

**65 HOCOMBE ROAD, CHANDLERS
FORD, SOUTHAMPTON**

**PRELIMINARY BAT ROOST
ASSESSMENT**

A Report to: [REDACTED]

Report No: RT-MME-158722-01

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

Report Version	Date	Completed by:	Checked by:	Approved by:
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The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

VALIDITY OF DATA

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, it may be necessary to undertake an updated survey to allow any changes in the status of bats on site to be assessed, and to inform a review of the conclusions and recommendations made.

NON-TECHNICAL SUMMARY

In August 2022, [REDACTED] commissioned Middlemarch Environmental Ltd to undertake a Preliminary Bat Roost Assessment at 65 Hocombe road, Chandlers Ford, Southampton. This assessment is required to inform a planning application associated with the reconfiguration of the single storey annexe, with proposals for a second story extension above and a single storey extension to the rear of the property.

To fulfil the above brief to assess the potential for the existing building on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 4th August 2022.

After a detailed assessment of the building, several potential roost or access features were identified. These included warped and lifted roof tiles and gaps under the hanging tiles. Droppings were also identified in the internal loft space confirming the loft is being utilised by roosting bats.

Based on the findings during the external and internal inspection and the surrounding habitats the building is classed as having high potential to support roosting bats.

Following the results of the Preliminary Bat Roost Assessment, the following recommendations have been made:

R1 Building 1 (Residential building)

As a bat roost/resting place has been identified in the building, no unlicensed work can be undertaken.

Prior to any works being undertaken which are likely to result in a breach of the legislation, a development licence must be obtained from Natural England. The licence application process will include the submission of a method statement detailing the current status of bats on site and how the favourable conservation status of the bat population will be maintained. Prior to a licence being issued, planning permission must be granted and relevant conditions relating to protected species and habitat issues must be discharged.

To inform the licence application at least three dusk emergence and/or dawn re-entry surveys must be undertaken during the bat activity season in line with Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016).

R2 Lighting

In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.

R3 Habitat Enhancement

In line with the National Planning Policy Framework, the development should aim to enhance the site for bats. Bat boxes should be installed to provide roosting habitat for species such as pipistrelle.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In August, 2022 [REDACTED] commissioned Middlemarch Environmental Ltd to undertake a Preliminary Bat Roost Assessment at 65 Hocombe road, Chandlers Ford, Southampton.

This assessment is required to inform a planning application associated with the reconfiguration of the single storey annexe, with proposals for a second story extension above and a single storey extension to the rear of the property.

In addition, Middlemarch Environmental Ltd has been commissioned to undertake the following assessments:

- Bat Surveys, Report RT-MME-157953-02.

To fulfil the above brief to assess the potential for the existing building on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 4th August 2022.

All UK bat species are legally protected species and they are capable of being material considerations in the planning process. A summary of the legislation protecting bats is included within Appendix 1. This section also provides some brief information on the ecology of British bat species.

1.2 SITE DESCRIPTION AND CONTEXT

The development area is located at 65 Hocombe Road, Chandlers Ford, Southampton, centred at national grid reference SU 438227 and has an area of 0.17 ha.

At the time of the survey the site was dominated by a large two-storey brick residential building with associated hardstanding access and car parking. Areas of amenity grassland with scattered trees and introduced shrub were present in the north and south of the property. Residential housing and their associated gardens abutted the south, east and west boundaries, whilst Hocombe Road delineated the northern boundary.

The wider landscape comprises residential areas with associated gardens and treelines to the south, east and west of the site. Pockets of woodland and rural agricultural land is located to the north abutting Hocombe Road. Cranbury Park is present in the north with three substantial waterbodies within 1km of the site. The M3, a major railway and The River Itchen lie to the east.

1.3 DOCUMENTATION PROVIDED

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.1.

