

Bat Survey Report

October 2025

**Kilnwood Apartments,
Rocky Lane,
Haywards Heath**

Prepared by
CSA Environmental

On behalf of
Cross Homes (Sussex) Ltd

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EXECUTIVE SUMMARY

Residential development is proposed at Kilnwood Apartments, Rocky Lane, Haywards Heath, comprising the erection of one apartment unit providing six dwellings, for which detailed planning permission is sought.

CSA Environmental was instructed by Cross Homes (Sussex) Ltd. to undertake bat activity surveys, comprising a Daytime Bat Walkover and static bat detector surveys. The habitats onsite were considered to hold 'moderate' potential for commuting and foraging bats.

A single static detector, deployed during August and September 2025, found the habitats onsite to support common and widespread species, with rarer species including Nathusius' pipistrelle *Pipistrellus nathusii* recorded infrequently. Survey methodology was adapted to be proportionate to the size of the Site and the limited scope of the proposals.

Bat activity was generally low across both recording periods; common pipistrelle *Pipistrellus pipistrellus* were recorded most frequently with a maximum 176 contacts made. The species assemblage recorded is considered to hold 'Local' importance.

Mitigation measures, including the implementation of a detailed lighting design strategy to minimised artificial light spill upon retained commuting or foraging habitats, are provided herein, and should be secured by Condition and delivered at the Reserved Matters stage.

1.0 INTRODUCTION

- 1.1 This report has been prepared by CSA Environmental on behalf of Cross Homes (Sussex) Ltd. and sets out the findings of bat survey work undertaken at Kilnwood Apartments, Rocky Lane, Haywards Heath, West Sussex (hereafter referred to as 'the Site').
- 1.2 The Site is located around central grid reference TQ 32609 22373, on the southern edge of Haywards Heath, Sussex and within a suburban area. The Site predominantly consists of grassland, an access road and parking area and a small section of woodland.
- 1.3 Residential development is proposed at the Site for a new three-storey apartment block comprising of six dwellings, for which detailed planning permission will be sought.
- 1.4 Bat activity surveys, comprising the deployment of a single static bat detector, were conducted in August and September 2025. The purpose of these surveys was to assess the use of the habitats onsite by commuting or foraging bats.
- 1.5 The content of this report has been determined with due consideration for best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017; 2018).

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

- 2.1 All British bat species are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These Regulations make it an offence to:
- Deliberately capture, injure, or kill a bat
 - Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young, or which significantly affects the local distribution or abundance of the species
 - Damage or destroy a breeding site or resting place used by bats
- 2.2 All bats and their roosts in the UK were previously fully protected under the Wildlife & Countryside Act 1981 (as amended). Amendments to the Act have removed most provisions as they relate to bats, however it remains an offence to:
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
 - Intentionally or recklessly obstruct access to any structure or place used for shelter or protection
- 2.3 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place is subject to 'strict liability', i.e. an offence is committed irrespective of whether the causal act was deliberate or otherwise.
- 2.4 Where development is proposed that would result in an offence under the Regulations, a European Protected Species (EPS) statutory derogation licence (often termed 'EPS Mitigation Licence') will need to be secured from Natural England to permit an act that would otherwise be unlawful. Such a licence can only be granted following receipt of planning permission with all relevant conditions discharged, and where it has been demonstrated that specific statutory derogation tests have been met.

3.0 METHODS

- 3.1 The following survey methods, design, data analysis and interpretation have been undertaken with due consideration of the Bat Conservation Trust (BCT) guidelines 4th edition (Collins, 2023).

Daytime Bat Walkover

- 3.2 A Daytime Bat Walkover (DBW) was undertaken on 02 May 2025 by Sam Ashby ACIEEM and Corie Lee BSc, MSc in fine and dry weather conditions. The aim of the survey was to observe, assess, and record any habitats suitable for bats to roost, commute, and forage onsite and within the surrounding area.
- 3.3 As part of the survey, surveyors identified any structures, trees or other features that could be suitable for bats to roost in, and habitats that could be suitable for bats to use to commute, forage or swarm. Assigning potential to roosting features is discussed in the relevant sections below.
- 3.4 Following the survey, suitability of commuting and dispersal habitats are assigned under the following categories:
- 3.5 *Either:*
- **High** – Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
 - **Moderate** – Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
 - **Low** – Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
 - **Negligible** – No obvious habitat features on-site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
 - **None** – No habitat features on-site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide

continuous lines of shade/protection for flightlines, or generate/shelter insect populations available to foraging bats).

