Rynehill Farm
Stock Shed,
Kingham

Preliminary Bat Survey

On Behalf of:
Mr and Mrs Ambler

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Written By:	Mark Satinet
Checked By:	Paula Matthews

4 Acre Ecology Limited

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1. Executive Summary

1.1 Rynehill Farm lies off of the B4450 1.2km south-east of the civil parish of Kingham in the West Oxfordshire District of the county of Oxfordshire (Central Grid Reference SP 26988 22782).

1.2 Cotswold Wildlife Survey Limited carried out bat emergence surveys at Rynehill House in September/October 2017 and August 2018, the property adjacent to the farm. A day roost for Brown Long-ear and Natterer's bat was identified in a barn at the south-eastern end of the farm complex.

1.3 Plans have now been put forward to carry out works to a stock shed located in the central area of the farm complex. Therefore, a preliminary bat survey has been requested by the local planning authority to inform the planning decision.

1.4 This Preliminary Bat Survey aims to provide an assessment of the barn and its roof space in order to identify the presence or absence of bats or whether further surveys are required to do so.

1.5 The field survey was undertaken on 30th August 2020 by an experienced Ecologist with a Natural England bat survey licence (Class Licence Registration Number 2016-13769-CLS-CLS). The building was assessed for roost potential and evidence of bats.

1.6 The stock shed lies 25m north-west of the barn building identified as a bat roost in the adjacent landholding.

1.7 No signs of bats were found within the stock sheds, while the walls were found to be well pointed with no deep crevices the roof was unlined with missing slates and no obvious splits or gaps in the roof beams.

1.8 The stock shed was assessed as negligible potential for roosting bats and no further surveys are required.

1.9 There were several birds' nests within the stock shed and recommendations have been made with regard to nesting birds.

1.10 No other protected species are believed to be present.

1.11 Recommendations for enhancements have been made to help fulfil some of the aims of the NPPF.

2. Introduction

Background

2.1 Rynehill Farm is situated off of the B4550 1.2km south-east of the civil parish of Kingham in the West Oxfordshire District of the county of Oxfordshire (Central Grid Reference SP 26988 22782).

2.2 The farm complex is made up of several buildings of traditional stone and modern construction, the overall building complex now being split ownership with Rynehill House covering the buildings to the south of Rynehill Farm.

2.3 Cotswold Wildlife Survey Limited (CWS) carried out bat emergence surveys on a barn at the south-eastern end of the Rynehill House complex in September/October 2017 and August 2018. A day roost for single Brown Long-eared and Natterer's was identified within the barn, for which a licence was obtained to convert the barns.

2.4 Plans have now been put forward to carry out works to stock sheds located in the Rynehill Farm area of the building complex. Therefore, the local Planning Authority requires a Preliminary Bat Survey to inform their planning decision.

2.5 Paul Ambler commissioned 4 Acre Ecology Limited on 25th August 2020 to undertake a Preliminary Bat Survey of the stock sheds to allow this report to be written.

Aims and Objectives

2.6 The aim of the survey was to determine whether bats used or were likely to use the stock sheds to roost in, or if further surveys were required to do so. The objective is to support a successful application for planning permission, whilst maintaining the conservation status of bats within the local area.

3. Methodology

Desk Study

3.1 The Cotswold Wildlife Surveys Limited Report; *2018 Updated Bat Survey Report for buildings at Rynehill House, Kingham, Chipping Norton, OX7 6UL,* has been used as a reference for this report.

3.2 The NBN Gateway was consulted to ascertain the number of bat records held for bats within 5km of the site.

3.3 The Multi-Agency Geographical Information for the Countryside (MAGIC) website was consulted to determine if there were any sites designated for bats within 5 km of the site.

Field Survey

3.4 An external and internal inspection of the buildings was made by a Natural England Licensed bat surveyor (Class Licence Registration number 2016-13769-CLS-LS). The exterior of the buildings were searched for evidence of bats, looking for grease stains in external crevices and searching for droppings on windows sills, windows, walls and ledges and on the ground below potential entrance/exit areas to the roof or walls.

