

PURE ECOLOGY

The Great Tythe Barn

Folly Farm, Long Newnton

Tetbury, Gloucestershire

GL8 8XA

Protected Species Report



February 2024

PURE ECOLOGY



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	Name	Position	Date
Prepared by	Anton Kattan MCIEEM	Director	09/02/24

Pure Ecology
Studio 1
Old Cottage Hospital Studio
The Homend
Ledbury
Herefordshire
HR8 1ED

info@pureecology.co.uk
www.pureecology.co.uk
07870 668 974

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1 Introduction

1.1 Background

The client is seeking Listed Building Consent from Cotswold District Council for renovation of Great Tythe Barn, Folly Farm, Long Newton in Tetbury, Gloucestershire, GL8 8XA. The Site is also located within an Area of Outstanding Natural Beauty and Conservation area and Great Tythe Barn (hereafter referred to as ‘the barn’) is Grade II Listed. It was originally part of a working dairy farm, but was converted in 1992 and it has now been operating as a wedding and event venue for a number of years.

Planning approval is sought for the re-roofing of the barn.

<p><i>Figure 1a. Site Location</i></p>	<p><i>Figure 1b. Location of Great Tythe Barn at Folly Farm</i></p>
	
<p><i>Taken from the Design, Access and Heritage Statement by Rural Architecture</i></p>	

1.2 Site Description

The Great Tythe Barn, is an 18th-century grade II listed building that is located on the B4014 Newton Road on the outskirts of Tetbury, at Ordnance Survey grid reference ST 89573 92925. The barn is positioned approximately 60m east of Folly Farmhouse, which is also a grade II listed building. The property is located approximately 170m from the River Avon, at its nearest point.

The barn is constructed from rubble stone with quoin and stone slate roof. The barn layout has two pairs of opposing projecting gabled cart entries, on the south-west and north-east elevations. There are also two dormers of the south-west aspect of the roof and various other openings associated with the barn’s traditional style, including a segmental headed pitch hole with dressed stone surround in the south gable, a plain pitch hole on the north gable and slit vents along the building elevations. On the outer side of each western entry is a three-bay lean-to open with tapering rubble pillars marking bays. There is a ground floor room with lower lean-to roof against the south-east gable and a lower pitched roof over an extension at the north-west end.

The barn was refurbished in 1992 and is currently used as a wedding venue. All doorways and openings are glazed or blocked. The ground floor accommodates an office, laundry room, bar area and cloakroom and toilets around the main hall. There is an internal partition wall, but with large doorway openings to create an open space. There is a mezzanine floor at the north-east end that connects to a first-floor gallery area via a walkway bridge. The barn interior is open to the roof, which has a traditional frame with plastered ceiling, and there are extractor fans over the mezzanine and gallery floor.

The grounds of the barn accommodate a venue carpark to the east with landscaped gardens for weddings to the west. The gardens are surrounded by former farm buildings that have been converted to provide overnight accommodation at the venue.

<p><i>Photo 1. North-east elevation view of the barn from the car park</i></p>	<p><i>Photo 2. South-west elevation from the garden shows the lower roof of the extension on the north-west gable</i></p>
	

1.3 Proposed Scheme

An ecological assessment is required to support a Listed Building Consent application for building renovations to The Great Tythe Barn. Planning approval is sought for the re-roofing of the barn, as the existing tiles and membrane below are failing and if left to deteriorate further, this would pose a risk of affecting the remaining fabric of the building. The proposed external roof tiles are to match the existing ones. A summary of the work specification is shown on the drawing by Rural Space Architecture in Appendix A, and includes:

- New roof lights (replacing existing)
- New galvanised gutters.
- New rainwater goods
- Lead roof to bar extension

1.4 Scope of the Study

Pure Ecology has been commissioned to undertake a protected species survey and assessment of The Great Tythe Barn (Figure 1b). The survey included a bat roost inspection that was undertaken by Anton Kattan (Natural England bat survey licence Level 2 Class CL18, Licence No. 2015-12201-CLS-CLS), a consultant ecologist with 23 years' professional experience and full members of the Chartered Institute of Ecology and Environmental Management.

The survey concentrated on identifying the presence of roosting bats, and other protected species (i.e. nesting birds), inhabiting or using the barn. This report sets out the findings of the surveys and where necessary makes recommendations for actions to ensure the proposed development complies with nature conservation legislation and biodiversity policy.

Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC Act) requires all public bodies to have regard to biodiversity conservation when carrying out their functions. Under the NERC Act the local planning authority should not determine a consent if there are any surveys outstanding for European protected species. The National Planning Policy Framework (NPPF), July 2021, requires the planning system should conserve and enhance the natural environment (Section 15) by, *inter alia*, 'protecting and enhancing sites of biodiversity value' and 'minimising impacts and providing net gains for biodiversity' (para 174) and 'protection and recovery of priority species' (para 179).

Further details of the policy context for the ecological assessment is in Section 2 and legislation relevant to this study is summarized in Appendix B. The protection afforded to species by the legislation has informed the scope of the ecological studies undertaken to determine baseline conditions and guided measures that will protect and benefit valued ecological resources associated with this site and Proposed Scheme.

2 Planning Context

2.1 National

The National Planning Policy Framework (NPPF), July 2021, requires that the planning system should conserve and enhance the natural environment (Section 15) by, *inter alia*, 'protecting and enhancing sites of biodiversity value' and 'minimising impacts and providing net gains for biodiversity' (para 174).

Scheme plans should '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' (para 179).

Local planning authorities should aim to protect and enhance biodiversity by applying the following principles (para 180):

- 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 border 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 or 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 incorporate biodiversity improvements 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.

