the ecology partnership

Bat Activity Surveys Report

Land South of Bolney Road, Ansty, West Sussex

The Ecology Partnership, Thorncroft Manor, Thorncroft Drive, Leatherhead, Surrey KT22 8JB

T +44 (0) 1372 364133 E info@ecologypartnership.com W ecologypartnership.com

Contents

1.0 Introduction

Background

1.1 The Ecology Partnership Ltd was commissioned by Devine Homes to undertake bat activity transect surveys of the proposed development site at land south of Bolney Road, Ansty, West Sussex.

1.2 A desk study of the site identified a series of treelines, hedgerows and scrub, suitable to support commuting and foraging bats. Due to this, bat activity transect surveys were recommended, to assess the value of the site for bats and inform any future ecological impact assessments.

1.3 This report presents the results of The Ecology Partnership's surveys in and around the site so far, which aims specifically to assess how bats are using the site over the course of the 2022 survey season.

1.4 Section 2 of this report sets out the methodology of The Ecology Partnership's survey and the results in Section 3 and the implications discussed in Section 4. Conclusions are provided for in chapter 5 of this report.

Site Context and Status

1.5 The site comprises three fields of modified grassland bounded by treelines and a small block of woodland. There is also an area of private garden with a vegetable plot and a small, dilapidated building used for storage. The site is approximately 2.9ha and located on the southern edge of Ansty village, with Bolney Road to the north-west and Cuckfield Road to the east (TQ 29030 23109). The immediate surrounding area comprises residential areas to the north, east and west, with arable fields to the south. In the wider area there are numerous large blocks of woodland to north-west, south, and west with arable land and connecting hedgerows in between.

1.6 The approximate red line boundary of the site is shown in Figure 1 below.

Figure 1: Approximate location of the red line boundary

Description of Proposed Development

1.7 The current early masterplan for the site indicates development on the western half of the red line boundary, with an access road connecting to the existing housing development, however, this plan is subject to change.

Legislation

1.8 Under the NERC Act (2006) it is now the duty of every Government department in carrying out its functions "*to have regard, so far as it is consistent with the proper exercise of those functions, to the purpose of conserving biological diversity in accordance with the Convention*".

1.9 Bats are covered by the following relevant legislation: the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010).

1.10 Under the WCA 1981 it is an offence to:

- intentionally, recklessly or deliberately disturb a roosting or hibernating bat i.e. disturbing it whilst it is occupying a structure or place used for shelter or protection)
- intentionally or recklessly obstruct access to a roost (i.e. a structure or place used for shelter or protection).

1.11 Under the CHSR 2010 it is an offence to:

- deliberately capture (or take), injure or kill a bat
- intentionally, recklessly or deliberately disturb a bat, in particular (i) any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) any disturbance which is likely to impair their ability in the case of hibernating or migratory species, to hibernate or migrate; or (iii) any disturbance which is likely to affect significantly the local distribution or abundance of the species to which they belong
- damage or destroy a breeding site or resting place (roost) of a bat.

2.0 Methodology

Bat Transect Activity Surveys

2.1 Monthly dusk activity surveys were carried out between 21st April 2022 and 21st September 2022.

2.2 The surveys followed BCT guidelines (Collins, 2016). One predetermined transect route was agreed and followed for the duration of the survey, during which bat flyovers and activity were recorded. The transect route was walked twice during the surveys. The transect route was designed to follow linear features such as treelines and scrub which bats are known to use as commuting corridors. These habitats also provide the most suitable habitat on site for foraging. Figure 2 below displays the layout of the transect routes.

Figure 2: Transect route indicated by the blue line with Anabat locations shown as white dots.

2.3 The dusk surveys started at sunset and observations were maintained until at least 2 hours after sunset. Bats usually emerge about twenty minutes after sunset depending on the species, light level, weather conditions and time of year. Peak activity will normally last for about two hours after sunset, during times of peak insect activity.

2.4 The Surveyor was equipped with one of the following recording devices: Batlogger and an Echo Meter Touch with an iPad.

2.5 Three Anabat Express static recording devices were also deployed over five consecutive nights between in April and September 2022. The recording devices were placed within treelines that were considered suitable for use by commuting or foraging bats and also deemed likely to be impacted by road infrastructure development within the proposals, in order to gauge activity levels and species diversity on site (see Figure 2). The subsequent recordings from the Anabat Express device were analysed using Anabat Insight software.