3.5 The interior stock sheds were searched using high powered torches for evidence of bats. This evidence includes sightings, dead bats, feeding remains, smell, droppings and grease marks at entry/exit points. The potential of the building as a bat roost was judged and any signs of bats or features offering roost potential were noted.

3.6 The site was also appraised for other protected species.

4. Legislation and Planning Policy

4.1 There are a number of tiers of legislation protecting wildlife in England and Wales. The highest tier is for those species protected by European Legislation, such as the Dormouse, Great Crested Newt, Otter and all species of bat. These are known as European Protected Species (EPS), which gain their protection from the Conservation of Habitats and Species Regulations (Habitat Regulations) 2017, whereby under section 43 it is an offence to;

- deliberately capture, injure or kill an EPS
- deliberately disturb or take/destroy the eggs of an EPS
- damage or destroy a breeding site or resting place of an EPS

4.2 They are also protected under the Wildlife and Countryside Act (WCA) 1981 and amendments, including the Countryside and Rights of Way Act (CRoW) 2000. Under the WCA it is an offence to:

- intentionally or recklessly kill, injure or take from the wild or possess all or any part of a bat;
- intentionally or recklessly damage or destroy any structure or place which a bat uses for shelter or protection, or disturb a bat while it is occupying such a place; or
- obstruct access to any structure or place which a bat uses for shelter or protection.

4.3 The Natural Environment and Rural Communities Act 2006 (NERC) made provision about bodies concerned with the natural environment and rural communities and in connection with wildlife, sites of special scientific interest, National Parks and the Broads. Section 41 established a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. This is known as the UK Biodiversity Action Plan (BAP) list.

4.4 The National Planning Policy Framework (NPPF) published in March 2012 states that "in assessing and determining development proposals, local planning authorities should apply the presumption in favour of sustainable development" and "opportunities to incorporate biodiversity in and around developments should be encouraged".

4.5 The National Planning Policy Framework (NPPF) updated in July 2018 states that Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

4.6 To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
b) Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

5. Results

Desk Study

5.1 No protected sites designated for bats were identified within 5 km of the site. There are no nationally protected sites within 2km of the site. There are two areas of ancient woodland within 2km of the site; Churchill Heath wood 1.2km south-west and The Norrells 1.4km south-east.

5.2 The NBN Gateway hold 12 records of bats within 5km of the site, covering six species; Brown Long-eared (2), Common Pipistrelle (2), Lesser Horseshoe (1), Pipistrelle (2), Serotine (1) and Soprano Pipistrelle (4).

5.3 There are eight European Protected Species Licences (EPSL) issued for bats within 5km of the site covering six species; Brown Long-eared, Common Pipistrelle, Lesser Horseshoe, Natterer's, Soprano Pipistrelle and Whiskered.

Field Survey

5.4 The survey was carried out on 30th August 2020. A dry day with a temperature of 11° centigrade, a light wind and 80% cloud cover.

Local Context

5.5 Rynehill Farm is situated in a rural area surrounded by intensively farmed agricultural fields with small areas of woodland. There are fishing lakes within 1km to the south-west, the River Evenlode is 1km west of the farm with the village of Bledington beyond. The farm is 1.2km south-east of Kingham and 1.8km south-west of the village of Churchill.

External Description

5.6 The stock sheds are an L shaped set of single storey buildings with solid stone walls.

5.7

5.8 The longer stretch of the building, running south-west to north-east, is a set of stock sheds that are 50m long, 5m wide and 2m to the eaves, with the roof extending a further 1.5m above them. The south-western gable end has five air holes in it, above eaves height, and they have a twin-pitched slate roof.

5.9 There are nine open doorways along the north-western side, seven double and two single, each strengthened internally by concrete blocks, while concrete blocks also fill-in the former doorways on the south-eastern side, beyond which the land is owned by Rynehill House.