2.2 Cotswold District Council

Cotswold District Local Plan 2011-2031 (Adopted 3 August 2018) sets out the relevant biodiversity policies relevant to this assessment as follows:

EN8: BIODIVERSITY AND GEODIVERSITY: FEATURES, HABITATS AND SPECIES

1. Development will be permitted that conserves and enhances biodiversity and geodiversity, providing net gains where possible.
2. Proposals that would result in significant habitat fragmentation and loss of ecological connectivity will not be permitted.
3. Proposals that reverse habitat fragmentation and promote creation, restoration and beneficial management of ecological networks, habitats and features will be permitted, particularly in areas subject to landscape-scale biodiversity initiatives. Developer contributions may be sought in this regard.
4. Proposals that would result in the loss or deterioration of irreplaceable habitats and resources, or which are likely to have an adverse effect on internationally protected species, will not be permitted.
5. Development with a detrimental impact on other protected species and species and habitats “of principal importance for the purpose of conserving biodiversity” will not be permitted unless adequate provision can be made to ensure the conservation of the species or habitat.

EN9: BIODIVERSITY AND GEODIVERSITY: DESIGNATED SITES

International Sites

1. Internationally designated wildlife sites (including proposed sites and sites acquired for compensatory measures) will be safeguarded from development that could cause a significant effect that would adversely affect their integrity.

National Sites

2. Development that is likely to have an adverse effect upon a nationally designated nature conservation site will not be permitted unless the benefits of development at the site clearly outweigh the impact development is likely to have both on (a) its special features and (b) the national network of Sites of Special Scientific Interest. Where a proposal is permitted appropriate mitigation or compensation will be required.

Local Sites

3. Development proposals that are likely to cause significant harm to locally identified wildlife sites and Local Nature Reserves, where such harm cannot be satisfactorily mitigated or adequately compensated for, will not be permitted unless it can be demonstrated that the benefits of the proposal clearly outweigh the impact of the development on the nature conservation value of the site.
4. Development should maintain Local Geological Sites for their scientific and educational value. Development that significantly adversely affects local geological features will be permitted only where comparable sites can be identified or created elsewhere, or the impact can be adequately mitigated through other measures.

3 Methodology

3.1 Desk Study

The DEFRA Multi-Agency Geographical Information for the Countryside (MAGiC) website was reviewed for European and nationally designated sites (including bat sites) and granted bat / great crested newt European Protected Species (EPS) licences within 2km of The Great Tythe Barn. Online mapping and aerial photograph resources such as GoogleEarth and Bing Maps (www.bingmaps.com) were also consulted for contextual information. The MAGiC website was consulted in January 2024.

3.2 Bats

3.2.1 Visual Inspection

A bat roost inspection and protected species survey of the barn was undertaken on 14th July 2023. The weather was overcast with spells of rain, but wind conditions were light (Beaufort Scale 2) and the temperature was 15°C.

The survey was undertaken by a licensed bat surveyor in accordance with Bat Conservation Trust guidelines (Collins, J (ed.), 2016).

The survey included an internal and external inspection of the barn looking for signs of, or the potential for, the building to support roosting bats. A ladder, high-powered torch, endoscope and binoculars were all available and were used where necessary to examine spaces, crevices and other small spaces suitable for roosting bats to occupy.

Evidence of bat presence/occupation includes:

- Droppings.
- Urine staining.
- Feeding remains (such as moth wings).
- Smudge marks and scratches around potential bat roost holes.
- Live roosting bats, bat skeletal remains or dead bats.

Conditions indicating an absence of bats can include the presence of established spider webs, bird nesting material, wasp nests (especially blocking potential entrances) and live sheltering/hibernating butterflies/moths and other insects.

The suitability of the buildings to support roosting bats was assessed according to the following categories:

1. *Negligible potential/not a roost*: no suitable features
2. *Low potential*: one or more suitable features that could be used by individual, or very low numbers of bats opportunistically

3. **Moderate potential:** one or more suitable features that could be regularly used by bats, but sub-optimal conditions may limit the potential for breeding or hibernating bats
4. **High potential:** one or more roost features that are suitable for use by a colony of bats on a regular basis and may support a maternity or hibernation site
5. **Confirmed roost:** evidence of current/ recent bat occupation.

3.2.2 Dusk and Dawn Bat Activity Surveys

The building appraisal for bats from the visual inspection on the 14th July 2023 (Section 3.2.1) assessed the barn as having moderate to high suitability for roosting. Two dusk and one dawn nocturnal surveys were therefore undertaken in accordance with guidance for professional survey standards (Collins J (ed.), 2023), which advocates a proportionate level of survey for buildings with the potential to support roosting bats. The survey protocol also had regard to the Interim Guidance Note 'Use of night vision aids for bat emergence surveys and further comment on dawn surveys' (2022).

The dusk and dawn surveys were scheduled between July and September 2023 to determine the presence of bats during the breeding season, covering the period when maternity roosts are formed and mating activity takes place. The timings and weather conditions for the bat surveys are shown in Table 1.

The four surveyor vantage points shown on Figure 2 provided suitable coverage of each barn elevation. The majority of the potential bat roost features were associated with the roof and bat access points identified during the visual inspection visit (detailed in Section 4.2) were closely monitored.

- Each surveyor was equipped with a full-spectrum bat detector that could record bat calls for subsequent species identification using Wildlife Acoustic's Kaleidoscope computer software (version 5.4).
- Each surveyor was also equipped with an Infra-Red (IR) camera, which was used as a static, fixed location observation point. Canon XA cameras (XA11, XA40 and XA65) were used with IR torches or lamps that "illuminated" the cameras' field of view.
- Two surveyors had Nightfox Whisker binocular Night Vision Aids (NVA) (see Figure 2) (although ambient light levels at the site were high).