Limitations

2.6 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment.

2.7 The Anabats recording ability are limited by the quantity of insect noise picked up over the bat calls, which varies over the season. This is a limit of the zero-crossing functionality of the Anabat recording devices. The number of bat calls recorded was particularly low some months because the loudest calls at a single frequency are always recorded. The actual number of passes is expected to have been higher.

2.8 Filters are created and used on Analook for the bat call analysis, which will have a certain degree of error, although tests are carried out to ensure the highest accuracy possible.

3.0 Results

Bat Transect Surveys

3.1 Seasonal bat activity transect surveys have been carried out in April, May, June, July, August and September 2022. The following section summarises the results from these surveys per transect route.

3.2 The date, time and weather conditions during for each monthly survey is shown in Table 1.

Table 1. Summary of the date, time and weather conditions during each monthly survey.

Survey date	Time of sunset	Weather conditions
21st April 2022	20:07	Conditions were mild with a moderate breeze and temperature starting 13°C and then dropping to 11°C at the end of the survey
17th May 2022	20:46	Conditions were overcast and some light rain with a light breeze. Temperature started at 20°C and then dropping to 17°C at the end of the survey.
22nd June 2022	21:19	Conditions were warm with little to no breeze. The temperature was initially 20°C, dropping to 18°C by the end of the survey.
19th July 2022	21:04	Conditions were clear with a slight breeze, it had rained just before the survey. Temperature started at 22°C and then dropping to 17°C by the end of the survey.

27th August 2022	20:11	Conditions were overcast but little wind. Temperature started at 20°C and then dropping to 16°C by the end of the survey.
21st September 2022	19:01	Conditions were overcast with a slight breeze. Temperature started at 16°C and then dropping to 13°C by the end of the survey.

April

3.10 During the April transect, very low levels of bat activity were recorded on site. Two common pipistrelle (*Pipistrellus pipistrellus*) passes, and one soprano pipistrelle (*Pipistrellus pygmaeus*) pass was the only activity on site. The first pass was from a common pipistrelle observed commuting along the southern boundary 29 minutes after sunset. The soprano pipistrelle was recorded 33 minutes after sunset commuting the hedgerow between the western field and central field. The final pass was a common pipistrelle 53 minutes after sunset in the northeast of the site.

May

3.11 During the May transect, low levels of bat activity were recorded on site. Common pipistrelle, noctule (*Nyctalus noctule*) and serotine (*Eptesicus serotinus*) were the only recorded species on site. The first pass was recorded 48 minutes after sunset in the west corner of the site adjacent to the woodland and then foraging the southwest treeline. The noctule pass was recorded 94 minutes after sunset in the centre of the site and the serotine pass was 112 minutes after sunset in the same area. This was also the final pass.

June

3.12 During the June transect, low levels of bat activity were recorded on site. Common pipistrelle, soprano pipistrelle and noctule were the only recorded species on site. The first pass was a common pipistrelle recorded 44 minutes after sunset in the west of the site adjacent to the woodland, then multiple forging passes on the southern boundary around 60 minutes after sunset. The noctule pass was recorded 79 minutes after sunset in the centre of the site. The soprano pipistrelle passes were towards the end of the survey with the last calls being

foraging activity along the hedgerow between the western and central fields 104 minutes after sunset.

July

3.13 During the July transect, low levels of bat activity were recorded on site. Common pipistrelle and soprano pipistrelle were the only recorded species on site. The first pass was a common pipistrelle commuting north across the centre of the site recorded 21 minutes after sunset. 47 minutes after sunset a soprano pipistrelle was recorded making multiple passes along the southern boundary. The majority of the passes of both species were along the southern boundary hedgerow. The final pass was a common pipistrelle in the north of the site 105 minutes after sunset.

August

3.14 During the August transect, very low levels of bat activity were recorded on site with only four common pipistrelle passes recorded. The first passes were foraging activity on the southern boundary 15 minutes after sunset. 54 minutes after sunset an individual was recorded faintly in the northeast of the site. The final pass was for an individual commuting along the road in the northwest of the site 85 minutes after sunset.

