



Bat Activity Surveys of Incline Fields on Behalf of Williams Homes

| Date | Author | Project Number | Approved by | Version | Comments |
|------------|--------------|----------------|---------------|---------|----------|
| 13/11/2024 | Daisy Askari | 4756 | Richard Cutts | V1 | |

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Author contact information: daisy@enfysecolgy.co.uk

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Executive Summary

| | |
|--|---|
| Site | Full address: Incline Fields, Llandegai Road, Bangor, LL57 4HP NGR: SH 59272 71908 |
| Surveyors | Joe Franklin (Accredited agent NRW Bat Licence Number S092545/1), Daisy Askari and assistants. |
| Proposed work | Housing development of 48 units and associated infrastructure. |
| Areas/ structures affected | Field of semi-improved grassland, hedgerows and woodland. |
| Type of survey | 2 night-time bat walkover (NBW) surveys (29/07/24 and 20/09/24) 2 static detector surveys (29/07/24 – 03/08/24; 20/09/24 – 25/09/24) |
| Main results | <ul style="list-style-type: none"> • 5 species were detected during the NBWs – common pipistrelle, soprano pipistrelle, noctule, brown long-eared and <i>Myotis</i> sp. • 6 species were detected during the static detector surveys- common pipistrelle, soprano pipistrelle, noctule, brown long-eared, <i>Myotis</i> sp. and lesser horseshoe |
| Survey conclusions | <ul style="list-style-type: none"> • The site contains high quality foraging and commuting habitat for bats in the form of hedgerows and woodland with connectivity to the wider landscape. • The assemblage of bat species present is of site importance only. • The impact of works has the potential to disturb foraging and commuting bats if RAMs are not adhered to. • Further surveys are necessary before determining if a European Protected Species Licence from NRW is required. |
| Reasonable Avoidance Measures (RAMs), compensation and enhancements | RAMS, compensation and enhancements will be detailed in a standalone mitigation, compensation, and enhancement plan upon the completion of further survey work. |
| Conclusions and Further Work | Further surveys to include an updated Preliminary Ecological Appraisal and Preliminary Roost Assessment of mature trees. |

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1.0 Introduction

- 1.1 Enfys Ecology Limited were commissioned by Williams Homes to carry out two night-time bat walkover surveys and two static detector surveys of Incline Fields, Llandegai Road, Bangor, Gwynedd.
- 1.2 The surveys were commissioned to determine whether the proposed works would affect bats and nesting birds, subsequent to recommendations made by a Preliminary Ecological Appraisal (PEA) of the site (Cheshire Ecological Services, 2020). The survey work informing the report was carried out during the months of July and September 2024. The report and its findings are valid for 18 months from September 2024 in accordance with best practice.
- 1.3 The following report provides information on which species of bat (if any) were using the site, how they were using it, and provides suitable Reasonable Avoidance Measures (RAMs), compensation, and enhancement recommendations.
- 1.4 This report should be read in conjunction with the aforementioned report (Cheshire Ecological Services, 2020) and a green infrastructure statement. This suite of reports should all be provided in support of any planning application.
- 1.5 All British bats (and roost sites) are protected under the Wildlife and Countryside Act (WCA) 1981 (as amended). In addition, all bats are classified as European Protected species by The Conservation of Habitats and Species Regulations 2010 (as amended). Under this legislation, it is an offence to kill, injure or disturb a bat, or to destroy any place used as a shelter by bats.
- 1.6 All birds (and their nests) are legally protected under the Wildlife and Countryside Act 1981 and it is an offence to intentionally take, damage or destroy the nest of any wild bird while it is in use or being built (as well as kill or injure wild birds or their eggs).
- 1.7 Should evidence of bats be found and it is deemed likely that the proposed works would disturb them a licence from Natural Resources Wales (NRW) would need to be obtained prior to any works commencing.
- 1.8 Planning Policy Wales (PPW12, paragraph 6.4.5) confirms that planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species (not including non-native invasive species), locally or nationally and must work alongside nature and it must provide a net benefit for biodiversity and improve, or enable the improvement, of the resilience of ecosystems.
- 1.9 Planning Policy Wales (PPW12, paragraph 6.2.12) states that a green infrastructure statement should be submitted with all planning applications. This should be proportionate to the scale and nature of the development proposed and will describe how green

infrastructure has been incorporated into the proposal. This will be provided in a separate document.

2.0 Methodology

2.1 Site Description

Incline Fields is an area of approximately 3 hectares of semi-improved grassland located approximately 200m east of Maesgeirchen housing estate, on the outskirts of Bangor. The site is adjacent to the A5 at the western boundary. The Afon Cegin is the nearest watercourse, running within 100m to the north and west of the site. Broadleaved woodland is present to the north and scattered trees are present along the eastern site boundary. Agricultural land extends to the east of the site. Bangor Crematorium is present to the south-west, surrounded by broadleaved woodland. Figure 2.1 shows the wider survey area.



FIGURE 2.1: WIDER SURVEY AREA- SITE SHOWN BY RED STAR. BASE MAP © GOOGLE 2024.

2.2 Night-time Bat Walkover Survey (NBW)

Two NBW surveys were carried out by two surveyors, using an Anabat scout detector. A stationary point was identified at the eastern field boundary whereby surveyors observed bat activity for the first 60 minutes of the survey period. A pre-determined walking route was then undertaken to observe and record bat activity across the site for a duration of 2 hours. The bat call data was analysed using Anabat Insight Software with the BatClassify plugin set at 70% confidence to auto analyse the bat calls; all of the calls were then reviewed and re-assessed as required. The NBW surveys took place on 29/07/2024 and 20/09/2024. They were carried out by Joe Franklin (accredited agent on NRW licence number S092545/1), Daisy Askari and assistants. Figure 2.2 shows the stationary survey point and predetermined walkover route.