Surveyors used Elekon BatloggerM, Titley Anabat Express Scout and Wildlife Acoustic EM Touch Pro bat detectors that record bat echolocation calls on time-stamped files that can be linked to the roost emergence time of bats recorded on the cameras. Surveyors were able to move around the IR camera's fixed location when watching for bats, a method that is particularly useful during dawn surveys.

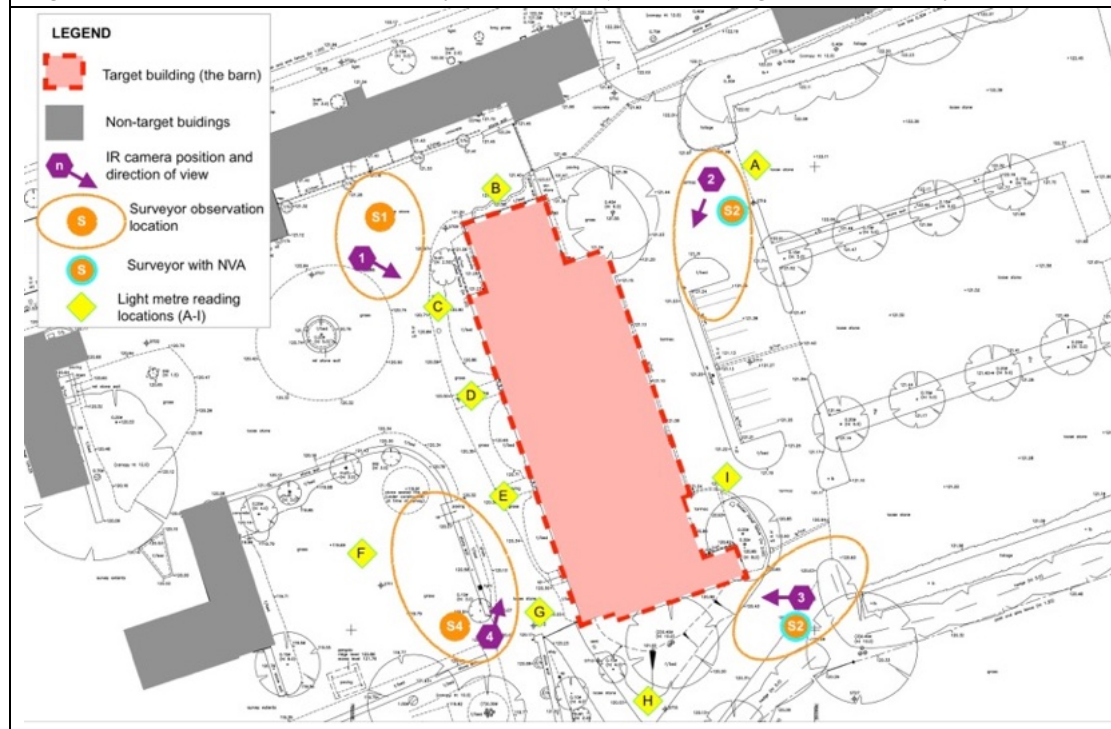
There is extensive lighting within the grounds of the barn and light level readings from nine sampling locations (shown on Figure 2) were measured using an INFURIDER

Digital Light Lux Meter YF-881D after the dusk bat survey on the 21st August 2023. The handheld meter can accurately measure luminance in the range 0.1-400,000Lux, with high accuracy: +/-4% rdg +/-0.5%f.s(20,000Lux).

Table 1. Dusk and Dawn Survey Details

Date (2023)	Survey Period (hrs)	Sunrise & Sunset (hrs)	Weather
19 th July	21:00 – 23:00	21:20	Temp range 14-13°C, 0% cloud Wind BF 2 Dry
21 st August	20:25 – 22:15	20:39	Temp range 17-19°C, 50% cloud Wind BF 1 Dry
29 th September	05:15-07:10	07:05	Temp range 14-13°C, 100% cloud Wind BF 2 Dry

Figure 2. Dusk and dawn bat survey observation points and light meter survey



3.3 Personnel

The surveys were undertaken by a professional team of consultant ecologists.

Visual Inspection

- Mr. Anton Kattan MCIEEM, 24 years' experience and a licenced bat worker (Natural England CL18 2015-12201-CLS-CLS)

Phase 2 bat surveys

- Mr. Anton Kattan
- Mr. Rob Spencer, 18 years' experience and a licenced bat worker (Natural England CL18, Licence No. 2015-14778-CLS-CLS)
- Mr. Phil Vincent 22 years' experience and a licenced bat worker (Natural England CL18, Licence No CL18 2020-49360-CLS-CLS).
- Mr. Dominic Hill (5 years' experience, including advanced bat survey for radio tracking studies)
- Dr. Andrew Freeman-Hall (7 years experience).

3.4 Study Limitations

There were no survey limitations– all external and internal areas of the barn were accessible and the dusk bat surveys comply with industry professional standards for assessing the presence or likely absence of bats. Dusk surveys were undertaken during dry weather conditions (with the August having been postponed due to heavy rain on the 14th August).

4 Results

4.1 Desk study

The Great Tythe Barn falls within an “Impact Risk Zone” (IRZ) for a Sites of Special Scientific Interest (SSSI). IRZ's are a tool developed by Natural England to make a rapid initial assessment of the potential risks to SSSIs within defined zones, which reflect the particular sensitivities of the features for which the SSSI is notified and indicate the types of development proposal which could potentially have adverse impacts. The Proposed Scheme at The Great Tythe Barn does not fall within any of the development categories defined for the IRZ.