September

3.15 During the September transect, low levels of bat activity were recorded on site. Common pipistrelle, soprano pipistrelle and brown long-eared (BLE) (*Plecotus auratus*) were the only recorded species on site. The first pass was 15 minutes after sunset where a soprano pipistrelle was foraging the southern central area of the site. The common pipistrelle activity was all recorded within the 60 minutes after sunset where 4 passes were heard but not seen in the west of the site. The BLE passes were recorded 31 minutes and 80 minutes after sunset in the west of the site, with the pass at 80 minutes after sunset being the final call recorded.

Anabat Express Static Recorders

3.16 Three Anabat Express static recording devices were deployed monthly across the site between April to September 2022. The data for each Anabat across the survey period is presented in Appendix 1.

3.17 In total **2815** bat passes were recorded over the survey period, comprising at least seven species (See Figure 4). The most frequently recorded species was the common pipistrelle, accounting for *c.*66.7% of all passes, the next most frequently recorded species were soprano pipistrelle and myotis species which accounted for *c.*12.2% and *c.*12.8% of all passes respectively. The remaining *c.*8.3% of passes were made up of serotine *c.*6%, Leisler's *c.*1.1%, noctule *c.*0.5%, and brown long-eared bats *c.*0.75%. Bats of the Myotis genus have been grouped together owing to difficulties in identifying calls to species level. Tables 2-4 summarise the results based on species, percentage total and anabat location.

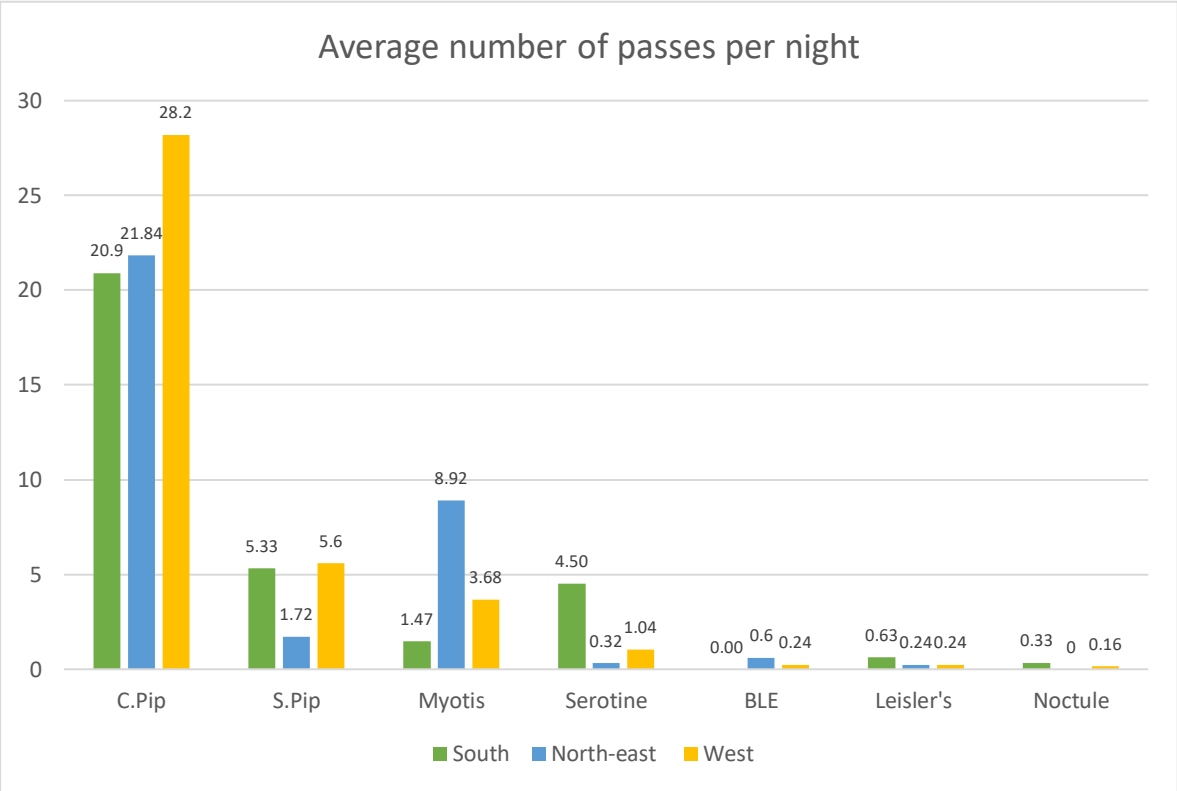

Figure 4: Average number of passes/night recorded by each anabat for each species across the site.

