



Preliminary Roost Assessment and Emergence Survey

31 Greenfields Road, Reading, RG2 8SG

26 May 2025

Preliminary Roost Assessment and Emergence Survey of 31 Greenfields Road, Reading, RG2 8SG

REPORT DETAILS

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management, nature conservation,
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book publisher.

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EXECUTIVE SUMMARY

A Preliminary Roost Assessment of 31 Greenfields Road determined that the building proposed for development (B1) offers a low potential to support bat roosts. Consequently, a (Phase Two) Bat Emergence Survey was undertaken to support a planning application for the proposed rear extension.

No bat roosts were recorded during either the Preliminary Roost Assessment or the Dusk Emergence Survey. However, given the highly mobile nature of bats and their tendency to change roosting sites, there remains a residual risk that bats could occupy the site between the time of the survey and the commencement of construction.

The site has been assessed as being of local level value for foraging and commuting bats.

A hedgehog was observed foraging on site, around the shed which is due to be removed as part of the proposed works.

Key Mitigation Measures:

A precautionary working method will be implemented: any soffits and roof tiles to be removed will be removed carefully by hand and inspected for bats prior to being discarded. Due to the very low likelihood of bats being present, this task can be undertaken by the site contractor and the presence of an ecologist is not required.

If bats or evidence of their presence are discovered during works, all activity must stop immediately, and advice from a licensed bat ecologist must be sought.

Additional Recommendations:

A sensitive lighting regime must be implemented to avoid disturbance to commuting and foraging bats.

Recommendations related to nesting birds have been made.

The removal of the shed should be scheduled for September to October or during the month of April, outside the key hedgehog nesting and hibernation periods. A pre-works hedgehog check should be made by the person(s) carrying out the shed removal. If works must proceed outside these times, a suitably qualified ecologist must carry out a pre-works inspection to determine the presence or absence of any active hedgehog nests and advise accordingly. In all cases, the shed should be dismantled with care, and habitat connectivity should be maintained or enhanced post-development through the provision of “hedgehog highways”.

These measures ensure legal compliance and protection of bats, birds and hedgehogs in line with current conservation regulations.

1 INTRODUCTION

31 Greenfields Road, Reading, RG2 8SG (hereafter referred to as "the site"), is centred on Ordnance Survey Grid Reference SU 71963 69578. It comprises the western (left-hand) portion of a semi-detached, two-storey residential dwelling (B1). The current proposals for the site involve the removal of an existing shed at the rear to accommodate a two-storey rear extension (hereafter referred to as "the proposed works").

NatureBureau was commissioned by Jazira Suiessinova (hereafter referred to as "the client") to undertake a bat roost assessment and dusk (emergence) survey to satisfy planning conditions in relation to bats and their roosts, which are protected by law. This report summarises the findings of those surveys.

1.1 Site Overview

B1 is situated within an approximately 266 square metre (m²) plot, which includes an amenity garden with trees to the rear (south) and a small garden with a driveway to the front (north). The site is in a high-density residential area, characterised by the presence of buildings and enclosed private gardens with scattered mature trees. The broader surrounding landscape similarly features residential properties and treelines alongside industrial areas – interspersed with recreation grounds, grassland and areas of woodland.

1.2 Scope of Assessments

The aim of the Preliminary Roost Assessment (PRA) is to assess the status of roosting bats on the site and to determine the existence and location of any ecologically valuable areas. With regards to roosting bats, this information will serve to assess the ecological impact of the proposals and identify any ecological constraints and/or mitigation measures that may be required.

The key objectives of the emergence survey are:

- Confirm the presence or likely absence of roosting bats within B1;
- Identify any bat species present, along with the number of individuals and the nature of any roost (where relevant);
- Assess patterns of bat activity around the structures, including any entry or exit points used by bats (where relevant);
- Inform the need for further survey effort or mitigation, should bat roosts be confirmed or if significant bat activity is observed;
- Ensure compliance with relevant wildlife legislation and planning policy, to support an informed planning decision regarding the proposed development.

