

**Gannock Farmhouse, Gannock Green, Sandon,
Hertfordshire, SG9 0RH
Preliminary Bat Roost Assessment Report**

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The contents of this report have been produced with due consideration of current best practice guidance, and in accordance with the Chartered Institute of Ecology and Environmental Management's Guidelines for Ecological Report Writing (CIEEM, 2017) and the Bat Conservation Trust's guidelines for writing bat reports (Collins, 2023).

Survey data within this report is valid for a maximum of 12 months from the date of the first survey. After this period an updated site visit will be required to determine a new ecological baseline.

This report has been compiled by Jonathan Durward, BSc (Hons) MCIEEM.

	Prepared By:	Checked By:	Date:
Draft	Jonathan Durward		16/01/2025
Final	Jonathan Durward	Rachel Bates BSc (Hons) MSc ACIEEM	23/01/2025

JDEcology

8 Hills View
Great Shelford,
Cambridge
CB22 5AY



Registered in England, No. 7722393
Job number JDE01368

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SUMMARY

In December 2024 JDEcology was commissioned by Mr and Mrs Ashton to undertake an inspection of a loft at Gannock Farmhouse, Gannock Green, Sandon, Hertfordshire, SG9 0RH in relation to roosting bats. The owners wish to convert the main loft in the building to use for storage. The loft forms part of a Grade II Listed Building (Historic England Number: 1307996).

This report summarises relevant biodiversity policy and legislation in regard to the proposal, and the methodologies used to determine and assess potential ecological impacts as a result of any loft conversion works. Results of the site visit are provided, and recommendations have been made as to any requirements for further surveys.

Gannock Farmhouse supports a **confirmed roost** due to the presence of a large number of bat droppings and contained features of **high suitability** for roosting bats (Collins, 2023). The clay roof tiles had gaps underneath them where bats could roost or land and crawl into the loft. The surrounding habitats were assessed as having **high suitability** for commuting and foraging bats: high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats, such as broadleaved woodland, tree-lined watercourses, hedgerows, and waterbodies.

A minimum of three bat activity surveys of the building is required to determine the presence or likely absence of roosting bats, to be carried out between the optimal survey months of mid-May through to August (inclusive).

There is potential for breeding birds to nest in the building, although no sign of nesting birds was seen during the initial inspection. Signs of nesting birds and bird nesting behaviour would be observed during the bat activity surveys. If birds are found to be nesting in the roof, then any loft conversion works will need to be undertaken outside of the breeding bird season (mid-March to mid-August). No further surveys of the building for other protected species are required.

1. INTRODUCTION

1.1 Background

In December 2024 JDEcology was commissioned by Mr and Mrs Ashton to undertake an inspection of a loft at Gannock Farmhouse, Gannock Green, Sandon, Hertfordshire, SG9 0RH in relation to roosting bats.

This report provides a baseline assessment of the ecological interest of the site and provides advice on ecological constraints associated with any demolition/construction works at the site.

1.2 Proposal

The owners wish to convert the main loft in the building to use for storage. The loft forms part of a Grade II Listed Building (Historic England Number: 1307996). The survey area is the building outlined in yellow in Figure 1 below.

1.3 Site Context

The farmhouse is situated to the northwest of the village of Sandon, and the surrounding land around the building consists of a mixture of estate gardens, interspersed with mature broadleaved and coniferous trees, with a lake lying less than 100m to the northeast of the site.

1.4 Survey Objectives

A preliminary bat roost assessment was undertaken to:

- Assess existing on-site features for their potential to support bats;
- Provide recommendations for further surveys if required;
- Evaluate likely ecological impacts of works on bats and their roosts if present; and
- Recommend required mitigation or compensation measures, as well as habitat enhancements if necessary.

Figure 1: Location of Gannock Farmhouse, Gannock Green, Sandon, SG9 0RH
(Source – Google Earth Pro and Magic.Defra.Gov 2024). The building is outlined in yellow.



2. METHODS

2.1 Desk Records

A review of existing statutory sites of nature conservation interest, such as Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Area of Conservation (SACs), National Nature Reserves (NNRs), and Areas of Outstanding Natural Beauty (AONBs) and non-statutory sites, such as Sites of Importance for Nature Conservation (SINCs) was undertaken on www.magic.defra.gov to indicate any existing nature conservation interest within 2km of the site. Jonathan Durward undertook a search of bat licence returns within 2km of the site in December 2024 through the www.magic.defra.gov website.

