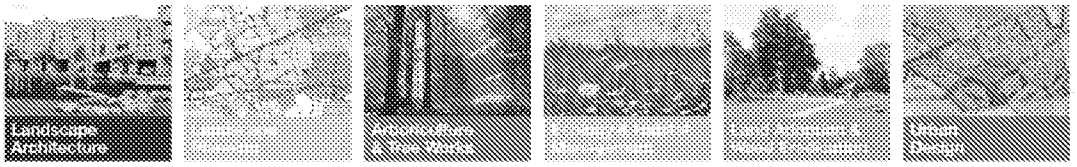

JAMES BLAKE ASSOCIATES

Bat Activity Survey Report

Of

Rustington Golf Course, Rustington, West Sussex

On behalf of

Barratt David Wilson Homes

(Southern Countries)

November 2021

Revision A – March 2022

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Revision	Purpose	Originated	Checked	Authorised	Date
		SR	JBA	JBA	November 2021
A	Date change for submission (March 2022)	SR		JBA	March 2022
Job Number: JBA 20/128		Title: Bat Activity Survey Report of Rustington Golf Course, Rustington, West Sussex JAMES BLAKE ASSOCIATES			

Disclaimer

James Blake Associates Ltd. have made every effort to meet the client's brief. However, no survey ensures complete and absolute assessment of the changeable natural environment. The findings in this report were based on evidence from thorough survey: It is important to remember that evidence can be limited, hard to detect or concealed by site use and disturbance. When it is stated that no evidence was found or was evident at that point in time, it does not mean that species are not present or could not be present at a later date: The survey was required because habitats are suitable for a given protected species, and such species could colonise areas following completion of the survey.

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0 NON-TECHNICAL SUMMARY

Site:	Rustington Golf Course, West Sussex
Ordnance Survey National Grid Reference:	TQ 055034
Report Commissioned by:	Barrett David Wilson Homes (Southern Countries)
Date of Survey:	26th May – 8th September 2021

Considerations	Description	Timings and potential impacts
Roosts Identified	N/A	N/A
Foraging and commuting bats	Moderate and low foraging and commuting activity by common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle *(Pipistrellus pygmaeus),* Nathusius' pipistrelle (*Pipistrellus nathusii),* noctule *(Nystalus noctula),* brown long-eared (*Plecotus auratus*) and Natterer's (*Myotis nattereri*). Majority of activity across site is considered to be dominated by common pipistrelle.	Indirect impacts from external lighting; consideration regarding lighting should be taken.

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1 INTRODUCTION

Background to the study

1.1 James Blake Associates Ltd. was commissioned by Barrett David Wilson Homes (Southern Countries) to undertake bat activity surveys of the land at Rustington Golf Course, Rustington, West Sussex. Ordnance Survey National Grid reference: TQ 055034 (taken from the centre of site).

1.2 The assessment was required to accompany a planning application for the development of residential buildings with associated hard and soft landscaping, and access roads.

1.3 All UK bat species are protected under European and UK law (Conservation of Habitats and Species (Amendment) (EU Exit) Regulations, 2019; Wildlife and Countryside Act (WCA) 1981), and some are species of principle importance (SPI) in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Protected and principally important species are a consideration under the National Planning Policy Framework (NPPF) 2019. The NPPF places responsibility on Local Planning Authorities to aim to conserve and enhance biodiversity and to encourage biodiversity in and around developments.

1.4 A Preliminary Ecological Appraisal (PEA) was undertaken in March 2021 by James Blake Associates (JBA) which considered the site to be of 'low' value habitat for bats and three bat activity surveys were recommended: one per season (spring – April/May, summer – June/July/August, autumn – September/October.

Site Description

1.5 The site is approximately 7.3 hectares in size and is located at Rustington Golf Course, Rustington, West Sussex. The wider landscape includes the town of Rustington, residential and commercial buildings and arable land. The A259 is approximately 17m south of the site. See Figure 1 for site location.

