

24 Broadwater Road
Twyford
Wokingham
RG10 0EX

Preliminary Roost Assessment

Report ref.: R2883_PRA_a

Report Quality Control Information	
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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by Mr Jim Quartermain to undertake a Preliminary Roost Assessment (PRA) for bats at 24 Broadwater Road in Twyford. The PRA was commissioned to accompany a planning application to be submitted to Wokingham Borough Council seeking consent for a ground floor infill and conversion of the garage into habitable space, with a first storey extension above the bay window on the front elevation.
- 1.1.2** The aim of the PRA is to ascertain if there is evidence of the presence of bats and/or potential for roosting bats to be present, and therefore whether further survey and/or mitigation would be required for the proposed development activities. A detailed inspection of the exterior and interior of the property was undertaken on the 11th March 2025 by Conor Watson (CL18: 2024-11877-CL18-BAT) and Meghan Porter (CL17: 2023-11300-CL17-BAT).
- 1.1.3** No evidence of roosting bats was found externally or internally during the building inspection. The absence of bat droppings inside the void spaces indicates that primarily void-dwelling species, such as long-eared bats (*Plecotus* spp.), are unlikely to be present. Gaps were visible on the external of the house comprising a gap below the uPVC soffits on the western gable end and a gap in the brickwork on the eastern facing gable end. Considering the features noted and setting of the property, the detached building is assessed to be of low potential suitability for bats.
- 1.1.4** The development proposals will avoid directly impacting the gap under the soffit and gap in the brickwork which offered potential roost sites suitable for opportunistic use by individual bats. The section of roof on the front elevation to be impacted by the proposals possesses no potential roosting opportunities for bats and therefore the removal of roof coverings, and soffits, is considered unlikely to contravene the legislation protecting bats and their roosts.
- 1.1.5** This report contains information regarding a mobile species so it will likely be valid for less than 12 months (CIEEM 2019).

2 INTRODUCTION

2.1 Project Background

2.1.1 John Wenman Ecological Consultancy LLP was instructed by Mr Jim Quartermain to undertake a Preliminary Roost Assessment (PRA) for bats at 24 Broadwater Road in Twyford.

2.1.2 The PRA was commissioned to accompany a householder planning application to be submitted to Wokingham Borough Council seeking consent for a ground floor infill and conversion of the garage into habitable space, with a first storey extension above the bay window on the front elevation (refer to plans in **Appendix 1**).

2.2 Site Location and Context

2.2.1 The detached house is situated on the northern side of Broadwater Road, to the south of Twyford town centre in Berkshire (central OS grid reference: SU 79348 75009).

2.2.2 The site is surrounded by residential properties on all sides with woodland present approximately 150m to the west and with Twyford Brook flowing through woodland 230m to the south. The River Loddon is present approximately 460m to the west of the site, adjacent to numerous lakes and woodland. In the wider area there was open farmland present to the south and east.

2.3 Report Objectives

2.3.1 The aim of the PRA is to ascertain if there is evidence of the presence of bats and/or potential for roosting bats to be present, and therefore whether further survey and/or mitigation would be required for future proposed development activities.

3 LEGISLATIVE AND POLICY BACKGROUND

3.1 Relevant Legislation

3.1.1 In England and Wales, all bat species found in the wild are fully protected under the Wildlife & Countryside Act 1981 (as amended) (WCA) and Conservation of Habitats and Species Regulations 2017 (as amended); the regulations are commonly referred to as the Habitat Regulations and hereafter referred to as such. The Habitat Regulations refer to European Protected Species (EPS) and all species of bats in the United Kingdom (UK) are EPS. Although the UK left the European Union on the 31st January 2020 and is therefore no longer tied to European legislation, the Habitat Regulations have been retained in their current format.

3.1.2 The legal framework underpinned by the WCA and Habitat Regulations makes these specific actions an offence as follows:

- Deliberately kill, injure, capture or take a wild bat;
- Deliberately, intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate, or to significantly affect local distribution or abundance;
- Damage or destroy a place used by a bat for breeding or resting; and
- Intentionally or recklessly obstruct access to any place used by a bat for shelter or protection.