2.3 Static Detector Survey

Two static detector surveys were carried out from 29/07/2024 to 03/08/2024 and 20/09/2024 to 24/09/2024. Three Anabat Swift/Ranger detectors were deployed onsite for five days to determine which species of bat use the site (if any), and the frequency of activity. The bat data from the survey was analysed using Anabat Insight software with the Bat Classify plugin set to 70% to auto-analyse any bat calls. The calls were then reviewed by a competent ecologist where necessary. Figure 2.2 shows the location of the static detectors deployed.

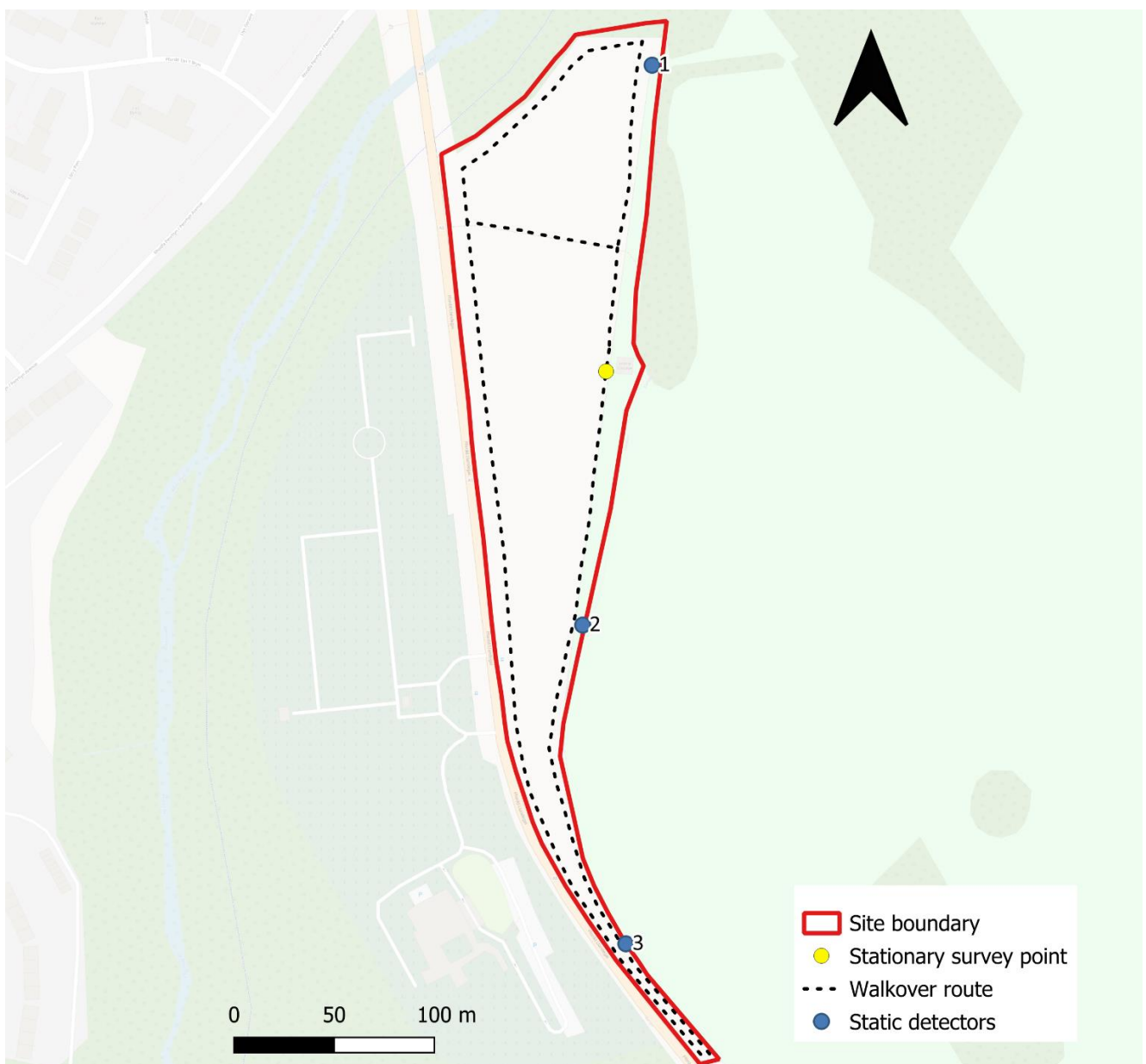


FIGURE 2.2: LOCATION OF STATIONARY SURVEY POINT, CLOCKWISE WALKOVER ROUTE AND STATIC DETECTOR LOCATIONS (WITH REFERENCE NUMBERS 1-3). BASE IMAGE © OPEN STREET MAPS 2024.

2.4 *Limitations*

Bats are highly mobile animals and they may use the site outside of the survey time. The surveys were carried out from July to September 2024, which is within the appropriate survey window as per the 'Bat Surveys for Professional Ecologists - Good Practice Guidelines' (Collins, 2023).

3.0 Survey Results

3.1 Night-time Bat Walkover (NBW) Survey Results

Two NBW surveys were carried out to determine if, what species, and how, bats were using the site. Table 3.1 provides details of the surveys with timings and weather conditions.

TABLE 3.1: SUMMARY OF SURVEY DETAILS

| Survey Type | Date | Start time | Sunset / sunrise time | End time | Temp. at start | Weather |
|-----------------|------------|------------|-----------------------|----------|----------------|----------------------|
| Dusk NBW Survey | 29/07/2024 | 20:45 | 21:15 | 23:15 | 16°C | Dry, sunny |
| Dusk NBW Survey | 20/09/2024 | 18:48 | 19:18 | 21:18 | 16°C | Warm, still and dry. |

3.1.1 First NBW Survey

The results from the first NBW survey are detailed in Table 3.2, below. Location numbers correspond with Figure 3.1 below.

