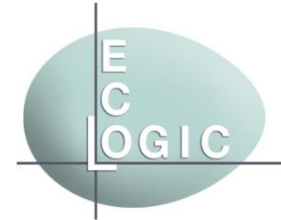


Bat & Protected Species Survey,
Bat Emergence Survey & Bat Activity Survey

Great Trill Farm
Pudleylake Road
Musbury
Devon
EX13 8TU



Planning Reference:		Report Reference:	201207 rev00
Client/s:	Roland De Hauke		
Architect/Agent:	Martin Blake Associates Ltd.		
Survey Date/s:	8 th January, 10 th May & 7 th June 2021		
Report Date:	July 2021	OS Grid Refs:	SY 29093 95635 SY 29076 95680
Report Author:	William Corbett BSc (Hons), MRes		
Approved By:	Andrew Charles BSc (Hons), MSc, MCIEEM		
Surveyor/s & Licence N°:	James Baker	Bats: 2015-12067-CLS-CLS (WML-A34 – Level 2)	
Additional Surveyor/s:	William Corbett, Andrew Charles, Dominic Sheldon, George Greenshields, Ian Crowe, Adrian Bayley, Andrew Baker, Megan Hobbs, Andrew Hobbs, Ruth Cooper & Will Robinson		

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1.1 Introduction

It is understood that it is proposed to conduct development and renovation works at Great Trill Farm, Pudleylake Road, Musbury, Devon, EX13 8TU (Figure 1). Works are to include:

- Re-roofing of the Farmhouse & Manor Barn;
- Demolishing a porch attached to the Farmhouse and replacing it with a two-storey extension;
- Re-instatement of a front porch and French windows on the Farmhouse;
- Residential conversion of the eastern extent of the Manor Barn; and,
- Re-instatement of the fireplace within the Manor Barn.

1.2 Bats

1.2.1 Roost Characterisations

Farmhouse

The combined survey results confirm the use of the Farmhouse by roosting bats, consisting of the following:

- Lesser horseshoe (*Rhinolophus hipposideros*) – utilised as a maternity roost by elevated numbers (peak count: 12);
- Brown long-eared bat (*Plecotus auritus*) – utilised as a day roost by individual/low numbers (peak count: 1);
- Whiskered bat (*Myotis mystacinus*) – utilised as a day roost by individual/low numbers (peak count: 1);
- *Myotis* species – utilised as a hibernation roost by individual/low numbers (peak count: 1);
- Barbastelle (*Barbastella barbastellus*) – utilised as a day roost by individual/low numbers (peak count: 1);
- Soprano pipistrelle (*Pipistrellus pygmaeus*) – utilised as a day roost by individual/low numbers (peak count: 1); and,
- Common pipistrelle (*Pipistrellus pipistrellus*) – utilised as a day roost by individual/low numbers (peak count: 1).

Manor Barn

- Lesser horseshoe – utilised as a day roost by low numbers (peak count: 5);
- Natterer's bat (*Myotis nattereri*) – utilised as a day roost by individual/low numbers (peak count: 1 & confirmed by DNA analysis);
- Serotine (*Eptesicus serotinus*) – utilised as a day roost by low numbers (peak count: 2);
- Grey long-eared (*Plecotus austriacus*) – utilised as a day roost by individual/low numbers (peak count: 1);
- Brown long-eared – utilised as a day, night and hibernation roost by individual/low numbers (peak count: 1);
- Soprano pipistrelle – utilised as a day roost by individual/low numbers (peak count: 1); and,
- Common pipistrelle – utilised as a day roost by moderate numbers (peak count: 6).

1.2.2 Implications of the Proposal

The proposed works to the Farmhouse and Manor Barn will temporally/partially destroy and/or damage the identified bat roosts and would cause disturbance or injury of any bats present at the time of the works.

It will therefore be necessary to apply and obtain a European Protected Species Licence (EPSL) from Natural England under the conservation (Natural Habitats, &c) (Amendments) 2017 Regulations, to legally allow the works to proceed.

In order to apply for the licence, it will be required to successfully obtain full planning permission from the Local Planning Authority (LPA).

Mitigation & Compensation for Bat Species

Specific mitigation and compensatory measures for bats would need to be incorporated into the proposal/s, including:

- Commencement of works to the Farmhouse are time restricted due to the presences of a maternity roost. Works are not to commence between the 1st April and 1st September of any given year. The maternity roosts would need to be reinstated or replaced prior to the 1st April;
- Prior exclusion of any lesser horseshoe bats by a licensed ecologist from both the Farmhouse and Manor Barn;

- Commencement of works relating to the bat roost/s with ecological supervision, required to safely exclude and remove any roosting bats from the working area/s;
- Positioning of temporary bat roosting provisions, consisting of at least six bat boxes positioned upon trees at the property. Two of the six bat boxes would need to be hibernation bat boxes. These bat boxes would be used to relocate any bats found during the works;
- Within the Farmhouse, it is understood following completion of the works the loft void will be re-instated including retention of the 'free-flight' access point for lesser horseshoe bats on the eastern elevation. Combined crevice positions within the loft void in the form of four wooden bat boxes will also need to be provided. Re-instatement of the three 'crevice' bat access points on the roof and ridge will also be required (see Appendix 2);
- Within the Manor Barn, it is understood that the loft void at the eastern extent of the barn will be retained for bats. Combined crevice positions within the loft void in the form of six wooden bat boxes will also need to be provided. A 'free flight' access point measuring 400 mm x 300 mm is recommended to be installed on the eastern elevation/aspect of the barn into the loft void (see Appendix 3). On the western extent of the loft void it is recommended a 400 x 300 mm gap is created allowing bats to access the unconverted western extent of the barn. Installation of 'crevice' bat accesses in the form of four ridge tile accesses and four access slates on the roof of the barn will also be required (see Appendix 2);
- The construction works in association with the bat voids and inbuilt provisions must utilise bat friendly building materials, including no breathable roofing membranes, mortared ridges and utilising suitable timber treatment products; and,
- The bat roosting provisions, bat access points, and a corresponding flight lines linking the provisions to the surrounding environment, must not be illuminated by external lighting.

