

Ladygreen Barns, Denford, Leek
Preliminary Bat Roost Assessment



Client:

Planning & Design Practice Ltd

Report Reference:

RSE_7434_01_V1

Issue Date:

August 2023

Project Details

Client: Planning & Design Practice Ltd

Project: Ladygreen Barns, Denford, Leek

Reference RSE_7434_01-V1

Report Title Preliminary Bat Roost Assessment

Document Control

Originated: **Anthony Mellor** BSc
MSc ACIEEM AMICE Director  30/08/2023

Technical Reviewed: **Nick Sanderson** BSc
MSc CEcol MCIEEM Director  30/08/2023

Issued to Client: **Anthony Mellor** BSc
MSc ACIEEM AMICE Director  30/08/2023

Revisions:

East Midlands: West Midlands: Yorkshire: Northern Ireland

Switch board 0115 930 2493: info@rammsanderson.com: www.rammsanderson.com

DISCLOSURE:

The information provided within this report has been prepared and provided as true and in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. It is intended for the sole use of the Client and their agents in accordance with the agreement under which our services were performed. Unauthorised communication, reproduction or usage of this report by any party other than the aforementioned is prohibited. No warranty, express or implied, is made as to the advice in this report or any other service provided by RammSanderson Ecology Ltd. This report has been prepared by an ecological specialist and does not purport to provide legal advice. RammSanderson is a trading name of RammSanderson Ecology Limited, as registered in England & Wales (Company No.: 8999992).



CONTENTS

1	INTRODUCTION AND BACKGROUND	5
1.1	PURPOSE AND SCOPE OF THIS REPORT	5
1.2	ZONE OF INFLUENCE	5
1.3	SITE CONTEXT AND LOCATION	5
2	METHODOLOGY	7
2.1	IMPACT APPRAISAL	7
2.2	BAT ROOST SUITABILITY ASSESSMENT	7
2.3	PROTECTED SPECIES SCOPING	8
2.4	LIMITATIONS	8
2.5	ACCURATE LIFESPAN OF ECOLOGICAL DATA	8
3	RESULTS	9
3.1	SURVEYOR COMPETENCY	9
3.2	SITE HABITAT DESCRIPTIONS	9
3.3	PRELIMINARY BAT ROOST ASSESSMENT	11
3.4	NESTING BIRDS	13
3.5	INVASIVE SPECIES	13
4	DISCUSSION AND RECOMMENDATIONS	14
4.1	BATS	14
4.2	NESTING BIRDS	14
4.3	SITE ENHANCEMENTS	14
5	REFERENCES	16
6	APPENDIX 1: LEGISLATION AND PLANNING POLICY	17
6.1	GENERAL & REGIONALLY SPECIFIC POLICIES	17
6.2	BATS	17
6.3	BIRDS	18

FIGURES

FIGURE 1: SITE LOCATION PLAN	6
FIGURE 2: GENERAL VIEW OF THE SITE	10
FIGURE 3: BUILDING LOCATION PLAN	10
FIGURE 4: BARN OWL EVIDENCE WITHIN BUILDING 2	13
FIGURE 6: IBSTOCK ENCLOSED BAT BOX C	15

TABLES

TABLE 1: CRITERIA FOR BAT ROOST POTENTIAL ASSESSMENT OF BUILDINGS	7
TABLE 2: SUMMARY OF CONDITIONS DURING SURVEY	9
TABLE 3: PRELIMINARY BAT ROOST ASSESSMENT	11

1 INTRODUCTION AND BACKGROUND

1.1 Purpose and Scope of this Report

- i RammSanderson Ecology Ltd was instructed by Planning & Design Practice Ltd to carry out a Preliminary Bat Roost Assessment (PBRA) to inform proposals for the redevelopment of Ladygreen Barns, Denford. The surveys were required to determine the presence or likely absence of protected / notable species on site.
- ii The study area is defined as shown in the enclosed Site Location Plan to include the Zone of Influence (see below) of the proposals (hereafter referred to as the "Site").
- iii This appraisal is based on a review of the development proposals provided by the Client, and surveys of the Site. The aims of this survey and report are to:
 - Investigate the presence / likely absence of protected / notable species on site or in the immediate vicinity;
 - Identify potential impacts on protected / notable species (if present); and
 - Provide outline recommendations for mitigation or compensatory measures where applicable.
- iv This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RammSanderson Ecology Ltd.
- v The surveys and desk based assessments undertaken as part of this review and subsequent report including the Ecological Constraints and opportunities Plan are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013).

