



Amethyst Ecology

89 Westwood Road, Tilehurst, RG31 5PY

Carly Merrett

Bat Report **(Preliminary Roost Assessment & Emergence** **Survey)**

January 2026

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0247	Draft	27/08/2025	Charlie Vaughan-Jones BSc
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EXECUTIVE SUMMARY

A planning application for the following works are proposed at 89 Westwood Road, Tilehurst, RG31 5PY:

- Conversion of the existing loft into a habitable space with ensuite;
- Replacement of the entire main roof;
- Converting the flat roof over the garage to a pitched roof;
- Single storey rear extension.

A Preliminary Roost Assessment (PRA) of the Site was undertaken to identify any ecological constraints with regards to roosting bats as a result of the development, highlight opportunities for ecological enhancement and determine the need for any additional investigation / survey. As part of this PRA, a field survey of the Site was undertaken in August 2025, in accordance with the Bat Conservation Trust Good Practice Guidelines (Collins et al., 2023).

The building B1 contains a low number of potential roosting features (PRFs) suitable for crevice dwelling bat species across the main roof coverings, as well as one section of the roof overhang on the northeast elevation. The main loft void is suitable for void dwelling species; but the presence of void dwellers was determined as likely absent due to the absence of any internal evidence.

The building B2 also contained PRFs across the roof coverings, consisting of lifted and broken tiles, which are suitable for crevice dwelling bats. As with B1, B2 was determined as likely absent of void dwelling species due to the absence of any internal evidence. The interior was also filled with thick old cobwebs, which further indicates no recent activity.

Considering the quantum and quality of features present across both B1 and B2, the buildings are assessed as **'low'** potential to support roosting bats, in line with the bat survey guidelines (Collins, 2023). A bat emergence survey was undertaken in August 2025; where no bats were observed emerging from the building by the surveyors or through post-survey analysis of infrared footage. Roosting bats are thereby determined as likely absent and no impacts to roosting bats are anticipated as a result of the development.

No evidence of nesting birds was recorded.

Recommendations for site enhancements to benefit bats and birds are detailed herein. The findings of this report remain valid until the beginning of the next bat survey season (i.e. May 2026).

1.0 INTRODUCTION

- 1.1 This report has been prepared by Amethyst Ecology Ltd (“Amethyst”) on behalf of Carly Merrett. It sets out the findings of a Preliminary Roost Assessment (PRA) and subsequent bat emergence survey of 89 Westwood Road, Tilehurst, RG31 5PY (hereafter referred to as ‘the Site’). The proposals include the conversion of the loft into a habitable space, conversion of the flat roof into a pitched roof and a ground floor single storey extension (see Appendix D).
- 1.2 The PRA involved an internal and external assessment of the building, whereby the surveyors searched for evidence of bats (e.g., physical bats or droppings, etc.), as well as assessing the building’s suitability to support roosting bats (valued from negligible – low – moderate – high suitability, in accordance with the Bat Conservation Trust Survey Guidelines, 2023).
- 1.3 The inspection of the building was necessary due to the nature of the proposed works, whereby destructive / disruptive works to the roof structure and coverings is proposed, as described above.
- 1.4 A bat emergence survey was carried out on 12th August 2025 to determine the presence/likely absence of roosting bats.
- 1.5 The Site is situated within a densely populated area of Tilehurst at grid reference SU 66562 74145, c. 4km west of central Reading. The Site is surrounded by residential housing in all directions, with connecting vegetated gardens that typically provide low value commuting and foraging habitat for bats. There is a park c. 0.3km south of the site, as well as a larger park c. 0.5km to the northeast that contains deciduous woodland, which is typically suitable habitat for bats. The wider landscape extends into arable fields and parcels of ancient woodland, with the closest being c. 5.7ha c. 0.7km west of the Site.