1.3 Nesting Birds

The buildings on site included active and former nest sites for swallows, corvids, starlings and wrens/robins. It is considered likely that these bird nest site(s) will be re-established within or upon the building structures during any future bird nesting season/s. There is also potential for the vegetation surrounding the site and buildings to conceal additional nesting sites.

Whilst active, bird nest sites are legally protected from damage or disturbance. Therefore, care should be taken that any future established bird nests are not disturbed by the works.

Ideally building works and any vegetation removal should be scheduled to commence outside of the bird-nesting season (March to August inclusive), removing any potential for undue delay/s caused by nesting birds. Alternatively, if works are to be commenced during the bird nesting season, a nesting bird check would be required to confirm the presence or absence of active bird nests, with any active nests protected accordingly.

1.4 Ecological Mitigation & Enhancements

The National Planning Policy Framework outlines the Government's commitment to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Therefore, in order for the development to result in a biodiversity gain, in addition to mitigation determined for bat species, the development will need to include the following:

- Two sparrow terrace nesting provisions – positioned within external walls of the on-site buildings (see Appendix 4);
- A dedicated swallow roosting area incorporated into the Manor Barn (unconverted western extent, eaves overhang box) or alternative structure. The swallow nesting area is to be supplemented by five nesting cups to encourage use by swallows (see Appendix 4);
- A house martin nesting cup – positioned under the eaves of an on-site building (see Appendix 4);
- Three inbuilt open fronted bird nesting provisions – positioned within/upon the external walls of the Manor Barn (see Appendix 4);
- A bee provision – positioned within/upon the external wall(s) of on-site buildings (see Appendix 5); and,
- Any external lighting associated with the development is to be adapted to be based on a Passive Infrared Sensor (PIR) system (being motion-sensitive only to large objects) and on a short timer (no longer than 2 minutes).

SECTION 2

SURVEY OBJECTIVES

It is understood that it is proposed to conduct development and renovation works at Great Trill Farm, Pudleylake Road, Musbury, Devon, EX13 8TU (Figure 1). Works are to include:

- Re-roofing of the Farmhouse and Manor Barn;
- Demolishing a porch attached to the Farmhouse and replacing it with a two-storey extension;
- Re-instatement of a front porch and French windows on the Farmhouse;
- Residential conversion of the eastern extent of the Manor Barn; and,
- Re-instatement of the fireplace within the Manor Barn.

The survey specifically aimed to identify the following:

- The presence of, or past use of the site by, any species of bat;
- The presence of, or past use of the site by, barn owl, or other nesting birds;
- The sites potential for use by any of above;
- Any other ecological issues relating to the proposal.

SECTION 3

SURVEY SITE DESCRIPTION

Great Trill Farm is located 1.5 km to the northeast of Musbury Village, and 1.8 km south of Axminster. The site includes multiple buildings, including a farmhouse, Manor Barn and other outbuildings with associated driveway access, gardens, agricultural fields and mature trees (Figure 1).

Farmhouse

The traditional farmhouse is an L-shaped two-storey building with a modern porch extension on the northern elevation (Figures 2 & 3). The main pitched roofs are constructed of original timbers and have a covering of slate tiles, no underlining is present. The attached porch has a covering of slates and has an underlining of bitumen roofing felt. The walls are constructed predominantly of stone which is partially rendered, with some brick and concrete block.



Figure 1. The Farmhouse and Manor Barn at Great Trill Farm



Figure 2. The northern and western elevations of the Farmhouse



Figure 3. The southern and eastern elevations of the Farmhouse

The Manor Barn

The Manor Barn is a large, pitched roof barn with a separate building attached on the northern elevation (Figures 4 & 5). The pitched roof is constructed of original timbers with a covering of slates and clay ridge tiles, no underlining is present. There are wooden fascias and barge boards present. The walls are constructed primarily of stone, with an extent of brick reveals and arches and concrete block repairs. The eastern extent has two floors, the western extent of the barn is a large open space to the roof.



Figure 4. The eastern gable and northern elevation of the Manor Barn



Figure 5. The southern elevation of the Manor Barn

4.1 The Bat & Protected Species Survey

The survey was conducted by James Baker and William Corbett on the 8th January 2021, with the aid of head and hand-held torches, an endoscope, close-range binoculars, an extendable ladder and a digital camera.

The aim of the survey was to assess levels of use by bats through the presence of actual animals or their field signs, such as droppings, insect prey remains and/or urine staining, and the potential suitability of the buildings for roosting.

The presence of other protected species, notably nesting birds and barn owl/s, was also investigated, including the presence and behaviour of any actual animals or their field signs, such as whitewash, pellets and or nest debris.

4.2 The Bat Emergence Survey

The bat emergence survey consisted of evening survey visits undertaken of the Farmhouse and Manor Barn on the 10th May & 7th June 2021. The surveys were conducted by William Corbett, Adrian Bayley, Ruth Cooper, Will Robinson, Andrew Bakere, George Greenshields, Ian Crowe and Andrew Charles on the 10th May 2021 and by William Corbett, James Baker, George Greenshields, Dominic Sheldon, Adrian Bayley, Ruth Cooper, Megan Hobbs, and Andrew Hobbs on the 7th June 2021. The surveys were undertaken from 15 minutes prior to sunset until 1½ hours after sunset.

