

Ringle Oast, Crouch Lane, Sandhurst, Kent

Bat Survey and Mitigation Strategy

10th July 2023/ Ref No 2023/04/07

Client: Mr and Mrs Whittle



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1 Introduction

KB Ecology Ltd was commissioned to undertake a bat survey in support of a planning application at Ringle Oast, Crouch Lane, Sandhurst TN18 5PA for the conversion of a roundel oast kiln currently used as garage and for storage into habitable space for the adjacent dwelling.

1.1 Survey Objectives

The purpose of the survey was to assess the likely impact of the scheme on bats, and to assist in demonstrating compliance with wildlife legislation and planning policy objectives.

The key objectives of this survey were to:

- Confirm the presence / likely absence of bats;
- Confirm the species and usage of the building, if present;
- Provide recommendations for necessary mitigation work.

1.2 Limitations

The findings of this report represent the professional opinion of a qualified ecologist and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited in this document.

2 Methodology

2.1 Scoping Survey

The site and its immediate surroundings were considered in terms of potential habitat for bats during a day-time walkover survey undertaken on 18th May 2023 by Katia Bresso CEnv MCIEEM, a qualified professional consultant ecologist with over 20 years of experience¹, licensed bat surveyor (Class Licence CL19, Level 3, Registration Number: 2016-27133-CLS-CLS²) and Registered Consultant of the Bat Low Impact Class Licence WML-CL21 with Natural England (Registered Consultant Reference Number RC056, since May 2015).

A visual examination of the external and internal areas of the building was undertaken. This consisted of a visual inspection using a bright torch (Cluson CB1 Clubman Standard High Power, 500,000 candle power). Cracks and holes were inspected using an endoscope³, if needed. The purpose of the survey was to look for signs of bats such as droppings, urine staining, marking around entrance/exit holes, and any animals; and to note any potential roosting locations and access points. The latter is important because signs of bats are frequently not present; for example, they can be washed off external surfaces by wind and

¹ Katia Bresso is a Suitably Qualified Ecologist with regards to Code for Sustainable Homes assessment and BREEAM

² This licence allows the holder to disturb or capture bats using: torches, endoscopes, hand nets, static hand-held nets, mist nets for development surveys (can be used for a maximum of 3 days at any one site), acoustic lures and to disturb but not handle hibernating bats.

³ RIDGID CA-350x Inspection Camera System 63888

rain and are often not visible where bats roost in crevices such as gaps between tiles and boarding or felt, behind weatherboarding, holes in brickwork, timbers and similar.

Bat roosting potential of all structures, buildings and trees was classified according to the following criteria set out in the Table below, taken from the Bat Conservation Trust Good Practice Guidelines (2016).

Suitability	Criteria
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by a larger number of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protections, conditions and surrounding habitats.

2.2 Night-time surveys

The Bat Conservation Trust’s guidelines provide a table stating the ‘minimum number of presence/absence survey visits required to provide confidence in negative preliminary roost assessment from buildings, built structures and trees in summer.

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey ^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^a	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. ^a

^a Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see Section 5.2.9). If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.

^b Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

Table 7.1 Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability	Moderate roost suitability	High roost suitability
May to August (structures) No further surveys required (trees)	May to September ^b with at least one of surveys between May and August ^b	May to September ^b with at least two of surveys between May and August ^b