1.2 Zone of Influence

- i The Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. The Zone is determined by the nature of the development and also in relation to individual species, depending on their habitat requirements, mobility and distances indicated in any best practice guidelines. This can be 5km from a site is significant bat habitat is to be affected.

1.3 Site Context and Location

- i The site is located at the end of a long access track south of Huntley Road in Denford; approximately 3.5km south of Leek. The site is situated in an entirely rural setting with three existing dwellings sharing the access road at a central location between the villages of Cheddleton to the east and Endon to the west. The surrounding landscape is predominantly cattle pasture with hedgerows, defunct hedgerows and tree lines with undulating topography.

Figure 1: Site Location Plan



2 METHODOLOGY

2.1 Impact Appraisal

- i In appraising any impacts the review considers the Client's Site proposals and any subsequent recommendations made are proportionate and appropriate to the site and have considered the Mitigation Hierarchy as identified below:
- **Avoid:** Provide advice on how the development may proceed by avoiding impacts to any species or sites by either consideration of site design or identification of an alternative option.
 - **Mitigate:** Where avoidance cannot be implemented mitigation proposals are put forward to minimise impacts to species or sites as a result of the proposals. Mitigation put forward is proportionate to the site.
 - **Compensate:** Where avoidance cannot be achieved any mitigation strategy will consider the requirements for site compensatory measures.
 - **Enhance:** The assessment refers to planning policy guidance (e.g. NPPF) to relate the ecological value of the site and identify appropriate and proportionate ecological enhancement in line with both national and local policy.

2.2 Bat Roost Suitability Assessment

- i The overall value of the site and its connectivity to the wider countryside was assessed in relation to bats. The likelihood of bats roosting at the site or moving through the site between local roost sites and foraging/mating/hibernation habitats was considered.
- ii The building was assessed by an ecologist and graded as to their suitability for supporting roosting bats using the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Survey Guidelines* (Collins, J. Eds. 2016), an extract of which is interpreted in the table below.

Table 1: Criteria for bat roost potential assessment of buildings

Roost Potential	Description	Surveys Required (Buildings)
Confirmed roost	Evidence of roosting bats found during initial daytime inspection.	3 – including 1 dawn as a minimum
High *	Structures with one or more features suitable for bat roosting, with obvious suitability for larger numbers of bats.	3 – including 1 dawn as a minimum
Moderate	Structure with one or more potential roost sites that could be used due to size, shelter and protection but unlikely to support a roost of high conservation status.	2 – including 1 dawn as a minimum
Low	Structure with one or more potential roosting sites used by individual bats opportunistically. Insufficient space, shelter or protection to be used by large numbers of bats.	1 Survey

Roost Potential	Description	Surveys Required (Buildings)
Negligible	No or negligible features identified that are likely to be used by roosting bats	None

** Unless it is a confirmed roost, additional surveys are required of buildings to assess presence / likely absence of a roost. The number of surveys are indicative to give confidence in a negative result, i.e. where no bats are found, confidence in a result can be taken.*

2.3 Protected Species Scoping

- i The survey included an assessment of the site and its surroundings in terms of the potential to support any protected or notable species and any incidental sightings or evidence such as faeces, prints, feeding remains and other field signs will be recorded. The surveyor also noted any evidence of invasive plant species such as Japanese knotweed (*Reynoutria japonica*).

2.4 Limitations

- i It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

2.5 Accurate lifespan of ecological data

- i The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for approximately 2 years, notwithstanding any considerable changes to the site conditions.