Table 2: Total bat passes recorded by species

Bat Species	Total Number of Recordings	% of Total
Common pipistrelle	1878	66.7
Soprano pipistrelle	343	12.2
Myotis	359	12.8
Serotine	169	6.0
Brown long-eared	21	0.7
Leisler's	31	1.1
Noctule	14	0.5
Total	2815	

Table 3: Number of calls made at each Anabat location

Anabat Location	Total Number of Passes per Month					
	April	May	June	July	August	September
West	30	353	FAILED	404	112	30
North-east	215	98	128	155	FAILED	245
South	40	210	241	451	53	86

Table 4: Number and percentage of calls made by each species at each Anabat location

	Western Anabat		North-eastern Anabat		Southern Anabat	
Bat Species	**Total Number of Recordings**	**% of Total**	**Total Number of Recordings**	**% of Total**	**Total Number of Recordings**	**% of Total**
Common pipistrelle	705	72.0	546	55.8	627	64.0
Soprano pipistrelle	140	14.3	43	4.4	160	16.3
Myotis	92	9.4	223	22.8	44	4.5
Serotine	26	2.7	8	0.8	135	13.8
Brown long-eared	6	0.6	15	1.5	0	0.0
Leisler's	6	0.6	6	0.6	19	1.9
Noctule	4	0.4	0	0.0	10	1.0
Total	979		841		995	

4.0 Bat Species and Activity

Transect Activity Surveys

4.1 In general, low levels of bat activity was recorded during the transect surveys. The highest amount of activity was recorded along the southern boundary treeline and the western woodland edge. The lowest amount of activity was in the north along the boundary with the existing houses and Bolney Road. Activity was dominated by common pipistrelle, with occasional soprano pipistrelles and a low number of serotine, noctule and BLE.

Anabat Data

4.2 Higher levels of bat activity were recorded across the site on the Anabat detectors in comparison with the walked transect surveys, with the highest levels of activity overall being recorded in July, followed by May. However, it must be noted that remote recording does not distinguish between a single individual making numerous passes whilst foraging around a particular feature, and between more numerous individual bats commuting across the

landscape. As such, walked transects provide a good understanding of how a particular feature is being used.

4.3 The highest level of activity was recorded by the western anabat (39.16 average passes/night), with the least activity recorded by the southern anabat (33.17 average passes/night).

Evaluation

Common & Soprano pipistrelle

4.4 In the Anabat surveys, the majority of bat passes recorded on site was from common and soprano pipistrelles, together making up approximately 78.9% of all bat calls. In the walked transects only a few soprano pipistrelle passes were recorded compared to common pipistrelles, which dominated the number of passes. Foraging bats are likely to make repeated passes within a small area whilst hunting for invertebrates. Consequently, a high number of passes could be generated by a small number of bats foraging in a small area, as opposed to a large number of bats making individual passes.

4.5 These species are both common and widespread across the UK. Considering the low number of passes recorded on the transect, it is considered that the pipistrelle species are using the site regularly but in low numbers. Considering the limited passes the population of these species using the site is therefore considered to be of **site** value.

Myotis species

4.6 Passes by myotis species were recorded on the Anabats and their calls accounted for approximately 12.75% of the total calls on site. Due to the difficulty in identifying myotis calls to species level using call analysis software, none of the calls on site were identified to species level, however, calls were largely indicative of Daubenton's, and, Natterer's bats.

4.7 However, due to relatively low number of myotis passes being recorded across the site and that the calls were not recorded every night, and therefore the site is not considered to support an important component of their habitat, the populations on site are considered to be of **site** value.

Serotine

4.8 Passes by serotine were recorded on the Anabats and their calls accounted for approximately 6% of the total calls on site. Serotine are vulnerable within the UK as a whole, however, are more common within the south. Due to relatively low number of serotine passes being recorded across the site, the populations on site are considered to be of **site** value.

