Gladman Developments Ltd

# Pencombe Lane, Bromyard, Herefordshire

# BAT SURVEY REPORT

February 2022

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# 1.0 INTRODUCTION

1.1 This report has been produced by FPCR Environment and Design Limited on behalf of Gladman Developments and provides details of surveys conducted land off Pencombe Lane, Bromyard, Herefordshire. The objective of the study was to determine which bat species were present and to assess use of the site.

1.2 The site consists of two whole grassland fields and a portion of a third field, bound by hedgerows with 1m wide margins of tall ruderal species and scrub. Hedgerows which contained some mature trees bounded all sides. The only building on-site was a small dilapidated wooden shed in the north-eastern corner.

## Prior Survey

1.3 Phase 1 habitat survey and protected species surveys were undertaken in April 2014, with subsequent surveys in August 2016, May 2018 and August 2021 to confirm site conditions.

1.4 The desktop study identified that there were known bat roosts within 1km to 1.6km of the site, which included species such as lesser horseshoe *Rhinolophus hipposideros*, brown long-eared *Plecotus auritus*, soprano pipistrelle *Pipistrellus pygmaeus*, unknown pipistrelle species *Pipistrellus sp.,* and other unknown bat roosts. Natterer's *Myotis nattereri,* and noctule bats *Nyctalus noctula* have also been recorded in the wider area.

1.5 Following the initial surveys a recommendation was made for specific bat surveys to be undertaken to assess potential impacts upon bats and these were subsequently commissioned in 2014, and has subsequently been updated in 2018 and 2021. This report provides the details of these surveys including methodology, results, analysis and conclusions.

1.6 During this time period some guidelines and legislation has been updated and as such prior reports should be referred to for details of methodology used during previous survey. Only methodology relevant to the most recent survey, is included in this document. The results of previous surveys will be included within this document in summary when deemed relevant.

## Development Proposals

1.7 Proposals for the survey boundary include a residential development with associated open space and infrastructure.

## 2.0 METHODOLOGY

### Desk Study

2.1 A desk study was undertaken as part of the Ecological Appraisal (FPCR 2016) for the proposed development with a subsequent update in 2021. As part of this process, Herefordshire Biological Records Centre were contacted for existing records of bats within 1km of the site boundary.

2.2 The Multi Agency Geographic Information for the Countryside (MAGIC) website has been reviewed for the presence of any statutory designated sites for bats of international (Special Area of Conservation (SAC), national (Site of Special Scientific, (SSSI)) or local nature conservation importance (Local Nature Reserves (LNR)) within 10km.

### Field Surveys

#### External/Internal Building Assessment

2.3 External aspects of the building on site (B1) were examined to determine any potential access points and roost sites on 22nd May 2018 and 3rd August 2021. Structural features with the potential for use by roosting bats were recorded and suitable access points such as small gaps under eaves/soffit boards, raised or missing ridge tiles and gaps at gable ends were sought. Evidence that potential access points were used by bats was also recorded where found. Such evidence includes staining from urine and/or fur and the presence of bat droppings in and around features. Indicators that potential access points had not recently been used included the presence of heavy cob-webbing and general detritus around these points.

2.4 Where access was possible, the interior of the buildings including any roof voids, was also visually assessed for evidence of bat activity and/or for the potential to be used by bats. Evidence of a roost would be the presence of a dead or live bat(s), concentrated piles or scattered droppings, food remains such as insect wing fragments as well as scratch marks and/or staining.

#### Tree Assessment

2.5 Tree assessments were undertaken from ground level, with the aid of a torch and binoculars (where appropriate). These surveys were undertaken on 22nd May 2018 and 3rd August 2021 by a suitably experienced ecologist. During the survey Potential Roosting Features (PRF) for bats such as the following were sought (Based on P16, British Standard 8596:2015 Surveying for bats in trees and woodland, October 2015):

- Natural holes (e.g. knot holes) arising from naturally shed branches or branches previously pruned back to a branch collar.
- Man-made holes (e.g. cavities that have developed from flush cuts or cavities created by branches tearing out from parent stems).
- Woodpecker holes.
- Cracks/splits in stems or branches (horizontal and vertical).
- Partially detached, lose or bark plates.
- Cankers (caused by localised bark death) in which cavities have developed.
- Other hollows or cavities, including butt rots.

- Compression of forks with occluded bark, forming potential cavities.
- Crossing stems or branches with suitable roosting space between.
- Ivy stems with diameters in excess of 50mm with suitable roosting space behind (or where roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk).
- Bat or bird boxes.

2.6 Certain factors such as orientation of the feature, its height from the ground, the direct surroundings and its location in respect to other features may enhance or reduce the potential value.

2.7 Trees were classified into general bat roost potential groups based upon the presence of these features. Table 3 broadly classifies the potential categories as accurately as possible as well as discussing the relevance of the features. This table is based upon Table 4.1 and Chapter 6 in Bat Surveys for Professional Ecologists: Good Practice Guidelines (J., Collins (Bat Conservation Trust), 2016).

2.8 Although the British Standard 8596:2015 document groups trees with moderate and high potential, these have been separated below (as per Table 4.1 in The Bat Conservation Trust Guidelines[1]) to allow more specific survey criteria to be applied.

**Table 1: Classification of bat potential in trees**

| Classification of Tree | Description of Category and Associated Features (based on Potential Roosting Features listed above) | Likely Further Survey work / Actions |
|---|---|---|
| Confirmed Roost | Evidence of roosting bats in the form of live / dead bats, droppings, urine staining, mammalian fur oil staining, etc. | A Natural England derogation licence application will be required if the tree or roost site is affected by the development or proposed arboricultural works. This will require a combination of aerial assessment by roped access bat workers (where possible, health and safety constraints allowing) and nocturnal survey during appropriate periods (Nocturnal - May to August) to inform on the licence.<br><br>Works to be undertaken under supervision in accordance with the approved good practice method statement provided within the licence.<br><br>However, where confirmed roost site(s) are not affected by works, work under a precautionary good practice method statement may be possible. |

[1] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust

| Classification of Tree | Description of Category and Associated Features (based on Potential Roosting Features listed above) | Likely Further Survey work / Actions |
|---|---|---|
| High Potential | A tree with one or more Potential Roosting Features that are obviously suitable for larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat. Examples include (but are not limited to); woodpecker holes, larger cavities, hollow trunks, hazard beams, etc. | Aerial assessment by roped access bat workers (if appropriate) and / or nocturnal survey during appropriate period (May to August).<br><br>Following additional assessments, a tree may be upgraded or downgraded based on findings.<br><br>If roost sites are confirmed and the tree or roost is to be affected by proposals a licence from Natural England will be required.<br><br>After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate. |
| Moderate Potential | A tree with Potential Roosting Features which could support one or more potential roost sites due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat but unlikely to support a roost of high conservation status (i.e. larger roost, irrespective of wider conservation status).<br>Examples include (but are not limited to); woodpecker holes, rot cavities, branch socket cavities, etc. | A combination of aerial assessment by roped access bat workers and / or nocturnal survey during appropriate period (May to August).<br><br>Following additional assessments, a tree may be upgraded or downgraded based on findings.<br><br>After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate<br><br>If a roost site/s is confirmed a licence from Natural England will be required. |
| Low Potential | A tree of sufficient size and age to contain Potential Roosting Features but with none seen from ground or features seen only very limited potential.<br>Examples include (but are not limited to); loose/lifted bark, shallow splits exposed to elements or upward facing holes. | No further survey required but a precautionary working method statement may be required. |
| Negligible/No potential | Negligible/no habitat features likely to be used by roosting bats | None. |

* The Conservation of Habitats & Species Regulations 2017 (as amended) affords protection to "breeding sites" and "resting places" of bats. The EU Commission's Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC, February 2007 states that these are places "where there is a reasonably high probability that the species concerned will return".

**Transect Surveys**

2.9 The site was considered to provide potential for foraging and commuting bats with previous survey (2014) indicating the use of the site by lesser horseshoe and barbastelle *Barbastella barbastellus* bats. Therefore, monthly dusk transect surveys between May and October were undertaken during 2018 and monthly dusk surveys between July and October 2021 with an additional pre-dawn survey September to update the previous dataset. The objective of the transect surveys was to identify foraging areas, commuting routes and to gain understanding of species utilisation of the site.

2.10 The transect routes were determined prior to survey in order to sample all areas of the site with those identified as having higher suitability being the main focus, as well as including point count stops to identify activity levels around these features of potential value to bats. Each point count was approximately 5 minutes long, during which time all bat activity was recorded. The point counts were strategically located throughout the site to ensure a comprehensive coverage of habitats present. Figures 3a-f and 5a-d show the transect routes and location of point count stops.

2.11 The dusk transects commenced around sunset, and continued for two to three hours. The pre-dawn transect commenced two hours before sunrise until 15 minutes afterwards.

2.12 The surveys were undertaken by appropriately experienced ecologists from FPCR. Each transect was walked at a steady pace using Wildlife Acoustics Inc. Echo Meter Touch® bat detectors in conjunction with Echo Meter Touch® app and Apple Inc. iPad® to provide back-up information and enable identification of bats encountered. When a bat passed by, the species, time noted and behaviour was recorded on a site plan. This information provides a general view of the bat activity present on site and identifies the key foraging areas and commuting routes.

2.13 The results of these surveys were used to assess the level of bat activity across the site in relation to the abundance of individual species foraging and commuting.

2.14 Post-survey, where necessary, bat calls were analysed using the Kaleidoscope (version 4), by taking measurements of the peak frequency, inter-pulse interval, call duration and end frequency. This analysis was completed by a suitably experienced ecologist. From this, the level of bat activity across the site in relation to the abundance of individual species foraging and commuting along habitats was assessed.

2.15 Table 2 provides the survey timings and weather conditions for the bat activity surveys in both 2014, 2018 and 2021 (for details of the methodology used in 2014 see FPCR (2016)[1])

**Table 2: Nocturnal Bat Survey Timings and Conditions**

| Date | Time | Sunset /Rise | Min. Temperature | Rain | Wind (0 to 5) | Cloud % |
|---|---|---|---|---|---|---|
| 31.05.2014 | Start: 21.05<br>Finish: 23.56 | 21.20 | 13°C | 0 | 1 | 70 |
| 25.06.2014 | Start: 21.16<br>Finish: 23.37 | 21.33 | 18°C | 0 | 0 | 5 |
| 22.07.2014 | Start: 21.03<br>Finish: 22.32 | 21.17 | 24°C | 0 | 0 | 1 |
| 20.08.2014 | Start: 20.15<br>Finish: 22.37 | 20.25 | 13°C | 0 | 0 | 40 |

[1] FPCR Environment and Design Ltd (August 2016) Bat Survey Report Pencombe Lane, Bromyard, Herefordshire written on behalf of Gladman Developments Ltd

| Date | Time | Sunset /Rise | Min. Temperature | Rain | Wind (0 to 5) | Cloud % |
|---|---|---|---|---|---|---|
| 21.08.2014 | Start: 04.32 Finish: 06.31 | 06.03 | 11°C | 0 | 0 | 15 |
| 17.09.2014 | Start: 19.07 Finish: 21.25 | 19.21 | 20°C | 0 | 0-2 | 70 |
| 30.05.2018 | Start: 21:19 Finish: 23:30 | 21:19 | 14°C | 0 | 1 | 100 |
| 17.07.2018 | Start: 21:22 Finish: 23:18 | 21:22 | 12°C | 0 | 1 | 75 |
| 20.08.2018 | Start: 20:24 Finish: 22:27 | 20:24 | 17°C | 0 | 0 | 70 |
| 06.09.2018 | Start: 19:31 Finish: 21:31 | 19:31 | 13°C | 0 | 2 | 100 |
| 07.09.2018 | Start: 04:42 Finish: 06:43 | 06:42 | 10°C | 0 | 1 | 95 |
| 08.10.2018 | Start: 18:36 Finish: 20:32 | 18:32 | 12°C | 0 | 1 | 90 |
| 28.07.2021 | Start: 21:08 Finish: 23:08 | 21:08 | 12°C | 0 | 2-3 | 10 |
| 19.08.2021 | Start: 20:28 Finish: 22.28 | 20:26 | 16°C | 1 | 1 | 100 |
| 23.09.2021 | Start: 19:07 Finish: 21:07 | 19:07 | 16°C | 0 | 0 | 5 |
| 24.09.2021 | Start: 04:59 Finish: 06:59 | 06:59 | 9°C | 0 | 0 | 0 |

**Static Monitoring**

2.16 Passive monitoring was undertaken using an automated logging system (Song Meter® SM4BAT FS, Wildlife Acoustics Inc.) with its output saved to an internal storage device. This information was used to supplement transect survey data and derive an index of activity and species composition within the site. A single SM4BAT+ device was deployed in May and July 2018 and two static passive recording broadband detectors were deployed in the subsequent survey periods in 2018 and 2021. The detectors recorded bat contacts for five consecutive nights in suitable weather conditions (little no rain/wind and temperatures above 10°C). The detectors were programmed to activate 30 minutes before dusk and recorded continuously until 30 minutes following sunrise. The output from this detector was subjected to computer analysis using Kaleidoscope (version 4). Analysis was undertaken by suitably experienced bat ecologists from FPCR.

2.17 The analysis of the SM4BAT+ files recorded can highlight the presence of more than one bat if they are recorded simultaneously on the same sound file. However, it is not possible to determine whether consecutive sound files have been recorded as the result of a single bat passing the detector as it commutes across the landscape or by one bat repeatedly triggering the detector as it forages in close proximately for an extended period. Therefore, each sound file is counted as a single bat registration. The number of bat registrations does however reflect the relative importance of the location of the detector by calculating the bat registrations per hour.

2.18 In 2014, one static passive recording broadband detector was deployed in May and June and two static passive recording broadband detectors were deployed in the subsequent survey periods (for details of the methodology used in 2014 see FPCR (2016)[1])

**Limitations**

2.19 During the 2021 October transect survey the data on the iPad used became corrupted and as such was lost. As static surveys were conducted during this month and the extensive amount of data from previous months and years, the lack of this data it is not considered to have a significant impact on the conclusions drawn from the results.

[1] FPCR Environment and Design Ltd (August 2016) Bat Survey Report Pencombe Lane, Bromyard, Herefordshire written on behalf of Gladman Developments Ltd

# 3.0 RESULTS

## Desk Study

3.1 Herefordshire Biological Records Centre provided records for eight species of bat within 1km of the site; brown long-eared, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, noctule *Nyctalus noctula*, natterer's *Myotis nattereri* and lesser horseshoe *Rhinolophus hipposideros*. These were located approximately 100m north, 400 - 750m south, 1km south south-west, 650m north-east and 1.2km east of the site boundary and dated from 2007 to 2011. The consultation confirmed that there are no statutorily designated sites located within 5km of the site which have been designated solely for their bat populations or for specific species of bat. Figure 1 illustrates the location of these records.

3.2 Some of the consultation response records have indicated that the records relate to roosting bats, however, no information was provided which detailed the status of the roosts, for example whether they are maternity roosts or not. From these roost records *Pipistrelle* species, common pipistrelle, soprano pipistrelle, brown long-eared *Plecotus auritus* and lesser horseshoe were all recorded approximately 1.2km to the north-east of the site boundary.

3.3 No statutory designated sites are present within 10km of the site which bats are a primary reason for their designation.

## Field Surveys

### External/Internal Building Assessment

3.4 A single building (B1) was present in the north-eastern corner of the site. In 2016 this was a single-storey open-sided storage unit constructed from timber with a flat roof covered with corrugated sheets which were not underlined. Internally no roof void was present.