3 RESULTS

3.1 Surveyor Competency

- i The survey was carried out by Anthony Mellor BSc MSc ACIEEM AMICE. Anthony holds a class one licence for GCN (2015-19099-CLS-CLS) and class one licence for bats (2016-23847-CLS-CLS) and has been a professional ecologist for the past twelve years. The survey was completed during suitable conditions as detailed in the table below.

Table 2: Summary of conditions during survey

Abiotic Factor	Survey 1
Survey type	PBRA
Date completed	24/08/2023
Temperature	16 °C
Wind speed (Beaufort Scale)	2
Cloud cover	25%
Precipitation	Nil

3.2 Site Habitat Descriptions

- i The site consists of two agricultural structures accompanied by an access track, all situated within an area where vegetation has been cleared. The buildings are situated at the end of a private track/driveway serving the barns and three dwellings whilst also providing access to the surrounding cattle pasture.
- ii Accessed from the north, the track sweeps around the south facing elevation of the barns before reaching a small agricultural yard immediately outside of the buildings. The track and buildings were previously separated by dense scrub vegetation, which has since been removed.
- iii The surrounding yard contains hard standing surface with discarded agricultural materials/equipment such as fence posts and stacked bricks/roof tiles. A drystone wall separates the yard from the access track to the north.

Figure 2: General View of the Site

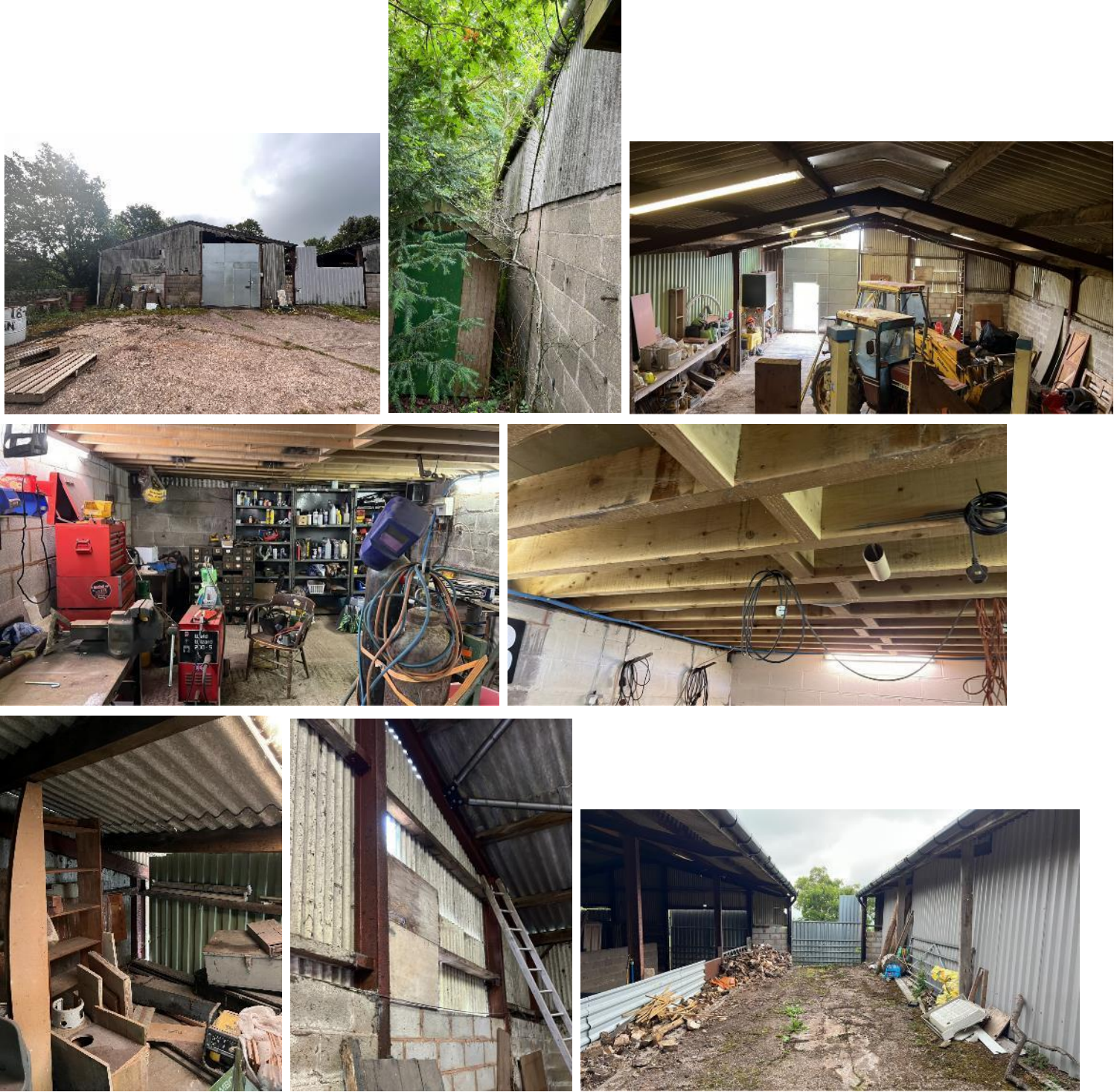


Figure 3: Building Location Plan



3.3 Preliminary Bat Roost Assessment

Table 3: Preliminary Bat Roost Assessment

Bldg. ref	Description	Potential Access Points	Evidence	Grading	Photographs
1	Double height steel framed agricultural building with half height concrete block construction below corrugated metal and corrugated fibre cement board panels. The roof is pitched with corrugated fibre cement board above machine cut timber purlins positioned across the steel frame. At the apex shaped corrugated fibre board panels provide ventilation. Internally the rear of the building has been segregated with a partition wall to create a workshop beneath a mezzanine storage space. ‘Homemade’ timber bird nesting boxes are located (externally) on the east facing elevation, shaded my the immediately adjacent treeline. The central area between Buildings 1 and 2 has been fenced and gated to create a cattle carrel and is currently used for working and log storage.	Ventilation panels at the apex. Open/slatted timber panels on each wall. Damaged/missing panels on north facing gable. Gaps around agricultural doors. The corrugated panel walls sit above the concrete block lower construction and whilst owing to their design would provide access, do not create a secluded niche where bats could roost out of sight.	None – All areas of the building were thoroughly inspected and no bat roosting evidence was identified. Historical nesting bird evidence recorded.	Negligible	

