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Report prepared for: Philip Mizon

For the Site of: 1 Wadham Gardens, NW3 3DN

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Cherryfield Ecology has prepared this report for the named clients' use only.
Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be from the most recent or current season, e.g. May 2024 to May 2025 for bats. Therefore, should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of the survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

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Emergence and Activity Bat Survey (EBS)

0.0 Non-Technical Summary

0.1 Background

This report follows national guidelines Collins (2023) allowing for dusk and dawn surveys and recommends mitigation and compensation if considered necessary. If a deviation from the guidelines has been made, this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of 1 Wadham Gardens, NW3 3DN.

The client commissioned Cherryfield Ecology to undertake an EBS as the proposals include for the excavation of single-storey basement level under footprint of existing building, a sunken terrace to north-west of site, 4x front and side light-wells with grilles, internal alterations to flats on ground, first and second floors, new and altered window openings to rear ground floor and first floor level, demolition and rebuild of the north-west end of the building, new boundary treatment and landscaping works, in association with 6 existing dwellings.

0.2 Results and Findings

Following a Stage 1 Ecological Assessment undertaken on 15/07/2024 (Cherryfield Ecology, 2024), further surveys were recommended. This included for three dusk emergence surveys.

The surveys have shown a likely absence of bats within the building and minimal foraging and commuting activity in the surrounds.

0.3 Impact Assessment and Recommendations

No impacts are foreseen; however, if bats are found during the development, all works must stop, and advice sought.

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4.3 for further details).

1.0 Introduction

1.1 Aim

The aim of this survey is to gather additional information from the site to establish species, population and entry/exit points of bats to aid in the design of mitigation and compensation for bats in the development. The information is used to help inform a licence application (if required) and to inform the client and their architect/planner of necessary changes in the design that may be required to ensure bats are protected during works. It should be read in conjunction with any Stage 1 survey such as a Preliminary Roost Assessment (PRA) that may have been undertaken.

1.2 Background Information

The client, Philip Mizon, has commissioned Cherryfield Ecology to undertake an EBS for the site of 1 Wadham Gardens, NW3 3DN. Planning permission is being sought for the excavation of single-storey basement level under footprint of existing building, a sunken terrace to north-west of site, 4x front and side light-wells with grilles, internal alterations to flats on ground, first and second floors, new and altered window openings to rear ground floor and first floor level, demolition and rebuild of the north-west end of the building, new boundary treatment and landscaping works, in association with 6 existing dwellings.

This survey has checked all buildings, trees (from ground level only) or structures due to be affected by the proposals for bats, signs of bats or habitat value e.g. crevices, gaps or holes that cannot be checked for a variety of reasons. In addition, surveyors have been positioned around the building, tree or structure to allow for emerging/re-entering bats to be watched for.

The inspections were conducted on 08/08/2024, 29/08/2024 and 19/09/2024.

The survey can only ever provide a ‘snapshot’ of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find or see emergence, re-entry and/or evidence.

Biological records have been requested to give the report context and allow a study of the surrounding area. The information is often sensitive and, therefore, a synopsis is provided.

The survey can be conducted between May and September with the optimal season for surveying maternity colonies limited to mid-May to August inclusive, however, it can also be limited due to bad weather, when bats are less active.

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule V of the Act. All bat species in the UK are also included in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("Habitats Directive") which defines United Kingdom protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

A bat roost is well-defined by the legislation as the 'resting place' of a bat. However, the word roost is used to describe this resting place and is generally accepted as the word describing where a bat or bats rest, feed or sleep.

1.3 Roost definitions

Roost definitions from Natural England's licensing documents (NE, 2024).

Day roost – a place where individual bats, small groups of males, rest or shelter in the day but are rarely found by night in the summer.

Night roost – a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be regularly by the whole colony.

Feeding Roost – a place where individual bats or a few individuals rest or feed during the night but are rarely present in the day.

Transitional/occasional roost – used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.

Swarming site – where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites.

Mating sites - sites where mating takes place from late summer and can continue through winter.

Maternity roost – where female bats give birth and raise their young to independence.

Hibernation roost – where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.

Satellite roost – an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Other – roosts not meeting the above definitions.