5.10 The foot of the L, at the north-east end, is 13m long and 8m wide with the roof 1m taller than the adjacent stock sheds, while the eaves height at 2.5m. It has a twin-pitched corrugated asbestos sheet roof. There are five air holes in the north-western gable end and five doors, with four small windows next to them along the north-eastern side (See Figure 1).

Internal description

5.11 The taller building at the foot of the L has an unlined roof open to a concrete floor. The roof is A frame and uninsulated, with cobwebs at the apex. The building is divided into two rooms by plywood sheeting, but above the plywood is a queen post beam enclosed by plastic sheeting to complete the divide.

5.12 Rat droppings were scattered throughout both rooms and at the south-east gable end there was a pigeon's nest above a single skin bricked up window.

5.13 The stock shed has an unlined, uninsulated A frame roof with the ridge-board open to a concrete floor. It is divided into 3 sections by stone walls that extend to 0.5m below the apex, leaving a small gap at the top (See Figures 1 and 2).

5.14 The walls are well pointed with no deep gaps, there are no obvious gaps in the roof beams and the sheds were light and airy due to gaps from missing tiles.

5.15 Towards the north-eastern end there is a Swallows nest on top of a beam with a Blackbird nest near to a door opening. There is also a Swallows nest used by Tits on the opposite side.

5.16 In the central area of the stock shed is a Swallows nest at the apex which had been used by a Blackbird. At the south-western end was a Pigeons nest, along with a Swallows nest being used by a House Sparrow.

5.17 No signs of bats were found around or inside any of these buildings.

Fauna Species

5.18 No other fauna species were observed on the day of the survey.

6. Discussion

6.1 There are no sites designated for bats within 5km of the site. The NBN Gateway holds 12 records of bats within 5km of the site, but there are likely to more bats and bat species than this suggest, due to under-recording.

6.2 There were eight EPS licences issued for bats within 5km of the site. One of the sites is located 850m south-west of the site for Brown Long-eared, Natterer's and Soprano Pipistrelle, the site did not involve a maternity roost but it is possible that this roost could be associated with the site through commuting and foraging bats.

6.3 The immediate structure of the surrounding landscape is one of extensive arable fields with few hedgerows which offer low potential commuting and foraging habitat however the fishing lakes and woodland belts offer improved commuting and foraging habitat for bats. The ancient woodland to the south-west and south-east offers good commuting, foraging and roosting habitat for bats. The River Evenlode 1km to the west of the site will also offer good potential commuting and foraging habitat

6.4 Cotswold Wildlife Surveys Limited surveyed seven farm buildings on the adjacent land holding of Rynehill House. As the result of evidence of bats from the preliminary bat survey one barn, 25m south-east of the stock shed, had a set of emergence surveys carried out on it in September/October 2017 and August 2018, confirming roosts for single Brown Long-eared and Natterer's bats.

6.5 For the current site no evidence of bats was found in or around any of the surveyed buildings. The stock shed was found to be light and airy from the missing roof tiles and open doorways. This could affect the temperature of the building where bats need warm dry conditions for a maternity roost and a constant temperature for hibernation.

6.6 There were also cobwebs at the apex of the taller north-eastern section of building which, combined with the lack of droppings, would indicate that light testing bats such as Brown Long-eared are not present as they fly around within a building before emerging late in the evening therefore any cobwebs would be broken up and droppings would be in evidence (Entwistle and Swift 2008).

6.7 Therefore, the stock shed was assessed as having negligible potential for roosting bats and no further surveys area required.

6.8 During the survey birds' nests were found to be present throughout the building including; Blackbird, House Sparrow, Pigeon, Swallow and Tit sp.

6.9 All breeding birds are protected by law. Clearance of the site of any nesting habitat should be undertaken outside the breeding bird season, which runs from March to August.

6.10 If this is not possible an experienced ecologist should inspect the barns for nests before it is converted. If nests are found they should remain intact with enough undisturbed surrounding habitat to avoid disturbance and left until the young have fledged. After this the nests can be removed and the work continued.