Bldg. ref	Description	Potential Access Points	Evidence	Grading	Photographs
2	Double height steel framed agricultural building with half height concrete block construction below corrugated metal and corrugated fibre cement board panels. The roof is pitched with corrugated fibre cement board above machine cut timber purlins positioned across the steel frame. At the apex shaped corrugated fibre board panels provide ventilation. The east facing elevation is open-sided to the central area between Building 1 and 2. Internally the building is separated along its length with a solid concrete block half height wall. At the rear of the building a cattle drinking trough is recessed into the elevation with external ground level higher than the interior, creating a superficial dark area. The conditions here are damp and no suitable niche where bats could roost out of sight were recorded.	Ventilation panels at the apex. Open/slatted timber panels on each wall. Open sided east facing elevation Damaged/missing panels on north facing gable. Gaps around agricultural doors.	None – All areas of the building were thoroughly inspected and no bat roosting evidence was identified. Recent barn owl perching evidence.	Negligible	      

3.4 Nesting Birds

- i The agricultural habitats surrounding the site provide suitability for a range of common farmland bird species. The habitats are common in a local context and the area proposed for development is not of greater value. The scrub and trees immediately adjacent to the buildings provide suitable nesting habitat for common species.
- ii Historical evidence of nesting birds was recorded within building 1 and the central carrel between the two buildings using the ledges of the steel frame. The nests were in poor condition with no sign of frequent use. Furthermore two homemade sparrow terraces were recorded on the east facing elevation of Building 1. An old unidentified bird skeleton was also present on the mezzanine floor area of Building 1.
- iii Building 2 was found to contain a recently used barn owl perch. Recent splashings and c.12 fresh pellets were recorded on the ground immediately below the apex of the first steel frame once in the building. No evidence of nesting was recorded and barn owl were not present during the inspection. The building does not provide a suitable area for nesting barn owl. Anecdotal evidence suggests that barn owl are known to nest within a nest box within the neighbouring farmstead.