3.5 In 2016, there was no evidence of roosting bats in association with building B1 and by the 2018 and 2021 surveys this structure had entirely collapsed, becoming over-run with bramble and nettle. Due to the open nature of the building, the lack of voids or other suitable potential roost sites within the structure and its general degraded nature it was considered highly unlikely that roosting bats would be present (Photo 1).

### Tree Assessment

3.6 There was no evidence of roosting bats in association with any of the trees present within the hedgerows. None were considered to have potential to support roosting bats due to a lack of features such as woodpecker holes, cracked bark, crevices and fissures.

**Photo 1: Building (B1) in the north-eastern corner of the site** ***Photo taken by FPCR Environment and Design Ltd 2018***

**Transect Surveys**

3.7 The following is a summary of the nocturnal transect survey data. Full details of bat contacts are provided on the relevant figures (for 2014 survey figures see FPCR (2016) [1]).

May 2014 Dusk Transect

3.8 A total of 14 bat contacts were recorded during the survey which was limited to a single species, common pipistrelle. The majority of the activity was recorded within the east and south-east of the site along field and site boundary hedgerows, H1, H2, H3 and H7. This was by individual bats displaying predominately foraging behaviours for a number of minutes at a time.

June 2014 Dusk Transect

3.9 Common pipistrelle was the most frequently recorded bat species with a total of 11 contacts. In addition, two single passes by 4 noctule bats were recorded. Bat activity was recorded throughout the site with increased activity along the northern (H7) and eastern (H3) boundary hedgerows, predominantly from individual common pipistrelle bats foraging and commuting.

July 2014 Dusk Transect

3.10 Thirty-one bat contacts were recorded, the dominant species recorded was common pipistrelle. Brown long-eared bats were also observed around hedgerows H8 and H4. Lower numbers of noctule and soprano pipistrelle were also recorded. Activity levels were relatively constant throughout the site, recording both foraging and commuting behaviours from individual and small groups of bats. Increased foraging activity was recorded along the southern boundary hedgerows H8 and H4, as well as the southern section on the internal hedgerow H2.

[1] FPCR Environment and Design Ltd (August 2016) Bat Survey Report Pencombe Lane, Bromyard, Herefordshire written on behalf of Gladman Developments Ltd

August 2014 Dusk Transect

3.11 During the August dusk transect a total of twelve bat registrations were recorded. Common pipistrelle and *Myotis* species were the most frequently recorded bats, with a small number of noctule also recorded. Bat activity was recorded from individual bats throughout the site with the majority being associated with the southern section of Hedgerow H2 and site boundary hedgerows, H8 and H4.

August 2014 Pre-Dawn Transect

3.12 No bats were recorded during the survey.

September 2014 Dusk Transect

3.13 During the survey a total of 21 bat registrations were recorded. Common pipistrelle were the most frequently recorded species, with a small number of noctule also noted. In addition, brown long-eared bats were observed foraging along hedgerow H4. Bat activity was recorded throughout the site with increased foraging activity observed along southern boundary hedgerows, H5, H4 and H8.

**Transect Summary – 2014**

3.14 Throughout the survey period common pipistrelle, soprano pipistrelle, noctule, brown long-eared and *Myotis* species were recorded.

3.15 Bat activity recorded during the transect surveys was considered to be unexceptional and recorded sporadically throughout the site. Whilst no areas of significant activity were noted, individual / small numbers of bats, predominantly common pipistrelle were identified as utilising the central hedgerows with mature trees and the orchard for both foraging and commuting.

May 2018 Dusk Transect (Figure 3a)

3.16 During the survey a total of 21 bat contacts were recorded. Common pipistrelle were the most frequently recorded species, with a small number of soprano pipistrelle, *Myotis* species and noctule also noted. Bat activity was recorded throughout the site with increased levels along the southern boundary hedgerows H8, H2 and H4 and along the northern boundary hedgerow H7.

July 2018 Dusk Transect (Figure 3b)

3.17 During the survey a total of 13 bat contacts were recorded. Common pipistrelle were the most frequently recorded species, with a small number of soprano pipistrelle, *Myotis* species and brown long-eared bats also noted. The level of bat activity was generally low during the survey with slight increased levels along the boundary hedgerows H7 and H6.

August 2018 Dusk Transect (Figure 3c)

3.18 During the survey a total of 41 bat contacts were recorded. Common pipistrelle and soprano pipistrelle were the most frequently recorded species with a number of *Myotis* calls also recorded and a single noctule call. Bat activity was recorded throughout the site with increased level along hedgerows H8 and H2, particularly in association with a mature tree along Pencombe Lane, to the south of the site boundary.

September 2018 Dusk Transect (Figure 3d)

3.19 During the survey a total of 39 bat contacts were recorded. Common pipistrelle were the most frequently recorded species, with a small number of soprano pipistrelle, *Myotis* species and brown long-eared bats also noted. Bat activity was recorded throughout the survey with increased levels of activity along hedgerows H6, H7 and H8.

September 2018 Pre-Dawn Transect (Figure 3e)

3.20 During the survey a total of 21 bat contacts were recorded. Common pipistrelle were the most frequently recorded species, with a small number of soprano pipistrelle, *Myotis* species and two contacts of barbastelle also recorded. Bat activity was recorded throughout the survey but within increased levels along H4 and H8 and the lane.

October 2018 Dusk Transect (Figure 3f)

3.21 During the survey a total of 20 bat contacts were recorded. Common pipistrelle were the most frequently recorded species, with a small number of soprano pipistrelle, *Myotis* species and noctule also recorded. Bat activity was recorded throughout the survey but within increased levels along H4 and H8 and to the western end of H7 with several bat passing over Worcester Road to the north of the site and down H6.

**Transect Summary – 2018**

3.22 Throughout the survey period common pipistrelle were the dominant species recorded with smaller numbers of soprano pipistrelle, noctule, brown long-eared, *Myotis* species and barbastelle bats also noted.

3.23 Bat activity recorded during the transect surveys was considered to be unexceptional and recorded throughout the site with some increase in foraging activity along hedgerows H8 and H4 and the lane running to the south of these features. The central hedgerow H2 and hedgerow H6 were used mainly for commuting.

July 2021 Dusk Transect (Figure 5a)

3.24 During the survey a total of seven bat contacts were recorded. Common pipistrelle were the most frequently recorded species, with a small number of soprano pipistrelle, *Myotis* species and brown long-eared also noted. Bat activity was recorded mainly along hedgerows H6 and H8.

August 2021 Dusk Transect (Figure 5b)

3.25 During the survey a total of 19 bat contacts were recorded. Common pipistrelle were the most frequently recorded species, with a small number of soprano pipistrelle, *Myotis* species and noctule also recorded. Bat activity was recorded throughout the survey but within increased levels along H2, H6 and H8.

September 2021 Dusk Transect (Figure 5c)

3.26 During the survey a total of seven bat contacts were recorded all common pipistrelle. Activity was recorded only along the southern and western boundary hedgerows.

September 2021 Dawn Transect (Figure 5d)

3.27 During the survey a total of three bat contacts were recorded, one soprano pipistrelle and two *Myotis* species at along H6. No other activity was recorded during the survey..

**Transect Summary – 2021**

3.28 Throughout the survey period common pipistrelle were the dominant species recorded with smaller numbers of soprano pipistrelle, noctule, brown long-eared and *Myotis* species also noted.

3.29 Bat activity recorded during the transect surveys was considered to be unexceptional and focused on the southern and western boundary hedgerows H6 and H8. The central hedgerow H2 was used mainly for commuting.

**Static Detector Surveys**

3.30 SM2BAT+ static bat detectors were placed along features considered to be of value to bats, such as hedgerows and tree lines which are likely to be affected by the proposals such as loss of hedgerow or by potential increases in artificial lighting on retained habitat features. The data for both the 2014, 2018 and 2021 surveys is summarised within this section. The location of the detectors in 2018 are illustrated in Figure 2 and for 2021 Figure 4.

**Static survey 2014**

**Table 3: Summary of 2014 SM2BAT+ Survey Results**

| Date | Unit location | Avg. registrations per hour | Total registrations | Most recorded species (number of registrations) | Other species recorded (number of registrations) |
|---|---|---|---|---|---|
| 30th May-01st June | 1: Hedgerow H2 | 17.51 | 386 | Common pipistrelle (172) | Soprano pipistrelle (29), lesser horseshoe (1), pipistrelle species (152), *Myotis* species (2), *Nyctalus* species (3) and noctule (27). |
| 25th – 30th June | 1: Hedgerow H2 | 47.13 | 2037 | Common pipistrelle (958) | Soprano pipistrelle (62), pipistrelle species (40), *Myotis* species (11), brown long-eared (70) *Nyctalus* species (221) and noctule (675). |
| 14th – 21st July | 1: Hedgerow H8 | 17.99 | 1120 | Common pipistrelle (934) | Soprano pipistrelle (83), pipistrelle species (30), *Myotis* species (9), brown long-eared (6) *Nyctalus* species (13) and noctule (45). |
| 14th – 21st July | 2: Hedgerow H7 | 4.21 | 262 | Common pipistrelle (200) | Soprano pipistrelle (25), pipistrelle species (9), *Myotis* species (4), brown long-eared (2) *Nyctalus* species (5) and noctule (17). |
| 06th – 08th August | 1: Hedgerow H2 | 5.1 | 130 | Common pipistrelle (90) | Soprano pipistrelle (21), pipistrelle species (6), brown long-eared (1) *Nyctalus* species (10) and noctule (2). |

| | | | | | |
|---|---|---|---|---|---|
| 06th – 08th August | 2: Hedgerow H7 | 6.61 | 228 | Common pipistrelle (176) | Soprano pipistrelle (28), pipistrelle species (7), Myotis species (3), brown long-eared (2), noctule (6) and barbastelle (6). |
| 05th – 08th September | 1: Hedgerow H2 | 3.82 | 161 | Common pipistrelle (102) | Soprano pipistrelle (33), pipistrelle species (2), *Myotis* species (2), noctule (19), lesser horseshoe (1) and barbastelle (2). |
| 05th – 08th September | 2: Hedgerow H6 | 3.68 | 155 | Common pipistrelle (76) | Soprano pipistrelle (14), pipistrelle species (6), *Myotis* species (26), brown long-eared (6) *Nyctalus* species (4) and noctule (23). |

## Static Survey 2018

**Table 4: Summary of 2018 SM2BAT+ Survey Results**

| Month | Unit location | Avg. registrations per hour | Total registrations | Most recorded species (number of registrations) | Other species recorded (number of registrations) |
|---|---|---|---|---|---|
| 30th – 04th May | 1: Hedgerow H8 | 71.25 | 3172 | Common pipistrelle (2749) | Soprano pipistrelle (253), pipistrelle species (152), *Myotis* species (80), noctule (58), *Nyctalus* species (10), brown long-eared (7), *Plecotus* species (3) and barbastelle (2). |
| 31st – 05th July | 2: Hedgerow H1 | 3.82 | 195 | Common pipistrelle (100) | Soprano pipistrelle (83), *Myotis* species (4), noctule (4) and brown long-eared (4) |
| 26th – 31st July | 3: Hedgerow H6 | 1.82 | 90 | Soprano pipistrelle (45) | Common pipistrelle (12), pipistrelle species (6), *Myotis* species (12), noctule (11) and brown long-eared (4). |
| 21st – 26th August | 4: Hedgerow H7 | 0.60 | 35 | Common pipistrelle (14) | Soprano pipistrelle (7), *Myotis* species (4), noctule (2) and brown long-eared (8). |
| 21st – 26th August | 5: Hedgerow H8 | 1.50 | 87 | Common pipistrelle (32) | Soprano pipistrelle (19), *Myotis* species (18), noctule (7), brown long-eared (10) and barbastelle (1). |
| 19th – 25th September | 6: Hedgerow H7 | 0.25 | 20 | Myotis species (6) | Common pipistrelle (1), Soprano pipistrelle (3), pipistrelle species (2), noctule (3) brown long-eared (2), *Nyctalus* species (2) and barbastelle (1). |
| 19th – 25th September | 7: Hedgerow H6 | 0.71 | 58 | Soprano pipistrelle (20) | Common pipistrelle (3), pipistrelle species (2), *Myotis* species (12), noctule (1) brown long- |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | eared (11) and barbastelle (9). |
| 12th - 17th October | 8: Hedgerow H8 | 7.02 | 550 | Common pipistrelle (508) | Soprano pipistrelle (22), Myotis species (13), noctule (2), brown long-eared (1), Nathusius' pipistrelle (1) and lesser horseshoe (2) |
| 12th - 17th October | 9: Hedgerow H2 | 1.47 | 115 | Common pipistrelle (105) | Soprano pipistrelle (5), noctule (2), brown long-eared (1), barbastelle and lesser horseshoe (1) |

## Static Survey 2021

**Table 5: Summary of 2021 SM2BAT+ Survey Results**

| Month | Unit location | Avg. registrations per hour | Total registrations | Most recorded species (number of registrations) | Other species recorded (number of registrations) |
|---|---|---|---|---|---|
| 26th July – 1st August | 1: Hedgerow H2 | 5.33 | 250 | Common pipistrelle (180) | Noctule (41), soprano pipistrelle (16), *Myotis* species (7), brown long-eared (4) and Daubenton's (2) |
| 26th July – 3rd August | 2: Hedgerow H7 | 5.16 | 242 | Common pipistrelle (180) | Soprano pipistrelle (43), noctule (10), *Myotis* species (6), and brown long-eared (3). |
| 9th – 19th August | 3: Hedgerow H6 | 36.13 | 1838 | Common pipistrelle (1585) | *Myotis* species (157), soprano pipistrelle (40), brown long-eared (33), barbastelle (17) and noctule (6) |
| 9th – 19th August | 4: Hedgerow H5 | 43.09 | 2179 | Common pipistrelle (1445) | Soprano pipistrelle (552), *Myotis* species (161), noctule (11), brown long-eared (7), barbastelle (2) and *Nyctalus sp.*(1). |
| 23rd – 29th September | 5: Hedgerow H1 | 4.69 | 307 | Common pipistrelle (236) | *Myotis* species (44), Soprano pipistrelle (21), brown long-eared (3), noctule (12) and barbastelle (1). |
| 23rd – 29th September | 6: Eastern Boundary | 65.52 | 4290 | Common pipistrelle (3964) | *Myotis* species (204), Soprano pipistrelle (120) and barbastelle (2). |
| 11th - 16th October | 7: Hedgerow H6 | 30.80 | 2201 | Common pipistrelle (1210) | Soprano pipistrelle (760), *Myotis* species (213), barbastelle (9), Lesser horseshoe (5) and noctule (4) |
| 11th - 16th October | 8: Hedgerow H8 | 10.38 | 742 | Common pipistrelle (312) | Soprano pipistrelle (271), *Myotis* species (156), noctule (1), |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | brown long-eared (1), and barbastelle (1). |

**Static survey summary 2014, 2018 and 2021**

3.31 During the SM2BAT+ surveys in 2014, 2018 and 2021 overall the most frequently recorded species was common pipistrelle with noctule bats the second most frequent. Table 6 presents the percentage breakdown of the species recorded during the SM2BAT+ surveys.