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

Legislation

- 2.1 All British bat species are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These Regulations make it an offence to:
- Deliberately capture, injure, or kill a bat
 - Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young, or which significantly affects the local distribution or abundance of the species
 - Damage or destroy a breeding site or resting place used by bats
- 2.2 All bats and their roosts in the UK were previously fully protected under the Wildlife & Countryside Act 1981 (as amended). Amendments to the Act have removed most provisions as they relate to bats, however it remains an offence to:
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
 - Intentionally or recklessly obstruct access to any structure or place used for shelter or protection
- 2.3 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place is subject to 'strict liability', i.e. an offence is committed irrespective of whether the causal act was deliberate or otherwise.
- 2.4 Where development is proposed that would result in an offence under the Regulations, a European Protected Species (EPS) statutory derogation licence (often termed 'EPS Mitigation Licence') will need to be secured from Natural England to permit an act that would otherwise be unlawful. Such a licence can only be granted following receipt of planning permission with all relevant conditions discharged, and where it has been demonstrated that specific statutory derogation tests have been met.
- 2.5 All wild birds are protected from killing and injury, and their nests and eggs are protected from damage and destruction, under the Wildlife and Countryside Act 1981 (as amended). Therefore, any clearance of nesting habitat or features required to facilitate the development should avoid the period between March and August (inclusive) when nesting birds are most likely to be present. If this is not possible, habitat will need to be checked for nesting birds by a suitably qualified ecologist prior to clearance with works only proceeding if no nesting evidence or behaviour are observed.

National Planning Policy

- 2.6 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2021) sets out the government planning policies for England and how they should be applied. Chapter 15: Conserving and Enhancing the Natural Environment, is of particular relevance to this report as it relates to ecology and biodiversity. Further details are provided in Appendix B.
- 2.7 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their effects within the planning system.

Local Planning Policy

- 2.8 A number of local planning policies relate to ecology, biodiversity and/or nature conservation. These are summarised in Table 1 of Appendix B. These policies have been addressed, as appropriate, in the production of this report.

Standing Advice

- 2.9 Natural England and Defra's Standing Advice (Natural England & Defra, 2014) regarding habitats and protected species aims to support local authorities and forms a material consideration in determining applications in the same way as any individual response received from Natural England following consultation. Standing advice has therefore been given due consideration, alongside other detailed guidance documents, in the production of this report.

3.0 METHODS

Desk Study

- 3.1 The desk study included a 2km radius review of statutory designated sites with bat qualifying interests and granted EPSL records for bats held on the Multi-Agency Geographic Information for the Countryside (MAGIC). An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

Limitations

- 3.2 A full biological records search has not been completed, as it was determined that they would not add any significant weight to the outcome of the assessment, as roosting bats have been determined as likely absent from the buildings.

Preliminary Roost Assessment (PRA)

- 3.3 A detailed external and internal inspection of the buildings B1 & B2 was completed on Friday 1st July 2025, using high-powered torches, binoculars, and a ladder. The survey was carried out by Charlie Vaughan-Jones (Natural England Class Licence WML-CL20, Registration Number 2024-12120-CL18-BAT).
- 3.4 The external inspection focused on identifying potential bat access points to the interior of the structure (which could be potentially used by void dwelling bats; crevice dwellers may also utilise to gain access to any internal crevice features) and any external features that could potentially be used by crevice-dwelling species. Particular attention was given to windowsills, windowpanes, window/door frames, soffits, fascia's, lead flashing, hanging/pitch/ridge tiles; as these are typical bat roosting features and evidence is can found at these locations.
- 3.5 The internal inspection involved a systematic search for bats or any evidence of their activity, in particular droppings and/or feeding remains within the loft space of the buildings.
- 3.6 A description of the structures was made, including construction, condition (in respect of roosting, rather than building or structural integrity) and age (where known).
- 3.7 The aim of this inspection is to record direct (i.e. actual roosting bats) or indirect evidence of roosting bats (e.g. droppings), as well as the nature and number of features with 'potential' to support roosting bats. This includes consideration of structures to support bats whilst in hibernation.

Assessing 'Potential' of Buildings to Support Roosting Bats

- 3.8 All structures were assigned to one of five categories in respect of their 'potential' to support roosting bats. 'Potential' in this context is taken to be

the broad suitability of features to support roosting bats, based upon the nature, condition or structure of such features, in the absence of confirmed evidence of roosting.

3.9 Assigning the following categories is intended to determine the effort of any further survey or inspections such as emergence/re-entry surveys, which are necessary to prove presence or likely absence of roosting bats, rather than to assign importance to such features. The further surveys are also to provide further indication of the character of the roost(s), including type and species assemblage, if found to be present.

3.10 The following categories are assigned to structures herein (in line with the BCT Good Practice Guidelines, 2023), Either:

- **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, e.g. maternity or classic cool/stable hibernation site.
- **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, such as maternity and hibernation – this categorisation is 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 at any time of the year. 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 and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
- **Negligible** – 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.
- **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).