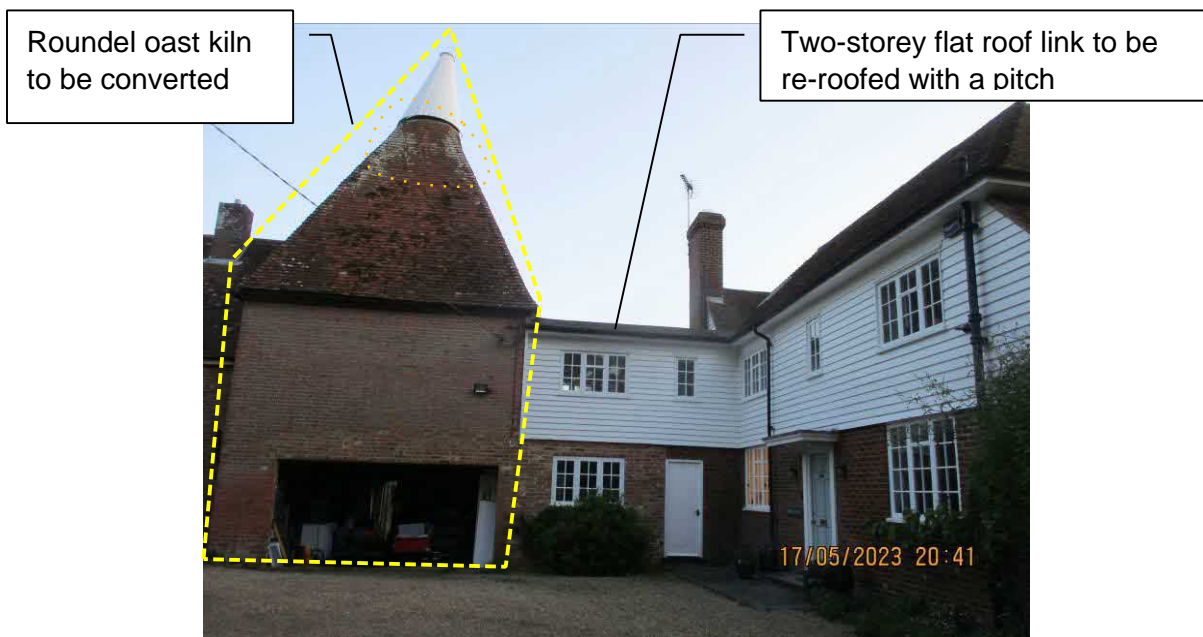
Three emergence survey were undertaken in May-July 2023 (by K Bresso⁴ and M Austin⁵ J Austin⁶, P Austin⁷, L Carter-Lilley⁷) using Batscanner / Anabat Express / Echo Meter Touch 2 Pro / Batlogger M bat detectors⁸. A Canon XA11 and a Canon XA10 video recorder on tripod were used to record the survey (with infrared illuminators).

3 Results

3.1 Day-time inspection

No bats were found during the internal/external inspection of the roundel kiln. But a small number of old bat droppings were found on the upper floor in the roundel. It is brick built with a tiled roof. The tiles offer high suitability for crevice-dwelling bats (such as a pipistrelle bats). There is a cavity in the brick work above the door threshold which provides some suitability for hibernation (although restricted as not very well insulated, being at the doorway).

Next to the kiln is a two-storey flat roof link between what was the farmhouse with the oast. This flat roof is well sealed and offers negligible suitability for roosting bats. Also, the walls have tight painted timber weather-boards, which provide negligible suitability for roosting bats.



⁴ CEnv MCIEEM, a qualified professional consultant ecologist with over 20 years of experience⁴, licensed bat surveyor (Class Survey Licence Registration Number 2015-11917-CLS-CLS (CL15 Bat Roost Visitor Level 1) and 2015-11918-CLS-CLS (CL18 Bat Survey Level 2)) and Registered Consultant of the Bat Low Impact Class Licence with Natural England

⁵ 12 years' experience in bat surveys

⁶ 2 years' experience in bat surveys

⁷ second survey season

⁸ All surveyors were able to take recordings of bat species in either frequency division or full spectrum formats and were equipped with a bat detector that could produce audible bat calls during the survey. Also, at least one experienced surveyor was present on all of the surveys.

3.2 Night-time survey

Three common pipistrelle bats emerged from the clay tiles of the roundel roof during the first night-time survey in May 2023.

Three common pipistrelle bats, one soprano pipistrelle bat and two pipistrelle *sp* (common or soprano) bats emerged during the second night-time survey in June 2023.

One soprano pipistrelle bat and one pipistrelle *sp* (common or soprano) bat emerged during the third night-time survey in July 2023.

This means that the building is used as a day⁹ roost by a low number of common and soprano pipistrelle bats (it is not used as a maternity roost).

Noctule, serotine, Leisler's, brown long-eared and *Myotis sp* bats were also heard and seen commuting and foraging during the survey.