The surveyors were positioned to cover all aspects of the buildings, with particular emphasis placed on the areas, which had, potential to be utilised by emerging bats.

When a bat was detected, it was identified with its position and activity noted on a field base plan. The time and position of each bat was recorded, along with its direction of flight (light permitting) and whether the bat was emerging, foraging or commuting. Cloud cover, wind strength, precipitation, humidity and temperature were all recorded at the start and on completion of the survey.

The surveyors were each equipped with a bat detector and recording device, comprising of either a Peersonic RPA3 bat detector with internal recording capability, an Echometer Touch 2 bat detector connected to a digital recorder, an Echometer 3 bat detector with internal recording capability or a Pettersson D240X connected to a

digital recorder. To aid species identification, all recordings were analysed using Kaleidoscope Viewer (ver4.5.5), BatSound (ver3.3 and/or ver4.03) and/or Analook (ver3.8) computer software.

4.3 The Bat Activity Survey

An automated bat detector was positioned within the Manor Barn for a period of five nights from the 10th May to 15th May 2021.

The automated bat detectors consisted of a SongMeter 2 Bat+ zero crossing frequency division detectors, programmed to commence recording 30 minutes prior to sunset until 30 minutes after sunrise.

All subsequent ultrasound recordings were analysed using Kaleidoscope Viewer (version 3.1.3), AnalookW (version 4.1) and BatSound (version 3.3) computer software.

5.1 The Bat & Protected Species Survey

Table 1. Environmental conditions on 8th January 2021

Temperature (°C)	Wind Speed (Beaufort Scale)	Cloud cover (%)	Precipitation	Sunset time
2	1	80	None	N/A

Constraints on the survey/s:

There was open access to all buildings. A thorough search was made of all available internal and external surfaces and an assessment made of the roof structures.

5.1.1 Bats

Farmhouse

The Farmhouse had multiple potential ‘crevice’ access points and roosting positions including within roofing layers and upon wall tops, where signs of roosting may remain concealed. A ‘free flight’ access designed specifically for lesser horseshoe bats was identified on the eastern elevation of the Farmhouse.

Actual field signs of bats included ~10,000s of predominantly lesser horseshoe bat droppings within the loft void of the Farmhouse (Figure 6). A myotis species bat was observed hibernating within a stone crevice within the loft void.

The Manor Barn

The Manor Barn had multiple potential ‘free-flight’ access points via door openings, dovecots and window openings. It also had multiple potential ‘crevice’ access points and roosting positions including within roofing layers, upon wall tops, in wooden lintels and within cracks and crevices within the stonework. Therefore, signs of roosting may remain concealed.

Actual field signs of bats included a brown long-eared bat hibernating within a ceiling joist on the ground floor of the eastern extent of the barn. The mezzanine floor within the eastern section of the barn included approximately 200 medium-sized droppings which DNA analysis revealed to be from a Natterer’s bat (Figure 7). A large concentration (~1000s) of lesser horseshoe droppings was observed within a grain hopper at the eastern extent of the barn. A scattering of long-eared droppings was observed within the western extent of the barn.

A bat trapping survey of the barn conducted by the local bat group on the 4th June 2021 identified roosting for four common pipistrelles, a lesser horseshoe, a grey long-eared, a serotine and a natterer's bat.

5.1.2 Nesting Birds

Farmhouse

Two corvid nests were observed within the loft space of the Farmhouse (Figure 8).

Nestling starlings were also observed within the loft space of the Farmhouse on the 10th May 2021.

Manor Barn

Multiple corvid, swallow (Figure 9), small passerine and robin/wren nests were observed throughout the barn.



Figure 6. A concentration of the 1,000s of lesser horseshoe bat droppings within the loft void of the Farmhouse



Figure 7. A scattering of Natterer's bat droppings on the mezzanine floor within the eastern extent of the Manor Barn



Figure 8. A corvid nest within the loft void of the Farmhouse



Figure 9. One of the many swallow nests observed within the Manor Barn

5.2 The Bat Emergence Survey

The bat emergence survey consisted of two evening survey visits of the Farmhouse and Manor Barn on the 10th May and 7th June 2021. Weather conditions recorded at the start and end of the survey visits are presented in Table 2.

Table 2. Timings and environmental conditions relating to the bat emergence survey.

Date & Times	Start/End	Temp (°C)	Wind Speed (Beaufort Scale)	Cloud Cover %	Precipitation	Humidity %
10 th May 2021 Sunset: 20:47	Start of Survey	16	2	<5	None	55
Start Time: 20:32 End Time: 22:17	End of Survey	10	1	<5	None	95
7 th June 2021 Sunset: 21:21	Start of Survey	18	1	30	None	48
Start Time: 21:06 End Time: 22:51	End of Survey	11	1	40	None	69

5.2.1 The Bat Emergence Survey Visit – 10th May 2021

Farmhouse

At the start of the survey, 12 lesser horseshoes were observed roosting within the loft void of the farmhouse. Eight lesser horseshoe bats were subsequently recorded emerging from the 'free flight' access point on the eastern elevation of the Farmhouse between 20:51 & 21:20 (see Figure 10). A number of these bats were observed light sampling and hanging up within the 'bovey' kiln to the north of the building.

A long-eared bat was recorded emerging from the roof join on the eastern elevation of the Farmhouse at 20:55 (Figure 10).

