MIDDLEMARCH

Preliminary Bat Roost Assessment

Haydon Drive, Pinner, London Borough of Hillingdon

A Report To: Philip Pank Partnership LLP
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Quality Assurance

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Declaration of Compliance

This study has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of Practice for Planning and Development". The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Disclaimer

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment. Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Validity of Data

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

Non-Technical Summary

Project Background

In January 2025 Philip Pank Partnership LLP commissioned Middlemarch to undertake a Preliminary Roost Appraisal of the buildings and trees at the site of a proposed development at Haydon Drive, Pinner, London Borough of Hillingdon. This assessment is required to inform a planning application associated with the demolition of the existing buildings and redevelopment of the site to provide 21 family homes, along with associated access roads/paths, car parking spaces, private gardens and a dedicated play/recreation area along the northern edge of the site.

Scope of Survey

To fulfil the above brief to assess the potential for the existing buildings and trees on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on 21st of March 2025.

Summary of Key Bat Features

Buildings B1-B4 were found to have high bat roosting potential due to the presence of several suitable roosting features on all buildings. These features included gaps in the white uPVC sofit boxes, gaps in the eave tiles, holes and cracks in the brickwork and lifted lead flashing.

Trees T8-T24 had PRFs that were visible from the ground, but could not be fully inspected. These trees therefore require further assessment because they may support roosting bats.

The site provides limited foraging habitat in the form of mature trees along the northern boundary of the site as well as further scattered trees and amenity grassland throughout the site and the hedgerow in the western section of the site. These habitats also provide commuting corridors and connect the site to further roosting, foraging, and commuting habitats in the surrounding area particularly to the pockets of nearby woodland such as Ruislip Woods.

Potential Impacts on Bats

The proposed development has the potential to directly kill or injure roosting bats, through the demolition of on-site buildings and removal of on-site trees that have potential roosting features.

The site provides limited foraging habitat in the form of mature trees along the northern boundary of the site as well as further scattered trees and amenity grassland throughout the site and the hedgerow in the western section of the site. These habitats also provide commuting corridors and connect the site to further roosting, foraging, and commuting habitats in the surrounding area particularly to the pockets of nearby woodland such as Ruislip Woods. Therefore, the development may negatively impact commuting and foraging bats through removal of suitable habitat, or through unsuitable operational-phase lighting.

Recommendations

R1 **Buildings B1-B**4: Buildings B1 – B4 have been identified as having high potential to support roosting bats. Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2023) recommends that for structures with high bat roosting potential at least three dusk emergence surveys be undertaken during the bat emergence survey season to determine the presence/absence of roosting bats within the structures.

R2 **Trees T8 & T24** have been identified as having potential to support roosting bats and could not be accessed directly to categorise the suitability of their roosting features, therefore further survey work is required. These trees can be assessed via an Aerial Inspection Survey.

R3 **Tree Group G29: A** Leyland Cypress tree present within G29 has been categorised as FAR. This tree is to be retained and will not be impacted by the proposed redevelopment of the site. However, should work proposals change and the tree becomes subject to removal or management, further survey effort will be required to determine the presence/absence of roosting bats.

R4 **The remaining trees** on site were considered to have negligible potential for roosting bats. The survey data obtained for the site is valid for 12 months from the survey date.

R5 **Lighting:** In accordance with best practice guidance relating to lighting and biodiversity (Bat Conservation Trust and Institute of Lighting Professionals, 2023; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.

R6 **Scheme Design** The proposed development should be designed to minimise effects on bats in accordance with ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG).

Contents

1. Introduction

1.1 Project Background

In January 2025, Philip Pank Partnership LLP commissioned Middlemarch to undertake a Preliminary Bat Roost Assessment at the site of a proposed development at Haydon Drive, Pinner, London Borough of Hillingdon. This assessment is required to inform a planning application associated with the demolition of the existing buildings and redevelopment of the site to provide 21 family homes, along with associated access roads/paths, car parking spaces, private gardens and a dedicated play/recreation area along the northern edge of the site. The existing trees along the northern site boundary will be retained as part of the open space.