TABLE 3.2: SUMMARY OF NBW ACTIVITY 29/07/24

| Time | Location Number | Species | Activity |
|---------------|-----------------|--------------------------|--|
| 21:16 – 21:18 | 1 | Noctule (N) | First bat seen – high pass over the roof of Incline Cottage. |
| 21:17 – 21:20 | 1 | Common pipistrelle (CP) | 2 x bats foraging above pine tree behind the cottage. |
| 21:35 – 21:50 | 1 | Soprano pipistrelle (SP) | Seen and heard foraging within woodland behind cottage. |
| 21:53 | 2 | Soprano pipistrelle (SP) | Foraging along treeline to the east. |
| 21:55 | 3 | Soprano pipistrelle (SP) | 3 bats foraging along eastern treeline. |
| 22:05 | 4 | SP | Foraging south to north along treeline east. |
| 22:09 | 5 | CP | Foraging south to north along treeline east. |
| 22:13 | 5 | CP | 2 bats foraging continuously |
| 22:15 | 6 | CP | Continuous foraging along eastern wall |
| 22:18 | 6 | N | Heard not seen. |
| 22:26 | 7 | SP | Heard not seen. |
| 22:32 – 22:34 | 8 | SP | Heard not seen. |
| 22:39 – 22:48 | 9 | SP | Heard not seen. |

| | | | |
|---------------|----|------------------------|-----------------|
| 22:43 | 9 | <i>Myotis</i> sp. (MY) | Heard not seen. |
| 22:51 | 10 | N | Heard not seen. |
| 22:52 | 10 | MY | Call detected. |
| 22:53 – 23:00 | 10 | SP | Heard not seen. |
| 23:04 | 11 | SP | Heard not seen. |
| 23:11 | 12 | N | Heard not seen. |

General Activity

Four species of bat were seen and/or heard during the transect survey.

Common pipistrelle and soprano pipistrelle species were detected the most frequently throughout the survey with the majority of calls at the eastern site boundary.

There were four calls of noctule species to the east and north-east of the site.

There were two *Myotis* sp. calls detected at the northern site corner.

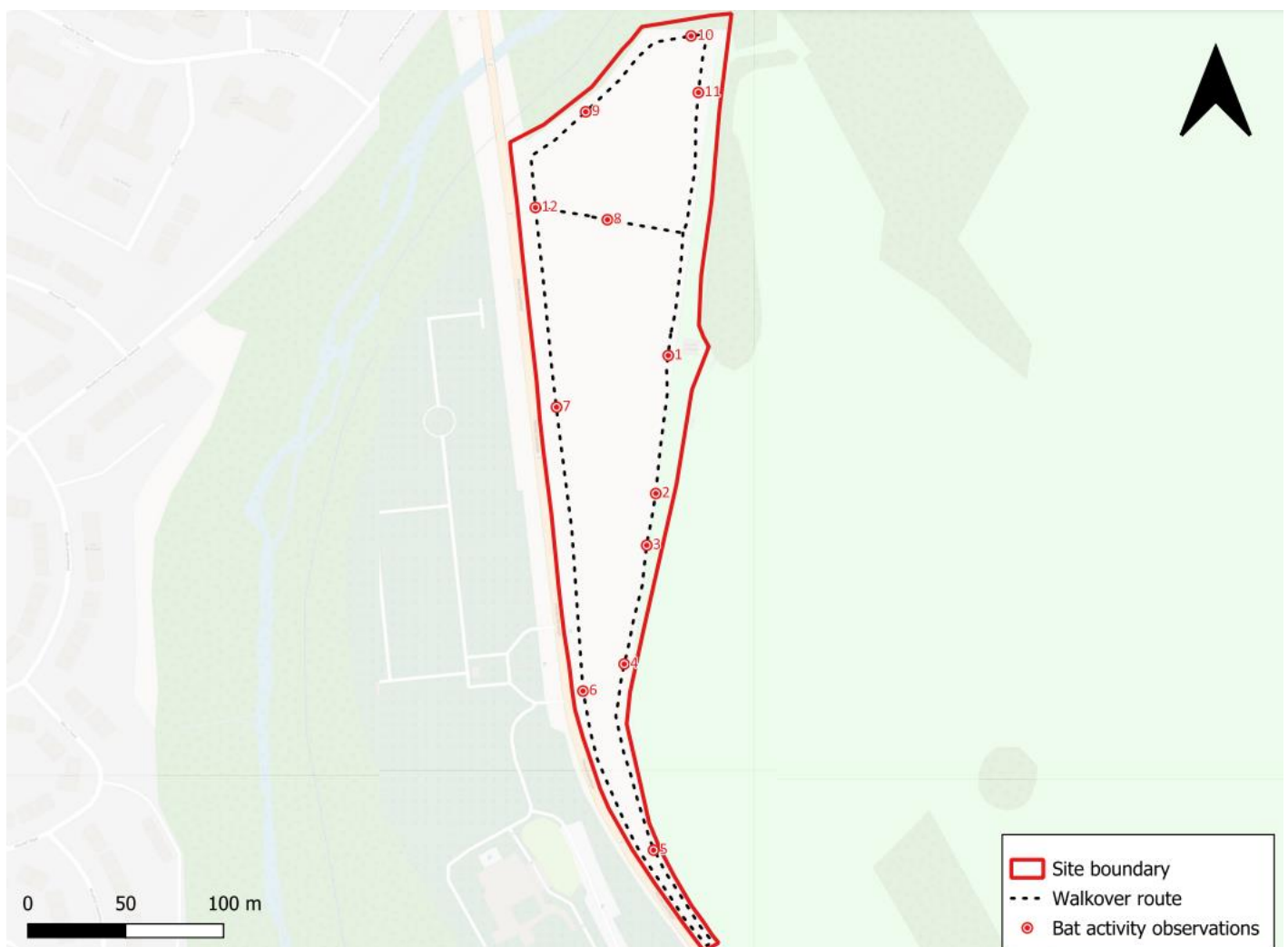


FIGURE 3.1: NBW SURVEY 1, ROUTE AND LOCATION OF BAT ACTIVITY. BASE IMAGE © OPEN STREET MAPS 2024.

