Preliminary Roost Assessment

77 Hilliard Road, Northwood Hills, HA6 1SL

November 2023

Project	77 Hilliard Road, Northwood Hills, HA6 1SL – Preliminary Roost Assessment
Client	Zoe Wilson & Michael Howard
Project Code	23-021
Report Ref.	23-021-PRA
Version	Issue 1

	Name	Date	Comments
Authored	Kate Williams	13/11/2023	
Reviewed	Hazel Crossley	13/11/2023	
Approved	Kate Williams	16/11/2023	

Disclaimer

This report has been prepared exclusively for the client named above. Unless otherwise agreed in writing by CW Ecology Ltd, no other party may use, make use of, or rely on its contents.

Whilst every effort has been made to prepare this report in accordance with the client's brief, no survey can be absolute in characterising a fluctuating environment. Where the report makes reference to the likely absence of a species, this is reflective of the conditions at the point of survey and does not exclude presence at later date. The information and opinions expressed in this report reflect the due diligence, skill and of CW Ecology's ecologists and no warranty is provided as to their accuracy.

No liability is accepted by CW Ecology Ltd for any use of this report, other than for the purpose it was originally intended.

Executive Summary

Background

CW Ecology Ltd was commissioned by Zoe Wilson and Michael Howard to undertake a preliminary roost assessment (PRA) of 77 Hilliard Road, Northwood Hills, HA6 1SL in respect to a planning application to:

- Demolish the existing buildings and construction of a residential dwelling and associated hardstanding and garden.

Findings Summary

	Results	Impacts	Recommendations
Buildings			
Section 1 – 5	A small number of missing/damaged tiles were noted, these were inspected externally and internally. None of the tiles presented suitable potential roost features, all tiles of concern were checked for evidence of bats. None of the buildings offer suitable roosting opportunities, either due to disturbance, noise and dust, or being open to the elements.	No direct or indirect impacts on bats are expected.	No further surveys are required, it is not anticipated that any work on the site would impact on roosting bats. It is however, recommended that where lighting is to be used on any external building, that it is not installed in such a way that it lights up any surrounding habitat, or spills "upwards" which can negatively impact on a variety of species. Further advice should be sought from an ILP member where extensive lighting is to be installed.

Contents

1.Introduction

1.1 Background

1.1.1 CW Ecology was commissioned by Zoe Wilson and Michael Howard to undertake a preliminary roost assessment at 77 Hilliard Road, Northwood Hills, HA6 1SL henceforth referred to as 'the site'.

1.1.2 The site has a central grid reference of TQ 09819 90949.

1.1.3 The site is situated within the well-developed residential area of Northwood. The site is in the southeast region of Northwood and is surrounded on all aspects by residential dwellings. A small patch of wood is located approximately 355 meters to the east, further afield to the southeast is Haste Hill public golf course, located 807 meters away. Beyond this golf course is Ruislip woods. The site in total is approximately 0.03ha.

1.1.4 The site is comprised of hardstanding and a collection of buildings. The buildings are all interconnected creating a "U" shaped design. The buildings have been in constant use as a woodworking business. There is no green space within the site area.

1.2 Proposed Works

1.2.1 Detailed designs are not available at the time of writing; however, the proposed works are anticipated to include:

- Demolition of the existing building and conversion to a residential dwelling with associated hardstanding and garden.

1.3 Aims

1.3.1 The objectives of the assessment were to:

- identify signs of bat usage;
- ascertain the potential of each building/structure/tree; and
- determine the need for further surveys.

2. Legislation

2.1 Wildlife and Countryside Act

2.1.1 All bat species are fully protected under section 9 (5) of the Wildlife and Countryside Act 1981 (as amended). According to this act, it is an offence to:

- Intentionally capture, kill or injure one of these animals
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used by one of these animals for shelter or protection
- Intentionally or recklessly disturb an animal whilst it is using this place sell, offer for sale or advertise for one of these animals live or dead

2.2 Conservation of Habitats and Species Regulations 2017 (as amended)

2.2.1 Designated as European Protected Species' **all bat species** receive additional protection from the Conservation of Habitats and Species Regulations 2017 (as amended, under Schedule 2. In accordance with this act, it is an offence to:

- Deliberately capture or kill a European Protected Species
- Deliberately disturb a European Protected Species
- Damage or destroy the breeding site or resting place of a European Protected Species

2.2.2 The **greater and lesser horseshoe bats**, **barbastelle** and **Bechstein's bats**, are also listed in Schedule 2 of the Conservation of Habitats and Species Regulations. Areas which support populations of these species can, therefore, be considered for designation as a Special Areas of Conservation **(SACs).**

3. Methodology

3.1 Desk Study

3.1.1 A biological data search was not undertaken on this occasion due to the small size of the site (0.03ha) and considering the composition of the site and surrounding habitat.

