

Greena Ecological Consultancy

PROTECTED SPECIES SURVEY REPORT

Rose Farm

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Somerset

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Brief

Ecological surveys were requested to in advance to support a planning application for development of this redundant farm surveys were carried out in 2020 & 2021 specifically concentrating on bats.

This ecological survey is intended to ascertain sufficient information to evaluate the situation adequately in preparation of the above mentioned works. The information gathered will be necessary to comply with European Regulations, which are connected with planning regulations and with The Wildlife and Countryside Directives and Habitat Regulations.

Summary

- Greena Ecological Consultancy was instructed by Alan Wilcox owner of this property to undertake these surveys to support a planning application.
- The survey site comprises a farmhouse, some traditional and modern agricultural barns.
- The site was surveyed in August 2020 by inspection of the buildings and (stage II) bat activity survey, with further bat activity surveys in September 2020 & 2021.
- The cluster of linked barns around the house is used by bats and one is occasionally used by a barn owl.
- Birds will nest in a number of these buildings.
- A full bat licence and mitigation will be required to go ahead to major works to the house and barn 'B' there is no bat interest in the other buildings.
- Presence of no other European protected species was confirmed or likely in these buildings, no badger setts in or around the buildings.

1. Introduction

1.1 Background

Greena Ecological Consultancy was instructed by Alan Wilcox owner of this property to undertake these surveys to support a planning application these were conducted in 2020 & 2021.

1.2 Legislation

1.2.1 Bats

All UK bat species and their roosts are fully protected under the Wildlife and Countryside Act 1981 (as amended) through inclusion in Schedule 5, under the Countryside and Rights of Way Act 2000, and under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). The Regulations designate bats as European Protected Species (EPS).

Taken together, the Acts and Regulations protecting bats make it an offence to:

- Deliberately kill, injure, capture or take bats;
- Deliberately disturb bats. This particularly relates to disturbance that is likely to:
 - Impair their ability to survive, breed or reproduce, or to rear or nurture their young;
 - Impair their ability to hibernate or (for migratory species) migrate; and/or
 - Affect significantly the local distribution or abundance of the species to which they belong.
- Damage or destroy bat roosts;
- Possess or transport a bat or part of a bat, unless acquired legally; and
- Sell, offer for sale or exchange bats or parts of bats.

A roost is any structure or place used for shelter or protection. Bats need to have access to a number of roosts because they use different roosts depending on season, breeding status and prevailing weather conditions. For this reason roosts are protected whether or not bats are present at the time.

As bats are designated EPS, development and building works that are likely to result in the disturbance of bats, damage to or destruction of their roosts, or require bats to be caught or translocated, usually require an EPS licence to be obtained from Natural England before any works begin. Obtaining a licence involves completing an Application Pack, including a Method Statement that details mitigation appropriate to maintaining the 'favourable conservation status' of the local bat population. Three conditions must be met before a licence can be granted:

- There is no satisfactory alternative;
- The development will not be detrimental to the maintenance of local bat populations at a 'favourable conservation status' in their natural range; and
- The development must be for 'imperative reasons of overriding public interest including those of a social or economic nature'.

An EPS licence is required for all development activities if there is a reasonable likelihood that an offence against Conservation of Habitats and Species Regulations 2017 (as amended), Wildlife and Countryside Act 1981 (as amended) or Environmental Damage Regulation 2009 (as amended) will be committed.

The following offences could potentially be committed by carrying out the proposed development if any bat species are present during the conversion works:

- Capturing or killing – a wild animal of a European Protected Species (EPS) could be deliberately captured, injured or killed (Reg 41(1)(a));
- Disturbing EPS – a wild animal of an EPS could be deliberately disturbed including in particular a disturbance which is likely to impair its / their ability to survive or hibernate (Reg 41 (1)(b));
- Disturbing EPS whilst occupying a structure or place used for shelter or protection – includes intentional and reckless disturbance (s9 (4)(b)WCA); and
- Damage of an EPS breeding site or resting place – (Reg 41 (1)(d)) – strict liability.

The above stated offences can be avoided where works are to take place when bats are not present and bat roost will be maintained unchanged. If roost is going to be available to bats at the time they usually occupy the structure, a continued ecological functionality of the site will be preserved. Suitable mitigation measures must be put in place prior, during and post works to ensure that continued ecological functionality will be maintained.

In case the above listed offences cannot be guaranteed to be avoided throughout the proposed development, an EPS licence to derogate must be sought.