3.1.2 Second NBW Survey

The results from the second NBW are detailed in Table 3.3, below. Location numbers correspond with Figure 3.2 below.

TABLE 3.3: SUMMARY OF THE NBW ACTIVITY 20/09/24

| Time Range | Location Number | Species | Activity |
|---------------|-----------------|------------------------|--|
| 19:34 – 19:42 | 1 | SP | 2 bats foraging between footpath and trees at eastern boundary. |
| 19:44 | 1 | CP | 2 bats foraging above footpath. |
| 19:45 | 1 | N | Heard not seen. |
| 19:48-19:53 | 2 | SP & CP | Constant foraging within woodland south of cottage. |
| 20:00 | 3 | MY | Call detected. |
| 20:00 | 3 | SP | Heard not seen. |
| 20:03-20:05 | 4 | SP & CP | Foraging along the treeline east. |
| 20:09 – 20:13 | 5 | SP & CP | Constant foraging along the treeline east. |
| 20:14 | 5 | MY | Call detected. |
| 20:19 | 6 | SP | 2 bats foraging east. |
| 20:27 – 20:29 | 7 | SP | Heard not seen. |
| 20:33 – 20:45 | 8 | SP & CP | Constant foraging between woodland east and streetlights at western site boundary. |
| 20:48 | 9 | SP | Foraging between streetlights west. |
| 20:54-20:55 | 10 | SP | Foraging along the western hedgerow. |
| 20:58 - | 11 | SP | Foraging along the western hedgerow. |
| 21:00 – 21:03 | 12 | SP | Constant foraging along western hedgerow and between streetlights. |
| 21:06 | 13 | SP | Heard not seen. |
| 21:16 | 14 | SP & CP | Heard not seen. |
| 21:19 | 15 | Brown long-eared (BLE) | Call detected. |
| 21:20 | 15 | N | Call detected. |

General Activity**Five species of bat were seen and/or heard during the transect survey.**

Common pipistrelle and soprano pipistrelle species were detected most frequently, foraging within woodland at the eastern boundary and between streetlights adjacent to the road west. There were two *Myotis* sp. calls detected at the eastern site boundary.

There was a single BLE call at the north-eastern boundary and a single noctule call to the east.

