



Musgrove Farm, Dunkeswell  
Ecological Appraisal (Bats & Birds)

Report No: 22/4007.02

Date: August 2022

Client: Keith Farmer Building Services Ltd.



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Consultancies

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<b>Revision</b>	<b>Prepared by</b>	<b>Authorised by</b>	<b>Dated</b>
<b>Initial Issue</b>	<b>Daniel Hooper BSc. (Hons)</b>	<b>Li-Li Williams MEnvSci. (Hons) MCIEEM</b>	<b>10/08/2022</b>

This report has been prepared for Keith Farmer Building Services Ltd. in accordance with the terms and conditions of the appointment supplied with Tender Number T/4007.01 and T/4007.02 dated 16<sup>th</sup> June 2022 and 30<sup>th</sup> June 2022, respectively. Devon Wildlife Consultants cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

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## Devon Wildlife Checklist (for front of Wildlife Report.)

**A.1 Protected and priority species** (relates to question 13a in the planning application form).

*Species with no suitable habitat present have been omitted from this table.*

<b>Location:</b>	Musgrove Farm, Dunkeswell	<b>Grid reference for centre of site:</b>	ST141110	<b>Planning Application number:</b>	Surveys undertaken pre- application
<b>Name of surveyor:</b>	Daniel Hooper	<b>Year that surveys carried out:</b>	2022	<b>Sent to DBRC:</b>	Data will be sent 6 months following submission of the report

Species Terrestrial, intertidal, marine	Walkover shows that suitable habitat present and reasonably likely species will be found?	Detailed survey needed to clarify impacts and mitigation ?	Detailed survey carried out and included?	Species Present or Assumed to be present on site <u>Indicate with P or A and name the species</u>	Impact on species?	Detailed Conservation Action Statement included?	EPS offence committed? Three tests met?	Grid reference for specific location of species (if required)
Bats (roost)	✓	✓	✓	×	×	×	×	-
Bats (flight line/foraging habitat)	✓	✓	✓	×	×	×	×	-
Dormice	×	×	×	×	×	×	×	-
Otters	×	×	-	-	-	-	-	-
Great crested newts	×	×	-	-	-	-	-	-
Cirl buntings	×	×	-	-	-	-	-	-
Barn owls	×	×	-	-	-	-	-	-
Other Schedule 1 birds	×	×	-	-	-	-	-	-

Species Terrestrial, intertidal, marine	Walkover shows that suitable habitat present and reasonably likely species will be found?	Detailed survey needed to clarify impacts and mitigation ?	Detailed survey carried out and included?	Species Present or Assumed to be present on site <u>Indicate with P or A and name the species</u>	Impact on species?	Detailed Conservation Action Statement included?	EPS offence committed? Three tests met?	Grid reference for specific location of species (if required)
Breeding birds	✓	✓	✓	P: crevice nesting bird species P: <i>Hirundine</i> species	✓	✓	×	-
Reptiles	×	×	-	-	-	-	-	-
Native crayfish	×	×	-	-	-	-	-	-
Water voles	×	×	-	-	-	-	-	-
Badgers	×	×	-	-	-	-	-	-
Other protected species	×	×	-	-	-	-	-	-
Species of principal importance	×	×	-	-	-	-	-	-
Devon BAP key species	×	×	-	-	-	-	-	-
Invasive species	×	×	-	-	-	-	-	-

**A.2 Designations / important habitats / sites of geological importance** (relates to questions 13b&c in the planning application form)

Designation Terrestrial, intertidal, marine	Within site or potential impact. <u>Tick or cross</u>	Name of site / habitat	Conservation Action Statement included in report?	Habitat balance sheet included (showing area of habitats lost, gained and overall net gain)	Relevant organisation consulted & response included in the application?
Statutory designations	×	-	×	×	N/A

<b>Designation Terrestrial, intertidal, marine</b>	<b>Within site or potential impact. <u>Tick or cross</u></b>	<b>Name of site / habitat</b>	<b>Conservation Action Statement included in report?</b>	<b>Habitat balance sheet included (showing area of habitats lost, gained and overall net gain)</b>	<b>Relevant organisation consulted &amp; response included in the application?</b>
European designations - Special Area of Conservation (SAC), Special Protection Area (SPA) and RAMSAR site or within the Greater Horseshoe consultation zone	×	-	Sufficient information included in order for the LPA to undertake an HRA?	-	N/A
Site of Special Scientific Interest (SSSIs)	×	-	×	×	N/A
Marine Conservation Zone (MCZ)	×	-	×	×	N/A
Local Nature Reserve (LNR)	×	-	×	×	N/A
<b>Non statutory wildlife designations</b>	×	×	×	×	N/A
County Wildlife Site (CWS)	×	-	×	×	N/A
Ancient Woodland	×	-	×	×	N/A
Ancient Trees	×	-	×	×	N/A
Special Verge	×	-	×	×	N/A
UKBAP Priority Habitat	×	-	×	×	N/A
Local Biodiversity Network (mapped by Devon Wildlife Trust / through Green Infrastructure work)	×	-	×	×	N/A
<b>Non statutory geological designations</b>	×	×	×	×	N/A
County Geological Site (CGS or RIGS)	×	-	×	×	N/A