There are no statutory designated wildlife sites within 1km of The Great Tythe Barn. The nearest statutory designated site is Veizey's Quarry SSSI, 1.95km northwest of the barn. This is a 1.4 hectare geological SSSI.

NatureSpace District Licensing Scheme for great crested newts places The Great Tythe Barn on the boundary between a “red risk zone” and “amber risk zone” on the Cotswold District Impact Map. This indicates it is in an area with highly suitable habitat for great crested newts. Natural England's great crested newt eDNA and

Habitat Suitability Index (HIS) survey results for ponds surveyed for District Level Licensing confirmed the following:

- Great crested newts were present in three ponds that are located between 1.14-1.83 km north of The Great Tythe Barn (surveyed between 2014 and 2018). Additionally, there has been one granted EPS licence for great crested newts for one of these ponds (located at ST892947) in 2013 (ref. EPSM2012-4578)
- Great crested newts were absent from two ponds that are located 1.5km west and 1.54km southwest of The Great Tythe Barn (surveyed in 2018).

The nearest pond shown on OS mapping is 240m north of the barn.

Natural England's dataset of granted EPS licences shows that there is one Bat Mitigation Licence within 2km (ref. 2020-49029-EPS-MIT). This is for a property 1km south of The Great Tythe Barn and the mitigation licence was granted for works that damaged/destroyed a non-breeding roost for lesser horseshoe (*Rhinolophus hipposideros*) brown long-eared (*Plecotus auritus*) and soprano pipistrelle bats (*Pipistrellus pygmaeus*) in 2020.

4.2 Building Appraisal

The Great Tythe Barn is a traditional threshing barn, first listed in 1987. The *Design, Access and Heritage Statement: Re-Roofing* by Rural Space Architects (dated February 2024) provides a photographic record of the barn conversion that was done in 1992 and comparison with Photos 1 and 2 in Section 1.2 shows the barn was under similar use and management as present.

Superficially, the barn appears to be in a well-maintained condition, with the roof being complete and the external stone walls well-pointed and sealed. There are gaps between the roof slates because of the natural variation in the stone tiles and features such as those shown on Figure 3 were noted as providing potential access points for bats to shelter within the building fabric of the barn. These features described in Table 2 are illustrative of the array of potential access points for bats to roost within external crevices of the building fabric.

The barn does not have a loft and the entire building interior is occupied space for the wedding venue and office facilities. There are no enclosed voids for roosting bats, or other protected species to shelter within the barn interior.

Figure 3. Potential bat access points on the barn exterior (F1-F10)

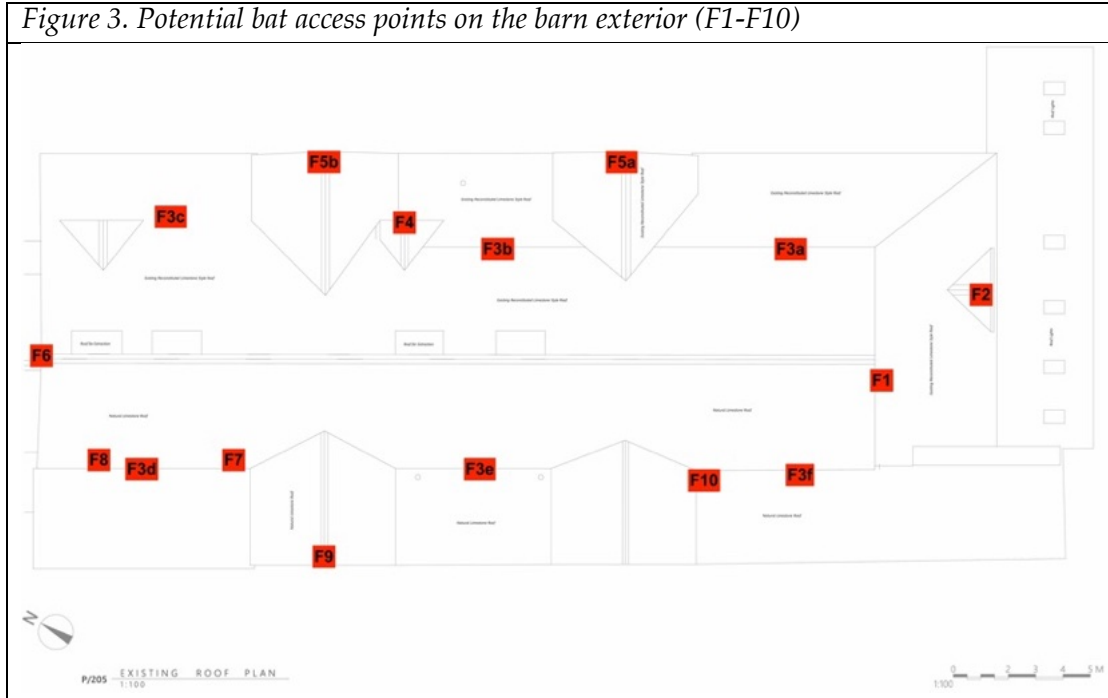








Table 2. Potential bat access points within the barn exterior

Ref. Fig.3	Feature	Photograph
F1	Gaps between stone blocks at the apex of the gable wall	
F2	Broken vent provides access to void in dormer	
F3 (a-f)	Continuous gap where the main roof meets lower, lean-to roofs. This feature is present on both elevations of the barn.	