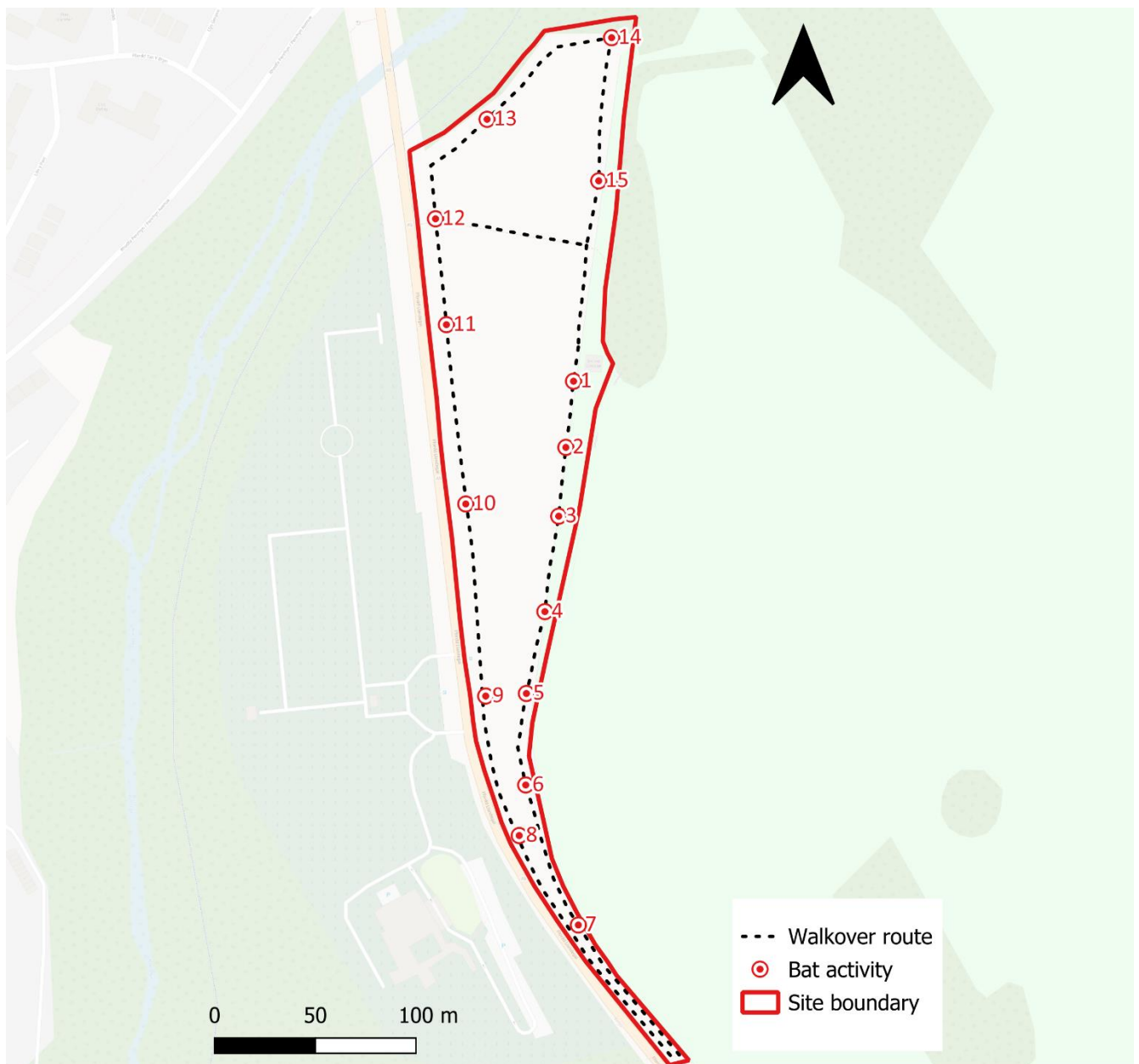


FIGURE 3.2: NBW SURVEY 2, ROUTE AND LOCATION OF BAT ACTIVITY. BASE IMAGE © OPEN STREET MAPS 2024.

3.2 Static Detector Results

3.2.1 First Static Detector Survey

Table 3.4 shows the weather conditions and timings for the first static detector survey. The data gathered showed that six species of bat were using the site. Table 3.5 shows the results from the static detector at Location 1, Table 3.6 shows the results from static detector 2 and Table 3.7 shows the results from static detector 3. The location of the static detectors is shown in Section 2, Figure 2.2.

TABLE 3.4: SUMMARY OF FIRST STATIC DETECTOR SURVEY DETAILS

| Date | Sunrise time | Sunset time | Min. temp. (°C) | Max. temp. (°C) | Weather |
|------------|--------------|-------------|-----------------|-----------------|----------------------|
| 29/07/2024 | 05:29 | 21:15 | 9 | 22 | Dry, sunny |
| 30/07/2024 | 05:30 | 21:14 | 9 | 20 | Overcast, light rain |
| 31/07/2024 | 05:32 | 21:12 | 11 | 24 | Clear, sunny |
| 01/08/2024 | 05:34 | 21:10 | 14 | 23 | Partly overcast |
| 02/08/2024 | 05:35 | 21:08 | 15 | 17 | Overcast, foggy |
| 03/08/2024 | 05:37 | 21:06 | 11 | 17 | Scattered clouds |

TABLE 3.5: DETECTOR 1 RESULTS, FIRST STATIC DETECTOR SURVEY

| Date | Time range | Species | Number of calls recorded |
|----------|---------------|---------------------|--------------------------|
| 29/07/24 | 21:21 – 05:24 | Soprano pipistrelle | 341 |
| | 20:08 – 03:48 | Common pipistrelle | 43 |
| | 20:08 – 04:13 | Noctule | 60 |
| | 22:09 – 03:58 | <i>Myotis</i> sp. | 14 |
| | 21:59 – 04:21 | Brown long-eared | 7 |
| 30/07/24 | 21:15 – 05:36 | Soprano pipistrelle | 551 |
| | 22:04 – 04:32 | Common pipistrelle | 91 |
| | 22:51 – 03:15 | Noctule | 3 |
| | 21:56 – 04:38 | <i>Myotis</i> sp. | 5 |
| | 00:07 – 03:44 | Brown long-eared | 4 |
| 31/07/24 | 21:04 – 04:03 | Soprano pipistrelle | 335 |
| | 21:35 – 04:13 | Common pipistrelle | 54 |
| | 22:06 – 03:04 | <i>Myotis</i> sp. | 10 |
| | 00:13 – 02:33 | Noctule | 7 |
| | 21:52 – 02:16 | Brown long-eared | 3 |
| 01/08/24 | 21:11 – 05:20 | Soprano pipistrelle | 275 |
| | 21:35 – 04:47 | Common pipistrelle | 28 |
| | 22:07 – 03:31 | <i>Myotis</i> sp. | 8 |
| | 22:23 – 04:37 | Noctule | 18 |

| | | | |
|----------|---------------|---------------------|---|
| | 04:09 | Brown long-eared | 1 |
| | 00:13 | Lesser horseshoe | 1 |
| 02/08/24 | 01:56 – 02:32 | Soprano pipistrelle | 3 |
| | 00:59 – 03:42 | Common pipistrelle | 3 |

TABLE 3.6: DETECTOR 2 RESULTS, FIRST STATIC DETECTOR SURVEY

| Date | Time range | Species | Number of calls recorded |
|----------|---------------|---------------------|--------------------------|
| 29/07/24 | 20:56 – 05:17 | Soprano pipistrelle | 590 |
| | 20:59 – 04:43 | Common pipistrelle | 128 |
| | 20:07 – 05:14 | Noctule | 10 |
| | 22:08 – 05:07 | <i>Myotis</i> sp. | 39 |
| | 00:59 – 05:13 | Brown long-eared | 4 |
| 30/07/24 | 21:00 – 05:23 | Soprano pipistrelle | 668 |
| | 21:05 – 04:49 | Common pipistrelle | 156 |
| | 22:33 – 05:18 | Noctule | 7 |
| | 22:00 -05:08 | <i>Myotis</i> sp. | 48 |
| | 03:01 | Brown long-eared | 1 |
| 31/07/24 | 20:58 – 05:38 | Soprano pipistrelle | 267 |
| | 21:17 – 05:22 | Common pipistrelle | 101 |
| | 22:05 – 02:34 | <i>Myotis</i> sp. | 25 |
| | 04:06 – 05:09 | Noctule | 3 |
| 01/08/24 | 21:06 – 05:30 | Soprano pipistrelle | 497 |
| | 21:14 – 05:02 | Common pipistrelle | 148 |
| | 21:50 – 02:49 | <i>Myotis</i> sp. | 17 |
| | 21:31 – 05:13 | Noctule | 5 |
| | 00:55 | Lesser horseshoe | 1 |
| 02/08/24 | 20:58 – 22:21 | Soprano pipistrelle | 47 |
| | 21:15 – 21:40 | Common pipistrelle | 4 |