2.0 Methods

The survey follows the national guidelines Collins (2023) and Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys (Bat Conservation Trust, May 2022) the following equipment is available for the inspection:

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting dropping and feeding evidence.
- Echo Meter Touch, EM3, and Pettersson D240X.
- IR night vision HD Camcorder, 12v IR flood lights or Nightfox whisker.

Night Vision Aids (NVAs) are used to cover the building alongside surveyors. These are not designed to replace surveyors, rather provide night vision, allowing for more accurate survey effort and when found, roost locations. **The cameras may not always capture bats entering/exiting roosts due to the size of the building, terrain, narrower field of view and other factors**. Video is processed in a video editor and checked in the office after the survey is completed, stills and snapshots are taken and used in reports, as per the guidelines.

Surveyors are positioned around the building(s), tree or structure in order to cover all elevations. The survey then observes emerging or entering bats from suitable features such as holes, cracks and crevices. Notes on commuting and foraging bats are also made in the surrounds.

If a deviation from the guidelines has been made, the reason and justification will be explained below:

No deviation from the standard guidelines has been made for this survey set.

2.1 Limitations

This survey provides a snapshot of the site at the time of the survey(s) only. Bats are highly mobile and can turn up from time to time unexpectedly. All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys.

Table 1: Roosting features (likelihood) of bat presence assessed against Collins (2023) guidelines *Source: Adapted from Collins (2023, pp44, table 4.1).*

Likelihood of bat presence (Habitat Value)	**Features that bats can use, regardless of evidence being present.**
Confirmed Bat Presence	Bats are found to be present during the survey. Evidence of bats is found to be present during the survey.
Higher likelihood of bat presence.	Pre-20th century or early 20th century construction. Agricultural buildings of traditional brick, stone or timber construction. Large and complicated roof void with unobstructed flying spaces. Large (>20 cm) roof timbers with mortice joints, cracks and holes. Entrances for bats to fly through. Poorly maintained fabric providing ready access points for bats into roofs, walls, bridges, but at the same time not too draughty and cool. Roof warmed by the sun, in particular south-facing roofs. Weatherboarding and/or hanging tiles with gaps. Low level of disturbance by humans. Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.

Moderate and Lower likelihood of bat presence.	Modern, well-maintained buildings or built structures that provide few opportunities for access by bats. Small, cluttered roof space. Buildings and built structures comprised primarily of prefabricated steel and sheet materials. Cool, shaded, light or draughty roof voids. Roof voids with a dense cover of cobwebs and no sections of clean ridge board. High level of regular disturbance. Highly urbanised location with few or no mature trees, parkland, woodland or wetland. High levels of external lighting.
Negligible likelihood of bat presence.	No obvious features suitable for roosting, minor foraging or commuting.
None	No features suitable for roosting.

3.0 Results

The following section details the results of the desk study, inspection and survey; it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

The desk study is centred on Grid Reference – TQ 27048394 and Postcode – NW3 3DN.

3.2 MAGIC

The following statutory sites and Natural England Protected Species (NEPS) have been located within the 2km search area (Figure 1).

Table 2: Magic search results

Receptor	Distance and Direction to Nearest (m/km)	Description
Statutory sites	~1370m Northeast	Belsize Wood (LNR)
	~670m Northeast	Adelaide (LNR)
	~890m South	St John's Wood Church Grounds (LNR)
Granted protected species licenses	~570m Southeast	Common pipistrelle, Pipistrellus pipistrellus (2015-10291, 2019-41271)
	~640m Southeast	Common pipistrelle, Soprano pipistrelle, *Pipistrellus pygmaeus* (2015-9230, 2012-4961 and 2010-2134)
Priority habitat	~1940m North	Good quality semi-improved grassland
	~1920m North	Lowland Heathland
	~50m East	Deciduous Woodland
	~1920m North	Woodpasture and Parkland