3.1.2 A desk study was completed on Magic Maps to identify previously granted European protected species licenses within 2km of the site.

Table 1 – Data Request

Data Source	Information Requested	Search buffer
Multi-Agency Geographic Information for the Countryside (MAGIC)	EPS Licence applications International and national statutory designations	2km

3.2 Preliminary Roost Assessment

3.2.1 A preliminary assessment was undertaken on the 6th of November 2023 of the "U" shaped outbuildings, using current best practice guidance (Collins, 2023). Please see appendix one for images of the buildings surveyed and potential roosting features.

3.2.2 The exterior of each building was inspected to identify potential access locations or features that may offer roosting potential. This could be missing or lifted tiles; gaps around lead flashing, facia boards or soffit boxes; or cracked mortar. Where practical an internal inspection of the roof space was also undertaken. Surveyors recorded indications of use by bats including but is not limited to, staining, discoloration, droppings and feeding remains. Where present, samples of droppings were taken with a note on size, shape, texture and age recorded. Each building was then assigned a potential to support bats using the rationales detailed in Table 2.

Table 2 – Classification of Roosting Habitats in structures[1]

Bat Potential	Rationale
High	A structure with more than one obviously suitable roosting feature. The feature is suitable for large numbers of bats, to be used for longer periods of time and at any time of year including hibernation. The features would present a high conversation status.

[1] Collins, J. (ed.) (2023), see Table 4.1, guidelines for assessing the potential suitability of proposed development sites for bats

Moderate	A structure with more than one potential roosting feature which is likely to offer roosting potential for bats, but not hibernation features or for large numbers of bats. The features would not present a high conservation status.
Low	A structure with one or more potential features, used opportunistically at any time of the year. However, it is unlikely to support bats, e.g., the feature is open to the elements or too small. May offer hibernation for singular opportunistic 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 e used by any roosting bats at any time of the year – i.e., complete absence of crevices/suitable shelter at ground/underground levels.

3.3 Surveyors

3.3.1 The survey was undertaken by Kate Williams, who holds a class 2 bat survey licence (2019-42888-CLS-CLS).

3.4 Weather Conditions

3.4.1 The starting temperature was 12°C with sunny conditions with moderate wind gusts and light cloud.

3.5 Constraints

3.5.1 It was not possible to inspect all of the roofline directly from the ground, instead a 4K camera on a pole was used to establish the condition of the roofline which was not visible from the ground.

4. Results

4.1 Desk Study

Protected Species

4.1.1 Seven bat mitigation licences were returned within a 2km search of MAGIC Maps. Five of these were located at properties on streets adjacent to Copse Wood, some 1.6 km to the west. Species covered by the licences were common pipistrelle (*Pipistrellus* pipistrellus), soprano pipistrelle (*Pipistellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), and Leisler's bat (*Nycatlus leisleri*).

4.2 Buildings

4.2.1 The site supports a former woodworking workshop and includes several storage and work areas with a complex roof structure consisting of both flat and false pitched elements of different construction. The building, as a whole can be considered as one interconnected "U" shaped structure that has been updated and extended at various different points in time. For simplicity, the site has been divided into 'Sections' to describe each area and associated roof structure (Figure 1).

Roost Potential

	Building and PRF Descriptions	Suitability
Section 1	Section 1 houses the main work area of the workshop with woodworking machinery still present. The workshop has been used daily until exchange of ownership with heavy machinery routinely in use creating significant dust, noise and vibration. Internally the workshop is cluttered with storage cupboards and units on the walls and significant timber offcuts stored in the rafters. The ceiling is flat wooden ply boards, abutted to the flat roofline. Inspection of the visible surfaces did not identify the presence of droppings or feeding remains. The space is sporadically filled with thick cobwebs, coated in dust. Externally there is a false pitch which faces southeast, this pitch leads directly into a corrugated metal roofline to both the north and west. The pitch is in reasonable condition with a lost tile replaced with a felt sheet. There are several disjointed tiles at the chimney exit point, however upon closer inspection with the camera pole (10x zoom), and where viewed internally there was no evidence of either bats, droppings or obvious staining. The back of the tiles has thick sheeted insulation present which gives minimal opportunity for crevice dwelling bats. It is highly unlikely due to the nature of the work which takes place that this section of the building would offer suitable roosting/feeding/hibernation potential for bats.	Negligible