Ref. Fig.3	Feature	Photograph
F4	Lead flashing at the edge of the dormer is lifted. The hanging tiles are also a feature of the dormer that bats may be able to shelter behind	
F5 (a-b)	Small gaps above the doorway lintels because of rot within the beam	
F6	A series of holes in the northwest gable wall	
F7	A crack in the wall that has formed a relatively deep vertical crevice.	

Ref. Fig.3	Feature	Photograph
F8	Holes, similar feature to F6.	
F9	Gaps under end tiles on the gable end of the doorway roof	
F10	Gaps under the end tiles at the eaves of the doorway roof	

The barn is situated within landscaped grounds with a venue car park on the eastern side of the building and the garden on the western side, which is also surrounded by accommodation buildings for guests and the farmhouse. The carpark and pedestrian pathways are graveled and the garden has lawned areas bordered by ornamental flower beds. There are external lights on the four doorway entrances to the barn (northeast and southwest elevations) and decorative lighting for wedding events in the garden, as shown on Photos 3 and 4. The light meter readings (taken on the 21st August) are listed in Table 3.

Table 3. Table 1. Existing Lux Levels at The Great Tythe Barn

Sampling Point	1.8m AGL Lx
A	3.2
B	0.14
C	10.03
D	2.05
E	6.14
F	22
G	1.48
H	0.01
I	2.08 / 11.33*
*Light readings taken when PIR security light was OFF / ON	



4.3 Bats

No evidence of current or previous roosting activity from bats was recorded during the initial building inspection on the 14th July 2023, but the barn was classified as Category 3 -4 (moderate to high suitability) because of the traditional characteristic of the building and the array of potential roost features on the barn exterior for crevice - dwelling bats.

No bats were recorded roosting in the barn during the two dusk and one dawn survey undertaken between July and September 2023.

Bat activity within the immediate vicinity was very low and limited to few species. The majority of the activity was from common pipistrelle bats (*Pipistrellus pipistrellus*) passing the barn, with very occasional, short bouts of foraging in the car park area by individual animals. Noctule (*Nyctalus noctule*) and a possible serotine (*Eptesicus serotinus*) were recorded from observation points S1, S2 and S4, but they were passing over the site and were not close to the barn.

Table 4. Bat Activity Recorded at The Great Tythe Barn

Surveyor position (Fig 2)	Bat species	Number of bat passes* (2023)		
		17 th July	21 st Aug	29 th Sept
S1	Common pipistrelle	4	1	2
	Noctule	1	2	0
S2	Common pipistrelle	9 (f)	1	4
	Noctule	0	2	0
S3	Common pipistrelle	14 (f)	18 (f)	3
	Brown long-eared	1	3	1
	Myotis sp.	1	0	0

Surveyor position (Fig 2)	Bat species	Number of bat passes* (2023)		
		17 th July	21 st Aug	29 th Sept
S4	Common pipistrelle	5	4	4
	Serotine	1	1	0
	Noctule	0	4	0
*Notes Bat pass – count of number of encounters recorded on the bat detector (f) – denotes occasional foraging activity recorded				

4.4 Other protected species

There was no evidence of active or previous nesting birds on the exterior of or within the interior of the barn. There are no opportunities for barn owl (*Tyto alba*) to nest in the building.

The Proposed Scheme is to repair the roof of the barn and therefore the ecological assessment is primarily concerned with protected species associated with buildings. Furthermore, the grounds of The Great Tythe Barn are unsuitable for ground dwelling species, such as reptiles and amphibians. The car park is graveled and the garden area is regularly tended, with lawned areas frequently mown to maintain a very short, even sward. Regularly mown amenity grassland does not provide any shelter or refuges for ground dwelling animals. The area is also heavily lit, which will deter many nocturnal species.

5 Conclusions

The Proposed Scheme at The Great Tythe Barn is not within close proximity to any statutory designated wildlife sites. Although it is within a SSSI IRZ, it does not fall within any of the development categories defined for the IRZ. The barn is part of an established property on the outskirts of Tetbury, and whilst there are semi-natural habitats within the wider landscape, there are no impact pathways to wildlife areas such as the River Avon. The scale of the development proposals are contained within the existing site.

Great Tythe Barn is not used by roosting bats and is not a significant resource for any local bat populations. Artificial light from the existing venue lighting scheme is high and the building exterior is heavily lit. This is likely to be a deterrent to many bat species that are light adverse and favour dark habitats in areas that are below 0.5 lux. The immediate surrounding grounds of the barn do not support wildlife habitats and therefore the Proposed Scheme is not predicted to impact any other protected species.

The proposed repairs and replacement of the roof will be like-for-like and the barn will retain features of the traditional building that can provide opportunities for wildlife, such as gaps between stone tiles that can provide shelter for roosting bats and holes in

the stone walls for nesting birds. Artificial features are therefore not required for mitigation, but nest boxes for swifts (*Apus apus*) are proposed as ecological enhancement to encourage this particular species to breed at the site. Bat boxes to be erected on trees along the driveway to the barn is recommended as this will create new roosting opportunities within a dark habitat for bats at the site. This will help deliver biodiversity net gain.

The bat surveys have established with reasonable certainty roosting bats are currently absent from the barn and it is concluded that a Bat Mitigation Licence under the provisions of The Conservation of Habitats and Species Regulations 2017 is not required for the Proposed Scheme (see Appendix A). Bats are a mobile species however, and given the barn has bat roost potential, recommendations for careful working methods during the roofing work have been provided in Section 6.1.

