



Gladman Developments

Land off York Close, Market Bosworth

BAT SURVEY REPORT

November 2024

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Rev	Issue Status	Prepared / Date	Checked / Date	Approved / Date
-	Final	DL / MPG / 29.10.24		KDG / 31.10.24
A	Final	MPG / 15.11.24		

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1.0 INTRODUCTION

- 1.1 The following report has been prepared by FPCR Environment and Design Ltd (FPCR) on behalf of by Gladman Developments and provides the results of bat surveys undertaken to inform a proposed development located at Land off York Close, Market Bosworth, Leicestershire. The central OS Grid Ref is SK 402 026 and hereafter referred to as the 'study area' or 'proposals'.
- 1.2 Surveys completed in 2024 and presented include:
- Ground assessment of trees.
 - Internal/External Building Assessment of buildings
 - Nocturnal surveys undertaken on buildings
 - Nighttime Bat Walkover (Flightpath / Transects Surveys)
 - Static bat recordings using SM4Bat FS.
- 1.3 Please note that this document should be read in conjunction with the Ecological Appraisal (FPCR, July 2024).

Study Area Location and Context

- 1.4 The study area comprised two modified grassland field compartments. Study area and field compartment boundaries were formed by hedgerows, fence lines and walls. Other habitats present either within or bounding the study area included broadleaved tree lines and standard trees, scattered scrub and buildings/built structures.
- 1.5 Habitat north of the study area comprised existing residential development, Shenton Lane and allotments abutted the eastern boundary, habitat to the south was grassland pasture fields whilst habitat to the west was arable fields.

Development Proposals

- 1.6 Development proposals are for the outline planning application for up to 100 dwellings including landscaping, open space and associated infrastructure, with access via the demolition of 35 York Close to the north (hereafter referred to as 'the proposals'). Development proposals can be viewed as 10352-FPCR-L-03-K DEVELOPMENT FRAMEWORK.

2.0 METHODOLOGY

Desktop Survey

- 2.1 To support the field surveys and to compile existing baseline data for the site, ecological information was sought from third parties, including records of protected or notable species and sites designated for nature conservation interest. Organisations contacted included:
- Leicestershire and Rutland Environmental Records Centre (LRERC).
 - The Multi Agency Geographic Information for the Countryside (MAGIC) website ¹consulted for the presence of European Protected Species Licences (EPSL) within 2km of the survey Site and 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 5km of Site.
- 2.2 The results are presented in the EcoApp (FPCR, July 2024).

Tree Roost Assessments

Preliminary Roost Assessment (Ground Level)

- 2.3 Preliminary Roost Assessments (PRA) were undertaken from ground level, with the aid of binoculars (where appropriate). These surveys were undertaken on 28th May 2024 by an experienced ecologist.
- 2.4 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 cavities created by branches tearing out from parent stems).
 - Man-made holes (e.g. cavities that have developed from flush cuts or branches previously pruned back to a branch collar).
 - Woodpecker holes.
 - Cracks/splits in stems or branches (horizontal and vertical).
 - Partially detached, loose 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 >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.

¹ Multi Agency Geographic Information for the Countryside (MAGIC) (<http://magic.defra.gov.uk>)

- Other suitable places of rest or shelter.
- 2.5 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.
- 2.6 Using professional judgement, the ground-based PRA assessment classified any trees identified based upon the presence of suitable features as set out in Bat Surveys for Professional Ecologists: Good Practice Guidelines (J., Collins (Bat Conservation Trust), 2023²) in which the general bat roost potential groups are defined (refer Table 4.2 of the guidelines) and provided in Table 1 below.

Table 1: Suitability of trees for bats

Suitability	Description
NONE	Either no potential roost features or highly unlikely to be any.
FAR	F urther A ssessment R equired to establish if Potential Roost Features are present.
PRF	A tree with at least one P otential R oost F eature.

Building Assessments

Preliminary Roost Assessment

- 2.7 Internal and external building assessments were undertaken on two buildings (B1 and B2) at the Site to determine any potential access points and roost sites on 28th May 2024 and 7th June 2024. The assessment was completed considering the guidance provided in chapters 4 and 5 of the Bat Surveys for Professional Ecologists, Good Practice Guidelines, (2023)³.

External Building Assessment

- 2.8 The exterior of the buildings was visually assessed for potential access points and evidence of bat activity. Features such as small gaps under barge/soffit/fascia boards, raised or missing ridge tiles and gaps at gable ends, which have potential to be used as access points, were sought. In addition, structural features were noted that could provide suitable hibernation potential or not. Evidence that bats actively used potential access points includes staining within gaps and bat droppings or urine staining under gaps, a note being made wherever these were present. Where they could be safely accessed crevices were inspected for the presence of bats or their signs using torches, mirrors and endoscopes.

Internal Assessment

- 2.9 The interior of the buildings where possible, including all accessible roof voids, were also visually assessed with the aid of an endoscope, mirrors and torches to identify potential or actual bat access points and roosting places and for evidence of current or past bat roosts. Definitive evidence of a bat roosts was determined by the presence of:
- Dead or live bat(s); and/or
 - Droppings.

² Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust

³ Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.

- 2.10 Other less definitive signs were also sought as indicators of potential roosting bats, these included:
- Urine staining;
 - Fur-oil staining;
 - Feeding remains such as moth wing fragments;
 - Audible calls;
- 2.11 The absence of any of the above evidence was not considered to be definitive evidence that no roosts were present as bats may leave no visible sign of their presence particularly where they occupy inaccessible or hidden spaces within a building.
- 2.12 Subsequently, the buildings (or where relevant, sections of) were categorised according to their suitability to support roosting bats and whether they provide classic or non-classic hibernation potential or not. These were classified according to the features present within the buildings (see Table 2).

Potential Bat Roosting Suitability

- 2.13 Following the internal and external assessments each building was assigned a category according to its roosting suitability which is based on Table 4.1 of Collins (2023), this potential suitability is used to indicate the likely requirements for any further surveys to determine the presence or absence of roosting bats.

Table 2: Building bat roost habitat classifications (based on Table 4.1 Collins, 2023)

Roost Suitability	Description of Roosting Habitats	Further Survey Requirements to Provide Confidence in the Likely Absence of Roosting Bats Within a Structure
None	No habitat features on site that are likely to be used by bats at any time of the year.	No further surveys or consideration of roosting bats is required.
Negligible	No obvious habitat features are present that are likely to be used by roosting bats, but features may be present where a bat could theoretically roost but it is considered very unlikely.	No further surveys are required, but some vigilance may be required if the feature is impacted.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or classic hibernation roost).	Up to one single dusk emergence survey undertaken between May and August. (requirement is based on professional judgment). Precautionary method statement if works are to be undertaken during the winter period (where non-classic hibernation potential exists).