3.2 Planning Policy

3.2.1 The biodiversity duty imposed through the Environment Act 2021 states that Local Planning Authorities (LPAs) must consider what action they can take to conserve and enhance biodiversity in England. Government planning policy, such as the ODPM Circular 06/2005, requires LPAs to account for the conservation of protected species when considering and determining planning applications.

3.2.2 The ODPM Circular 06/2005 states that *‘the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.’* This policy means that in instances where there is a reasonable likelihood of bats being

present and affected by a development, surveys must be undertaken to inform a mitigation strategy to be agreed prior to granting planning permission.

3.3 Mitigation Licensing

3.3.1 The government's statutory nature conservation body, Natural England, is responsible for issuing European Protected Species (EPS) mitigation licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. An EPS mitigation licence can be issued if the following three tests derived from Regulation 55 have been satisfied:

- (2)(e) – the derogation is for the purposes of '*preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.*'
- (9)(a) – there is '*no satisfactory alternative*' to the derogation; and
- (9)(b) – '*the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.*'

3.3.2 LPAs have a statutory duty under Regulation 7(3)(e) of the Habitat Regulations to consider and determine whether these three tests are likely to be satisfied by planning proposals affecting EPS before granting planning permission. If an EPS mitigation licence is necessary, a licence can be sought once all the necessary planning consents have been granted. Natural England aims to issue a decision on licence applications within 30 working days of submission.

3.3.3 The Bat Mitigation Class Licence (BMCL) scheme allows ecologists to apply to become Registered Consultants to use this licence for low conservation status roosts, i.e. roosts comprising small numbers of seven commonly occurring species. A site registration form must be completed as a condition of the licence and submitted to Natural England at least three weeks before the licensable activities are due to start; Natural England aims to register sites within two weeks of submission.

3.3.4 Baseline survey information supporting EPS mitigation licence applications or BMCL site registrations must be up-to-date and have been completed within the current or most recent optimal season. A suitably experienced ecologist will be required to

undertake a site walkover/check within three months prior to application/registration submission to confirm that conditions have not changed since the most recent survey.

4 SURVEY METHODOLOGY

4.1 Desk Study

4.1.1 A desk-based study for bats was undertaken to collate and review existing information about the site and the surrounding land. The study utilised the following open access resources:

- OS maps and Google Earth – maps and satellite imagery were used to identify potential flight-paths and foraging habitats for bats;
- DEFRA Data Services Platform and MAGIC – maps were used to locate relevant designated sites, habitats and granted European Protected Species licences; and
- Pre-existing bat survey reports – any available reports were obtained from the client or relevant planning portal.

4.2 Building Inspection

Survey Details

4.2.1 A detailed inspection of the exterior and interior of the property was undertaken on the 11th March 2025 by Conor Watson ACIEEM registered under Natural England Bat Survey Class Licence CL18 (Registration no.: 2024-11877-CL18-BAT) and Meghan Porter (a qualifying member of CIEEM) registered under Natural England Bat Survey Class Licence CL17 (Registration no.: 2023-11300-CL17-BAT), in accordance with good practice guidelines (Collins 2023). The equipment used during the inspection comprised binoculars, a high-power (1 million candlepower) LED torch, a headtorch, ladder and PPE (facemask, gloves etc.). The inspection involved a systematic search of the exterior and interior of the building during daylight hours to compile information on potential and actual bat access points; potential and actual bat roost sites; and any evidence of bat presence.

External Survey

4.2.2 Frequently used bat access points and/or roost sites include (but are not limited to) spaces:

- behind hanging tiles, weatherboarding, soffit boxes and barge boards;
- under lead flashing (particularly around chimneys) and roof tiles/slates; and
- in existing bat boxes.

4.2.3 It is important to note that the two most abundant and widespread bat species, common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*), typically only require gaps measuring 15mm by 20mm to gain access to a roost inside a building.