The full EPS licence generally applies if the proposed development is to cause greater than low ecological impact. A simpler and faster way of carrying out development with low ecological impact had been implemented by Natural England under the Bat Mitigation Class Licence (BMCL). It involves BMCL Registered Consultants who can supervise the proposed low impact development under their personal class licence, the need for preparation and processing of an EPS licence is vastly reduced. The development is carried out under a site registration prepared for the works and under the supervision of the licensed ecologist. BMCL only covers low impact development affecting low numbers of “common” bats and providing the site in question does not serve as a maternity or hibernation roost.

1.2.2 Birds

In the UK, with the exception of 13 ‘pest species’ of birds, which may be killed by authorised persons only, wild birds have general protection under the Wildlife and Countryside Act (1984). It is an offence to: kill, injure or take a wild bird; take, damage or destroy nests (in use or being built); and take or destroy eggs. Under Schedule I of the Act, some species (including the barn owl *Tyto alba*) are protected by special penalties at all times.

Birds receive additional protection under the European Communities Council Directives on the Conservation of Wild Birds. This directive relates to the conservation of all species of birds naturally occurring in the wild in European territory of the Member States, as well as their nests and habitats.

If any of the above resulted from a person being reckless, even if they had no intention of committing the offence, their action would still be considered an offence.

2. Aims and Objectives

Surveyor Geoff Billington (Greena Ecological Consultancy), holders of class 3 & 4 Natural England bat licenses, Geoff Billington is a full member of CIEEM and professional ecologist for over 30 years.

Geoff undertook a daytime inspection of the buildings on 11th August & 24th September 2021.

The proposals for the buildings will only affect the immediate surrounding habitat of hardstanding around and between buildings.

No overall desktop search has been carried out for bat records because already 14 bat species have been recorded by Greena including the more common four annex II species, so these are taken to be the species occurring in the area.

A search for past records in this actual site was conducted.

A search for nearest designated sites was conducted.

A search for the nearest bat licence that has been listed on MAGIC site.

3. Site description

Description of the buildings

Figure 1 Plan of existing buildings on site



Figure 2 Photos of house 'A' from south and east



Figure 3 Photos of barn 'D'



Figure 4 Photos of barn 'B'



Figure 5 Photos of barn 'C'



Figure 6 Photo of barn 'I'



Figure 7 Photo of barn 'G'



Figure 8 Photo of barn 'F'



Figure 9 Photos of barn 'E'



Figure 10 Photo of barn 'H'



Figure 11 Photo of barn 'J'



Table 1 Building construction & bat roost potential

Building	Roof	Walls	Light inside	Floors	Underfelt	Bat potential
A	Tile	Stone	No*	2	Yes	M
B	Tile	Stone	No	2	No	M
C	Tile	Stone	Y	1	Partial lathe plaster	L
D	Tile	Stone & block	Y	1	Partial ceiling	M
E	Tin	Tin & open	Y	1	No	N
F	Tin	None	Y	1	No	N
G	Cement fibre	Cement fibre & tin & open	Y	1	No	N
H	Tin	Tin & open	Y	1	No	N
I	Tin part collapsed	Brick	Y	1	No	N
J	Tin	Tin	Y	1	No	N

*Attic L – low M – medium N - negligible

4. Methods

Surveyor Geoff Billington (Greena Ecological Consultancy), holders of class 3 & 4 Natural England bat licenses, Geoff Billington is a full member of CIEEM.

Geoff undertook a daytime inspection of the interior and exterior of the buildings on 11th August & 24th September 2020.

4.1 Bats

The buildings were surveyed using the following methodology:

Signs of residency by bat species, this consisted of a slow methodical search for roosting bats and their signs. Droppings on walls, windowsills and in roof space can be used to identify species and scratch marks and staining at roosts and exit holes shows the presence of bats. Similarly the presence of spider webs at a potential roost entry can often indicate an absence of bats. The survey comprised a detailed

internal and external inspection with the aid of a high-powered torch and articulating camera scope, to locate potential roosting sites.

The overall habitat was assessed as good potential for foraging and feeding of bats.

Three evenings bat emergence surveys were conducted covering buildings A, B, C & D on 11th August 2020, 24th September & 24th September 2021.

This bat activity surveys were carried out by Geoff Billington and Rachel Denness assisted by several SpyCamera CCTV 1080HD with built in infrared illumination. The cameras were used with a time-synchronized EcoObs Batcorder bat detectors containing recorders.