2.2 Bat Roost Assessment

Jonathan Durward BSc (Hons) CEnv MCIEEM, undertook a bat roost assessment on the 18th of December 2024. Jonathan holds Natural England Class 4 Survey Licence number 2016-11967-CLS-CLS and Class 3 Survey Licence number 2016-11968-CLS-CLS, that for the purpose of this survey allows for the disturbance and handling of bats in all the counties in England.

2.3 Building Survey

An inspection of the building on site was undertaken with the aid of a high-powered Clulite torch and binoculars during daylight hours, to look for evidence of bats and features suitable for use by bats that could offer potential roosting sites following standard survey guidelines (Collins 2023; Mitchell-Jones 2004; Mitchell-Jones & McLeish 2004).

2.4 Assessment of Roost Potential

The building was assessed for its potential to support bat roosts. This involves the consideration of the following factors:

- Light levels;
- Temperature regime and protection from the weather;
- Access to the interior of the building and other roost sites;
- Potential roost sites;
- Building construction; and
- Habitat context

Based on these factors an assessment was made of whether the building might support bats, and the type and numbers of roosts present.

The following may indicate the presence of a bat roost within a building:

- Droppings (these can be found externally, especially in sheltered areas such as window sills, underneath roost entrances or internally within roof spaces);

- Piles of insect remains e.g. moth wings (these are indicative of regular feeding sites used by species such as brown long eared bat);
- Staining at roost entrances or within the roost (urine and oil from fur can leave stains on timbers when bats are gathered for long periods); and
- Bats (live or dead).

Buildings may offer potential roosting sites in locations such as:

- The top of the gable end or dividing walls;
- The top of the chimneybreasts;
- Ridge and hip beams and other roof beams;
- Mortise and tenon joints;
- All beams (free hanging bats);
- The junction of roof timbers, especially where the ridge and hip beams meet;
- Behind purlins;
- Between tiles and roof lining;
- Under flat felt roofs;
- Gaps and cracks in exterior walls, which provide access to a wall cavity;
- Under barge boards and soffits;
- Under lead flashing or cladding; and
- Under roof coverings

This list is not exhaustive.

Table 4.1 in the Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement (from *Bat Surveys for Professional Ecologists – Good Practice Guidelines*; Collins, 2023). This table with relevance to structures and potential roost features (PRFs) is reproduced below as Table 1.

Table 1 – extracted from Table 4.1 in the Bat Surveys for Professional Ecologists – Good Practice Guidelines (Collins, 2023).

Suitability	Description of Roosting habitats	Potential flight-paths and foraging habitats
None	No habitat features on site which are likely to be used by any roosting bats at any time of the year.	No habitat features on site which are likely to be used by any commuting or foraging bats at any time of the year.
Negligible	No obvious habitat features on site likely to be used by roosting bats. There may be features where a bat could roost, but which are unlikely to be utilised due to another attribute	No obvious habitat features on site likely to be used as flight paths or by foraging bats. There may be features where a bat could forage, but which are unlikely to be utilised due to another attribute.

Suitability	Description of Roosting habitats	Potential flight-paths and foraging habitats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis by larger numbers of bats (i.e., unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).	Habitat could be used by a small number of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e., not very well connected to the surrounding landscape by another habitat. Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only such as maternity and hibernation – the categorisation in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity and classic cool/stable hibernation site	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used by regularly commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and parkland. Site is close and connected to known roosts.

If the preliminary roost assessment has confirmed the presence of roosting bats in the building in question, then roost characterisation surveys will be required. The results from these will inform the impacts of loss of roost(s) and mitigation and/or compensation required. If the preliminary roost assessment has confirmed that the building in question is not suitable for roosting bats, then no further action is required with respect to bat roosts in the building.

2.5 Nesting Birds

During the inspection of the loft, signs of nesting birds were noted.

2.6 Other Protected Species

On-site habitats were not suitable for other protected species.

2.7 Survey Limitations

Due to the height of the building, it was not possible to closely inspect the roof of the building using a ladder, Ridgid CA300 endoscope and a hand torch, which would be standard survey procedure. The building and roof could only be inspected from the ground level on the outside of the building.

The list of bat records within 2km of the site only shows what species are in the area that have been part of European Protected Species Licence applications for developments. These records are not likely to include every single bat record within 2km of the site given that the site is in a rural area.