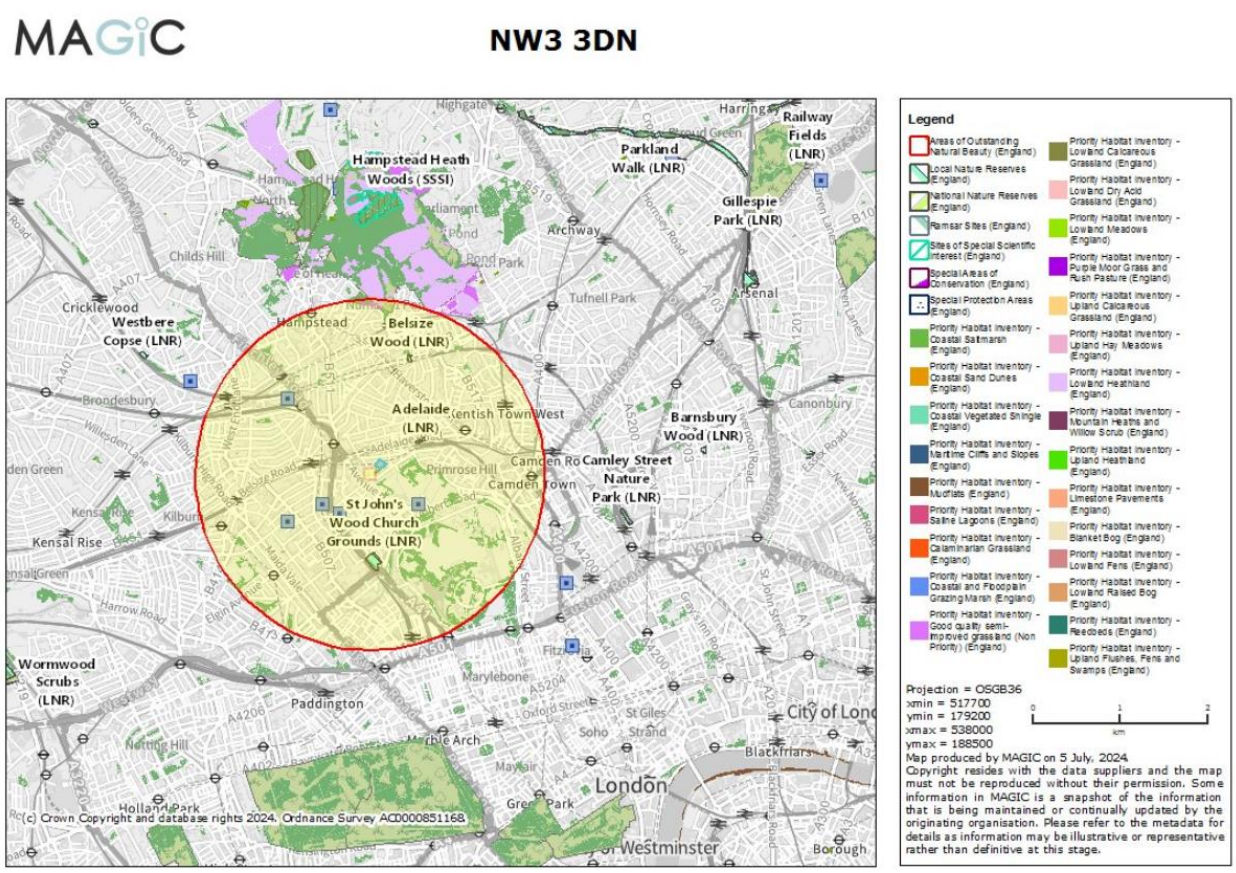

Figure 1: Magic Map Search

3.3 Biological Records Data

A standard search of existing records for protected species and nature reserves has been commissioned, below details the results and site context.

Biological records were obtained from Greenspace Information for Greater London (2024).

Table 3: Biological Records

Species	Number of Records	Closest record (accuracy)	Most recent record (year)
Barbastelle *Barbastella barbastellus*	-	-	-
Brown Long-Eared *Plecotus auritus*	-	-	-
Common Pipistrelle *Pipistrellus pipistrellus*	108	~292m (100m)	2017
Daubenton's *Myotis daubentonii*	28	~819m (100m)	2017

Leisler's *Nyctalus leisleri*	-	-	-
Nathusius' Pipistrelle *Pipistrellus nathusii*	12	~819m (100m)	2017
Natterer's *Myotis nattereri*	-	-	-
Noctule *Nyctalus noctula*	19	~485m (100m)	2017
Serotine *Eptesicus serotinus*	-	-	-
Soprano Pipistrelle *Pipistrellus pygmaeus*	103	~292m (100m)	2017
Unidentified Bat *Chiroptera*	-	-	-
Unidentified Long-Eared *Plecotus sp.*	-	-	-
Unidentified Myotis *Myotis sp.*	-	-	-
Unidentified Pipistrelle *Pipistrellus sp.*	-	-	-
Unidentified Vesper *Vespertilionidae*	-	-	-
Whiskered *Myotis mystacinus*	-	-	-
Whiskered/Brandt's *Myotis mystacinus/brandtii*	-	-	-

3.4 Site Location and Surrounds

The site is located in South Hampstead, London and is surrounded by high density housing in the immediate locale. Table 4 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 4: Habitat features suitable for bat use.