Section 2	Section 2 follows a similar structure to Section 1 with a false pitch facing west, and a flat roof constructed of felt facing north and northeast. Externally, the pitched part of the roof has been backfilled with a mixture of insulation and expanding foam on the underside. The chimney sits between sections one and two, no loose tiles noted within section two roofline. The chimney is present at the western end of the false pitch. A bay window extends towards the courtyard (facing west) which is covered by polycarbonate sheets. Internally the building contains a partial suspended ceiling grid above which a collection of wood had been stacked. The internal make up is much the same as section one, with a cluttered workspace, full of cupboards, equipment, and wood stacked up into the rafters. There are no obvious signs of bats within this space, either externally or internally, as per section one, this area would also be affected by dust, noise and vibrations. Overall, this space does not offer any suitable roosting/feeding or hibernation opportunities for bats.	Negligible
Section 3	Section 3 is currently used as a wood storage area. The building has a pitched roof facing approximately northeast to south, this is then connected on the east and west pitches to a flat roof. The roof is support by a combination of steel supports and brickwork columns. There is a metal roller shutter within the pitched element of the building which appears in a state of disrepair leaving the structure open at all times to the courtyard. Internally the workshop is cluttered with timber and offcuts stored in the rafters. Inspection of the roof using the 4K camera on a pole did not identify any slipped or missing tiles. No light ingress was observed from inside the building. The roof appears in good condition with no obvious defects. Although it was noted that the rafters are currently being supported by steel props implying instability within structure. There is a gap under the barge board which leads directly into the open space, no evidence of bats was noted when viewed with a high-powered torch/endoscope. Overall, this space is unlikely to offer suitable roosting/feeding or hibernation potential for bats. As the structure is open, it is affected by the weather. To a lesser degree compared to section one and two, it will be affected by noise and vibration, and frequent use of removing and storing wooden planks, both on the ground, and up towards the roofline pitch.	Negligible
Section 4	Section 4 is an open fronted, red brick walled structure with a corrugated tin roof and partial wooden ceiling. It is open to the courtyard with only half brick, half wooden support columns, and no separating wall. It also includes the polycarbonate panel covering which encompasses half of the courtyard. No internal or external features of interest were present, due to the nature of the roofline and its open nature the building does not offer any opportunities for bats.	None

Section 5	Section 5 is a small toilet block. The building is in a state of disrepair, with the internal plywood ceiling appearing wet and mouldy with areas peeling away. Externally, several slipped tiles were noted from the ground, although it appears that the tiles are doubled up, based on the deterioration of the inside of the toilet block, it seems reasonable to assume that this building is no longer watertight where the tiles have slipped and across the building. Although these slipped tiles could offer suitable crevice opportunities for bats, as they are no longer weatherproof, it would be unlikely that they would be suitable for bats.	Negligible

Hibernation Potential

	Building and PRF Descriptions	Suitability
Section 1 - 5	None of the spaces provide suitable hibernation features. This is either due to a lack of space within suitable features, i.e., expanding foam present or rigid insulation sheets. The flat roofs do not offer any features which would be suitable for bats, this includes where the rooflines join, or where they sit in or above brickwork. Section one and two are very dusty, with thick, hanging, dust ridden cobwebs present throughout, it is highly unlikely that such an environment would be suitable for bats. It is also likely that the noise of the workshop would not be suitable for hibernating bats. Section one and two are heated by a wood burning stove which would not give a consistent temperature. Sections three and four are open fronted, meaning they are not fully protected from wind/rain and will receive fluctuating temperatures also. Section five is also affected by the weather, as noted by the deterioration of the building, it is unlikely that it will provide suitable weather protection for hibernating bats.	None