Middlemarch has previously carried out a Preliminary Ecological Appraisal at this site. The findings of this survey are detailed in Report RT-MME-162897-01-Rev B. In addition, Middlemarch has been also undertaken a Biodiversity Statement & Metric Assessment for the site, detailed in report RT-MME-162897-02.

To fulfil the above brief to assess the potential for the existing buildings and trees on site to support roosting bats, a Preliminary Bat Roost Assessment was undertaken on the 21st of March 2025.

All UK bat species are legally protected species, and they are capable of being material considerations in the planning process. A summary of the legislation protecting bats is included within Appendix 1.

1.2 Site Description and Context

Table 1.1 provides a brief summary of the site and its surroundings.

Attribute	Description
Site Location	Haydon Drive, Pinner, London Borough of Hillingdon HA5 2PL
National Grid Reference	TQ 10423 89444
Site Area (ha)	0.58
Topography	Flat
Land Cover (on site)	The site comprises a residential road (Haydon Drive) and associated residential properties, gardens and verges. The gardens and verges are dominated by amenity grassland, whilst other habitats include trees, dense scrub and introduce shrub.
Land Cover (site surrounds)	The site is bordered in all directions by residential properties and associated roads and gardens. The northern site boundary also borders a small cluster of trees adjacent to Chamberlain Lane, whilst an offsite ornamental hedge (dominated by non-native privet *Ligustrum* sp.) is located immediately beyond the western site boundary. The wider landscape is largely residential in nature, whilst a number of greenspaces and habitat corridors are present. These include Haydon Hall Meadows SINC, located approximately 70 m east of the site and Ruislip Woods SSSI/NNR, located approximately 550 m west of the site.

Table 1.1: Summary of Site and Surroundings

1.3 Documentation Provided

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.2.

Document / Drawing Number	Author
Topography (Drawing no.: MBS21558-T-R1-(1-4), June 2023)	MK BIM Solutions
Elevation (1-23; Drawing no.: MBS21558-E-R1-(1-23), June 2023)	MK BIM Solutions
Proposed Residential Scheme; Interim Design Document (File Ref. M10029, October 2024)	Hunters
Proposed Residential Scheme Site Plan (Job no: M10029, Drawing no: APL006, Rev A, November 2024)	Hunters

Table 1.2: Documentation Provided by Client

2. Methods

2.1 Desk study

As part of the Preliminary Ecological Appraisal (Report RT-MME-162897-01-Rev B) an ecological desk study was undertaken. The consultee for the desk study was:

- Greenspace Information for Greater London CIC – GIGL.

Middlemarch then assimilated and reviewed the desk study data provided by this organisation. Relevant bat data are discussed in Chapter 3. In compliance with the terms and conditions relating to its commercial use, the full desk study data are not provided within this report.

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

2.2 Field Survey

A Preliminary Bat Roost Assessment of the building and trees was carried out on site in line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004)[1] and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023)[2]. The survey was carried out over three visits.

The assessment was conducted on 21/03/2025 by Zeina Farhat (Ecological Consultant) and Ruby Hill (Ecological Project Officer). Weather conditions were recorded and are presented in Table 2.1.

Parameter	Condition
Temperature (ºC)	16
Cloud (%)	100
Wind (Beaufort)	F1
Precipitation	0

Table 2.1: Weather Conditions During Field Survey

A visual assessment was conducted during daylight hours of the buildings and trees to determine the presence of any Potential Roost Features (PRFs), together with a general appraisal of the suitability of the site for foraging and commuting bats. Please refer to Appendix 2 for a list of example PRFs. Any accessible PRFs were inspected using binoculars, a torch and endoscope for evidence of possible bat presence.

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

[1] English Nature (2004). *Bat Mitigation Guidelines.* English Nature, Peterborough.

