

Ecological Impact Assessment (Bats and Birds)

The Hill, Burrington, Somerset

26 March 2024

Ecology
Arboriculture
Land Management





Quality Assurance

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Site Details

Site Name and Location	The Hill, Burrington, Somerset
Central OS Grid Reference	ST478590
Client	Yeo Valley Farms Ltd.

Executive Summary

Site Description	The Site is approximately 0.1ha in extent and comprises two outbuildings set in an area of hardstanding with a bare ground and grassland access track. There is a small block of hazel and elder woodland, with bramble scrub to the north of the Site and along the northern edge of the access track. The southern edge of the access track is bound by a defunct stone wall beyond which lies a steep sloping grazed pasture field.
Proposals	Full planning application to include the conversion and extension of the two existing buildings to develop a one bedroom, one storey dwelling with a private driveway using the existing access.
Survey Work	Desk-based study, preliminary roost assessment, three bat emergence surveys, two bat dropping analyses.
Designated Sites with Potential Impacts	The Site lies within 2km of three SSSI and is within Consultation Zone Band B for the North Somerset and Mendip Bat SAC. Given the small-scale nature of works, impacts to the designated sites adjacent to the Site are not anticipated.
Roost Characterisation	Night roost/Feeding perch for individual or a small number of greater and lesser horseshoe bats.
Other Ecological Features	Evidence of swallow nesting within Outbuilding 2, and potential for common garden bird species to be using the surrounding vegetation for nesting.
Mitigation	<ul style="list-style-type: none"> 👉 A Protected Species Mitigation Licence will be required for the destruction of a greater and lesser horseshoe night roost due to the conversion of Outbuilding 2. 👉 No works to the building (including blocking of access points) should be undertaken until the licence has been secured or the remit of works has been approved by the project ecologist. 👉 All window and door apertures of buildings within the Site that do not contain bat roosts, will be sealed overnight to prevent bats establishing new roosts within the buildings; 👉 All works must be undertaken in strict accordance with the licence. This will include an ecologist supervising key aspects of the works. 👉 To compensate for loss of the greater and lesser horseshoe night roost a compensatory roost in the form of a custom-made bat house will be provided towards the north eastern boundary of the Site. This roost will be as close in dimension and structures as the existing roost to increase the likelihood of its success. 👉 Roofs must be lined with Type 1 bitumen felt or an approved bat safe liner. 👉 Lighting will be kept to a minimum to ensure that important flyways are retained to and from the roost e.g. at <0.5 lux). Any external lighting will be discussed and approved by the ecologist. 👉 To compensate for loss of bird nesting opportunities externally mounted/integrated general purpose bird boxes will be provided, along with internally mounted swallow cups to existing and retained adjacent barn buildings. 👉 Existing trees and hedgerows will be retained and protected during construction by fencing in accordance with BS5837:2012; 👉 Any works to include vegetation clearance should be timed to avoid the bird nesting season (March to August, inclusive) or a check by an ecologist will be required immediately prior to these works being undertaken; 👉 Any new planting within the Site should include of native shrub planting or species on the RHS Plants for Pollinators List of benefit to wildlife.
Additional Enhancements	1 no integrated bird boxes and 1no.integrated bat boxes to be installed on the new dwelling. 2 swallow cups to be installed on retained building within the site.



Survey data to support the licence application should be from the current/ most recent active season (May – August). Therefore, if there are delays, update surveys at the appropriate time of year will be required.

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1 Introduction

This report presents the results of an Ecological Impact Assessment (Bats and Birds) (EcIA) at The Hill, Burrington, Somerset in relation to a full planning application for the conversion and extension of two outbuilding and associated access. The surveys were commissioned by Yeo Valley Farms Ltd..

The area within the application boundary is hereafter referred to as the 'Site'.

1.1 Description of Proposed Development

Proposals consist of the conversion and extension of the two existing outbuildings to create a single one bedroom, one storey dwelling with a private driveway using the existing access.

1.2 Aims

This report details the results of a desk study, a preliminary roost assessment (PRA) and bat emergence surveys and aims to:

- 👉 Identify any existing bat roosts within the building or any potential features which may provide roosting opportunities for bats and identify any evidence of nesting birds;
- 👉 To characterise any bat roosts present by identifying species and roost types (e.g. day roost/ maternity roost etc.);
- 👉 Ascertain whether the proposals will affect protected species, specifically bats and nesting birds;
- 👉 Provide recommendations for further survey, licensing, mitigation and enhancement opportunities, as applicable, in accordance with relevant planning policy, legislation and other published guidance (see **Appendix 3**).

2 Methods

2.1 Desk Study

A desk-based study was undertaken by GE Consulting in February 2024 Whereby:

- 👉 MAGIC (www.magic.gov.uk) was searched for European designated sites within 10km and for statutory designated sites within 2km and Protected Species Mitigation Licences (formerly European Protected Species Licences) within 2km.
- 👉 Previous reports (primarily First Ecology Bat and Bird Assessment 2019 and Bat Roost Assessment 2022) were reviewed with any relevant results provided in the appropriate sub-sections.
- 👉 Aerial photography of the wider area was reviewed to assess connectivity and landscape features which may be important to local biodiversity, including bats.

2.2 Biodiversity Net Gain Assessment

As this application relates to a small site development which was made before 2nd April 2024 it is exempt from Biodiversity Net Gain conditions under The Biodiversity Gain Requirements (Exemptions) Regulations 2024, Regulation 3.1.

2.3 Bat Survey

2.3.1 Preliminary Roost Assessment

All buildings within the Site boundary were assessed for their potential to support roosting bats. A detailed Preliminary Roost Assessment (PRA) was undertaken on 16 June 2023 by Vicki Baldwin BSc MSc ACIEEM (NE Level 1 bat class licence 2017-27581-CLS-CLS) in accordance with best practice

methodology (Collins 2016) current at the time of survey. An update survey was conducted on 19th March 2024.