TABLE 3.7: DETECTOR 3 RESULTS, FIRST STATIC DETECTOR SURVEY

| Date | Time range | Species | Number of calls recorded |
|----------|----------------------|---------------------|--------------------------|
| 29/07/24 | 21:21 – 05:08 | Soprano pipistrelle | 956 |
| | 21:35; 22:08 – 03:49 | Common pipistrelle | 1150 |
| | 20:55 – 04:41 | Noctule | 132 |
| 30/07/24 | 22:02 – 04:47 | Common pipistrelle | 1032 |
| | 00:00 – 00:06 | Soprano pipistrelle | 1668 |
| | 21:51- 03:42 | Noctule | 74 |
| 31/07/24 | 21:04 – 05:08 | Soprano pipistrelle | 921 |

| | | | |
|----------|-------------------------------|---------------------|------|
| 31/07/24 | 22:14 – 04:34 | Common pipistrelle | 1310 |
| | 21:46 – 03:48 | Noctule | 46 |
| | 22:11 | <i>Myotis</i> sp. | 1 |
| 01/08/24 | 21:44 – 04:36 | Common pipistrelle | 900 |
| | 21:23 – 05:20 | Soprano pipistrelle | 840 |
| | 22:19 – 04:43 | Noctule | 76 |
| | 23:50; 23:56; 02:44; 04:27 | <i>Myotis</i> sp. | 4 |
| 02/08/24 | 22:39 – 04:21 | Soprano pipistrelle | 386 |
| | 22:45 – 03:44 | Common pipistrelle | 346 |
| | 00:24 – 03:25 | Noctule | 17 |

3.2.2 Second Static Detector Survey

Table 3.8 shows the weather conditions and timings for the second static detector survey. The data gathered showed that six species of bat were using the site. Table 3.9 shows the results from static detector number 1, Table 3.10 shows the results from static detector 2 and Table 3.11 shows the results from static detector 3. The location of the static detectors is shown in Section 2, Figure 2.2.

TABLE 3.8: SUMMARY OF SECOND STATIC DETECTOR SURVEY DETAILS

| Date | Sunrise time | Sunset time | Min. temp. (°C) | Max. temp. (°C) | Weather |
|------------|--------------|-------------|-----------------|-----------------|------------|
| 20/09/2024 | 06:59 | 19:18 | 6 | 16 | Overcast |
| 21/09/2024 | 07:01 | 19:16 | 13 | 17 | Overcast |
| 22/09/2024 | 07:03 | 19:14 | 13 | 14 | Light rain |
| 23/09/2024 | 07:04 | 19:11 | 12 | 13 | Overcast |
| 24/09/2024 | 07:06 | 19:09 | 9 | 12 | Overcast |
| 25/09/2024 | 07:08 | 19:06 | 7 | 12 | Light rain |

TABLE 3.9: DETECTOR 1 RESULTS, SECOND STATIC DETECTOR SURVEY

| Date | Time range | Species | Number of calls recorded |
|----------|---------------|---------------------|--------------------------|
| 20/09/24 | 19:26 – 06:57 | Soprano pipistrelle | 195 |
| | 19:32 – 06:45 | Common pipistrelle | 99 |
| | 20:19 – 23:34 | Noctule | 2 |
| | 19:57 – 05:18 | <i>Myotis</i> sp. | 37 |
| | 01:12 | Brown long-eared | 1 |
| | 00:02 – 01:29 | Lesser horseshoe | 2 |
| 21/09/24 | 19:16 – 07:06 | Soprano pipistrelle | 207 |
| | 19:20 – 06:41 | Common pipistrelle | 84 |

| | | | |
|----------|---------------|---------------------|-----|
| | 20:11 – 04:25 | Noctule | 6 |
| | 20:07 – 06:21 | <i>Myotis</i> sp. | 18 |
| | 23:23 | Lesser horseshoe | 1 |
| 22/09/24 | 19:03 – 07:10 | Soprano pipistrelle | 164 |
| | 19:14 – 06:08 | Common pipistrelle | 51 |
| | 19:59 – 06:31 | <i>Myotis</i> sp. | 21 |
| | 19:48 – 23:21 | Lesser horseshoe | 4 |
| 23/09/24 | 19:10 – 06:50 | Soprano pipistrelle | 122 |
| | 19:11 – 05:44 | Common pipistrelle | 77 |
| | 19:42 – 06:34 | <i>Myotis</i> sp. | 18 |
| | 00:34 | Lesser horseshoe | 1 |
| 24/09/24 | 19:20 – 06:45 | Soprano pipistrelle | 36 |
| | 19:24 – 06:03 | Common pipistrelle | 24 |
| | 20:56 – 02:22 | <i>Myotis</i> sp. | 4 |