Figure 1: The structure surveyed, B1 (red)

(Source: Google Earth, 2022)



Figure 2: Site location (red) within the wider landscape

(Source: Google Earth, 2022)



2 METHODOLOGY

2.1 Desk Study

Publicly available online datasets were reviewed to identify any licences issued for works involving bats within a 2 kilometre (km) radius of the site, along with records of designated sites within the same search area. In addition, maps and aerial imagery were examined to identify features of potential importance to bats.

Table 1: Summary of resources used during the desk study

Resource	Information assessed
Google Earth	Assessment of the local landscape. Latest image date: July 2022
Multi-Agency Geographic Information for the Countryside (MAGIC) website ¹	Records of licences issued by Natural England for works affecting bat species within 2 km of the site; any relevant site designations within 2 km of the site; Special Areas of Conservation designated for bat interest within 10 km of the site; Priority Habitats in the local area

2.2 Site Surveys

A site visit was undertaken on 19 May 2025 between 19:35 and 10:30 hours.

2.2.1 Preliminary Roost Assessment

An assessment was carried out on B1 to determine its potential to support roosting bats. The assessment included an internal and external investigation of structures for signs of bat activity such as droppings, rub or scratch marks, staining at potential roosts and exit holes, live or dead bats, and features potentially suitable for use by roosting bats, such as raised or missing tiles. Particular attention was given to the floor and flat surfaces, window frames and features within the roof space (where possible). The suitability of B1 to support bats was rated from no suitability to high suitability in accordance with Section 4.3 of the Bat Conservation Trust's Good Practice Guidelines, and recommendations for further survey requirements are also taken from Collins (2023).

2.2.2 Dusk Emergence Survey

One dusk emergence survey was undertaken of B1. The survey involved two surveyors and three night vision cameras, positioned to observe the north, west and south of B1. The details of the bat surveyors are detailed in Section 3.3.

Each surveyor was equipped with an Echo Meter Touch 2 Pro bat detector to record bat echolocation calls, and night vision aids to record the building elevations after dark. The footage

¹ [Magic Map Application \(defra.gov.uk\)](https://defra.gov.uk/magic-map-application)

was reviewed within the following days by the same surveyors. Each surveyor also used a survey record sheet to record all real-time bat activity observed during the survey.

The dusk emergence survey started 20 minutes before sunset and continued for 1.5 hours after sunset (20:30 – 22:27). The survey was carried out during optimal weather conditions, with dusk air temperatures exceeding 10°C and avoiding heavy rain or strong wind, as adverse weather conditions can impact upon bat emergence and foraging behaviour.

The work, analysis and reporting were undertaken in line with CIEEM's Code of Professional Conduct, the Bat Conservation Trust's Good Practice Guidelines and other relevant guidelines and legislation as listed in the Appendices of this report.

2.3 Assessing the Site's Value to Commuting and Foraging Bats

An evaluation of the site's importance for bat commuting and foraging activity was carried out in accordance with established guidance (Wray *et al.*, 2010). This guidance outlines a scoring framework that considers the rarity of each bat species potentially present on-site, alongside factors such as the presence or likelihood of roosts and the types of habitats locally available. Once the scores for each species had been determined, the reference table (see Table 2) was consulted to determine the ecological value of the site on a defined geographical scale.

Table 2: Scoring system for valuing commuting and foraging bats (Wray *et al.*, 2010)

Geographic Frame of Reference	Score
International	> 50
National	41 - 50
Regional	31 - 40
County	21 - 30
District, Local or Parish	11 - 20
Not important	1 - 10

2.4 Limitations

DEFRA's MAGIC mapping system has recently been updated, and as a result, European Protected Species licences are not always displayed accurately or in full. It is possible that data is incomplete.

The surveys were conducted in accordance with current best practice guidelines (Collins, 2023) to determine the presence or likely absence of roosting bats. However, the data collected represents a snapshot in time, based on conditions observed during specific survey dates. As such, it provides an indication of site use by bats at the time of assessment only.