4 Legislation

All species of bat are afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). They are also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and are therefore an EPS). Some species of bats (noctule, soprano pipistrelle, brown long-eared bat, barbastelle) are also listed as species of principal conservation importance¹⁰.

The first official IUCN Red List for British Mammals shows that four of the 11 mammal species native to Britain classified as being at imminent risk of extinction are bats. These are: greater mouse-eared bat, grey long-eared bat, serotine and barbastelle. A further two species are classified as Near Threatened: Leisler's bat and Nathusius' pipistrelle. The serotine is also an Indicator Species under the Kent Biodiversity Strategy¹¹.

Bats rarely use the same roosting place all year round as they need different conditions for breeding and hibernating. But bats are creatures of habit and tend to return to the same sites at the same time year after year. For this reason, roosts are legally protected even if bats don't seem to be living there at certain times of year.

The legislation makes it a criminal offence to:

Deliberately capture, injure or kill a bat;

Intentionally or recklessly disturb¹² a bat in its roost or deliberately disturb a group of bats;

⁹ a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.

¹⁰ Please note that this legal information is a summary and intended for general guidance only. The original legal documents should be consulted for definitive information.

¹¹ <http://kentnature.org.uk/uploads/files/Nat-Env/Kent%20Biodiversity%20Strategy%202020.pdf>

¹² Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat;
Intentionally or recklessly obstruct access to a bat roost.

For more information, Natural England have produced a Standing Advice Species Sheet available at <https://www.gov.uk/bats-protection-surveys-and-licences>

5 Impact and Mitigation Strategy

The building is used as a day roost by a small number of common and soprano pipistrelle bats, both being common species. Thus:

1. the roost should be regarded as being of low conservation significance as referred in the 'Bat Mitigation Guidelines' (English Nature, 2004).
2. the following mitigation strategy should be followed to ensure the local bat population stays at a favourable conservation status and include the mitigation/compensation requirements suggested in the 'Bat Mitigation Guidelines' (English Nature, 2004):
*'Flexibility over provision of bat boxes,
access to new buildings etc.
No conditions about timing or monitoring'.*

5.1 Mitigation Strategy

The development needs to satisfy the requirements of the 'mitigation hierarchy' to maintain the continued ecological functionality of the site, through appropriate mitigation if needed; this hierarchy means:

1. Avoidance of any impacts should be the first consideration¹³,
2. The next step is mitigation of any impacts that cannot be avoided; where significant harm cannot be wholly or partially avoided, it should be minimised by design or by the use of effective mitigation measures¹⁴;
3. And lastly compensation¹⁵ should be used to off-set unavoidable remaining impacts.

Thus the following mitigation measures are proposed to maintain the conservation status of bats on site in the short and long-term:

Two bat boxes should be installed onto an adjacent tree prior to roof dismantling works starting to provide continued roosting opportunities locally during the works;

¹³ Avoidance is always the preferred form of mitigation. It involves steps taken to avoid deliberate killing, injury or disturbance to bats and to existing roosts. The great majority of roosts are used only seasonally so there is usually some period when bats are not present and works can occur without impacting bats. It may also be possible to 'design out' the impacts of a development by retaining the roosting site and building around it, as well as commuting routes to and from the roost.

¹⁴ Mitigation refers to measures to protect the bat population from damaging activities and to reduce or remove the impact of development (for example, by carrying out works to a summer roost site when bats aren't present in the winter).

¹⁵ Compensation refers to the offsetting of remaining impacts in the form of roost creation, restoration or enhancement as a result of loss of breeding or resting places (for example, by building a new roosting site when the original roosting site is lost through demolition of a building).

Gaps will be reinstated under at least ten tiles throughout the whole roof to allow bats access between the tiles and felt (by raising a tile using a timber batten and thus creating a gap that is 20mm wide by at least 50mm long).

Under bat mitigation licences, only bitumen Type 1F with hessian matrix can be used in areas where bats are likely to roost; if the use of non-bitumen coated roof membrane is necessary, a certificate that proves the roofing membrane has passed a '*snagging propensity test*' will be needed by Natural England.

