

PRELIMINARY ROOST ASSESSMENT

September 2023

Zochonis Building

University of Manchester
Oxford Road
M13 9Gb

U R B A N
G R E E N



QUALITY MANAGEMENT

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NON-TECHNICAL EXECUTIVE SUMMARY

The University of Manchester are proposing roofing renovations and partial demolition of the Zochonis building of the University of Manchester campus on Oxford Street (hereafter referred to as 'the site'). The proposals include internal redesign and the demolition of 2 no. stores located on the upper roof.

Urban Green have been appointed to complete a Preliminary Roost Assessment (PRA). The assessment found the Zochonis Building to have negligible potential for bat roosts. And as such no further surveys in relation to bats are required for the project to proceed.

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1 Introduction

1.1 Background to the Scheme

The University of Manchester are proposing roofing renovation and partial demolition of the Zochonis building of the University of Manchester campus on Oxford Street (hereafter referred to as 'the site'). The proposals include internal redesign and the demolition of 2 no. stores located on the upper roof.

Urban Green have been appointed to undertake a Preliminary Roost Assessment (PRA) of the site.

The author of the report is Barnaby Indio Gardner, Assistant Ecologist at Urban Green. Barney has experience providing ecological consulting services for a range of development schemes across the UK, including residential, commercial mineral extraction and road infrastructure schemes.

1.2 Site Context

The site is located at National Grid Reference SJ 84733 96575 and comprises a total area of approximately 0.1ha (see Figure 1).

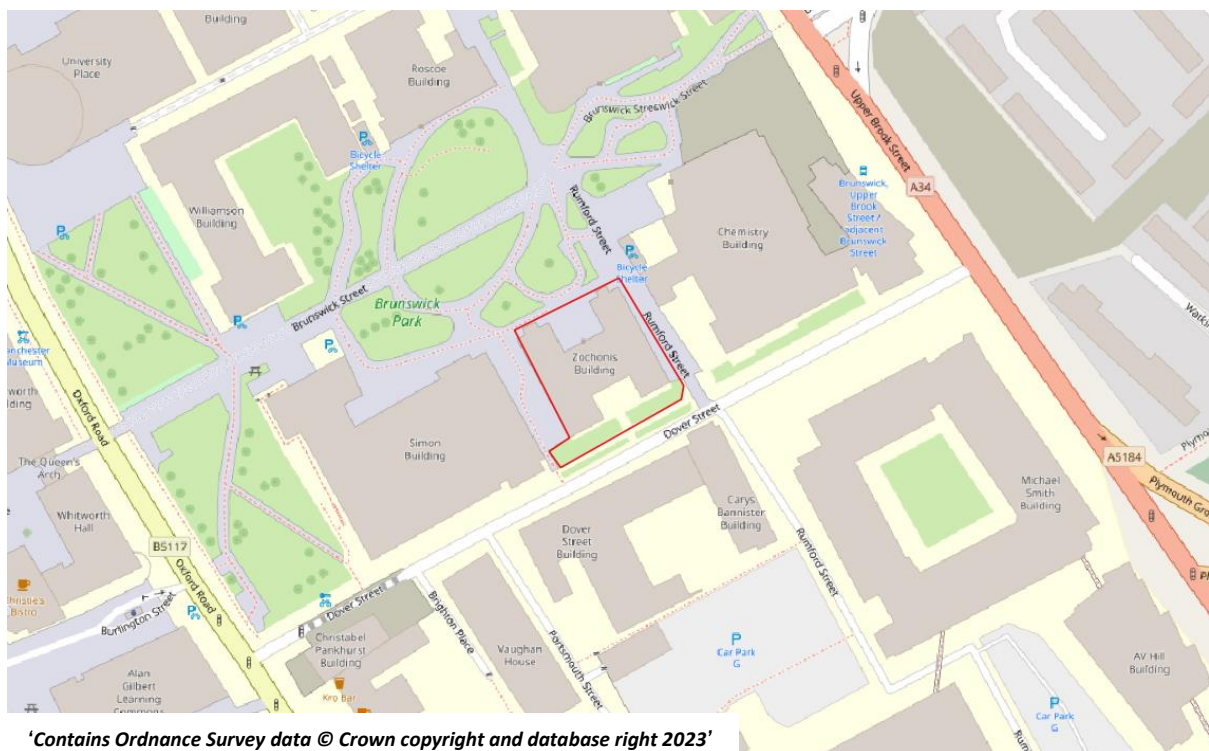


Figure 1 – Site Extent

The site is located within the University of Manchester campus, at the heart of the densely urban centre of Manchester.

The entire extent of the wider area is densely urban, dominantly university buildings including education, recreation, commercial and residential facilities. The nearest semi-natural habitats include Whitworth, Alexandra, and Platt Fields Parks, all within 1km south. Manchester's Albert Square city centre is 1.5km north.

1.3 Purpose of this Report

This report has been produced to document the methods, results, and conclusions of a Preliminary Roost Assessment. The objective of the assessment includes a field survey of the features of interest and assessment of its suitability for roosting bats, following guidance set out in Collins (2016). The assessment will determine whether further nocturnal bat surveys are required to confirm likely absence or presence of roosting bats.

Relevant UK legislation of the protection of all UK bats are detailed in Appendix 1.

2 Methods

2.1 Desk Study

Sources of information used in the desk study are presented in Table 1.

Table 1 – Desk Study Sources of Information

Source	Date Consulted	Information Sought
Online aerial imagery	28/06/2023	Review of satellite imagery.
MAGIC website (www.magic.gov.uk)	28/06/2023	Locations of granted EPSL within 5km of the site.