The Great Tythe Barn is within the amber or red risk zone for great crested newts (see Section 4.1) and the nearest pond is 240m from the site, but habitats within and immediately adjacent to the barn have negligible suitability for this species. The likely presence of great crested newts can therefore be discounted with adequate certainty to conclude the scheme will not impact this protected species and does not require District licensing under the provisions of the Conservation of Habitats and Species Regulations 2017.

No further ecological survey is required for the Proposed Scheme (see Section 3.4).

6 Recommendations

6.1 Mitigation

6.1.1 Work Schedule / Timetable

There are no specific timing constraints for ecology, but scheduling the roofing work outside of the bird breeding season (March to August) and bat activity season (May to September), minimizes the risk of nesting birds or roosting bats unexpectedly being present during the building renovations. The optimal period for the work schedule is therefore between October and April, with consideration given to the following constraints:

- The optimal months to commence the roof strip are March, April and October as this avoids the winter bat hibernation period.
- Ideally the roofing work should be completed before the start of the following bat activity season and therefore the work schedule would need to conclude before the start of May.

6.1.2 Toolbox Talk and Ecological Supervision

Prior to commencing the building activities, a licenced bat worker will provide a toolbox talk to the applicant / building contractor that will cover aspects such as:

- The location of potential bat roost features in the barn roof and walls
- careful working methods for removing tiles and stripping the roof
- evidence of bats and what to look out for
- what to do in the event of finding bats
- bats and the law

A pre-commencement check and building inspection for bats by the licenced bat worker will be undertaken before the building renovation work starts. The ecological pre-commencement survey will be undertaken once the scaffolding has been erected and access arrangements to the exterior of the roof have been made. The survey will also make an appraisal of any other current wildlife issues at the barn, including the presence of nesting birds, so that reasonable actions can be taken to help prevent adverse impacts that would result from disturbance to animals.

The appointed ecologist can provide direct supervision for the removal of roof slates identified as providing access for bats to the void between the roof cover and membrane lining. Immediately prior to removing these potential bat access slates the void under the roof will be inspected by the licenced bat worker. If bats are found the roofing work will cease and the bat roost location will be retained in-situ. Natural England will be consulted for advice before proceeding to determine whether a Bat Mitigation Licence is required.



The bat boxes shown on Figure 4 (in Section 7) will be erected prior to the roofing work so that an alternative place of shelter is available for the emergency rescue of bats.

6.2 Ecological Enhancement


The Site is in a rural setting with habitats associated with the historic property providing foraging opportunities for bats and birds and landscape features in the local areas such as the River Avon being important wildlife areas. The landscape around Great Tythe Barn is also an important area for great crested newts. The installation of bat boxes on trees, two swift boxes on the barn and a log pile at the end of a hedgerow near the car park as shown on Figure 4 is considered suitable habitat enhancement. The proposed ecological mitigation is in line with Cotswold District Council's Policy EN8 that seeks development that "*enhances biodiversity and geodiversity, providing net gains where possible to seek to maintain and enhance biodiversity*".

- Swift nest boxes will be erected on the northeast elevation as it provides shelter from direct sunlight. The provision of swift boxes recognises the fact that swifts are in decline, and swift nesting boxes are also readily used by a range of other small passerine birds such as house sparrow (*Passer domesticus*), and

are therefore seen as a ‘universal bird box’ for new development. The boxes are designed to fit under the eaves and should be installed as high as possible on the wall. A range of alternative bird boxes are available and can be incorporated depending on the proposed design and architecture. Boxes can be viewed on-line (for example www.nhbs.com or www.wildcare.co.uk).

<i>FSC Wooden Swift Box</i>	<i>Vivara Pro WoodStone Swift Nest Box</i>
	

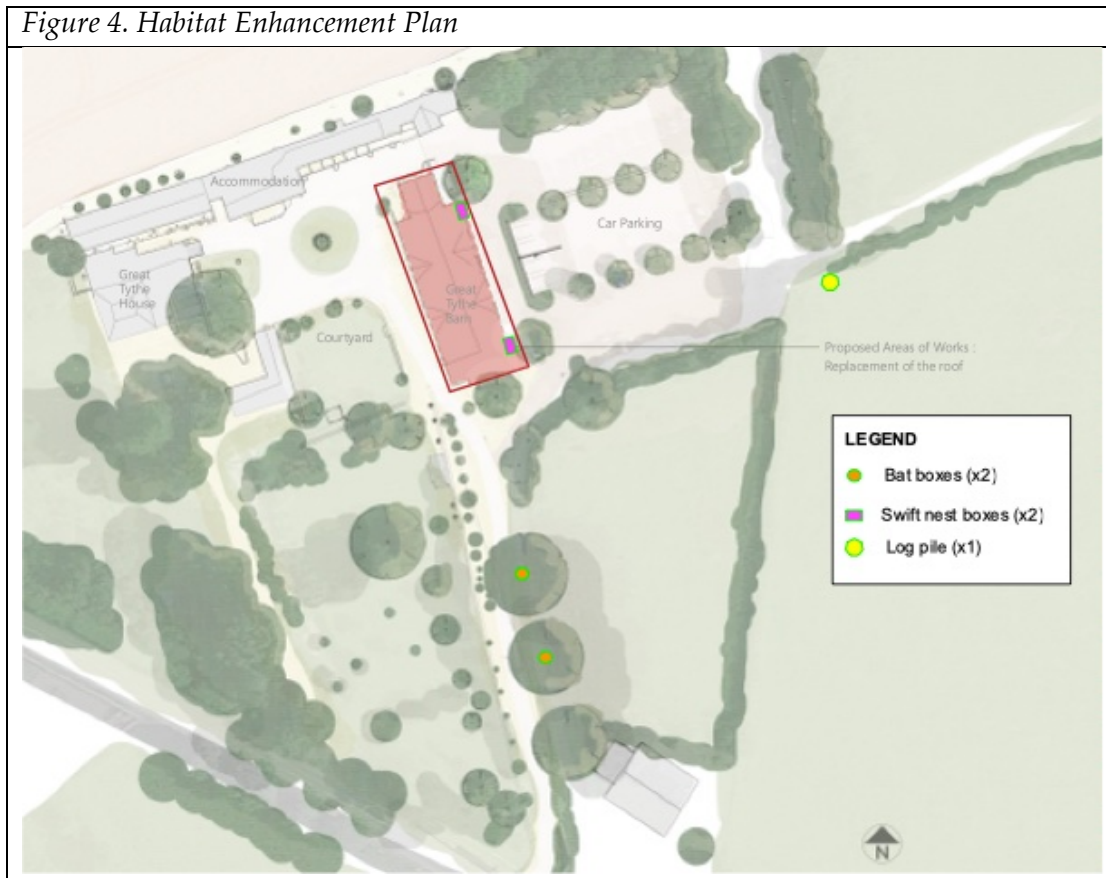
- Two bat boxes will be hung on mature trees along the driveway entrance to the north, which is a dark area (see Table 3), unaffected by the existing external lights at the barn, and the location where the highest levels of bat activity were recorded in 2023 (see Table 4). One box will be positioned on the south side of the tree so that it benefits from the warming morning sun. The bat boxes will be at least 3m above ground level. A suitable example is the CJ Wildlife ‘large multi-chamber woodstone bat box’ or Schwegler 2F bat box (with double front panel). These bat boxes are made from durable material and can be used as a summer maternity or hibernation roosts in mild winters.