Once a licence is in place, dismantling prior to demolition/conversion shall be done as such:

Briefing to contractors – A toolbox talk will be delivered to contractors in advance of works commencing on site. This will include information on relevant legislation relating to bats, and contractor's responsibilities. It will also include confirmed bat roosts proposed for retention during works and the protection measures to be enforced.

Supervision by a licensed bat handler – Any works affecting suitable roosting opportunities will be undertaken under the supervision of a licensed bat handler. Soft techniques will be employed, with dismantling carried out by hand in a vertical rather than horizontal sliding motion checking for roosting bats, under the supervision of a licensed bat handler.

If any bats are found during the dismantling works, they will be captured by hand, by the licenced bat worker, checked for injury and released at the site in the evening on the same day (depending on weather conditions, should weather conditions be bad, the bat would be kept in captivity by the licence holder for as little time as possible, until suitable weather conditions) or transferred to a suitable bat box which will be plugged for a short period of time to allow the bat to become acclimatised to the box.

The licenced bat worker will decide how long to supervise the works or whether to stay 'on-call' once the works have started. If a bat is discovered at other unsupervised times, work will cease immediately, and the licensed ecologist will be called for advice. This advice will include leaving the bat to disperse of its own accord or wait for the licensed ecologist to appear and move the bat. Builders and contractors are explicitly forbidden from handling bats.

Besides, as lighting can be detrimental to roosting, foraging and commuting bats¹⁶, the recommendations from the Bat Conservation Trust and the Institution of Lighting Professionals, titled 'Guidance Note 8 Bats and Artificial Lighting'¹⁷, should be considered, when designing any lighting scheme for the proposed development.

5.2 Need for application for a EPSM licence or for registration of the site under a Bat Low Impact Class Licence

As the proposed works would result in the loss of a bat roost, the works should only be undertaken once a licence is in place for the project, which can be done as below:

- A. A Bat Mitigation Licence (A13) could be sought from Natural England to permit the proposed works. An application would need to be prepared and submitted to Natural England for determination, once full planning permission has been granted. A decision on the application would be made by Natural England within 30 days of receipt (although it has taken Natural England considerably more time in the last two

¹⁶ http://www.bats.org.uk/pages/bats_and_lighting.html and <http://www.batsandlighting.co.uk/index.html> for more information

¹⁷ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

years). The licence application would need to include full details of the proposed ecological mitigation / compensation and a program for these works.

- B. Alternatively, a Registered Consultant of Bat Earned Recognition (ER) Class Licence could register the site under their licence to undertake the works¹⁸.
- C. Alternatively, a Registered Consultant of the bat 'low impact' licence (CL21)¹⁹ could register the site under their licence to undertake the works; i.e.:
 - To disturb and capture up to 3 'common or widespread' bat species (which are those listed in each annex);
 - If the project has a low or temporary impact on bats or their roosts.
 - If the dismantling works (i.e. works impacting bats) would last a maximum of six months.

In all cases, the species protection provisions of the Habitats Directive, as implemented by the Conservation of Habitats and Species Regulations 2017, contain three "derogation tests" which must be applied by Natural England when deciding whether to grant a licence to a person carrying out an activity which would harm a European Protected Species.

For development activities, this licence is obtained after planning permission has been obtained. The three tests are that:

- the activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
- there must be no satisfactory alternative; and
- favourable conservation status of the species must be maintained.

More information is present in:

<https://www.gov.uk/government/publications/bats-apply-for-a-mitigation-licence>
<http://publications.naturalengland.org.uk/publication/113030?category=8004>

5.3 Further surveys



Another two repeat night-time surveys are needed to confirm the roost characterisation and that no other bat species will be impacted (or amend the strategy, in the unlikely event that another species/roost is confirmed).

Please note that the bat surveys used for licence application need to have been conducted within the current AND/OR most recent optimal season and need to follow the Bat Conservation Trust's guidelines.