## Executive Summary

Devon Wildlife Consultants (DWC) was commissioned by Keith Farmer Building Services Ltd. to undertake an Ecological Appraisal (Bats & Birds) of three barns located to the north of Dunkeswell, Devon.

The barns are currently utilised for storage. The landscape surrounding the site comprises grazing pasture and woodland.

It is understood that it is proposed to obtain planning permission to convert the existing barns and construct three individual holiday lets, a utility room and a pump room. The recommendations in this report are based on Drawing No. PA202 Barn Proposed GF Plan provided by the client.

A Preliminary Ecological Appraisal identified no droppings or other evidence within the interior or exterior of the barns. However, there is low potential for individual crevice-dwelling species such as pipistrelle *Pipistrellus* species to be present within the stonework of the walls of all three barns. The subsequent emergence survey ascertained that all three barns have no roosting bats present.

No evidence of active nesting birds was noted within the barns, however, there are multiple opportunities for crevice nesting birds to utilise the structure. Multiple former swallow nests and nests in wall crevices were observed within the barns. No evidence of roosting/nesting barn owl activity was noted.

In light of the survey results, the following construction compliance recommendations are provided:

- No evidence of roosting bats currently using the building was identified however if bats are discovered during the proposed works, then any sheltering materials should be replaced around the bat and work within the immediate vicinity ceased until advice can be sought from Natural England or Devon Wildlife Consultants.
- The conversion of the barns should ideally be undertaken outside of the main bird nesting season which extends from March to August (inclusive) or following a nesting bird check. The construction schedule should allow for potential delays in this case as any active nests must remain undisturbed until all the young have fledged naturally, which may take several months.

Recommendations to enhance the site post development are also provided to take into account the national biodiversity strategy detailed in the National Planning Policy Framework (NPPF) to preserve, restore and re-create priority habitats, ecological networks and to ensure the protection and recovery of priority species populations, linked to national and local targets.

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## **1 Introduction**

### **1.1 Description of Site**

The site comprises three barns located to the north of Dunkeswell, Devon at National Grid Reference ST 141110. The proposals are limited to conversion works on the buildings which form part of a farmyard; the footprint of the development will remain unchanged following completion of the works.

### **1.2 Purpose of Assessment**

DWC was commissioned by Keith Farmer Building Services Ltd to undertake an Ecological Appraisal (Bats & Birds) for a site known as Musgrove Farm, Dunkeswell. The purpose of the appraisal is to use the results of field surveys to describe and evaluate the ecological resources present within the site. The appraisal includes an assessment of the potential ecological constraints and opportunities which are likely to result from the development. Mitigation and enhancement proposals are included together with construction compliance recommendations to ensure the development conforms with relevant policy and legislation. The appraisal follows the steps set out by the mitigation hierarchy: avoid, minimise, restore and compensate.

### **1.3 Scope of Works**

The current report comprises a Preliminary Ecological Appraisal and subsequent evening emergence survey.

The buildings present within the site were subject to a Preliminary Ecological Appraisal to assess their potential to support roosting bats and nesting birds.

Potential for roosting bats which could not be fully inspected was identified within the buildings and therefore a further emergence survey was undertaken to ascertain the presence/absence of roosting bats and if required, the species and number of bats utilising the building, their roost location and access points.

It should be noted that these surveys are valid for two years, after which an updated survey may be required.

### **1.4 Development Proposals**

It is understood that it is proposed to obtain planning permission to convert the existing barns and construct three individual holiday lets, a utility room and a pump room. The recommendations in this report are based on Drawing No. PA202 Barn Proposed GF Plan provided by the client.



## **2 Survey Methodology**

### **2.1 Preliminary Ecological Appraisal (Bats & Birds)**

A visual inspection of the buildings was undertaken utilising binoculars, an endoscope, a ladder and a torch to search for evidence of bat activity such as droppings, insect prey remains, urine staining and/or actual bats. The buildings were also inspected for the presence of nesting birds, including barn owls *Tyto alba*, or their field signs such as whitewash, droppings, pellets and/or nest debris. Legislation relating to these species is provided in Appendix 1.