Roost Suitability	Description of Roosting Habitats	Further Survey Requirements to Provide Confidence in the Likely Absence of Roosting Bats Within a Structure
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Two separate dusk emergence surveys undertaken between May and September and at least one between May and August and spread at least 3 weeks apart. Precautionary method statement if works are to be undertaken during the winter period (where non classic hibernation potential exists).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support High conservation status roosts such as those used for maternity or hibernation (classic site).	Three separate dusk emergence surveys undertaken between May and September and at least two between May and August and spread at least 3 weeks apart. Where classic hibernation potential is present hibernation surveys should be undertaken during the winter period.
A classic hibernation site is considered to provide stable climatic conditions including temperature humidity, and light level such as, but not exclusively limited to underground structures which are subject to low levels of disturbance or species-specific habitual requirements such as where brown long eared bats often use a the same roosts for maternity and hibernation purposes. A non-classic hibernation site is a location which does conform to the criteria above but could be used by individual hibernating bats. It usually not possible to identify non-classic hibernation sites through surveys work.		

DNA Sampling

- 2.14 Faecal samples found within building B1 were collected for DNA analysis in accordance with the protocol outlined within Appendix 4 of the BCT Good Practice Guidelines.
- 2.15 Sampling was undertaken on 28th May 2024 when droppings were selected by the most recent and intact samples and carefully gathered to avoid cross contamination.
- 2.16 Samples were placed in Eppendorf plastic tubes and transported to Ecotype Genetics Ltd. laboratory at Sussex Innovation Centre, Brighton for analysis. Samples were subjected to a quantitative polymerase chain reaction (qPCR) analysis. DNA is extracted from ~0.2g faecal material using a standard protocol⁴. Species identification was carried out by first testing for common or soprano pipistrelle, brown-long-eared or *Myotis* genus bats. If *Myotis* was present, a further test was then run to identify the particular species.
- 2.17 The use of qPCR provides a binary yes or no result. The technique uses species specific primers; therefore, a positive result is only given if DNA from the matching species is present. Each species-

⁴ Croose, E., Birks, J.D., O'Reilly, C., Turner, P., Martin, J. and MacLeod, E.T. (2016) Sample diversity adds value to non-invasive genetic assessment of a pine marten (*Martes martes*) population in Galloway Forest, Southwest Scotland. *Mammal Research* 61, 131-139

specific primer is tested against all other species to ensure no cross reactivity. Furthermore, during the reaction, each species test is run in duplicate, and a result is only given if both replicates give the same result.

Nocturnal Surveys

- 2.18 Following the building assessment survey on 7th May 2024 the structure of and features associated with Buildings B1 were considered to present High potential to support roosting bats. Due to the presence of suitable potential roosting features identified, three nocturnal bat surveys were carried out at least three weeks apart.
- 2.19 During the nocturnal surveys, 2 surveyors were positioned so that all aspects of the building with the potential to support bats could be observed as shown in Figure 1. The emergence surveys commenced at least 15 minutes prior to sunset until at least 90 minutes following sunset. The number and species of bats observed emerging or entering the buildings was recorded.
- 2.20 Any notable activity patterns including commuting and/or foraging within the vicinity of the building was recorded.
- 2.21 Echo Meter Touch® (Wildlife Acoustics, Inc.) bat detectors were utilised in conjunction with Echo Meter Touch® app. Where necessary to confirm species identification Bat calls were analysed using the Kaleidoscope Viewer® (Wildlife Acoustics, Inc.) software package.
- 2.22 Surveyors were equipped with night vision aids (NVA's) to enhance visibility of the survey area throughout the survey. NVA's were set to record for the duration of the survey, where roosting bats were observed or uncertain behaviours observed, footage was extracted, analysed and saved. A still shot of the darkest point of the survey was also extracted and saved and are included in Appendix A. NVA's used were Nightfox Whisker night vision binoculars with a Nightfox XB10 IR torch for each unit.
- 2.23 All of the nocturnal surveys were conducted in appropriate conditions, i.e. ambient temperature exceeding 10°C and little wind and no rain, details are provided in Table 3 below.

Table 3 – Summary of Nocturnal Survey Dates and Conditions

Survey date	Buildings covered	Start / Finish	Sunset	Conditions
01.07.24	B1	21:18 to 23:33	21:33	15°C, 100% cloud cover, 1 BF, no rain.
05.08.24	B1	20:35 to 22:50	20:50	21°C, 100% cloud cover, 2 BF, no rain.
27.08.24	B1	19:50 to 22:05	20:05	20°C, 90% cloud cover, 1 BF, no rain.

Bat Activity Surveys

Habitat Assessment

- 2.24 This assessment was undertaken to identify the suitability of the Site to foraging and commuting bats or areas which may be important for exhibiting various social behaviours. This was informed by the results of the initial UKHabs survey and also from information gathered in the desk study to ensure that potential effects are considered in the context of the onsite habitats within the wider area.

- 2.25 The Site was also categorised for its habitat suitability for bats, which would inform the necessary survey effort. The habitat suitability was assessed using guidance from 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' (Bat Conservation Trust, 4th Edition, 2023). Table 4.1 of those guidelines provides an outline for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape. This should be applied using professional judgement. This groups a site into five categories based on habitat suitability for foraging and commuting bats which has been further summarised in 4, below:

Table 4: Criteria for Assessing Habitat Suitability for Commuting and Foraging Bats - Based on table 4.1 (Collins, 2023)

Suitability	Potential Flight Paths and Foraging habitat	Proposed Survey Requirements
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines or generate/shelter insect populations available to foraging bats).	No further surveys required
Negligible	No obvious habitat features on site likely to be used as flightpaths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.	
Low	Habitat that could be used by small numbers of bats as flightpaths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.	Automated static detector monitoring and nighttime bat walkover surveys (flight path and transect) on a <u>seasonal*</u> basis.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flightpaths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.	Automated static detector monitoring on a <u>monthly</u> basis and nighttime bat walkover surveys (flight path and transect) on a <u>seasonal*</u> basis.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.	

Suitability	Potential Flight Paths and Foraging habitat	Proposed Survey Requirements	Further Survey Requirements
*Seasonal surveys should be increased to monthly where Annex II species are expected/ detected or if significant commuting routes are identified. The BCT guidelines requires that survey work is completed in a proportionate manner. This does require consideration of the potential effects of development proposals. Where proposals are not affecting important features or resources for bats the level of survey work required can be reduced.			