<i>Schwegler 2F bat box with double front panel</i>	<i>CJ Wildlife ‘large multi-chamber woodstone bat box’</i>
	

- A log pile should be created at the periphery of the carpark to provide refugia for ground dwellings animals, such as reptiles, amphibians, small mammals (including hedgehog) and invertebrates. The log pile should be created according to the following specification:
 - Placed in a sunny location adjacent to a hedgerow.

- Maintain the pile by adding additional material as the pile decomposes (or is disturbed). This can be provided from ongoing scrub management at the site.
- To be useful to amphibians / reptiles brash/log piles should not be tightly compacted. To provide diverse structure, it is recommended that the central core be composed of the largest logs, while the outer layers are laid more loosely on top. Vegetation growing through the outer edges of the brash pile will provide additional cover.
- Log piles should contain a mixture of sizes and shapes, with some small-diameter material present.

Figure 4. Habitat Enhancement Plan



7 References

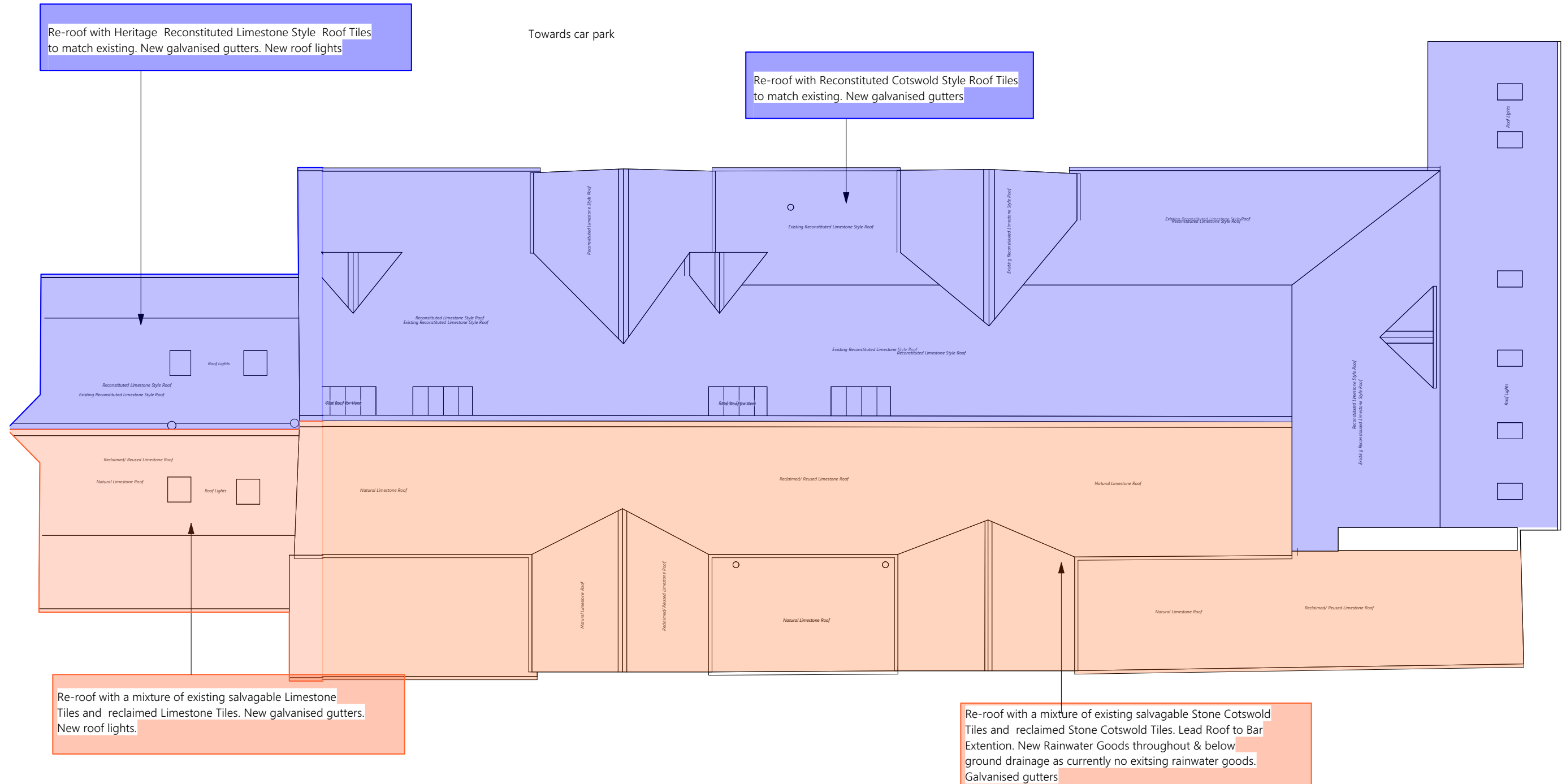
Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London