Activity Surveys

Automated/Static Surveys

- 3.6 A single Wildlife Acoustics Songmeter Mini Bat detector was deployed during Summer (August) and Autumn (September) to provide two datasets. The position of this Monitoring Location (ML) is shown on Figure 1 below.



Figure 1. The position of the static Monitoring Location (ML) surveyed during remote monitoring surveys in August and September 2025.

- 3.7 The detector was set up to automatically record ultrasonic signals for the period from half an hour before sunset to half an hour after sunrise each night, with each monitoring period spanning at least five consecutive nights.

- 3.8 Weather conditions were obtained for each night surveyed using historic weather data from the World Weather Online website, with weather observations taken from the nearest weather station in East Grinstead. The five nights showing the most optimal weather conditions (in terms of temperature, precipitation, and wind speed, see Table 1) were taken forward for analysis.
- 3.9 Recordings are triggered when a bat echolocation call is detected and will contain a variable number of call 'pulses'. Each file containing call pulses by a bat is designated as a 'bat contact' for each species present. The maximum recording duration is 15 seconds after which time a new recording file, and thus a new bat contact, is generated if echolocation calls are still being detected. This means that periods of prolonged bat activity near a detector is represented as multiple bat contacts, rather than a single contact.

Analysis of Data

Call Analysis

- 3.10 Recordings of bat contacts were subsequently analysed using BatExplorerPro software, with sonograms reviewed to confirm bat identification to genera, or where possible, species level.
- 3.11 Each of the recorded files, which contain a variable number of call 'pulses', was designated a 'bat contact'. At the point of contact, each sound file is assigned a GPS location.
- 3.12 For analysis of data recorded during static monitoring, a quantitative analysis of bat activity was then undertaken by calculating the average bat contacts per hour on each night monitored, for each species.
- 3.13 Bat activity can show considerable inter-night variability and is dependent on a number of variables, including temperature, wind, and seasonality, amongst others. To account for this variability the median values for the average hourly bat contacts per night are reported, rather than a mean value which would misrepresent the average activity.

Limitations

- 3.14 It should be noted that the findings described herein for remote monitoring surveys are based on the bat activity recorded at the location immediate to each detector, and therefore only describe localised activity at the Site. Where possible, in line with best practice guidance (Collins, 2023), the static detector was placed c. 1.5m from any nearby vegetation however due to the potential for disturbance from the public, this has not always been possible.
- 3.15 Best practice guidance (Collins, 2023) stipulates that habitats with 'moderate' potential for commuting/foraging bats are subject to

monthly static detector deployments and seasonal walked transect surveys; however, considering the limited size of the Site, the limited scope of the proposals and the minimal anticipated impacts on suitable habitats on and adjacent to Site, the deployment of a single detector upon a seasonal basis was considered a proportionate approach. No walked transects were undertaken as due to the small size of the Site this survey information, if collected in addition to static detector data, would unlikely add any further information of worth.

- 3.16 In addition, comparisons drawn on the number of detector activations by different species/genera can only give an indication of relative species abundance at the Site, as detectability varies between species.
- 3.17 It is acknowledged that the quantum of bat contacts recorded during a survey may not give a true reflection of the abundance of bats using the Site. For example, a single bat foraging close to a detector may trigger several hundred activations in the course of one night. However, this activity level does provide a proxy for the level of use by bats, and therefore its relative importance.

Evaluation

- 3.18 The species assemblage recorded by the activity surveys has been evaluated in line with Reason and Wray (2023), which provides guidance on assessing the conservation value of a site according to the species present.