4.2.4 The external survey involved a systematic search for evidence of bats including:

- live or dead specimens;
- droppings;
- urine marks;
- fur-oil staining; and
- squeaking noises.

4.2.5 It should be noted that bats can be present in a building while leaving no visible signs externally and wet weather has the potential to wash any evidence away. The search for evidence was focused on (but was not limited to) the ground, windowsills, windowpanes and walls (including cladding and hanging tiles); particularly in places near to potential bat access points and/or roost sites.

Internal Survey

4.2.6 The internal survey comprised a systematic search for evidence of bats on the upper floors of the building (i.e. checking the exterior from windows) and inside the roof space. Evidence of bats found during an internal inspection can include:

- live or dead specimens;
- droppings;
- urine marks;
- fur-oil staining;
- feeding remains (i.e. moth wings);
- squeaking noises;
- bat-fly (Nycteribiid) pupal cases; and
- odour.

4.2.7 It should be noted that only specimens or droppings can be relied upon in isolation to confirm the presence of a bat roost.

4.2.8 Frequently used roosting locations within the roof include (but are not limited to):

- the apex of the gable end or dividing walls;
- the top of chimney breasts;
- ridge and hip beams;
- mortise and tenon joints;
- behind purlins; and
- between tiles and roof lining.

Survey Limitations and Validity

4.2.9 There were no significant survey limitations because PRAs can be carried out at any time of year under any weather conditions and the building was fully accessible.

4.2.10 It should be noted that it is not always possible to inspect all potential roost sites during a survey, particularly for bat species which typically roost in hidden crevices. Therefore, an absence of bat evidence found during a survey does not necessarily equate to evidence of bat absence in a building.

4.2.11 This report contains information regarding a mobile species so it will likely be valid for less than 12 months (CIEEM 2019).

5 SURVEY RESULTS

5.1 Desk Study

5.1.1 The scattered trees in the linked gardens provide continuous habitat that could be used as a flight path connecting the property to higher-quality foraging habitats, such as nearby woodland and farmland to the west and south, and the nearby Twyford Brook and River Loddon.

5.1.2 Bat mitigation licences that have been granted inside a 2-kilometre radius of the property are detailed in **Table 1** below.

Table 1. Bat mitigation licences granted within a 2km radius of the property (Source: MAGIC).

Case Reference of Granted Licence	Species on the Licence	Licensable Period	Licensable Works	Distance (m)
2016-25277-EPS-MIT-1	Soprano pipistrelle	15/06/2017 – 13/09/2026	Destruction of a breeding place	1170 S
2020-49294-EPS-MIT	Soprano pipistrelle & common pipistrelle	14/10/2020 – 31/08/2025	Destruction of a resting place	1190 N
2019-43858-EPS-MIT	Soprano pipistrelle	01/02/2020 – 28/02/2025	Destruction of a resting place	1310 S
2020-44644-EPS-MIT	Brown long-eared & common pipistrelle	05/02/2020 – 31/08/2020	Destruction of a resting place	1830 N
2019-43241-EPS-MIT	Brown long-eared, soprano pipistrelle & common pipistrelle	20/11/2019 – 30/04/2025	Destruction of a resting place	1890 NW

5.1.3 The client had no existing bat survey reports in their possession and none had been published on the Wokingham Borough Council online planning portal.

5.2 Building Inspection

Overview

5.2.1 The findings from the external and internal inspections carried out for the house are described with photographs and annotated in a plan, as follows:

External Survey

5.2.2 The detached property had a multi-pitched roof, with a flat roof bay window to the front of the house, a single storey extension and conservatory on the rear elevation (**Photographs 1 & 2**).



Photograph 1. Front of the house viewed from the south.



Photograph 2. Rear of the house viewed from the north.

- 5.2.3** The roof was covered with interlocking roof tiles which were tightly fitted, with solar panels present on the western elevation of the main pitched roof (**Photograph 3**). The ridge tiles were all in place and mortared with intact verge mortar on the front and rear gables, apart from a superficial gap in the mortar on the bottom corner of the western pitched gable front of the house (**Photograph 4; Target note 1**).