Identifying bat roosts within buildings can be challenging, particularly in larger structures or those with numerous potential roosting features. Roosting sites used by solitary bats or males can be especially difficult to detect due to their discreet nature. Many bat species utilise narrow crevices,

such as gaps between roof tiles or beneath tile linings, where any droppings or signs of occupancy may become concealed and inaccessible to surveyors.

Additionally, internal inspections may not always reveal evidence of bat presence, as droppings and other field signs can degrade quickly in damp conditions. Evidence located on external or exposed surfaces may also be lost due to adverse weather, further limiting the reliability of visual inspections alone.

All survey techniques for bats are subject to bias and bat detector surveys may under-record species with quiet echolocation calls, such as brown long-eared bats.

Thermal and infrared cameras were used during the survey to aid in the detection of bat activity under low-light conditions. While these technologies can enhance the visibility of heat signatures and movement in darkness, they are not conclusive tools. Environmental factors such as ambient temperature, background heat sources (e.g., warm walls or rooftops), and vegetation cover can interfere with image clarity and detection accuracy. As a result, observations made using thermal or infrared imaging were supported by visual confirmation and acoustic recordings wherever possible. The use of these tools should be considered supplementary rather than definitive.

During the emergence survey, the entire front (north) roof slope could not be fully observed from ground level due to visibility constraints. However, the emergence survey utilised two cameras, positioned to ensure that any bats emerging from these obscured areas would have been detected. Had any bat activity been recorded from the unobserved sections, further surveys would have been undertaken to determine the precise roost location.

Following footage review, Surveyor 2 failed to save an image from the darkest point of the survey prior to deleting all the footage. Therefore, no 'darkest point' image from the Sony handycam fdr-ax53 has been included in this report. Instead, an image of their view throughout the survey has been included.

Bats are highly mobile and can change roosting sites frequently in response to environmental conditions, availability of resources, and life cycle requirements. Therefore, while no evidence of roosting was recorded during this survey, it is not possible to definitively rule out the use of B1 by bats at other times of the year. Consequently, the findings of this survey should be considered within the context of these temporal limitations.

The results of this report are valid up to 12 months and/or if the conditions of the site change significantly, as per the Advice Note on the lifespan of ecological reports and surveys produced by CIEEM in 2019.

3 RESULTS

3.1 Desk Study

3.1.1 Natural England Protected Species Licences

Within 2 km of the site there are eight records for licences issued by Natural England for works affecting bats entered on the MAGIC² website. These licences relate to the destruction of known resting and breeding places of brown long-eared bats (*Plecotus auritus*), common pipistrelle bats (*Pipistrellus pipistrellus*), and soprano pipistrelle bats (*Pipistrellus pygmaeus*) between 2009 and 2021.

The closest record relates to a known common pipistrelle bat roost 428 meters (m) southeast of the site in 2009 (licence reference: EPSM2009-1119). Ecological connectivity between this roost and the site is low.

3.1.2 Site Designations

Within a 2 km radius of the site, there are no designated Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), or Special Areas of Conservation (SACs).

One Local Nature Reserve (LNR), Pearman's Copse, is located approximately 1.45 km to the southeast. This LNR comprises a small, 2-hectare area of Ancient Woodland, supporting tree species such as ash, hazel, and oak. Although Pearman's Copse is not specifically designated for its bat interest, the woodland habitat is likely to provide both direct and indirect support for a range of bat species. Nonetheless, ecological connectivity between the site and the LNR is low.

Within 10 km of the site there are no Special Areas of Conservation designated for bat interest.