Noctules and Leisler's

4.9 Leisler's were the next most frequently recorded bat making up 1.1% of all calls picked up on anabats. Noctules made up 0.5% of the calls recorded. Noctules are uncommon, but numerous in well-wooded areas, and, Leisler's are widespread but scarce in Britain but may be under-recorded. Both these species are associated with woodland and parkland, which is extensive within the surrounding area. However, despite this the numbers recorded where relatively low. Consequently, the population of these species using the site is considered to be of **site** value

Brown long-eared bat

4.10 Only 21 passes of brown long-eared (BLE) bats were recorded, however, it is considered likely that further activity by this species may have been missed due to the quietness of their low-amplitude echolocation calls, which could be obscured by louder species such as pipistrelles, and their reliance upon their hearing and sight for foraging. This species is both common and widespread across the UK and within Sussex, and, the numbers recorded on site were relatively low. Consequently, the population of this species using the site is considered to be of **site** value.

Mitigation Recommendations

4.11 It is important to provide habitat for foraging bats on site and ensure connectivity through the site in order to maintain the favourable conservation status of bats in the area post-development. As such, a number of recommendations have been outlined below to be considered when designing the scheme.

Commuting and foraging habitat

4.12 Maintaining and enhancing the existing linear features on site, such as hedgerows, boundary scrub, and, mature treelines, as well habitats suitable for foraging, such as woodland, would be considered necessary to ensure that bats would not be adversely affected by the proposals. As such, loss of these features should be avoided in the first instance, and, they should be incorporated within the design and layout of the scheme. However, if loss of small sections of these habitats cannot be avoided, then this loss should be offset through the planting of new hedgerows and treelines on site to maintain and enhance connectivity across the site for foraging and commuting bats in addition to other species. These features should be planted in such a way as to create variety in the species composition, structure and age which would provide a number of niches for bats favoured invertebrate prey.

Lighting recommendations

4.13 As a number of bat species make use of the linear features across the site, it is recommended that light should be directed away from these features, maintaining these as 'dark corridors'. In particular the woodland in the west of the site should be shielded from any artificial light. Any lighting necessary within proximity to other commuting features (mature linear scrub/tree lines) should comprise sensitive low-level lighting to minimise any potential impacts on light sensitive species such as brown long-eared bats, and some myotis species (Stone *et al*., 2012).

4.14 Lighting can alter bat behaviour significantly in terms of light avoidance with some species unable to cross lit areas even at low light levels. In addition, lighting can affect the availability of insect prey with some groups attracted to lights, creating a 'vacuum effect' in adjacent habitats. Some of the species on site, such as brown long-ears, barbastelles and *Myotis* species, are known to avoid all street lights (Stone *et al.,* 2009, 2012, 2015), meaning that development could seriously impact the abundance of these species on site post-development without careful design and mitigation.

4.15 Dark corridors could be implemented through the inclusion of dark buffer zones along important features highlighted above in addition to the new linear features and woodland screens to be created as part of the proposals. These will help to ensure that light levels (measured in lux) within a certain distance of a feature do no exceed certain defined limits.

The feature itself, such as the woodland edge or hedgerow, would not have any artificial lighting (Zone A in Figure 5). The habitats between these important features and the development area would then act as a transition with lighting limits (Zones B and C in Figure 5). Within the transition zone, it is important to use screening methods and to carefully consider whether lighting is appropriate and at what levels. The size of these buffers will be dependent on the importance of the feature. A lighting specialist in collaboration with an ecologist would help determine these levels and zone sizes. The development area itself (Zone D in Figure 5) should then be subject to a sensitive lighting scheme.