A common pipistrelle bat emerged at 21:12 from a gap beside a window frame on the northern elevation of the Farmhouse (Figure 11).

Manor Barn

At the start of the survey, five lesser horseshoe bats were observed roosting within the grain hopper and apex of the roof within the eastern extent of the barn.

Two common pipistrelle bats were recorded emerging from the eaves on the southern elevation of the barn at 20:54 and 21:01 (Figure 12). A further two common pipistrelle bats were recorded emerging from the large opening on the southern elevation of the barn (Figure 12). Two common pipistrelles emerged from above the barn door on the eastern elevation of the Barn at 21:10 and 21:20 (Figure 13).

A lesser horseshoe bat was recorded light sampling within the barn at 21:12. A lesser horseshoe was later observed emerging from a door opening on the southern elevation of the barn (Figure 12). At 21:22 two lesser horseshoe bats were observed roosting/remaining within the barn.

A Natterer's bat emerged from the eaves of the barn on the northern elevation at 21:15 (Figure 13).

A soprano pipistrelle emerged from the stonework on the gable end of the barn at 21:17 (Figure 14).

Additional Bat Activity

Additional bat activity around the site predominantly consisted of commuting and feeding common pipistrelles. Multiple passes were also recorded of serotines, lesser horseshoes and soprano pipistrelles. A single pass of a noctule bat was also recorded.

5.2.2 The Bat Emergence Survey Visit – 7th June 2021

Farmhouse

Ten lesser horseshoe bats were recorded emerging from the 'free flight' access point on the eastern elevation of the Farmhouse between 21:39 & 21:55 (Figure 10). A number of these bats were observed light sampling before emerging fully.

A soprano pipistrelle was recorded emerging from beneath a ridge tile of the Farmhouse at 21:30 (Figure 10).

A common pipistrelle bat emerged at 21:44 from a gap beside a window frame on the northern elevation of the Farmhouse (Figure 11).

A whiskered bat was recorded emerging from beside the chimney on the eastern elevation of the farmhouse at 22:17 (Figure 10).

A barbastelle bat was recorded emerging from the roof join on the eastern elevation of the Farmhouse at 22:31 (Figure 10).

Manor Barn

A lesser horseshoe was present at the start of the survey at the apex of the roof within the eastern extent of the barn. This lesser horseshoe light sampled and then emerged at 21:54 from a door opening on the northern elevation of the barn (Figure 15).

A common pipistrelle emerged from a window opening at 21:42 on the northern elevation of the barn (Figure 15). A common pipistrelle was also recorded emerging from the stonework on the gable end of the barn at 21:46 (see Figure 14).

Two serotine bats emerged at 21:59 & 22:05 from the large opening on the southern elevation of the barn at (Figure 12).

Additional Bat Activity

Additional bat activity around the site predominantly consisted of commuting and feeding common pipistrelles and soprano pipistrelles. Multiple passes were also recorded for serotines, lesser horseshoes and long-eared bats. A single pass of a noctule bat was also recorded.

5.3 The Bat Activity Survey

The automated bat detector comprised of an SM2 BAT+ bat detector, positioned within the mezzanine at the eastern extent of the Manor Barn to record for the following period:

- 10th – 15th May 2021

The detector recorded a high level of bat activity during this period, consisting of the following:

- Lesser horseshoe bats (peak count: 2) – day roosting from the 10th – 15th May 2021; and,
- Long-eared bat – night roosting on the 10th, 11th & 14th May 2021

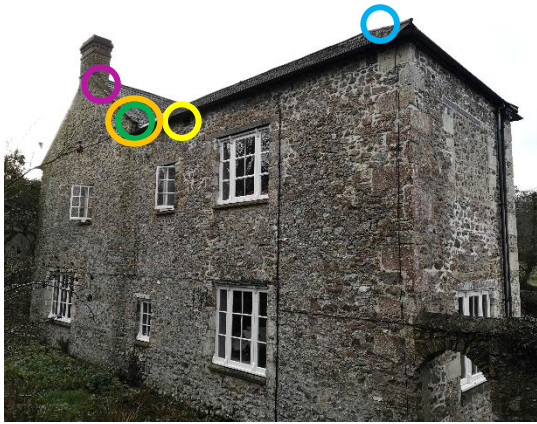


Figure 10. Locations of the emerging lesser horseshoe bats (yellow), long-eared bat (green), whiskered bat (purple), soprano pipistrelle (blue) and barbastelle (orange) from the northern and eastern elevations of the Farmhouse



Figure 11. Locations of the emerging common pipistrelle bats (red) from the northern elevation of the Farmhouse



Figure 12. Locations of the emerging common pipistrelle bats (red), serotines (black) and lesser horseshoe (yellow) from the southern elevation of the barn



Figure 13. Location of the emerging common pipistrelle bats (red) and Natterer's bat (green) from the eastern and northern elevation of the barn



Figure 14. Locations of the emerging common pipistrelle bat (red) and soprano pipistrelle bat (blue) from the western elevation of the barn

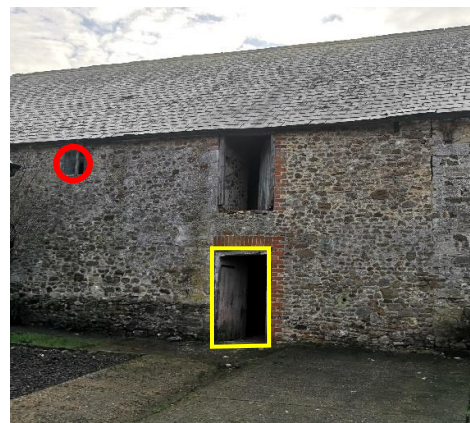


Figure 15. Location of the emerging common pipistrelle bat (red) and lesser horseshoe bat (yellow) from the northern elevation of the barn