- 2.26 The Site was identified as providing Low suitability for bats and seasonal activity surveys were completed. The surveys were undertaken to identify the value of the Site to foraging and commuting bats or areas which may be important for exhibiting various social behaviours so that the effects of the proposals can be assessed.
- 2.27 In order to inform an impact assessment, where possible the bat activity surveys aim to identify:
- The presence or absence of bats, abundance and species using the Site whilst away from the roost;
 - The usage of the habitats on the Site by bats;
 - The temporal (both seasonally and nightly) and spatial distribution of recorded bat activity on site and any associations in terms of timings or particular features;
 - Any connectivity in terms of habitats within the Site and/or the surrounding area;
 - The effect of any existing lighting on the existing bat population.
- 2.28 Bat activity surveys were designed and lead by an ecologist with expertise meeting the BCT level 3 competency.

Static Monitoring

- 2.29 Static (passive) monitoring was undertaken using an automated logging system (Wildlife Acoustics Inc. Song Meter® SM4BAT FS bat detectors with SMM-U2 microphones). During the survey period two static recording devices were positioned within the Site to record bat registrations for at least five consecutive nights per season.
- 2.30 The number of static detectors to be used and location of deployment was determined so that a representative sample of all habitats within the Site could be monitored. The locations were subjectively predetermined using professional judgment to be positioned at least 15m away from any known or likely roosts and also in consideration of likely impacts. In order to provide rigorous analysis, static detectors were placed in the same location during each survey and these are shown on Figure 3b.
- 2.31 The devices were deployed for 5 consecutive nights during suitable weather conditions that were typical for the season/ month of deployment and were programmed to activate 30 minutes before sunset and record continuously until 30 minutes following sunrise.
- 2.32 Static detectors were deployed during the following periods;
- 2nd to 7th May 2024.
 - 24th to 29th July 2024.

- 12th to 17th September 2024.

- 2.33 The data were analysed as soon as possible after retrieval of the static units using the Sonobat™ 30.1 (SonoBat™ Inc.) software package to assess the amount of bat activity on site by recording the number of bat registrations. Data were initially run through the auto-analysis function of the software with manual vetting taking place of every call with the exception of common pipistrelles and soprano pipistrelles. Noise files were also manually vetted. Measurements including peak frequency, inter-pulse interval, call duration and end frequency were taken to aid in species identification. This analysis was completed by a suitably experienced ecologist (analysts are audited internally for quality control purposes and to maintain consistent results).

Nighttime Bat Walkover (Flightpath / Transects Surveys)

- 2.34 In line with current guidance (Collins, 2024) nighttime bat walkovers are undertaken in two parts. The first part is undertaken by stationary surveyors positioned on habitat features most likely to be utilised as commuting routes by bats. Once conditions become too dark to see or once commuting activity has been observed and has largely ended, surveyors begin a walked transect sampling all areas and habitats within the Site noting any bat activity that is heard or observed along the way. Whilst this includes two elements it is one survey designed to record information to provide further context to elements that static detectors cannot always identify such as bat behaviour or abundance of bats.
- 2.35 The first part of the survey to observe flightpaths involved 2 surveyors being positioned at predetermined locations as shown on Figures 3a, 4a and 5a. The survey started just before sunset and lasted for between 30 minutes and one hour after sunset. After this the walked transect was started and continued until two to three hours after sunset. The route followed during each transect was repeated on each survey occasion, however the starting point was varied throughout the season. Figures 3b, 4b and 5b show the route of the transect and the start/ end points of each survey.
- 2.36 Surveyors were equipped with Wildlife Acoustics Inc. Echo Meter Touch® bat detectors in conjunction with Echo Meter Touch® app and Samsung Galaxy Tab Active 3® during the transect surveys to detect bats and aid species identification. And during the survey noted any bat activity observed during the survey.

Table 5: Nighttime Bat Walkover Timings

Survey Date	Sunset Time	Start Time (commuting)	Start Transect	End Transect
02.05.24	20:35	20:35	21:39	22:39
24.07.24	21:10	21:10	22:50	23:10
12.09.24	19:27	19:27	20:21	21:27

Table 6: Nighttime Bat Walkover Conditions

Survey Date	Start Temp	Wind Beaufort Scale	Rain	Cloud cover (%)
02.05.24	13°C	1	None	20%
24.07.24	17°C	1	None	100%
12.09.24	10°C	0	None	30

- 2.37 The data from the nighttime Bat Walkover survey was analysed as soon as possible after the survey using the Kaleidoscope Viewer® (Wildlife Acoustics, Inc.) software package to assess the amount of bat activity on site by recording the number of bat registrations. Measurements including peak frequency, inter-pulse interval, call duration and end frequency were taken to aid in species identification. This analysis was completed by a suitably experienced ecologist (Analysts are audited internally for quality control purposes and to maintain consistent results).

Survey Limitations

- 2.38 Where bat 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* species) 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 Kaleidoscope and Sonobat™ 30.1 data analysis software package and taking into account the geographical location of the site and the habitats present.
- 2.39 To ensure the security of the SM4Bat FS bat detectors the placement of the detectors was carefully considered to avoid open habitats.

3.0 RESULTS

Desktop Survey

- 3.1 Previously known consultation records for bats can be viewed within the results section of the EcoApp (FPCR, 2024).

Designated Sites

- 3.2 No statutory or non-statutory sites are present within a 5km radius of the Site for which bats are a primary feature for citation.

Field Surveys

Preliminary Roost Assessment (Ground Level)

- 3.3 The Preliminary Roost Assessments (PRA) identified two trees presenting features which provided potential roosting features (PRFs).
- 3.4 T1 was a mature ash *Fraxinus excelsior* tree comprising at least four woodpecker holes, multiple knot holes and a single flute. T1 was assessed as PRF.
- 3.5 T2 was a mature ash tree comprising a single knot hole. T2 was assessed as PRF.
- 3.6 Both T1 and T2 are to be retained as part of the development and will not be affected by development proposals.

Internal/External Building Assessment and DNA Analysis

- 3.7 Internal and external building surveys were undertaken on all the buildings within the application boundary on 7th May 2024 and 28th May 2024.
- 3.8 Building B1 was a 1970's to 1980's style brick built residential building with a pitched concrete tiled roof, ridge tile, lead flashing and a cavity wall. Double glazed UVPC windows, modern doors, hanging concrete tiles and UVPC soffit box were also present on the building. Other structural features of note include a single brick-built chimney with lead flashing in good condition, conservatory on southern aspect, stone lintel above back doors and an extension on western aspect with a lower height roof.
- 3.9 Internally, building B1's roof void was approximately 1.5-2m high, insulated with partial boarding and connects to new extension (10m x 5m). Modern timber trusses were present and traditional bitumen underfelt was present. During the internal inspection a low number of (less than 10) old common pipistrelle *Pipistrellus pipistrellus* bat droppings were found in the insulation of the eastern aspect of the building beneath a gap between breeze block wall and timber truss.
- 3.10 Potential bat access points and roosting features include lifted hanging tiles above window on northern aspect, hole in bitumen felt on northern aspect with external light entering the void, gaps between timber trusses and gable ends providing suitable roosting features and gaps in the breezeblock wall where the mortar has failed.
- 3.11 Due to historic common pipistrelle bat droppings recorded, three nocturnal building surveys were carried out between May and August 2024.