4.0 RESULTS

Daytime Bat Walkover

- 4.1 The Site was categorised with 'moderate' potential for commuting or foraging bats, in line with the Bat Conservation Trust (BCT) guidelines (Collins, 2023). The woodland parcel situated to the northern extent of the Site provides connectivity to off-site woodland, treelines, and urban gardens. The railway abutting the western Site boundary also provides connectivity to habitats further afield. Additionally, neutral grassland to the southern extent of the Site may provide foraging opportunities.
- 4.2 It was not within the scope of the DBW to conduct a detailed Ground Level Tree Assessment (GLTA). However, upon initial inspection during the DBW, none of the mature trees within the Site boundary were considered to hold roosting potential.

Activity Surveys

Static/Automated Monitoring

- 4.3 The weather conditions experienced during the ten nights where data was analysed are provided in Table 1 below.

Table 1. Overnight weather conditions during remote monitoring

Survey Month	Dates Sampled	Temp. (°C)		Cloud Cover (%)		Wind (km/h)		Precipitation (mm)
		Min	Max	Min	Max	Min	Max	
Aug	06/08/2025	9.2	21.4	0	94	0	17	0
	07/08/2025	13.2	20.9	74	100	2	22	0
	08/08/2025	14.1	22.3	0	99	4	15	0
	09/08/2025	11.4	23.2	0	95	6	22	0
	10/08/2025	11.2	11.2	0	75	2	11	0
Sep	17/09/2025	12.8	17.4	25	100	7.7	28	1.7
	18/09/2025	16.7	19.6	25	92	12.6	23.8	0.7
	19/09/2025	14.4	23.7	0	91	3.2	16.2	0
	20/09/2025	12.3	20.4	25	88	2.1	34.8	0
	21/09/2025	10.4	15	25	94	10.7	30.2	0

- 4.4 The total number of bat contacts recorded across all monitoring locations and monitoring periods for each bat species/genera are provided in Figure 2 below.

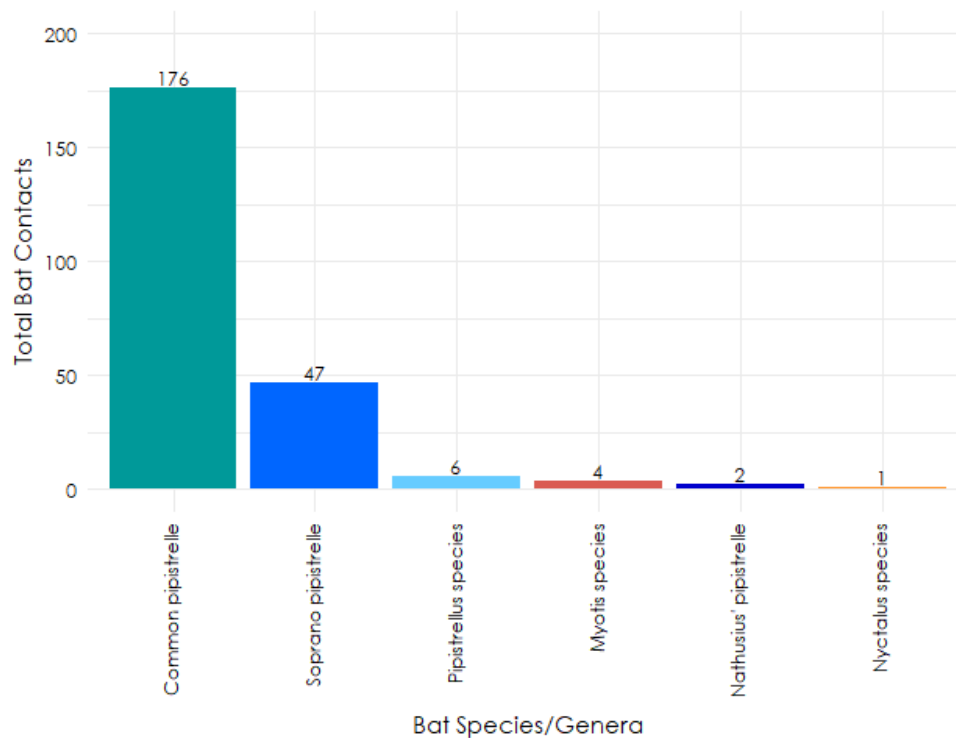


Figure 2. Total bat contacts by species/genera recorded from Monitoring Location 1