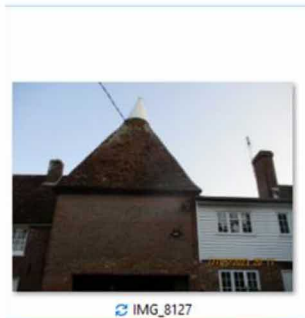
¹⁸ <https://www.bats.org.uk/our-work/project-collaborations-partnerships/earned-recognition-project>

¹⁹ <https://www.gov.uk/government/publications/bats-licence-to-interfere-with-bat-roosts-cl21>

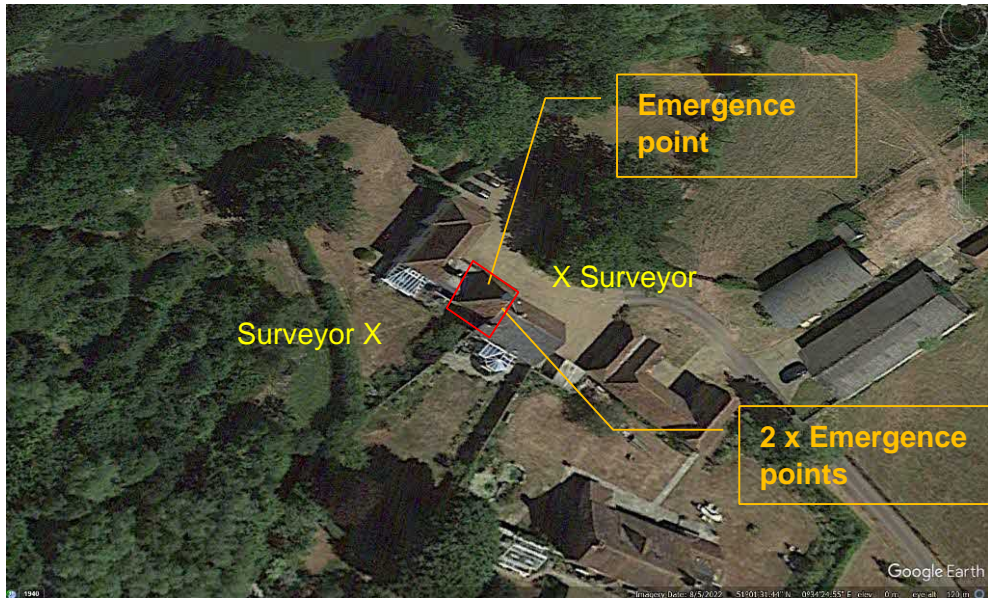
Proposed Timeline:

Installation of bat boxes on tree	 EPS licence granted	
	Dismantling of bat roosting features under watching brief by licensed ecologist (best avoiding winter)	
		All conversion works

Appendix A – Photos



Appendix B – Night-time Bat Survey Results



Site Name and Building Number	Ringle Oast, Crouch Lane, Sandhurst TN18 5	Surveyor Name / Equipment	Megan Austin: Elekon Batscanner, Anabat express (D1), Canon AX10 (SD1)
Weather Conditions	5% cloud, no wind	Date	18.05.2023
Start Time	20:30	Finish Time	22:15
Air Temperature (°C) at Start of Survey	12	Air Temperature (°C) at End of Survey	10
Sunset	20:45	Sunrise	

South west of roundel			
Time	Species	Activity*	Comments
21:03	pip sp.	E	From top of roundel, flying west
21:03	45 pip	E	From top of roundel, flying south east, then intermittent foraging
21:24 onwards	55pip	F	intermittent foraging around building and garden
21:45	Sero	F	East to west then over pond
21:51			bat flying around roundel roof, no audio, pip size and flight
21:54	Noct/Leis	F	1 pass, NS
22:01	BLE		From the west flies up to building, triggers security light then flies west again, no emergence

*Activity - 'E' = emergence; 'R' = return; 'F' = foraging; 'C' = commuting **S' = seen; 'NS' = not seen

Site Name and Building Number	Ringle Oast, Crouch Lane, Sandhurst TN18 5	Surveyor Name / Equipment	K Bresso: Elekon Batscanner, Echo Meter Touch 2 Pro, Batlogger M , Canon AX11
Weather Conditions	5% cloud, no wind	Date	18.05.2023
Start Time	20:30	Finish Time	22:15
Air Temperature (°C) at Start of Survey	12	Air Temperature (°C) at End of Survey	10
Sunset	20:45	Sunrise	