TABLE 3.10: DETECTOR 2 RESULTS, SECOND STATIC DETECTOR SURVEY

| Date | Time range | Species | Number of calls recorded |
|----------|---------------|---------------------|--------------------------|
| 20/09/24 | 19:33 – 06:38 | Soprano pipistrelle | 392 |
| | 19:37 – 06:33 | Common pipistrelle | 1415 |
| | 21:21 | Noctule | 1 |
| | 19:48 – 05:11 | <i>Myotis</i> sp. | 33 |
| | 20:55 – 03:26 | Brown long-eared | 18 |
| | 20:20 & 00:04 | Lesser horseshoe | 2 |
| 21/09/24 | 19:34 – 06:50 | Soprano pipistrelle | 371 |
| | 19:30 – 06:21 | Common pipistrelle | 661 |
| | 19:47 – 23:11 | Noctule | 8 |
| | 19:45 – 05:22 | <i>Myotis</i> sp. | 16 |
| | 19:41 – 05:34 | Lesser horseshoe | 21 |
| | 19:54 – 00:52 | Brown long-eared | 4 |
| 22/09/24 | 19:45 | Soprano pipistrelle | 1 |
| | 19:33 – 20:16 | Common pipistrelle | 20 |
| 23/09/24 | - | - | No calls recorded |
| 24/09/24 | 19:26 – 21:02 | Soprano pipistrelle | 27 |
| | 19:28 – 20:21 | Common pipistrelle | 8 |
| | 19:51 & 20:19 | Noctule | 2 |
| | 21:00 | <i>Myotis</i> sp. | 1 |
| | 19:40 – 00:02 | Lesser horseshoe | 3 |

TABLE 3.11: DETECTOR 3 RESULTS, SECOND STATIC DETECTOR SURVEY

| Date | Time range | Species | Number of calls recorded |
|----------|---------------|---------------------|--------------------------|
| 20/09/24 | 19:33 – 19:53 | Soprano pipistrelle | 63 |
| | 19:38 – 19:52 | Common pipistrelle | 3 |
| | 19:52 & 19:53 | <i>Myotis</i> sp. | 2 |
| 21/09/24 | 19:30 – 06:50 | Soprano pipistrelle | 1195 |
| | 19:35 – 06:44 | Common pipistrelle | 383 |
| | 22:37 – 04:48 | Noctule | 61 |
| | 23:17 – 05:16 | <i>Myotis</i> sp. | 5 |
| | 23:37 & 00:30 | Brown long-eared | 2 |
| 22/09/24 | 19:38 – 00:31 | Soprano pipistrelle | 61 |
| | 22:14 – 02:35 | Common pipistrelle | 22 |
| 23/09/24 | 19:32 – 06:45 | Soprano pipistrelle | 328 |
| | 19:36 – 05:46 | Common pipistrelle | 211 |
| | 19:54 – 03:56 | Noctule | 3 |
| 24/09/24 | 19:26 – 02:26 | Soprano pipistrelle | 415 |
| | 19:27 – 23:20 | Common pipistrelle | 73 |
| | 20:20 – 22:47 | Noctule | 6 |
| | 20:55 & 21:01 | <i>Myotis</i> sp. | 2 |

4.0 Discussion and Evaluation

4.1 *Night-time Bat Walkover (NBW)*

4.1.1 There were four species of bat detected during the first NBW survey, comprising common pipistrelle, soprano pipistrelle, noctule and *Myotis* sp. Pipistrelles were the most frequently-detected species, foraging throughout the survey and specifically using woodland and hedgerows to the east of the site. Noctule and *Myotis* sp. were located within woodland at the north-eastern and eastern site boundaries.

4.1.2 There were five species of bat detected during the second NBW survey, including those previously observed (common pipistrelle, soprano pipistrelle, noctule and *Myotis* sp.) and the additional brown-long eared bat, which was detected once to the north-east of the site. There were high levels of bat activity at the eastern hedgerow including numerous foraging pipistrelles and two *Myotis* sp. calls detected. There was a greater level of activity observed at the western site boundary than in the previous NBW survey. This involved constant foraging of common and soprano pipistrelles between the eastern and western hedgerows and streetlights adjacent to the west of the site.

4.2 *Static Detector Surveys*

4.2.1 There were six species of bat recorded during the static detector surveys; common pipistrelle, soprano pipistrelle, noctule, *Myotis* sp., brown long-eared and lesser horseshoe. Lesser horseshoe bats were recorded on detectors 1 and 2 during both of the survey periods, suggesting that they were using the northern woodland and eastern hedgerow within the site. *Myotis* sp. and brown long-eared calls were also most frequent on detectors 1 and 2. The highest number of species calls recorded within 24 hours per detector was 1668 calls of soprano pipistrelle on 30/07/24, from detector 3 to the south of the site. There were consistent high levels of pipistrelle activity on detector 3 throughout both of the surveys, indicating that the bats could be using the open grassland and the eastern and western hedgerows.

4.3 *Overall Site Assessment*

4.3.1 Results from the NBW and static detector surveys suggest that the site contains foraging and commuting habitat for six bat species. The north-eastern corner of the site supports woodland specialists such as noctule, *Myotis* sp., brown long-eared and lesser horseshoe. The eastern hedgerow and scattered trees provide a flight path and woodland edge habitat for foraging and commuting bats, with connectivity to suitable bat habitat within the wider landscape including the Afon Cegin, Coed Cegin and neighbouring fields to the east. The western hedgerow adjacent to the road provides foraging habitat for pipistrelles, which have a greater tolerance to artificial lighting than the other species present (ILP, 2023). The open grassland within the site provides additional foraging habitat and enables commuting of bats between the two hedgerows.

4.3.2 With the survey findings considered, the site had high potential to support bats as per the Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition) (Collins, 2023). Table 4.1 below describes the species present, numbers, importance of the roost, importance of the commuting and foraging habitat, and the importance of the roost assemblage in relation to the survey results and provides the foundations for the RAMs, compensation, and enhancements that will be provided in a separate mitigation, compensation, and enhancement report.