1.6 The site itself mainly consists of amenity grassland, with species poor hedgerows, boundary/scattered trees, with small areas of semi-improved grassland, tall ruderal, introduced shrubs. A pond is located towards the east of site.

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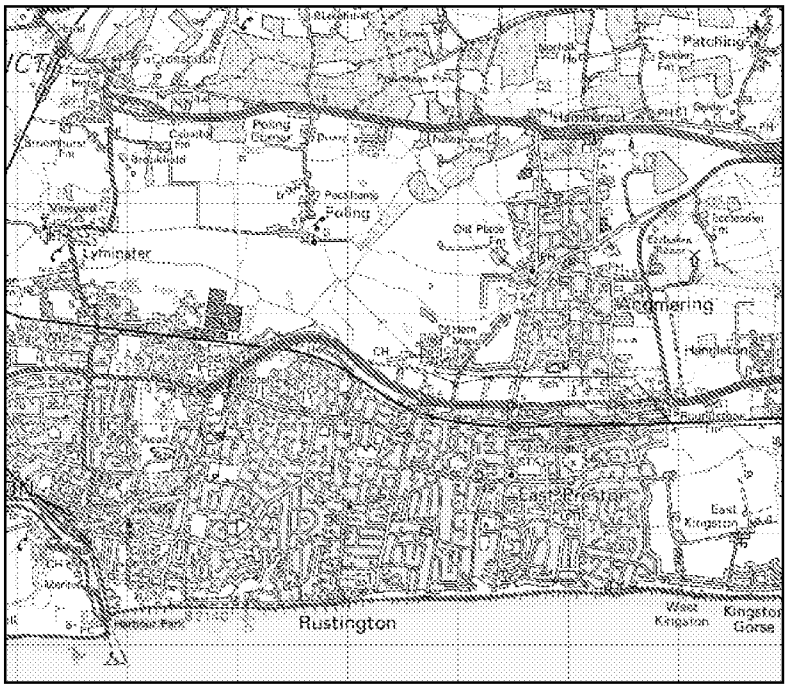
Figure 1: Site location (Reproduced from Magic maps data licence number 100059700)



Aims and objectives

1.7 The aims of the surveys were to:

- Determine bat use of the site, including the species, amount and type of activity; and
- Assess the risk of impact on bats, bat roosts and local bat conservation status from the proposed development and, if necessary, design appropriate precautionary measures, compensation, or mitigation measures.

2 SITE SURVEY AND ASSESSMENT

Survey Methods

2.1 Two dusk activity surveys and a single dawn activity survey was undertaken between 22nd April and 23rd September 2021. The surveys were undertaken within the optimal survey window for bat activity. For clarity, the optimal survey window for bat activity is April to October inclusive.

2.2 The surveys were carried out by ecologists; Chris Bridge BSc (Hons), Bethan Feeney-Howells BSc (Hons) and Sean Minns BA (Hons).

2.3 Equipment used included Echo Meter Touch Pro, Wildlife Acoustics EM3+ and EM3. Recordings were analysed using BatSound and Kaleidoscope software.

2.4 One static automated detector (SM2) was used on all surveys and left in-situ for at least five consecutive nights, either prior to the survey or post survey. The SM2 was placed within the vegetation on the southern boundary, at the central tree line.

2.5 The survey methodology followed standard techniques and designs recommended by Natural England and the Bat Conservation Trust. The dates of the surveys carried out and the weather conditions are shown in Table 1 below:

Table 1: Survey dates and weather conditions

Date (2021)	Weather Conditions
22nd April (dusk)	Temperature – 13°C Beaufort – 1. Cloud cover – 10%
9th July (dawn)	Temperature – 19°C Beaufort – 0-1. Cloud cover – 50%
23rd September (dusk)	Temperature – 16°C Beaufort – 1. Cloud cover – 30%

2.6 All surveys were conducted in optimal weather conditions (mild, dry, little wind). Dusk surveys started at least 15 minutes before sunset and continued for approximately two hours after sunset. Dawn surveys commence two hours prior to sunrise, until sunrise.