6.11 The conversion works will only effect hard standing and current buildings, therefore no other notable or protected species have been identified or are thought to be present on the site.

7. Further Surveys, Recommendations and Enhancements

Further Surveys

7.1 No Further survey are required.

Recommendations

7.2 Nesting birds should be excluded from the stock shed, or the work started in autumn to avoid disturbance of nesting birds. If work begins in spring then the stock shed will be checked by an experienced ecologist to determine if birds are nesting in the stock shed.

7.3 Should active birds' nests be found they should remain in place undisturbed until the birds have fledged before they can be removed.

7.4 Any exterior lighting of the stock shed should be low lux downlighters 3 lux maximum at ground level. Any security lighting should use motion sensors, be angled down as sharply as possible to light the immediate area and be 70w maximum.

Enhancements

7.5 Any planting to include native species and particularly night-flowering species to attract insects for bats to feed on.

7.6 The eaves of the stock shed could be designed to overhang the walls and then Swallow nest boxes can be fitted beneath them to provide Swallows with nesting features.

7.7 Bird boxes, including Sparrow terraces, Tit boxes and nest boxes for Blackbirds could be placed on suitable farm buildings or suitable surrounding trees.

8. Figures

Figure 1: Building Plan

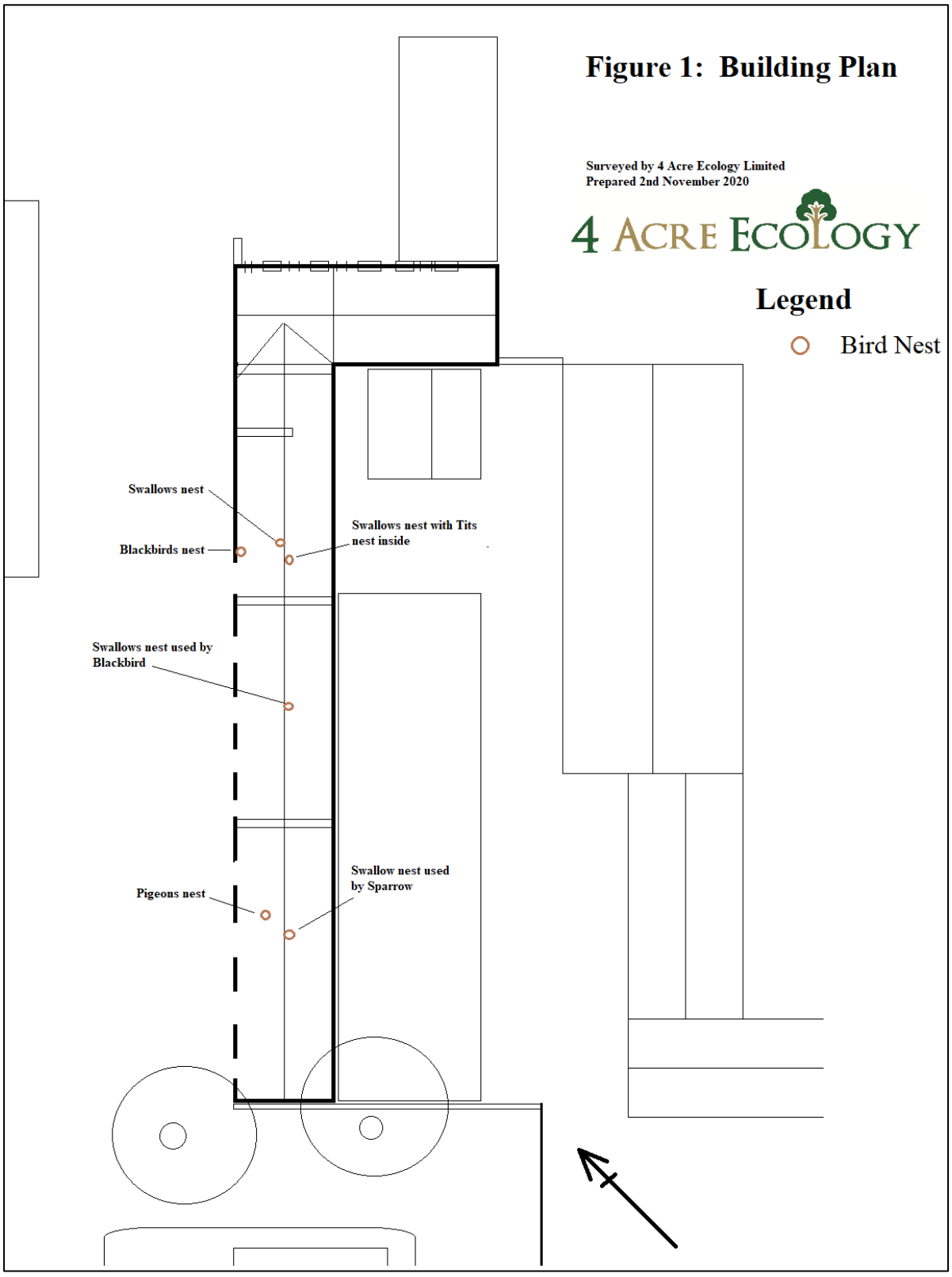

Figure 2: Images

1. SW gable end of stock shed

2. NE building from north

3. NE end of buildings from NW

4. SW end of buildings from north

5. Interior of stock shed

6. Unlined roof of NE building at join with stock shed

7. Queen post roof in NE building

8. Swallows' nest used by Blackbird

9. References

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Appendix 1: Information on British Bats

There are 18 species of bat in the UK (17 of which are known to be breeding here). They range from the tiny **Pipistrelle**, weighing in at around 5g (less than a £1 coin), to our biggest bat, the **Noctule**, which is still smaller than the palm of your hand.

All British bats eat insects exclusively, a **Pipistrelle** bat eating as many as 3,000 midges in one night, while **Long-eared** bats eat moths and **Noctule** or **Greater Horseshoes** also eat larger beetles.