The site was surveyed on 29<sup>th</sup> June 2022 by Daniel Hooper, under the licence of Kitty Straghan, a Natural England licensed bat surveyor (Natural England Class Bat Licence Registration Number 2017-27979-CLS-CLS) and accredited agent under Barn Owl Licence Registration Number CL29/00350.

Following the Bat Survey Guidelines (BCT, 2016), each building was assigned a value of high/moderate/low/negligible suitability.

### **2.2 Emergence Survey**

The potential for roosting bats was identified within all three barns, therefore, in line with the BCT (2016) guidelines, one emergence survey was undertaken. The survey was undertaken in periods of suitable weather conditions.

The site was surveyed for emerging bats from 15 minutes before sunset until 1½ hours after sunset. Cloud cover, wind strength, precipitation and air temperature were all recorded at the start and on completion of the survey.

The survey was undertaken by five surveyors who were positioned to cover all aspects of the buildings. Particular emphasis was placed on the areas which were highlighted as having the potential to support roosting bats, where access was restricted or where a potential bat access point was identified.

If a bat was detected emerging, the time, position of each emerging bat was noted on a field base plan, together with its direction of flight (light permitting) and, where possible, the specific point from/to which the bat was emerging.

All bat activity was recorded on Peersonic RPA3 full spectrum bat detectors. To aid species identification recordings were analysed using Kaleidoscope computer software. Nightfox Red night vision goggles, a SANNCE CCTV system and additional infrared lighting were utilised to aid low light vision.

The buildings were surveyed for emerging bats on 27<sup>th</sup> July 2022. The surveys were undertaken by Li-Li Williams MEnvSci (Hons) MCIEEM, Daniel Hooper BSc. (Hons), Edward Slade BSc. (Hons), Alex Fergusson BSc. (Hons) and Ross Upton BSc. (Hons).

## 2.3 Survey Limitations

### Preliminary Ecological Appraisal

The results of this survey will depend on signs of bat activity being identified, as it is unlikely that bats will be visible. A number of bat species roost in very small crevices, consequently, it is possible that individuals may not be seen during the survey. In addition, bird nests may be situated in concealed locations which may not be visible to the surveyor.

### Evening Emergence Surveys

It is not possible to distinguish between the calls of different species of the genera *Plecotus* or *Myotis* either in the field or during analysis. As such these species will be identified to genus unless key visual identification features were noted within the field which confirms identification to species level.

## 3 Results

### 3.1 Introduction

The landscape surrounding the site comprises grazing pasture and woodland. Three barns known as Barn 1, Barn 2 and Barn 3 were subject to assessment. These barns adjoin each other, forming part of a farmyard.

Details relating to evidence of bat/nesting bird activity are presented in Section 3.2. A plan illustrating the location and layout of the barns is provided in Appendix 2 and a description of the buildings is provided in Appendix 3. Weather conditions recorded during the survey visits are presented in Appendix 4.

MAGIC ([www.magic.defra.gov.uk](http://www.magic.defra.gov.uk)) indicates that there are no records of Natural England licenses regarding bat species within a 2km radius of the site.

### 3.2 Preliminary Ecological Appraisal

#### 3.2.1 Roosting Bats

##### Barns 1, 2 and 3

No droppings or evidence of bats was identified either within the interior or exterior of the barns. However, there is low potential for individual crevice-dwelling species such as pipistrelle *Pipistrellus* species to be present within the stonework of the walls of all three barns, with occasional deep cracks in the walls which could not be fully surveyed utilising the endoscope.

Overall, the suitability of the buildings for roosting bats is considered to be **low**.

#### 3.2.2 Nesting Birds

##### Barns 1, 2 and 3

Disused swallow *Hirundo rustica* nests were noted on rafters and beams of all three barns. Disused nests of crevice-nesting species likely to include house sparrow *Passer domesticus* and wren *Troglodytes troglodytes* were identified in wall cavities and on the wall tops of all three barns.

Overall, the suitability of the buildings for nesting birds is considered to be **moderate**, with nesting by multiple species confirmed.

### 3.3 Bat Emergence Survey Results

#### Survey Visit – 27<sup>th</sup> July 2022

No bats were detected emerging from any of the three barns that were subject to survey.

