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COMMERCIAL PROPERTY ADVICE



Bat Survey Report

Berrowgreen Road, Martley

On Behalf Of:

Hayfield Homes Construction Ltd

Prepared By: Abigail Lloyd BSc MSc

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Bat Survey Report

Berrowgreen Road, Martley

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1.0 INTRODUCTION

1.0 Site location

1.0.1 Harris Lamb Property Consultancy (HLPC) was commissioned by Hayfield Homes to undertake a walked bat transect survey of an area of land off Berrow Green Road, Martley (central national grid reference SO 74991 59561) hereafter termed the 'site' (see Figure 1 below). The 2024 walked spring bat transect survey has been undertaken to accompany the 2023 summer and autumn surveys.



Figure 1: Site Location.

1.0.2 The site measures approximately 3.8 ha and is located to the south of Martley, a small village in the Malvern Hills District of Worcestershire. The site is dominated by arable land with hedgerow boundaries. A smaller area of allotments and broadleaved woodland is present to the northern extent of the site. A public footpath crosses the site.

1.1 Legislation

1.1.1 Bats and the places they use for shelter or protection (i.e. roosts) receive legal protection under the Conservation of Habitats and Species Regulations

2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

1.1.2 Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

1.1.3 Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

1.1.4 It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

1.1.5 Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

1.1.6 All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

1.1.7 The obligations of a competent authority in the 2017 Regulations for the protection of species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

1.1.8 Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to intentionally kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to intentionally or recklessly* damage or destroy, or obstruct access to, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to intentionally or recklessly* disturb any protected species while it is occupying a structure or place which it uses for shelter or protection.

*Reckless offences were added by the Countryside and Rights of Way (CRoW) Act 2000.

1.1.9 As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

1.1.10 The reader should refer to the original legislation for the definitive interpretation.

1.1.11 The following bat species are Species of Principal Importance for Nature Conservation in England: barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*. Species of Principal Importance for Nature Conservation in England are material considerations in the planning process. The list of species is derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006.

1.1.12 Full details of legislation can be found at www.legislation.gov.uk.

1.2 Proposed development

1.2.1 The Applicant is submitting an outline planning application for the construction of up to 50 dwellings with associated driveway parking, access roads, drainage system, and blue and green infrastructure.

1.3 Purpose of this report

1.3.1 The purpose of this report was to help determine the following:

- the activity levels of bats within or immediately surrounding the site and highlight any features of interest.
- identify further survey work or mitigation requirements.

2.0 METHODOLOGY

2.1 Field survey

2.1.1 Seasonal walked bat transect surveys were undertaken in summer and autumn 2023 with the Spring dataset collected in May 2024, in accordance with the methodologies contained within Collins, 2016¹. The surveys commenced at sunset and continued for a minimum of 2 hrs following sunset. Each survey observed nocturnal bat activity at suitable point locations along the transect route (see Figure 2).



Figure 2: Transect Route

2.1.2 The transect surveys targeted habitats and features suitable for foraging and commuting activity, including woodland, hedgerow boundaries and the brook on site. Prominent aboveground features, such as hedgerows also provide navigational cues and any bat activity associated with such features was recorded.

2.1.3 The surveys observed nocturnal bat activity at suitable points along the route and targeted the above interest features. The surveyors were equipped with Echo Meter Touch bat detectors and high-powered torches.

¹ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines. The Bat Conservation Trust

The transect routes were walked at a steady pace, during which all visual and audible bat activity was recorded. The dates, timings and weather condition during the surveys are given in Table 1.