Figure 4: Barn owl evidence within Building 2



3.5 Invasive Species

- i No non-native species were encountered during the survey.

4 DISCUSSION AND RECOMMENDATIONS

4.1 Bats

- i No further survey or more detailed reporting is considered necessary or proportionate at this site in respect of either building. At most, given the open nature of the structures and numerous points of possible access and egress it would be prudent to recommend vigilance during any works. The buildings do not contain suitable secluded areas where bats can roost out of site and the general construction of the buildings is considered sub-optimal. Given the available points of access and egress there remains a residual risk of a transitional, solitary bat opportunistically taking advantage of the site during the warmer summer period (such roosting can never be ruled out for nearly all structures and no proportionate survey effort would reveal any roosting of this nature where a bat may use a site for a single night of the year). As such it is recommended that the building's roof and cladding removal should be undertaken by hand and in the extremely unlikely event a bat is found or suspected, works should temporarily cease whilst an ecologist is contacted for further advice.

4.2 Nesting Birds

- i Any demolition and vegetation clearance works should ideally take place outside the bird nesting season (which runs March to August inclusive) to ensure compliance with the general protection afforded to wild birds under the Wildlife and Countryside Act 1981 (as amended). If this is unavoidable, the buildings and vegetation works should be carefully checked, by a suitably qualified ecologist, prior to removal. Where active nests are found, working restrictions would be put in place until a follow up survey can demonstrate that all chicks have fledged.
- ii To compensate for the loss of the habitats it is recommended that the proposed building included integrated bird boxes. Sparrow boxes to replicate those currently present should be included, but additional provision for barn swallow could also be incorporated.
- iii Barn owl are not currently nesting on site and the building provides limited potential. Building 1 currently is of greater suitability with the mezzanine floor area. Access is also available through the damaged north facing panels. Prior to the dismantling of the building, it is recommended that an appropriately licenced ecologist inspect the building for nesting barn owl. If barn owl are found to nest on site further consideration and disturbance licence may be required.
- iv The proposals will result in the loss of a feeding perch for barn owl. As such it is proposed that a pole mounted barn owl box is provided within the sites boundaries. The area to the south of the buildings, adjacent to the access track would be ideal, away from the frequent disturbance at the entrances to the buildings and in a south/east facing position overlooking the neighbouring agricultural land.

4.3 Site Enhancements

- v Any landscape planting associated with the new development should consider the use of native shrub species and also species which provide important sources for pollinating species such as lavender. The Royal Horticultural Society provide online resources to identify suitable plants for garden areas that are aesthetically pleasing but of significant value to local pollinators (www.rhs.org.uk/plantsforpollinators).
- vi Consideration to provision of bat boxes could also be given in respects to the new building. Use of in-cavity boxes such as Ibstock Enclosed Bat Box C provide a long-term solution incorporated into the building.