6.1 Bats

6.1.1 Results Summary

Farmhouse

The combined survey results confirm the use of the Farmhouse by roosting bats, consisting of the following:

- Lesser horseshoe – utilised as a maternity roost by elevated numbers (peak count: 12);
- Brown long-eared bat – utilised as a day roost by individual/low numbers (peak count: 1);
- Whiskered bat – utilised as a day roost by individual/low numbers (peak count: 1);
- *Myotis* species – utilised as a hibernation roost by individual/low numbers (peak count: 1);
- Barbastelle – utilised as a day roost by individual/low numbers (peak count: 1);
- Soprano pipistrelle – utilised as a day roost by individual/low numbers (peak count: 1); and,
- Common pipistrelle - utilised as a day roost by individual/low numbers (peak count: 1).

Manor Barn

The combined survey results confirm the use of the Manor Barn by roosting bats, consisting of the following:

- Lesser horseshoe – utilised as a day roost by low numbers (peak count: 5);
- Natterer's bat – utilised as a day roost by individual/low numbers (peak count: 1 & confirmed by DNA analysis);
- Serotine – utilised as a day roost by low numbers (peak count: 2);
- Grey long-eared – utilised as a day roost by individual/low numbers (peak count: 1);
- Brown long-eared – utilised as a day, night and hibernation roost by individual/low numbers (peak count: 1);
- Soprano pipistrelle – utilised as a day roost by individual/low numbers (peak count: 1); and,

- Common pipistrelle – utilised as a day roost by moderate numbers (peak count: 6).

6.1.2 Species Status

Common Pipistrelle

The common pipistrelle bat is common and widespread locally in Devon and throughout the UK, Ireland and the Isle of Man (Battersby 2005).

Soprano Pipistrelle

The soprano pipistrelle bat is common and widespread locally in Devon and throughout the UK, Ireland and the Isle of Man (Battersby 2005).

Whiskered Bat

Whiskered bat is relatively abundant and widespread locally within Devon. However, the species is considered locally distributed at a national level (Battersby 2005).

Natterer's Bat

Whiskered bat is relatively abundant and widespread locally within Devon. However, the species is considered locally distributed at a national level (Battersby 2005).

Long-eared (grey and brown)

There are two long-eared bat species within southern England, including Devon, consisting of the more common and widespread species of brown long-eared bat (*Plecotus auritus*), and the rarer and more restricted grey long-eared bat (*Plecotus austriacus*). Both are present on site.

Serotine

Serotine bat has become increasingly abundant within Devon, with the species having a widespread southerly UK distribution (Battersby 2005), which is currently expanding westwards through the county.

Lesser Horseshoe

Lesser horseshoe bat is relatively abundant and widespread locally within Devon. However, the species is considered rare and endangered at a national level, with severe declines recorded from northern England and across Europe (Battersby 2005).

Barbastelle

Barbastelle bat is relatively abundant locally within Devon, with its range within the south of the UK. However, It is likely to be under recorded within its range (Battersby 2005).

6.1.3 Legislation

Bats are protected under several articles of UK and European legislation, notably the Wildlife & Countryside Act 1981, the CroW Act 2000, and the Conservation (Natural Habitats, &c) (Amendments) 2017 Regulations [referred to as HR]. Under this legislation, it is illegal to:

- Intentionally or deliberately kill or injure bats;
- Deliberately disturb bats;
- Recklessly disturb roosting bats or obstruct access to their roosts; and,
- Damage or destroy bat roosts.

Where works are proposed that would result in offences being committed, a European Protected Species Licence (EPSL) is required under the Habitats Regulations (2017). An EPSL must be applied for from Natural England, permitting activities that would otherwise be deemed illegal.

6.1.4 Impact of the Proposed Development

The proposed works to the Farmhouse and Manor Barn will destroy and/or damage the identified bat roosts, and would cause disturbance or injury of any bats present at the time of the works.

It will be necessary to apply and obtain a standard European Protected Species Licence (EPSL) from Natural England under the conservation (Natural Habitats, &c) (Amendments) 2010 Regulations, to legally allow the proposed works.

In order to apply for the licence, it will be required to successfully obtain full planning permission from the Local Planning Authority (LPA).

For a standard EPSL Natural England will take at least 30 working days to approve and grant such a licence.

In order to obtain an EPSL, the following three regulations must be satisfied:

- 1) The proposed works or development may be 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.*” [R.44(2) (e)];
- 2) “*There is no satisfactory alternative*” [R.44(3)(a)]; and,
- 3) “*The action will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.*” [R.44(3)(b)].

Mitigation and compensatory measures will need to be detailed within the EPSL application, including; appropriate/sensitive timing of the commencement of works, initial ecological inspection, ecological exclusion and supervision, retention and/or replacement of suitable species-specific bat roosting provisions.

Providing that such measures are implemented, the destruction and disturbance of roosting bats, combined, with recreation of bat roosting provisions suitable for the identified species, at Great Trill Farm, will mean that the proposal will not necessarily have a detrimental bat population effect.

6.2 Nesting Birds

The buildings on site included active and former nest sites for swallows, corvids, starlings and wrens/robins. It is considered likely that these bird nest site(s) will be re-established within or upon the building structures during any future bird nesting season/s.

There is also potential for the vegetation upon and around the buildings to conceal additional nesting sites.