3 RESULTS AND EVALUATION

3.1 Overall bat activity recorded on and adjacent to the site's boundaries were 'low' during the initial two survey visits. However, activity had increased slightly during the final visit on the 23rd September, although activity was restricted to the western half of the site.

3.2 Species recorded during the survey period include; common pipistrelle (*Pipistrelle pipistrelle*), soprano pipistrelle (*Pipistrelle pygmaeus*), noctule (*Nyctalus noctula*), brown long-eared (*Plecotus auratus*) and Natterer's (*Myotis nattereri)*. All of which are common and widespread species across West Sussex and the UK. A single Nathusius' pipistrelle (*Pipistrellus nathusii*) was also recorded on the 23rd September which is considered widespread across the UK, although is rarely recorded.

3.3 Most activity recorded was foraging and commuting at the western most and eastern boundary of the site; this activity was dominated by common pipistrelle. All noctule recordings were considered to be commuting behaviour across the site. The SM2 recorded similar to that during the survey visits.

3.4 The first activity of each bat species on dusk surveys and the last activity for the dawn survey, and the approximate time after sunset (for dusk surveys) and before sunrise (for dawn surveys) is provided in Table 2.

Table 2: Time of first bat of each species recorded on dusk surveys and last on dawn surveys

22nd April 2021		
Time recorded (time past sunset)	Bat species	Activity
20:39 (30 minutes)	Common pipistrelle	Foraging at the western most point of the site.
21:17 (68 minutes)	Soprano pipistrelle	Foraging at the western most point of the site.

9th July 2021		
Time recorded (time before sunrise)	Bat species	Activity
04:30 (30 minutes)	Noctule	Commuting from north to south at the eastern boundary.
03:59 (61 minutes)	Common pipistrelle	Brief foraging at eastern boundary and off-site around trees.
02:54 (126 minutes)	Brown long-eared	Heard not seen (HNS) – surveyor was at the eastern boundary.
23rd September 2021		
Time recorded (time past sunset)	Bat species	Activity
18:51 (0 minutes – recorded 7 minutes before sunset)	Noctule	Commuting across the centre of site from north to south west.
19:32 (34 minutes)	Soprano pipistrelle	Foraging off-site to the north (surveyor located at western most corner of the site).
19:36 (38 minutes)	Common pipistrelle	Brief foraging on the northern boundary (towards the west).
19:53 (55 minutes)	Nathusius' pipistrelle	Brief foraging on the southern boundary, at the central tree line.
20:22 (84 minutes)	Natterer's	HNS – faint recordings suggesting bat foraging on adjacent habitats.

3.5 Pipistrelle bats usually emerge within 15-35 minutes after sunset and will usually forage in habitats around the roost before commuting to other feeding areas or other roosts such as a night roost. Pipistrelle bats typically roost under roof tiles of where there are suitable gaps, around windowsills, behind barge boards, under soffits or above doorways. They can roost in trees, usually behind loose bark. Common pipistrelles were recorded on every survey, however only the first survey on the 22nd April and potential the last survey visit during the 23rd September were they recorded at a time which would suggest there is a nearby roost; 30 minutes and 38 minutes after sunset, respectively. The first recording of soprano pipistrelle during the last survey visit would also suggest there is a roost nearby (34 minutes before after sunset). A single Nathusius' pipistrelle was recorded during the last survey visit on the 23rd September, however this was not at a time to suggest a nearby roost (55 minutes before after sunset).

3.6 Noctule bats usually emerge at the time of sunset and have been known to emerge a few minutes before sunset. They will usually forage in large open habitats, similar to those found within the site boundary; however no noctule bats were recorded foraging on site, only commuting across the site (mainly from north to south). Noctule bats rarely roost in buildings and typically roost in trees, often in rot holes and woodpecker holes. Noctule bats were recorded on the September dusk survey at time which does imply there is a roost nearby, as the bat was recorded 7 minutes before sunset. Noctule bats have been recorded to fly far distances from roost to feeding areas.