**Table 6: Species recorded during the SM2BAT+ Surveys 2014, 2018 and 2021**

| Species | Percentage (%) 2014 | Percentage (%) 2018 | Percentage (%) 2021 |
|---|---|---|---|
| Common Pipistrelle | 60.5 | 81.5 | 75.6 |
| Noctule | 18.2 | 2.1 | 0.6 |
| Soprano Pipistrelle | 6.6 | 10.6 | 15.1 |
| *Nyctalus* Species | 5.7 | 0.3 | <0.01 |
| Pipistrelle Species | 5.6 | 0.5 | - |
| Brown Long-eared | 1.9 | 1.1 | 0.4 |
| *Myotis* Species | 1.3 | 3.4 | 7.9 |
| Barbastelle | 0.2 | 0.3 | 0.7 |
| Lesser Horseshoe | <0.1 | 0.1 | <0.1 |
| *Plecotus* Species | - | 0.1 | - |
| Nathusius' pipistrelle | - | <0.1 | <0.1 |
| Daubenton's | - | - | <0.1 |

3.32 Activity was variable throughout the site and even along the same habitat features on different survey occasions. For example, the SM2BAT+ units deployed along the central hedgerow H2 recorded 47.13 registrations per hour in June 2014 but 5.10 in August 2014 and 3.82 in September 2014.

3.33 Considering the habitats present within and adjacent the site, the recorded levels of activity are not considered to be exceptional.

Notable Species Recorded

3.34 Three notable species of bats were recorded during the surveys: Nathusius' pipistrelle, lesser horseshoe and barbastelle.

3.35 A single registration of Nathusius' pipistrelle was recorded on the night of 13th October 2018 along H8. The October timing of this record combined with the single registration and the close proximity of the River Great Ouse and the closer connecting Padbury Brook (The Twins) suggests it is very likely that this was a migratory individual passing through the site whilst foraging in the area

3.36 Lesser horseshoe were recorded as single registrations during May 2014 on hedgerow H2, September 2014 along hedgerow H2, October 2018 along H2 and H8 and October 2021 along H6.

3.37 Small numbers of barbastelle registrations were recorded in August and September 2014 and May, August and September 2018 and August, September and October 2021. The peak total of barbastelle registrations in a single survey occasion was seven. The species was recorded:

- August 2014 along hedgerow H7;
- September 2014 on hedgerow H2.
- June and August 2018 on H8;
- September 2018 on H7.
- September 2018 on H6.
- October 2018 on H8.
- August 2021 on H6.
- August 2021 on H5.
- September 2021 on H1.
- September 2021 on the Eastern boundary.
- October 2021 on H6.
- October 2021 on H8.

**Note**

3.38 Where calls could not be identified to species level, for example due to the lower quality of those recordings or where there are similarities between species echolocation calls (particularly for myotis and *Nyctalus* genus bats) making a definite identification difficult, a likely species identification is provided. This is based on the features displayed by the calls when analysed using the Analook data analysis software package and taking in to account the geographical location of the site and the habitats present. It was therefore considered that:

- Pipistrelle species bats were either common or soprano pipistrelle;
- Nyctalus species bats were likely to be noctule but exhibited some overlap with Leisler's *Nyctalus leisleri* bats;
- Myotis species bats were likely to be whiskered/Brandt's *Myotis mystacinus/brandtii* or natterer's *Myotis nattereri* bats.

## 4.0 DISCUSSION AND CONCLUSIONS

4.1 Proposals for the site are for up to 120 residential dwellings together with associated green infrastructure. All interior and boundary hedgerows are to be retained and buffered where appropriate with a balancing pond and new hedgerows, tree planting and grassland habitat created.

4.2 The majority of the mature trees associated with hedgerows along field and site boundaries are to be retained within the proposed development. The construction of the proposed road and footpath between fields will result in the loss of small sections of hedgerow H2, and the access into the site off Worchester Road will result in the loss of sections of hedgerow H1 and H7.

### Legislation

4.3 All species of bats and their roosts are listed on the Conservation of Habitats and Species Regulations 2017 (as amended) making it illegal to deliberately disturb any such animal or damage / destroy a breeding site or roosting place of any such animal. Bats are also afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is illegal to recklessly or intentionally kill, injure or take a species of bat or recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection or disturb any animal whilst they are occupying such a place of shelter or protection. Some bat species, including soprano pipistrelle, are species of principal importance under the NERC Act. All bat species are priority species for Herefordshire Council.

### Roost Assessments

#### Trees

4.4 As with the findings of the previous surveys, the examination of mature trees associated with on-site hedgerows found that none were considered to have potential to support roosting bats due to a lack of potential roost sites. Therefore, no further surveys are recommended with regard to potential bat roosts within trees.

#### Buildings

4.5 One building (B1) is present on site which was (in 2016) an open sided shed with a flat roof. At the time of the 2016 survey no evidence of roosting bats was recorded and given the open nature of the structure and lack of potential roost sites the building at the time was considered to offer negligible potential to support roosting bats. By the time of the 2018 survey this building had become dilapidated with the roof having collapsed with bramble growing over it. As such no further bat survey is recommended on building B1 and is not considered a constraint to development.

### Bat Activity Assessment

#### Species Recorded

4.6 Species recorded on site during the surveys include:

- Common pipistrelle
- Soprano pipistrelle
- Lesser horseshoe
- Noctule
- Brown long-eared
- Long-eared species

- Barbastelle
- *Myotis* species
- Pipistrelle species
- *Nyctalus* species
- Nathusius' pipistrelle

4.7 The dominant species during both the transect and static surveys was common pipistrelle. Noctule, *Nyctalus* species, pipistrelle species and soprano pipistrelle were also regularly recorded during the surveys with lower numbers of barbastelle, brown long-eared, and *Myotis* species also noted. Lesser horseshoe were recorded rarely and only during the static detector surveys in 2014 and 2021.

4.8 All species of bat recorded on site are listed on the Herefordshire BAP with barbastelle, noctule, soprano pipistrelle, brown long-eared and lesser horseshoe also listed as species of principal importance on the NERC Act.

4.9 Barbastelle bats are rare nationally whilst lesser horseshoe bats are generally restricted to the south-west of England, the West Midlands and most of Wales. They are found across much of Herefordshire, particularly in the south of the county.

4.10 The application site consists primarily of semi-improved grassland with well-established boundary hedgerows which support a resource of mature tree standards. The site is in keeping with the surrounding landscape which is a mosaic of agricultural habitat with established boundary hedgerows providing connectivity to the wider area including to off-site roosts.

4.11 In 2014 and 2018, bat activity recorded during the transect and static bat detector surveys was sporadic throughout the site with activity levels increasing along the southern boundary hedgerow H8 and along interior hedgerow H2. In 2021, activity was increased along the Southern and Western boundaries, hedgerow H6 and H8

4.12 Unit 1 during the June and July 2014 SM2BAT+ surveys along hedgerows H2 and H8 produced increased levels of bat activity with 2037 and 1120 registrations respectively. This was replicated in 2018 with 3172 registrations from Unit 1 on H8 in May. These were predominantly from common pipistrelle, noctule, *Nyctalus* species and soprano pipistrelle bats, with a *Myotis* species calls recorded in 2018. The results of the transect surveys undertaken throughout the year also recorded some increased levels of activity from individual / small numbers of bats constantly foraging around the internal and boundary hedgerows. As such, it is likely that the bats recorded during the June and July 2014 and May 2018 SM2BAT+ surveys along hedgerows H2 and H8, were individual / small numbers of bats foraging for a prolonged period of time and therefore producing many registrations on the detector.

4.13 Lesser horseshoe were recorded as single registrations during May 2014 on hedgerow H2, September 2014 along hedgerow H2, in October 2018 along H2 and H8 and in October 2021 along H6. Small numbers of barbastelle registrations were recorded in August and September 2014 and May, August, September and October 2018 and August, September and October 2021. Whilst barbastelle and lesser horseshoe bats are considered uncommon, given the low level of activity recorded it is considered that the site does not form a significant resource for these species and the proposals are unlikely to have a significant impact upon these species.

4.14 A single registration of Nathusius' pipistrelle was recorded on the night of 13th October 2018 along H8. Nathusius' pipistrelle are widespread but rare across the UK most commonly encountered on migration in late summer/autumn although some do remain all year and breed in the UK. The

species is regularly recorded each year during the migration season particularly along watercourses and is being encountered on a regular basis by local bat groups participating in the National Nathusius' pipistrelle project. The October timing of this record combined with the single registration and the close proximity of the River Great Ouse and the closer connecting Padbury Brook (The Twins) suggests it is very likely that this was a migratory individual passing through the site whilst foraging in the area and is unlikely to affect the favourable conservation status given the large amount of similar habitat present around the site.

4.15 Common pipistrelle and soprano pipistrelle are both widespread species that are commonly associated with the habitat types associated with the application site and surrounding landscape. The levels of activity associated with these species, and also brown long-eared, *Myotis* species, and noctule are consistent with their known abundance at a regional and national scale and is not considered to be significant.

4.16 Foraging and commuting activity was recorded mainly in association with the field and site boundary habitats. These habitats are to be retained, buffered and enhanced so connectivity around the site will be maintained. The primary habitat which will be lost is previously grazed but now left unmanaged species-poor semi-improved grassland.

4.17 The loss of these habitats following the implementation of mitigation is unlikely to have a significant negative impact upon the Favourable Conservation Status of local bat populations.

## MITIGATION AND ENHANCEMENTS

### Foraging / Commuting Habitat

4.18 The proposals will result in the loss of habitat within the core of the site which is semi-improved grassland. The loss of the semi-improved grassland compartment will result in the loss of some habitat utilised by bats for commuting and foraging, it is considered that these habitats will form part of a network of suitable foraging areas in the wider landscape particularly to off-site habitats in the immediate surroundings.

4.19 The removal of two small sections of hedgerow H2 will be required to facilitate primary routes through the site. The majority of H1 and H7 will be translocated, being repositioned along the visibility splays of the new access road, or replanted. As such, hedgerow loss will be kept to a minimum and the presence of a single-carriageway road is not considered a significant barrier to dispersal. It is recommended that artificial lighting is not used immediately adjacent to where the hedgerows are severed, and lighting does not spill on to hedgerows, to ensure that connectivity along these features is maintained and impacts to the local bat population are negligible.

4.20 The principal boundary hedgerows are features that provide habitat connectivity and are known to be used by commuting bats are all to be retained largely retained with the exception of the sections for access. Proposed areas of indicative tree and compensatory hedgerow planting will enhance connectivity along boundary features to the wider habitat, upon maturity of the vegetation. Species-rich grassland and proposed drainage features will also be created.

### Lighting

4.21 Bat activity recorded on site was dominated by common pipistrelle and soprano pipistrelle which are adaptable species and more tolerant of artificial light and will feed on insect congregations around the lights, as will noctule and other *Nyctalus* species.

4.22 Low numbers of lesser horseshoe and barbastelle were recorded within the site over the survey periods predominantly in association with the retained field boundary hedgerows. These species are known to be particularly sensitive to artificial light and research has demonstrated that lighting can have a significant negative impact upon the selection of flight routes and dramatically reduce bat activity by horseshoe bat species.

4.23 With the exception of lesser horseshoe and barbastelle, the other species of bat recorded on site are generally common and widespread. However, in the absence of mitigation the direct lighting of retained habitats may reasonably be expected to lead to the avoidance of these areas by the local bat population, particularly lesser horseshoe, barbastelle and Myotis species bats.

4.24 The lighting and layout of the proposed development will be designed to minimise light-spill onto habitats both within and adjacent to it that are used by the local bat population foraging or commuting. This will be achieved by ensuring that the design of lighting is based upon guidelines presented in the Bat Conservation Trust & Institute of Lighting Engineers *'Bats and Lighting in the UK - Bats and Built Environment Series',* the Bat Conservation Trust *'Artificial Lighting and Wildlife Interim Guidance'* and the Bat Conservation Trust *'Statement on the impact and design of artificial light on bats'*.[1] Therefore, the lighting scheme will include the following:

- The strategic use of landscaping and planting to avoid light spill on sensitive habitats.
- The avoidance of direct lighting of existing trees, scrub, woodland, or proposed areas of habitat creation / landscape planting.
- Unnecessary light spill will be controlled through a combination of directional lighting, low lighting columns, hooded / shielded luminaires or strategic planting.
- Where appropriate, luminaires on the site boundary will be fitted with light baffles to prevent light spill.

4.25 Impacts from artificial lighting upon bats are considered to be potentially significant where they exceed 1 lux upon ecological receptors utilised by bats such as hedgerows and woodland. Therefore, the lighting design should incorporate the above recommendations to ensure that light levels remain below 1 lux on sensitive features.

### Bat Boxes

4.26 It is recommended that 12 bat boxes are placed on suitable mature trees along the site boundaries. The bat boxes should be a variety of designs to encourage different environmental conditions and to be suitable for a range of species. The following boxes and quantities are suggested:

- 4 x Schwegler 2F boxes, good for smaller British bats such as pipistrelle;
- 4 x Schwegler 1FF, good for a wide range of bat species including barbastelle;

[1] http://www.bats.org.uk/pages/bats_and_lighting.html *last accessed 12.10.18*

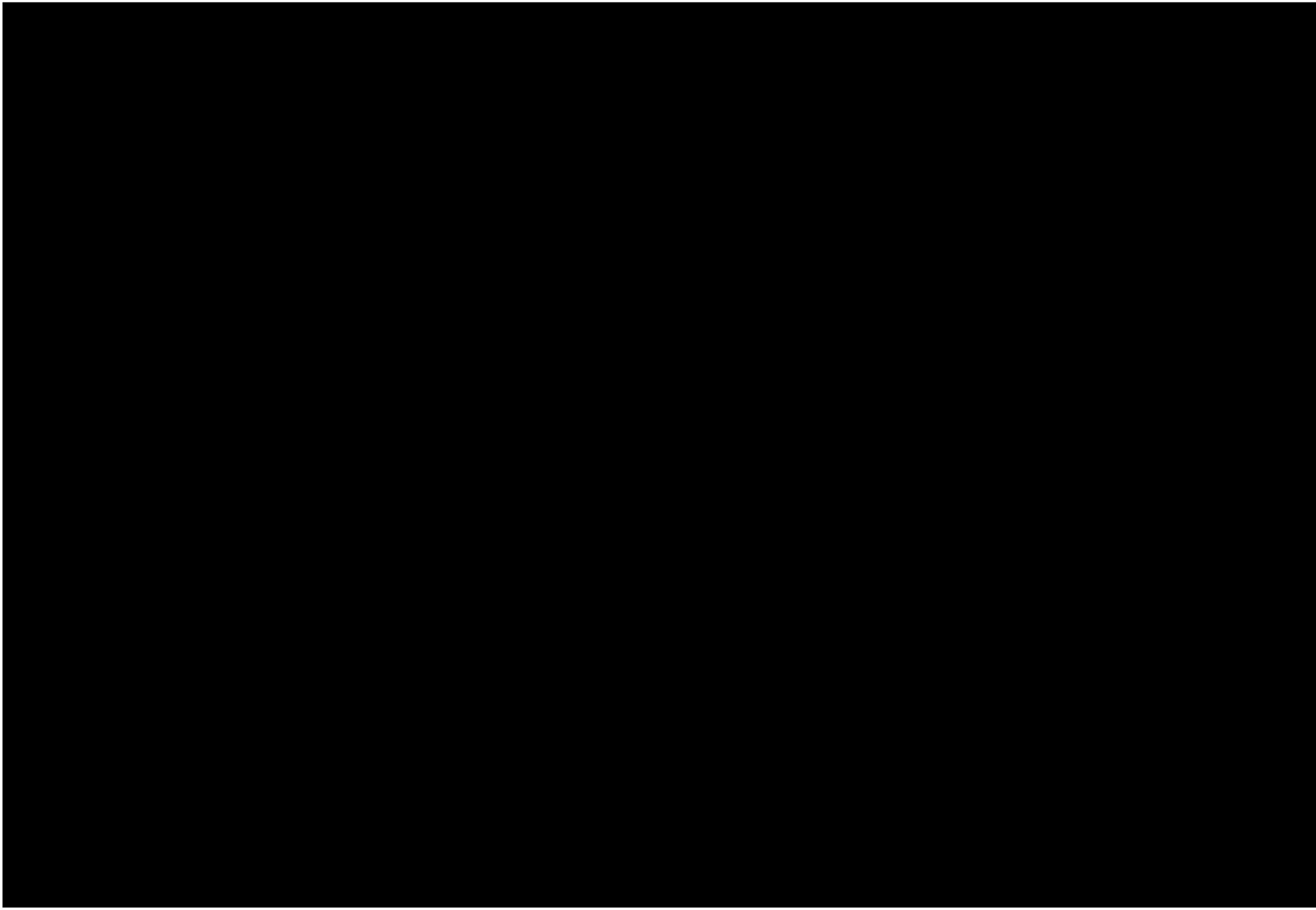
- 4 x Schwegler 2FN boxes, good for both smaller bat species and larger species such as noctule and Leisler's.