Non-emerging bat activity included common pipistrelle bats *Pipistrellus pipistrellus* which were recorded throughout the survey on all elevations. A soprano pipistrelle *Pipistrellus pygmaeus* was recorded commuting over Barn 2 at 21:27 and two noctule bats *Nyctalus noctule* were recorded commuting along the western elevation of Barn 1 and 2 at 21:52 and 22:26

respectively. Serotine bats *Eptesicus serotinus* were recorded passing over Barns 1, 2 and 3 between 22:24 and 22:36.

### **3.4 Conclusion**

No roosting bat activity was identified during the further survey.

## 4 Impacts and Recommendations

This section details design and construction compliance requirements, based on current UK wildlife legislation and national and local planning policy. These recommendations must be followed to ensure the legislation is not contravened by the proposed development, including any site investigation or vegetation clearance works.

### 4.1 Construction Compliance

#### 4.1.1 Roosting Bats

No evidence of roosting bats currently using the barns was identified and therefore there are no perceived legal implications for the proposed development regarding bat species. It is important to note that although no evidence of roosting bats was present at the time of the survey, bats may use a variety of roost sites throughout the year and may on occasion roost under tiles, between/under the beams and joists and/or on the wall tops and within the wall crevices present on the interior and exterior of the barns. As a precautionary measure, work on the barns should ideally commence in September/October outside of the sensitive breeding/hibernation periods for bats. If bats were discovered during the proposed works, then any sheltering materials should be replaced around the bat and work within the immediate vicinity ceased until advice can be sought from Natural England or Devon Wildlife Consultants.

#### 4.1.2 Nesting Birds

Conversion of Barns 1, 2 and 3 should be undertaken outside of the main bird nesting season of March to August (inclusive). This includes any pointing/repair works to the walls due to the presence of multiple nests in wall crevices. Nesting can extend outside this period however this is often dependent on weather conditions and species, therefore undertaking works outside of the nesting bird season would minimise the risk of potential delays to the works programme.

If such works cannot be undertaken outside of the nesting season, a nesting bird check should be undertaken by an ecologist immediately before conversion works. The construction schedule should allow for potential delays in this case as any active nests must remain undisturbed until all the young have fledged naturally, which may take several months.

Based on the survey results there are no identified barn owl-related constraints.

## 5 Conservation Action Statement

### 5.1 Introduction

This Conservation Action Statement is required in line with Devon County Council guidance (2019) to detail: Ecological impacts and how they will be avoided, mitigated and compensated; how enhancement measures will be implemented; overall net gain or loss for wildlife; and how the scheme complies with wildlife legislation and planning policy.

Enhancement recommendations are required under the National Planning Policy Framework (NPPF) which sets out the UK Government's national policies on the enhancement of biodiversity and promotion of ecosystem services through the planning system

### 5.2 Impacts

The proposed scheme will require the conversion of Barns 1, 2 and 3. This will result in the loss of potential roosting opportunities for crevice-roosting bat species, and nesting opportunities for a number of bird species.

### 5.3 Mitigation and Enhancement

The survey results have informed measures which have been specifically designed to mitigate and compensate for the ecological impacts of the development, to provide a gain in biodiversity at the site post-development. These measures **will be** incorporated into the scheme design.

#### 5.3.1 Roosting Bats

A minimum of four bat roosting units/tubes suitable for different species of bat will be installed on the three barns post-development. These should be installed on a southerly aspect at a minimum height of 3m.

#### 5.3.2 Nesting Birds

A minimum of 10 bird boxes suitable for different species of birds which nest in association with human habitation will be incorporated into the three barns post-development. These could include swallow, house martin barn owl, robin *Erithacus rubecula* and house sparrow. Examples of bird nesting and bat roosting provisions are provided in Appendix 5.

Swallow nest provision should be located within an unheated outbuilding on the farm with permanent open access; a droppings board should be installed beneath each nest. House martin *Delichon urbicum* nest provision should be located in groups at least 5m high under overhanging eaves on north or east-facing walls; a droppings board should be installed beneath each nest.

Ecological Receptor	Geographical scale of impact	Potential impacts	Mitigation		Impact	
			Avoidance measures	Compensation & Enhancement measures	Short term	Long term
Roosting Bats	Site	<ul style="list-style-type: none"> <li>• Loss of crevices suitable for roosting bats</li> </ul>	Commence conversion works in September/October if possible	Provision of a minimum of four bat roosting units/tubes	Neutral at site level	Positive at site level
Nesting Birds	Site	<ul style="list-style-type: none"> <li>• Damage or destruction of active nests</li> <li>• Loss of nest sites</li> </ul>	Undertake works outside of bird nesting season	Provision of 10 bird boxes suitable for different species. Provision of swallow and house martin nests within unheated outbuildings elsewhere on the farm.	Negative at Site level	Positive at Site level