- 3.12 Building B2 was a single storey wooden constructed former stable structure with single skinned timber walls and a single-skinned corrugated pitched tin roof and a half-open stable door. Structural features included gables, barge boards and gutters. Potential bat access points included holes creating an open roof, open stable door and missing wood around the walls. No roof void was present and no other internal features suitable to provide potential for roosting bats were present. Building B2 was assessed to provide a 'negligible' roosting potential for bats.

Nocturnal Building Surveys

Survey 1 – 1st July 2024

- 3.13 No evidence of roosting bats were identified emerging from building B1 from the first nocturnal survey undertaken on building B1. Incidental commuting and foraging activity within the immediate area of building B1 was noted with small numbers of common pipistrelle, noctule and brown long-eared bats. The first bat identified was a noctule commuting far overhead at 21:39.

Survey 2 – 5th August 2024

- 3.14 No evidence of roosting bats were identified emerging from building B1 from the second nocturnal survey undertaken on building B1. Incidental commuting and foraging activity within the immediate area of building B1 was noted with small numbers of common pipistrelle, soprano pipistrelle, noctule and brown long-eared bats. The first bat identified was a common pipistrelle foraging in and around an adjacent garden at 21:09.

Survey 3 – 27th August 2024

- 3.15 No evidence of roosting bats were identified emerging from building B1 from the third nocturnal survey undertaken on building B1. Incidental commuting and foraging activity within the immediate area of building B1 was noted with small numbers of common pipistrelle, soprano pipistrelle, noctule and brown long-eared bats. The first bat identified was a noctule commuting far overhead at 20:03.

Activity Surveys

May Nighttime Bat Walkover (Flightline & Transects Surveys)

- 3.16 During the May flightpath survey, location 1 recorded a total of seven bat contacts. Species included noctule, common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus* and unidentified *Myotis* species. Only a single common pipistrelle was observed at 21:06 foraging within the corner of the field originating from the east adjacent to rear gardens. At location 2 total of five bat contacts from species including common pipistrelle, soprano pipistrelle and noctule were recorded. Common pipistrelle were observed foraging along hedgerow H2 and land to the south of hedgerow H1. A single soprano pipistrelle was observed foraging on land to the south of H1. A single noctule was observed foraging along hedgerow H1.
- 3.17 During the walked transect survey, a total of 20 bat contacts were identified, with species composition consisting of common pipistrelle and soprano pipistrelle. The majority of activity was associated with commuting bats, although some foraging behaviour was also identified. Bat activity was identified along hedgerows H1, H2, H3, H5 and H6 and adjacent to rear gardens along the north of the site. The majority of activity was associated with hedgerows H3 and H6.

- 3.18 No notable Annex II species were recorded during the survey.

July Nighttime Bat Walkover (Flightline & Transects Surveys)

- 3.19 During the July flightpath survey, location 1 recorded a total of eight bat contacts. Species included noctule, common pipistrelle, and *Myotis* species. Two common pipistrelle were observed at 21:31 and 21:39 foraging within the corner of the field originating from the adjacent fields on the western boundary. At location 2 recorded six bat contacts from species including common pipistrelle, soprano pipistrelle and brown long-eared were recorded. Common pipistrelle and soprano pipistrelle were observed foraging along hedgerow H2 and land to the south of hedgerow H1.
- 3.20 During the walked transect survey, a total of 14 bat contacts were identified. The species composition included common pipistrelle and soprano pipistrelle with single calls from *Myotis Sp.* and Noctule. The majority of activity was associated with commuting bats, although some foraging behaviour was also identified. Bat activity was identified along hedgerows H1, H2, H3, H4, H5 and H6. The majority of activity was associated with hedgerow H4.
- 3.21 No notable Annex II species were recorded during the survey.

September Nighttime Bat Walkover (Flightline & Transects Surveys)

- 3.22 During the September flightpath survey, location 1 recorded a total of eight bat contacts. Species included noctule, common pipistrelle, and *Myotis* species. Only a single common pipistrelle was observed at 20:17 foraging within the corner of the field originating from across the site. Location 2 recorded a total of eight bat contacts from species including common pipistrelle, soprano pipistrelle, noctule and *Myotis Sp.* Common pipistrelle were observed commuting along hedgerow H2 and land to the south of hedgerow H1.
- 3.23 During the walked transect survey, a total of five bat contacts were identified, with species composition consisting of common pipistrelle, unidentified *Myotis* species and brown long-eared bat. The majority of activity was associated with commuting bats along hedgerows H3, H4 and H6 running through the centre of the site.
- 3.24 No notable Annex II species were recorded during the survey.

Static Detector Surveys

- 3.25 Two static detector units were installed within the site during each static detector survey occasion. The first static unit was located within the south-western corner of the site at the hedgerow junction of H5 and H6. Here, this location covered species rich native hedgerow with trees and native hedgerow with trees, associated with a ditch. The second static unit was located within the eastern corner of the site at the junction of hedgerows H3 and H4 and TL1. Here, this location covered species rich native hedgerow, species rich native hedgerow with trees and tree line.

May Static Detector Surveys (Figure 3b)

- 3.26 Unit 21 was placed within the south-western corner of the site and recorded a total of 4485 bat registrations over a five-night survey period. Species registrations was dominated by common pipistrelle, accounting for 4305 registrations (95.99% of total bat activity). All other species were recorded in very low numbers, which included soprano pipistrelle, noctule, unidentified *Myotis* species, unidentified *Nyctalus* species and brown long-eared *Plecotus auritus* bat.

3.27 Unit 10 was placed within the eastern corner of the site and recorded a total of 3065 bat registrations over a five-night survey period. Species registrations was dominated by common pipistrelle, accounting for 2098 registrations (68.45% of total bat activity). All other species were recorded in very low numbers, which included soprano pipistrelle, unidentified *Myotis* species, noctule, brown long-eared bat and a single Nathusius' pipistrelle *Pipistrellus nathusii*.

3.28 No annex II species of bat was recorded.

July Static Detector Surveys (Figure 4b)

3.29 Unit 14 was placed within the south-western corner of the site and recorded a total of 3350 bat registrations over a five-night survey period. Species registrations was dominated by common pipistrelle, accounting for 3182 registrations (94.99% of total bat activity). All other species were recorded in very low numbers, which included soprano pipistrelle, unidentified *Myotis* species, noctule, unidentified *Nyctalus* species and brown long-eared bat.