Photograph 3. Tight roof tiles at the southern side of the house.



Photograph 4. Section of mortar missing from bottom of verge to the front of the house.

- 5.2.4** There was a slight gap present between the uPVC soffit along the western front pitched gable, which could offer potential ingress opportunities for roosting bats (**Photograph 5; Target note 2**). The barge board was tight to the brickwork on the eastern front gable (**Photograph 6**). A small section of missing brickwork created a gap under the barge board on the rear gable (**Photograph 7; Target note 3**). The bay window to the front of the house had a flat roof and was tight to the brickwork (**Photograph 8**).



Photograph 5. Gap between soffit and brickwork on the western front gable.



Photograph 6. Barge board tight to brickwork on the eastern front gable.



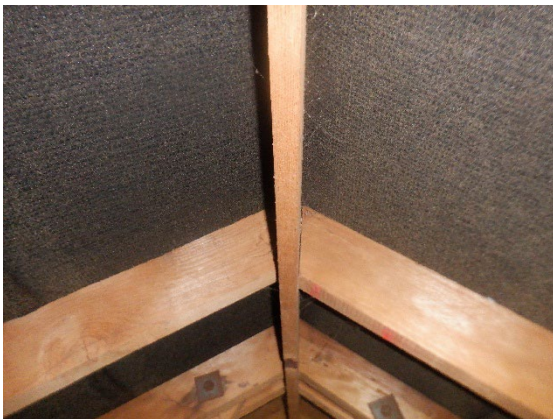
Photograph 7. Section of missing brickwork on the rear gable creating a gap under the barge board.



Photograph 8. Barge board tight to brickwork on bay window.

Internal Survey

- 5.2.5** The building had one roof void within the main pitched roof of the house. The space had a maximum height of approximately 1.75 m and the ridge was lightly cobwebbed in places (**Photograph 9**). The roof was lined with hessian and bituminous felt liner which was mostly intact, apart from a gap in the felt around an old plastic vent tile, with the underside of the roof tiles visible (**Photograph 10**; **Target note 4**).



Photograph 9. Lightly cobwebbed ridge.



Photograph 10. Gap in bituminous roofing felt around plastic vent tile.

- 5.2.6** The floor was centrally boarded, with fibreglass insulation present along the sides of the void, which went up to the eaves that were open to the soffit box along the eastern side (**Photograph 11; Target note 5**). The brickwork wall plate and timber from the pitched roof extension on the eastern side were visible in the eaves on the western side (**Photograph 12**).

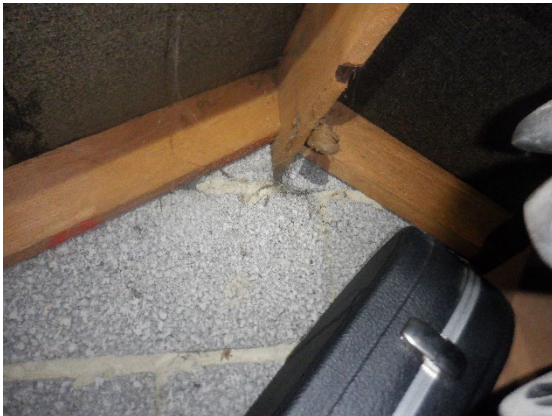


Photograph 11. Eaves open to the soffit on the eastern side.



Photograph 12. Brickwork and timber visible along part of the western eaves.