- 4.5 At least six species were recorded across two seasonal surveys, dating 6 to 11 August and 17 to 22 September 2025. Some calls could not be identified to the species level, such as *Pipistrellus* sp. and *Nyctalus* sp. Common pipistrelles were recorded significantly more than any other species, totalling 176 contacts across August and September 2025. Soprano pipistrelle *P. pygmaeus* were recorded less frequently, with a total of 47 contacts, followed by unidentified *Pipistrellus* sp., *Myotis* sp., Nathusius' pipistrelle, and *Nyctalus* sp.
- 4.6 Figure 3 below shows the variance in nightly activity levels for each of these bat species recorded on-site. More detailed data describing Figure 3 are provided in Table 2. The activity data in Figure 3 are presented as boxplots for each bat species, which show the inter-night variability in bat activity across the 10 nights monitored. The median value (middle line of the boxplot) is taken as the typical level of activity for that species on-site at the point monitored. The length of each coloured boxplot is the interquartile range which shows the variance in nightly activity around the median value. The ends of each whisker line define the minimum and maximum nightly activity values recorded at the monitoring location.
- 4.7 Outlying values are nightly activity levels that are greatly different when compared to the distribution of the remaining nightly activity levels. Outliers are illustrated as black points away from the boxplot. While

important to note, these outliers do not represent the bat activity more commonly found at the Site for the species in question.

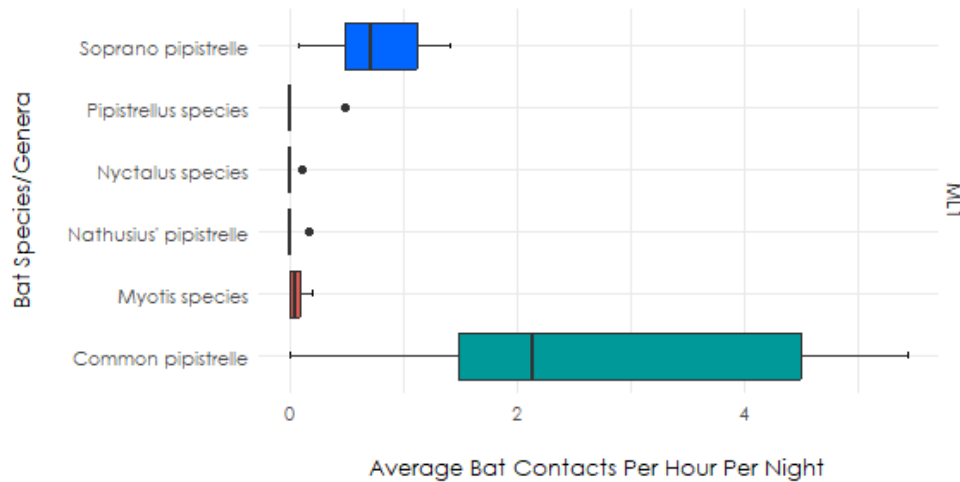


Figure 3. Average bat contacts per hour per night for each bat species/genera recorded across all remote monitoring

- 4.8 Bat contacts from common species, namely common and soprano pipistrelles, were recorded significantly more frequently than any other species. Both of these species are 'widespread' in Southern England (Reason and Wray, 2023). *Nyctalus* sp. may be considered 'widespread but not as abundant' or 'rarer or restricted', depending on the species recorded. *Myotis* sp. are considered 'widespread but not as abundant', whereas *Nathusius'* pipistrelle are considered 'rarer or restricted' in Southern England.
- 4.9 Overall, activity across both monitoring periods was low; the maximum number of bat contacts made per hour per night did not exceed six, while on average fewer than three contacts were made per hour per night.