3.30 Unit 5 was placed within the eastern corner of the site and recorded a total of 1748 registrations over a five-night period. Species registrations was dominated by common pipistrelle, accounting for 1518 registrations (86.84% of total bat activity). All other species were recorded in very low numbers, which included soprano pipistrelle, unidentified *Myotis* species, unidentified *Nyctalus* species, brown long-eared bat and noctule.

3.31 No annex II species of bat was recorded.

September Static Detector Surveys (Figure 5b)

3.32 Unit 34 was placed within the south-western corner of the site and recorded a total of 2211 bat registrations over a five-night survey period. Species registrations was dominated by common pipistrelle, accounting for 1950 registrations (88.20% of total bat activity). All other species were recorded in very low numbers, which included unidentified *Myotis* species, soprano pipistrelle, noctule, unidentified *Nyctalus* species and brown long-eared bat.

3.33 Unit 17 was placed within the eastern corner of the site and recorded a total of 2973 registrations over a five-night survey period. Species registrations was dominated by common pipistrelle, accounting for 1903 registrations (64.01% of total bat activity). All other species were recorded in very low numbers, which included unidentified *Myotis* species, soprano pipistrelle, unidentified pipistrelle species, unidentified *Nyctalus* species, brown long-eared bat, noctule and a single Nathusius' pipistrelle.

3.34 No annex II species of bat was recorded.

4.0 DISCUSSION AND EVALUATION

Legislation Summary

- 4.1 All bat species and their roosts are afforded full legal protection under the Conservation of Habitats and Species Regulations 2017 (*as amended*) and the Wildlife & Countryside Act 1981 (*as amended*). The purpose of the legislation is to maintain and restore protected species to a situation where their populations are favourable.
- 4.2 Under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (*as amended*) it is illegal to:
- Deliberately capture, injure or kill any wild animal of a European Protected Species (EPS),
 - Deliberately disturb wild animals of an EPS (affecting ability to survive, breed or rear young) – disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young,
 - Deliberately disturb wild animals of an EPS (impairing ability to migrate or hibernate) – disturbance of animals includes in particular any disturbance which is likely to impair their ability in the case of hibernating or migratory species to hibernate or migrate,
 - Deliberately disturb wild animals of an EPS (affecting local distribution and abundance) – disturbance of animals includes in particular any disturbance which is likely to affect significantly the local distribution or abundance of the species to which they belong,
 - Deliberately disturb wild animals of an EPS (whilst occupying a structure or place used for shelter or protection) – intentionally or recklessly disturb any wild animal while it is occupying a structure or place which it uses for shelter or protection,
 - Damage or destroy a breeding site or resting place of a wild animal an EPS.
- 4.3 Under the Wildlife and Countryside Act 1981 (*as amended*) it is illegal to:
- Recklessly or intentionally kill, injures or take any wild animals included in Schedule 5.
 - Recklessly or intentionally obstruct access to any structure or place which any wild animal included in Schedule 5 uses for shelter or protection,
 - Recklessly or intentionally disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.
- 4.4 The impact that this legislation has on the planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory obligations and their impact within the Planning System.
- 4.5 This guidance states that as the presence of protected species is a material consideration in any planning decision, it is essential that the presence or otherwise of protected species, and the extent to which they are affected by proposals is established prior to planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species, such as through attaching appropriate planning conditions for example.

Bat Roosts

Trees

- 4.6 During ground assessment on a total of two trees (T1 and T2) were identified as providing PRFs.
- 4.7 The two trees identified with potential roost features (T1 and T2) are retained and buffered, therefore the potential presence of a bat roost in these trees wasn't identified as a statutory constraint to development.

Buildings

- 4.8 Building B2 was assessed as providing negligible potential to support roosting bats. As such, the presence of a bat roost has not been considered as a statutory constraint for the demolition of B2.
- 4.9 The detailed internal inspection survey undertaken identified historical evidence of bats within building B1 in the form of less than 10 old common pipistrelle bat droppings. The three nocturnal building surveys undertaken however did not identify the presence of roosting bats and the presence of a bat roost was not identified as a statutory ecological constraint to the development.
- 4.10 As historic evidence of bats utilising B1, it is recommended that demolition works of B1 should proceed in strict accordance with the specifications of a non-licensable precautionary working method statement and mitigation strategy. The following bat mitigation strategy outlines details of working methods, mitigation, and compensation measures required to facilitate the proposed development.
- 4.11 The following outline the recommended precautionary working methods that should be employed during the demolition of B1.
- Prior to the start of works, two tree mounted bat boxes will be installed on suitable retained trees within close proximity of B1.
 - All relevant demolition contractors will be given an induction by a licenced / accredited Bat Ecologist regarding the unlikely but potential presence of bat roosts within the working area, and the best practice methods to be employed.
 - Prior to commencement of demolition works, building B1 must be subject to a pre-works inspection. This will include the internal inspection of any loft spaces/voids, and checking of suitable PRFs, using endoscopes, torches and inspection mirrors, as required.
 - Following the pre-works inspection and given consideration to nesting birds, all suitable PRFs will be removed by hand under the supervision of the licensed bat ecologist/accredited agent. Where applicable, materials will be removed carefully and not rolled or sprung to avoid potential harm to bats. Removed PRFs will be thoroughly checked for the presence of bats prior to stacking/disposal. Examples of works requiring ecological supervision are provided below:
 - Roofing works; inclusive (but not limited to) removal of; roof/ridge tiles, fascia boards, soffit boxes, bargeboards/ roof verges, roof lining.
 - Eaves works (both internal and external).
 - Chimneys, rainwater goods, lead flashing etc.
 - Removal of hanging tiles and demolition of brickwork (where PRFs or access points are present)

- Any additional works which will result in impacts to potential roost features and/or access points.
- Upon completion, these works will render the building unsuitable for bat occupation due to the change in environmental conditions. The building structure shall then be left for a minimum of 24 hours prior to demolition.
- Following the removal of PRFs, the remainder of the works can be undertaken without bat worker supervision. In the event any bats are recorded by contractors works must stop immediately until advice is provided by a licenced bat worker.