This involved an external and internal inspection using close focusing binoculars and high-powered torches where appropriate. A search was made for features which could provide suitable roosting spaces for bats, including gaps beneath tiles and flashing, gaps around windows, door frames and pipe work and possible access under eaves, soffits and barge/ fascia boards. A systematic search was made of all accessible loft spaces for the presence of bats and evidence such as bat droppings.

The buildings were then prescribed a category based on their potential to support roosting bats as detailed in **Table 1**. A building location plan is provided in **Figure 1**. If evidence of a bat roost was identified during the PRA, this was noted as a ‘confirmed roost’.

Table 1: Bat Roost Potential (adapted from Collins, 2016)

Potential Suitability	Description of bat roosting potential
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels.
Negligible	No obvious habitat features on site likely to be used by roosting bats; however a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable habitat to be used on a regular basis or by a larger number of bats.
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 e.g. a maternity or hibernation roost.
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 or classic cool/stable hibernation site.

2.3.2 Bat Emergence Survey

Three dusk emergence surveys of Outbuilding 2 were conducted in accordance with best practice guidelines (Collins 2016) on the dates detailed in **Table 2**.

Surveyors were positioned around the building with a good view of any potential bat access points and roost features. Surveyors were equipped with a bat detector to assist in acoustic identification.

The dusk surveys commenced 15 minutes before sunset and continued for approximately one and a half hours after sunset. All surveys were completed during optimal weather conditions of at least 10°C temperature at the start of the survey, dry and with very little or no wind.

Table 2: Emergence Survey Dates and Personnel

Date	Sunset time	Start time	Survey length (time)	Weather	Personnel
12/07/2023	21:27	21:12	1 hour 45 mins	Dry, 14 – 15°C, 60-80% cloud cover (cc), wind (Beaufort) 1.	AG & VB

Date	Sunset time	Start time	Survey length (time)	Weather	Personnel
02/08/2023	20:57	20:42	1 hour 45 mins	Dry, 16°C, 70-100% cloud cover (cc), wind (Beaufort) 3.	EB & KO
17/08/2023	20:29	20:14	1 hour 45 mins	Dry, 19- 22°C, 20-40% cloud cover (cc), wind (Beaufort) 2- 7.	HK, HC, KO

VB = Vicki Baldwin BSc MSc ACIEEM (NE Level 1 bat class licence 2017-27581-CLS-CLS).; **AG** = Anna Galvin BSc MSc; **EB** = Ella Bond BSc; **HK** = Hamish Kidd BSc; **KO** = Kit Owen BSc;

The bat detectors used were a combination of Wildlife Acoustics Echo Meter Touch 2 Pro and Elekon BatScanner alongside Titley Scientific Anabat Express.

2.3.3 DNA Analysis

Where bat species could not be identified during the survey, droppings were collected following the BCT bat dropping collection protocol (Collins 2016). Two samples of droppings were sent to Swift Ecology Ltd. for DNA analysis to confirm species identification. Locations from which samples were taken is shown on **Figure 1**.

2.4 Nesting Bird Survey

All buildings were inspected for evidence of and potential for nesting birds. This included a search for evidence of barn owl (Schedule 1 species) pellets, droppings, splashing (whitewashing) and feathers.

2.5 Other Protected/ Notable Species

During the survey work described above, the Site and immediate surroundings were assessed for the presence of and potential for other protected, notable or invasive species which could be impacted by proposals.

2.6 Baseline Evaluation and Impact Assessment

Determining the importance of ecological features was undertaken in accordance with the Chartered Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2018). The guidelines recommend a scale of significance from International to Local Ecological Importance as a frame of reference, however notes that it can be adapted to suit local circumstances. As such, where ecological receptors are assessed to be of less than Local value, an additional valuation of 'Site value' has been included.

Assessment of conservation status on bats, including rarity of species and geographical importance of any roosts present, was made in accordance with criteria provided in the UK Bat Mitigation Guidelines (Reason et al, 2023).

2.7 Survey Limitations

Care has been taken to ensure that balanced advice is provided on the information available and collected during the study period (s), and within the resources available for the project. However, the possibility of important ecological features being missed due to survey timings, absence during surveys or the year of survey cannot be ruled out. In addition, the lack of evidence or records of protected species on Site does not preclude their presence from Site.

3 Baseline Conditions

3.1 Desk Study

3.1.1 Designated Sites

The Site lies within a Consultation Zone Band B for North Somerset and Mendip Bat SAC for both lesser and greater horseshoes. This SAC is designated for the Annex II bat species lesser and greater horseshoe bats, as an important stronghold of both hibernation and maternity roosts. The closest segment of this SAC lies 2.6km south of the Site. The site also lies within the Mendip Hills Area of Outstanding Natural Beauty (AONB). Further details of adjacent designated sites are shown below in **Table 3**.

Table 3: Designated Sites within 2km

Site Name	Proximity to Site	Description
Burrington Coombe SSSI	15m south	<ul style="list-style-type: none"> 👉 The primary habitat of interest linked with the steep sides of the gorge consist of scarce calcareous grassland, scrub, immature ash woodland and numerous caves which support a crucial variety of fauna and flora. 👉 Several caves are included within the site, some of which support populations of bats. 👉 The site is within the Impact Risk Zone for Burrington Combe SSSI.
Bourne SSSI	0.9km north	<ul style="list-style-type: none"> 👉 A signification location for geological conservation research of the northern Mendip Pleistocene alluvial fan. This site stands as the sole area where a fan sequence can be demonstrated. 👉 The site is within the impact risk zone for Bourne SSSI.
Dolebury Warren SSSI	1.4km west	<ul style="list-style-type: none"> 👉 A limestone hill from the Carboniferous era sustains a continuous graduation of communities from species-rich calcareous grasslands to limestone heathlands and areas of bracken with extensive mixed scrub. The site hosts a diverse range of invertebrate fauna with numerous local species documented.

3.1.2 Bat Records

Magic Map provided three records of roosting bats within 2km as shown in the table below. These roosts are NOT deemed to be impacted by the proposals.