Table 1: Transect Survey Details and Weather Conditions

| Date | Sunset | Start time | End time | Temperature (°C) | Weather |
|------------|--------|------------|----------|------------------|--|
| 01/08/2023 | 20:59 | 20:59 | 23:00 | 17°C | 95% cloud cover, dry and light breeze. |
| 18/09/2023 | 19:17 | 19:17 | 21:10 | 14°C | 15% cloud cover, dry and gentle breeze. |
| 14/05/2024 | 20:57 | 20:57 | 23:05 | 17°C | 45% scattered cloud cover, dry and light breeze. |

- 2.1.4 The walked transect methodology for May 2024 was adjusted slightly to adhere to the new best practice guidelines that were published in October 2023² taking into account the start of the survey comprising a static observation for the first 30-60 minutes following sunset, stationed at points of specific interest to foraging and/or commuting bats, or features with roosting potential. The live observation focused on the eastern hedgerow between point count location A & H (see Figure 2), whereby the access road into the new development is proposed.
- 2.1.5 One automated static Anabat Express bat detector was deployed on site for the purpose of providing supplementary bat activity data over 2023 and again in May 2024. The extent of tree and hedgerow removal was not known prior to deployment and the detectors were placed at appropriate locations to capture activity occurring along these different areas of the site (see Figure 3). The location of the static was consistent every month for temporal comparison, as recommended in the latest best practice guidelines.

² Bat Surveys for Professional Ecologists – Good Practice Guidelines (4th Edition). Bat Conservation Trust, 2023.



Figure 3: Static Detector Location

2.1.6 The static detector units were seasonal and deployed to record over a minimum of five nights over the Summer and Autumn 2023, with Spring collected in May 2024 (see Table 3, 4 & 5, respectively). Data was analysed using AnalookW and/or Anabat Insight and assessed to species/genus level through sonogram identification. This was supported by species guidance produced by Russ (2012)³.

³ Russ, J., (2012). British Bat calls: a guide to species identification. Pelagic Publishing, Exeter.

Table 3: Summer Static Detector Survey Details and Weather Conditions

| Date | Sunset | Air Temperature | Weather |
|------------|--------|-----------------|---|
| 01/08/2023 | 20:59 | 17°C - 19°C | Low cloud cover, dry and gentle breeze. |
| 02/08/2023 | 20:59 | 16°C - 19°C | Thunderstorms and scattered clouds. |
| 03/08/2023 | 20:57 | 17°C - 19°C | Scattered showers and scattered clouds. |
| 04/08/2023 | 20:56 | 17°C - 19°C | Low cloud cover, dry and gentle breeze. |
| 05/08/2023 | 20:54 | 14°C - 16°C | Scattered showers and scattered clouds. |

Table 4: Autumn Static Detector Survey Details and Weather Conditions

| Date | Sunset | Air Temperature | Weather |
|------------|--------|-----------------|--|
| 18/09/2023 | 19:17 | 13°C - 17°C | Scattered showers, gentle breeze and passing clouds. |
| 19/09/2023 | 19:16 | 15°C - 18°C | Rain showers, gentle breeze and passing clouds. |
| 20/09/2023 | 19:13 | 15°C - 17°C | Scattered light showers, gentle breeze and passing clouds. |
| 21/09/2023 | 19:11 | 12°C - 13°C | Low cloud cover, dry and light breeze. |
| 22/09/2023 | 19:09 | 9°C - 12°C | Dry, gentle breeze and passing clouds. |

Table 5: Spring Static Detector Survey Details and Weather Conditions

| Date | Sunset | Air Temperature | Weather |
|------------|--------|-----------------|---|
| 14/05/2024 | 20:58 | 16°C - 17°C | Scattered cloud cover, dry and light breeze. |
| 15/05/2024 | 21:00 | 17°C - 19°C | Partly cloudy, dry, and virtually no wind. |
| 16/05/2024 | 21:01 | 17°C - 19°C | Partly cloudy and virtually no wind but scattered showers in the night. |
| 17/05/2024 | 21:03 | 17°C - 21°C | Rain showers, light breeze and passing clouds. |
| 18/05/2024 | 21:04 | 15°C - 21°C | Dry, gentle breeze and very little cloud cover. |

3.0 RESULTS

3.0 Background data

3.0.1 The data search by Worcestershire Biological Records Centre (WBRC), and Herefordshire Biological Records Centre (HBRC) provided records of brown long-eared *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, Daubenton's bat *Myotis daubentonii*, lesser horseshoe bat *Rhinolophus hipposideros*, whiskered bat *Myotis mystacinus* and unidentified *Pipistrellus*. The closest auditory record is of a common pipistrelle, approximately 230m east of the site from 2013.