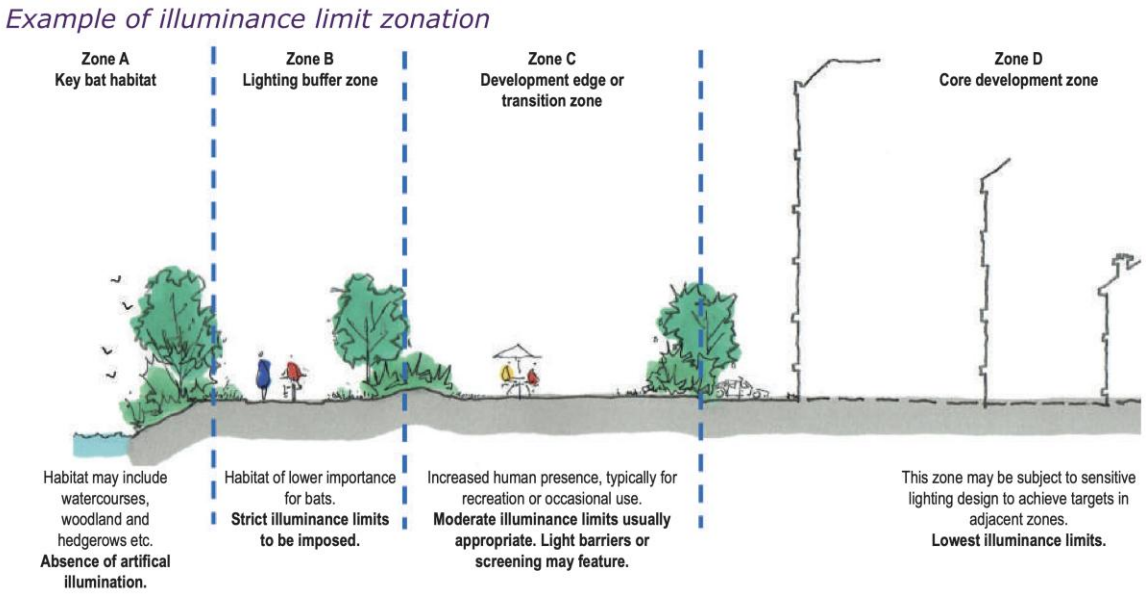

Figure 5: Examples of lighting buffers which can be included within the design of the scheme. Image sourced from the Bat Conservation Trusts Guidance Note 08.18 - Bats and artificial lighting in the UK:

4.16 Where lighting is required on site, a sensitive lighting scheme must be implemented. Again collaboration between a lighting professional and ecologist may be required in order to help design this scheme but measures should include:

- The impact on bats can be minimised by the use of Light emitting diodes (LEDs) instead of mercury, fluorescent or metal halide lamps where glass glazing is preferred due to their sharp cut-off, lower intensity and their dimming capability. Lighting should be directed to where it is needed and light spillage avoided.

- This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.
- Soft landscape planting should also be used as a barrier or manmade features such as walls or fencing with planted climbers where required within the build can be positioned so as to form a barrier between any development and the linear features used by bats.

4.17 The edges of semi-natural woodland in the west of the site are recommended to be maintained as dark corridors with no lighting installed in these areas. Where lighting is necessary near other commuting features (mature linear scrub\mature trees), bollard lighting is recommended, in place of full street lighting (Figure 6). This will maintain the integrity of these corridors for foraging bats. Warm-white or red lights are recommended to be used if health and safety concerns are great as these are said to limit the impact on insects and therefore bat activity.

Figure 6: Example of low level bollard lighting

4.18 If any future scheme follows the above recommendations for retention of existing commuting and foraging habitat on site, and sufficiently protects it from artificial light, then a significant impact on foraging/commuting bats would be unlikely.

Enhancement Recommendations

Strengthening commuting features

4.19 New treelines and hedgerows, comprising native species, could be created within the site to strengthen existing linear features. This would improve these features as commuting corridors and provide a greater number of foraging opportunities. These could be buffered by areas of species-rich meadows to provide additional foraging resources for bats.

Roost enhancements - Bat boxes and tubes

4.20 It is recommended that new roosting opportunities are created on site through installing bat boxes on retained mature trees along the site boundaries, within areas devoid of artificial light. This would enhance the site for local bat populations and would provide further roosting opportunities. Recommended boxes include:

- Vivara Pro WoodStone Bat Box – A general purpose bat box that supports a range of species (Figure 8). These can be hung on trees in a variety of heights and aspects in order to provide a variety of micro-climates.
- Large Multi Chamber WoodStone Bat Box – This is a multipurpose box designed for larger colonies and a range of bat species including pipistrelles, noctules and brown long-eared bats. These should be hung on mature trees around the site (Figure 8).