The **Alcothoe** bat is the latest addition to the UK bat family, only being confirmed as a resident species in 2010 due to its similarity to the **Whiskered** and **Brandt's** bat species.

The **Daubenton's** bat is known as the 'water bat', as they fish insects from the water's surface with their large feet or tail. In England and Wales the majority of known summer colonies are in humid, more or less underground sites near water. These may be tunnels or bridges over canals and rivers, or in caves, mines and cellars. They are only occasionally found in buildings, usually old stone structures such as moated castles and waterworks.

Bats do not build nests, but use small spaces to shelter and rest in during the day, or hibernate in during winter. These places are known as roosts. There are a variety of different types of roost, from winter hibernation roosts, spring and autumn transitory roosts to summer maternity roosts. However, not all bats will roost within buildings, with the following being those most likely to:

Pipistrelle bats (both Common and Soprano species) are the most common bats in this country. They prefer to roost in very confined spaces around the outside of buildings, typically behind hanging tiles, soffits and barge boards, under roofing felt or in cavity walls. They do not usually enter roof spaces, although well-established large colonies in older buildings may do so.

Brown Long-eared bats are the third most commonly occurring species, after the two **Pipistrelle** species. They roost singly or in small groups among the roof timbers at the apex, particularly around ridge ends and chimneys, and in crevices in ridge tiles. These medium sized bats spend more time inside the roof space than many other bats, and are generally very quiet inside the roost, not leaving until after dark.

The **Serotine** bat, one of the largest bat species in the UK, is almost exclusively found roosting in houses across southern England and Wales. Rarer than **Pipistrelles** and **Brown Long-eared** bats, **Serotines** usually roost in crevices around chimneys and in cavity walls. Their favoured prey is large beetles, which they find over farmland and grassland.

Horseshoe bats, probably the most unusual looking of the UK's bats, are sometimes found roosting in houses in south-western England and Wales. **Greater** and **Lesser Horseshoe** bats hang free in the roost from their feet.

(Find further details from the Bat Conservation Trust Website at: www.bats.org.uk)