4.27 The bat boxes should be placed in groups of three on the suitable trees. Placement of three boxes per tree on west, south and eastern aspect is an accepted technique offering a range of temperature variations. The boxes should be placed at between 4-6m from ground level to enable bats to access them adequately and also to reduce the likelihood of any vandalism. The bats' approach to the box should be clear of obstacles, such as tree branches, to enable easy access to the box. The tree should be semi-mature or preferably mature and the boxes should not be placed in areas of artificial lighting. The inclusion of additional bat boxes around the development site would provide new potential roosting sites for bats within the local area. Any external lighting will be applied sensitively with no lights above or adjacent to access points on bat boxes.

**Habitat Creation**

4.28 The introduction of a balancing pond within the south-west corner of the site following development will increase the foraging opportunities for the local bat population and it is recommended that adjacent to the pond should be seeded with a grassland mix with a high proportion of flower species to compensate for the loss of the grassland habitat. In addition, proposed new and replacement hedgerow and tree planting across the site will further provide foraging and commuting habitat for the local bat population. The implementation of these habitat creations will increase the diversity found within the site and will increase potential diversity of insects which will use the area and will increase potential features created as part of the residential development.

4.29 With the implementation of the mitigation proposed above, residual effects on the local population of bats are likely to be negligible.



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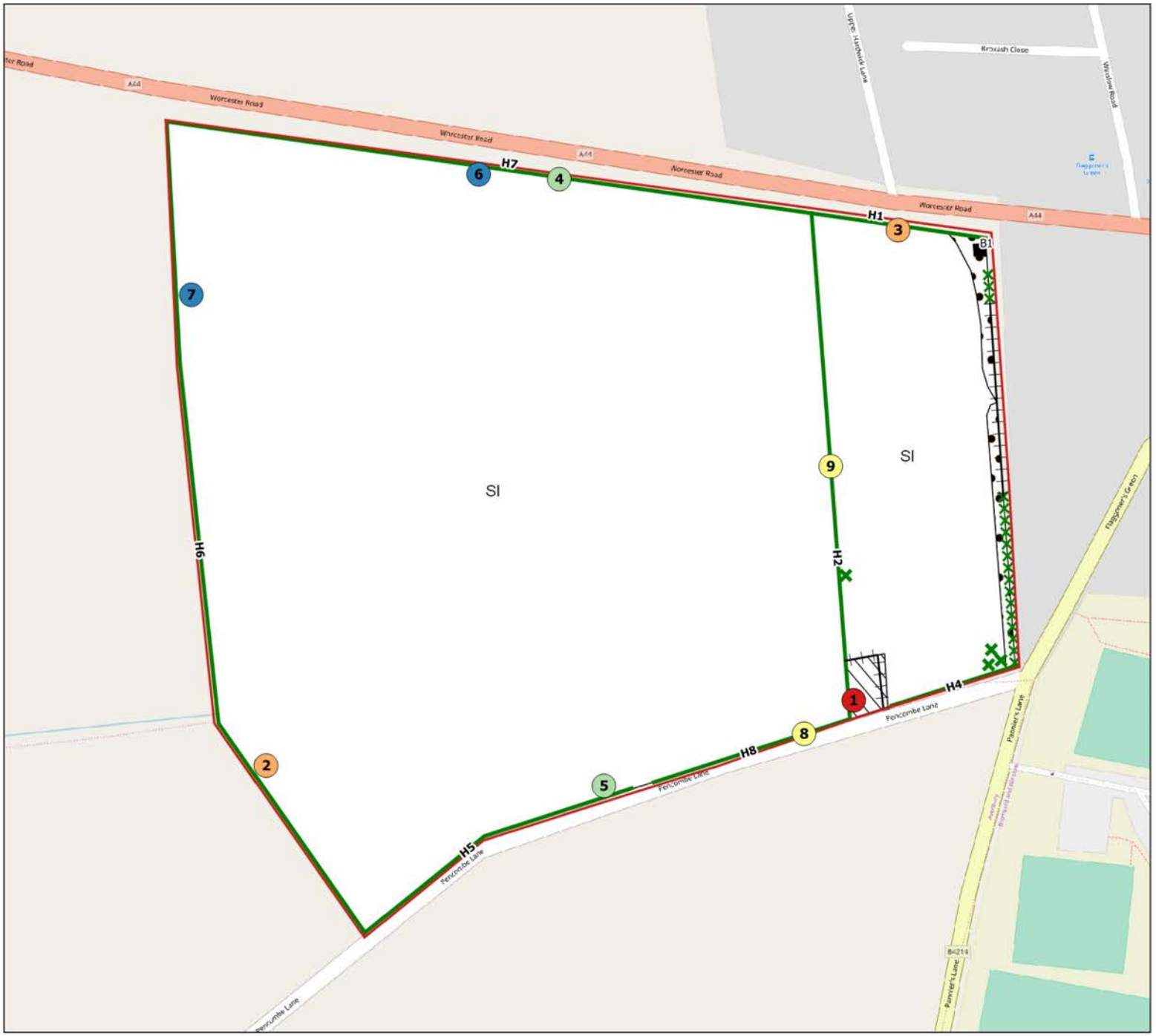




## Key

- Site Boundary
- Buildings (with ref)
- Bare ground
- Tall ruderal vegetation
- SI Poor semi-improved grassland
- Hedgerow (with ref)
- Fence
- Scattered scrub
- Scattered scrub

Static Detector Location (with ref)

- May
- July
- August
- September
- October

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0 25 50 m

Gladman Development Ltd
Land off Pencombe Lane
Bromyard, Herefordshire

PHASE 1 AND STATIC LOCATION PLAN

N

Scale: 1:2,000 LAM/DJF 23/10/2018

**Figure 2** **6158-E-02**

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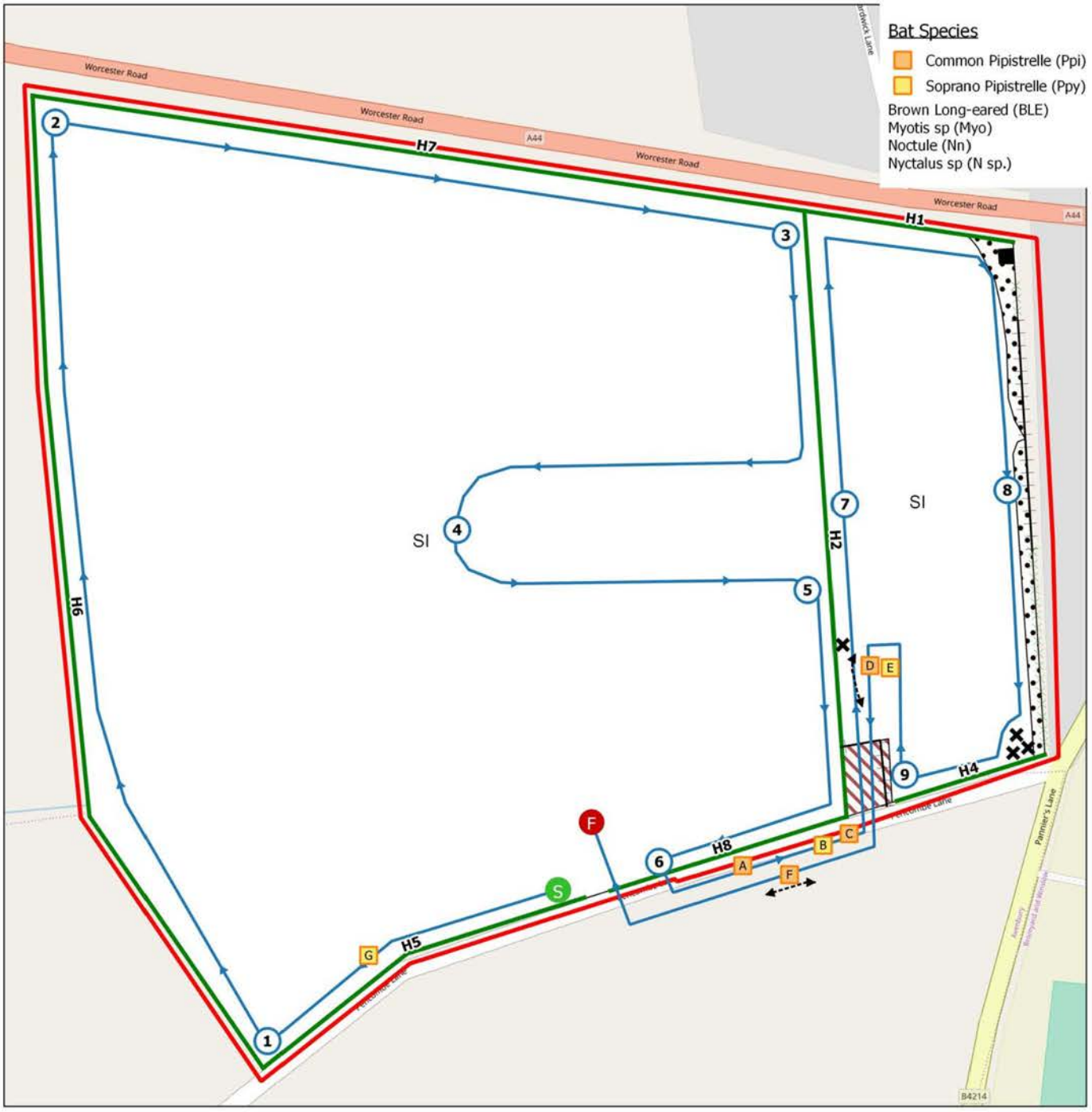


| Ref | Time | Species | Behaviour | Habitat | Passes |
|---|---|---|---|---|---|
| PC 1 | 21:26-21:31 | | | | |
| i | 21:31 | Ppi | P | Hedgerow | 1 |
| PC 2 | 21:35-21:40 | | | | |
| ii | 21:40 | Nn | P | Hedgerow | 3 |
| PC 3 | 21:45-21:50 | | | | |
| iii | 21:46 | Nn | P | Hedgerow | 1 |
| iv | 21:46 | Ppi | P | Hedgerow | 1 |
| v | 21:48 | Ppi | S | Hedgerow | 1 |
| vi | 21:48 | Nn | S | Hedgerow | 1 |
| PC 4 | 21:53-21:58 | | | | |
| PC 5 | 22:00-22:05 | | | | |
| vii | 22:01 | Ppi | P | Grassland | 1 |
| PC 6 | 22:07-22:12 | | | | |
| viii | 22:07 | Ppy | P | Hedgerow | Cont. |
| ix | 22:07 | Ppi | P | Hedgerow | 4 |
| x | 22:09 | Myo | P | Hedgerow | 1 |
| xi | 22:10 | N sp. | P | Hedgerow | 2 |
| xii | 22:11 | BLE | P | Hedgerow | 2 |
| xiii | 22:11 | Ppi | P | Hedgerow | 1 |
| A | 22:13 | Ppi | P | Hedgerow | 1 |
| B | 22:14 | Ppy | P | Hedgerow | 2 |
| C | 22:14 | Ppi | P | Hedgerow | 2 |
| PC 7 | 22:18-22:23 | | | | |
| PC 8 | 22:26-22:31 | | | | |
| PC 9 | 22:32-22:36 | | | | |
| xiv | 22:32 | Ppi | P | Hedgerow | 1 |
| D | 22:36 | Ppi | F | Hedgerow | Cont. |
| E | 22:36 | Ppy | F | Hedgerow | Cont. |
| NV | 22:39 | Myo | P | Hedgerow | 1 |
| F | 22:41 | Ppi | F | Hedgerow | 4 |
| NV | 22:43 | Ppi (2) | P | Hedgerow | 3 |
| G | 22:45 | Ppy | P | Hedgerow | 1 |
| PC 1 | 22:46-22:51 | | | | |
| xv | 22:48 | Myo | P | Hedgerow | 2 |
| xvi | 22:48 | Ppi | P | Hedgerow | Cont. |
| PC 2 | 22:54-23:00 | | | | |
| PC 3 | 23:03-23:08 | | | | |
| xvii | 23:05 | Ppi | P | Hedgerow | Cont. |
| xviii | 23:08 | Ppi | P | Hedgerow | 1 |
| PC 6 | 23:11-23:16 | | | | |
| xix | 23:11 | Ppi | P | Hedgerow | 2 |
| xx | 23:15 | Myo | P | Hedgerow | 1 |
| NV | 23:18 | Ppi | P | Hedgerow | 1 |
| PC 9 | 23:25-23:30 | | | | |
| xxi | 23:25 | Ppi | F | Hedgerow | Cont. |
| xxii | 23:25 | Ppy | F | Hedgerow | Cont. |



## Key:

Site Boundary

- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Path

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J:\6100\6158\ECO\Bats\Update 2018\Bat Transect Plan May 2018