Bat Activity Assessment

- 4.12 The application Site is dominated by other neutral grassland and small areas of modified grassland. These are considered to provide low value habitat for commuting and foraging bats as the habitat do not support high numbers of invertebrates upon which bats prey. Therefore, the loss of such habitats is unlikely to significantly affect the favourable conservation status of the species recorded using the Site. These are bound by hedgerows and trees, which provide higher valuable commuting and foraging opportunities for the local bat population, with these features for the most part retained in the proposals.
- 4.13 The unit located within the southwest corner of the Site consistently recorded the higher levels of activity. Under current proposals this habitat and area is to be retained and buffered from the built development through the creation of species rich meadow grassland mix and broadleaved tree planting. Given these proposals it is likely that development of the site will provide enhanced commuting and foraging resource for bats within this area. In addition, new hedgerow and tree planting is proposed along the residential edge along the western part of the site, further enhancing commuting and foraging resources.
- 4.14 The dominant species during the activity surveys were common pipistrelle, accounting for 83.87% of total bat activity, with soprano pipistrelle and unidentified *Myotis* species recorded in lower numbers. Noctule, brown long-eared, pipistrellus *spp.*, *Nyctalus spp.*, Brown Long-eared and Nathusius pipistrelle were all recorded in very low numbers.
- 4.15 Common pipistrelle and soprano pipistrelle are both common and widespread species that are frequently associated with the habitat types present with the application Site and surrounding landscape. The levels of activity associated with these species, plus brown long-eared bats and noctule, unidentified pipistrelle species, unidentified *Myotis* species and unidentified *Nyctalus* species are consistent with their known abundance at a regional and national scale and are not considered to be of a significant accumulation.
- 4.16 Species of note include Nathusius' pipistrelle were recorded in very limited numbers with only two registrations over the static bat detector surveys. Overall, the relative abundance of Nathusius' as a proportion of bat species recorded on Site was low, with species accounting for less than 1% of the total registrations recorded suggesting that the Site only forms a minor part of a network of foraging and commuting areas within the wider landscape. From the result of the surveys, it has been concluded that the site does not form an important resource for these species and as a result the proposed development is not considered to have a significant impact upon the Favourable Conservation Status of these species. An appropriate mitigation strategy incorporating the

measures outlined below can be accommodated in the design to minimise any potential impacts from the proposals.

- 4.17 Due to the dominance by low value commuting and foraging habitat currently on Site (other neutral grassland), the implementation of proposed green infrastructure as outlined below and the unexceptional levels of bat activity from utilising the Site, the proposed development is unlikely to result in a significant adverse impact on the conservation status of bat species.
- 4.18 Given that common and widespread species of bats were recorded and the majority of higher value habitat including hedgerows within the Site will be retained, it is considered that the below mitigation measures will provide adequate levels of mitigation for the bat populations recorded.

Habitat Provision and Mitigation Measures

- 4.19 Post-development the site offers significant opportunities to provide enhancements for the local population of bats. Habitat creation, including native species rich hedgerows, broadleaved tree planting, along with SUDs, and species rich meadow grassland creation within the proposed development will increase the foraging value within the site as well as maintaining / creating commuting connectivity between these areas and the wider site surrounds.
- 4.20 Both common and soprano pipistrelles are known to adapt to the urban environment and with the incorporation of green infrastructure it is anticipated that the proposals will not affect the conservation status of these species.
- 4.21 The hedgerow network and tree lines within the Site are utilised by local bat populations for foraging and commuting purposes, although the surveys did not record significant numbers of bats within the Site. The areas of retained hedgerow and new hedgerow creation will maintain movement throughout the Site to the wider landscape for the local bat population.
- 4.22 Minor losses of three small sections of hedgerows are unlikely to affect commuting ability of the local bat populations due such small lengths lost, continuing availability of the retained lengths of hedgerow and other suitable habitat immediately next to and provision of broadleaved trees adjacent post development. The creation of public open space through the Site will also provide additional foraging opportunities to mitigate any potential impacts from the loss of foraging/commuting habitat. It will however be important to ensure that dark corridors are maintained along such features to avoid impact on bats. Lighting mitigation is discussed below.
- 4.23 The creation of waterbodies will also offer further foraging opportunities for bats. Waterbodies should, where feasible, be designed so that there are permanent areas of standing water to improve foraging opportunities for bats.
- 4.24 The proposals provide opportunity to deliver enhanced roosting opportunities via the incorporation of bat boxes and/or bat 'tubes' into the fabric of the upper storey external walls and/or provision of bat boxes mounted onto walls or retained suitable trees within the new development footprint. These should be located at a height of at least 4m above ground level, on an unshaded SW/S/SE facing aspect and should be unlit by any form of artificial lighting such as security lighting.

Lighting

- 4.25 Bat activity recorded on Site was dominated by common pipistrelle and soprano pipistrelle which are adaptable species, more tolerant of artificial light and will feed on insect congregations around

the lights, as will noctule. However, some species of bats are known to be deterred by artificial lighting such as brown long-eared and *Myotis* species which were recorded on Site in low numbers. To avoid any impacts associated with light spill on bat flight-lines or foraging habitat, mitigation measures should be implemented.

- 4.26 In the absence of mitigation, the direct lighting of created and retained habitats may reasonably be expected to lead to the avoidance of these areas by the local bat population, particularly brown long-eared and *Myotis* species bats. It is therefore important to avoid such impacts through the development of a sensitive lighting strategy with a focus on maintaining dark corridors.
- 4.27 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 for foraging or commuting. This will be achieved by ensuring that the design of lighting is based upon guidelines presented in EUROBATS '*Publication Series No. 8 – Guidelines for consideration of bats in lighting projects*'. Therefore, the lighting scheme will include the following:
- The strategic use of landscaping and planting to avoid light spill on sensitive habitats. New planting should aim to buffer retained boundary features and create dark corridors around the Site.
 - The avoidance of direct lighting on existing trees, hedgerows, river corridor (southern boundaries of the development area), or proposed areas of habitat creation / landscape planting.
 - The use of dynamic lighting where feasible, where lighting is proposed along linear habitat features such hedgerow and tree lines.
 - 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 and create dark corridors around the Site.
- 4.28 With the implementation of the mitigation proposed above, residual effects on potential commuting/foraging routes will be limited and any disturbance likely to be caused by lighting on the local bat population is considered likely to be negligible.

Bat Boxes

- 4.29 Bat boxes should be installed on retained trees (where feasible) and incorporated into the fabric of new buildings (where appropriate). The provision of such features would be in accordance with NPPF 2023, providing an enhancement for biodiversity within the local area. Bat boxes should be installed at varying heights between 3 and 6m on the southern, south-eastern and south-western aspects of the trees and buildings, with a variety of box types used to provide roosting opportunities for a wide range of species. Specific bat boxes that would be suitable to erect on retained trees where appropriate would be Schwegler 1FF and 2F boxes or similar specification.
- 4.30 Bat bricks/integrated wall boxes such as Habitat Bat Boxes and Schwegler 1FR and Schwegler 2FR or similar specification should also be positioned on the southern, eastern and western elevations of buildings at least 4m from the ground. The bat boxes/bricks on tree and buildings should be located around the Site's periphery adjacent to the proposed and existing habitats which

provide suitable commuting/foraging habitat, particularly around the eastern, western and southern site boundaries.

- 4.31 Any external lighting will be applied sensitively with no lights above or adjacent to access points on bat boxes.

