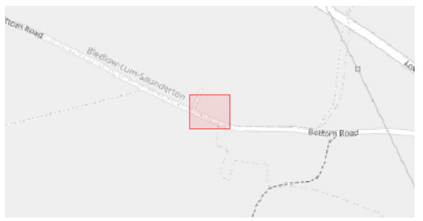
Appendix 2 - Drawings

Overleaf – EBD_1571_DR001 Bat Survey

LEGEND

- Surveyed building
- Surveyor and orientation
- Common pipistrelle re-entry point
- Area of repeated common pipistrelle foraging/commuting activity

Location (1:10,000):



Project:

Chawley Green Farm

Client:

Edgars Ltd

Drawing Title:

Bat Survey

Drawing No.: EBD_1571_DR001	*Scale (@A3):* 1:200
Central Grid Ref.: SU 81449 95576	*Date Drawn:* 02/09/2021
Drawn by: JH	*Approved by:* BG

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Appendix 3 - Geographic Context of Importance for Bats (taken from Wray *et al*., 2010)

Geographic Context of Importance	Examples
Local/District	Feeding perches (common species) Individual bats (common species) Small numbers of non-breeding bats (common species) Mating sites (common species
County	Maternity sites (common species) Small numbers of hibernating bats (common and rarer species) Feeding perches (rarer/rarest species) Individual bats (rarer/rarest species) Small numbers of non-breeding bats (rarer/rarest species)
Regional	Mating sites (rarer/rarest species) including well used swarming sites Maternity sites (rarer species) Hibernation sites (rarest species) Significant hibernation sites for rarer/rarest species or all species assemblages
National/UK	Maternity sites (rarest species) Sites meeting SSSI guidelines
International	SAC sites

Appendix 4 - Example Specifications

Products	Description
Bat boxes	
	**Habibat Bat Box** The Habibat Bat Box is a solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built or renovated. A variety of facings can be fitted to suit any building. The box is suitable for Pipistrelle bats and other common UK species. https://www.nhbs.com/habibat-bat-box-plain-for-rendering
	**Miramare Woodstone Bat Box** The Miramare is designed to mimic a hollow tree. It is a large bat box with four internal cavities and an external construction of woodcrete to be long-lasting and provide opportunities to large numbers of bats. The box is open to the bottom meaning that it is effectively self-cleaning. https://www.wildcare.co.uk/miramare-woodstone-bat-box-11268.html
	**Beaumaris Woodstone bat Box** Suitable for hanging on trees or external walls/fences and made of long lasting woodstone, this bat box has a narrow internal cavity favoured by crevice-roosting species such as soprano pipistrelle. With an entrance hole at the bottom, this box is self-cleaning and requires little-no maintenance. https://www.nhbs.com/beaumaris-woodstone-bat-box

Bird boxes

Ibstock swift box

A specially designed box which can be fitted on the exterior of a building or be built into the wall. Swifts are colonial nesters so multiple boxes are required. These boxes need to be fitted at a height of at least 5m.

https://www.nhbs.com/ibstock-eco-habitat-for-swifts?bkfno=201574

Woodstone Swift Nest Box

An FSC certified swift box constructed of WoodCrete to be long-lasting. Entrance hole and orientation is designed to encourage swifts and discourage competitors for suitable nesting space such as house sparrows (*Passer domesticus*) and starling (*Sturnus vulgaris*).

https://www.nhbs.com/woodstone-swift-nest-box

House Martin Nest – Double Entrance

Specially designed to appeal to house martins and situated beneath eaves of buildings, these boxes are constructed of plywood and WoodStone to be long-lasting. These nests are used by house martins as ready-made features which then encourages other members of this communally-nesting species to construct their own nests nearby.

https://www.nhbs.com/house-martin-nests

Barn Owl Nest Box

Designed in conjunction with the barn owl trust, this box is constructed from FSC cetified exterior grade plywood to be long-lasting. The box has a generous depth of 44 cm and a hatch to allow access for maintenance. The box can be erected on buildings or trees.

It is recommended that the box exterior is treated prior to erection to ensure longevity. Should it be adopted by barn owl, it is also recommended that the barn owl trust and relevant local wildlife groups are made aware for monitoring purposes.

https://www.nhbs.com/barn-owl-nest-box