Feature	Description
Watercourses	Regent's canal runs along the eastern boundary ~720m from the site.
Waterbodies	N/A
Woodland	A copse is located ~800m Southeast. A copse is located ~400m East.
Linear e.g. hedgerows	The search area is dominated by residential hedgerows.
Pasture/arable/grassland	Primrose Hill is located ~130m from the site. Regents Park is located ~700m Southeast from the site. St. Johns Wood Church gardens are located ~900m South. Antrim Grove Playground is located ~980m North. Primrose Gardens are located ~880m Northeast. A sportsground is located ~400m Northwest. Alexandra Road Park is located ~840m West. Lords Nursery Ground is located ~980m South.
Other	St. Peters Church was located ~830m Northwest. St Thomas more church is located ~880m Northwest. St Johns Wood Church is located ~1km South.

3.5 Building, Tree or Other Structure

The following section details the structure(s) reference, bats located, evidence located and observed emergence/re-entry (see Figure 14 for Site Plan).

Building/tree/structure reference – B1 (Main Building)

Table 5: Weather Records

Date	Survey	Time: from/to	Weather: Start	Weather: Finish
09/08/2024	Dusk	20:19 to 22:19 SS: 20:35	Temp: 20°C Humidity: 53% Cloud: 0% Wind: 1/12 Precip: None	Temp: 19°C Humidity: 61% Cloud: 0% Wind: 0/12 Precip: None
29/08/2024	Dusk	19:37 to 21:37 SS: 19:52	Temp: 19°C Humidity: 56% Cloud: 20% Wind: 0/12 Precip: None	Temp: 17°C Humidity: 61% Cloud: 10% Wind: 0/12 Precip: None
19/09/2024	Dusk	18:50 to 20:50 SS: 19:05	Temp: 21°C Humidity: 64% Cloud: 10% Wind: 0/12 Precip: None	Temp: 18°C Humidity: 75% Cloud: 0% Wind: 0/12 Precip: None

3.6 Observations

Table 6: Results and observations of the building, tree or structure.

Surveyor	Building, Tree or Structure	Dates, Times and Survey Type	Bat Activity Observed
PH	B1	09/08/2024 20:19 to 22:19 SS: 20:35	Common pipistrelle (CP) was heard five times between 21:04 and 21:40, with two passes observed flying south to north, past the western elevation of B1.  Figure 2: Surveyor IR image
ZH	B1	As above	A single CP pass was heard at 21:04, with the bat observed passing around the southeast corner of B1.  Figure 3: Surveyor IR image
TH	B1	As above	Two passes of CP were heard at 20:56 and 21:00.

			 Figure 4: Surveyor IR image
HS	B1	As above	Four passes of CP were heard between 20:56 and 21:11, with one pass observed flying over B1 from the east (at 21:00).  Figure 5: Surveyor IR image
DB	B1	29/08/2024 19:37 to 21:37 SS: 19:52	Four CP passes were heard but not seen between 20:23 and 21:03.  Figure 6: Surveyor IR image

HS	B1	As above	A single pass of CP was heard but not seen at 20:36.  Figure 7: Surveyor IR image
CS	B1	As above	Three passes of CP were heard. At 20:11 a bat flew past the eastern elevation of B1, at 20:18 a bat flew in the reverse direction and at 20:19 a bat was heard but not seen.  Figure 8: Surveyor IR image
KP	B1	As above	Passes of CP were heard between 20:11 and 20:54, with one pass observed flying over B1 from the west.