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

Based on the PRF's present, the survey area was assessed using the suitability classes detailed within Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023)[2], as detailed in Table 2.2. Trees will be categorised into:

- PRF – M: "*The PRF is suitable for multiple bats and may therefore be used by a maternity colony*".
- PRF – I: "*Potential Roosting Feature is only suitable for individual bats or very small number of bats ether due to size or lack of suitable surrounding habitats*".
- Further Assessment Required (FAR): The GLTA has identified a PRF which cannot be assessed from the ground, or a tree likely to have PRFs' not visible from the ground and requires further assessment to determine its suitability for bats.
- Negligible: no PRFs' suitable for bats identified and no further survey work required.

Trees with features present which appear from the ground as suitable to support roosting bats (PRF-M, PRF-I and FAR) are discussed more fully in the report.

Suitability	Description
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts (e.g. maternity and classic hibernation sites).
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 e.g. maternity and hibernation – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or multiple hibernating individuals).
Negligible	Negligible habitat features on site likely to be used by roosting bats.

Table 2.2: Classification of Structures with Bat Potential (Adapted from Collins, 2023)[2]

2.3 Constraints

Access restrictions prevented an internal inspection of Buildings B1 – B4.

The northern elevations on Buildings B1 and B4, as well as the western elevation on Building B3, were inspected from afar due access constraints.

3. Desk Study

3.1 Statutory Nature Conservation Sites

The site is not located within 10 km of any statutory nature conservation sites designated for the presence of bats however Ruislip Wood SSSI/LNR is located 550 m west from the proposed development site and is regarded as one of the capital's most important site for bats, with at least nine species recorded.

3.2 Species Records

The data search was carried out on 27th November 2024 by GiGL. Records of bat species within a 1 km radius of the survey area provided by the consultee are summarised in Table 3.1. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Serotine *Eptesicus serotinus*	1	2021	995 m south	-	ECH 4, WCA 5, WCA 6
Unidentified Myotis *Myotis* sp.	1	2021	995 m south	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Daubenton's bat *Myotis daubentonii*	1	2017	691 m southeast	-	ECH 4, WCA 5, WCA 6
Leisler's bat *Nyctalus leisleri*	1	2021	995 m south	-	ECH 4, WCA 5, WCA 6
Noctule *Nyctalus noctula*	1	2021	995 m south	✓	ECH 4, WCA 5, WCA 6
Unidentified Pipistrellus *Pipistrellus* sp.	3	2010	435 m east	#	ECH 4, WCA 5, WCA 6
Nathusius's pipistrelle *Pipistrellus nathusii*	4	2021	691 m southeast	-	ECH 4, WCA 5, WCA 6
Common pipistrelle *Pipistrellus pipistrellus*	11	2021	691 m southeast	-	ECH 4, WCA 5, WCA 6
Soprano pipistrelle *Pipistrellus pygmaeus*	10	2021	691 m southeast	✓	ECH 4, WCA 5, WCA 6
Unidentified Plecotus *Plecotus* sp.	1	2013	770 m southeast	#	ECH 4, WCA 5, WCA 6
Brown long-eared bat *Plecotus auritus*	2	2021	712 m south	✓	ECH 4, WCA 5, WCA 6
Unidentified bat *Vespertilionidae* sp.	3	2004	755 m southwest	#	ECH 2 #, ECH 4, WCA 5, WCA 6

Table 3.1 (continues): Bat Species Records Within 1 km of Survey Area

Key:
#: Dependent on species.

ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation.
ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection.

WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds).
WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be

Note. These tables do not include reference to the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats), the Bonn Convention on the Conservation of Migratory Species of Wild Animals or the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Table 3.1: Bat Species Records Within 1 km of Survey Area (continued)

4. Survey Results

4.1 Buildings

Building B1

External Assessment

Building B1 was a single-storey brick building with a gable roof of clay tiles (Plate 4.1). The brick work was in good condition. The eave closures of the roof were generally in good condition, however throughout the building on the southern elevation there were occasional gaps which could lead to the roof void (Plate 4.2). There was a gap in the gable-end roof tile on the eastern elevation of Building B1, potentially affording access to the roof void (Plate 4.3). The building had three brick chimneys with lead flashing between the roof and chimney stack; there was a gap in the ridge tile by one of the chimneys (Plate 4.4). The soffit box was made from white uPVC and was generally well maintained, however there was a gap in the soffit in the south west corner of the building (Plate 4.5).