Summary

- 4.32 The internal inspection survey undertaken identified historical evidence of bats within building B1, however three nocturnal building surveys undertaken however did not identify the presence of roosting bats. Demolition works of B1 should proceed under a non-licensable precautionary working method statement and mitigation strategy for roosting bats.
- 4.33 The species assemblage and level of activity identified on Site during the survey period was generally unexceptional and not considered to be significant. The boundary and internal hedgerows were identified as the main corridors of movement for commuting and foraging bats.
- 4.34 Whilst Nathusius' pipistrelle was identified utilising the Site, they were not confirmed to be utilising the Site in significant numbers. Proposals demonstrate that the site will implement the creation of a range of diverse habitats across the Site enhancing the sites foraging and commuting potential. In addition, the habitats utilised the most by these species (hedgerows) will be incorporated into green corridors throughout the site improving links throughout the development and into the wider landscape.
- 4.35 The grassland habitats which dominate the Site are considered to provide negligible value for bats. The hedgerows present were assessed as providing higher commuting and foraging value for bats and they are to be largely retained and buffered within the development proposals. Due to the size of the Site and areas of green infrastructure to be created, it is considered that impacts can be mitigated, through the creation of new areas of native species-rich grassland, broadleaved tree planting and the creation of waterbodies within the areas of public open space throughout the development.
- 4.36 New habitat creation and other mitigation measures, including the appropriate use of artificial lighting and provision of bat boxes, should also be implemented to minimise potential impacts and provide new foraging, commuting and roosting opportunities.
- 4.37 In conclusion, if mitigation and enhancements are implemented within the development, this will ensure the Favourable Conservation Status of all species identified using the Site over the survey will be maintained. The proposals may properly be considered to accord with the requirements of the Conservation of Habitats & Species Regulations 2017 (*as amended*) and the NPPF (2023)

APPENDIX A: SCREENSHOTS FROM NVA

The following images show a screenshot recorded by each of the Night Vision Aids (NVAs) used taken at the darkest point during the emergence surveys

Emergence Survey 1

Survey Position	Screenshot
B1 [1]	
B1 [2]	

Emergence Survey 2

Survey Position	Screenshot
B1 [1]	
B1 [2]	

Emergence Survey 3

Survey Position	Screenshot
B1 [1]	
B1 [2]	

APPENDIX B: STATIC DETECTOR SURVEY RESULTS

Unit Number	Survey Dates	Survey Hours	Total Avg. per hour	Total Registrations	Common Pipistrelle			Soprano Pipistrelle			Nathusius Pipistrelle			Pipistrelle Sp.			Noctule			Nyctalus Species			Brown Long-eared Bat			Myotis Species		
					Avg. per hour	Peak Count	Period Total	Avg. per hour	Peak Count	Period Total	Avg. per hour	Peak Count	Period Total				Avg. per hour	Peak Count	Period Total	Avg. per hour	Peak Count	Period Total	Avg. per hour	Peak Count	Period Total	Avg. per hour	Peak Count	Period Total
10	02.05.24 – 07.05.24	48.5	63.03	3065	43.12	502	2097	18.59	261	904	0.021	1	1	0	0	0	0.41	5	20	0	0	0	0.062	1	3	0.82	9	40
21		48.5	92.23	4485	88.12	760	4285	3.43	58	167	0	0	0	0	0	0	0.14	3	7	0.021	1	1	0.021	1	1	0.49	9	24
5	24.07.24 – 29.07.24	46	37.88	1748	32.90	385	1518	2.62	38	121	0	0	0	0	0	0	0.17	3	8	0.22	3	10	0.22	3	10	1.76	21	81
14		46	72.59	3350	68.93	532	3181	1.95	41	90	0	0	0	0	0	0	0.33	6	15	0.065	2	3	0.087	2	4	1.24	18	57
17	12.09.24 – 17.09.24	62	48.06	2973	30.77	547	1903	4.12	96	255	0.016	1	1	3.36	85	208	0.11	4	7	0.37	11	23	0.31	4	19	9.005	131	557
34		62	35.75	2211	31.45	426	1945	1.019	33	63	0	0	0	0.081	3	5	0.19	4	12	0.11	4	7	0.081	1	5	2.81	44	174



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Key

 **Red Line Boundary**

Baseline Habitats

 **Developed land; sealed surface**

 **Modified grassland**

Baseline Hedgerows

 **Non-native and ornamental hedgerow**

 **Line of trees**

 **Native hedgerow with trees**

 **Native hedgerow with trees - associated with bank or ditch**

 **Species-rich native hedgerow**

 **Species-rich native hedgerow with trees**

Baseline Individual Trees

 **Existing Large Rural Tree**

 **Existing Medium Urban Tree**

 **Existing Medium Rural Tree**

 **Existing Small Rural Tree**

 **Tree with bat potential**





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Key:

- Site Boundary
- Building
- Surveyor Location



client Gladman Developments
project Land West of Shenton Lane,
Market Bosworth
drawing title BUILDING LOCATION & SURVEYOR PLAN

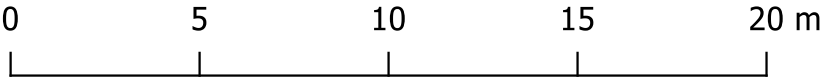
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drawn
MPG

issue
16/7/2024

drawing / figure number
Figure 2

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Key:

Site Boundary (new)

Static Locations

Flightlines

Common Pipistrelle

Soprano Pipistrelle

Flightline Path

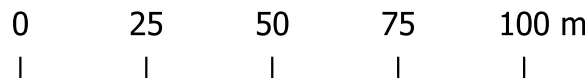
Point Count Locations

Location 1

Plan Ref	Time	Bat Specie	Passes	Behaviour
1	21:04	Noctule	1	C
2	21:06	Common pipistrelle	Mult	F
3	21:13	Soprano pipistrelle	4	C
4	21:17	Soprano pipistrelle	1	C
5	21:19	Common pipistrelle	Mult	F
6	21:22	Myotis species	1	C
7	21:29	Common pipistrelle	3	C

Location 2

Plan Ref	Time	Bat Specie	Passes	Behaviour
1	21:04	Common pipistrelle	4	F
2	21:04	Noctule	1	C
3	21:08	Noctule	4	F
4	21:15	Common pipistrelle	1	F
5	21:15	Soprano pipistrelle	1	F





client
Gladman Developments

project
**Land West of Shenton Lane,
Market Bosworth**

drawing title
**FLIGHTLINE BAT TRANSECT LOCATION PLAN
SPRING 2024**

scale @ A3
1:1,500

drawn
MPG/RAG

issue date
17/10/2024

rev
-

Figure 3a



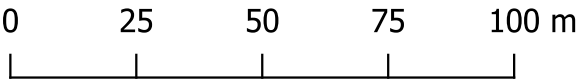
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Key:

- Site Boundary
- Transect Route
- Start point
- Finish point
- Flight Arrow
- Static Locations
- Common Pipistrelle
- Soprano Pipistrelle