			 Figure 9: Surveyor IR image
AW	B1	19/09/2024 18:50 to 20:50 SS: 19:05	Three passes of CP were heard but not seen at 19:10, 19:53 and 28:20.  Figure 10: Surveyor IR image
HS	B1	As above	No activity recorded.  Figure 11: Surveyor IR image
GL	B1	As above	One pass of CP was heard but not seen at 19:30.

			 Figure 12: Surveyor IR image
JN	B1	As above	Two passes of CP were heard but not seen at 19:31 and 20:21.  Figure 13: Surveyor IR image

Summary of surveys and supplementary observations:

09/08/2024 – No emergences recorded.

29/08/2024 – No emergences recorded.

19/09/2024 – No emergences recorded.

Any other protected species that would be affected by the development:

N/A

Figure 14: Site Plan

4.0 Conclusions, Discussion, Impacts and Recommendations

The following section details the conclusions, discussion and recommendations in the context of the proposed works.

Building/tree/structure reference – B1 (Main Building)

4.1 Conclusion and Discussion

The proposals include for the excavation of single-storey basement level under footprint of existing building, a sunken terrace to north-west of site, 4x front and side light-wells with grilles, internal alterations to flats on ground, first and second floors, new and altered window openings to rear ground floor and first floor level, demolition and rebuild of the north-west end of the building, new boundary treatment and landscaping works, in association with 6 existing dwellings.

The surveys have shown a likely absence of bats within the building and minimal foraging and commuting activity in the surrounds.

4.2 Potential Impact

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and the following details a proportionate impact assessment based on current information.

Table 7: Impact Assessment.

Impact	No impacts foreseen
Characterisation of unmitigated impact on the feature	N/A
Effect without mitigation	N/A
Mitigation and or enhancement	See Table 8 and 9
Significance of effects of residual impacts (after mitigation)	N/A

4.3 Recommendations

The following table details the recommended mitigation and compensation required;

License type required: N/A

Roost type: N/A

Table 8: Mitigation and Compensation

Work	Specification
Mitigation and compensation	The following is recommended: As no roost has been confirmed in the building the works can proceed. Commuting bats were using the grounds and surrounds, therefore, any tree, hedges or linear feature should be retained where possible. ***If at any time bats are found during works, works must stop, and further advice sought from a licensed bat worker.***
Lighting	Any lighting near or shining onto any trees will be designed to minimise the impact it has on potential bat roosting and commuting. Lighting will be in line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2023) *https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/* This lighting, where possible, will be of low level, be on downward deflectors and be on PIR sensors. Using LED directional lighting can also be a way of minimizing the light spill affecting the habitat. No up-lighting should be used. This will ensure that the roosting and commuting resources that the bats are likely to be using are maintained.

The local planning authority has a duty to impose enhancements. The following table details the affordable and simple enhancements suitable for the site (Table 9).

Table 9: Enhancements to allow a net gain for protected species.

Work	Specification
Enhancements to provide a net gain as per the LPA's duty.	A minimum of one Chillon Woodstone bat boxes or similar boxes (Figure 15) can be hung on the building at a minimum of 3m from ground level and face south/southwesterly. These boxes are known to be used by crevice and void-dwelling species.  Figure 15: Chillon Woodstone Bat Box (British-made) Bat tubes can also be built into any new areas of the building (Figure 16); these require no maintenance and can be hidden by facing the tube with the cladding/brick etc. for aesthetics.  Figure 16: Example of bat tube

5.0 References

Cherryfield Ecology (2024), Ecological Appraisal Report 2024

CIEEM (2018), Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, September 2018. Chartered Institute of Ecology and Environmental Management, Winchester, online at https://www.cieem.net/data/files/ECIA%20Guidelines.pdf

Collins, J. (ed.) (2023), Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th Edition, BCT, London

Essah *et al*. (2020), Method for evaluating the snagging propensity of roofing membranes in buildings by roosting bats, online at tandfonline

Google Earth (2024), Located on site postcode, online

MAGIC (2024): Magic maps, NEPS licences and designated sites, online http://www.magic.gov.uk/Login.aspx?ReturnUrl=%2fMagicMap.aspx, accessed at report date.

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Office of the Deputy Prime Minister (2005), Circular 06/2005: Biodiversity and Geological Conservation. Para.99 http://www.communities.gov.uk/documents/planningandbuilding/pdf/147570.pdf

Records: Greenspace Information for Greater London (2024)