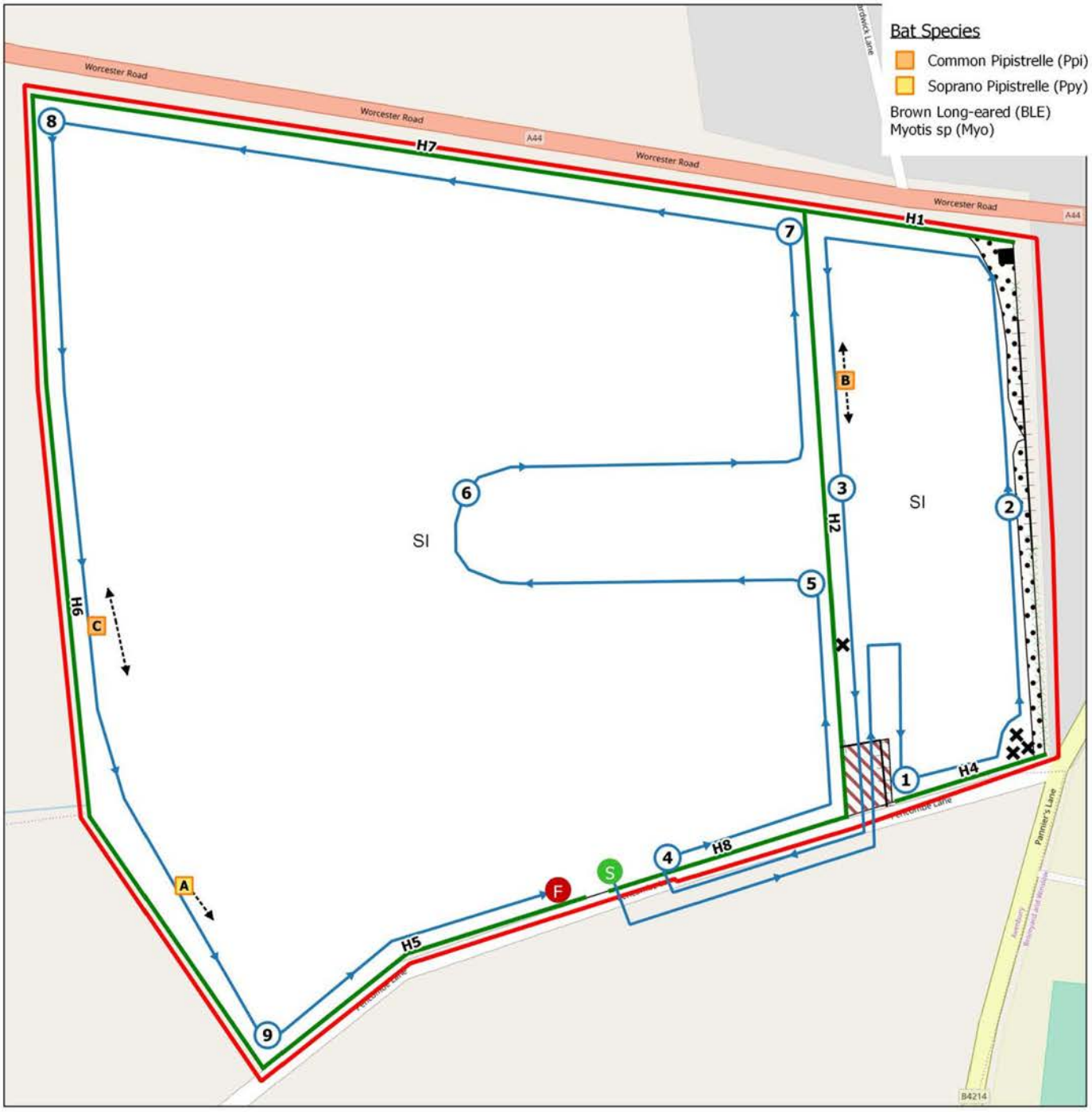
client: Gladman Developments

project: Land off Pencombe Lane Bromyard, Herefordshire

drawing title: BAT TRANSECT RESULTS 30/5/18

scale @ A3: 1:1,100 | drawn: EJW | issue: 21/9/2018

drawing / figure number: **Figure 3a** | rev: **6158-E-3a**




| Ref | Time | Species | Behaviour | Habitat | Passes |
|---|---|---|---|---|---|
| PC 1 | 21:23-21:28 | | | | |
| PC 2 | 21:29-21:34 | | | | |
| PC 3 | 21:36-21:41 | | | | |
| PC 4 | 21:43-21:48 | | | | |
| i | 21:44 | Ppi | P | Hedgerow | 1 |
| PC 5 | 21:49-21:54 | | | | |
| PC 6 | 21:55-22:00 | | | | |
| PC 7 | 22:01-22:06 | | | | |
| PC 8 | 22:08-22:13 | | | | |
| ii | 22:11 | Ppi | P | Hedgerow | 1 |
| iii | 22:13 | Myo | P | Hedgerow | 2 |
| iv | 22:13 | Ppi | P | Hedgerow | 1 |
| A | 22:16 | Ppy | P | Hedgerow | 2 |
| PC 9 | 22:16-22:21 | | | | |
| v | 22:21 | Ppy | P | Hedgerow | 1 |
| PC 1 | 22:24-22:29 | | | | |
| PC 2 | 22:30-22:35 | | | | |
| B | 22:36 | Ppi | F | Hedgerow | Cont. |
| PC 3 | 22:37-22:42 | | | | |
| vi | 22:37 | Ppi | F | Hedgerow | Cont. |
| PC 4 | 22:43-22:48 | | | | |
| vii | 22:45 | Ppi | P | Field | Cont. |
| PC 5 | 22:48-22:53 | | | | |
| PC 6 | 22:54-22:59 | | | | |
| PC 7 | 23:00-23:05 | | | | |
| viii | 23:00 | Ppi | F | Hedgerow | Cont. |
| PC 8 | 23:06-23:11 | | | | |
| ix | 23:07 | Ppi | F | Hedgerow | 2 |
| x | 23:07 | BLE | P | Hedgerow | 1 |
| C | 23:12 | Ppi | F | Field | 4 |
| PC 9 | 23:13-23:18 | | | | |



## Key:

Site Boundary

- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Path

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**masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture**

client: Gladman Developments

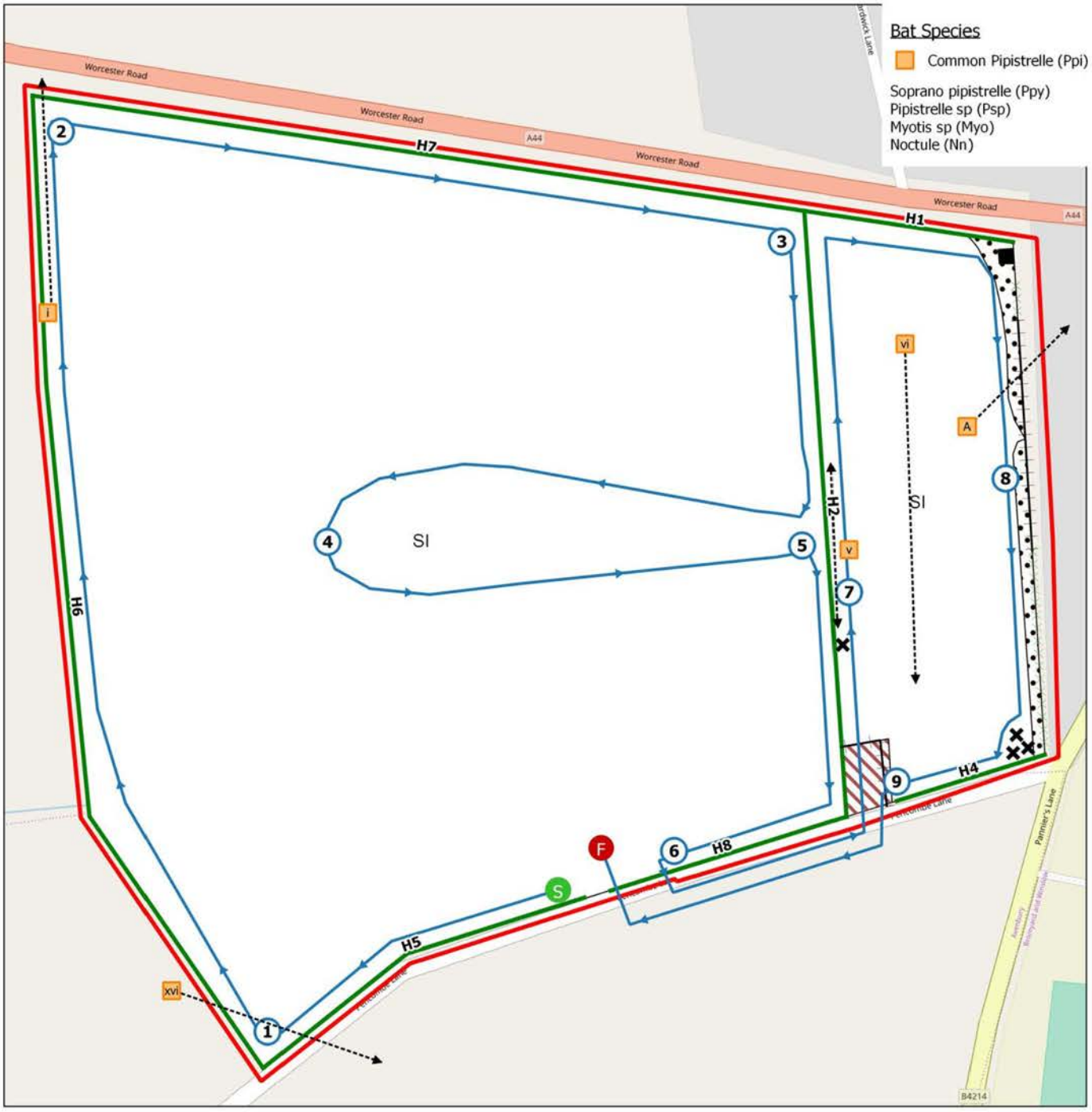
project: Land off Pencombe Lane Bromyard, Herefordshire

drawing title: BAT TRANSECT RESULTS 17/7/18

scale @ A3: 1:1,100 | drawn: EJW | issue: 21/9/2018

drawing / figure number: **Figure 3b** | rev: **6158-E-3b**

J:\6100\6158\ECO\Bats\Update 2018\Bat Transect Plan July 2018




| Ref | Time | Species | Behaviour | Habitat | Passes |
|---|---|---|---|---|---|
| PC 1 | 20:25-20:30 | | | | |
| PC 2 | 20:33-20:38 | | | | |
| i | 20:36 | Ppi | C | Hedgerow | 1 |
| PC 3 | 20:40-20:45 | | | | |
| PC 4 | 20:46-20:51 | | | | |
| PC 5 | 20:52-20:57 | | | | |
| ii | 20:53 | Ppi | C | Hedgerow | 1 |
| iii | 20:54 | Ppi | C | Hedgerow | 1 |
| PC 6 | 20:58-21:03 | | | | |
| iv | 21:00 | Ppi | C/F | Road | 5 |
| PC 7 | 21:04-21:09 | | | | |
| v | 21:04 | Ppi x2 | C | Hedgerow | 3 |
| vi | 21:08 | Ppi x2 | C | Hedgerow | 1 |
| vii | 21:09 | Ppi | C | Hedgerow | 1 |
| NV | 21:10 | Ppy | C | Hedgerow | 1 |
| A | 21:11 | Ppi | C | Hedgerow | 2 |
| PC 8 | 21:13-21:18 | | | | |
| viii | 21:13 | Ppi | C | Hedgerow | 1 |
| ix | 21:15 | Ppi | C | Hedgerow | 1 |
| x | 21:18 | Ppi | C | Hedgerow | 1 |
| PC 9 | 21:19-21:24 | | | | |
| xi | 21:24 | Ppi/ Myo | C | Road | 1\|5 |
| xii | 21:26 | Ppy | C | Hedgerow | 1 |
| xiii | 21:26 | Myo | C | Hedgerow | 1 |
| PC 1 | 21:28-21:33 | | | | |
| xiv | 21:28 | Ppi | C | Hedgerow | 2 |
| xv | 21:30 | Ppi | P | Hedgerow | 1 |
| NV | 21:34 | Myo | P | Hedgerow | 2 |
| NV | 21:37 | Myo | P | Hedgerow | 1 |
| PC 2 | 21:37-21:42 | | | | |
| xvi | 21:38 | Nn | P | Hedgerow | 1 |
| xvii | 21:41 | Ppi | P | Hedgerow | 1 |
| PC 3 | 21:44-21:49 | | | | |
| xviii | 21:45 | Psp | P | Hedgerow | 1 |
| xix | 21:48 | Psp | P | Hedgerow | 2 |
| PC 4 | 21:51-21:56 | | | | |
| PC 5 | 21:56-22:01 | | | | |
| PC 6 | 22:01-22:06 | | | | |
| xx | 21:59 | Ppi/ Ppy | P | Hedgerow | 1\|1 |
| xxi | 22:00 | Myo | P | Hedgerow | 1 |
| xxii | 22:01 | Ppi | P | Hedgerow | 1 |
| xxiii | 22:02 | Ppy | P | Hedgerow | 1 |
| xxiv | 22:03 | Myo | P | Hedgerow | 1 |
| xxv | 22:05 | Ppi | P | Road | 1 |
| xxvi | 22:06 | Myo | P | Road | 2 |
| PC 7 | 22:08-22:13 | | | | |
| xxvii | 22:12 | Psp | P | Hedgerow | 2 |
| NV | 22:14 | Ppi | P | Hedgerow | 2 |
| NV | 22:16 | Ppy | P | Hedgerow | 1 |
| PC 8 | 22:16-22:21 | | | | |
| xxviii | 22:17 | Ppy | P | Hedgerow | 1 |
| NV | 22:22 | Ppi | P | Hedgerow | 1 |
| PC 9 | 22:22-22:27 | | | | |
| xxix | 22:26 | Psp/ Ppi | P | Hedgerow | 1\|1 |



## Key:

Site Boundary

- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Path

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J:\6100\6158\ECO\Bats\Update 2018\Bat Transect Plan Aug 2018