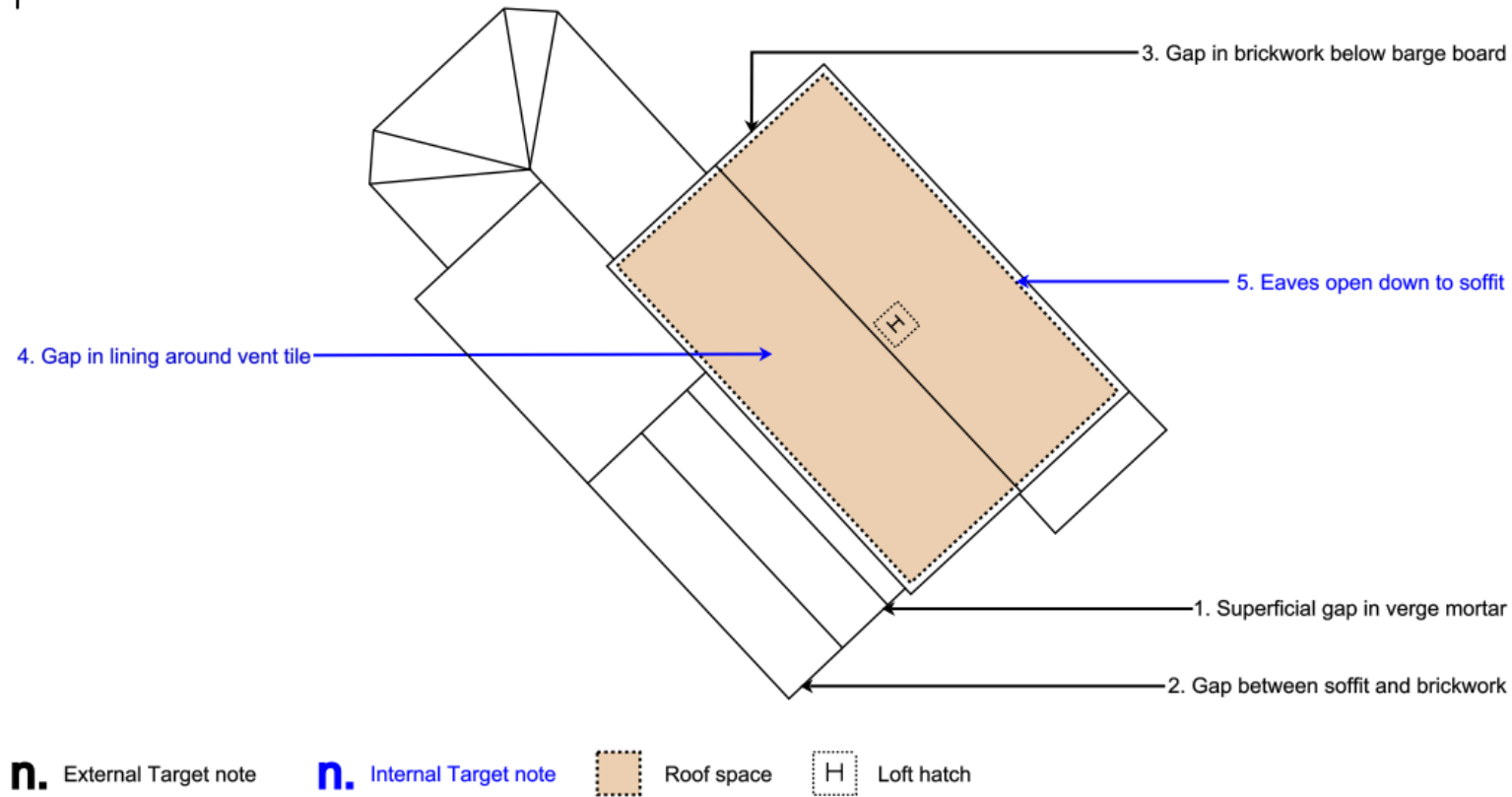
- 5.2.7** The north and south gables were both of blockwork construction, which were lightly cobwebbed and a small, old wasp nest was visible at the ridge on the southern gable (**Photograph 13**). The blockwork was tight to the roofline and roofing felt along both gables (**Photograph 14**).



Photograph 13. Eaves open to the soffit on the eastern side.



Photograph 14. Blockwork tight to roofline and felt.



Drawn by:	Date	Scale:	24 Broadwater Road Twyford	
MP	March 2025	Not to scale	Preliminary Bat Roost Assessment Findings	

Figure 1. Preliminary Roost Assessment plan.