Plate 4.1: Overview of Building B1 (southern elevation)

Plate 4.2: Gaps in eave tiles (southern elevation)

Plate 4.3: Gap in gable end tile (eastern elevation)

Plate 4.4: Gap in ridge tile

Plate 4.5: Gap in soffit box (south west corner)

Roosting Potential

Building B1 has been assessed as having high bat roosting potential due to the presence of crevice features which could afford access to the roof void. This has been assessed as a precautionary measure as access was not gained internally and the features were recorded at height, therefore a detailed inspection could not be undertaken to confirm the presence/absence of roosting bats.

Building B2

External Assessment

Building B2 was a single-storey brick building with a gable roof of clay tiles (Plate 4.6). The brick work was in good condition. The eave closures of the roof were generally in good condition, however on both the northern and southern elevations there were occasional gaps which could lead to the roof void (Plate 4.7). There was a gap in the gable-end roof tile on the eastern elevation of Building B2, potentially affording access to the roof void (Plate 4.8). The building had two brick chimneys with lead flashing between the roof and chimney stack. There was a gap in the ridge tile by the lead flashing of one of the chimneys (Plate 4.9) and lifted lead flashing on the other (Plate 4.10). The soffit box was made from white uPVC and was generally well maintained, however there was a gap in the soffit in the north west corner of the building (Plate 4.11).

Plate 4.6: Overview of Building B2 (southern elevation)

Plate 4.7: Gap in eave tiles (north elevation)

Plate 4.8: Gap in gable end tile (eastern elevation)

Plate 4.9: Gap in ridge tiles

Plate 4.10: Lifted lead flashing (southern elevation)

Plate 4.11: Gap in soffit box (north west corner)

Roosting Potential

Building B2 has been assessed as having high bat roosting potential due to the presence of crevice features which could afford access to the roof void. This has been assessed as a precautionary measure as access was not gained internally and the features were recorded at height, therefore a detailed inspection could not be undertaken to confirm the presence/absence of roosting bats.

Building B3

External Assessment

Building B3 was a smaller single-storey brick building with a gable roof of clay tiles (Plate 4.12). The brick work was in good condition. The eave closures of the roof were generally in good condition, however on both the northern and southern elevations there were occasional gaps which could lead to the roof void (Plate 4.13). There was a gap in the gable-end roof tile on the eastern elevation of Building B3, potentially affording access to the roof void (4.14). The ridge tile at the gable end of the western elevation was missing, giving direct access to the roof void (Plate 4.15). The building had one brick chimney with lead flashing between the roof and chimney stack. The soffit box was made from white uPVC and was generally well maintained.

Plate 4.12: Overview of Building B3 (northern elevation)

Plate 4.13: Gap in eave tiles (northern elevation)

Plate 4.14: Gap in tiles at gable end (eastern elevation)

Plate 4.15: Missing ridge tiles (western elevation)

Roosting Potential

Building B3 has been assessed as having high bat roosting potential due to the presence of missing tiles with direct access to the roof void. This has been assessed as a precautionary measure as access was not gained internally and the features were recorded at height, therefore a detailed inspection could not be undertaken to confirm the presence/absence of roosting bats.

Building B4

External Assessment

Building B4 was a single-storey brick building with a gable roof of clay tiles (Plate 4.16). The brick work was in good condition. The eave closures of the roof were generally in good condition, however on both the northern and southern elevations there were occasional gaps which could lead to the roof void. The building had two brick chimneys with lead flashing between the roof and chimney stack, the brickwork was damaged on the western chimney, on the north elevation, affording access to the roof void (Plate 4.17). The soffit box was made from white uPVC and generally well maintained.