The manufacturer's specifications of the high-definition cameras lists its range for both, colour (daytime, dusk) and black&white (post-dusk to complete darkness) during infrared illumination as 100ft (30.48metres). The cameras are fitted with a varifocal (adjustable) 2.8-12mm lens covering the field view from very wide (up to 100 degrees) to narrow and zoomed in. The setting is manual, and a maximum possible view of the surveyed structure is always ensured prior to the start of the survey. The smart IR technology enables the cameras to automatically adjust the intensity of the infrared lighting based on the distance objects are located from the camera (wide dynamic range enhancement). The recording from each night is subsequently viewed by an experienced licensed bat ecologist with the possibility to rewind and view segments repeatedly, providing much higher accuracy of the assessment than the traditional in-field survey method alone.

4.2 Birds

The buildings were checked for obvious signs of bird nesting or roosting.

4.3 Other Protected Species

The overall site was inspected/ assessed for obvious signs of presence/ potential for other European Protected Species and species protected under the Habitat Directives.

Visual inspection was utilised as a method of search for other protected species.

5. Survey Constraints

No specific constraints as all buildings accessible.

6. Results

6.1 Desk Study for bats and protected sites

The results of desk top study for bats are based on local information obtained by Greena Ecological Consultancy between 1999 & 2020 of 14 bat species.

Table 2 Bat species recorded in the local area

Bat species recorded in the area	Rhinolophus hipposideros
	Rhinolophus ferrumequinum
	Plecotus auritus
	Common pipistrelle
	Soprano pipistrelle
	Nathusius pipistrelle
	Myotis daubentonii
	Myotis bechsteinii
	Myotis mystacinus
	Myotis brandtii
	Myotis nattereri
	Eptesicus serotinus
	Barbastella barbastellus
	Nyctalus noctula

No known bat records at this site are known or within 1km.

Nearest protected site from MAGIC database

Site	Distance
Somer Levels & Moors RAMSAR Tealham & Tadham Moors SSSI	320m to N

Features:

Lowland neutral grassland

The development would not directly affect the SSSI or its features, note this conclusion does not include potential phosphate emissions and mitigation if required, which needs assessment.

The closest EPS bat licence issued was obtained by the author for a site 3.4km to the west for destruction of a resting place of: Long eared & Soprano pipistrelle bats in 2011.

Nearest Great Crested Newt EPS licence (and nearest record) is 2.1km to east south east.

6.2 Building inspection survey bats

Table 2 Bat signs found

Building	Bat droppings found	Location
A	1000+ Long eared & Pipistrelle 200+ Serotine 'fresh'	Attic
B	150+ Lesser horseshoe & Long eared	Upper floor

*Attic

6.3 Building bat activity survey

11th August 2020

Bat activity survey was conducted overall between 2036 & 2151 sunset 2040

Weather

	Temp.	Cloud	Rainfall	Wind
Start	23C	30%	0	1
End	22C	20%	0	0

Weather conditions on the survey were very suitable (optimal) for bats to be active and complied with BCT Survey Guidelines on seasonal timings and weather suitability

West elevation of barns 'B', 'C' & N of 'A'

Geoff Billington

time	species & notes
2101	55P heard
2102	2x 55P emerged from first floor doorway of 'B'
	55P into 'B'
2103	55P emerged from first floor doorway of 'B'
	55P into 'B'
2104	55P emerged from first floor doorway of 'B'
2105	2x 55P into 'B'
2106	2x 55P emerged from first floor doorway of 'B'
2107	2x 55P emerged from first floor doorway of 'B'
2108	2x 55P emerged from first floor doorway of 'B'
2109	55P emerged from first floor doorway of 'B'
	55P into 'B'
	2x 55P flying around 'B'
2113	55P past
	55P emerged from first floor doorway of 'B'
2114	55P emerged from first floor doorway of 'B'
2116	55P N-S
2117	LE emerged from ground floor doorway of 'B'
	55P emerged from first floor doorway of 'B'
2118	2x 55P emerged from first floor doorway of 'B'
2119	Sert N-S
	55P in & out of 'B'
2122	LE emerged from ground floor doorway of 'B'
2123	55P in & out of 'B'
2127	55P in & out of 'B'
2129	Myt past SE-NW
2134	LE emerged from ground floor doorway of 'B'
2135	Distant Noc
2136	W/Br emerged from first floor doorway of 'B'
2138	55p heard
2139	Natt flying inside 'B'