Document Name / Drawing Number	Author
Survey Drawing 14566 S1	Solent Surveys

Table 1.1: Documentation Provided by Client

2. METHODOLOGY

2.1 DESK STUDY

A desk study was undertaken for the site which included a search for statutory nature conservation sites designated for bats within a 10 km radius of the site.

2.2 FIELD SURVEY

In line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), a Preliminary Bat Roost Assessment of the building was conducted during daylight hours. A visual assessment was undertaken to determine the presence of any Potential Roost Features (PRFs), together with a general appraisal of the suitability of the site for foraging and commuting. Table 2.1 provides examples of PRFs. Any accessible PRFs were inspected using binoculars, a torch and endoscope for evidence of possible bat presence. The building was surveyed externally and internally.

For reasons of health and safety, the survey was only undertaken in areas accessible from 3.5 m ladders.

Based on the PRF's present, the survey area was assessed using the suitability classes detailed within Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), as detailed in Table 2.2.

Example of Potential Roost Features	
<u>Externally</u>	• Access through window panes, doors and walls; • behind peeling paintwork or lifted rendering; • behind hanging tiles; • weatherboarding; • eaves; • soffit boxes; • fascias; • lead flashing; • gaps under felt (even including those of flat roofs); • under tiles/slates; • existing bat and bird boxes; and • any gaps in brickwork or stonework permitting access into access to cavity- or rubble-filled walls.
<u>Internally</u>	• behind wooden panelling; • in lintels above doors and windows; • behind window shutters and curtains; • behind pictures, posters, furniture, peeling paintwork; • peeling wallpaper, lifted plaster and boarded-up windows; • inside cupboards and in chimneys accessible from fireplaces. • within attic voids: • the top of gable end or dividing walls; • the top of chimney breasts; • ridge and hip beams and other roof beams; • mortise and tenon joints; • all beams (free-hanging bats); • the junction of roof timbers, especially where ridge and hip beams meet; • behind purlins; • between tiles and the roof lining; and • under flat felt roofs.

Table 2.1: Potential Roost Features (Adapted from Collins, 2016)

Suitability	Description
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.
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).
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 hibernation).
Negligible	Negligible habitat features on site likely to be used by roosting bats.

Table 2.2: Classification of Structures with Bat Potential (Adapted from Collins, 2016)

3. DESK STUDY

3.1 STATUTORY NATURE CONSERVATION SITES

No Statutory nature conservation sites were identified that were located within 10 km of the survey area.

4. SURVEY RESULTS

4.1 INTRODUCTION

The Preliminary Bat Roost Assessment was conducted on 4th August 2022 by [REDACTED] (Ecological Project Officer).

Weather conditions were recorded and are presented in Table 4.1.

Parameter	Conditions
Temperature (°C)	18C
Cloud Cover (%)	80%
Precipitation	0
Wind Speed (Beaufort)	F1

Table 4.1: Weather Conditions During the Preliminary Bat Roost Assessment

4.2 CONSTRAINTS

There were no constraints at the time of the survey.

4.3 SURVEY RESULTS

4.3.1 Building 1 (Residential Property)

External Assessment

Building 1 is a residential, detached, two-storey brick building with a pitched concrete tiled roof. A single storey extension was present on the east elevation of the building. This building was in a good state of repair and in active usage, although until recently has been unoccupied. Plates 4.1 and 4.2 provide an overview of the building.



Plate 4.1: Overview of Building 1 (Eastern Elevation)



Plate 4.2: Overview of Building 1 Southern Elevation)

The roof of the building was made up of concrete roof and ridge tiles and were covered in moss. Several holes and warped tiles were present which may provide suitable access points for roosting bats. The northern and southern, elevations had sections of clay hanging tiles of which several features were recorded. (Plate 4.3).



Plate 4.3: Gaps and Holes within the Hanging Tiles (Northern Elevation).

The concrete pitched roof revealed gaps under lifted tiles providing potential for roosting bats to access the internal roof space (Plates 4.4). Two brick chimneys were present along the eastern and western aspects of the ridge tiles and appeared to be in a good state of repair. Further gaps were noted underneath the ridge tiles, lead flashing and warped tiles (Plate 4.5).