3.11 The potential of a structure to support roosting bats is often influenced by its age and construction, thermal stability, lighting and levels of human activity. Furthermore, the proximity to foraging habitat - particularly woodland, parkland and wetland- as well as the presence of navigational routes (e.g. hedgerows, treelines and watercourses) influence both the potential for bats to roost, as well as the species which may roost. Professional judgement is therefore applied, based upon known factors

which effect the potential of features to support roosting bats, insofar as determining the need or scope of further surveys or inspections.

Limitations

- 3.12 The survey was conducted in fine and dry conditions. The northwest elevations roof coverings could not be seen; however, the internal inspection revealed all the tiles where in place.

Emergence Survey

- 3.13 One bat emergence survey was undertaken on 12 August 2025 to confirm the presence/likely absence of any further roosting bats in association with the building B1 and B2. In addition, the surveys aim to determine the character of any identified roosts, namely species present, number of roost bats and roost type (i.e. day, night feeding, maternity and transitory).
- 3.14 The dusk emergence surveys were undertaken for approximately two hours following British Summer Time (BST) sunset, with due consideration for the BCT good practice guidelines. The survey was carried out by Charlie Vaughan-Jones (Natural England Class Licence WML-CL17, Registration Number 2022-10755-CL17-BAT) and was assisted by Spike Vaughan-Ide (three seasons bat survey experience) in suitable weather conditions (see Table 1).
- 3.15 During the survey, the surveyors watched for any bats leaving or entering parts of the building or using key flight lines, equipped with a hand-held Echometer Touch (EMT) 2 Pro, full-spectrum bat detectors to assist in determining species of bat and any associated behaviour. A note was made of all bat passes, along with the time, species and any information regarding behaviour, including direction of flight, and activity e.g. foraging/commuting.
- 3.16 Four infrared video camera rigs (Nightfox Whisker) were used to film any bats emerging from the building, which were used to cover all elevations and roof aspects. An EMT bat detector was affixed to the camera rigs to record bat calls and thereby assist with identifying the species of any bats filmed emerging from/returning to roost in association with the building.
- 3.17 The positions of the surveyors and the infrared camera rigs around the building during the survey are illustrated on the Bat Emergence Survey Plan in Appendix C.
- 3.18 Following the survey all bat calls were downloaded from the EMT detectors and analysed using Kaleidoscope Viewer, where required, to enable species identification, where possible, and quantitative analysis of the data.

Limitations

- 4.0 There were no specific limitations to the survey, which was conducted at an optimum time of year and in good conditions.

Nesting birds

- 3.19 The surveyor made note of any other ecological constraints observed during the survey, notably the likelihood, presence, or field signs of breeding birds.
- 3.20 Field signs such as general bird activity, specifically birds flying to and from potential nest sites, foraging and alarm calls were recorded. Other field signs recorded included nesting materials, bird droppings, chicks (seen/heard) and eggs.

Limitations

- 3.21 There were no specific limitations with regards to nesting birds.

4.0 RESULTS

Desk Study

- 4.1 No statutory designations (such as Special Areas of Conservation SAC or Sites of Special Scientific Interest SSSI) with bat qualifying interests were identified within 2km of the Site.
- 4.2 Other smaller statutory designations such as Local Nature Reserves (LNR) were identified, such as Blundells Copse LNR contains ancient woodland, which is typically suitable habitat for bats and is situated c. 0.8km southeast from the Site. Bats are a recorded species within this LNR.
- 4.3 Other LNRs such as Lousehill Copse LNR (c. 1.35km east), Round Copse LNR (c. 1.2km east) and McIlroy Park LNR (1.0km northeast) all contain woodland habitat which is typically suitable for bats for roosting, foraging and commuting.
- 4.4 The connectivity to these sites is of low value, with only vegetated gardens providing potentially suitable corridors, which pass through an area of dense housing.
- 4.5 There are four granted European Protected Species Licences (EPSLs) for bats identified on the MAGIC Database within the 2km search area. The closest record is 1.2km northeast of the Site, which was for the destruction of the resting place of common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and brown long eared bat *Plecotus auritus* (mitigation licence reference **2015-18545-EPS-MIT**, **2015-18545-EPS-MIT-1** & **2015-18545-EPS-MIT-3**).
- 4.6 The other five granted EPSL licences are c. 1.3km southeast (**EPSM2011-3384** – destruction of a common pipistrelle resting place), two sites located c. 1.35km southeast (**EPSM2011-3499** – destruction of a common pipistrelle, soprano pipistrelle and brown long eared resting place; **EPSM2010-2341** – destruction of a common pipistrelle and brown long eared breeding site) and another two sites c. 1.4km southwest (**2019-41955-EPS-MIT** – destruction of a common pipistrelle resting place; **2020-50627-EPS-MIT** for the destruction of a common pipistrelle resting place).