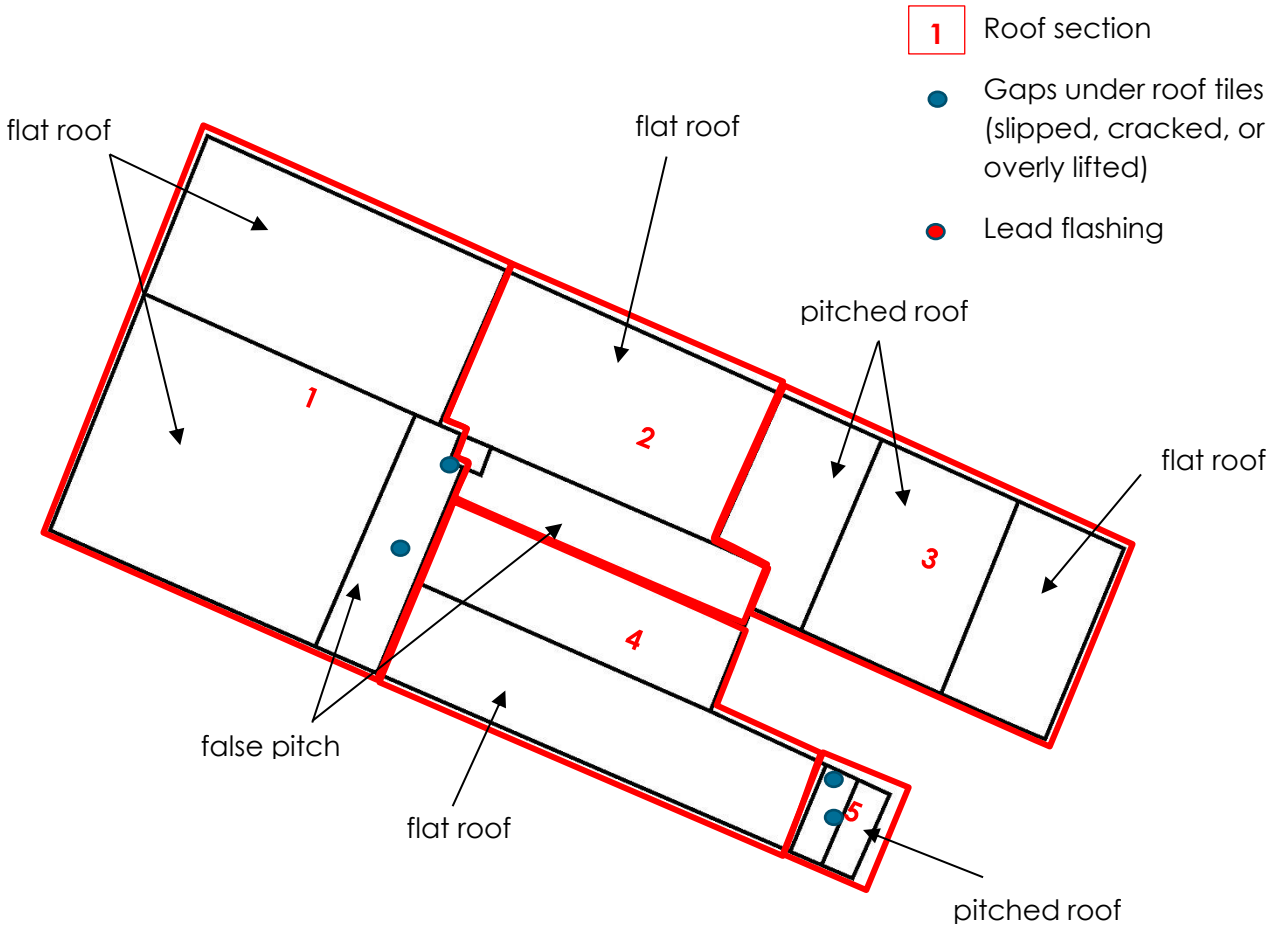


Figure 1 – Breakdown of structure, showing features identified during the preliminary roost assessment.

4.3 Limitations

4.3.1 Magic Map data does not offer accurate locations for European protected species licences, this may mean that the application is closer or further than detailed.

5. Evaluation

5.1.1 No further surveys are recommended for the site. It is unlikely that the property in its current condition is suitable for roosting bats.

5.1.2 If at any point during works bats are found and no ecological supervision is in place, then works must stop and a suitably qualified ecologist contacted.

5.1.3 Within the false pitch of section one of the building, there were missing tiles observed via photographs. Following inspection of these tiles internally, it is unlikely that these would provide a suitable resting place due to being directly adjacent to the flue for the chimney, which is unencapsulated internally, causing this area to become quite hot. This combined with the regular industrial use of the space and cramped environment would suggest that opportunities for crevice dwelling bats would be significantly hampered due to rigid insulation boards and foam spray being used behind the false pitch roof tiles.

5.1.4 The toilet block is in a state of disrepair and is not considered to offer suitable roosting potential for bats, despite having two slipped tiles, these tiles were inspected, and no evidence of bats was noted, such as droppings/staining or obvious crawl pathways. The roof line is leaking, which is causing internal damage, it seems reasonable to conclude that the slipped tiles are no longer watertight, which would significantly reduce the likelihood of bats using them for crevice dwelling purposes.

5.1.5 Whilst used as a workshop the environment in and around the buildings would have been very noisy, dusty, and affected by vibration, which would be a very unsuitable environment for bats. Internally, the abundance of materials stored with the upper areas of the buildings would significantly restrict the usage of the available space by large numbers of bats and by any bats requiring flight warm-up space such as brown long-eared bats.