Plate 4.4: Gap under Lifted Tile



Plate 4.5: Warped Tiles and Gap under Lead Flashing

Plastic soffits were present on the southern and northern elevations which were in good condition and tight fitting (Plate 4.6).



Plate 4.6: Tight Fitting Soffits

Further external assessment of the building revealed no further possible ingress points for bats to utilise as the brickwork of the building in general was in a good state of repair as were the uPVC framed windows which were tight fitting.

Numerous features were recorded around the building which could be utilised by bats to gain entry into the building and potential roost locations. These features include:

- Warped and lifted roof tiles;
- Gaps under roof tiles;
- Misaligned hanging tiles;
- Holes in the hanging tiles;
- Gaps under lead flashing; and,
- Holes under ridge tiles.

It was not possible to inspect the features listed above due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey.

Internal Assessment

The loft space of the building was an A-framed modern truss with timber rafters and black felt sarking in between the rafters (Plate 4.7) A ridge beam was present which was suitable for roosting bats (Plate 4.8). The apex was approximately 3 m high. The gable ends comprised concrete breeze block and brick and the floors were insulated (Plate 4.9). A separate loft space was located over a previous extension and accessible through a small doorway (Plates 4.10 and 4.11).



Plate 4.7: View of Felt Sarking



Plate 4.8: View of Ridge Beam

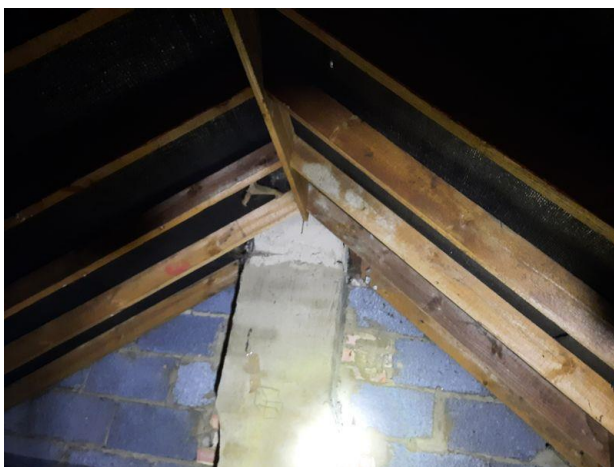


Plate 4.9: View of Gable End



Plate 4.10: Additional Loft Space Access

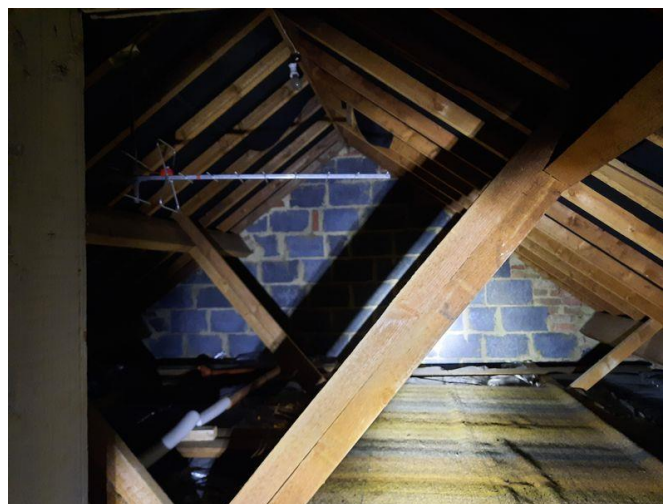


Plate 4.11: Additional Loft Space

Light entered the loft space from gaps under the eaves (Plate 4.12). The felt sarking was in a good state of repair with the exception of some areas of torn felt (Plate 4.13). Bat droppings were recorded below these features and below the ridge beam. Bat droppings were scattered throughout the loft floor (Plate 4.14). The droppings resembled those of a brown long eared bat species and approximately 20 - 30 droppings were identified in total. These droppings were old and deemed to have been deposited during the previous bat activity season 2021. Droppings were recorded under the ridge beam and below the hole in the sarking.