Plan Ref	Time	Bat Species	Passes	Behaviour
1	21:38	Common pipistrelle	Mult	F
2	21:42	Common pipistrelle	Cont	C, F
3	21:45	Soprano pipistrelle	1	C
4	21:47	Common pipistrelle	Cont	F
5	21:48	Soprano pipistrelle	1	F
6	21:51	Common pipistrelle	2	C
7	21:51	Soprano pipistrelle	2	C
8	21:54	Common pipistrelle	1	C
9	21:57	Soprano pipistrelle	1	C
10	22:03	Common pipistrelle	1	C
11	22:07	Common pipistrelle	1	C, F
12	22:09	Common pipistrelle	Mult	C, F
13	22:12	Soprano pipistrelle	1	C
14	22:15	Common pipistrelle	1	C
15	22:19	Common pipistrelle	1	C
16	22:21	Common pipistrelle	1	C
17	22:30	Common pipistrelle	Mult	C
18	22:33	Soprano pipistrelle	1	C
19	22:34	Common pipistrelle	1	C
20	22:36	Common pipistrelle	1	C



client

Gladman Developments

project

Land West of Shenton Lane,
Market Bosworth

drawing title

WALKED BAT TRANSECT & STATIC
LOCATION PLAN SPRING 2024

scale @ A3

1:1,500

drawn

MPG/RAG

issue date

17/10/2024

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Figure 3b

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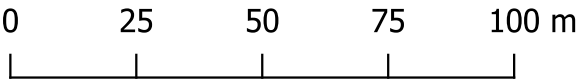
- Site Boundary
- Static Locations
- Common Pipistrelle
- Soprano Pipistrelle
- Myotis Species
- Noctule
- Brown Long-eared
- Flight Arrow

Location 1

Plan Ref.	Time	Bat Specie	Passes	Behaviour
1	21:26	Common pipistrelle	1	C
2	21:31	Common pipistrelle	Cont.	F
3	21:38	Noctule	2	C
4	21:39	Common pipistrelle	Cont.	F
5	21:45	Noctule	1	C
6	21:45	Common pipistrelle	Cont.	F
7	21:47	Myotis sp	1	C
8	21:47	Common pipistrelle	Cont.	F

Location 2

Plan Ref.	Time	Bat Specie	Passes	Behaviour
1	21:33	Common pipistrelle	Cont.	F, S
2	21:40	Soprano pipistrelle	1	F, S
3	21:40	Common pipistrelle	Cont.	F, S
4	21:47	Myotis sp	1	C
5	21:48	Common pipistrelle	2	C
6	21:50	Brown long-eared	1	C





client

Gladman Developments

project

Land off York Close,
Market Bosworth

drawing title

FLIGHTLINE BAT TRANSECT LOCATION PLAN
SUMMER 2024

scale @ A3
1:1,500

drawn
MPG/RAG

issue date
17/10/2024

drawing / figure number

Figure 4a

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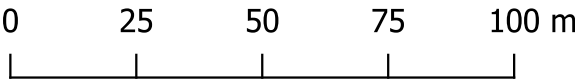
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- Flight Arrow
- Static Locations
- Common Pipistrelle
- Myotis Species
- Noctule

Plan Ref.	Time	Bat Specie	Passes	Behaviour
1	21:51	Common pipistrelle	1	C
2	21:54	Noctule	1	C
3	21:55	Common pipistrelle	1	C
4	21:56	Common pipistrelle	3	F
5	21:59	Common pipistrelle	2	C
6	22:00	Myotis sp	1	C
7	22:01	Common pipistrelle	1	C
8	22:03	Common pipistrelle	1	C
9	22:12	Common pipistrelle	2	C
10	22:22	Common pipistrelle	2	C
11	22:24	Common pipistrelle	Mult.	F
12	22:35	Common pipistrelle	Mult.	F
13	22:45	Common pipistrelle	2	C
14	23:09	Common pipistrelle	1	C





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Land off York Close,
Market Bosworth

drawing title

WALKED BAT TRANSECT & STATIC
LOCATION PLAN SUMMER 2024

scale @ A3
1:1,500

drawn
MPG/RAG

issue date
17/10/2024

drawing / figure number

rev

Figure 4b

-



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Key:

Site Boundary (new)

Static Locations

Flightline

Flightline Arrows

Flightline Contacts

Common Pipistrelle

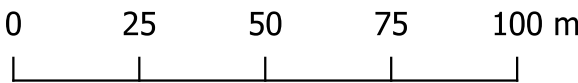
Surveyor Locations

Location 1

Ref.	Time	Species Name	Passes	Behaviour
1	19:37	Noctule	1	Commuting
2	19:54	Common Pipistrelle	2	Commuting
3	20:04	Noctule	1	Commuting
4	20:05	Myotis Species	1	Commuting
5	20:09	Common Pipistrelle	Multiple	Foraging
6	20:17	Common Pipistrelle	Multiple	Foraging
7	20:20	Myotis Species	1	Commuting
8	20:21	Common Pipistrelle	1	Commuting

Location 2

Ref.	Time	Species Name	Passes	Behaviour
1	19:59	Common Pipistrelle	Multiple	Foraging
2	20:03	Soprano Pipistrelle	1	Commuting
3	20:09	Myotis Species	2	Commuting
4	20:11	Common Pipistrelle	3	Commuting
5	20:11	Noctule	1	Commuting
6	20:19	Soprano Pipistrelle	Multiple	Foraging
7	20:16	Common Pipistrelle	Multiple	Foraging
8	20:17	Brown Long-eared	1	Commuting





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**Land West of Shenton Lane,
Market Bosworth**

drawing title
**FLIGHTLINE BAT TRANSECT LOCATION PLAN
AUTUMN 2024**

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drawn
MPG/RAG

issue date
17/10/2024

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Figure 5a



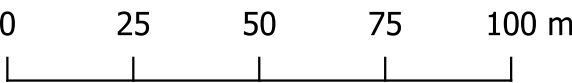
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Key:

- Site Boundary
- Transect Route
- Start point
- Finish point
- Static Locations
- Bat Contacts**
 - Common Pipistrelle
 - Myotis Species
 - Brown Long-eared

Ref.	Time	Species Name	Passes	Behaviour
1	20:40	Common Pipistrelle	1	Commuting
2	20:49	Brown long-eared	1	Commuting
3	20:56	Common Pipistrelle	1	Commuting
4	21:00	Myotis Species	1	Commuting
5	21:22	Common Pipistrelle	1	Commuting





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**Land West of Shenton Lane,
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**WALKED BAT TRANSECT & STATIC
LOCATION PLAN AUTUMN 2024**

scale @ A3
1:1,500

drawn
MPG/RAG

issue date
17/10/2024

drawing / figure number
Figure 5b

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