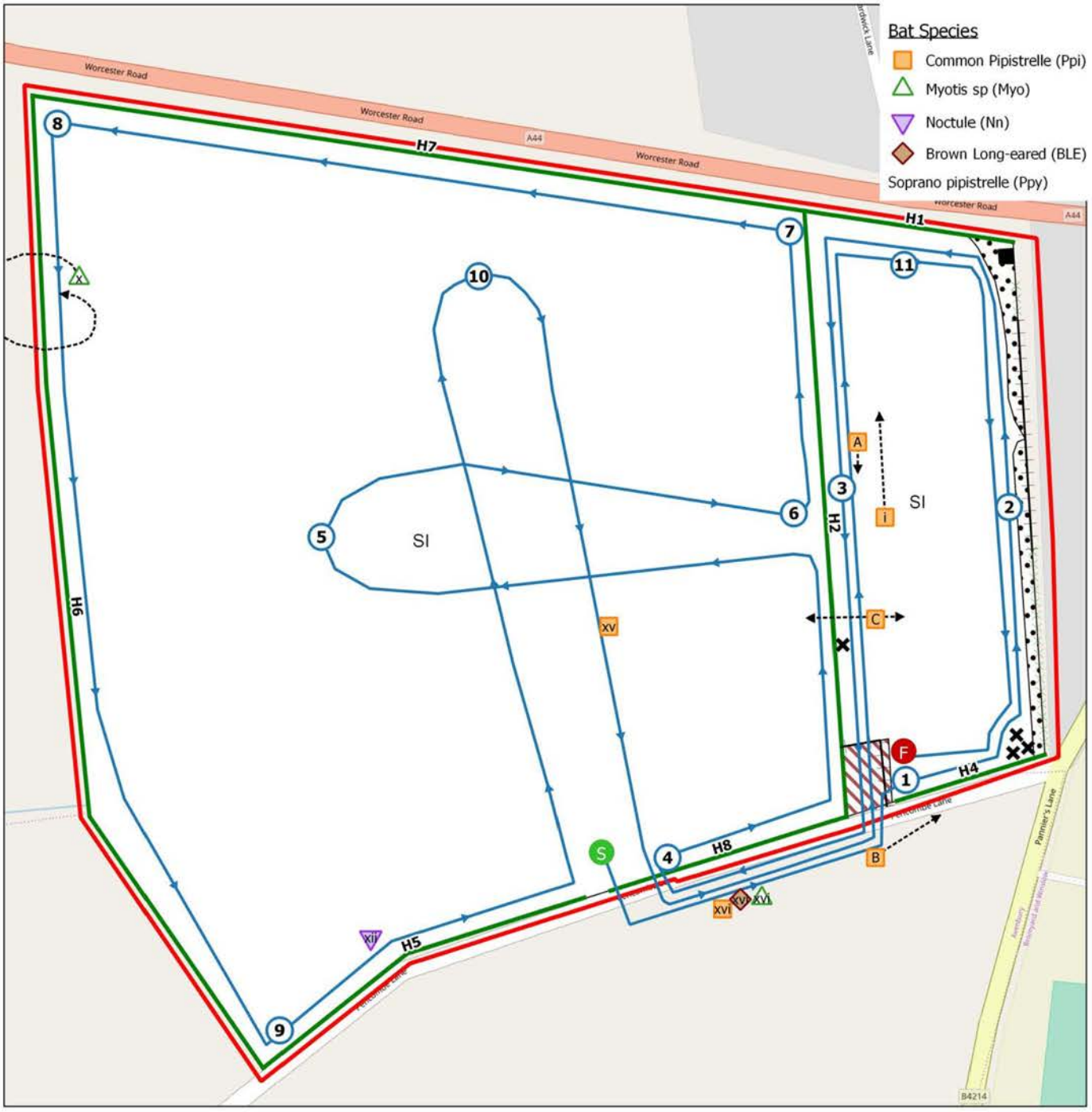
client: Gladman Developments

project: Land off Pencombe Lane Bromyard, Herefordshire

drawing title: BAT TRANSECT RESULTS 20/8/18

scale @ A3: 1:1,100 | drawn: EJW | date: 21/9/2018

drawing / figure number: **Figure 3c** | rev: **6158-E-3c**




| Ref | Time | Species | Behaviour | Habitat | Passes |
|---|---|---|---|---|---|
| PC 1 | 19:34-19:39 | | | | |
| PC 2 | 19:41-19:46 | | | | |
| A | 19:50 | Ppi | | Hedgerow | 1 |
| PC 3 | 19:51-19:56 | | | | |
| i | 19:53 | Ppi | F | Hedgerow | 1 |
| B | 19:58 | Ppi x2 | F | Lane | 4\|2 |
| NV | 20:00 | Ppi | F | Lane | 2 |
| PC 4 | 20:03-20:08 | | | | |
| ii | 20:04 | Ppi | F | Field | 2 |
| iii | 20:05 | Ppi | F | Lane | 2 |
| PC 5 | 20:11-20:16 | | | | |
| C | 20:18 | Ppi | F | Field | 3 |
| PC 6 | 20:19-20:24 | | | | |
| iv | 20:19 | Ppi | F | Field | 2 |
| v | 20:23 | Ppi | P | Field | 1 |
| PC 7 | 20:25-20:30 | | | | |
| vi | 20:26 | Ppi | F | Field | 2 |
| vii | 20:28 | Ppi | F | Field | 4 |
| viii | 20:30 | BLE | P | Field | 1 |
| NV | 20:33 | Ppi/BLE | F | Field | 5\|4 |
| NV | 20:34 | Ppy/Ppi | F | Hedgerow | 3\|4 |
| NV | 20:34 | Myo | F | Hedgerow | 1 |
| PC 8 | 20:35-20:40 | | | | |
| ix | 20:35 | Ppy | F | Hedgerow | 2 |
| x | 20:36 | Myo | P | Hedgerow | 2 |
| xi | 20:38 | Ppy/Ppi | S/F | Hedgerow | 3\|3 |
| xii | 20:38 | BLE/Myo | F/P | Hedgerow | 2\|3 |
| NV | 20:40 | Myo/Ppi | P | Hedgerow | 2\|3 |
| NV | 20:42 | Myo | F | Hedgerow | 6 |
| NV | 20:45 | Ppi/Myo | F/P | Hedgerow | 4\|1 |
| NV | 20:48 | Ppi | P | Hedgerow | 2 |
| PC 9 | 20:50-20:55 | | | | |
| xiii | 20:58 | Nn | P | Field | 1 |
| xiv | 20:59 | Ppi | P | Field | 1 |
| PC 10 | 21:05-21:10 | | | | |
| xv | 21:08 | Ppi | P | Lane | 1 |
| xvi | 21:13 | Ppi | P | Lane | 2 |
| xvii | 21:16 | Ppi/BLE | P | Lane | 1\|2 |
| xviii | 21:16 | Myo | P | Lane | 2 |
| xix | 21:17 | Myo | P | Lane | 1 |
| xx | 21:20 | Ppi | P | Hedgerow | 1 |
| PC 11 | 21:21-21:27 | | | | |
| xxi | 21:26 | Ppi | P | Hedgerow | 2 |



## Key:

Site Boundary

- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Path

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J:\6100\6158\ECO\Bats\Update 2018\Bat Transect Plan Sept Dusk 2018

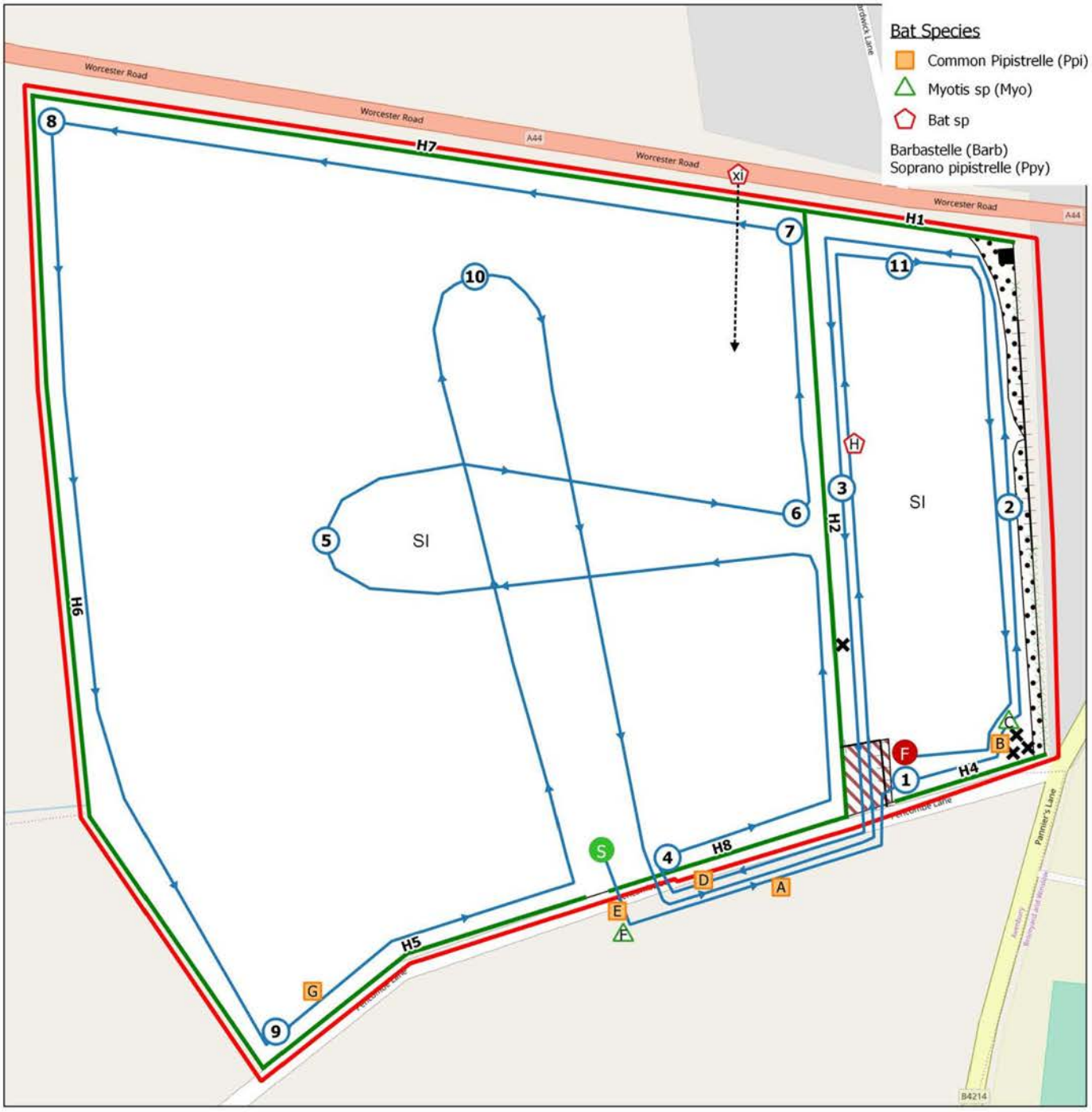
client: Gladman Developments

project: Land off Pencombe Lane Bromyard, Herefordshire

drawing title: BAT TRANSECT RESULTS 13/9/18

scale @ A3: 1:1,100 | drawn: EJW | issue: 21/9/2018

drawing / figure number: **Figure 3d** | rev: **6158-E-3d**




| Ref | Time | Species | Behaviour | Habitat | Passes |
|---|---|---|---|---|---|
| A | 04:43 | Ppi | C | Hedge | 2 |
| PC 1 | 04:46-04:51 | | | | |
| i | 04:46 | Bat | P | Hedge | 1 |
| ii | 04:48 | Ppi | P | Hedge | 1 |
| iii | 04:50 | Barb | P | Hedge | 1 |
| iv | 04:51 | Barb | P | Hedge | 1 |
| B | 04:52 | Ppi | P | Hedge | 1 |
| C | 04:52 | Myo | P | Hedge | 2 |
| PC 2 | 04:54-04:59 | | | | |
| PC 3 | 05:01-05:06 | | | | |
| D | 05:07 | Ppi | C | Hedge | 1 |
| E | 05:10 | Ppi | F | Hedge | 2 |
| F | 05:10 | Myo | C/F | Hedge | 1 |
| PC 4 | 05:13-05:18 | | | | |
| v | 05:15 | Bat | P | Field | 1 |
| PC 5 | 05:22-05:29 | | | | |
| PC 6 | 05:31-05:37 | | | | |
| PC 7 | 05:38-05:43 | | | | |
| vi | 05:41 | Ppy | C/F | Field | 4 |
| vii | 05:41 | Ppi | C | Field | 2 |
| viii | 05:43 | Ppi | C | Field | 1 |
| ix | | Ppy | C | Field | 1 |
| PC 8 | 05:48-05:57 | | | | |
| x | 05:49 | Ppi | C | Field | 2 |
| xi | 05:55 | Bat | P | Field | 1 |
| PC 9 | 06:01-06:06 | | | | |
| xii | 06:02 | Ppi | C | Field | 1 |
| xiii | 06:06 | Ppi | C | Field | 1 |
| G | 06:07 | Ppi | F | Field | 3 |
| PC 10 | 06:11-06:17 | | | | |
| H | 06:25 | Bat | P | Field | 1 |
| PC 11 | 06:28-06:34 | | | | |
| PC 1 | 06:38-06:43 | | | | |



## Key:

Site Boundary

- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Path

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0 25 50 m

J:\6100\6158\ECO\Bats\Update 2018\Bat Transect Plan Sept Dawn 2018

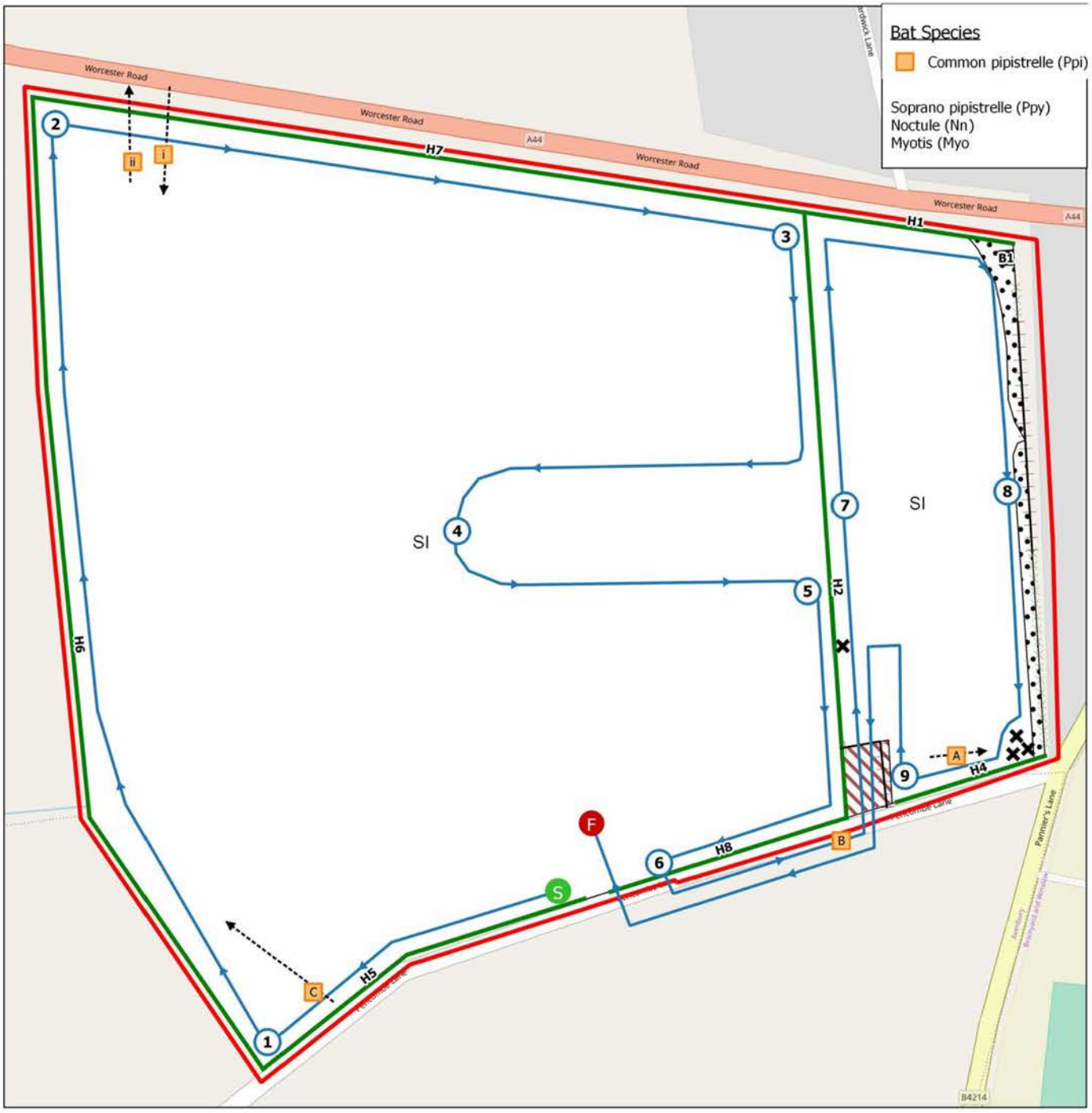
client: Gladman Developments

project: Land off Pencombe Lane Bromyard, Herefordshire

drawing title: BAT TRANSECT RESULTS 14/9/18

scale @ A3: 1:1,100 | drawn: EJW | issue: 21/9/2018

drawing / figure number: **Figure 3e** | rev: **6158-E-3e**




| Ref | Time | Species | Behaviour | Habitat | Passes |
|---|---|---|---|---|---|
| PC1 | 18:39-18:44 | | | | |
| PC2 | 18:48-18:53 | | | | |
| | 18:53 | Ppi | P | Hedgerow | 1 |
| PC3 | 18:56-19:01 | | | | |
| PC4 | 19:02-19:07 | | | | |
| PC5 | 19:09-19:14 | | | | |
| | 19:09 | Ppy | P | Hedgerow | 3 |
| PC6 | 19:16-19:21 | | | | |
| | 19:17 | Ppy | P | Hedgerow | 4 |
| | 19:19 | Ppi | P | Hedgerow | 1 |
| PC7 | 19:24-19:29 | | | | |
| | 19:26 | Ppi | P | Hedgerow | 5 |
| PC8 | 19:32-19:37 | | | | |
| | 19:37 | Ppi | P | Hedgerow | 1 |
| A | 19:38 | Ppi | F | Hedgerow | 4 |
| PC9 | 19:38-19:43 | | | | |
| | 19:41 | Ppi | P | Hedgerow | 2 |
| | 19:43 | Ppi + Myo | P S | Hedgerow | 2 |
| B | 19:44 | Ppi | P | Hedgerow | 1 |
| C | 19:48 | Ppi | P | Hedgerow | 1 |
| PC1 | 19:48-19:53 | | | | |
| | 19:49 | Nn | P S | Hedgerow | 1 |
| | 19:52 | Myo | P | Hedgerow | 1 |
| PC2 | 19:56-20:01 | | | | |
| i | 19:56 | Ppi | P | Hedgerow | 5 |
| i | 19:59 | Ppi + Myo | P | Hedgerow | cont. |
| ii | 20:01 | Ppi | P | Hedgerow | 1 |
| PC3 | 20:03-20:08 | | | | |
| PC4 | 20:09-20:14 | | | | |
| PC5 | 20:16-20:21 | | | | |
| PC6 | 20:22-20:27 | | | | |
| | 20:24 | Ppi | P | Hedgerow | 3 |
| | 20:26 | Psp | P | Hedgerow | 1 |
| PC7 | 20:30-20:35 | | | | |
| | 20:32 | Ppi | P | Hedgerow | 1 |
| PC8b | 20:36-20:41 | | | | |
| PC9 | 20:44-20:49 | | | | |
| | 20:44 | Ppi | P | Hedgerow | 1 |