Plate 4.16: Overview of Building B4 (southern elevation)

Plate 4.17: Damaged brick work on chimney stack (northern elevation)

Roosting Potential

Building B4 has been assessed as having high bat roosting potential due to the presence of damaged brick work affording access to the roof void. This has been assessed as a precautionary measure as access was not gained internally and the features were recorded at height, therefore a detailed inspection could not be undertaken to confirm the presence/absence of roosting bats.

4.2 Trees with Potential to Support Roosting Bats

The trees considered to have potential for use by roosting bats are summarised in Table 4.1.

Tree No.	Species	Potential Roost Feature(s)	Suitability (using BCT guidance)	Plate No.
T8	Crap Apple *Malus sylvestris*	Branch socket cavity at 3.5 m high, facing south west on south-west facing limb.	FAR	4.18, 4.19
T24	English Oak *Quercus robur*	Pruning wound at 5 m high, facing south east on east facing limb.	FAR	4.20, 4.21
G29	Leyland Cypress *Cupressus × leylandii*	Split stem at 5 m high.	FAR	4.22

Table 4.1: Trees with Potential to Support Roosting Bats

Plate 4.18: Tree T8 – Crab Apple

Plate 4.19: Tree T8 – Branch Socket Cavity

Plate 4.20: Tree T24 – English Oak

Plate 4.21: Tree T24 – Pruning Wound

Plate 4.22: Tree Group G29 – Spilt Limb on Leyland Cypress

4.3 Trees with Negligible Potential to Support Roosting Bats

All remaining trees on site were considered to have negligible potential to support roosting bats, due to lack of visible PRFs and unsuitable age and size.

4.4 Site and Surrounding Habitats

The site has some areas of suitable habitat for commuting and foraging bats. The most important habitats are likely to be the areas of introduced shrub in the northern section of the site and along the western boundary, along with the hedgerow. Certain species may also make use of the areas of amenity grassland and the scattered trees across the site.

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

- Residential houses and associated gardens;
- Running water and standing waterbodies;
- Pockets of woodland, particularly woodland at Ruislip Woods;
- Golf courses with associated open grassland habitats
- Churches, schools, hospitals and associated grounds; and,
- Railway lines with vegetated banks.

The site is well connected to these adjacent habitats, albeit with the presence of roads, industrial estates and residential areas that may preclude the most light-intolerant species.

5. Impact Assessment

5.1 Summary of Proposals

The development proposals involve the demolition of the existing buildings and redevelopment of the site to provide 21 family homes, along with associated access roads/paths, car parking spaces, private gardens and a dedicated play/recreation area along the northern edge of the site. The existing trees along the northern site boundary will be retained as part of the open space.

Activities likely to be associated with the proposed development during the construction and operational phases are outlined below.

Construction Phase

- Site clearance and ground preparation;
- Use and movement of heavy goods vehicles and machinery;
- Storage of plant, materials and waste;
- Presence of and movement of site personnel; and,
- Creation of landscaping / delivery of new habitats.

Operational Phase

- Permanent siting of buildings, roads and other hard landscaping;
- Frequent movement of vehicles and site personnel;
- Use of lighting associated with roads and buildings;
- Establishment of new habitats; and,
- Maintenance of landscaping.

5.2 Summary of Key Bat Features

Roosting Bats

The Preliminary Bat Roost Assessment has identified the site as having high potential to support roosting bats due to the presence of several suitable roosting features on all buildings. These structures have the potential to support high conservation status roosts. Potential roost features included gaps in the white uPVC sofit boxes, gaps in the eave tiles, holes and cracks in the brickwork and lifted lead flashing. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the external inspection of the buildings. This has been assessed as a precautionary measure as access was not gained internally and the features were recorded at height, therefore a detailed inspection could not be undertaken to confirm the presence/absence of roosting bats.

Trees T8 and T24 had PRFs that were visible but could not be fully inspected from ground level. Therefore, these trees require further assessment to determine whether they could potentially support roosting bats.