Figure 5: Ibstock Enclosed Bat Box C



5 REFERENCES

- i Institution of Lighting Professionals and Bat Conservation Trust (2018). Bats and Artificial Lighting in the UK – Bats and the Built Environment Series Guidance Note. 08/18
- ii BS 42020:2013 Biodiversity – Code of Practice for Planning and Development 2013: The British Standards Institution.
- iii Chartered Institute of Ecology and Environmental Management, 2018. Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Winchester: CIEEM.
- iv Chartered Institute of Ecology and Environmental Management, 2017. Guidelines for Preliminary Ecological Appraisal. 2nd ed. Winchester: CIEEM.
- v Chartered Institute of Ecology and Environmental Management (CIEEM), 2019. 'Advice Note: on the Lifespan of Ecological Report and Surveys'. Winchester: CIEEM.
- vi Chartered Institute of Ecology and Environmental Management, 2018. 'Guidelines for Ecological Impact
- vii Collins J eds. 2016. Bat Surveys: Good Practice Guidelines, 3rd Edition. London: Bat Conservation Trust.
- viii Joint Nature Conservation Committee, 2004. Bat Workers Manual. 2nd ed. Peterborough: s.n.
- ix Office of the Deputy Prime Minister, 06/2005. Government Circular: Biodiversity and Geological Conservation - Statutory Obligations and their impact within the planning system. London: ODPM.
- x Department of Communities & Local Government, 2021. 'National Planning Policy Framework', London: DCLG.

6 APPENDIX 1: LEGISLATION AND PLANNING POLICY

6.1 General & Regionally Specific Policies

- i Articles of British legislation, policy guidance and both Local Biodiversity Action Plans (BAPs) and the NERC Act, 2006 are referred to throughout this report. Their context and application is explained in the relevant sections of this report. The relevant articles of legislation are:

- 1) The Environment Act (2021)
- 2) The National Planning Policy Framework (2021)
- 3) ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2021)
- 4) Local planning policies (Staffordshire Moorlands district council)
- 5) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;
- 6) The Wildlife and Countryside Act 1981 (as amended);
- 7) EC Council Directive on the Conservation of Wild Birds 79/409/EEC;
- 8) The Natural Environment and Rural Communities (NERC) Act 2006;

6.2 Bats

- i British bats are fully protected within UK Law under *Wildlife and Countryside Act 1981* (as amended) through their inclusion in Schedule 5. Under the Act, they are protected from:
- Intentional or reckless killing, injury, taking;
 - Damage to or destruction of or, obstruction of access to any place of shelter, breeding or rest;
 - Disturbance of an animal occupying a structure or place;
 - Possession or control (live or dead animals);
 - Selling, bartering or exchange of these species, or parts of.
- ii This law is reinforced by the UK's transposition of the EU Habitats Regulations under *The Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019 (as amended)*. These Regulations also prohibit:
- the deliberate killing, injuring or taking of great crested newt or bats;
 - the deliberate disturbance of any great crested newt or bat species in such a way as to be significantly likely to affect:
 - their ability to survive, hibernate, migrate, breed, or rear or nurture their young; or
 - the local distribution or abundance of that species.
 - damage or destruction of a breeding site or resting place;
 - the possession or transport of great crested newt or bats or any other part of.
- iii Under certain circumstances a licence may be granted by Natural England to permit activities that would otherwise constitute an offence. In relation to development, a scheme must have full planning permission before a licence application can be made.
- iv In addition, seven British bat species are listed as Species of Principal Importance (SPI) under the Natural Environment and Rural Communities (NERC) Act, 2006. These are barbastelle (*Barbastellus barbastellus*), Bechstein's (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe (*Rhinolophus hipposideros*).
- v Under the National Planning Policy Framework 2021 the presence of any protected species is a material planning consideration. The Framework states that impacts arising from development proposals must be avoided where possible or adequately mitigated/compensated for and that opportunities for ecological enhancement should be sought.

6.3 Birds

- i The Wildlife and Countryside Act 1981 (as amended) is the principle legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to recklessly or intentionally:
 - Kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while it is in use or being built;
 - Take or destroy the egg of any wild bird.
- ii For birds listed on Schedule 1 of the Act, it is an offence to disturb any bird while it is building a nest, is at or near a nest with young; or disturb the dependant young of such a bird.
- iii Species listed in Annex 1 of the EU Birds Directive 1994 (e.g. barn owl) are required to have special conservation measures taken to preserve their habitats and sites to be classified as Special Protection Areas (SPAs) where appropriate.