3.1.3 Priority Habitats

The nearest substantial area of Deciduous and Ancient Woodland is located approximately 740 m southeast of the site. An additional significant area of Deciduous Woodland lies approximately 970 m to the northeast. Numerous smaller and medium-sized parcels of these Priority Habitats are also present within both the local and wider landscape. Furthermore, three notable areas of Woodpasture and Parkland - identified as UK Biodiversity Action Plan habitats - are located within the surrounding area. These habitat types are known to support a diverse range of bat species, providing valuable roosting, commuting, and high-quality foraging opportunities. However, a review of aerial imagery suggests that ecological connectivity between the site and these key bat habitats is limited, largely due to the urbanised, residential nature of the immediate surroundings.

² [Magic Map Application \(defra.gov.uk\)](https://magic.defra.gov.uk/)

3.2 Preliminary Roost Assessment

A roost assessment was undertaken prior to the emergence survey on 19 May 2025. At the time of the survey the temperature was 16°C in bright and clear conditions.

Additional site photos can be found in the Appendices.

3.2.1 Structure B1: External Survey

B1 is a two-storey, semi-detached residential property characterised by a clipped gable roof design. The northern (front) elevation includes a part-flat roof at second-storey level and a catslide roof over the front entrance. To the rear (south), the property features a flat-roofed, single-storey extension, along with an additional small single-storey extension incorporating a sloped roof.

Overall, the brickwork was found to be in good condition, with no missing bricks or deteriorating mortar. Additionally, the windows and doors are well fitted to the building, with no gaps suitable for roosting bats.

The external survey identified the following potential crevice bat roosting features to be surveyed during the emergence survey:

- Gaps below the ridge tiles to the rear (south) of B1
- Gaps around tiles on the lower side of the (south) roof
- Gaps between the soffit and brickwork on the south elevation
- Gaps between the brick and fascia on the side (west) elevation
- Gaps below the ridge tiles to the front (north) of B1
- Gaps where tiles have lifted on the front (north) catslide roof
- A small gap under lead flashing at the top of the (north) catslide roof

The flat roof to the front (north) was not fully observable during the survey, so additional roosting features may be present.

Figure 3: The front (north) of B1



3.2.2 Structure B1: Internal Survey

Access to the internal loft space of B1 at 31 Greenfields Road was gained via a hatch located on the first floor. The loft comprises a traditional timber-framed apex structure.

The roofing membrane was found to be in poor condition, with numerous tears allowing visibility of roof tiles and ingress of light across all aspects. Moreover, light was observed entering around the ridge. However, the apex height is insufficient to support void-dwelling bat species, and heavy presence of cobwebs was noted throughout the space, suggesting a lack of regular use by bats.

A detailed inspection of the loft, including the floor and cobwebs, revealed no evidence of bat presence, such as droppings, feeding remains, or staining. No bats were observed during the survey.

Based on these findings, the loft space within B1 is assessed as having negligible potential to support roosting bats.

Figure 4: The loft void of B1



3.2.3 On-site Habitat

The site is bordered on the south by trees. However, B1 is not itself enclosed by vegetation which could provide cover to bats entering and exiting roosts.

No trees are due to be impacted by the proposed development; therefore, no tree assessments were undertaken.

Overall, B1 at 31 Greenfields Road offers low (crevice) bat roosting potential and in accordance with the latest guidance (Collins, 2023), one bat emergence survey is required.

3.2.4 Nesting Birds

No birds were seen nesting on site the at time of the survey, however, it is possible that birds could begin nesting on or within B1 at any time during bird nesting season.