**Table 5.1 Conservation Action Statement**

## References

**Bat Conservation Trust. (2016).** *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.

**Conservation of Habitats and Species (EU Exit) Regulations 2019.** HMSO

**Countryside and Rights of Way Act (2000).** HMSO

**Devon County Council. (2019).** *Validation Requirements for Planning Applications to Devon County Council*. Devon County Council, Exeter

**Dietz, C. (2007)** *Bats of Britain, Europe and Northwest Africa*. A & C Black Publishers Ltd.

**English Nature. (2004).** *The Bat Mitigation Guidelines*. English Nature, Peterborough

**JNCC (2004).** *Bat Workers Manual*. 3<sup>rd</sup> Edition. Joint Nature Conservation Committee, Peterborough

**MAGIC.** <http://magic.defra.gov.uk/> [accessed on 01/08/2022]

**Ministry of Housing, Communities & Local Government (2021)** *National Planning Policy Framework (NPPF)*. Ministry of Housing, Communities & Local Government, London.

**Mitchell-Jones A.J. & Mcleish A.P. (2004).** *Bat Mitigation Guidelines*. 3<sup>rd</sup> Edition. Joint Nature Conservation Committee, Peterborough

**Natural Environment and Rural Communities Act (2006).** HMSO

**Ramsden. D. (2007).** *Barn Owls and Major Roads: Results and Recommendations from a 15-year Research Project*. Barn Owl Trust, Ashburton

**Wildlife & Countryside Act (1981), as amended.** HMSO



## Appendices

Appendix 1: Legislation

Appendix 2: Building Location Plan (DWC Drawing No. PA202 Barn Proposed GF Plan)

Appendix 3: Building Descriptions

Appendix 4: Survey Weather Conditions

Appendix 5: Examples of Bird Nesting & Bat Roosting Provisions

## Appendix 1 – Legislation

### Barn Owl

All birds, their nests and eggs are protected by law under the Wildlife and Countryside Act 1981 (as amended). Barn Owls are listed on Schedule 1 which provides them with special protection. It is an offence to:

- Intentionally kill, injure, or take (handle) any wild barn owl.
- Intentionally take, damage, or destroy any wild barn owl nest if in use or being ‘built’.
- Intentionally take or destroy a wild barn owl egg.
- Intentionally or recklessly disturb any wild barn owl whilst ‘building’ a nest or whilst in, on, or near a nest containing eggs or young.
- Intentionally or recklessly disturb any dependent young of wild barn owls.

### Bat Species

All British bats and their roosts are afforded strict protection under the Wildlife and Countryside Act 1981 (as amended), as well as the Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019. In combination, these pieces of legislation give substantial protection to bats and their roost sites, and make it an offence for any person to carry out the following acts:

- Intentionally or recklessly kill, injure or take a bat.
- Damage, destroy or obstruct access to any place that a bat uses for shelter or protection. This is taken to mean all bat roosts whether bats are present or not.
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.