Preliminary Roost Assessment (PRA)

B1

- 4.7 The main building on-Site (B1) consists of a brick-built, fully detached house with integrated garage. The roof is pitched across the main building, with gabled and hipped ends. The roof over the first-floor bedroom and garage is flat. There are bay windows towards the front, and a lean-to extension at the rear. The building is rendered from the first floor up to roof level. The

roof is covered with single clay tiles, across a traditional timber frame roof structure. The window and door frames are constructed of uPVC, as are the gutters and downpipe. The soffits and fascia are made of timber.

External Building Inspection

- 4.8 No evidence of bats was identified during the external assessment of the building.

Northeast elevation

- 4.9 The roof tiles across the main roof pitch contain a few gaps due to lifted or missing tiles (Photo 2) that offer as suitable Potential Roosting Features (PRFs) for crevice dwelling bats to utilise, such as a common pipistrelle *Pipistrellus pipistrellus*. It was noted from the internal search that the roof does not have any internal lining, with the tiles laid directly onto battens. This reduces the suitability of the tile features as the PRF between the tiles is very exposed and is suitable for individual bats as transitional/opportunistic roost.
- 4.10 The timber boards forming the roof overhang on the gable end have small gaps between them which form suitable PRFs for bats (Photo 3). The void behind the boards typically creates a more stable environment for bats.
- 4.11 The window and door frames do not contain and PRFs and are well sealed. The brickwork is also in reasonable order, with no PRFs present.



Photograph 1. East elevation of B1



Photograph 2. Roof tiles with gaps between tiles



Photograph 3. Soffit gap

Southeast elevation

- 4.12 The southeast elevations' main pitch tiles exhibited minor lifts that provide suitable access to the space between the tiles that crevice dwelling bats could utilise. As noted above, the lack of internal lining greatly reduces the suitability of the roof tile features for bats due to the exposed nature of them.
- 4.13 The timber soffits and fascia across do not contain and PRFs and are well sealed. The brickwork is also in reasonable order, with no PRFs present (no PRFs identified across brickwork on any elevation). The lead flashing around the chimney is flush and no PRFs are present.



Photograph 4. Southeast elevation roof

Southwest elevation

- 4.14 The west elevations roof tiles contain small gaps that provide as suitable PRFs for crevice dwelling bats, but under the same rationale as above, are of low potential due to the lack of internal lining. There is also spalled mortar along the right-hand hip tiles of this elevation, which provide as suitable PRFs.
- 4.15 The tiles across the lean-to roof are flush and do not exhibit any PRFs.
- 4.16 The soffits, brickwork and window/door frames are all well sealed, with no suitable PRFs present.



Photograph 5. Southwest elevation of B1



Photograph 6. Roof tiles with minor lifts



Photograph 7. Hip tiles with spalled mortar



Photograph 8. Lean-to roof

Northwest elevation

- 4.17 The flat roof of the northwest elevation could not be accessed, nor could the hip roof of this elevation be viewed.
- 4.18 The soffits, fascia, brickwork and window/door frames are all well sealed, with no suitable PRFs present.



Photograph 9. Northwest elevation



Photograph 10. Northwest elevation (wide angle)

Internal Building Inspection

- 4.19 The loft space is constructed of modern timber frame, including rafters, purlins struts and a ridge board. The roof has no lining, with the underside of the roof tiles exposed. The floor is lined with mineral wool insulation, which is laid between the floor joists, which is partially boarded.
- 4.20 Where tiles were noted to be missing or lifted from the exterior, these were inspected internally for bat evidence. No evidence was recorded, and the gaps were vacant. The underside of the hip tiles could also be partially seen, which were also vacant with an absence of bat evidence e.g. droppings.
- 4.21 All surfaces and internal brick/block work were inspected for any bat evidence, as items such as bat droppings can typically collect across these areas. No internal evidence of bats was recorded.