6 DISCUSSION

6.1 Assessment of Potential Roost Suitability

6.1.1 The suburban area surrounding the house with gardens with scattered trees provides habitat that could be used as a flight-path connecting it to higher-quality foraging habitats, such as nearby woodland and riverine habitats to the south and west, and open farmland to the east.

6.1.2 Furthermore, the search of granted bat mitigation licences included records of at least three species known to be roosting within a 2km radius of the property: soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*) and brown long-eared bat (*Plecotus auritus*), with the nearest roost for soprano pipistrelle bats situated just over 1km to the south of the site.

6.1.3 The building had the following suitable/potential bat access points:

- a gap below soffit on the western front gable (**Photograph 5; Target note 2**) and,
- gap in brickwork below barge board on the rear gable (**Photograph 7; Target note 3**).

6.1.1 The roof void had sufficient space for internal flight and suitable conditions for supporting individual or small numbers of void-dwelling bats, such as the locally recorded brown long-eared bat (*Plecotus auritus*). However, no bat droppings were found internally so the presence of void-dwelling bats is considered highly unlikely.

6.1.2 The potential bat access points below the soffit and barge board are considered likely to provide only sufficient space, shelter, protection and conditions for opportunistic use by individual crevice-dwelling bats, such as the locally recorded common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*pipistrellus pygmaeus*) bats. Therefore, the property has been assigned low potential suitability for bats overall (see **Appendix 2** for potential suitability categories).

7 IMPACT ASSESSMENT

7.1 Potential Impacts of Development Proposals

Overview

- 7.1.1** The planning application to be submitted to Wokingham Borough Council seeks consent for a ground floor infill and conversion of the garage into habitable space, and a first storey extension above the bay window on the front elevation (refer to plans in **Appendix 1**). The impacts of the proposals have been assessed in accordance with the mitigation hierarchy during construction and post development, as follows:

Construction Phase

- 7.1.2** The development proposals will not have an impact on any features that have potential to be used by roosting bats. Therefore, it is considered highly unlikely that the proposals will result in the damage and/or destruction of a bat roost or cause disturbance, injury and/or death of bats, particularly disturbance that would affect the ability of bats to survive, reproduce, nurture young or hibernate.

Post Development

- 7.1.3** The proposed roof works do not result in the loss of any potential roost sites identified in the property. As such, it is considered highly unlikely that the proposals will result in the permanent damage/loss of a bat roost or affect significantly the local distribution or abundance of bats.

7.2 Conclusion

- 7.2.1** The development proposals will not have any potential impacts to bats and their roosts. As such, a European Protected Species (EPS) mitigation licence would not be required for the planning works to go ahead lawfully.
- 7.2.2** In the unlikely event that bats are encountered during construction, the works must stop immediately, and a suitably licensed ecologist should be called to site attend to the bat and provide advice on how to proceed; works should not continue until further written advice has been received. At this stage, an EPS mitigation licence may be required to permit the works to recommence lawfully.

8 REFERENCES

CIEEM (2019). *Advice Note on the Lifespan of Ecological Reports and Surveys*. CIEEM, Winchester.

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

Mathews F., Kubasiewicz L.M., Gurnell J., Harrower C.A., McDonald R.A., Shore R.F. (2018). *A Review of the Population and Conservation Status of British Mammals*. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough.

Mitchell-Jones, A. J. & McLeish, A. P. (2004). *Bat Workers' Manual (3rd edition)*. JNCC, Peterborough.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. CIEEM, Ampfield.