NE of roundel

Time	Species	Activity*	Comments
20:58	45 pip	E?	saw pip flying round SE elevation of neighbour's house, potential emergence from roof
21:03	45 pip	E	From SE top of roundel, flying south east, then intermittent foraging all evening
21:04	45 pip	E?	saw pip flying round SE elevation of neighbour's house, potential emergence from roof
21:12 onwards	55pip	F	intermittent foraging around buildings, garden and pond, up to 3 bats
21:45	Sero	F	East to west then over pond
21:51	Myo sp	CNS	
21:54	Noct/Leis	CNS	

Site Name and Building Number	Ringle Oast, Crouch Lane, Sandhurst TN18 5	Surveyor Name / Equipment	Megan Austin: Elekon Batscanner, Anabat express (D1), Canon AX10 (SD1)
Weather Conditions	20% cloud, light wind	Date	05.06.2023
Start Time	20:51	Finish Time	22:36
Air Temperature (°C) at Start of Survey	12	Air Temperature (°C) at End of Survey	10
Sunset	21:06	Sunrise	

North of roundel

Time	Species	Activity*	Comments
21:27	55pip	C	from north
21:28	pip sp.	E	From 1/3 up north facing hip of roundel (video clip on cloud)
21:30	45pip	F	to the north, then intermittent foraging
21:31	45pip	E	From top of roundel, flying east (video clip on cloud)
21:37	45pip	E	From ridge behind chimney (video clip on cloud)
21:59	Myotis	C	1 pass, east to west, not from building

Site Name and Building Number	Ringle Oast, Crouch Lane, Sandhurst	Surveyor Name / Equipment	Pete Austin: Elekon Batscanner, Anabat express (D2)
Weather Conditions	20% cloud, light wind	Date	05.06.2023
Start Time	20:51	Finish Time	22:36
Air Temperature (°C) at Start of Survey	12	Air Temperature (°C) at End of Survey	10
Sunset	21:06	Sunrise	

South west of roundel

Time	Species	Activity*	Comments
21:28	pip sp.	E	No audio, emerging from hip flying north (same bat as Megan)
21:31	45pip	E	From top of roundel (same bat as Megan)
21:35	55pip	CNS	1 pass, NS
21:36	55pip	E	From half way up east facing elevation, flying south (not on video)
21:40 onwards	55pip	F	intermittent foraging around garden
21:53	Serotine	CNS	1 pass, NS

Site Name and Building Number	Ringle Oast, Crouch Lane, Sandhurst TN18 5	Surveyor Name / Equipment	Megan Austin: Elekon Batscanner, Anabat express (D1), Canon AX10 (SD1)
Weather Conditions	0% cloud, no wind	Date	06.07.2023
Start Time	20:58	Finish Time	22:43
Air Temperature (°C) at Start of Survey	13	Air Temperature (°C) at End of Survey	12
Sunset	21:13	Sunrise	

South-west of roundel

Time	Species	Activity*	Comments
21:22	Noctule	CNS	1 pass, NS
21:33	45pip	F	to the west, then intermittent foraging around garden and over house
21:40	55pip	F	to the east, then intermittent foraging around garden and over house
21:43	pip sp.	E	From 2/3 up north facing hip of roundel (video clip on cloud)
22:09	myotis sp.	C	east to west
22:28	BLE	CNS	1 pass
22:30	BLE	CNS	1 pass

Site Name and Building Number	Ringle oast, crouch lane, sandhurst, tn18 5pa	Surveyor Name / Equipment	Lewis Carter-Lilley / Elekon BatScanner
Weather Conditions	No wind, no cloud	Date	06/07/23
Start Time	20:58	Finish Time	22:43
Air Temperature (°C) at Start of Survey	13	Air Temperature (°C) at End of Survey	
Sunset	21:13	Sunrise	

position around building: east side

Time	Species*	Activity**	Comments
21:22	Noc	F	NS
21:26	55pip	F	NS (somewhere to south)
21:41-42	55pip	F	NS (to south)
21:44	55pip	E	S over flat roof (seen from other side - not a fly over)
22:06	45pip	F	NS
22:13-14	45pip	F	S - over driveway
21:15-16	55pip	F	S Over drive and flat roof
22:23-26	45pip	F	NS
22:34-40	45Pip	F	NS