



DAY Architectural Ltd.

North Manchester General Hospital

Bat Emergence Survey Report

2486953

JULY 2024

RSK
biocensus
EXPERTS IN ECOLOGY

RSK GENERAL NOTES

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Signature

Date: 26 June 2024

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This work has been undertaken in accordance with the quality management system of RSK Biocensus.

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EXECUTIVE SUMMARY

This report presents the results of dusk emergence surveys for bats carried out at the North Manchester General Hospital, Manchester (Grid Ref: SD 84881 02381).

The surveys were carried out between 20 May and 25 June 2024 by RSK Biocensus on behalf of DAY Architectural Ltd. The objective of the surveys was to establish whether bats are using the buildings to roost, and if so to assess the type and importance of roosts in order to inform the proposed demolition of eight buildings (Buildings 32, 47, 50, 54, 59, 70, 71, 75) located on the site.

During the preliminary roost assessment undertaken on 12 December 2023, the buildings were assessed externally for their suitability to support roosting bats, see *RSK Biocensus - North Manchester General Hospital - Preliminary Roost Assessment* report for further information. The quality of bat roosting habitat within Buildings 47, 54, 70, 71 and 75 is moderate, within Buildings 32 and 50 is low while the quality of roosting habitat within Building 59 is negligible.

The majority of the site provides poor quality habitat for foraging and commuting bats. However, the line of trees south of Building 75 and the strip of woodland along the east boundary of the site provide suitable foraging and commuting habitats for bats.

No bats were found to be roosting within the buildings. Only common pipistrelle (*Pipistrellus pipistrellus*) were recorded during the surveys. Activity levels during the surveys was 'low' throughout, with few passes comprising of bats foraging along the line of trees south of Building 75.

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1.0 INTRODUCTION

1.1 Purpose of this report

- 1.1.1 This report presents the results of dusk emergence surveys carried out between 20 May and 25 June 2024 for Buildings 32, 47, 50, 54, 59, 70, 71 and 75 (Figure 2) at the North Manchester General Hospital, Manchester (OS Grid Ref: SD 84881 0238) (Figure 1).
- 1.1.2 The objective of the surveys was to establish whether bats are using the buildings to roost, and if so to assess the type and importance of roosts in order to inform the proposed development at the site.

1.2 Landscape context

- 1.2.1 North Manchester General Hospital is on the northern outskirts of the city of Manchester. The hospital itself comprises mainly concrete and hardstanding, with a limited number of scattered trees throughout. East of the hospital is a c. 60 m wide strip of woodland, with a thin strip of grassland located in its middle. On all other sides the hospital is bordered by semi-urban housing, with a small recreational park located to its south west. The surrounding landscape comprises of further residential development with small areas of woodland / lines of trees intermixed.

1.3 Development proposals

- 1.3.1 The survey was undertaken in relation to the proposed redevelopment of the hospital complex. It is understood that the eight buildings on the site will be demolished or re-developed as part of the current proposed design.

2.0 METHODS

2.1 General

- 2.1.1 The Bat Conservation Trust (BCT) provides guidance for bat survey work in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023). It contains guidance for preliminary roost assessment (PRAs).
- 2.1.2 The external inspection was completed on 12 December 2023 by Lewis Wright and assisted by Claire Hesketh and Iveta Nikandrovaite of RSK Biocensus. Lewis is a principal ecological consultant who holds a Class 2 Natural England bat licence (licence number: 2017-32926-CLS-CLS) and is experienced in this type of survey.
- 2.1.3 The emergence surveys were undertaken between 20 May and 25 June 2024 by RSK Biocensus Ecologists Lewis Wright, Iveta Nikandrovaite, Aidan Feasby, Danielle Langton, Claire Hesketh, Ben Faulkner, Robert Regan, Georgia Beasley, William Pelham, Joe Wain and Paige Forrester.
- 2.1.4 All surveyors are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and competent at carrying out this type of survey.

2.2 Building inspections

- 2.2.1 All eight buildings on the site (Figure 2) were searched externally for bat presence and features associated with bat activity, as detailed in BCT guidance (Collins, 2023). The assessment was completed on 12 December 2023, a detailed methodology is provided within *RSK Biocensus - North Manchester General Hospital - Preliminary Roost Assessment* report.
- 2.2.2 The quality of bat roosting habitat within Buildings 47, 54, 70, 71 and 75 is moderate, within Buildings 32 and 50 is low while the quality of roosting habitat within Building 59 is negligible.

2.3 Emergence surveys

- 2.3.1 Surveyors were positioned with a good view of likely roost-access points, ensuring that all identified features were also covered. Surveys were completed in line with the Bat Conservation Trust (BCT) guidance as highlighted in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023). Buildings assessed as moderate were subject to two dusk emergence surveys and buildings assessed as low were subject to one dusk emergence survey. Building 59 did not require further survey.
- 2.3.2 Dusk emergence surveys commenced 15 minutes before sunset and continued for 90 minutes after sunset.
- 2.3.3 Electronic equipment capable of detecting and recording the ultrasonic echolocation calls of bats in flight was used to record bat activity (Elekon Batlogger M and M2). Species were identified from the characteristics of their calls (including peak frequency, minimum and maximum frequency, call duration, and inter-pulse interval). In addition,

infra-red video cameras (Panasonic X1500E) with a series of large infrared lights were used alongside every surveyor (or in a minority of cases, as a surveyor) to allow visibility long after sunset.