Table 4: Protected Species Mitigation Licences Granted Within 2km of the Site (MAGIC)

Licence No. and	Species	Impact/ Roost Type	Dates of Licence	Distance from Site
2016-25182-EPS-MIT-1	brown long-eared (EPS, SPI)	Destruction of a resting place	04/10/2016 01/09/2021	0.6km northeast
2015-12070-EPS-MIT	Common pipistrelle	Destruction of a resting place	30/06/2015 31/12/2020	1.7km west

Licence No. and	Species	Impact/ Roost Type	Dates of Licence	Distance from Site
2016-19553-EPS-MIT	Soprano pipstrelle	Destruction of a resting place	09/02/2016 04/02/2016	
EPSM2012-4413	Lesser horseshoe bat and serotine (EPS)	Destruction of a resting place	17/10/2012 30/08/2017	2km east

3.2 Habitats/ Site Description

The Site is located in a largely rural landscape, well connected to other similar buildings, watercourses and woodland by hedgerows.

The Site itself is approximately 0.1ha in extent and comprises two small outbuildings. An area of hardstanding surrounds the buildings with bare ground and grassland forming the existing access. There is a small block of hazel and elder woodland, bramble scrub growing on some mounded rubble with colonising vegetation to the north of the site and along the northern edge of the access track. A steep sloping grazed pasture borders the southern edge of the access track, in addition to a defunct stone wall.

Detailed descriptions of the buildings are included in **Section 3.3**.

3.3 Bat Survey


3.3.1 Preliminary Roost Assessment

The buildings on Site are described in **Table 5**, along with an assessment of the suitability of the building to support roosting bats and a description of any bat evidence found.

In summary, evidence of roosting bats in the form of droppings was identified in Building 2 and therefore the building was subjected to three emergence surveys. Building 1 was classified as having negligible potential and no evidence of roosting bats was found within the building.

The Site as a whole provides good connectivity from the buildings to habitats in the surrounding landscape to the north, south, east and west due to the presence of mature treelines, woodland and grazed pasture.

Table 5: Preliminary Roost Assessment Results

Building number	Description	Bat evidence/ access points/ potential features	Photograph	Category (based on Collins 2023)
Outbuilding 1	<p>Single storey block stable building with a clay tile roof with overhanging porch over a hardstanding yard area. A separate storage room to the western end of the building is of similar construction but closed to the outside.</p> <p>Internally, the stable building is open to the roof with both the roof trusses and felt in good condition although heavy with cobwebs. The building is disturbed regularly due to the stabling of ponies and human activities.</p> <p>The storage room is kept clean, tidy and was well sealed to the outside. No evidence of nesting birds or roosting bats was identified. All areas of the roof were in very good condition.</p>	No evidence of roosting bats was identified within the stable or storage building and no features suitable for roosting bats were noted.		Negligible

Outbuilding 2

Single storey open sided stone barn with a clay tile roof. The roof is in a good state of repair with very few loose tiles. There are no doors or windows present, so the building is open to the outside on its western aspect. There is a timber lean-to on the eastern aspect (also open to the outside), with a clay tile roof which is in a poorer state of repair.

Internally, there is a single open space, used as an outdoor gym (at the time of the first survey) and for storage (during the update survey).

The roof is underlined with traditional roofing felt and both felt and roof trusses are in good condition.

An aggregation of c. 25 droppings typical of lesser horseshoe bats were located directly below the central roofing beam during the initial survey.

An aggregation of c. 15 droppings again typical of horseshoe bats were located towards the southern gable wall during the update survey.

Droppings were collected for DNA analysis confirming both lesser and greater horseshoe bats

The following features that may provide suitable roosting conditions or access points were identified:

- Access internally was available through open doorways and unpaned windows; and,
- Roofing struts in good condition.
- Building open to the roof void where bats can freely hang and light sample.

The building did not offer any suitable opportunities for hibernating bats.



Moderate
Confirmed
Roost

3.3.2 Emergence Survey Results

No bats were observed or recorded emerging from either building during the three emergence surveys.

Other species recorded incidentally during the survey (e.g. flying past but not associated with the buildings) included common pipistrelle, noctule, *Myotis* spp., brown long-eared and lesser horseshoe bat.

3.3.3 DNA Analysis Results

The DNA analysis results provided by Swift Ecology Ltd identified the species as follows:

- 🦇 Sample 1 – (Outbuilding 2 – beneath the central beam) – lesser horseshoe
- 🦇 Sample 2 – (Outbuilding 2 – below southern gable) – lesser horseshoe and greater horseshoe

3.4 Nesting Bird Survey

An inactive single swallow nest was noted within Outbuilding 2 during the update building inspection in March 2024 and both buildings are readily accessible to birds and have potential to be used for nesting in the future.

The scrub vegetation (e.g. hedgerows and mature trees beyond the hardstanding) provide suitable nesting habitats for common garden species.

3.5 Other Protected/ Notable Species

The habitats surrounding the buildings comprised hazel, hawthorn, holly and bramble scrub, grazed pasture, bare ground with rubble and hardstanding. The presence of other protected or notable species such as reptiles or badger was considered but not identified, although reptiles may be present in the active summer season and badgers may use the site to forage as part of a wider territory. The hedgerows and woodland outside the Site boundary may offer some potential for dormouse, but these will remain unaffected by the proposals.

4 Further Survey Work

No further ecological survey work is considered necessary for this planning application and the results are considered valid for two years (unless local planning authority policy dictates otherwise); however any changes to the proposals or if any significant amount of time has passed since the date of this report, a re-appraisal may be required.

Update emergence surveys will be required as part of the bat licence process, if, at the time of licence submission, the emergence surveys are not from the most recent bat active season (May – August/ September). A verification walkover survey is always required within three months of submitting the licence application.

Vegetation will need to be checked for breeding birds, if it is to be cleared within breeding bird season (March to August inclusive).

5 Evaluation and Mitigation Recommendations

5.1 Designated Sites

The site is located within Consultation Zone B for the Annex II bat species lesser horseshoe and greater horseshoe within the North Somerset & Mendip Bat SAC. Whilst emergence surveys did not record any horseshoe bats emerging from the buildings, lesser horseshoe bats were recorded, along with several other bat species, commuting over the site and droppings of both lesser and greater were found within one of the buildings. Therefore, it is considered likely that they use the habitats on site to commute and forage, and opportunistically use the buildings as a night roost, with the boundaries forming a link to foraging habitat in the wider area, including areas that provide a supporting function to horseshoe bats potentially associated with the North Somerset and Mendip Bat Sites SAC. See **Section 5.2** below for more specific details.