- 4.22 The insulation was lifted to check for historic bat evidence; none was recorded.



Photograph 11. Roof void of B1



Photograph 12. Close up of B1 roof coverings



Photograph 13. B1 roof void with water tanks



Photograph 14. Internal face of northeast gable

B2

- 4.23 The detached shed in the rear garden is brick built, with a pitched roof and gabled ends. The apex of the gable is clad in timber boards at the northwest end, with remainder being brick. The roof is covered with single clay tiles. The window and door frames are constructed of timber.

External Building Inspection

- 4.24 No evidence of bats was identified during the external assessment of the building.

Northeast elevation

- 4.25 The verge tiles across the shed have spalled mortar, which creates suitable PRFs for bats. The gaps could be inspected with a torch and were vacant, with the gap only extending to the width of the tile.
- 4.26 The timber boards at the apex of the gable contain gaps and lifts. There is no lining behind the boards, with the overlap being very small. The gaps are unlikely to be utilised by crevice dwellers due to the exposure but do provide

as a suitable access point to the internal space of the shed for void dwelling bats such as a brown long eared.

- 4.27 The door frames also contain gaps that could allow the passage of a bat but are unsuitable for crevice dwellers.



Photograph 15. Northeast elevation of B2



Photograph 16. Close-up of lifted and exposed cladding

Southeast elevation

- 4.28 The main roof tiles across B1 have numerous lifted and gaps that could serve as a potential access point for void dwelling bats. The gaps themselves are of low value to crevice dwellers such as a pipistrelle sp. due to the exposure of the feature and lack of internal lining.



Photograph 17. Southeast elevation of B2



Photograph 18. Close-up of lifted tiles

Southwest elevation

- 4.29 The southwest elevation has timber cladding from ground level up to c. 1.5m of the gable elevation. The overlaps of the cladding are only c. 2-3cm and do not have any lining behind. Considering this and the low positioning of the feature, bats are unlikely to utilise the cladding.
- 4.30 The verge mortar has spalled on this elevation leaving small, exposed gaps along the roof. The back of the gaps can be seen, and no bats or bat evidence was recorded. There are gaps between the tiles themselves, but

these were also vacant of bats or bat evidence; also, the lack of lining behind reduces the suitability of the features as only this leaves only the space between the tiles to be occupied.



Photograph 19. Southwest elevation of B2



Photograph 20. Close-up of lifted timber cladding



Photograph 21. Close-up of spalled verge mortar

Northwest elevation

- 4.31 The northwest elevations roof contains lifted and slipped roof tiles at the northwest end of the building. The gaps provide suitable access to the interior of the building, as well as low value roosting potential for crevice dwelling bats.



Photograph 22. Southwest elevation of B2

Internal Building Inspection

- 4.32 The roof of B2 is constructed of traditional timber frame, including rafters, joists and a ridge board. The roof has no lining, with the underside of the roof tiles exposed. There are stored items in the shed on a concrete sub-base.
- 4.33 Where tiles were noted to be missing or lifted from the exterior, these were inspected internally for bat evidence. No evidence was recorded, and the gaps were vacant.
- 4.34 All surfaces and internal brick work were inspected for any bat evidence, as items such as bat droppings can typically accumulate across these areas. No internal evidence of bats was recorded.
- 4.35 The interior space of the shed had thick and old cobwebs spanning the roof structure, which indicates no recent internal activity. Furthermore, there is a window on the southwest elevation that allows daylight to penetrate, which is typically unsuitable conditions for roosting bats.



Photograph 23. Internal space of B2



Photograph 24. Roof structure and underside of coverings



Photograph 25. Underside of coverings and internal face of exposed timber cladding.

Bat Emergence Survey

- 4.36 No bats of any species were seen by the surveyor or recorded by the infrared camera rigs to emerge from the building B1 or B2 during the dusk emergence survey.
- 4.37 Bat activity was very low, with a single species being recorded in the area; soprano pipistrelle *Pipistrellus pygmaeus*. The results are summarised in Table 1.