3.3 Dusk Emergence Survey

Table 2: Results of the dusk emergence survey

Date	19 May 2025	
Start and end times	20:30 – 22:27 (sunset: 20:57)	
Weather conditions	Start: Temp: 15 °C Humidity: 51% Cloud cover: 5% Wind: 0-1 (Beaufort) Rain: 0	End: Temp: 12 °C Humidity: 45% Cloud cover: 15% Wind: 0-1 (Beaufort) Rain: 0
Surveyor 1	Kristina Wood, surveyor with 4 years bat surveying experience and a Natural England CL17 bat licence. No emergences from the north and west elevations of B1. Activity started at 21:28 with a commuting common pipistrelle bat which approached the site from the north and flew down the west side of B1, in the direction of Surveyor 2. This was repeated by another common pipistrelle at 21:34. At 21:32 an unidentified bat was observed foraging to the west of the site, in a neighbouring garden. At 21:29 a noctule (<i>Nyctalus noctula</i>) bat was heard but not seen (HNS) passing. No other species were heard or seen.	
Surveyor 2	Ross Allen, surveyor with 11 years bat surveying experience No emergences from the south elevation of B1. Activity started at 21:15 with a commuting common pipistrelle bat which was heard but not seen (HNS). At 21:18, a common pipistrelle commuted from south to east across the rear of the site, above the surveyor. At 21:28, a common pipistrelle flew down the west elevation of B1, commuting from north to south. At 21:27, three common pipistrelles started foraging around the neighbouring garden, to the southwest of B1. This continued for around 10 minutes. Between 20:40 and the end of the survey, common pipistrelle bats were regularly heard and seen foraging around the site and making passes across the south. At 21:28 a noctule bat was HNS passing.	

	No other bat species were heard or seen, however, around 21:00 a hedgehog (<i>Erinaceus europaeus</i>) was observed foraging around the shed, to the southwest of B1.
Infrared/thermal imaging used for survey	• Camera 1: Nightfox Whisker camera paired with Nightfox XB5 IR Torch • Camera 2: Pixfra Arc A613 Thermal Imaging camera • Camera 3: Sony handycam fdr-ax53 paired with Nightfox XB5 IR Torch and 2x floodlights Images from the survey can be found in the Appendices.

Figure 5: Surveyor and camera positions during survey



3.3.1 Survey Summary

During the dusk emergence survey undertaken on 19 May 2025 at 31 Greenfields Road, two bat species were recorded. A peak count of three common pipistrelle individuals were observed foraging actively in the southwestern and southern sections of the site. Frequent passes were noted along the southern elevation of the property, which remains unlit and provides suitable bat commuting conditions. Most bat activity was concentrated to the rear of the site, particularly

around garden areas and mature trees. In contrast, minimal bat activity was observed or recorded at the front of the property.

A single noctule bat was recorded passing over the site.

Review of the full footage confirmed that there were no bat emergences from 31 Greenfields Road during the survey on 19 May 2025.

3.3.2 Other Protected Species

During the survey, Surveyor 2 observed a hedgehog actively foraging in the vicinity of the rear garden shed. As no evidence of recent movement through the wider garden was noted, it is considered likely that the individual is nesting in the garden, potentially near to the shed.

4 EVALUATION AND RECOMMENDATIONS

Taking the Phase Two survey results into account, 31 Greenfields Road has been evaluated for its value for roosting bats, and a likely absence of roosting bats is concluded. **No further bat surveys are required.**

However, bats are highly mobile animals that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time. The features noted in Section 3.2.1 present some roosting features which could be used by bats, and the proposed works will result in the removal of some of these features on the west and south elevations. Any bats that begin using the building during the intervening period between the survey being undertaken and works commencing could be injured or killed and their roosts destroyed. Therefore, it is recommended that the features (southern roof tiles and western soffits) suitable for bat roosting will be removed carefully by hand and inspected for bats prior to being discarded. Due to the very low likelihood of bats being present, this task can be undertaken by the site contractor and the presence of an ecologist is not required.

The client and site contractors must be aware of their legal responsibilities in relation to bats (Section 6.4) and if bats or evidence of bats are discovered during the development all works must be halted and the advice of a licenced bat ecologist must be sought.

4.1 Value Assessment

The survey results were analysed to inform an assessment of the value of the habitat at the site for commuting and foraging bats (Wray *et al*, 2010).

- Common Pipistrelle - (2) + small number of bats (10) + Roost Potential (4) + Suburban area (2) = **18**
- Noctule - (5) + individual bats (5) + Roost Potential (4) + Suburban area (2) = **16**

The site has been assessed as being of local level value for foraging and commuting bats.