3.7 A single Natterer's was recorded during the last survey on the 23rd September 2021. However, the timing recorded of this species does not suggest there is a Natterer's roost nearby, as the first observations/recordings were made 84 minutes after sunset. Natterer's bats usually emerge within 30-60 minutes after sunset; it is therefore considered unlikely that this species is roosting within the site boundary. It is also considered unlikely that brown long-ear bats are roosting on site or within close proximity as this species was only recorded on a single occasion, 126 minutes before sunrise.

3.8 A very low number of recordings were taken during the initial two survey visits on the 22nd April and 9th July 2021, with no more than six recordings made. The recordings consisted only of brief foraging activity recorded on the western boundary and commuting during the dusk survey (April) and foraging activity on the eastern boundary during the dawn survey (July), with a single commuting noctule.

3.9 Majority of the bat activity was recorded during the last survey on the 23rd September, where five bat species were recorded; common, soprano and Nathusius' pipistrelle, Natterer's, noctule and brown long-eared. However, all surveys were dominated by common pipistrelle activity.

4 RECOMMENDATIONS

4.1 The following recommendations are made to comply with current legislation, planning policy and best practice as recognised by the various statutory authorities.

4.2 External lighting would have a negative impact upon foraging and roosting bats, particularly at the north-western (where a proposed hedgerow is to be planted), western (were majority of bats were recorded) and southern boundaries. Please refer to the publication, *Bats and Lighting in the UK* for more information. To minimise risk of disturbance to foraging and commuting, and potentially roosting bats on the site, the following lighting minimisation precautions are recommended for the development:

- No works on site should be conducted after sunset, or the area should be lit where working rather than the whole site, and if security lighting is required then this should be kept to the minimal level (as necessary for safety and security).
- Post development lighting should be directed away from boundary and onsite trees and hedgerows that are to be retained.
- Any external lighting which is required for access (particularly where these occur along hedgerows) should be positioned low down and the lights should be covered with a hood.
- Installation of lighting columns at the lowest practical height level with box shield fittings will minimise glare and light spillage.
- Lux level of lamps should be as low as possible with covers made from glass rather than plastic as this minimises the amount of UV light, reducing the attraction effects of lights on insects.

- Security lights should be set on short timers and be sensitive to large moving objects only.

4.3 An access route is proposed through the central tree line where there is already a natural gap in the canopy. Other boundary hedgerows and trees should be retained where possible; this will maintain potential commuting routes and foraging grounds for bats. Retained areas should also be enhanced by additional native planting and appropriate management, where possible.

4.4 It is recommended that any existing gaps in the hedgerows (not used for proposed access) should be plug-planted up with native species

4.5 The installation of bat boxes should be installed onto suitable retained trees at the boundaries of the site and proposed new buildings, where possible to provide additional roosting opportunities throughout the site. Suitable boxes include; 1FR Schwegler bat tube, 2FE Schwegler wall-mounted bat shelter and/or Ibstock 'Enclosed Bat Box' integrated on proposed new buildings. 2F Schwegler Bat Boxes (general purpose) for retained mature trees. All boxes are available from nhbs.com.

4.6 If works do not commence within 12 months of the date of these surveys, a re-assessment and potential updated survey may be required to identify any changes which may have occurring in the interim.

5 CONCLUSIONS

5.1 Bat dusk and dawn activity surveys were undertaken at Rustington Golf Course, Rustington, West Sussex between the 22nd April and 23rd September 2021 by James Blake Associates.

5.2 The surveys found a low number of foraging and commuting bats using mainly the western and eastern boundaries of the site. Bat species recorded on site include; common, soprano and Nathusius' pipistrelle, Natterer's, noctule and brown long-eared. However, all surveys were dominated by common pipistrelle activity.

5.3 Where possible, boundary vegetation should be retained and enhanced by the proposed development. The installation of bat boxes will provide additional roosting opportunities. A sensitive lighting scheme should also be implemented.

5.4 An updated assessment and potential updated surveys will be required if works do not commence within 12 months of these surveys.

6 REFERENCES

Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition (2016). Bat Conservation Trust, London.

Bats and Lighting in the UK: Bats and the Built Environment Series, BCT.

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