## Key:

Site Boundary

- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Path

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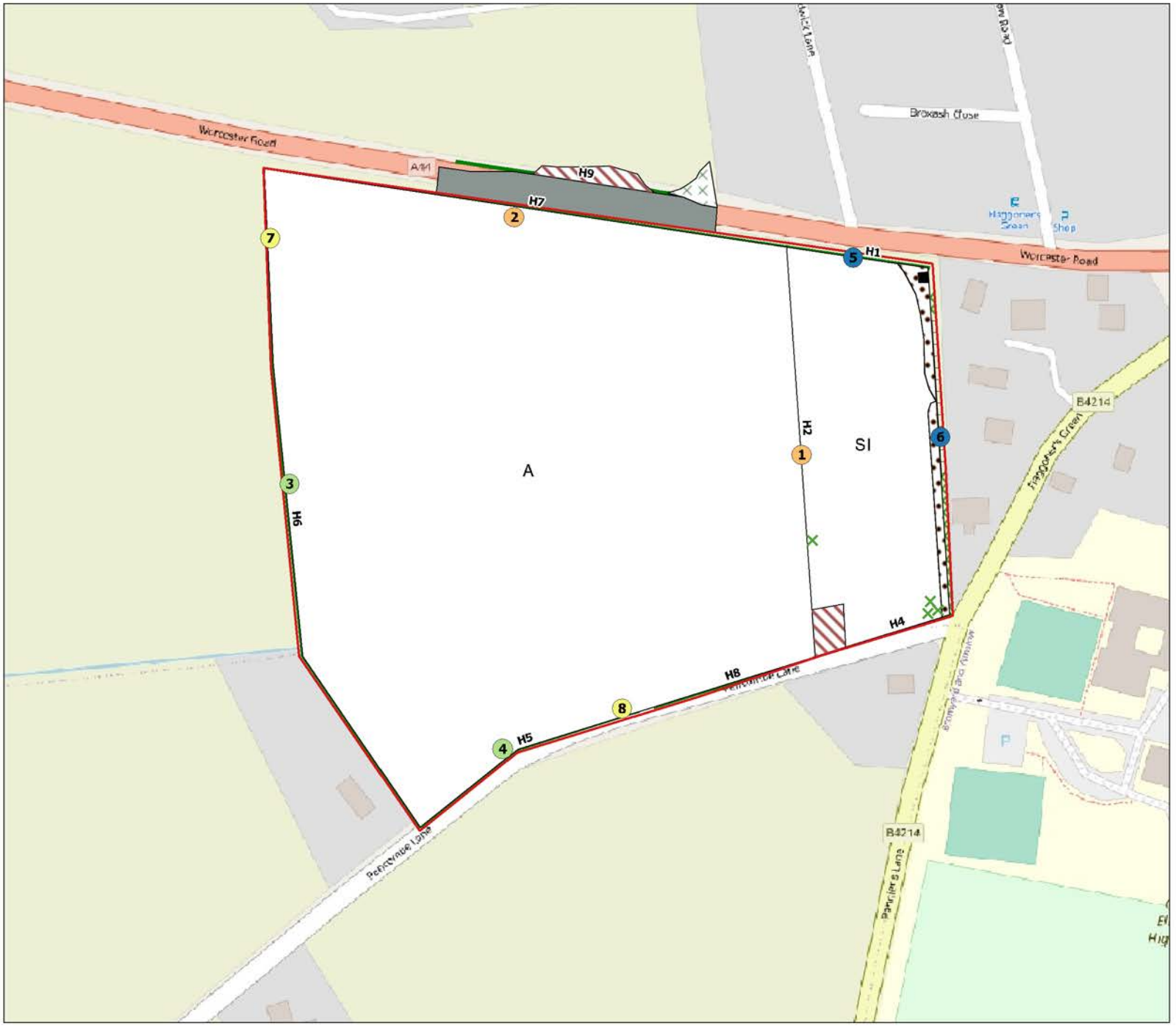
J:\6100\6158\ECO\Bats\Update 2018\Bat Transect Plan Sept Dawn 2018

client: Gladman Developments
project: Land off Pencombe Lane Bromyard, Herefordshire
drawing title: BAT TRANSECT RESULTS 08/10/18

scale @ A3: 1:1,100 | drawn: DJF | issue: 10/10/2018
drawing / figure number: **Figure 3f** | rev: **6158-E-3f**






## Key:

- Site Boundary
- Hardstanding
- Buildings
- Bare ground
- Scattered scrub
- Tall ruderal vegetation
- SI Poor semi-improved grassland
- A Arable land

Static Detector Location (with reference)

- July
- August
- September
- October

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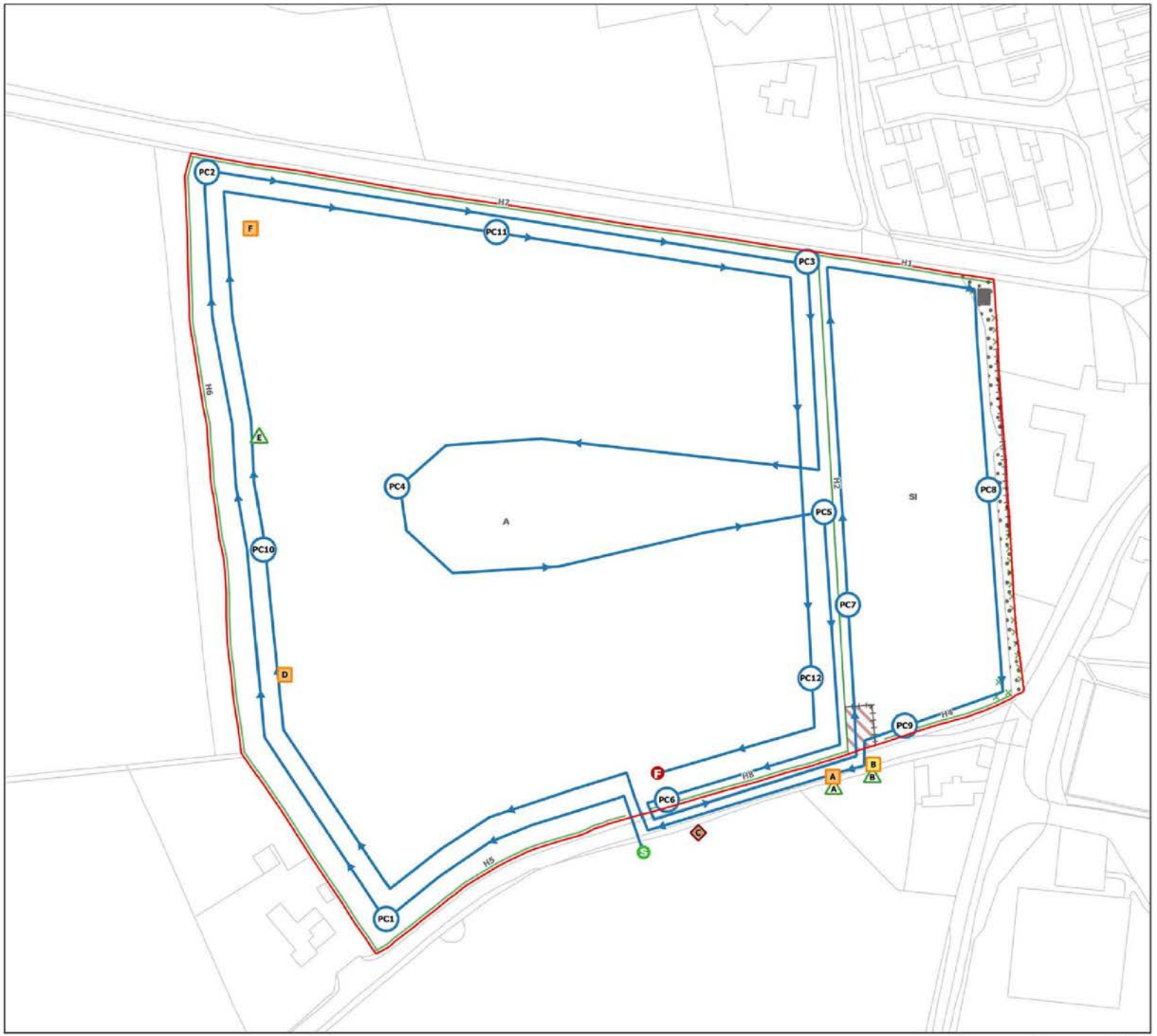
0 25 50 75 100 m

client: Gladman Developments Ltd
project: Land off Pencombe Lane, Bromvard
drawing title: PHASE 1 AND STATIC LOCATION PLAN 2021
scale @ A2: 1:1500
drawn: DJF
issue: 19/11/202
drawing / figure number: **Figure 4**
rev: -

J:\6100\6158\QGIS\Plans\2021 Update\Static Location Plan 2021.qgs.qgz






## Key

- Site Boundary
- Point Count Locations (with reference)
- Start point
- Start Point
- Transect Route

**Bat Contacts (with reference)**

- Common Pipistrelle
- Soprano Pipistrelle
- Brown Long-eared
- Myotis Species

| | |
|---|---|
| Date | 28.07.21 |
| Start Time | 21:08 |
| End Time | 23:08 |
| Sunset | 21:08 |
| Start Temp | 14C |
| End Temp | 12C |
| Cloud Cover | 10% |
| Wind | 2 |
| Rain | 0 |

| Ref. | Time | Species | Behaviour | Passes | Comments |
|---|---|---|---|---|---|
| PC1 | 21:11-21:16 | No Bats | | | |
| PC2 | 21:21-21:26 | No Bats | | | |
| PC3 | 21:32-21:37 | No Bats | | | |
| PC4 | 21:41-21:46 | No Bats | | | |
| PC5 | 21:49-21:54 | No Bats | | | |
| PC6 | 21:57-22:03 | | | | |
| I | 22:02 | C. Pip | Commuting | 2 | NV |
| A | 22:04 | Myotis sp. ; C. Pip | Pass | 1 | NV |
| B | 22:05 | Myotis sp. ; S. Pip | Foraging | Constant | NV |
| PC7 | 22:09-22:14 | No Bats | | | |
| PC8 | 22:20-22:25 | No Bats | | | |
| PC9 | 22:29-22:34 | No Bats | | | |
| C | 22:37 | Brown Long-eared | Pass | 1 | NV |
| D | 22:41 | C. Pip | Foraging | Constant | NV |
| P10 | 22:43:22:48 | No Bats | | | |
| E | 22:50 | Myotis sp. | Pass | 1 | NV |
| F | 22:51 | C. Pip | Pass | 1 | NV |
| PC11 | 22:52-22:57 | No Bats | | | |
| PC12 | 23:02-23:07 | No Bats | | | |

*Lower case numerals denote bat contact within point count

0 25 50 m

client: Gladman Development Ltd.

project: Land off Pencombe Lane, Bromyard

drawing title: BAT TRANSECT SURVEY RESULTS PLAN - JULY 2021

scale @ A3: 1:1250 | drawn: LC/EH | date: 30/11/2021

drawing / figure number: **Figure 5A** | rev: -

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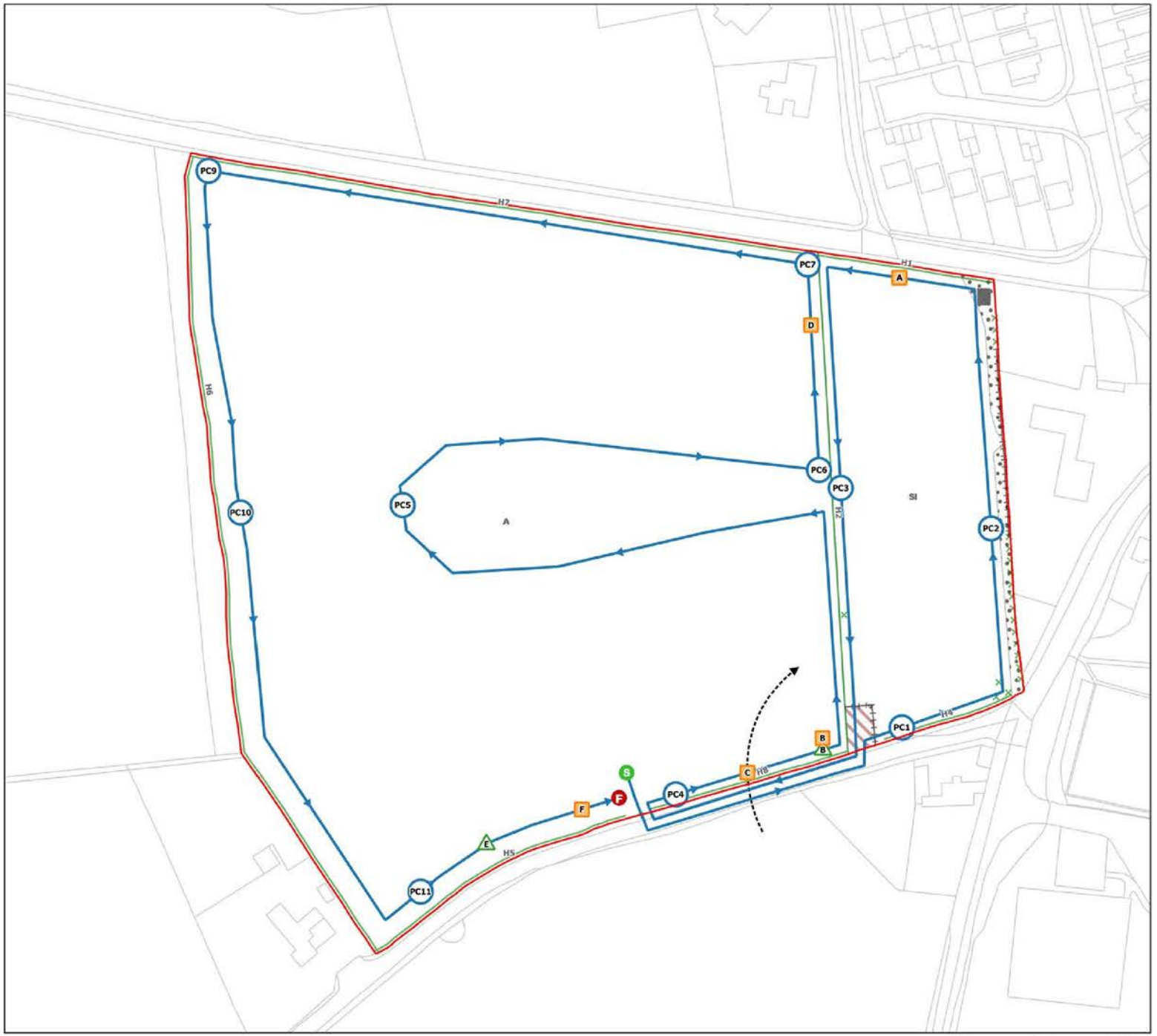
J:\6100\6158\QGIS 2021\QGIS 2.14\Plans\Bat Figures\Transect Plans\6158-E-01 Bat Transect Survey Results Plan - July 2021.qgs