4.2 Lighting

Bats are using the site (and neighbouring sites) for commuting and foraging and therefore any lighting resulting from the proposed works is likely to create a (local level) disturbance to bats. It is recommended that any development which takes place should be considerate of this when implementing any new lighting regimes during the construction and operational phases.

To reduce the likelihood of disturbing bats, during the construction phase there should be no temporary nighttime lighting from sunset to sunrise, and all works must be completed in daylight hours. If emergency lighting is required, it should follow the following specifications:

- Lighting must be directional, facing away from the rear and neighbouring gardens and set using a steep ground-ward angle and on short columns (no higher than 3m);
- Use a lamp no greater than 2000 lumens (150 watts), using light sources that peak higher than 550 nanometres, which avoids the UV, white and blue wavelengths;
- Warm white spectrum LED (<2500 Kelvin) should be used over a cool white spectrum;
- Cowls, hoods, baffles or louvres must be used to avoid light spillage off-site;
- Use of reflective surfaces under the light must be avoided.

In addition, the following recommendations must be employed post-development:

- Any lighting around the site must use sensor activated lamps;
- Variable lighting regimes must be utilised to lower lighting levels during periods of reduced human activity (e.g. 22:00-05:30).

4.3 Nesting Birds

No evidence of bird nesting was identified on or within B1. However, birds could potentially begin nesting anywhere on site at any time during bird nesting season. The proposed works could therefore cause disturbance, injury or death to nesting birds.

If work is to be carried out during bird nesting season (March to August, inclusive), the client and site contractors must be aware of their obligations towards nesting birds and must check for them prior to commencing the works. If an active bird nest is discovered, an exclusion zone must be put in place (minimum 5 m), and works must be halted in that area. Breeding birds and their nests are protected by law and all active nests must be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works.

4.4 Hedgehogs

During the emergence survey on 19 May 2025, a hedgehog was observed foraging around the rear garden shed, which is due to be removed as part of the development. Hedgehogs are listed as a Biodiversity Action Plan Priority Species and are listed under Section 41 (Natural Environment and Rural Communities Act) as a Species of Principal Importance in England. This places a duty on public authorities (including local planning authorities) to have regard to the conservation of biodiversity, including hedgehogs, when carrying out their functions - such as when considering planning applications.

Throughout the year, hedgehogs are reliant on access to dense vegetation, hedgerows, log piles, and garden structures (such as sheds) to provide secure nesting sites and cover from predators and

weather. Hedgehogs exhibit distinct nesting behaviours, aligned with seasonal changes in temperature, food availability, and breeding cycles.

Spring (March - May): Upon emergence from hibernation, hedgehogs build or use temporary day nests for resting during daylight hours. These nests are less elaborate and often constructed in log piles, thick undergrowth, or beneath garden structures.

Summer (May - August): During the breeding season, females construct maternity nests to rear their young. These nests are typically built in concealed, undisturbed locations and may house the mother and her litter for several weeks.

Autumn (September - November): Hedgehogs begin preparing hibernation nests in anticipation of colder weather. Nest-building activity increases, and hedgehogs accumulate fat reserves during this time.

Winter (November - March): Hedgehogs hibernate in hibernation nests (or hibernacula), which are well-insulated structures built from leaves, grass, and other vegetation, typically located in sheltered spots such as under sheds, in dense vegetation, or compost heaps.

Disturbance of a maternity nest (typically between May and August) can result in significant welfare and conservation impacts, including abandonment of young, infanticide, and increased mortality risk due to relocation (e.g. exposure to predators, dehydration, or starvation). Similarly, disturbance during the winter hibernation period (November to March) can be fatal.

To minimise these risks, the removal of the shed should be scheduled for September to October or during the month of April, outside the key nesting and hibernation periods. A pre-works hedgehog check should be made by the person(s) carrying out the shed removal.