Figure 8: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

4.21 Incorporating specially designed bat boxes into the design can enhance the habitat on site for bats. Suitable bat boxes include a variety of wooden bat boxes, such as an improved cavity box, a double chamber bat box and other wood based varieties.

5.0 Conclusions

5.1 Relatively low levels of bat activity were recorded during transect surveys at the Land South of Bolney Road. Current surveys have identified key areas of habitat used by bats, including the woodlands, hedgerows, treelines throughout the site as well as the boundary scrub. The highest level of activity was recorded along the woodland edge in the west of the site.

5.2 Activity on site was largely dominated by common and soprano pipistrelles, which made up 66.7% and 12.2% of the calls. The remaining *c.*21.1% of passes were made up of myotis species *c.*12.75%, Leisler's *c.*1.1%, noctule *c.*0.5%, serotine *c.*6%, and brown long-eared bats *c.*0.75%. Numbers of pipistrelle species were considered to be of local value, and other bat species of site value.

5.3 Recommendations have been made to retain and enhance the identified key features where possible and protect them from any new artificial lighting to ensure that any future proposals would not impact upon the favourable conservation status of bats within the local area post-development.

6.0 References

Collins, J. (ed.)., (2016)., *Bat surveys for Professional Ecologists: Good Practice Guidelines (3rd edition).* The Bat Conservation Trust, London.

English Nature (1994) *Species Conservation Handbook*. English Nature, Peterborough

Miles, J., Ferguson, J., Smith, N. and Fox, H., (2018). *Guidance note: Bats and artificial lighting in the UK*. The Bat Conservation Trust, London.

Mitchell-Jones, A.J. (2004)., *Bat Mitigation Guidelines*. English Nature, Peterborough.

Stone, E.L., Jones, G. and Harris, S., (2012). Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats. *Global Change Biology*, 18 (8), pp. 2458-2465.

The Ecology Partnership (2022) Ansty - Preliminary Ecological Appraisal

Appendix 1 – Raw data

Table 1: Anabat data for the western anabat

Night	Common pip	Soprano	Myotis	Serotine	BLE	Leisler's	Noctule
21/04/2022	0	0	2	0	0	0	0
22/04/2022	0	0	0	0	0	0	0
23/04/2022	2	2	2	0	0	0	0
24/04/2022	4	1	8	0	0	0	0
25/04/2022	3	1	5	0	0	0	0
Total	**9**	**4**	**17**	**0**	**0**	**0**	**0**
17/05/2022	23	7	4	20	0	0	0
18/05/2022	7	1	0	0	0	1	0
19/05/2022	23	3	5	0	0	0	0
20/05/2022	100	21	0	1	0	0	0
21/05/2022	118	8	0	3	6	2	0
Total	**271**	**40**	**9**	**24**	**6**	**3**	**0**
No data recorded in June due to SD card error							

Night	Common pip	Soprano	Myotis	Serotine	BLE	Leisler's	Noctule
19/07/2022	37	8	3	1	0	1	0
20/07/2022	52	6	2	0	0	0	2
21/07/2022	27	41	0	0	0	0	0
22/07/2022	158	3	4	0	0	0	0
23/07/2022	41	11	4	1	0	2	0
Total	**315**	**69**	**13**	**2**	**0**	**3**	**2**
25/08/2022	23	1	5	0	0	0	1
26/08/2022	18	6	1	0	0	0	0
27/08/2022	3	2	6	0	0	0	0
28/08/2022	18	0	1	0	0	0	0
29/08/2022	15	11	1	0	0	0	0
Total	**77**	**20**	**14**	**0**	**0**	**0**	**1**
21/09/2022	2	0	7	0	0	0	0
22/09/2022	6	3	15	0	0	0	0
23/09/2022	17	3	1	0	0	0	0
24/09/2022	4	1	8	0	0	0	0
25/09/2022	4	0	8	0	0	0	1
Total	**33**	**7**	**39**	**0**	**0**	**0**	**1**