Commuting and Foraging Bats

The site provides limited foraging habitat in the form of mature trees along the northern boundary of the site as well as further scattered trees and amenity grassland throughout the site and the hedgerow in the western section of the site. These habitats also provide commuting corridors and

connect the site to further roosting, foraging, and commuting habitats in the surrounding area particularly to the pockets of nearby woodland such as Ruislip Woods. Therefore, the development may negatively impact commuting and foraging bats through removal of suitable habitat, or through unsuitable operational-phase lighting.

5.3 Potential Impacts on Bats

The proposed development has the potential to directly kill or harm roosting bats, through the demolition of on-site buildings and removal of on-site trees that possess potential roosting features. A recommendation for further works has been made in Chapter 6.

Furthermore, foraging and commuting bats may be adversely impacted due to the removal or damage of habitats across the site, including scattered trees. These impacts on bats using the site can be avoided or minimised by retaining valuable habitats and enhancing the value of the site for bat species. Any new lighting, either during the construction or operational phase of the development, could result in fragmentation of this habitat for foraging and commuting bats. Recommendation regarding lighting and the scheme design are also made in Chapter 6.

6. Recommendations

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

R1 **Building B1 – B4:** Buildings B1 – B4 have been identified as having high potential to support roosting bats. Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2023)[2] recommends that for structures with high bat roosting potential at least three dusk emergence surveys be undertaken during the bat emergence survey season to determine the presence/absence of roosting bats within the structures. The bat emergence survey season extends from May to September. At least two of the surveys should be undertaken during the peak season for emergence surveys between May and August. If a roost is discovered during these surveys, a Natural England licence application may be required.

R2 **Trees T8 & T24:** As part of proposed works, Tree T8 is to be removed and Tree T24 is to be pruned. Both trees have been identified as having potential to support roosting bats, but the feature could not be accessed directly to categorise the suitability of the PRF. As such, these trees have been categorised as FAR.

An Aerial Inspection Survey using standard tree climbing equipment to access features that were inaccessible during this GLTA survey is required. Where safe to do so, trees will be climbed utilising tree climbing equipment. Any PRF will be internally searched using a torch and endoscope. Following the guidance the trees will be categorised (Collins 2023)[2] into.

- PRF – M: "*The PRF is suitable for multiple bats and may therefore be used by a maternity colony*". Under the guidance, three aerial inspection surveys are required within the bat activity season. The bat activity season extends from May to September. At least two of the surveys should be undertaken between May and August.
- PRF – I: "*Potential Roosting Feature is only suitable for individual bats or very small number of bats ether due to size or lack of suitable surrounding habitats*". No further surveys are required for trees in the PRF-I category, with future works covered under a Precautionary Working Method Statement.
- If the feature on further inspection is found to be unsuitable for bats, then the status of the tree will be downgraded to negligible.

If the PRF extends beyond the reach of an endoscope and/or cannot be fully inspected, or if the PRF is occupied by bats and the number of bats cannot be fully counted, dusk emergence surveys will be required.

R3 **Tree Group G29:** A Leyland Cypress tree within Group G29 has been identified as having potential to support roosting bats and could not be accessed directly to categorise the suitability of the PRF. Therefore, this tree has been categorised as FAR. It is understood that this tree is to be retained and will not be impacted by the proposed redevelopment of the site. Therefore, no immediate action is required. However, should work proposals change and this tree is subject to removal or management, further survey effort will be required to determine the presence/absence of roosting bats within the tree.

R4 **The remaining trees on site** were considered to have negligible potential for roosting bats. The survey data obtained for the site is valid for 12 months from the survey date. If proposed site works have not commenced within this timeframe, it will be essential to update the survey effort to establish if the trees have developed features that could be used by roosting bats in the interim. In the unlikely event that a bat is found during works to the trees all works must immediately cease and a suitably qualified ecologist should be contacted.