With minimal vegetation proposed for removal at this stage, a sensitive lighting strategy will be developed key as is described further in **Section 5.2.4**.

5.2 Bats

5.2.1 Roost Characterisation and Impact Assessment

The surveys indicate that Outbuilding 2 is used intermittently as a night roost (feeding perch) by lesser horseshoe and greater horseshoe bats. Based on the number of droppings it is estimated that the building is used by individual bats. No bats were recorded emerging from the building during the emergence surveys conducted in 2023 and no bats were identified in situ during either building inspection survey or prior to any of the three emergence surveys in 2023. In addition, no emergences from Outbuilding 2 were recorded during previous surveys conducted by First Ecology in 2022. However, it is likely bats are entering the building via unglazed windows and the open doorway on the western elevation on an opportunistic basis and using the building intermittently.

Lesser and greater horseshoe bats are considered 'rarer or with a restricted distribution' in Southwest England (Reason et al, 2023). A night roost used by low numbers of this species is considered of **Local** level importance.

Both buildings will be altered and converted to facilitate the development. Therefore, the bat roosts listed above will be permanently destroyed and there is potential for bats to be killed/ injured during demolition of Outbuilding 2. This would be an offence under UK legislation. The Site will therefore require a **Protected Species (PS) Mitigation Licence (Bats)** from Natural England prior to works to Outbuilding 2.

As no roosts have been identified in Outbuilding 1, works to demolish this building will not require a licence.

5.2.2 Licencing Requirements

A Protected Species Mitigation Licence from Natural England will be required prior to works to Outbuilding 2. A licence cannot be applied for until full planning permission is granted, and all wildlife conditions are discharged.

During the licencing process there is a requirement to demonstrate that the application meets the 'Three Tests' under the Conservation of Habitats and Species Regulations 2017 (as amended). Please refer to **Appendix 3** for details of the three tests. If met, these tests provide for derogations via the licencing process which allow what would under normal circumstances be illegal acts, to take place

legally. When considering planning applications local authorities also have a duty to consider whether it is likely that these tests can be met and therefore the likelihood of the licence being granted by Natural England.

The three tests are as follows:

1. Regulation 55(2) (e) states: a licence can be granted for the purposes 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”.
2. Regulation 55(9) (a) states: the appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”.
3. Regulation 55(9) (b) states: the appropriate authority shall not grant a licence unless they are satisfied “that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.”

The three tests will be met in this case as follows:

1. The licence would be applied for under ‘other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’.
2. This project would meet this test to satisfy the need for housing in the area and no satisfactory alternative for this development is available.
3. The loss of the roosting sites in their current location will not be detrimental to the population of bats in their natural range as proportionate mitigation measures will be put in place to allow bats to continue to roost on Site.

The table within **Appendix 5** lists the types of works that have the potential to disturb roosting bats. Prior to commencing any works on the building, this form should be completed and returned to the ecologist at the earliest opportunity. This is to ensure that both the developer and ecologist have a detailed understanding of the works that may impact roosting bats prior to the licence application process and commencement of works.

Please refer to **Section 4** for information about further survey work that may be required to support a licence application.

5.2.3 Mitigation and Compensation

Where impacts cannot be avoided, mitigation and compensation measures will be required to ensure that bats are not harmed during conversion works and that there is long term provision of roosting opportunities for greater and lesser horseshoe bats on Site. Detailed specification will be included the subsequent licence application; however, a summary is provided below.

Due to the nature of the development, it has not been possible to retain the existing night roost or to create new roosts within the converted buildings suitable for lesser and greater horseshoe. Therefore, a compensatory night roost for horseshoe bats will be provided. This will comprise a bespoke bat house located 2m in from the northeastern boundary of the Site, as shown in **Appendix 1**. This bat house will provide new night roosting opportunities for both horseshoe species as well as other bat species in the area.

The bat house will be open to the roof with a minimum height of 2.5 m ground to apex, to allow internal flight space encompassing the entire footprint of the building (2m x 1.5m). The main fly-in access point will be installed on the southern aspect of the building, with dimension of 300mm x 200mm to allow access to and from suitable foraging and/or linear habitats and away from significant light sources.

Once the licence has been received, a toolbox talk and a precautionary check for bats by a licenced ecologist will be required immediately prior to any works affecting the building. Works to key features and dismantling of the roof structure will need to be supervised by a licensed ecologist. It is highly unlikely that bats will be discovered during works to Outbuilding 1, however, prior to commencement, contractors should be made aware of the procedure to follow if a bat is discovered or suspected during works as outlined in **Appendix 6**.

5.2.4 Lighting

Lighting during construction and operation has the potential to prevent/ reduce bat numbers commuting and foraging within the Site during the active bat season, and as such avoiding the use of construction lighting and designing lighting to avoid illumination of boundaries should be undertaken. Lighting will be designed in conjunction with the ecologist to ensure that flyways are retained.

Sensitive lighting will be implemented allowing for bats to continue using the Site. Any proposed lighting should follow the following principles in line with the Bat Conservation Trust (2014) and Institute of Lighting Professional (ILP) guidance (ILP, 2023):

- 👉 Minimise the number of luminaires required;
- 👉 Set on PIR motion sensors of a short duration timer;
- 👉 Low wattages bulbs;
- 👉 Warm coloured bulbs that do not emit light from the UV end of the spectrum – less than 2700 kelvin;
- 👉 Bulbs to be covered from above and positioned downwards to minimise light pollution.
- 👉 The use of internal lighting design solutions to minimise light spill from windows will be implemented in line with ILP guidance (ILP, 2023).

Between 1st April and the 31st October works during the construction phase should be undertaken starting no earlier than 30 minutes after sunrise and finishing no later than 30 minutes prior to sunset with no Site lighting left on overnight.