Plate 4.12: Light Entering from Underneath Eaves



Plate 4.13: Torn Felt with Access to Roof Tiles



Plate 4.14: Example of Bat Droppings

The area between the felt sarking and roof tiles could not be fully inspected at the time of surveying and as such the bat roosting potential of this area could not be determined.

4.4 SITE AND SURROUNDING HABITATS

The building on site has been identified as a bat roost and several external features were noted that could be utilised by roosting bats. In addition to this, the presence of scattered trees and hedgerows around the building provide suitable foraging and commuting opportunities for bats.

The immediate area surrounding the site was dominated by further buildings which may provide further roosting opportunities for bats and additional areas of scattered trees and hedgerows providing further foraging and commuting habitat for bats.

The wider landscape has some suitable habitat for roosting, commuting and foraging bats. Suitable habitats are present within neighbouring residential properties and their associated gardens, areas of grassland, pockets of woodland and tree and hedgerow lined agricultural fields.

The site is directly connected to suitable habitat within the wider landscape through treelines and hedgerows.

Habitats within 1 km of the site suitable for roosting, commuting and foraging include:

- Residential houses and associated gardens;
- Running and standing water bodies (The closest being 0.42km north east);

- Agricultural fields with tree and hedge lined boundaries;
- Pockets of woodland (located less than 20 m north);
- Schools associated grounds;
- Railway lines with vegetated banks; and
- Golf courses with associated open grassland habitats.

5. DISCUSSION AND CONCLUSIONS

5.1 SUMMARY OF PROPOSALS

Planning proposals include the reconfiguration of the single storey annexe, with proposals for a second story extension above and a single storey extension to the rear of the property.

5.2 ASSESSMENT OF BUILDING

After a detailed assessment of the building, a number of potential bat roosting features were identified on the building, which included:

- Warped and lifted roof tiles;
- Gaps under roof tiles;
- Misaligned hanging tiles;
- Holes in the hanging tiles;
- Gaps under lead flashing; and,
- Holes under ridge tiles.

Internal inspection of the building identified gaps under the eaves and torn sarking which revealed exposed roof tiles. These features provided access into the loft space. Evidence of roosting bats were recorded in the form of bat droppings which were located beneath the ridge beam and beneath the hole in the sarking.

Based on the findings during the external and internal inspection and the surrounding habitats the building is classed as having high potential to support roosting bats.

5.3 POTENTIAL IMPACTS ON BATS

Should bats be found to be using the potential roost features identified for roosting, there is potential for direct harm/ injury to roosting bats, roost destruction and disturbance to roosting bats during the works. A recommendation for further survey work has therefore been made in Chapter 6.

The areas of scattered trees, hedgerows and woodland surrounding the building offer foraging and commuting opportunities. These areas have some connectivity to more suitable surrounding habitats. As such the potential for bats being present foraging and commuting within the site boundary is therefore determined as high.

The proposed plans suggest that no trees are to be removed as part of the proposed works, therefore there is no potential for the loss of habitat for foraging and commuting bats.

6. RECOMMENDATIONS

All recommendations provided in this section are based on Middlemarch Environmental Ltd's current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

R1 Building 1

As a bat roost/resting place has been identified in the building, no unlicensed work can be undertaken which will contravene the legislation outlined in Appendix 1.

Examples of works which will breach this legislation include:

- Roof modifications/repairs/removal;
- Timber treatment;
- Noise, vibrations and storage of odorous and dangerous chemicals;
- Alterations to bat entrance/exit points;
- Investigations works in the roof as this can cause bats to abort their young/awake from hibernation and can alter the roof temperature/humidity; and,
- Works in the main body of the building.