Table 2: Anabat data for the North-eastern anabat

Night	Common pip	Soprano	Myotis	Serotine	BLE	Leisler's	Noctule
21/04/2022	21	2	12	0	0	0	0
22/04/2022	33	0	52	0	0	0	0
23/04/2022	4	0	28	0	0	0	0
24/04/2022	29	1	4	0	0	0	0
25/04/2022	24	0	5	0	0	0	0
Total	**111**	**3**	**101**	**0**	**0**	**0**	**0**
17/05/2022	12	5	1	0	0	2	0
18/05/2022	18	1	0	0	0	1	0
19/05/2022	11	6	1	2	4	1	0
20/05/2022	11	1	1	1	0	0	0
21/05/2022	12	0	6	0	1	0	0
Total	**64**	**13**	**9**	**3**	**5**	**4**	**0**
22/06/2022	51	0	2	1	0	0	0
23/06/2022	7	0	5	0	0	1	0
24/06/2022	0	0	0	0	0	0	0
25/06/2022	4	0	19	0	2	0	0
26/06/2022	10	0	26	0	0	0	0
Total	**72**	**0**	**52**	**1**	**2**	**1**	**0**

Night	Common pip	Soprano	Myotis	Serotine	BLE	Leisler's	Noctule
19/07/2022	12	0	20	0	0	0	0
20/07/2022	7	0	8	2	0	0	0
21/07/2022	24	3	4	0	0	0	0
22/07/2022	38	0	5	0	5	0	0
23/07/2022	11	5	8	0	2	1	0
Total	**92**	**8**	**45**	**2**	**7**	**1**	**0**
No data recorded in August due to an SD card error							
21/09/2022	98	3	11	2	0	0	0
22/09/2022	55	15	1	0	0	0	0
23/09/2022	37	1	2	0	1	0	0
24/09/2022	6	0	1	0	0	0	0
25/09/2022	11	0	1	0	0	0	0
Total	**207**	**19**	**16**	**2**	**1**	**0**	**0**

Table 3: Anabat data for the Southern anabat

Night	Common pip	Soprano	Myotis	Serotine	BLE	Leisler's	Noctule
21/04/2022	7	0	4	0	0	0	0
22/04/2022	3	0	5	0	0	0	0
23/04/2022	2	0	1	0	0	0	0
24/04/2022	6	1	5	0	0	0	0
25/04/2022	2	0	4	0	0	0	0
Total	**20**	**1**	**19**	**0**	**0**	**0**	**0**
17/05/2022	10	23	1	40	0	0	0
18/05/2022	0	0	0	5	0	0	0
19/05/2022	8	9	1	70	0	3	0
20/05/2022	11	14	0	11	0	0	0
21/05/2022	3	1	0	0	0	0	0
Total	**32**	**47**	**2**	**126**	**0**	**3**	**0**
22/06/2022	24	0	0	0	0	0	0
23/06/2022	41	0	0	0	0	0	0
24/06/2022	119	34	0	4	0	0	0
25/06/2022	13	0	0	0	0	0	0
26/06/2022	6	0	0	0	0	0	0
Total	**203**	**34**	**0**	**4**	**0**	**0**	**0**

Night	Common pip	Soprano	Myotis	Serotine	BLE	Leisler's	Noctule
19/07/2022	37	1	0	0	0	4	0
20/07/2022	32	2	0	0	0	0	0
21/07/2022	28	1	0	0	0	0	0
22/07/2022	22	40	0	1	0	2	0
23/07/2022	247	4	21	3	0	5	1
Total	**366**	**48**	**21**	**4**	**0**	**11**	**1**
25/08/2022	0	3	2	0	0	2	2
26/08/2022	3	2	0	0	0	1	4
27/08/2022	1	1	0	0	0	0	3
28/08/2022	2	6	0	0	0	1	0
29/08/2022	0	18	0	1	0	1	0
Total	**6**	**30**	**2**	**1**	**0**	**5**	**9**
21/09/2022	4	0	6	1	1	0	0
22/09/2022	5	30	2	7	1	0	1
23/09/2022	1	2	1	1	1	0	1
24/09/2022	3	0	1	1	0	0	0
25/09/2022	13	0	1	0	2	0	0
Total	**26**	**32**	**11**	**10**	**5**	**0**	**2**

The Ecology Partnership Ltd

Thorncroft Manor

Thorncroft Drive

Leatherhead

Surrey

KT22 8JB

Tel. 01372 364 133

www.ecologypartnership.com

Approved by: Alexia Tamblyn MA (Oxon) MSc CEcol CEnv MCIEEM FRGS,

Managing Director

Date: 19/12/2022