Table 1. Bat roost presence/absence survey timings and weather conditions

Survey Date	Sunset Time	Start Time	End Time	Temp. (°C)		Cloud Cover (oktas 0-8)		Wind (Beaufort Scale 0-12)		Precipitation
				Start	End	Start	End	Start	End	
12/08/25	20:31	20:16	22:01	25	21	10	10	1	1	None
Building Ref	Surveyor/ Camera position	Notes / Observations								
B1	01	The first bat activity recorded from this position was at 21:11, where a soprano pipistrelle was observed passing past the site on the eastern boundary. The bat was following the ornamental hedgerows down the street line heading south (see plan in Appendix C). At 21:21, the same activity by a soprano pipistrelle was observed. Activity then ceased beyond this point from this position. No emergences were recorded by the surveyor or through post-survey analysis of the IR footage.								
	02	The first bat activity was recorded at 21:10, where a soprano pipistrelle was heard but not seen (HNS) by the bat detector. At 21:42 and 21:44, a soprano pipistrelle was also HNS. Activity then ceased beyond this point from this position. No emergences were recorded by the surveyor or through post-survey analysis of the IR footage.								
B2	03	No emergences were recorded through post-survey analysis of the IR footage.								
	04	No emergences were recorded through post-survey analysis of the IR footage.								

Table 2. IR footage

	Camera position 01
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	Camera position 02
	Camera position 03
	Camera position 04

Nesting Birds

- 4.38 No evidence of historic or active nesting was recorded anywhere across the building B1. The roof structure across B1 & B2 are suitable to support nesting birds, with potential entry points through gaps in the tiles and around the door frame (B2).

5.0 DISCUSSION AND RECOMMENDATIONS

Bats

- 5.1 The buildings B1 & B2 contain a low quantity of potentially suitable features that could support crevice-dwelling bat species to roost, such as a pipistrelle day/transitional roost.
- 5.2 The majority of features across B1 and B2 are in association with the roof coverings, including lifted tiles and missing tiles, as well as some spalled mortar at the hip of B1. The lack of an internal roof lining greatly reduces the suitability of the tile features for roosting bats, as they are restricted to the immediate exposed gap at the front of the tile. There is also a gap in the timber boards of the soffit of the roof overhand that provide potentially suitable roosting opportunity for bats. The cladding on B2 does not provide sufficient PRFs for crevice dwelling bats, due to the overlap of the boards being relatively small, and there being no lining behind. The gaps could be inspected via torchlight, and no bats or bat evidence was recorded.
- 5.3 The loft void (B1) and internal space (B2) contains suitable access points that could be utilised by a void dwelling bat species. However, the absence of any internal evidence provides an indication that void dwelling species are likely absent from the building and can be ruled out from further consideration. Furthermore, B2 is illuminated by daylight through a rear window, which is typically unsuitable for roosting bats.
- 5.4 The linked back gardens surrounding the Site are provide typically low-quality connectivity to the wider landscape. Furthermore, being in an area of dense housing and suburban landscape, the surrounding buildings may emit moderate levels of artificial lighting, thereby deterring bats as lighting can create suboptimal foraging/commuting conditions. As such, given the features recorded and the setting of the Site, both buildings B1 and B2 were assessed as '**low**' value for roosting bats.
- 5.5 No bats were recorded emerging from either building during the emergence survey, or through post-survey analysis of the infrared camera footage. Furthermore, no evidence of bats was recorded across the building, which was assessed during a period of continually good weather. Therefore, bats are determined as likely absent from the building.
- 5.6 However, bats are highly mobile creatures that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time. Any bats that begin using the building during the intervening period between the surveys being undertaken and works commencing could be injured or killed and their roosts destroyed.
- 5.7 A precautionary working method will be implemented during and post-development. This will include the following measures:

- The areas where PRFs have been identified (as above) will be removed by hand.
- The proposed works will be undertaken outside of the optimal bat season May-August, where bats are least likely to be present.
- In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice. This may require further bat emergence surveys and an appropriate mitigation licence from Natural England.

5.8 Light spells of bat activity were recorded during the surveys. To refrain from impacting local bat commuting and foraging territory, a low impact lighting strategy is recommended for any new lighting proposals, which includes the following measures:

- Use narrow spectrum light sources to lower the range of species affected by lighting.
- Use light sources that emit minimal ultra-violet light.
- Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin.
- Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal.
- Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only.
- External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on.
- Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.