English Nature (2004). *Bat Mitigation Guidelines*

Appendix A. Proposed Scheme

Proposal

Proposed Roof Plan



Appendix B. Legislation

Conservation of Habitats and Species Regulations 2017

In relation to wildlife and nature conservation, two key Directives have been adopted by the European Community. These are (i) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds ("The Birds Directive" formerly 79/409/EEC); and (ii) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora ("The Habitats Directive"). These Directives provide for the protection of animal and plant species of European importance and the habitats which support them, particularly through the establishment of a network of protected sites.

The Conservation of Habitats and Species Regulations 2017 comes into force from the 30th November 2017 and consolidate and update the Conservation of Habitats and Species Regulations 2010. The regulations provide for the designation and protection of European Sites, the protection of European protected species and the adaptation of planning and other controls for the protection of European Sites.

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) (WCA) consolidated and amended existing national legislation to implement the Convention of the Conservation of European Wildlife and Natural Habitats (The Bern Convention) and the Birds Directive. There have been various amendments since the original enactment. Schedules 1 and 5 of the Act identify species of bird and other animal in relation to which the Act makes killing, injury, taking and disturbance an offence while Schedule 8 to the Act lists species of plant in relation to which the Act makes it an offence to intentionally pick, uproot or destroy.

Legal Protection and Licensing

Bat Mitigation Licensing

Bats are sensitive to activities associated with development and the restoration of buildings. The availability of suitable roost sites is considered to be a key factor in the conservation of bats and as a consequence all species of bat and their roost sites are protected in the UK. The key pieces of legislation are the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and The Conservation of Habitats and Species Regulations 2017.

Bats are legally protected from harm and it is an offence to deliberately or intentionally kill or injure a bat. It is also prohibited to incidentally or deliberately capture, kill, disturb or take bats, or damage or destroy a breeding site or resting place - irrespective of whether it (the roost) is occupied. Taken together, the Act and Regulations make it illegal to:

- Deliberately capture or intentionally take a bat;

- Deliberately or intentionally kill or injure a bat;
- To be in possession or control of any live or dead bat or any part of, or anything derived from a bat;
- Damage or destroy a breeding site or resting place of a bat;
- Intentionally or recklessly obstruct access to any place that a bat uses for shelter or protection;
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection;
- Deliberately disturb bats, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to affect significantly the local distribution or abundance of the species to which they belong.

A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. It is important to note that since bats tend to re-use the same roost sites, current legal opinion is that a bat roost is protected whether or not the bats are present at the time.

Although the law provides strict protection to bats, it also allows this protection to be set aside (derogated) under Regulation 55 of the Conservation of Habitats and Species Regulations 2017 through the issuing of licences for the purpose of preserving public health, or public safety, or other imperative reasons of overriding public interest (IROPI) including those of a social or economic nature and beneficial consequences of primary importance for the environment. Schemes with planning permission usually fulfil the requirements of IROPI. Natural England (NE) currently determine these licences in England and an application to NE can be made once the necessary planning and building consents have been obtained.

Where a lawful operation is required to be carried out, but which is likely to result in one of the above offences, a licence may be obtained from NE to allow the operation to proceed. However, in accordance with the requirements of the Conservation of Habitats and Species Regulations 2017 a licence can only be issued where the following requirements are satisfied:

- a) that there is no satisfactory alternative; and
- b) that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favorable conservation status in their natural range.

The Natural Environment and Rural Communities Act 2006

The Natural Environmental and Rural Communities Act 2006 (NERC) introduced changes intended to benefit rural communities and the environment. Section 40 of the Act creates a duty on public bodies to have due regard for habitats and species of principal importance for biodiversity in England when exercising their duties; Section

41 requires the Secretary of State to maintain a list of such habitats and species. This is important in the context of planning decisions as the National Planning Policy Framework (paragraph 117) affords planning policy protection to the habitats of species listed by virtue of Section 41.

Policy Context

The protection of ecological resources is promoted by planning statements and policies made at national and local levels.

National Planning Policy Framework

The government published the National Planning Policy Framework (NPPF) on 27th March 2012. The NPPF states that, “the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, minimising impacts on biodiversity and recognising the wider benefits of ecosystem services.

The Government will “now embark on a new exercise to consider what underpinning guidance continues to be needed” with the outcome of this process being “an appropriate and easy to use set of guidance, focusing on issues that require national expression, to support implementation of the National Planning Policy Framework.” The Government has “not established the process or set a timetable” for this yet and “until such time as the guidance review is complete, the existing guidance where relevant can still be used.” Regarding what guidance is still relevant, “Annex 3 of the NPPF indicates that ODPM Circular 06/2005: *Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System* (Circular 06/05) is still relevant. This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.