5.3 Nesting Birds

The buildings and adjacent vegetation have the potential to support nesting birds.

Given the protection afforded to all breeding birds, their nests, eggs and young, any removal of or disturbance to any vegetation and buildings on Site that are considered to offer potential nesting habitat for breeding birds, should be undertaken between September and February inclusive or following an inspection for active nests by a suitably qualified ecologist. If nesting birds are found to be present then a buffer will be implemented around the nest, in which no works can take place until all birds have fledged. To compensate for the loss of nesting opportunities resulting from building losses, integrated bird bricks and swallow cups will be included. Recommended locations and specifications are provided in **Table 6** below.

5.4 Other Protected/ Notable Species

Significant adverse impacts on other notable species are not anticipated given the small size of the Site, common nature of the habitats present and connectivity to other more suitable habitats in the wider landscape.

The layout of the proposals provides continuity of commuting habitat with additional cover and potential opportunities provided by retained vegetation. As such it is considered that species such as hedgehog will continue to traverse freely through the Site and will not be significantly affected during operation. No additional mitigation is considered necessary.



6 Additional Enhancements

In addition, the enhancements detailed in **Table 6** are recommended in line with national guidance and local planning policy.

New roosting features suitable for crevice dwelling species will be installed on the newly converted building. This will be in the form of an integrated bat boxes such as the Schwegler 1FR Bat Tube or Habibat Bat which should be built into the eastern or western gable and will provide a roosting provision for crevice dwelling bats. Whilst these species weren't identified using the building during initial surveys, this will enhance the Site further for a wider range of bat species.

Table 6: Enhancement Features

Quantity & Type	Illustrations	Description & Installation
1	 <p>Orlando Build-in Swift Box (nhbs.com)</p>  <p>Installation – integral nestbox installed in outer leaf of brickwork in a traditional cavity wall construction</p>	<ul style="list-style-type: none"> 👉 Density: one box per dwelling. 👉 Fully integrated boxes to be built into the fabric of the dwelling constructed of a durable material such as woodcrete or woodstone. 👉 Swift boxes are recommended as they are considered a universal box suitable not only for swifts but also for house sparrows and other small birds (CIEEM, 2021). 👉 Swift boxes such as the Orlando Build-in Swift Box or PRO UK Rendered Build-in Swift Box (nhbs.com) can be used to allow different finishes. 👉 Install at the highest point of the building. 👉 To be sited under the shelter of eaves or overhanging roofs where possible. 👉 Entrance out of direct sun and the prevailing weather and away from perches/ledges where birds are at risk from predators. <p>See swift-conservation.org for additional advice.</p>
1	 <p>Schwegler 1FR build-in bat tube and Habibat Bat Box</p>	<ul style="list-style-type: none"> 👉 Density: one box per dwelling. 👉 A fully integrated box such as the Schwegler 1FR Bat Tube, Habibat Bat Box or similar approved is to be positioned a minimum of 3m above the ground. 👉 Boxes are to be made of a durable material such as woodstone or woodcrete. 👉 Locate where there is a clear flight path for bats to linear vegetation (e.g. hedgerows) and away from windows. 👉 Install away from any lighting.

Quantity & Type	Illustrations	Description & Installation
	 <p>Installation</p>	<ul style="list-style-type: none"> ✦ Install within the cavity of house walls. The entrance hole can sit flush to a course of bricks. ✦ The Schwegler 1FR can be rendered to match the finish of the building. <p>The Habibat Bat Box can be customised to fit a variety of facings to suit any existing brick, wood, stonework or rendered finish.</p>
2	 <p>Schwegler Swallow Cup (Woodstone house martin box can be used as an alternative)</p>	<ul style="list-style-type: none"> ✦ Two cups within an adjacent retained outbuilding. ✦ To be located within the cover of the building at the height of the rafters where swallows have freely open access to fly in and out of the building.

7 Conclusions

In summary, the Site supported two bat roosts of Low (Site) Conservation Importance within Outbuilding 2. Conversion of the building will result in destruction of an intermittently used night roost for individual lesser and greater horseshoe bats. Once planning permission has been granted, a Protected Species Mitigation Licence (Bats) from Natural England will be required before commencement of works. Indicative mitigation and compensation for these impacts has been provided within this report, with the final design confirmed at the licensing stage.

No further survey work is required at this point in time, prior to submission of a planning application. If there are any changes to the proposals or if any significant amount of time has passed since the date of this report, a re-appraisal may be required.

Avoidance measures and careful timing of works have been incorporated into the design to eliminate impacts to other protected species including breeding birds. Provided the avoidance, timing of works and mitigation measures are carried out, the proposal is considered unlikely to have significant adverse effects on ecological features.

Enhancement features have also been described with the aim of providing an increase in wildlife opportunities on Site post-development, contributing to the aims of National Planning Policy Framework and local policy.

8 References

Bat Conservation Trust (2014) *Artificial lighting and wildlife. Interim Guidance: Recommendations to help minimise the impact artificial lighting*. Available at

http://www.bats.org.uk/pages/bats_and_lighting.html

[Bat Conservation Trust/ Institute of Lighting Professionals \(2023\) *Guidance Note 08/23, Bats and Artificial Lighting at Night*](https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/). Available from: <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

Bat Conservation Trust (2022) *Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys*. Available at:

<https://cdn.bats.org.uk/uploads/pdf/Interim-guidance-note-on-NVAs-May-2022-FINAL.pdf?v=1653399882>

BSI (2013) *BS42020: 2013 Biodiversity. Code of practice for planning and development*. British Standards Institution, London, UK.

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

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

Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.

Mitchell-Jones A.J. (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation, and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.