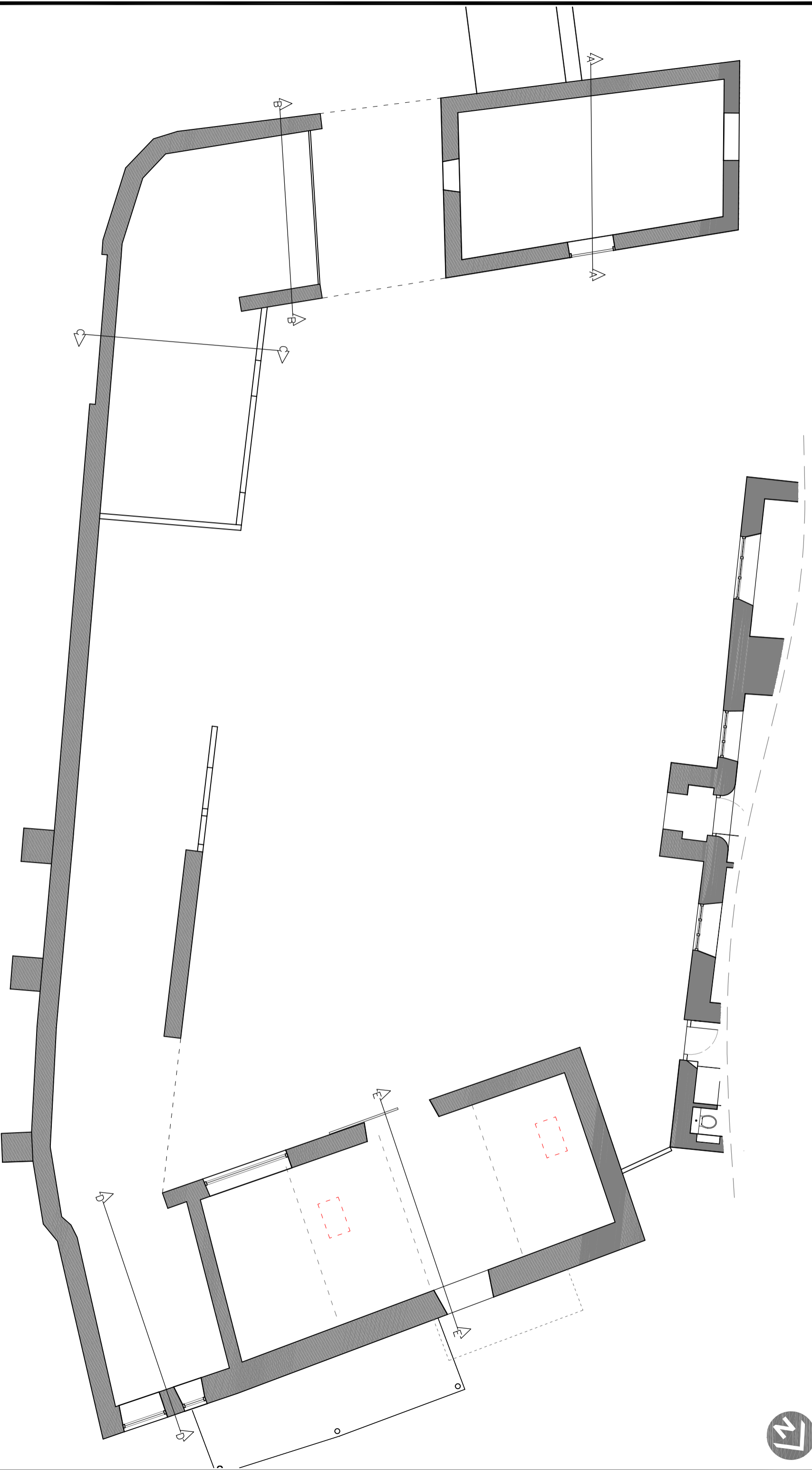
In order to undertake actions that would result in damaging, destroying or obstructing access to a roost, or to disturb bats (whether in a roost or not), a licence is required from Natural England. In effect, this means that development activities that may disturb ‘European protected species’ are subject to such licensing, to remain within the law.

### Nesting and Nest Building Birds

All birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended). Nesting is determined as being from when birds first initiate nest building up until the point when fledglings stop returning to the nest. It is an offence to:

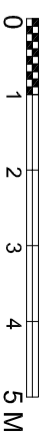
- Intentionally kill, injure, or take any wild bird.
- Intentionally take, damage, or destroy the nest of any wild bird.
- Intentionally take or destroy the egg of any wild bird.

**Appendix 2 – Building Location Plan**



# Barn GF Plan

Scale 1:100



**NOTES:**

**DO NOT COPY - IF IN DOUBT ASK**

PROJECT: MUSGROVE FARM, DUNKESWELL,  
HONINGTON EX14 4RR

CLIENT: MR & MRS BOTT

DRAWING TITLE: BARN EXISTING GF PLAN

SCALE (ISO-A3): 1:100

DATE: 01/04/2022

DRAWN BY: fb

CHECKED BY: dk

PROJECT REF: 22-012

DRAWING No. PA201

REV: ---

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**Appendix 3 – Building Descriptions**

<b>Walls</b>	<p>Stone and concrete.</p> <p>Loosely fitting wooden doors.</p>
<b>Roof structure</b>	<p>Metal cladding onto wooden beams. The interior of the roofing is unlined.</p> <p>The 1<sup>st</sup> floor is wooden planks onto wooden beams.</p>
<b>Potential access points for bats &amp; birds</b>	<p>Gaps in stonework – exterior and interior.</p> <p>Gaps under the metal roof cladding.</p> <p>Open to elements on the southeast aspect.</p>
<b>Potential roosting features</b>	<p>Gaps in interior and exterior stonework.</p> <p>Multiple old bird nests.</p>

**Table A3.1 Barn 1**

<b>Walls</b>	<p>Stone and concrete.</p> <p>Loosely fitting wooden doors.</p> <p>Enclosed wooden walled wood store.</p>
<b>Roof structure</b>	<p>Metal cladding onto wooden beams. The interior of the roofing is unlined.</p> <p>The 1<sup>st</sup> floor is wooden planks onto wooden beams.</p>
<b>Potential access points for bats &amp; birds</b>	<p>Gaps in stonework – exterior and interior.</p> <p>Gaps under the metal roof cladding.</p> <p>Open to elements on the southeast aspect.</p>
<b>Potential roosting features</b>	<p>Gaps in interior and exterior stonework.</p> <p>Multiple old bird nests.</p>