N.B. This is not an exhaustive list and a bat worker should be consulted to determine if the works are likely to breach any legislation.

Prior to any works being undertaken which are likely to result in a breach of the legislation, a development licence must be obtained from Natural England. The licence application process will include the submission of a method statement detailing the current status of bats on site and how the favourable conservation status of the bat population will be maintained. Prior to a licence being issued, planning permission must be granted and relevant conditions relating to protected species and habitat issues must be discharged.

To inform the licence application at least three dusk emergence and/or dawn re-entry surveys must be undertaken during the bat activity season in line with Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016). The bat emergence/re-entry survey season extends from May to September. At least two of the surveys should be undertaken during the peak season for emergence/re-entry surveys between May and August and one of the three surveys should be a dawn re-entry survey. These surveys need to be carried out during the activity season closest to the start date of the proposed development to ensure that the data obtained is current and appropriate for assessment by Natural England.

R2 Lighting

In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species. Examples of good practice include:

- Avoiding the installation of new lighting in proximity to key ecological features, such as hedgerows and treelines.
- Using modern LED fittings rather than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.
- The use of directional lighting to reduce light spill, e.g. by installing bespoke fittings or using hoods or shields. For example, downlighting can be used to illuminate features such as footpaths whilst reducing the horizontal and vertical spill of light.
- Where the use of bollard lighting is proposed, columns should be designed to reduce horizontal light spill.
- Implementing controls to ensure lighting is only active when needed, e.g. the use of timers or motion sensors.
- Use of floor surface materials with low reflective quality. This will ensure that bats using the site and surrounding area are not affected by reflected illumination.

R3 Habitat Enhancement

In line with the National Planning Policy Framework, the development should aim to enhance the site for bats. Bat boxes should be installed to provide roosting habitat for species such as pipistrelle. In general, bats seek warm places and for this reason boxes should be located where they will receive full/partial sun, although installing boxes in a variety of orientations will provide a range of climatic conditions. Position boxes at least 4 m above ground to prevent disturbance from people and/or predators. The planting of species which attract night flying insects is encouraged as this will be of value to foraging bats, for example: evening primrose *Oenothera biennis*, goldenrod *Solidago virgaurea*, honeysuckle *Lonicera periclymenum* and fleabane *Pulicaria dysenterica*.

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APPENDIX 1

LEGISLATION

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

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

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

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

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

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

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

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

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

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

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

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

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

For England:

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

ECOLOGY

At present, 18 species of bats are known to live within the United Kingdom, of which 17 species are confirmed as breeding. All UK bat species are classed as insectivorous, feeding on a variety of invertebrates including midges, mosquitoes, lacewings, moths, beetles and small spiders.

Bats will roost within a variety of different roosting locations, included houses, farm buildings, churches, bridges, walls, trees, culverts, caves and tunnels. At different times of the year the bats roosting requirements alter and they can have different roosting locations for maternity roosts, mating roosts and hibernation roosts. Certain bat species will also change roosts throughout the bat activity season with the bat colony using the site to roost for a few days, abandoning the roost and then returning a few days or weeks later. This change can be for a variety of reasons including climatic conditions and prey availability. Bats are known live for several years and if the climatic conditions are unfavourable at a particular roost, they may abandon it for a number of years, before returning when conditions change. Due to the matriarchal nature of bat colonies, the locations of these roosts can be passed down through the generations.

Bats usually start to come out of hibernation in March and early April (weather dependent), when they start to forage and replenish the body weight lost during the hibernation period. The female bats then start to congregate together in maternity roosts prior to giving birth and a single baby is born in June or July. The female then works hard to feed her young so that they can become independent and of a sufficient weight to survive the winter before the weather gets too cold and invertebrate activity reduces. Males generally live solitary lives, or in small groups with other males, although in some species the males can be found living with the females all year. The mating season begins in the autumn. During the winter bats hibernate in safe locations which provide relatively constant conditions, although they may venture outside to forage on warmer winter nights.