Key:

- Observed buildings
- Lesser horseshoe droppings identified
- Lesser horseshoe and greater horseshoe droppings identified



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Figure 1:
Bat DNA analysis results

Project:
The Hill, Burrington

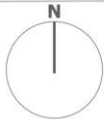
Client:
Wotton Donoghue Architects

Date:
25/3/2024

Drawn:
EB

Ref:
1986-EclA-F1

Revision:
-



Materials Key
 A - Walls - weatherboard timber
 B - Roof - Heavy duty roofing felt
 - Inside of roof to be lined with F1 felt

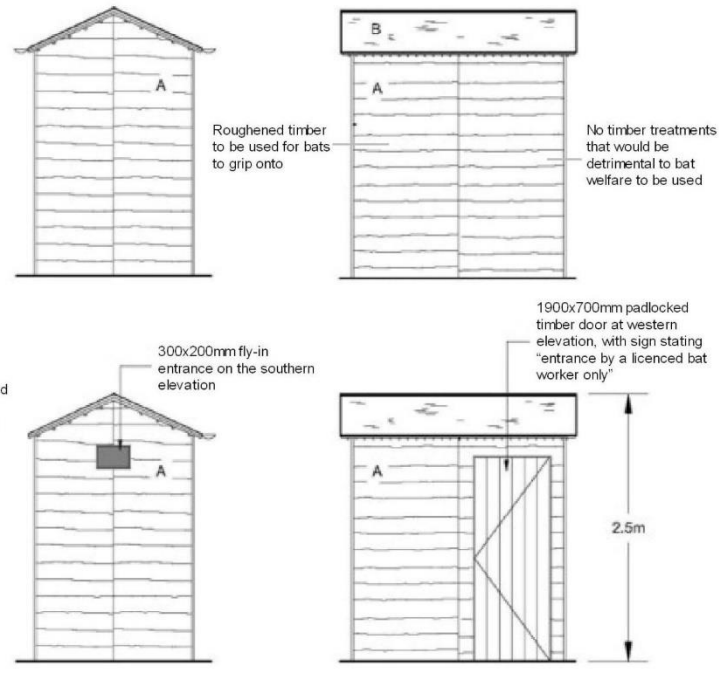


Figure 2:
 Specification for Compensation and Mitigation

Project:
 The Hill, Burrington

Client:
 Wotton Donoghue Architects

Date:
 25/3/2024

Drawn:
 EB

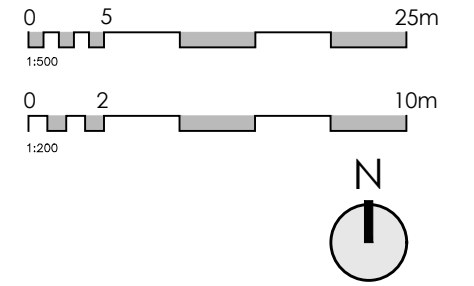
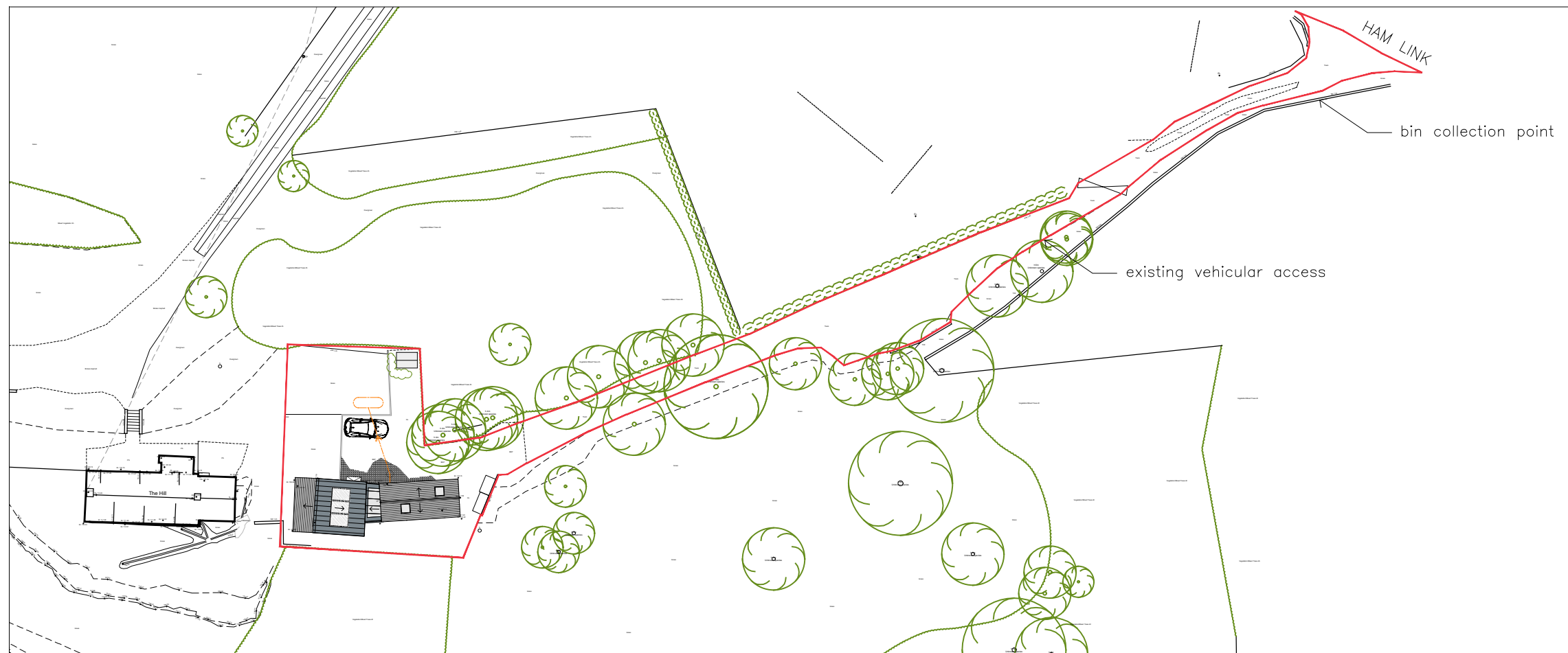
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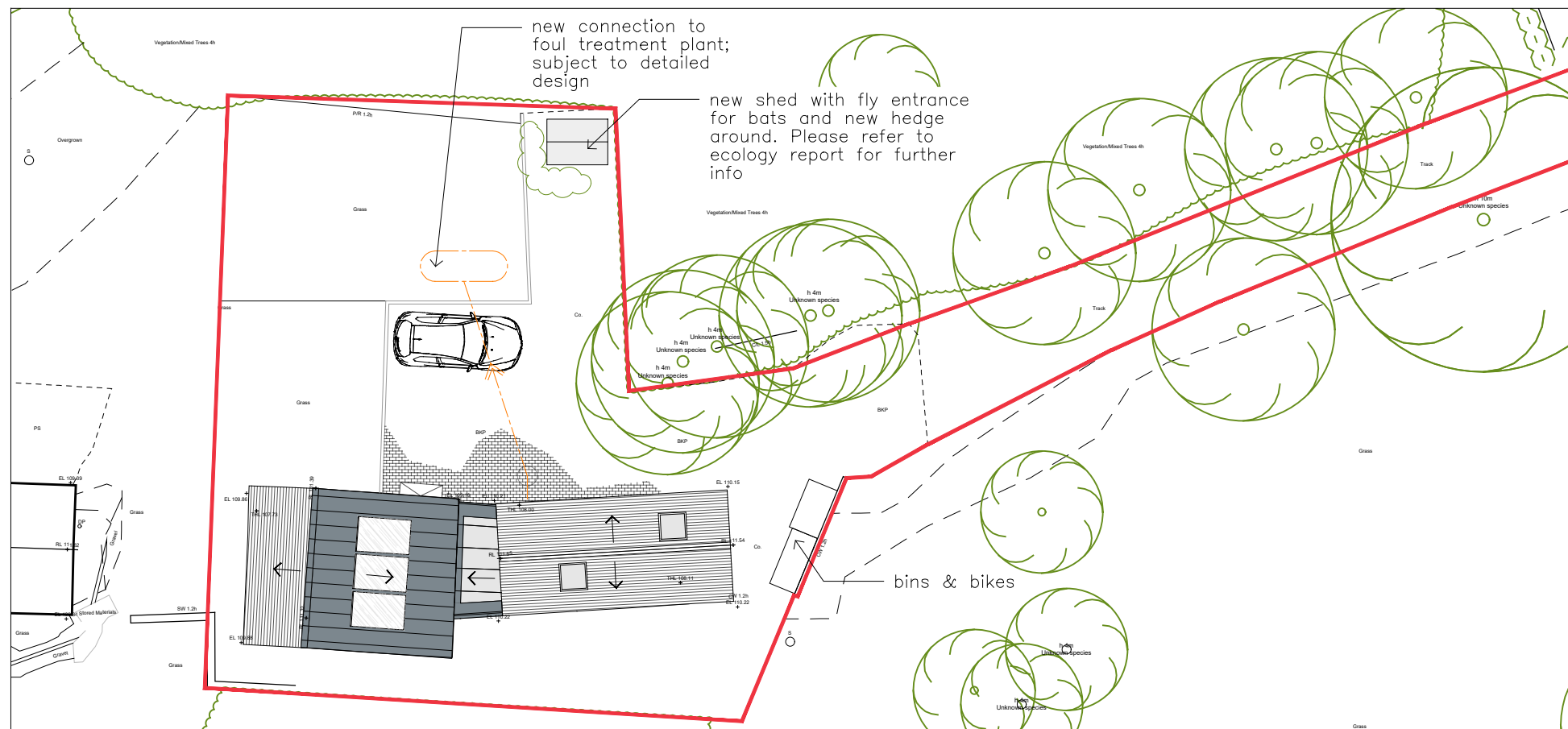