3.1 Survey data

3.1.1 The habitats on site are considered to offer limited suitability for foraging/commuting bat species due to the arable nature of the field compartment and immediate surrounding habitat. The following series of tables provide a summary of the seasonal bat activity survey results in 2023 and 2024.

Table 6: Summary of Activity Survey Results - Summer 2023

| 1 st August 2023 | | |
|-----------------------------|--|--|
| Point Count Reference | Species Recorded | Point Count Results |
| A | No bats observed. | N/A |
| B | No bats observed. | N/A |
| C | Common pipistrelle, soprano pipistrelle, noctule, leislars bat | One individual common pipistrelle observed foraging along hedgerow. All other not seen but heard, and also considered to be foraging along the hedgerow. |
| D | Common pipistrelle, soprano pipistrelle | Two bats heard but not seen, considered to be foraging. |
| E | No bats observed. | N/A |
| F | Common pipistrelle, soprano pipistrelle, myotis sp. | Two pipistrelles heard but not seen, considered to be foraging. Myotis observed commuting across site. |
| G | Myotis sp | One individual bat heard but not seen, considered to be foraging. |
| H | Common pipistrelle | One individual bat heard but not seen, considered to be foraging. |

Table 7: Summary of Activity Survey Results - Autumn 2023

| 18 th September 2023 | | |
|---------------------------------|-------------------|---------------------|
| Point Count Reference | Species Recorded | Point Count Results |
| A | No bats observed. | N/A |

| | | |
|----------|--|---|
| B | No bats observed. | N/A |
| C | Soprano pipistrelle, | One individual observed foraging along hedgerow. |
| D | No bats observed. | N/A |
| E | No bats observed. | N/A |
| F | Brown long-eared bat, soprano pipistrelle, | Two bats heard but not seen, considered to be foraging. |
| G | Soprano pipistrelle, | One individual bat heard but not seen, considered to be foraging. |
| H | No bats observed. | N/A |

Table 8: Summary of Activity Survey Results – Spring 2024

| 14 th May 2024 | | | |
|--|-------|--|---|
| Point Reference | Count | Species Recorded | Point Count Results |
| A couple of passes were identified when stationed at the observation point for the first 45 minutes after sunset. A single pass of a noctule bat was identified, considered to the commuting across site only, and a common pipistrelle that was considered to be foraging in the general vicinity. | | | |
| A | | No bats observed. | N/A |
| B | | Noctule | One individual observed commuting across site and headed south. |
| C | | Soprano pipistrelle, common pipistrelle. | Two individual passes, both observed foraging along hedgerow. |
| T | | No bats observed. | N/A |
| E | | No bats observed. | N/A |
| F | | Soprano pipistrelle, | Two bats heard but not seen, considered to be foraging. |
| G | | Soprano pipistrelle, | One individual bat heard but not seen, considered to be foraging. |
| H | | No bats observed. | N/A |

Automated Bat Static Detector Surveys – Summer 2023

3.1.2 Label key can be found in Table 9 below.

Table 9: Label Key

| Label | Species |
|----------|--|
| Mnat | Natterer's Bat - <i>Myotis nattereri</i> |
| NSL | Noctule - <i>Nyctalus noctula</i> / Serotine - <i>Eptesicus serotinus</i> / Leisler's Bat - <i>Nyctalus leisleri</i> |
| Ppip | Common Pipistrelle - <i>Pipistrellus pipistrellus</i> |
| Ppyg | Soprano Pipistrelle - <i>Pipistrellus pygmaeus</i> |
| MbraMmys | Whiskered/Brandt's Bat - <i>Myotis mystacinus</i> / <i>Myotis brandtii</i> |
| Mdau | Daubenton's Bat - <i>Myotis daubentonii</i> |
| Paur | Brown Long-eared Bat - <i>Plecotus auritus</i> |
| Bbar | Barbastelle - <i>Barbastella barbastellus</i> |
| Rhip | Lesser Horseshoe Bat - <i>Rhinolophus hipposideros</i> |

3.1.3 The static detector recorded 1090 registrations. Common pipistrelle was the dominant species and comprised 56% of these (615 registrations). The remainder were soprano pipistrelle (378 passes), NSL (16 registrations), *Myotis* sp. (80 registrations), and brown long-eared bat (1 registration).