R5 **Scheme Design:** The proposed development should be designed to minimise effects on bats in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF). The ecological mitigation hierarchy requires all development schemes to apply the following principles:

- *Avoidance and Mitigation* – the proposed development should seek to avoid/minimise losses of features with bat potential, in the first instance and incorporate these features in the landscaping layout of the scheme accordingly. Similarly, protection measures for retained features and surrounding habitats should be considered to prevent incidental damage or disturbance during the construction phases. These measures will help to reduce the likelihood of impacting bats and minimise losses of suitable bat roosts and habitat. Where significant harm cannot be wholly or partially avoided, adverse impacts should be minimised by design or through the use of effective mitigation measures such as minimising light spill (see below).
- *Compensation* – where unavoidable losses occur and mitigation cannot be provided, compensation for significant residual harm will be required as a last resort or planning permission could be refused. Where there is a significant effect on a bat roost, a compensation strategy sufficient to obtain a development licence from Natural England may also be required.

R6 **Lighting:** In accordance with best practice guidance relating to lighting and biodiversity (Bat Conservation Trust and Institute of Lighting Professionals, 2023[3]; Gunnell et al, 2012[4]), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species. Examples of good practice include:

- Avoiding the installation of new lighting in proximity to key ecological features, such as hedgerows.
- Using modern LED fittings rather than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.
- The use of directional lighting to reduce light spill, e.g. by installing bespoke fittings or using hoods or shields. For example, downlighting can be used to illuminate features such as footpaths whilst reducing the horizontal and vertical spill of light.
- Where the use of bollard lighting is proposed, columns should be designed to reduce horizontal light spill.
- Implementing controls to ensure lighting is only active when needed, e.g. the use of timers or motion sensors.

[3] Bat Conservation Trust and Institute of Lighting Professionals (2023) *Guidance Note 08/23: Bats and artificial lighting at night*. ILP, Rugby

[4] Gunnell, K., Grant, G. and Williams, C. (2012) *Landscape and urban design for bats and biodiversity.* Bat Conservation Trust.

- Use of floor surface materials with low reflective quality. This will ensure that bats using the site and surrounding area are not affected by reflected illumination.
- For internal lights, recessed light fittings cause significantly less glare than pendant type fittings. The use of low-glare glass may also be appropriate where internal lighting has the potential to influence sensitive ecological receptors.

7. Drawings

Drawing C181875-01 – Preliminary Bat Roost Assessment

C181875-01-01

Legend

- Site boundary
- Tree with PRF(s)
- Tree without PRF(s)
- Further assessment required - Tree not impacted by development
- Gap in soffit box
- Gap/missing ridge tile
- Gap in roof tile at gable end
- Lifted lead flashing
- Damaged brick work
- Gap in eaves tiles
- Building surveyed

N

Project	Haydon Drive
Drawing	Preliminary Roost Assessment Map
Client	Philip Pank Partnership LLP
Drawing Number	C181875-01-01
Revision	00
Scale @ A3	1:400
Date	March 2025
Approved By	RH
Drawn By	KB

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Appendix 1

Relevant Legislation

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

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

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

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

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

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

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

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

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

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

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

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

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

For England:

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

Appendix 2

Examples of Potential Roost Features

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

Potential Roost Features (Adapted from Collins, 2023)[2]

Trees
• Bat, bird and dormouse boxes on trees; • Cankers (caused by localized bark death) in which cavities have developed; • Compression forks with included bark, forming potential cavities; • Cracks/splits in stems or branches (both vertical and horizontal); • Crossing stems or branches with suitable space between for roosting; • Ivy stems with diameters in excess of 50 mm with suitable roosting space behind (or where a roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk); • Man-made holes (e.g. cavities that have developed from flush cuts); • Natural holes (e.g. knot holes) arising from naturally shed branches, or cavities created by branches tearing out from parent stems; • Other hollows or cavities, including rot holes and butt rots; • Partially detached or loose, platy bark; • Woodpecker holes; or, • Other features that offer a place of shelter.

Potential Roost Features (Adapted from Collins, 2023)[2]