Appendix 1 – Proposed Site Plan and Location of Mitigation Roost (WDA 2024)



1:500 Proposed Site Plan



1:200 Proposed Site Plan



Project The Hill, Burrington Combe		
Title PROPOSED SITE PLAN		
Drawing Number 1047_100	Revision -	Status PLANNING
Scale of A3 1:500 & 1:200 @ A3	Date Feb 2024	Drawn / Checked By SL
<small>Scale suitable for Planning purposes, use only figured dimensions for Construction. Any discrepancies are to be reported to Wotton Donoghue Architects immediately. Prior to the execution of the works on site, all dimensions to be verified on site before any work is put in hand. Copyright reserved to Wotton Donoghue Architects</small>		
<small>t +44 (0) 117 9466966 e info@wdarchitects.co.uk w www.wdarchitects.co.uk</small>		

Appendix 2 – General Glossary of Terms

Annex I Threatened bird listed on Annex I of the EC Birds Directive/ Habitats listed on Annex I of the EC Habitats Directive

Annex II Species of community interest whose conservation requires the designation of SACs

BAP Biodiversity Action Plan

BMCL Bat Mitigation Class Licence

BNG Biodiversity Net Gain

BoCC Bird of Conservation Concern

CEMP Construction Environmental Management Plan

CWS County Wildlife Site

DBW Daytime Bat Walkover

EPS European Protected Species

GLTA Ground Level Tree Assessment

HPI Habitat of Principal Importance required under Section 41 of the NERC Act 2006

HSI Habitat Suitability Index

IRZ Impact Risk Zone

GCN Great crested newt

JNCC Joint Nature Conservation Committee

LBAP Local Biodiversity Action Plan

LEMP Landscape and Ecology Management Plan

LWS Local Wildlife Site

NBW Night-time Bat Walkover

NERC Act Natural Environment and Rural Communities Act 2006

NPPF National Planning Policy Framework

NVA Night Vision Aid

NVC National Vegetation Classification Survey

OSWI Other Site of Wildlife Interest

pCWS Potential County Wildlife Site

PRA Preliminary Roost Assessment

PRF Potential Roost Feature

Ramsar A wetland site designated to be of international importance under the Ramsar Convention



SAC	Special Area of Conservation
SPA	Special Protection Area
SPI	Species of Principal Importance required under Section 41 of the NERC Act 2006
SSSI	Site of Special Scientific Interest
UWS	Unconfirmed Wildlife Site
WCA	Wildlife and Countryside Act 1981(as amended)
ZOI	Zone of Influence

Appendix 3 – Planning Policy and Legislation

Bats

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 (as amended) and Section 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence for anyone to:

- 👉 Deliberately capture, kill or injure a bat;
- 👉 Intentionally or recklessly to disturb a bat or group of bats in a roost;
- 👉 Damage or destroy any place used by bats for shelter, (whether they are present or not);
- 👉 Intentionally or recklessly obstruct access to a bat roost;
- 👉 Possess, or offer a bat (dead or alive) or part of a bat for sale or exchange.