55P – Soprano pipistrelle, Myt – Myotis species, LE – Long eared, Noc – Noctule, W/Br – Whiskered or Brandt's, Sert – Serotine, Natt – Natterer's

Eleven Soprano pipistrelle, three Long eared, one Whiskered/Brandt's and one Natterer's bats emerged from barn 'B'

West elevations of barns 'B' & 'C' & north of house 'A'

Batcorder

time	species & notes
2106-2121	100x 55P & 45P
2121-2122	18x 55P & LE

2123-2127	2x 45P, 54x 55P & Sert
2128	45P & 2x 55P
2129-2136	33x Noc & 55P
2140	3x Noc & 2x Sert

55P – Soprano pipistrelle, 45P – Common pipistrelle, LE – Long eared, Noc – Noctule, Sert - Serotine

Video
No bats emerged

South elevations of house 'A' & barn 'D'

Batcorder

time	species & notes
2100-2108	7x 55P
2109-2116	22x 55P, 45P & 3x LE
2117-2119	16x 55P & 4x LE
2120-2127	45P, 7x LE, 2x Sert & 34x 55P
2128	LE, Myt & 2x 45P
2131-2132	2x 55P, 2x LE & Noc
2133-2135	8x Noc
2136-2137	5x LE, Noc, Sert, 55P
2140	4x Sert
2141-2144	5x LE
2150	45P

55P – Soprano pipistrelle, 45P – Common pipistrelle, LE – Long eared, Noc – Noctule, Sert – Serotine, Myt - Myotis

Video
One Long eared bat emerged from east gable (south side) of the house 'A' at 2141

24th September 2020

Bat activity survey was conducted overall between 1901 & 2011 sunset 1903

Weather

	Temp.	Cloud	Rainfall	Wind
Start	11.5C	80%	0	0
End	11C	70%	0	0

Weather conditions on the survey were suitable for bats to be active and complied with BCT Survey Guidelines on seasonal timings and weather suitability

West elevation of barns 'B', 'C'

Geoff Billington

time	species & notes
1920	55P emerged from first floor doorway of 'B'
1921	55P emerged from first floor doorway of 'B'
1922	55P into 'B'
1928	55P into 'B'
1929	45P in & out 'B'

	45P emerged from first floor doorway of 'B'
1930-1931	2x 55P circling barn 'B'
1932-1947	55P circling barn 'B'
1933	55P emerged from first floor doorway of 'B'
1935	55P emerged from first floor doorway of 'B'
1937	55P circling barn 'B'
1944	45P past
1947	45P past
1953	45P past
1955	45P past
1956	55P past
1958	LE past
2000	Natt past

45P – Common pipistrelle, 55P – Soprano pipistrelle, LE – Long eared, Natt – Natterer's

Two Soprano pipistrelle & one Common pipistrelle bats emerged from barn 'B'

North elevation of house 'A' & east elevation of barn 'B'

Batcorder

time	species & notes
1929-1942	6x 55P
1953	45P
1957	LE

55P – Soprano pipistrelle, 45P – Common pipistrelle, LE – Long eared,

Video

No bats emerged

North & east elevations of barn 'D'

Batcorder

time	species & notes
1929-1942	6x 55P
1953	45P
1957	LE

55P – Soprano pipistrelle, 45P – Common pipistrelle, LE – Long eared,

Video

No bats emerged

South elevations of barn 'D' & house 'A' & east gable house 'A'

Batcorder

time	species & notes
1930	55P
1934	LE
1935-1945	40x 55P
1946	3x 45P & LE

1947	2x LE
1948-1954	3x LE & 55P
1955	45P
1956	LE & 55P
1957	3x 55P & LE
2007-2011	4x LE

55P – Soprano pipistrelle, 45P – Common pipistrelle, LE – Long eared,

Video
No bats emerged

24th September 2021

Bat activity survey was conducted overall between 1845 & 2022 sunset 1903

Weather

	Temp.	Cloud	Rainfall	Wind
Start	19C	100%	0	2
End	18C	100%	0	2

Weather conditions on the survey were very suitable for bats to be active and complied with BCT Survey Guidelines on seasonal timings and weather suitability

West gable & north elevation of house 'A'

Batcorder

time	species & notes
1919	3x 55P
1920	5x Noc
1921-1922	5x 55P
1922	2x Noc
1923-1926	12x 55P
1927	Noc
1928-1939	50x 55P & LE
1941	45P
1943-2008	84x 55P
2008	2x LE
2008-2016	31x 55P & 45P