5.9 No evidence of nesting birds was recorded while on Site. Building B1 & B2 contain suitable features to support nesting birds. It is recommended that any works or demolition are undertaken outside of the nesting bird season (March-August). If this timeframe cannot be avoided, an inspection by an experienced ecologist must be undertaken to confirm the presence/absence of nesting birds.

Ecological Enhancement Opportunities

5.10 In line with the NPPF and the Reading Borough Local Plan (Reading Borough Council, 2019). The following opportunities for ecological enhancement are recommended:

- Provision of one artificial bat roost features such as the surface mounted Beaumaris Bat Box, to be installed >3m from ground level, away from artificial light sources and be mounted on a southwest elevation.
- Provision of one artificial bird nest/box (such as the Vivara Pro Woodstone Nest Box, and/or the RSPB Sparrow Terrace Nest Box, or similar alternative), to be installed >3m from ground level on a southwest elevation. Alternatively, a Schwegler 1B Bird Box should be installed on a suitable tree in the rear garden, >3m from ground level and facing north.

6.0 REFERENCES

Chartered Institute of Ecology and Environmental Management, 2017. *Guidelines for Ecological Report Writing*. Winchester: CIEEM.

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Appendix A

Legislation and Planning Policy

- 1.1. The **Conservation of Habitats and Species Regulations 2017** (as amended) make prescriptions for the designation and protection of Sites of Community Importance ('European sites', i.e. Special Areas of Conservation and Special Protection Areas) and European Protected Species (EPS). The latter include all native bats, great crested newts, dormice, otters and certain reptiles, listed under Annex II of the Regulations. Following the UK's departure from the European Union, the provisions of the Regulations have been retained through enactment of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which came into force on 31 December 2020.
- 1.2. The **Wildlife and Countryside Act 1981** (as amended, principally by the Countryside and Rights of Way Act 2000) forms the basis for protection of statutory designated sites of national importance (e.g. Sites of Special Scientific Interest; SSSIs) and native species that are rare and vulnerable in a national context. Additionally, badgers are protected under the **Protection of Badgers Act 1992**.
- 1.3. The **Environment Act 2021** received Royal Assent in November 2021. Through an amendment to the Town and Country Planning Act 1990 the Environment Act will introduce a mandatory requirement for all planning permissions to be conditional upon the submission of a Biodiversity Gain Plan for approval by the Local Planning Authority. The Plan will need to demonstrate a net gain of at least 10% in the biodiversity value of the development site. These provisions are not yet in force, pending their enactment through secondary legislation (expected November 2023).
- 1.4. Section 40(1) of the **Natural Environment and Rural Communities (NERC) Act 2006** states that each public authority, "must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity." This legislation makes it clear that planning authorities should consider impacts to biodiversity when determining planning applications, with particular regard to the Section 41 (S41) lists of 56 habitats and 943 species of principal importance. The UK Biodiversity Action Plan (BAP) has been superseded by the Biodiversity 2020 Strategy, however Local BAPs continue to influence biodiversity management and conservation effort, including through the spatial planning system, at the local scale.
- 1.5. The **National Planning Policy Framework (2023)** (NPPF) sets out government planning policies for England and how they should be applied. With regards to ecology and biodiversity, Chapter 15: Conserving and Enhancing the Natural Environment, paragraph 174, states that the planning system and planning policies should minimise impacts on and provide net

gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

- 1.6. Paragraph 180 sets out the principles that local planning authorities should apply when determining planning applications:
 - If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.
 - Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest.
 - Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.
 - Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.
- 1.7. Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Policy Guidance (PPG). The Natural Environment PPG addresses principles across a broad spectrum of topics targeting biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services, and the use of local ecological networks to support the national Nature Recovery Network. In particular, the PPG promotes the delivery of measurable Biodiversity Net Gain through the creation and enhancement of habitats alongside development.
- 1.8. The **Government Circular 06/2005**, which is referred to within the NPPF, defines statutory nature conservation sites and protected species as a material consideration in the planning process.
- 1.9. Local planning policies of relevance to ecology, biodiversity and/or nature conservation have been set out in Table 1 below.

Table 1. Summary of regional and local planning policy relating to ecology

Policy	Summary
Reading Borough Local Plan (2019)	
Policy EN12: Biodiversity and The Green Network	a) The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises: • Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and • Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links. New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map. b) On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should: • Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and • Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable. In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.

Appendix B

PRA Survey Plan



Appendix C

Bat Emergence Survey Plan



Appendix D

Proposed Elevations