APPENDIX 1 – PROPOSED PLANS



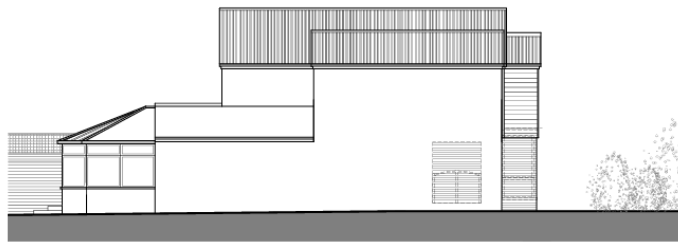
South West Elevation



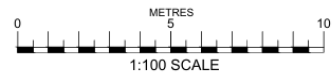
South East Elevation



North East Elevation



North West Elevation



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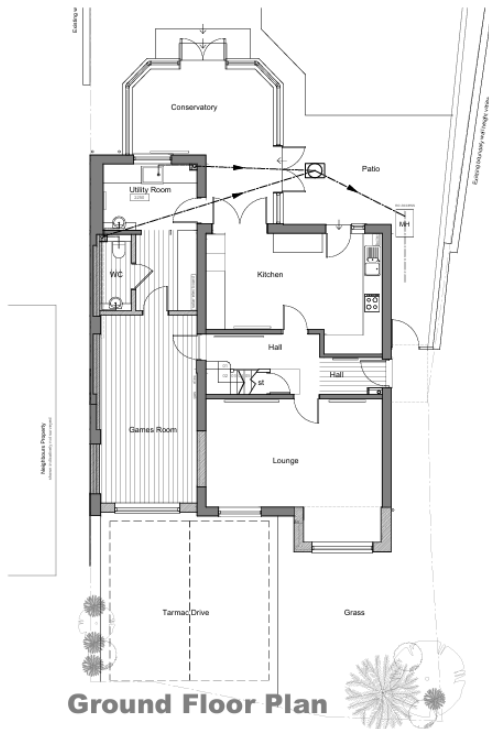
Oakwood House
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Project Proposed Alterations at:
24 Broadwater Road, Twyford,
Reading RG10 0EX
Client Jim Quartermain

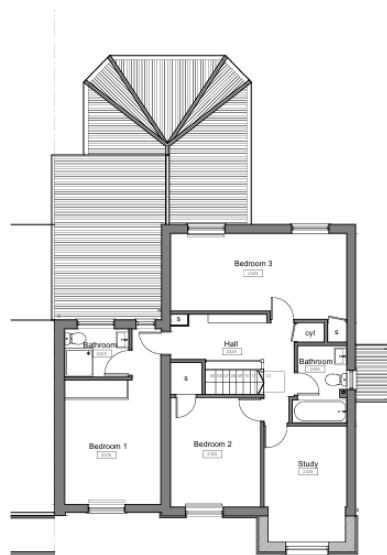
Title Proposed Elevations
Revision

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Drawing No **1597.09** **Rev**

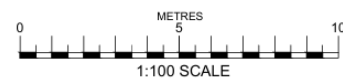
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Ground Floor Plan



First Floor Plan



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Project Proposed Alterations at:
24 Broadwater Road, Twyford,
Reading RG10 0EX
Client Jim Quartermain

Title Proposed Ground & First Floor Plans
Revision

Drawn IRH **Scale** 1:100 **Date** Dec 2024
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APPENDIX 2 – POTENTIAL SUITABILITY CATEGORIES FOR ROOSTING BATS

The categories detailed in **Table 2** below are derived from the '*Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*' (Collins 2023) and provide guidance for assessing the potential suitability of buildings (and other structures) for roosting bats. These categories are applied using professional judgement and irrespective of whether the presence of a bat roost has been confirmed during a survey, as additional bat roosts could be present which have not yet been discovered.

Table 2. Categories for potential suitability of buildings (and other structures) for roosting bats.