Licences to permit illegal activities relating to bats and their roost sites can be issued for specific purposes. These are sometimes called 'derogation licences' or mitigation licences. These are issued by the relevant Statutory Nature Conservation Organisation (SNCO) under the Habitats Regulations e.g. Natural England (NE) in England.

Breeding Birds

All wild bird species, their eggs and nests are protected by law. The Wildlife & Countryside Act 1981 (as amended) makes it an offence to:

- 👉 Intentionally kill, injure or take wild birds;
- 👉 Intentionally take, damage or destroy a wild bird's nest while it's being used or built;
- 👉 Intentionally take or destroy a wild bird's egg;
- 👉 Possess, control or transport live or dead wild birds, or parts of them, or their eggs;
- 👉 Sell wild birds or put them on display for sale; and
- 👉 Use prohibited methods to kill or take wild birds.

In addition, birds listed on Schedule 1 of the Act (including barn owl) have extra legal protection which protects them from disturbance while they're nesting, building a nest, in or near a nest that contains their young and protects their dependent young from disturbance.

Habitat and Species Legislation

Species and habitats receive legal protection in the UK under various legislation, including:

- 👉 The Wildlife and Countryside Act (WCA) 1981 (as amended);
- 👉 The Conservation of Habitats and Species Regulation 2017 (as amended) (also known as the Habitat Regulations, it implements the EU Habitats Directive in England and Wales);
- 👉 The Countryside Rights of Way (CRoW) Act 2000;
- 👉 The Hedgerows Regulations 1997;
- 👉 The Protection of Badgers Act 1992; and
- 👉 The Natural Environment and Rural Communities (NERC) Act 2006.

Where relevant, this report takes into account the legislative protection afforded to specific habitats and species.

Appendix 4 – Protected Species Mitigation Licence Tests

The three tests that need to be met in order for Natural England to grant a licence are as follows, and will also need to be considered at the planning stage:

- 👉 Regulation 55(2) (e) states: a licence can be granted for the purposes 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”.
- 👉 Regulation 55(9) (a) states: the appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”.
- 👉 Regulation 55(9) (b) states: the appropriate authority shall not grant a licence unless they are satisfied “that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.”

The developer is responsible for proving/ providing evidence as to why the first two tests are met, for example by providing evidence to show that the work will contribute to the local economy/ meet housing need, and showing that alternative options have been considered as to why the existing roosts cannot be retained *in situ*.

The recommended mitigation measures outlined in this report will ensure that the third test is met.

Appendix 5 – Works that May Impact Roosting Bats

This form should be completed prior to commencing any works on the building and prior to applying for a licence. It does not relate directly to the planning process and is included in this report for information only.

As part of the bat licence process, it is important for the ecologist to have a detailed understanding of the works involved with the development. An ecologist must be contacted to seek further advice before undertaking any of these works to ensure no adverse impacts occur to roosting bats. Table X below gives a summary of these works, please fill out this table and return to the Ecologist before works commence.

Table 4.1: A Summary of Works Which May Impact Roosting Bats

Type/ location of works	Impacted/ required?	Brief description of works	Time schedule
<i>For example: Soffits</i>	✓	<i>Soffits to be removed and replaced</i>	<i>Winter 2023</i>
Soffits/ barge boards			
Wall tops/ eaves			
Lead flashing			
Windows and doors			
Guttering			
Porch			
Wood/ tile cladding			
Chimney			
Tiles e.g. repair/ removal/ replacement			
Re-thatching			
Felt/ lining removal/ replacement			
Mortar repair/ replacement			
Repairs to walls, shingles and weatherboards, and other gaps			
Installing insulation including cavity wall insulation			
Roof joists			
Timber treatment			
Dry rot treatment			
Controlling flies, other insects and ‘pests’			
Rewiring, plumbing and other service work within cellars and/ or loft void			
Removing internal ceilings			
Any other works within the cellar/ loft void			
Use of scaffolding poles, plastic sheeting or mesh			
Works that cause vibration/ noise near the roost			
Existing bat features e.g. bat boxes			
Building site lighting			



Vegetation removal within 5m of works			
Any other works you may feel are relevant			

Appendix 6 – Procedure to Follow if Bats are Discovered During Works

- 👉 If at any point during the works bats are discovered, contractors should stop work immediately and telephone GE Consulting on 01647 253 652;
- 👉 GE Consulting will either provide a licensed bat worker to the site or provide a member of staff who will liaise directly with Natural England. Actions will then be taken following advice given by Natural England. This may include removal of bats, but only where direct written or verbal permission is gained from Natural England;
- 👉 Only when Natural England is satisfied that the risk to bats is ceased will works recommence.
- 👉 Should it transpire that the operation being carried out is of more risk to bats than was originally thought, then it is likely that works will only be able to proceed under a development licence from Natural England;
- 👉 If a bat is found under a tile or any other aperture, works will stop immediately (as above). If the bat does not voluntarily fly out, then the aperture will be carefully covered over to protect the bat(s) from the elements, leaving a small gap for the bat to escape voluntarily. Further advice will then be sought from Natural England (as above). Any covering should be free from grease or other contaminants, and should not be fibreglass-based materials;
- 👉 Avoid handling bats. Bats should not be handled with bare hands. If a decision is made to handle a bat (e.g. for good reason in the case of an injured bat or a bat in ‘harm’s way’) then gloves must be worn to avoid being bitten. Any injured bats could be placed in a secure ventilated box (e.g. cardboard box) by the contractor for the bat’s protection whilst awaiting the arrival of the bat worker;
- 👉 If during the course of works anyone is bitten by a bat then the area of the bite should be washed immediately with soap and water and medical advice sought.

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Email: info@ge-consulting.co.uk

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