55P – Soprano pipistrelle, 45P – Common pipistrelle, LE – Long eared, Noc – Noctule

Video
No bats emerged

West elevations of barns 'B' & 'C' & north gable of barn 'C'

Batcorder

time	species & notes
1919	55P
1920	5x Noc, 45P & 3x LE
1921-2021	122x 55P

55P – Soprano pipistrelle, 45P – Common pipistrelle, LE – Long eared

Video

Three Soprano pipistrelle bats emerged from upper floor doorway of barn 'B' 2x at 1933 & one at 1937

One Long eared bat emerged from ground floor doorway at 1939

South elevation of house 'A' & barn 'B'

Batcorder

time	species & notes
1921	5x Noc
1921-1958	5x 55P

55P – Soprano pipistrelle, Noc – Noctule

Video

No bats emerged

North elevations of house 'A' & barn 'D' & east gable of barn 'D'

Batcorder

time	species & notes
1920	4x Noc
1921-1931	98x 55P
1931	2x Sert
1931-1947	62x 55P
1949	Sert
1952	LE
1953	55P
1954	LE
1954-1958	18x 55P
2004	Noc
2005	Sert
2007-2011	11x 55P

55P – Soprano pipistrelle, Sert – Serotine, LE – Long eared, Noc - Noctule

Video

No bats emerged

East elevations of barns 'B' & 'C'

Batcorder

time	species & notes
1920	4x Noc
1921-1931	98x 55P
1931	2x Sert
1931-1947	62x 55P
1949	Sert
1952	LE
1953	55P
1954	LE
1954-1958	18x 55P

2004	Noc
2005	Sert
2007-2011	11x 55P

55P – Soprano pipistrelle, Sert – Serotine, LE – Long eared, Noc - Noctule

Video
No bats emerged

SUMMARY FROM ALL BAT SURVEYS

House 'A'

Single Long eared bat recorded emerging plus droppings in attic suggest single Serotine bat has roosted there.

Barn 'B'

Up to 11 Soprano pipistrelle, three Long eared and single Common pipistrelle, Whiskered or Brandt's and Natterer's bats recorded emerging.
Also individual Lesser horseshoe bats visit from droppings found.

Probably none of the bat species breed here but as a precaution it should be presumed Soprano pipistrelle breed in barn 'B'.

Barns 'C' & 'D' and all other barns

No evidence of bats using them.

6.4 Birds

A barn owl has roosted (not nested) occasionally on upper floor of barn 'B', seven pellets and urine splashes were present.
Also there were several old wrens, swallow and other nests in barn 'B'.
Two nests seen in barn 'C', plus 15 barn owl pellets and urine splashes were present, where barn owl has roosted (not nested).
Barn owl was present on site in barn 'C' on 24th September 2020.
Old Jackdaw nest in barn 'D'.

6.5 Other protected species

No badgers on site.

No evidence or potential of other protected species was found in the buildings or outside of them.

7. Discussion and Recommendations

BATS

Barn 'B' is a significant bat roost housing 6 species.

The house 'A' roof is used by individual Long eared and Serotine bats.

Mitigation must be included in your proposals this can be on the upper floor of 'B', house attic or upper section of 'C' or 'D'. This must comprise a void of at least 20m² floor area and at least 2m maximum height, with a flight hole of 350mmW x 200mmH, plus at least four under ridge crevices and four under tile/slate edges in gable(s) (entrances 75mmW x 20mmH).

Also in at least one other building at least two under ridge crevices, and two under tile/slate edges in gable(s) (entrances 75mmW x 20mmH).

A full EPS bat licence is required to go ahead with works to the house 'A' roof/attic and upper floor/roof of barn 'B'.

BIRDS

At least one barn owl box must be installed ideally into trees at least 5m above ground level, if not into tree(s) then into semi open agricultural barns.

For small birds install at least 10 bird boxes of variety of types for small/medium sized birds ideally onto trees 1.5-3m above ground level.

For swallows install at least 10 'cups' high on walls under overhanging eaves (>60cm) or into open building(s) such as agricultural semi open barns or car port.

OTHER PROTECTED SPECIES

No other species are likely to use the site (buildings and hard standing).

ENHANCEMENTS

The above suggestions can be considered as mitigation and enhancements plus plant several native species of trees e.g. >20.

8. References

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