**Table A3.2 Barn 2**

<b>Walls</b>	<p>Stone and concrete.</p> <p>Loosely fitting wooden doors.</p> <p>Window on southern aspect.</p> <p>The outbuilding is attached to the western aspect.</p>
<b>Roof structure</b>	<p>Metal cladding onto wooden beams. The interior of the roofing is unlined.</p> <p>The 1<sup>st</sup> floor is wooden planks onto wooden beams.</p>

<b>Potential access points for bats &amp; birds</b>	<p>Gaps in stonework – exterior and interior.</p> <p>Gaps under the metal roof cladding.</p> <p>Open to elements on the southeast aspect.</p>
<b>Potential roosting features</b>	<p>Gaps in interior and exterior stonework.</p> <p>Multiple old bird nests.</p>

**Table A3.3 Barn 3**

**Appendix 4 – Survey Weather Conditions**

<b>Date: 27/07/2022</b>					
<b>Sunset: 21:06</b>					
<b>Parameter</b>	<b>Time</b>	<b>Temp (°C)</b>	<b>Wind Speed (Beaufort Scale)</b>	<b>Cloud Cover %</b>	<b>Precipitation</b>
Start of Survey	20:51	16	F1	30	None
End of Survey	22:36	14	F1	60	None

**Table A4.1 Emergence Survey**

**Appendix 5 – Examples of Bird Nesting & Bat Roosting Provision**



## BAT ROOSTING PROVISION

**This information is provided as an indication of different types of roosting provision, and is not comprehensive. DWC does not endorse any particular products or suppliers.**

	<p><b>General Purpose Wooden &amp; Woodcrete Bat Boxes</b> e.g. Schwegler Bat Boxes 2F &amp; 2FN for trees</p> <p>Woodcrete boxes e.g. Schwegler are more durable and provide more stable temperatures</p> <p>Position: Upon external walls or mature trees with a southerly aspect, at approximately 3m or higher from ground level.</p> <p><a href="http://www.wildcareshop.com/product/nest-boxes-artificial-habitats/bat-boxes.html">http://www.wildcareshop.com/product/nest-boxes-artificial-habitats/bat-boxes.html</a></p> <p><a href="http://www.nhbs.com/bat_boxes_eqcat_421.html">http://www.nhbs.com/bat_boxes_eqcat_421.html</a></p>
	<p><b>Schwegler 1FQ Bat Box</b> (pictured)</p> <p>Position: On external walls with a southerly aspect, beneath eaves or approximately 3m or higher from ground level. Front panel can be painted to match building.</p>



**Schwegler N27 Bat Box** (pictured)

Position: Within external walls with a southerly aspect, beneath eaves or approximately 3m or higher from ground level.



**Schwegler 1FE Bat Access Panel with Optional Back Panel** (pictured)

Position: Within or on external walls with a southerly aspect, beneath eaves or approximately 3m or higher from ground level.

Additional Information: Installation of access panel alone would allow bats to access into a building, potentially into a cavity wall spaces or loft spaces. No maintenance required

By fitting the optional back panel the Schwegler 1FE becomes a self contained bat roosting unit at the dimensions shown above.

	<p><b>Schwegler 2FR Bat Tube</b> (pictured)</p> <p>Position: Within or on external walls with a southerly aspect, beneath eaves or approximately 3m or higher from ground level.</p> <p>Additional information: Can be painted or rendered. No maintenance required. The top can be removed to allow access to cavity walls, or optional holes in the sides mean that several units can be installed together to form a larger roost.</p>
	<p><b>Permanent provision within structure of the building</b></p> <p>It is possible to create more traditional access into the roof space and suitable crevices within a building, for example through raised ridge tiles or slates, or gaps behind the soffit boxes e.g. Tudor Roof tiles (pictured)</p> <p><a href="http://www.tudorrooftiles.co.uk/bat.html">http://www.tudorrooftiles.co.uk/bat.html</a></p>