It should be noted that this bat roost assessment provides baseline data at the time of the survey only and does not include information on the presence of bats at different times of the year. The survey was undertaken during the day in late November when bats are not likely to be active.

3. RESULTS

3.1 Desk Records

The relevant results of the records search including existing bat data within 2km of the site using www.magic.defra.gov, are included in this report.

There are no statutory or non-statutory nature conservation areas within 2km of the site. Habitats of Principal Importance within 2km of the site include Chalk Rivers, Good quality semi-improved grassland, Ancient Woodland, Deciduous Woodland, Ponds and Lakes.

Bat records

A search using www.magic.defra.gov revealed that two European Protected Species Licences (EPSL's) had been granted for bats 1.1km (2019) and 0.9km (2010) southwest of the site. In 2019, the EPSL was granted for Brown long-eared *Plecotus auritus* and Natterer's *Myotis nattereri* maternity roosts and Common Pipistrelle *Pipistrellus pipistrellus* and Barbastelle *Barbastellus barbastellus* day roosts in a barn. In 2010, the EPSL was granted for Brown long-eared, Natterer's and Common Pipistrelle roosts, at least one which would have been a breeding colony.

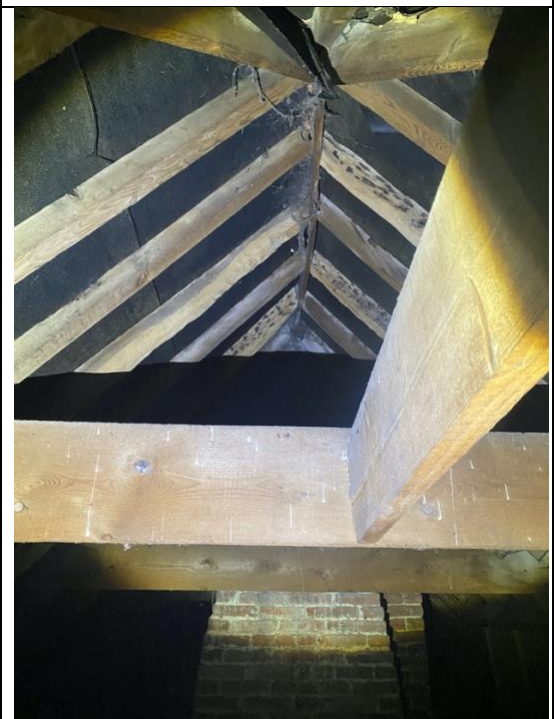
3.2 Building Inspection

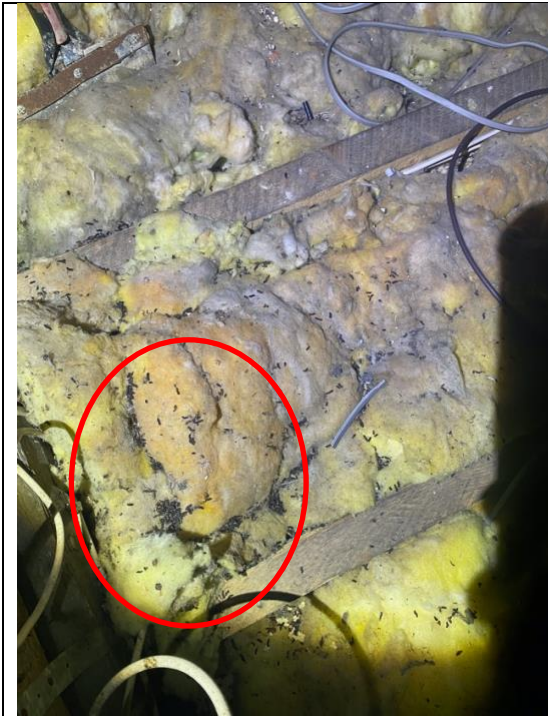
The loft is part of a detached double-storey brick-built Grade II Listed Building which is likely to have been constructed sometime in the 16th Century, with remodelling and extensions in the 18th and 19th Centuries. The complex roof is hipped with a number of different elevations (see Table 2), and the roof tiles are of clay composition. The loft predominantly runs along the northwestern and southwestern elevations of the roof and is L-shaped, rising to a height of approximately 3 metres at the ridge. Internally, the loft is constructed of timber frames and rafters, with bitumastic felt insulation between the rafters and the roof tiles and roll loft insulation on the floor of the loft.