Whist active, bird nest sites are legally protected from damage or disturbance (see Appendix 1). Therefore, care should be taken that any future established bird nests are not disturbed by the works.

Care will need to be taken to ensure no active bird nests are disturbed by the proposed works.

6.3 Ecological Enhancements

The National Planning Policy Framework (NPPF) outlines the Government's commitment to minimise impacts on biodiversity and to provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Therefore, in order for the development to result in a biodiversity gain the development will need to include replacement, and/or compensatory provisions for birds and bees.

7.1 Roosting Bats

7.1.1 European Protected Species Licence (EPSL)

The proposed works to the Farmhouse and Manor Barn will destroy and/or damage the identified bat roosts, and would cause disturbance or injury of any bats present at the time of the works.

It will therefore be necessary to apply and obtain a European Protected Species Licence (EPSL) from Natural England under the conservation (Natural Habitats, &c) (Amendments) 2017 Regulations, to legally allow the works to proceed.

In order to apply for the licence, it will be required to successfully obtain full planning permission from the Local Planning Authority (LPA).

For a standard EPSL, Natural England will take at least 30 working days to approve and grant such a licence.

7.1.2 Mitigation & Compensation for Bat Species

Specific mitigation and compensatory measures would need to be incorporated into the proposal/s, including:

Specific mitigation and compensatory measures for bats would need to be incorporated into the proposal/s, including:

- Commencement of works to the Farmhouse are time restricted due to the presences of a maternity roost. Works are not to commence between the 1st April and 1st September of any given year. The maternity roosts would need to be reinstated or replaced prior to the 1st April;
- Prior exclusion of any lesser horseshoe bats by a licensed ecologist from both the Farmhouse and Manor Barn;
- Commencement of works relating to the bat roost/s with ecological supervision, required to safely exclude and remove any roosting bats from the working area/s;
- Positioning of temporary bat roosting provisions, consisting of at least six bat boxes positioned upon trees at the property. Two of the six bat boxes would need to be hibernation bat boxes. These bat boxes would be used to relocate any bats found during the works;

- Within the Farmhouse, it is understood following completion of the works the loft void will be re-instated including retention of the 'free-flight' access point for lesser horseshoe bats on the eastern elevation. Combined crevice positions within the loft void in the form of four wooden bat boxes will also need to be provided. Re-instatement of the three 'crevice' bat access points on the roof and ridge will also be required (see Appendix 2);
- Within the Manor Barn, it is understood that the loft void at the eastern extent of the barn will be retained for bats. Combined crevice positions within the loft void in the form of six wooden bat boxes will also need to be provided. A 'free flight' access point measuring 400 mm x 300 mm is recommended to be installed on the eastern elevation/aspect of the barn into the loft void (see Appendix 3). On the western extent of the loft void it is recommended a 400 x 300 mm gap is created allowing bats to access the unconverted western extent of the barn. Installation of 'crevice' bat accesses in the form of four ridge tile accesses and four access slates on the roof of the barn will also be required (see Appendix 2);
- The construction works in association with the bat voids and inbuilt provisions must utilise bat friendly building materials, including no breathable roofing membranes, mortared ridges and utilising suitable timber treatment products; and,
- The bat roosting provisions, bat access points, and a corresponding flight lines linking the provisions to the surrounding environment, must not be illuminated by external lighting.

7.2 Nesting Birds

The buildings on site included active and former nest sites for swallows, corvids, starlings and wrens/robins. It is considered likely that these bird nest site(s) will re-established within or upon the building structures during any future bird nesting season/s. There is also potential for nests to have been concealed within on-site vegetation.

Whilst active, bird nest sites are legally protected from damage or disturbance (see Appendix 1). Therefore, care should be taken that any future established bird nests are not disturbed by the works.

Ideally building works and vegetation removal should be scheduled to commence outside of the bird-nesting season (March to August inclusive), removing any potential

for undue delay/s caused by nesting birds. Alternatively, if works are to be commenced during the bird nesting season, a nesting bird check would be required by a qualified ecologist to confirm the presence or absence of active bird nests, with any active nests protected accordingly.

7.3 Ecological Mitigation & Enhancements

The National Planning Policy Framework outlines the Government's commitment to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Therefore, in order for the development to result in a biodiversity gain, in addition to mitigation determined for bat species in section 7.1.2, the development will need to include the following,:

- Two sparrow terrace nesting provisions – positioned within external walls of the on-site buildings (see Appendix 4);
- A dedicated swallow roosting area incorporated into the Manor Barn (unconverted western extent, eaves overhang box) or alternative structure. The swallow nesting area is to be supplemented by five nesting cups to encourage use by swallows (see Appendix 4);
- A house martin nesting cup – positioned under the eaves of an on-site building (see Appendix 4);
- Three inbuilt open fronted bird nesting provisions – positioned within/upon\ the external walls of the Manor Barn (see Appendix 4);
- A bee provision – positioned within/upon the external wall(s) of on-site buildings (see Appendix 5); and,
- Any external lighting associated with the development is to be adapted to be based on a Passive Infrared Sensor (PIR) system (being motion-sensitive only to large objects) and on a short timer (no longer than 2 minutes). Such lighting will specifically not be positioned where it could illuminate surrounding vegetation (e.g. woodland, trees, hedgerows, hedgebanks, etc), any bat roosts or any areas beyond the site.