- 2.3.4 The surveys were carried out in weather suitable for bats to be active i.e., no heavy rain, no strong wind and sunset air temperature 10°C or above. See *Table 2* for survey dates and associated weather conditions.
- 2.3.5 Bat calls were analysed using Kaleidoscope Lite (v.5.6.8.) whilst IR camera footage was reviewed using VLC media player (V3.0.). Footage and bat data was analysed by Iveta Nikandrovaite, Robert Regan and Danielle Langton who have been trained and are considered competent at reviewing IR camera footage.
- 2.3.6 The weather conditions for the surveys are shown in Table 1 below.

Table 1. Weather conditions for dusk emergence surveys.

Date	Building	Sunset Time	Start / End Time	Mean Temperature (°C)	Wind (Beaufort)	Cloud (Octas)	Precipitation
20 May 2024	47 and 54	21:11	20:56 / 22:41	14	2	8	None
21 May 2024	32, 50, 70, 71 and 75	21:13	20:58 / 22:43	17	1	2	None
12 June 2024	47 and 54	21:28	21:23 / 23:08	12	1	1	None
25 June 2024	70, 71 and 75	21:42	21:27 / 23:12	21	1	7	None

3.0 RESULTS

3.1 Dusk Emergence Surveys

- 3.1.1 Only common pipistrelle (*Pipistrellus pipistrellus*) were recorded during the surveys. Activity levels during all of the surveys was 'low', with few passes comprising of bats foraging along the line of trees south of Building 75. Bats were only observed around Buildings 70 and 75.
- 3.1.2 No bats were recorded emerging from the buildings during the surveys. This was confirmed by analysing IR camera footage.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 Evaluation of results

- 4.1.1 The majority of the site provides poor quality habitat for foraging and commuting bats. However, the line of trees south of Building 75 and the strip of woodland along the east boundary of the site provide suitable foraging and commuting habitats for bats. Precautionary measures to reduce impact to foraging bats are recommended during the construction and operation stages of the site.
- 4.1.2 The buildings contain a number of potential roosting features, including numerous lifted tiles, holes in fascia boards, missing tiles and rotten holes in soffit boxes. However, no field signs of bats, such as droppings, were found during the external building inspection.
- 4.1.3 Only common pipistrelle bats were recorded during the surveys. Activity was low, with a few bats observed foraging and commuting along the line of trees south of Building 75.
- 4.1.4 No bats were recorded roosting within any of the surveyed buildings.

4.2 Mitigation and compensation measures

- 4.2.1 As no bats were found to be using the buildings to roost, no further mitigation in relation to the demolition of the buildings is required, with regard to roosting bats. However, it is recommended the following measures are incorporated into the scheme and site design;
- Avoid night-working except for task lighting that can be adequately controlled to avoid light spill. Avoid direct lighting towards tree lines during construction and operation (the aim should be for zero lux).
 - External lighting as part of proposals to be designed in line with the Institute of Lighting Professionals (ILP, 2023) Guidance Note 08/23 'Bats and Artificial Lighting in the UK' and aim to keep a <1 lux increase in light levels of current and any newly established potential foraging and commuting resources both during the construction and operational phases.
 - Trees should be retained wherever possible. Final scheme layout to include additional tree planting between Buildings 75 and 70 to reduce the light spill from the new buildings.
 - To enhance the sites attractiveness for foraging and commuting bats it is recommended that soft landscaping is implemented incorporating night-scented plants which will attract night-flying insects which in turn offer foraging resources for local bats.

REFERENCES

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

Institute of Lighting Professionals (ILP) (2023) Bats and artificial lighting in the UK - Guidance Note 08/23, Bats and the Built Environment series.

RSK Biocensus (2023) North Manchester General Hospital - Preliminary Roost Assessment Report.

FIGURES

Figure 1 - Site location

Figure 2 - Building locations



Legend:

Site Boundary

00	03/07/2024	2486953	TG	SP	IN
Rev	Date	Project Code	Drn	Chk	App

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TITLE: Figure 1:
Site Location Plan

0

60

120

180

Metres

SCALE: 1:5,000 @ A3

N

W

E

S

REV 00



Legend:

- Site Boundary
- Bat Roost Potential
 - Moderate
 - Low
 - Negligible
 - Not surveyed

00	03/07/2024	2486953	TG	SP	IN
Rev	Date	Project Code	Drn	Chk	App

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TITLE: Figure 2:
**Potential Roost Features
Building Locations**

0 30 60 90
Metres
SCALE: 1:3,000 @ A3

REV 00

APPENDIX A: LEGISLATION

Bats

All species of British bat are protected by The Wildlife and Countryside Act 1981 (as amended) extended by the Countryside and Rights of Way Act 2000. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat while it occupies a bat roost.

Bats are also European Protected Species listed on Schedule 2 of The Conservation of Species and Habitats Regulations 2017 (as amended). This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats, including in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii) hibernate or migrate, where relevant; or (b) to affect significantly the local distribution or abundance of the species to which they belong;
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.