The building was a **confirmed roost** and classified as having features of **high suitability** for roosting bats at the time of survey due to the presence of a large number (hundreds) of bat droppings of various ages spread throughout the loft. The droppings are likely to belong to the genus *Plecotus* (Long-eared bat). Given the height of the building, it was not possible to inspect the roof close-up, but it is likely that bats are gaining access to the loft through gaps under roof-tiles around the chimney on the western elevation of the roof (see Table 2). Given the number of droppings and the range of ages, it is likely that the loft is being used as a maternity roost in the summer months. An inspection of the loft on the 18th of December 2024 did not reveal any live bats to be present.

No signs of bird's nests were seen inside the loft.

Table 2 – Photos of the Gannock Farmhouse and loft.

	
Looking at the building and roof from the west	Looking at the building and roof from the south
	
Looking at the building and roof from the southeast	Looking at the building and roof from the northeast
	
Loft insulation and bat droppings just inside the loft the hatch	Timber supports, rafters and bitumastic felt insulation in front of the central chimney



Brown long-eared droppings on the floor insulation



Brown long-eared droppings on floor below the ridge of the roof



Timber rafters inside loft space.



Central chimney inside loft space



3.3 Surrounding Habitats

The building is situated to the northwest of the village of Sandon, and the surrounding land around the building consists of a mixture of estate gardens, interspersed with mature broadleaved and coniferous trees, with a lake lying less than 100m to the northeast of the site. The habitats were assessed as having **high suitability** for commuting and foraging bats: high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats, such as broadleaved woodland, tree-lined watercourses, hedgerows, and waterbodies.

Birds will likely nest in the buildings on site, surrounding broadleaved and coniferous trees.

4 DISCUSSIONS AND RECOMMENDATIONS

4.1 Evaluation

Bat records

The data showed four species within 1.1km of the site, with at least three maternity roost records from buildings around Sandon (in 2019 and 2010). Brown long-eared and Natterer's maternity roosts with Common Pipistrelle and Barbastelle day roosts being present.

Given the lack of buildings in this area, once bats have been excluded from one building, they are likely to try and find another suitable one nearby to roost in. Brown long-eared and Common Pipistrelle are common and widespread species in the United Kingdom, Natterer's is less common but still widespread and Barbastelle is one of the United Kingdom's rarest bat species but known to be quite widespread in Hertfordshire, Cambridgeshire, and Essex.

Roosting, Commuting and Foraging Habitats for Bats

Gannock Farmhouse supports a **confirmed roost** and contains features of **high suitability** for roosting bats (Collins, 2023). The clay roof tiles had gaps underneath them where bats could roost or land and crawl into the loft. Bats can crawl through a gap of less than 15mm, so even if bats or signs of bats were not seen on the outside of a roof during the initial building inspection, they can still be present in a roof space, having entered the building at a different location to the one surveyed. The number of droppings spread throughout the loft, with several distinct clusters of droppings, indicates that it is likely that this area is being used as a maternity roost in the summer months. Given the location of this building immediately adjacent to highly suitable habitats, with a river close by, commuting and/or foraging bats may use the building to roost in on an opportunistic basis.

The on-site habitats were assessed as having features of **high suitability** for flightpaths and foraging bats: high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats, such as broadleaved woodland, tree-lined watercourses, hedgerows, and waterbodies.

Birds

Bird's nests may be present internally or externally in the building, with the possibility of them nesting underneath the roof tiles.

Other Protected Species

The on-site habitats were not suitable for other protected species.

4.2 Recommendations

All bat roosts are protected by law whether they are in occupation or not. Bats are highly mobile animals, frequently changing roosting sites and may potentially be within a building at any time.

Gannock Farmhouse supports a **confirmed roost** and contains features of **high suitability** for roosting bats. A minimum of three activity surveys of the building is required to determine the presence or likely absence of roosting bats, to be carried out between May and August inclusive. Each survey is required to be at least 3 weeks apart, so three surveys can only be undertaken in a minimum period of 6-7 weeks. If bats are found roosting in the building during the activity surveys, then there will be a requirement for a European Protected Species mitigation licence from Natural England to enable any loft conversion works to go ahead. If no bats are found to be emerging from the building during the activity surveys, at the time the loft conversion starts then ecological supervision will be required.

Should a bat be found at any time, works must cease immediately and the project ecologist must be asked for advice on how to proceed.