Table 10: Static Detector Survey Results – Summer 2023

| Date | Label | Count |
|------------|----------|-------|
| 01/08/2023 | Mnat | 3 |
| 01/08/2023 | NSL | 14 |
| 01/08/2023 | Ppip | 96 |
| 01/08/2023 | Ppyg | 25 |
| 02/08/2023 | MbraMmys | 19 |
| 02/08/2023 | Mnat | 3 |
| 02/08/2023 | NSL | 1 |
| 02/08/2023 | Ppip | 132 |
| 02/08/2023 | Ppyg | 106 |
| 03/08/2023 | MbraMmys | 28 |
| 03/08/2023 | Mdau | 1 |
| 03/08/2023 | Mnat | 1 |
| 03/08/2023 | NSL | 1 |
| 03/08/2023 | Ppip | 129 |
| 03/08/2023 | Ppyg | 71 |
| 04/08/2023 | MbraMmys | 19 |
| 04/08/2023 | Mnat | 1 |
| 04/08/2023 | Paur | 1 |
| 04/08/2023 | Ppip | 124 |
| 04/08/2023 | Ppyg | 156 |
| 05/08/2023 | MbraMmys | 4 |
| 05/08/2023 | Mnat | 1 |
| 05/08/2023 | Ppip | 134 |
| 05/08/2023 | Ppyg | 20 |

Automated Bat Static Detector Surveys – Autumn 2023

3.1.4 The static detector recorded 3094 registrations. Common pipistrelle was the dominant species and comprised 61% of these (1890 registrations). The remainder were soprano pipistrelle (700 passes), NSL (66 registrations), and *Myotis* sp. (437 registrations).

Table 11: Static Detector Survey Results – Summer 2023

| Date | Label | Count |
|------------|----------|-------|
| 18/09/2023 | MbraMmys | 6 |
| 18/09/2023 | Mdau | 3 |

| Date | Label | Count |
|------------|----------|-------|
| 18/09/2023 | Mnat | 4 |
| 18/09/2023 | NSL | 33 |
| 18/09/2023 | Ppip | 464 |
| 18/09/2023 | Ppyg | 156 |
| 19/09/2023 | Ppip | 223 |
| 19/09/2023 | Ppyg | 82 |
| 20/09/2023 | MbraMmys | 2 |
| 20/09/2023 | Mdau | 1 |
| 20/09/2023 | NSL | 1 |
| 20/09/2023 | Ppip | 156 |
| 20/09/2023 | Ppyg | 136 |
| 21/09/2023 | MbraMmys | 214 |
| 21/09/2023 | Mdau | 173 |
| 21/09/2023 | Ppip | 275 |
| 21/09/2023 | Ppyg | 223 |
| 22/09/2023 | MbraMmys | 15 |
| 22/09/2023 | Mdau | 19 |
| 22/09/2023 | NSL | 32 |
| 22/09/2023 | Ppip | 772 |
| 22/09/2023 | Ppyg | 104 |

3.1.5 The static detector recorded 783 registrations. Common pipistrelle was the dominant species and comprised 57% of these (444 registrations). The remainder were soprano pipistrelle (320 passes), NSL (1 registration), *Myotis* sp. (11 registrations), barbastelle *Barbastella barbastellus* (3 registrations), and lesser horseshoe *Rhinolophus hipposideros* (4 registrations).