Potential Suitability	Category Justification
None	A building (or structure) that has no features likely to be used by any roosting bats at any time of the year (i.e. a complete absence of cracks, crevices or voids that could provide suitable shelter).
Negligible	A building (or structure) that has no obvious features likely to be used by roosting bats, but in this case a small element of uncertainty remains as bats will occasionally use small and apparently unsuitable features. This category may also be used where a bat could potentially roost due to one attribute, but it is considered unlikely due to another attribute (e.g. a feature that is subject to constant illumination from artificial lighting).
Low	A building (or structure) that has one or more potential roost sites suitable for opportunistic use by individual bats at any time of the year. However, these potential roost sites for bats do not provide sufficient space, shelter, protection, conditions and/or surrounding suitable habitat to be used regularly or by large numbers (i.e. unlikely to be suitable for a maternity colony and not a classic hibernation site).
Moderate	A building (or structure) that has one or more potential roost sites suitable for regular use by individual bats, or small non-breeding groups, due to sufficient space, shelter, protection, conditions and surrounding habitat. However, these potential roost sites for bats are unlikely to support a roost of high conservation status with regards to the type of roost only (i.e. maternity colonies and classic hibernation sites).
High	A building (or structure) that has one or more potential roost sites suitable for use by large numbers of bats more regularly and for longer periods of time due to sufficient space, shelter, protection, conditions and surrounding habitat. These potential roost sites for bats are capable of supporting high conservation status roosts (i.e. maternity colonies and classic hibernation sites).

APPENDIX 3 – DEFINITION OF BAT ROOST TYPES

The potential suitability of a building in conjunction with any evidence of bat presence is used to provide an initial assessment of likely roost type and importance. The types of roost considered are based on the following Natural England definitions:

- Day roost – a summer resting place used by individual bats, or small non-breeding groups, during the day;
- Night roost – a resting place used by individual bats on occasion, or by a whole colony regularly, during the night;
- Feeding perch – a resting place used by individual bats, or a few individuals, primarily for short periods of feeding during the night;
- Transitional roost – a place used by a few individual bats, or occasionally small groups, for a short period of time upon waking from hibernation or in the period prior to hibernation;
- Maternity roost – a place used by small to large groups of female bats to give birth and raise their young to independence;
- Hibernation roost – a place used by individual bats, or in groups, during winter where there is a constant cool temperature and high humidity; and
- Satellite roost – a place used by a few individuals to small groups of breeding female bats found in close proximity to the main nursery colony throughout the breeding season.

The importance of a bat roost is underpinned by the conservation status of the suspected species (i.e. the distribution/rarity of a species in a specific geographic location) and the type of roost (i.e. not all roosts have the same level of importance in supporting the local bat population). Further roost characterisation surveys may be required to fully determine the importance of a confirmed roost to allow for a robust impact assessment.

APPENDIX 4 – FURTHER SURVEY RATIONALE

In cases where no evidence of use by bats is found during a building inspection but the possibility of their presence cannot be ruled out, further presence/likely absence survey is likely to be required if the development proposals will impact potential roost sites.

Emergence surveys are carried out to establish the presence or likely absence of roosting bats in buildings (and other structures) and these are designed in accordance with the ‘*Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*’ (Collins 2023) detailed in **Table 3** below.

Table 3. Recommended further survey for establishing presence/likely absence of roosting bats in buildings (and other structures).

Potential Suitability	Further Survey
None	No further surveys are required.
Negligible	No further surveys are required.
Low	A minimum of one dusk emergence survey visit should be undertaken in the period of May to August. However, if all areas (including cracks, crevices and voids) can be thoroughly inspected and no evidence of use by bats is found, then emergence surveys may not be required. In cases where a complete inspection cannot be carried out, professional judgement and proportionality should be applied when assessing the impacts of the development proposals.
Moderate	A minimum of two dusk emergence survey visits should be undertaken in the period of May to September, with at least one of the surveys between May and August; the survey visits should be spaced at least three weeks apart.
High	A minimum of three separate dusk emergence survey visits should be undertaken in the period of May to September (inclusive), with at least two of the surveys between May and August; the survey visits should be spaced at least three weeks apart.

In cases where the PRA and/or further survey establishes the presence of roosting bats in a building (or structure), this will likely trigger the need for roost characterisation to collect sufficient information to inform the impact assessment and mitigation strategy. The roost characterisation comprises information collected during the PRA, emergence surveys and by other methods, such as DNA analysis of bat droppings, and ultimately aims to determine the bat species roosting; the number of bats the roosts support; the roost access points; the locations of the roosts and the types of roost present. This information is crucial when applying for planning permission and/or a European Protected Species mitigation licence.