If birds are found to be nesting in the loft, then where feasible, loft conversion works should be undertaken outside of the breeding bird season (mid-September through to mid-March). If works are likely to take place during the bird-breeding season (mid-March through to mid-August), then a watching brief or pre-works check will be necessary to check for any active bird nests.

5 REFERENCES

- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, September 2018. Chartered Institute of Ecology and Environmental Management, Winchester, online at <https://www.cieem.net/data/files/ECIA%20Guidelines.pdf>
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- The Natural Environment and Rural Communities Act 2006. London: HMSO
- Wildlife and Countryside Act 1981 (and amendments), (c.69), London: HMSO

Environment and Biodiversity

Section 15 of the National Planning Policy Framework 2023 (NPPF) 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.

Species and Habitats of Principal Importance for the conservation of biodiversity in England are covered under Section 41 of the Natural Environmental and Rural Communities (NERC) Act (2006) (JNCC, 2009). Species and habitats listed within Section 41 need to be taken into consideration by a public body when performing any of its functions, such as assessing planning applications.

Bat species listed within Section 41 include Barbastelle *Barbastella 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*.

Wildlife Legislation

The information below is intended only as guidance to the legislation relating to these species. The Acts themselves should be referred to for the correct legal wording.

In England, Scotland and Wales all bat species are protected under the Wildlife and Countryside Act (WCA) 1981 (as amended) through inclusion in Schedule 5. The existing offences under the WCA, which cover the obstruction of places used for shelter or protection, disturbance and sale still apply to European protected species.

In England and Wales, the WCA is amended by the Countryside Rights of Way Act 2000 (CRoW), which adds an extra offence ('or recklessly' to S9(4)(a) and (b)), makes species offences arrestable, increases the time limits for some prosecutions and increases penalties. All bats are included in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), which implement the requirements of the Habitats Directive in England, Scotland and Wales and in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations (Northern Ireland) 2019 (as amended), which implement the requirements of the Habitats Directive in Northern Ireland. Bats and their breeding sites or resting places are protected under Regulation 39.

It is an offence to:

Intentionally or recklessly/deliberately injure, take or kill a bat;

To possess a bat (unless obtained legally) alive or dead;

Intentionally or recklessly/deliberately damage, destroy or obstruct access to any place that bats use for shelter or protection whether bats are present or not;

Intentionally or recklessly/deliberately disturb a bat while it is occupying a structure or place that it uses for shelter or protection; and

Deliberately disturb bats in such a way as to be likely to significantly affect – The ability of any significant group to survive, breed, or rear or nurture their young; or the local distribution or abundance of that species.

Prosecution could result in imprisonment, fines of £5,000 per animal affected and confiscation of vehicles and equipment used.

This legislation provides defences so that necessary operations may be carried out in places used by bats, provided the appropriate Statutory Nature Conservation Organisation (in England this is Natural England) is notified and allowed a reasonable time to advise on whether the proposed operation should be carried out and, if so, the approach to be used. The UK is a signatory to the Agreement on the Conservation of Bats in Europe, set up under the Bonn Convention. The Fundamental Obligations of Article III of this Agreement require the protection of all bats and their habitats, including the identification and protection from damage or disturbance of important feeding areas for bats.

Paragraph 98 of Circular 06/2005 states that 'the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat'.

Exemptions can be granted from the protection afforded to bats under the Habitat Regulations, by means of an EPS (European Protected Species) Habitats Regulations licence obtained from Natural England.

An 'EPS Habitats Regulations Licence' could be required for:

Demolition of a building known to be used by bats prior to development of a site

Conversion of barns or other buildings to be used by bats

Removal of trees known to be used by bats as well as tree pruning

Significant alterations to roof voids known to be used by bats

Road building or widening

Bridge strengthening

There are three tests which must be satisfied before a licence can be issued to permit otherwise prohibited acts;

Regulation 44(2)(e), for the purpose of preserving 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; or

Regulation 44(3)(a) and there is no satisfactory alternative; and

Regulation 44(3)(b) that the action authorised will not be detrimental to the maintenance of the species concerned at favourable conservation status in their natural range.

A European Protected Species Licence is required before the commencement of any development that might impact on bats and their roosts.

Birds

Breeding birds (all species) are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure or take any wild bird and to take, damage or destroy the nest (whilst being built or in use) or eggs. Schedule 1 species are afforded additional protection from disturbance at or near nest sites, including reckless disturbance under the Countryside Rights of Way Act 2000.