Table 2. Average bat contacts per hour per night recorded during remote monitoring surveys

ML	Species	Average bat contacts per hour per night				Total bat contacts	Number of nights monitored
		Minimum	Maximum	Median	IQ range		
ML1	Common pipistrelle	0.000	5.438	2.139	3.021	176	10
ML1	Soprano pipistrelle	0.08	1.403	0.702	0.630	47	10
ML1	Pipistrellus sp.	0.000	0.478	0.000	0.000	6	10
ML1	Nathusius' pipistrelle	0.000	0.159	0.000	0.000	2	10
ML1	Myotis sp.	0.000	0.199	0.040	0.094	4	10
ML1	Nyctalus sp.	0.000	0.101	0.000	0.000	1	10

5.0 DISCUSSION

Assessment

- 5.1 The activity surveys recorded the presence of common and widespread species, namely common and soprano pipistrelle, in addition to those considered 'widespread but not as abundant' in Southern England such as *Myotis* sp. and *Nyctalus* sp. (see Table 3). Nathusius' pipistrelle, considered 'rarer or restricted distribution' in Southern England, were recorded infrequently with a total two contacts made across the two monitoring periods.

Table 3. Categorising Bats by Geographic Distribution and Rarity (adapted from Reason and Wray, 2023)

Geographic Location	Rarity Category			
	Widespread	Widespread in many geographies but not all	Rarer or restricted distribution**	Rarest Annex II species and very rare
Southern England	Common pipistrelle Soprano pipistrelle	<i>Myotis</i> sp. <i>Nyctalus</i> sp.	Nathusius' pipistrelle	None recorded

*N.B. Only the relevant geographic location has been reproduced within the table.

**Species not included in the table above are considered to be 'rarer' in line with guidance.

- 5.2 In line with Reason and Wray (2023), this species assemblage would be considered of 'Local' importance. The proposed development does not comprise the removal of the woodland, thereby retaining ecological connectivity for foraging and commuting bats.
- 5.3 No trees onsite were considered to hold rooting potential, although it was not within the scope of the DBW to undertake a detailed GLTA as no mature trees are anticipated to be removed as part of the proposed development. Should the proposal be subject to change and comprise the removal of individual trees or the woodland parcel, a detailed GLTA is recommended to ascertain the potential for bat roosts to be present.

Mitigation

- 5.4 To avoid disturbance upon bats using retained habitats onsite or adjacent, a detailed lighting strategy should be provided to detail measures that will minimise artificial light spill during the operation phase of the development. The sensitive lighting design will be informed by the latest guidance provided by the Bat Conservation Trust and the Institution of Lighting (2023) and include measures such as the following:
- Security lighting used during the construction phase will be directed away from these trees, the woodland parcel, and boundary habitats

- Lighting installed for the operational phase, such as street lighting, will be directed towards the developed area and away from retained habitats.
 - Interior lighting in dwellings adjacent to the woodland parcel and boundary habitats will be countersunk.
- 5.5 Specifications for the sensitive lighting design will be provided within a specific lighting design report, to be developed at the reserved matters stage.
- 5.6 Providing the above mitigation measures are implemented, and given the proposal will not comprise the removal of woodland and boundary habitats frequented by bats, the impacts of the development are not thought to elicit significant negative effects upon commuting/foraging bats.

6.0 CONCLUSIONS

- 6.1 The species assemblage recorded across both August and September monitoring periods was largely comprised of common and widespread species. The occurrence of Nathusius' pipistrelle may be considered notable as this species is not considered widespread within the region, albeit with only two contacts made by this species across the recording periods. Generally, across both monitoring periods, bat activity was low.
- 6.2 Any new lighting scheme will need to be designed to avoid illuminating retained habitats onsite or within the vicinity, such as the woodland to the northern extent of the Site. A detailed lighting design strategy will provide recommendations for the avoidance of artificial light spill and the retention of 'dark corridors' for bats.

7.0 REFERENCES

Bat Conservation Trust (BCT) and Institute of Lighting Professionals (ILP), 2023. *Guidance Note 8: Bats and Artificial Lighting*. Warwickshire: ILP.

Collins, J., ed., 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th ed. London: The Bat Conservation Trust.

Reason, P.F. and Wray, S. 2023. *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Ampfield: Chartered Institute of Ecology and Environmental Management.



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