5.1.6 Where new lighting is to be installed at the site, it must not be directed towards habitats in or outside the site boundary, "upward" light spill is to be avoided which can be detrimental towards many animals. Advise should be sought from a qualified engineer who is a member of "Institution of Lighting Professionals" who can advise on how to avoid the above scenarios.

5.1.7 Although unlikely to provide opportunity for bats in its current form, redevelopment of the property could provide opportunity for enhancement and encourage use by bats through integration of a crevice bat box feature. It is therefore recommended that a suitable integrated bat tube is installed at a minimum height of three meters, up to six meters and is positioned facing east through to a west elevation. A northern elevation should be avoided to reduce adverse impact by weather. Bat tube examples include Schwegler 1FR bat tube, Pro UK build-in wood stone bat box or Habibat 001 brick bat box.

6. References

Bat Conservation Trust. (2022). *Interim Guidance Note: Use of night vision aids for emergence surveys and further comment of dawn surveys.* Bat Conservation Trust.

CIEEM. (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd Edition.* Winchester: Chartered Institue of Ecology and Environmental Management.

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

Appendix 1

Image 1: Entranceway to property.

Image 2: View from open courtyard showing external Section 3

Image 3: Underside of flat timber clad Section 4

Image 4: Underside of Section 4

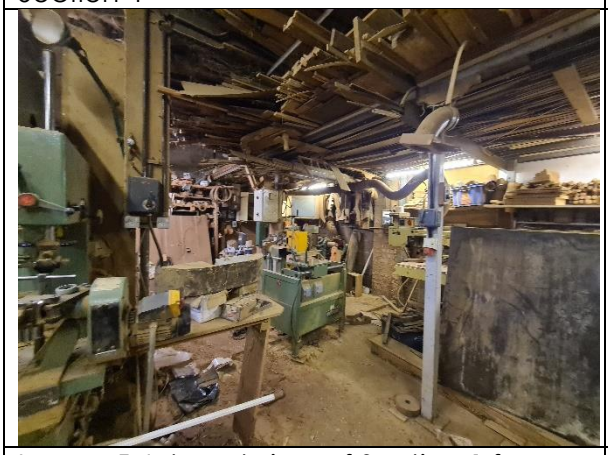
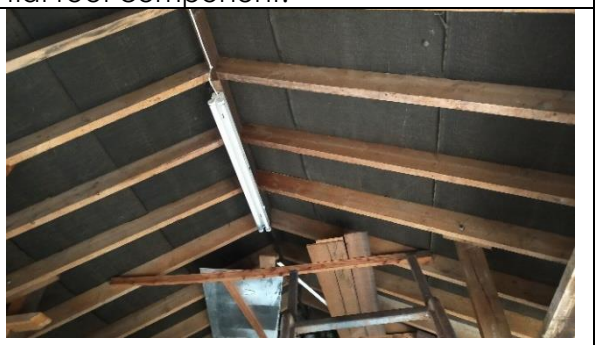
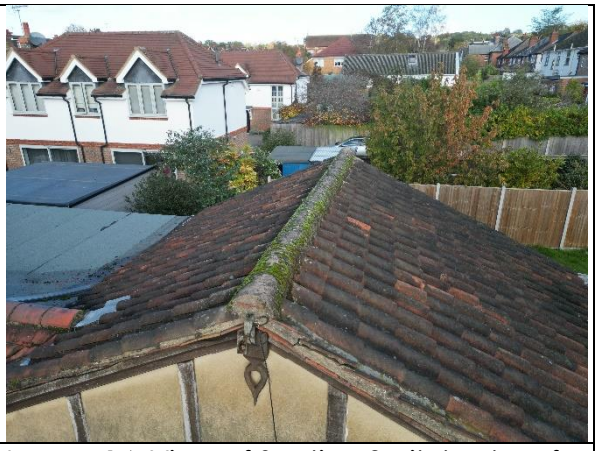


Image 5: Internal view of Section 1 former main workshop area with flat roof.

Image 6: Section 2 pitch with expanding foam filling.

	
Image 7: Section 5 toilet block with pitched roof.	Image 8: Internal view of Section 3 metal flat roof component.
	
Image 9: Internal view of Section 3 pitched roof.	Image 10: Internal view of Section 3 pitch roof.
	
Image 11: Boarding within pitched roof of Section 3 with no droppings observed.	Image 12: Internal view of Section 3 pitched roof.

	
Image 13: View showing the two false pitches and flat roofs.	Image 14: View of Section 3 pitched roof.
	
Image 15: Flat roof of Sections 1 and 2.	Image 16: View of Section 5 toilet block roof.