## Key

- Site Boundary
- Point Count Locations (with reference)
- Start point
- Finish point
- Transect Route
- Flight Paths

**Bat Contacts (with reference)**

- Common Pipistrelle
- Myotis Species

| | |
|---|---|
| Date | 19.08.2021 |
| Start Time | 20:28 |
| End Time | 22:28 |
| Sunset | 20:26 |
| Start Temp | 18C |
| End Temp | 16C |
| Cloud Cover | 95% |
| Wind | 1 |
| Rain | 0 |

| Ref. | Time | Species | Behaviour | Passes | Comments |
|---|---|---|---|---|---|
| PC1 | 20:36-20:43 | No Bats | | 0 | |
| PC2 | 20:45-20:50 | No Bats | | 0 | |
| A | 20:52 | C. Pip | Commuting/Social calls | 1 | NV |
| PC3 | 20:55-21:00 | No Bats | | 0 | |
| B | 21:03 | Myotis sp. ; | Commuting/Social calls | 2 | NV |
| | | C. Pip | Commuting/Social calls/Foraging | 6 | NV |
| C | 21:05 | C. Pip | Commuting | 2 | |
| PC4 | 21:06-21:11 | | | 0 | |
| i | 21:10 | C. Pip | Commuting | 2 | NV |
| PC5 | 21:15-21:23 | No Bats | | 0 | |
| D | 21:25 | C. Pip | Commuting | 1 | NV |
| PC6 | 21:26-21:31 | No Bats | | 0 | |
| PC7 | 21:32-24:40 | | | 0 | |
| ii | 21:35 | C. Pip | Commuting/Foraging | 3 | NV |
| iii | 21:36 | Myotis sp. | Commuting | 1 | NV |
| iv | 21:40 | S. Pip | Commuting | 1 | NV |
| PC8 | 21:41-21:46 | | | 0 | |
| v | 21:44 | C. Pip | Commuting | 2 | |
| PC9 | 21:48-21:54 | | | 0 | |
| vi | 21:51 | C. Pip | Commuting | 5 | |
| vii | 21:52 | Myotis sp. | Commuting | 2 | |
| PC10 | 21:56-22:05 | | | 0 | |
| viii | 21:56-22:02 | C. Pip | Commuting | 3 | |
| ix | 22:04 | Noctule | Commuting/Foraging | 1 | |
| x | 22:05 | C. Pip | Commuting | 1 | |
| PC11 | 22:09-22.18 | | | 0 | |
| xi | 22:09 | C. Pip | Commuting | 4 | |
| xii | 22:11 | S. Pip | Commuting | 1 | |
| E | 22:20 | Myotis sp. | Commuting | 1 | |
| F | 22:27 | C. Pip | Commuting/Social calls | 1 | |

*Lower case numerals denote bat contact within point count

0 25 50 m

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client: Gladman Development Ltd.

project: Land off Pencombe Lane, Bromyard

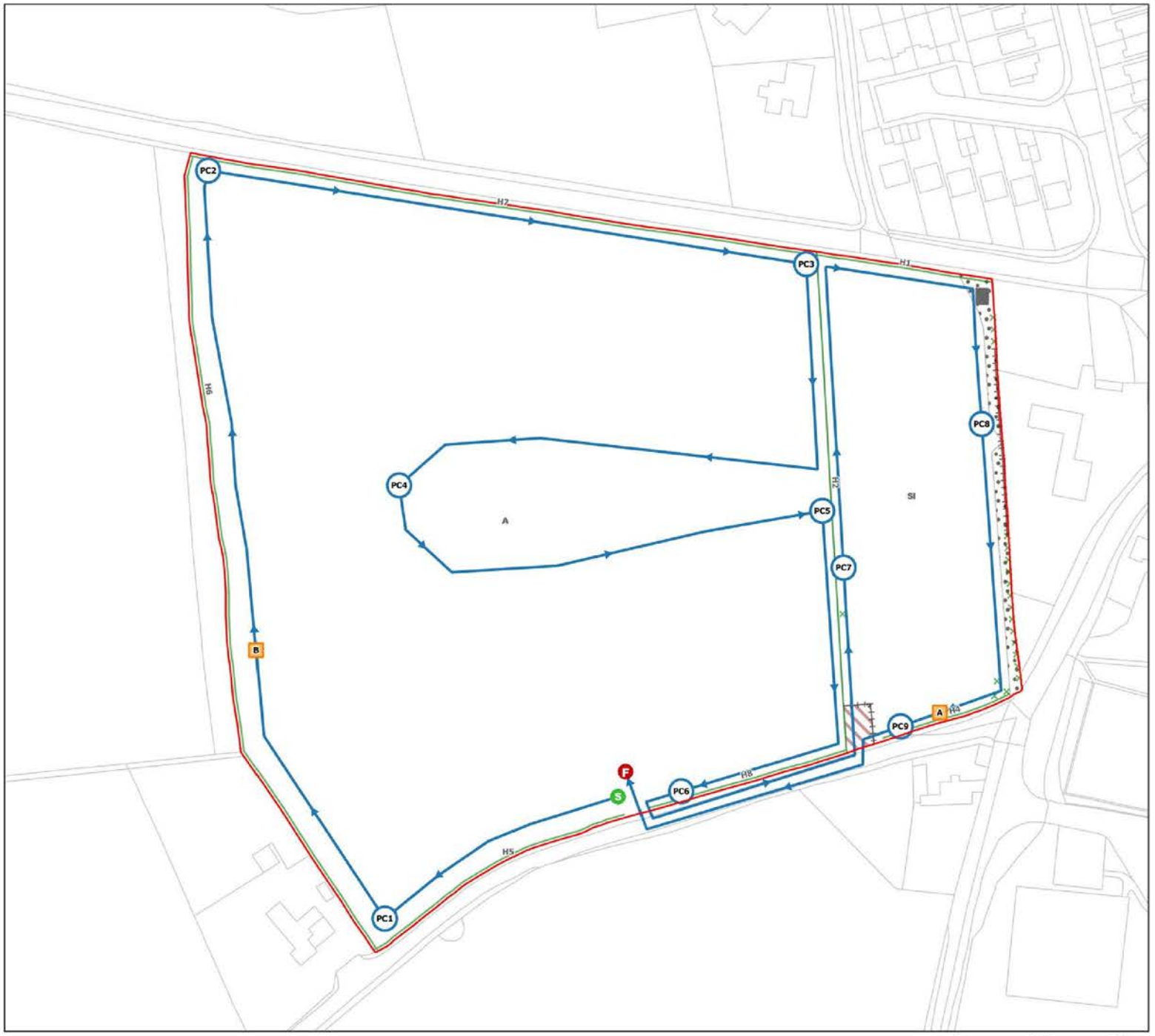
drawing title: BAT TRANSECT SURVEY RESULTS PLAN - AUGUST 2021

scale @ A1: 1:1250 | drawn: EH | issue: 30/11/2021

drawing / figure number: **Figure 5B** | rev: -

N

J:\6100\6158\QGIS 2021\QGIS 2.14\Plans\Bat Figures\Transect Plans\6158-E-02 Bat Transect Survey Results Plan - August 2021.qgs






## Key

- Site Boundary
- Point Count Locations (with reference)
- Start point
- Finish point
- Transect Route

**Bat Contacts (with reference)**

- Common Pipistrelle

| | |
|---|---|
| Date | 23.09.21 |
| Start Time | 19:07 |
| End Time | 21:07 |
| Sunset | 19:07 |
| Start Temp | 17C |
| End Temp | 16C |
| Cloud Cover | 5% |
| Wind | 0 |
| Rain | 0 |

| Ref. | Time | Species | Behaviour | Passes | Comments |
|---|---|---|---|---|---|
| PC1 | 19:16-19:21 | No Bats | | 0 | |
| PC2 | 19:25-19:30 | No Bats | | 0 | |
| PC3 | 19:33-19:38 | No Bats | | 0 | |
| PC4 | 19:40-19:45 | No Bats | | 0 | |
| PC5 | 19:46-19:51 | No Bats | | 0 | |
| PC6 | 19:53-19:58 | No Bats | | 0 | |
| i | 19:59 | C. Pip | Commuting | 1 | NV |
| PC7 | 20:03-20:08 | | | 0 | |
| ii | 20:05 | C. Pip | Commuting | 1 | NV |
| PC8 | 20:13-20:18 | No Bats | | 0 | |
| A | 20:20 | C. Pip | Commuting | 1 | NV |
| PC9 | 20:22-20:27 | No Bats | | 0 | |
| New lap | | | | 0 | |
| PC1 | 20:31-20:36 | | | 0 | |
| iii | 20:31 | C. Pip | Commuting | 1 | NV |
| iv | 20:32 | C. Pip | Commuting | 4 | NV |
| B | 20:38 | C. Pip | Commuting | 2 | NV |
| PC2 | 20:41-20:46 | | | 0 | |
| v | | C. Pip | Commuting | 1 | NV |
| PC3 | 20:49-20:54 | No Bats | | 0 | |
| PC4 | 20:57-21:02 | No Bats | | 0 | |
| PC5 | 21:03-21:07 | No Bats | | 0 | |

*Lower case numerals denote bat contact within point count

client
Gladman Development Ltd.

project
Land off Pencombe Lane, Bromyard

drawing title
BAT TRANSECT SURVEY RESULTS PLAN - SEPTEMBER DUSK 2021

scale @ A1 1:1250 | drawn EH | issue 30/11/2021

drawing / figure number **Figure 5D** | rev -

N

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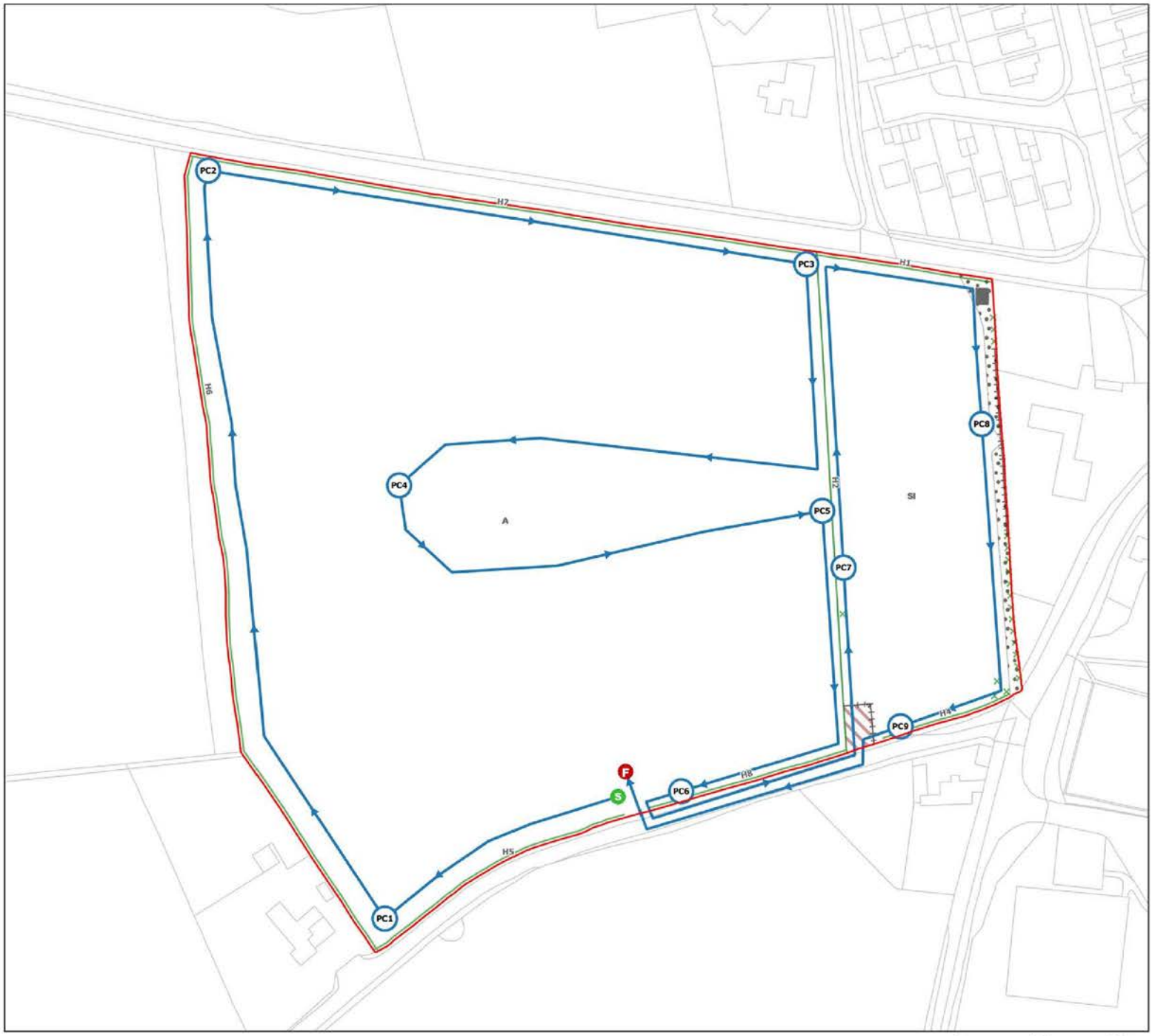




## Key

- Site Boundary
- Point Count Locations (with reference)
- Start point
- Finish point
- Transect Route

| | |
|---|---|
| Date | 24.09.21 |
| Start Time | 04:59 |
| End Time | 06:59 |
| Sunrise | 06:59 |
| Start Temp | 4C |
| End Temp | 10C |
| Cloud Cover | 0 |
| Wind | 1 |
| Rain | 0 |

| Ref. | Time | Species | Behaviour | Passes | Comments |
|---|---|---|---|---|---|
| PC1 | 05:00-05:05 | No Bats | | | |
| PC2 | 05:10-05:15 | | | | |
| i | | Myotis sp. | Commuting | 1 | NV |
| PC3 | 05:18-05:23 | No Bats | | | |
| PC4 | 05:25-05:30 | No Bats | | | |
| PC5 | 05:34-05:39 | No Bats | | | |
| PC6 | 05:42-05:47 | No Bats | | | |
| PC7 | 05:48-05:53 | No Bats | | | |
| PC8 | 05:58-06:03 | | | | |
| ii | | Myotis sp. | Commuting | 1 | NV |
| PC9 | 06:05-06:10 | No Bats | | | |
| New lap | | | | | |
| PC1 | 06:14-06:19 | No Bats | | | |
| PC2 | 06:23-06:28 | | | | |
| iii | | S. Pip | | Constant | Circling roost behaviour, roosted in oak tree |
| PC3 | 06:33-06:38 | No Bats | | | |
| PC4 | 06:39-06:44 | No Bats | | | |
| PC5 | 06:45-06:50 | No Bats | | | |
| PC6 | 06:51-06:56 | No Bats | | | |

*Lower case numerals denote bat contact within point count

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client: Gladman Development Ltd.

project: Land off Pencombe Lane, Bromyard

drawing title: BAT TRANSECT SURVEY RESULTS PLAN - SEPTEMBER DAWN 2021

scale @ A1: 1:1250 | drawn: EH | issue: 30/11/2021

drawing / figure number: **Figure 5C** | rev: -

N

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