## BIRD NESTING PROVISION

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	<p><b>General Purpose Wooden &amp; Woodcrete Bird Boxes</b> e.g. Greenalyte range (pictured), Schwegler Bird Boxes 1B &amp; 2H for trees, and Schwegler 1MR Avianex for buildings.</p> <p>Woodcrete boxes e.g. Schwegler are more durable and provide more stable temperatures</p> <p>A range of entrance hole sizes will cater for different species e.g.  <b>26mm:</b> Blue Tit, Coal Tit, possibly Wren.  <b>32mm:</b> Great Tit, Nuthatch, Pied Flycatcher.  <b>45mm:</b> Starling  <b>Open Fronted:</b> Robin, Wren, Pied Wagtail.</p> <p>Position: External walls or mature trees with a northerly aspect, approximately 2m or higher from ground level, with nearby tree or hedge cover.</p> <p><a href="http://www.wildcareshop.com/product/nest-boxes-artificial-habitats/bird-boxes.html">http://www.wildcareshop.com/product/nest-boxes-artificial-habitats/bird-boxes.html</a></p> <p><a href="http://www.nhbs.com/bird_boxes_eqcat_426.html">http://www.nhbs.com/bird_boxes_eqcat_426.html</a></p>
	<p><b>Sparrows</b> e.g. NHBS FSC sparrow terrace (pictured)</p> <p>Position: At a height of at least 2m upon external wall, facing east. Several boxes can be installed approximately 1.5m apart</p>

	<p><b>Swifts</b> e.g. Schwegler Swift No. 16 Swift Box (pictured), No. 18 Schwegler Swift Box (for eaves), Ibstock swift bricks</p> <p>Position: At a height of 5m or above. Within external walls with a northerly aspect or beneath eaves and out of direct sunlight. Away from windows, obstructions and creepers. Provide several boxes.</p> <p>Note: Swift calls can be played in May to help swifts locate the nest site <a href="http://www.swift-conservation.org/Nestboxes&amp;Attraction.htm">http://www.swift-conservation.org/Nestboxes&amp;Attraction.htm</a></p>
	<p><b>House Martins</b> e.g. Schwegler House Martin Nesting Cups (pictured)</p> <p>Positioning: On unobstructed walls directly beneath eaves, at a height of 2m or above, facing north or east. Install a droppings board beneath, or install where droppings will not be an issue.</p> <p>Several nests can be placed together. House martins nest in colonies, and the cups may encourage birds to build their own nests.</p>
	<p><b>Swallows</b> e.g. Schwegler No 10 Swallow Nest (pictured)</p> <p>Positioning: Inside of buildings or larger covered areas (e.g. carport or stables), ensuring clear flight path in and out of the structure. Nests should not be placed close together.</p>



**Barn Owl nest boxes**

Barn Owl Trust design has been developed to reduce juvenile mortality.

Positioning: Over 3m in height, facing towards open countryside (more than 1km from a motorway or dual carriageway).

Different designs for trees, poles and buildings are available from the Barn Owl Trust:

<https://www.barnowltrust.org.uk/shop/>



**Barn Owl permanent provision**

The best option for barn owls is to provide permanent space within a building. Further detailed information is available from the Barn Owl Trust:

<http://www.barnowltrust.org.uk/infopage.html?Id=244>

## BEE PROVISION



### **Bee Brick**

e.g. Green&BlueBuild range (pictured)

‘Britain has more than 250 bee species, but numbers have fallen dramatically due to disease, an increase in chemical use and habitat loss’ (Friends of the Earth, 2013).

Solitary bees are non-aggressive and as such are very pet and child friendly. Solitary bees will not sting you unless you squash them, and even then their stings are not painful.

Specification: Each concrete brick is 215mm x 105mm x 65mm.

Position: The bee brick has been created to be used either as an integral part of a building, used within landscaping, or to be positioned as a free standing bee nest in the garden. It offers the dual function of being a construction material that also promotes biodiversity. The bee brick should be positioned in a warm sunny spot, preferably a south facing wall, with no vegetation in front of the holes. They should be positioned at least 1m from the ground with no upward limit.

Function: Each Bee brick contains cavities for solitary bees to lay their eggs. Each cavity is moulded part way into the brick ensuring bees cannot enter the building. Bees lay their eggs inside the holes and seal the entrance with mud or chewed up vegetation. The offspring emerge the following Spring and begin the cycle again.

<https://greenandblue.co.uk/product/bee-brick/>

References and Further Information

- **Bat Conservation Trust (2013)**  
[http://www.bats.org.uk/pages/accommodating\\_bats\\_in\\_buildings.html](http://www.bats.org.uk/pages/accommodating_bats_in_buildings.html)
- **Envisage Wildcare** <http://www.wildcareshop.com/>
- **NHBS** <http://www.nhbs.com/>
- **Williams, C. (2010)** *Biodiversity for Low and Zero Carbon Buildings*. RIBA Publishing, London