If works must proceed outside these times, a suitably qualified ecologist should be engaged to carry out a pre-works inspection to determine the presence or absence of any active hedgehog nests. If no nests are found, works may proceed.

In all cases, the shed should be dismantled with care, and operatives should be made aware of the potential for hedgehogs to be present.

In addition, habitat connectivity should be maintained or enhanced post-development through the provision of “hedgehog highways” - small openings (minimum 13 cm x 13 cm) in boundary fences or walls - to allow continued movement through the site.

4.5 Other Protected Species

Based on the surrounding habitat and limited connectivity to designated or high-value ecological sites, it is considered unlikely that the site supports any European Protected Species. However, given the presence of suitable terrestrial habitat (e.g. garden vegetation and built structures), there remains a low potential for species such as common frogs and toads to be present. As such, site

operatives should remain vigilant during the removal of the existing shed or other ground-level features.

If amphibians are encountered, they may be carefully relocated to a sheltered, vegetated area at the rear of the garden.

5 CONCLUSION

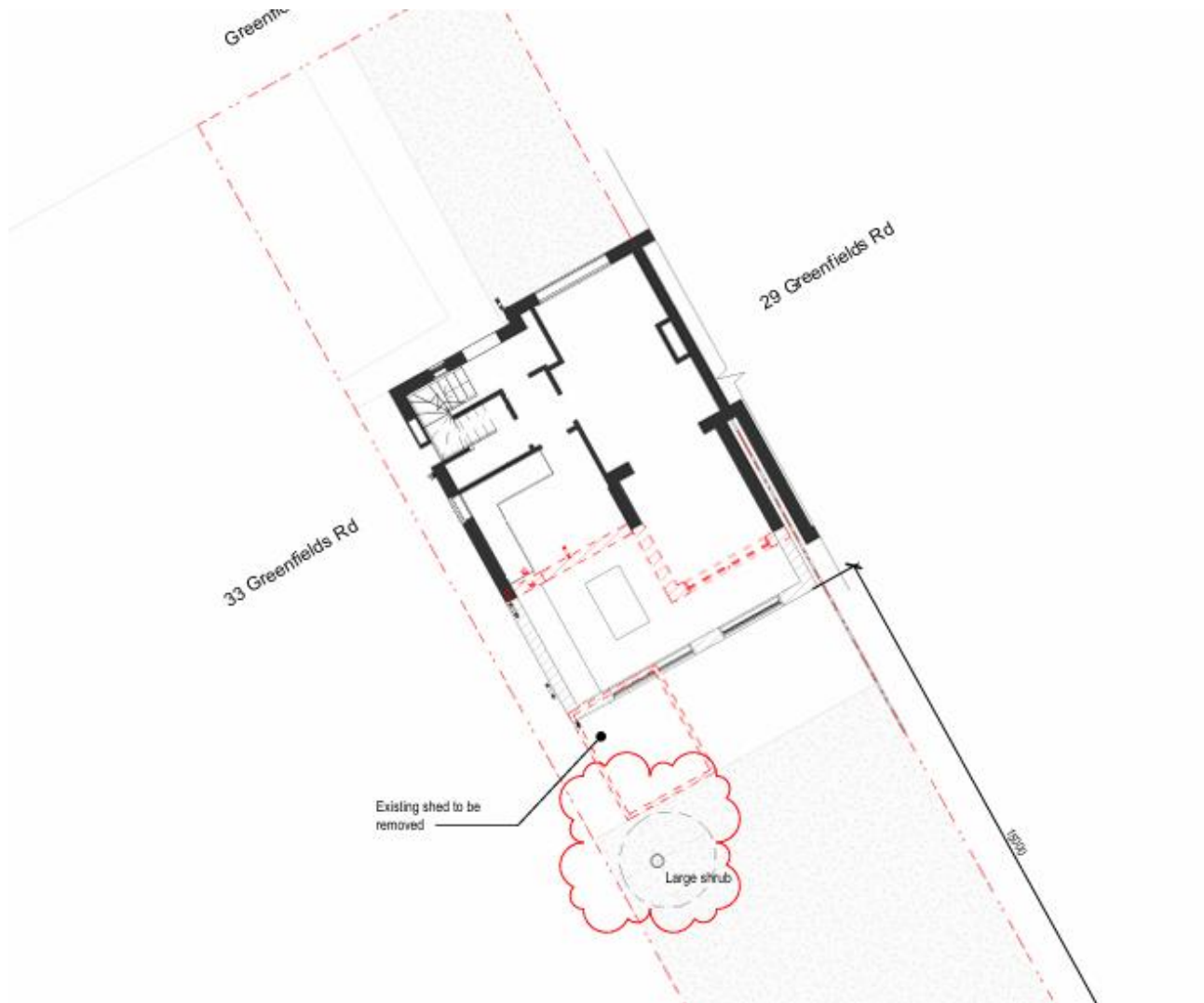
B1 at 31 Greenfield's Road has been evaluated for its value for roosting bats and a likely absence of roosting bats is concluded. No further bat surveys are required; however, this report recommends the implementation of a precautionary working method and a wildlife-sensitive lighting strategy. This is because the site has been assessed as being of local level value for foraging and commuting bats.