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APPENDICES

- Appendix 1: Legislation
- Appendix 2: Examples of Bat Crevice Access Points
- Appendix 3: Examples of Horseshoe Bat Roosting Provisions
- Appendix 4: Examples of Bird Nesting Provisions
- Appendix 5: Examples of Bee Provisions

Bat Species

All bat species and their roosts are legally protected in the UK. All bats are listed as European protected species of animals in the European Union's Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the Habitats Directive. This Directive is implemented in the UK by The Conservation of Habitats and Species Regulations 2017 (better known as the Habitats Regulations).

There is also some protection for bats and roosts in England and Wales under the Wildlife & Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000). For practical purposes, the protection of bats and their roosts now falls mostly under the Habitats Regulations

In summary, it is an offence to

- deliberately, capture, injure or kill a bat
- deliberately, disturb in a way that would significantly affect their local distribution or abundance, or affect their ability to survive, breed or rear young
- damage or destroy a roost (this is an 'absolute' offence)
- possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat

('Deliberately' may be interpreted as someone who, although not intending to injure, kill, etc, performed the relevant action, being sufficiently informed and aware of the consequences their action will probably have.)

A person who needs to carry out actions that would result in an offence being committed should apply for a derogation licence from Natural England. They have powers to grant Habitats Regulations derogation licences in certain circumstances, for certain reasons and with certain terms attached, so that the licence holder remains within the law. Application for a derogation licence should be made in plenty of time, and the services of a bat expert utilised in making the application. It is an offence to make a false statement to obtain such a licence.

This information is not provided as legal advice and before making decisions relating to the law a qualified legal representative should be consulted.

Barn Owl

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

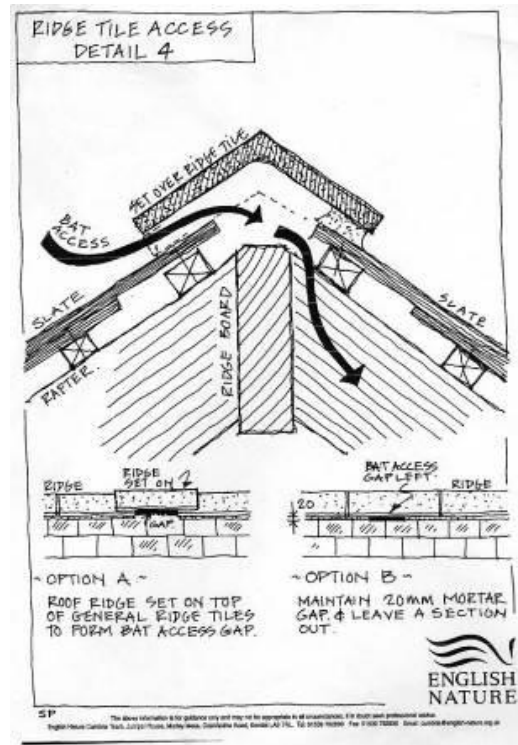
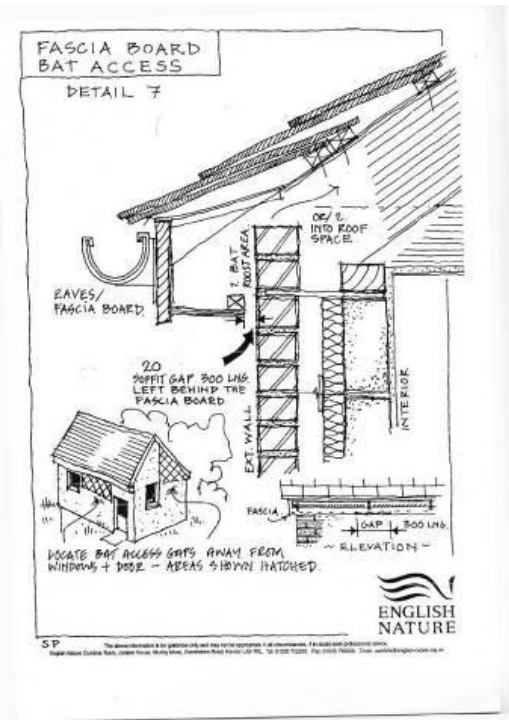
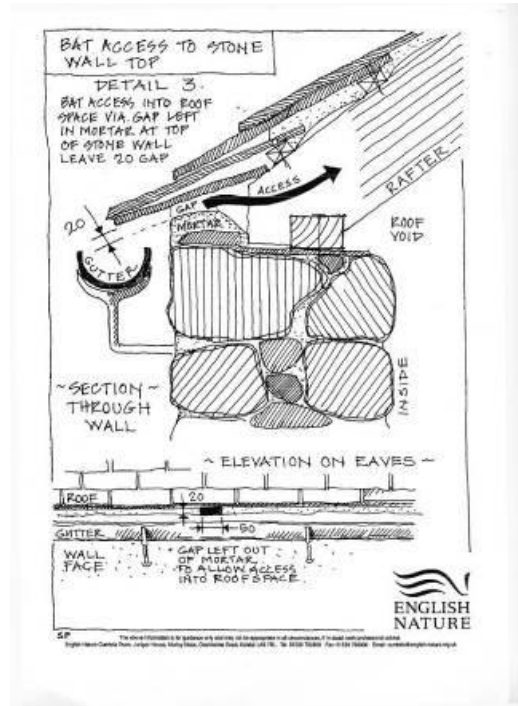
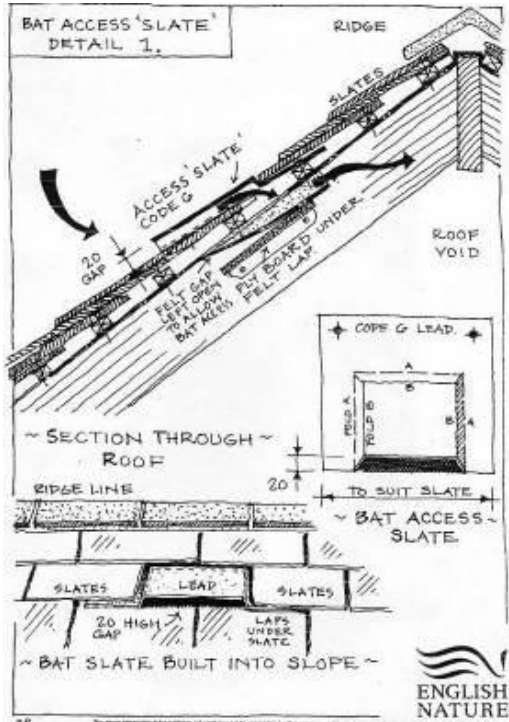
It is an offence to:

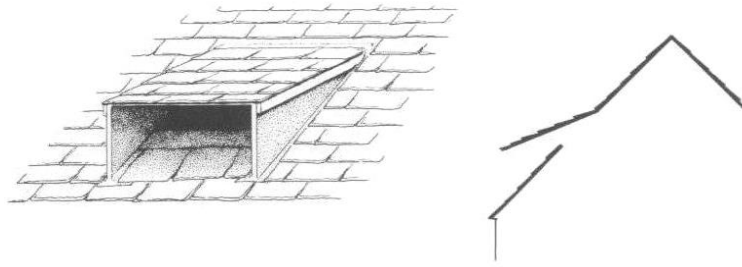
- Intentionally kill, injure, or take (handle) any wild barn owl.
- Intentionally take, damage, or destroy any wild barn owl nest whilst in use or being 'built'.
- Intentionally take or destroy a wild barn owl egg.
- Intentionally or recklessly disturb any wild barn owl whilst 'building' a nest or whilst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

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.

Example Access Points for Pipistrelle, Serotine & Long-eared Bat Species





Dormer type entrance suitable for horseshoe bats



Letter box type entrance suitable for horseshoe bats

Woodstone Sparrow Terrace

Suitable for: House sparrows and individual blue & great tits
 Material: Woodcrete
 Height: 220 mm
 Width: 290 mm
 Depth: 165 mm
 Weight: 7 kg

Position: At a height of at least 2 m within external wall

**WoodStone Build in Open Nest Box**

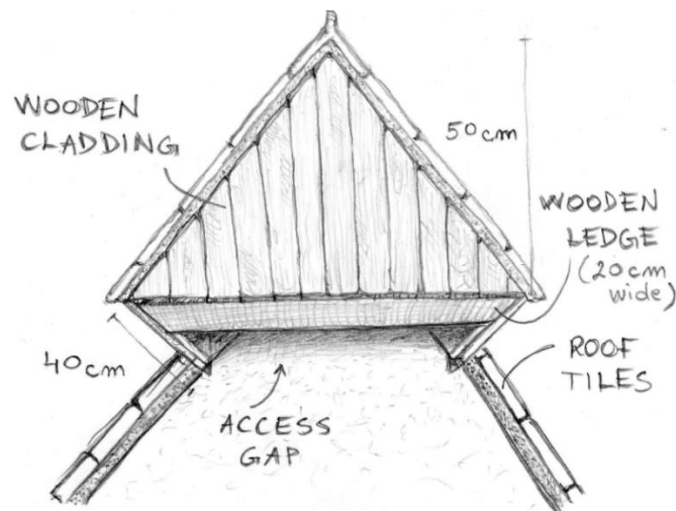
Suitable for: robins, wrens and blackbirds.
 Material: Woodstone
 Height: 180 mm
 Width: 220 mm
 Depth: 180 mm
 Weight: 4.2 kg

Position: Within external walls, at a height of 2 m or above.

**Swallow Eaves Overhang Nesting Box**

Suitable for: Common swallow
 Material: Timber cladding with tile roof to match building
 Height: 500 mm
 Width: to match pitch of roof
 Depth: 400 mm

Positioning: on gable of existing building. Supplemented by three Schwegler No 10 Swallow nesting cups installed within the box against the gable wall.



Schwegler No 10 Swallow Nest

Suitable for: Common swallow
Material: Woodcrete with water resistant glued chipboard mounting panel which can be painted
Height: 110 mm
Width: 250 mm
Depth: 140 mm
Weight: 0.9 kg

Positioning: Inside of buildings or larger covered areas ensuring clear flight path in and out of the structure



Schwegler House Martin Nesting Cups

Suitable for: House martins
Material: Woodcrete with stainless steel fittings
Height: 175 mm
Width: 430 mm
Depth: 175 mm
Weight: 5.5 kg

Positioning: On unobstructed walls directly beneath eaves, at a height of 2 m or above



Bee Brick

Each bee brick includes nesting compartments for solitary nesting bees, including for egg laying and hibernation.

Bee bricks to be positioned within southerly elevations, which includes part or full sun, between 1 m to 2 m above ground level, and ideally facing garden or boundary habitats.



Bee Brick - case in concrete: 215 mm x 105 mm x 65 mm
<http://greenandbluebuild.co.uk/product/bee-brick/>

Woodstone Insect Block

These durable homes will attract insects such as wild bees, lacewings and ladybirds.

Dimensions: 185 x 270 x 90 mm
Weight 3.2 kg

Position: Place the insect block preferably in a sunny spot, ideally next to areas with flowers close by. The front where possible aimed at the south. Hang the insect block up at least 2 metres high.

The insect block can also be directly built into a façade or wall.