Table 12: Static Detector Survey Results – Spring 2024

| Date | Label | Count |
|------------|----------|-------|
| 14/05/2024 | Mnat | 1 |
| 14/05/2024 | Ppip | 82 |
| 14/05/2024 | Ppyg | 67 |
| 15/05/2024 | Bbar | 2 |
| 15/05/2024 | MbraMmys | 1 |
| 15/05/2024 | Ppip | 230 |
| 15/05/2024 | Ppyg | 52 |
| 16/05/2024 | Bbar | 1 |
| 16/05/2024 | MbraMmys | 3 |
| 16/05/2024 | Ppip | 46 |
| 16/05/2024 | Ppyg | 63 |
| 17/05/2024 | MbraMmys | 1 |
| 17/05/2024 | NSL | 1 |
| 17/05/2024 | Ppip | 19 |
| 17/05/2024 | Ppyg | 41 |
| 18/05/2024 | MbraMmys | 5 |

| Date | Label | Count |
|------------|-------|-------|
| 18/05/2024 | Ppip | 55 |
| 18/05/2024 | Ppyg | 83 |
| 18/05/2024 | Rhip | 2 |
| 19/05/2024 | Ppip | 12 |
| 19/05/2024 | Ppyg | 14 |
| 19/05/2024 | Rhip | 2 |

Summary

- 3.1.6 The static bat detector surveys recorded seven species of bat: common pipistrelle, soprano pipistrelle, brown long-eared, NSL, *Myotis sp*, lesser horseshoe, and barbastelle.
- 3.1.7 The highest level of bat activity recorded was associated with the hedgerow boundaries that forms the site boundaries. These provide foraging habitat as well as navigational pathways for commuting bats. Common pipistrelle and soprano pipistrelle were the dominant species recorded throughout the static survey period. Noctule was recorded throughout the static survey period. Similarly, *Myotis sp*. were identified frequently during the survey period. It is considered likely that these were utilising the hedgerows for foraging and commuting as identified during the transect surveys.
- 3.1.8 There were also infrequent recordings of brown long eared in August 2023. Due to the low numbers of recordings of this species they would not be considered to regularly use the site.
- 3.1.9 Similarly, in May 2024 infrequent recordings of lesser horseshoe and barbastelle were identified. All lesser horseshoe registrations were recorded within a five-hour period on the night of 18th May and early hours of 19th May only. In addition, all barbastelle registrations were recorded within a three-hour period of the night of 15th May and early hours of 16th May. It cannot be discounted that these registrations are of singular bats and this species is not considered to be using the site regularly for foraging or commuting purposes.
- 3.1.10 Based in the survey data gathered, the site is used by a number of common bat species for foraging and commuting throughout the period which bats are active. The site is, therefore, considered to be of Site - Local importance to foraging and commuting bats.

4.0 ASSESSMENT & RECOMMENDATIONS

4.0 Proposed Development

Potential impacts

- 4.0.1 The site is used by a number of common bat species for foraging and commuting throughout the period which bats are active.
- 4.0.2 In addition to this, less common and more light sensitive species, barbastelle, and lesser horseshoe, were recorded and limited to the May 2024 survey. Although the site is not considered to be a significant foraging and commuting location due to low numbers of registrations, their presence should be acknowledged and mitigated appropriately.

Mitigation Measures

- 4.0.3 It is anticipated that a section of hedgerow will be removed to facilitate access and should be replaced which will enable bats to continue to commute across the site. Planting native trees would also benefit foraging and commuting bats.
- 4.0.4 To minimise disturbances to foraging and commuting bats, artificial lighting introduced during the construction works should be fitted using directional cowling. Lighting should then be positioned in such a way that avoids unnecessary light spill. Lighting outputs should be maintained at, or below, 1lux which is equivalent to twilight conditions, where practicable and should avoid all hedgerows.
- 4.0.5 Any additional permanent lighting should be kept to a minimum and be sensitive to local bat foraging and commuting activity and avoid unnecessary light spill. Design of the lighting scheme should follow the principles within the Institution of Lighting Professionals guidance (ILP, 2023) where possible within the context of the existing lit environment.
- 4.0.6 Retained and newly planted hedgerows should remain unlit and ecological connectivity should be maintained to allow passage to the wider environment for foraging and commuting purposes. Additionally, bat boxes should be placed on retained trees and/or new structures to provide extra enhancement for local bat populations.