A hedgehog was identified on site during the survey. Recommendations relating to the destruction of the garden shed must be implemented to minimise the risk of harm or death to this species. These recommendations also consider amphibian species which may be present.

The results of this report are valid up to 12 months and/or if the conditions of the site change significantly.

6 APPENDICES

6.1 Site Plans



6.2 Additional photos from the Site Visit on 19 May 2025











6.3 Images from the emergence survey on 19 May 2025

6.3.1 Camera 1: West



6.3.2 Camera 2: North



6.3.3 Camera 3: South (survey start)



6.4 Bat Legislation

All species of bats receive special protection under UK law, including the strict species protection provisions of the EU Habitats Directive as implemented in England and Wales by Part 3 of the Conservation of Habitats and Species Regulations 2019 (the “2017 Regulations, amended by the 2019 Regulations due to Britain leaving the EU”), and Part 1 of the Wildlife and Countryside Act 1981 (as amended).

Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended by the 2019 Regulations) makes it illegal to:

- i. Deliberately capture, injure or kill a bat;
- ii. Deliberately disturb bats in a way that would significantly affect their local distribution or abundance, or affect their ability to survive, breed or rear young; or
- iii. Damage or destroy a roost – regardless of whether the action was deliberate or not.

Furthermore, the Wildlife and Countryside Act 1981 (as amended) makes it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to damage, destroy or obstruct access to this structure or place.

Eight of the UK bat species are also listed as Priority Species on the UK BAP³, highlighting them as species of conservation concern.

6.5 Industry Guidance and Standards

This report has been written with consideration to:

- Bat Conservation Trust (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines. 4th edition.
- Bat Conservation Trust (2019). National Bat Monitoring Program Annual Report 2019.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Garland, L. & Markham, S. (2008) Is Important Bat Foraging and Commuting Habitat Legally Protected? <http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf>
- Harris, S. & Yalden, D. (2008). Mammals of the British Isles: Handbook, 4th Edition. The Mammal Society, Southampton.
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting
- Mathews F, and Harrower C. (2020). IUCN – compliant Red List for Britain’s Terrestrial Mammals. Assessment by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough ISBN 978-1-78354-485-1.

³ UK Biodiversity Framework - Biodiversity policy & advocacy - Bat Conservation Trust (bats.org.uk)

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

6.6 Table 4.1 from Bat Surveys for Professional Ecologists: Good Practice Guidelines

Table 4.1 . Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	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).
Negligible ^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b 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 and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).	Habitat that could be used by small numbers of bats as flight-paths 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.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths 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.
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 ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	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.

a Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

b For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

c Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2016 and Jansen *et al.*, 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

6.7 Planning Policy

National Planning Policy Framework 2024

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and recreation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'. Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.