Table 4.1: Overall Site Assessment Rating

| Species & Abundance | Importance of Roosts | Importance of Commuting & Foraging Habitat | Importance of Assemblage |
|--|--|---|--------------------------|
| Widespread <ul style="list-style-type: none"> - Common pipistrelle - Soprano pipistrelle - Brown long-eared | There were no bat roosts identified onsite during the surveys. It is possible that species observed would roost within the woodland onsite and further inspection is necessary to determine the suitability of mature trees onsite for roosting bats. It is possible that bats are roosting within Incline Cottage, the property just outside of the survey area to the east. Further surveys are necessary to confirm bat roost presence. | The site was well located for bats as it would provide good foraging and commuting habitat. The Afon Cegin, which was located approximately 30m to the north of the site, flowed in a south-westerly direction and would be a highly valuable foraging and commuting feature for any bats in the area. | 3 from a maximum of 3 |
| Widespread but not as abundant in all geographies <ul style="list-style-type: none"> - Natterer's - Whiskered/Brandt's - Daubenton's - Noctule | | | 4 from a maximum of 10 |
| Rarer or restricted distribution <ul style="list-style-type: none"> - Lesser horseshoe | | Additionally, the grassland and mature trees within the site would also be of high value to bats for foraging and commuting. | 4 from a maximum of 4 |
| Rarest Annex 2 species and very rare <ul style="list-style-type: none"> - Greater horseshoe - Barbastelle - Serotine - Nathusius' pipistrelle - Leisler's | There were no bats of these species identified during the survey. | The surveys identified that bats do use the immediate surrounding features for foraging. | 0 from a maximum of 20 |
| The assemblage score is $11/36 = 30.5\%$, confirming an assemblage of site importance only. | | | |

4.4 Proposed Works

4.4.1 The proposed works to the site comprise construction of a housing development containing 48 units of housing with associated infrastructure and landscaping. Figure 4.1 below shows the current plans for the site provided at the time of report writing.



Figure 4.1: Plans for the proposed works
Base image © Ainsley Common Architects

4.5 Effect of Works on Bats

4.5.1 The site was used by commuting and foraging bats and it is possible that roosting bats are present within the onsite woodland. The works will not directly impact bats if the trees onsite are to be retained, but features that could be used by bats opportunistically may be lost as a result of the works. Also, without RAMs in place, bats that could use the site opportunistically may be negatively impacted as a result of the works.

5.0 Conclusion and Further Works

5.1 *Bats*

- 5.1.1 The site contains high quality foraging and commuting habitat for bats in the form of hedgerows and woodland with connectivity to the wider landscape via the Afon Cegin, adjacent woodland to the north and farmland to the east.
- 5.1.2 There were six species of bat using the site during the survey period. The highest level of activity was within the hedgerow and scattered trees at the eastern site boundary, which provided foraging and commuting habitat for common pipistrelle, soprano pipistrelle, noctule, *Myotis* sp. and brown long-eared species. The woodland in the north-eastern corner of the site was used by woodland specialists including lesser horseshoe, noctule, *Myotis* sp. and brown long-eared. The open grassland, western hedgerow and site boundary adjacent to the road, were used by foraging and commuting pipistrelle species.
- 5.1.3 The results of further surveys will inform whether a European Protected Species licence (EPSL) is required from Natural Resources Wales (NRW) prior to any works commencing.
- 5.1.4 Recommended avoidance, mitigation, compensation and enhancement measures for bats (in line with adopting a step-wise approach) will be detailed in a separate mitigation, compensation, and enhancement plan.

5.2 *Further Works*

- 5.2.1 Table 5.1 below provides further information on the necessary further works required on site before the project can progress to planning.

TABLE 5.1: FURTHER SURVEY WORK REQUIRED

| Species | Further Requirements |
|-------------------------------|--|
| Bats | Preliminary Roost Assessment of mature trees proposed for felling |
| Habitats & Additional Species | Update Preliminary Ecological Appraisal due to the previous report dated 2020, as per CIEEM good practice guidelines (2019). |

6.0 Legislation

6.1 *International Law*

6.1.1 The UK is a contracting party to the 1979 Convention of the Conservation of European Wildlife and Natural Habitats (commonly referred to as the Bern Convention). The Bern convention has been described as the “European Treaty for the conservation of nature”. Its provisions with regards to bats are transposed into law as follows:

- In England and Wales via the Conservation of Habitats and Species Regulations 2017 (as amended) (the England and Wales Habitat Regulations) and the Wildlife and Countryside Act 1981 (as amended) (the W&CA)

6.2 *Legislation in England and Wales*

6.2.1 All species of bat, their breeding sites and their resting places in England and Wales are protected through a ‘dual’ system of protection, under the England and Wales Habitats Regulations and W&CA. Because two regimes give legal protection to bats, the implications of both regimes must be fully understood.

6.2.2 Regulation (Reg.) 43 of the England and Wales Habitats Regulations makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats (which includes 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);
- damage or destroy a breeding site or resting place of a bat; or
- possess, control, transport, sell or exchange, or offer for sale or exchange, any live or dead bat or part of a bat or anything derived from a bat or any part of a bat

6.2.3 Under Section 9 of the W&CA (s.9(4)(b), 9(4)(c) and 9(5) only), it is an offence (in relation to bats) to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place of shelter or protection;
- intentionally or recklessly obstruct access to any structure or place used by a bat for shelter or protection; or
- sell, offer or expose for sale, or have in their possession or transports for the purpose of sale, any live or dead bat or any part of, or anything derived from a bat (or be responsible for adverts suggesting the intention to do this).

6.3 ***Birds***

6.3.1 In addition, under the Wildlife and Countryside Act, 1981 (as amended) and the Countryside and Rights of Way, 2000, all wild birds, their nests and eggs are protected during the breeding season (typically March to August inclusive). This makes it an offence to:

- Intentionally kill, injury or take any wild bird.
- Take, damage or destroy the nest of a wild bird included in Schedule ZA1.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

7.0 References

Cheshire Ecological Services. (2020). Land off Llandegai Road, Bangor – Preliminary Ecological Appraisal.

CIEEM. (2019). 'Advice Note on the Lifespan of Ecological Reports and Surveys'. Chartered Institute of Ecology and Environmental Management, Winchester.

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

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