2.2 Preliminary Roost Assessment

A PRA was carried out on site on June 6th, 2023. It was completed by Barnaby Indio Gardner, author of this report.

The PRA methodology is based on information contained within the Bat Conservation Trust (BCT) guidelines, 3rd edition (Collins, 2016). The categorisation within this report is based on that set out in Table 2, which is used as a basis for determining the requirement for further surveys.

The building's externals were inspected by close focussing binoculars on all aspects.

Table 2 – Suitability of Buildings and Trees for Roosting Bats (adapted from Collins, 2016)

Category of Suitability	Typical Characteristics	Further Survey Requirements
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.	A minimum of three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September, with at least two surveys between May and August.
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 are unlikely to support a roost of high conservation status.	A minimum of two separate survey visits. One dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September with at least one survey between May and August.

Category of Suitability	Typical Characteristics	Further Survey Requirements
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 condition and/or suitable surrounding habitat to be used on a regular basis by larger numbers of bats.	Structures: a minimum of one emergence/re-entry survey between May and August. Trees: No further survey required but precautionary methods of felling recommended.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further work required.

2.3 Constraints to the Survey

Where a lack of records is found during the desk search for a defined geographical area, it does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

2.4 Lifespan for Report

In accordance with CIEEM's Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), the details of this report will remain valid for a period of **18 months** from the date of the survey (i.e. until December 2024). After this date, this assessment should be reviewed to determine whether any update surveys are required.

3 Results

3.1 Desk Study

Results of the desk study are presented in Table 3.

Table 3 – Desk Study Sources of Information

Source	Date Consulted	Information Found
Online aerial imagery	28/06/2023	The surrounding area, for several kilometres from site, is explicitly and densely built-up urban land, and has been for as far as detailed satellite records go back, to 2000. Green space is limited to small, sparse areas and urban trees, with larger parks found within 1km south of the site.
MAGIC website (www.magic.gov.uk)	28/06/2023	There were forty-four records of EPS Licenses found within 5km of site: The licenses largely concerned common pipistrelle (<i>Pipistrellus pipistrellus</i>), though records of soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) and brown long-eared (<i>Plecotus auratus</i>) and mostly allow collectively for the disturbance and destruction of resting places. Just four licenses allowed for the damage and destruction of breeding sites. Records were dominantly found within the inner-city Manchester ring-road. See Appendix 2 for a full list of granted EPSL relating to bats within 5km of the site.

3.2 Site Context

The entire extent of wider surrounding area is a densely urban environment, situated well within Manchester city centre. Typical habitats for roosting bats in such an area are limited, though include age-worn features in buildings, bat box installations, urban trees, and parks in the wider area. Situated on the active campus of the University of Manchester, the immediate site area is subject to extensive light and noise disturbance.

3.3 Field Survey

3.3.1 Zochonis Building

External

The building was built of well-sealed red brick and featured a multi-storey layout of several rises. The main north and south-facing aspects featured tall, ornamental glass panelling of ~20x20cm panels, as well as ornamental grass planting in lawns against both aspects. One glass panel, on the building's south aspect, was smashed, allowing potential access. A service ramp leading to an exterior alcove to the north-east of the building featured some void space above a service door, though inspection by torchlight found no suitable roosting features.

The plant room store wings located on the roof of the building were small single storey structures comprised of red brick and windows, with a flat roof stone and felt lining. The structures were well sealed and with no PRFs present anywhere externally.



Photograph 1 – The building's northern aspect



Photograph 2 – Close-up on the small, smashed panel



Photograph 3 – A small void found down the exterior service ramp



Photograph 4 – Southern aspect of western plant store room

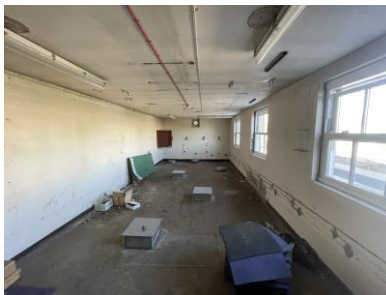


Photograph 5 – Northern aspect of eastern plant store room

Internal

The majority of the internal building comprised an active university building with associated lecture halls, seminar rooms, and offices. The building is regularly use and experiences a high level of disturbance consistently. The interior of the main building is well maintained offering no PRFs.

The plant rooms atop the roof of the building appeared to be less regularly accessed and less well maintained than the rest of the building. However, the general structure of the rooms were in good condition and well-sealed, offering no PRFs. There was no evidence of bat activity within any of the rooms either such as insect wings or droppings.



Photograph 6 – Western plant store room



Photograph 7 – Central plant store room

3.3.2 Summary

Table 4 summarises the results of the field survey.

Table 4 – BRA Summary

Building Reference	Assessment	Category of Suitability	Further Surveys?
Zochonis Building	Entirely well-sealed brick building in active use, with minimal to no access for any roosting features	Negligible	No

4 Recommendations

4.1 Further Survey

No further surveys are required, in compliance with Bat Conservation Trust survey guidance and the judgement of an experienced bat surveyor.

4.2 Lighting Mitigation

Proposed lighting should follow the protocols outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obtrusive Lighting” (2005) and the Bat Conservation Trust’s “Bats and Artificial Lighting in the UK” (2018). Lighting recommendations include:

- Keep site lighting to minimum levels.
- Luminaries should lack UV elements and preferably LED lighting with a warm white light should be used over cool white light (ideally <2700Kelvin).
- Lighting should feature peak wavelengths greater than 550nm.
- Light placement should be downward facing to prevent excess horizontal or vertical light spill.
- Avoid illuminating any suitable retained bat habitats, particularly local urban trees, that are potential commuting and foraging habitat for bats.
- Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use, where appropriate.

5 Conclusion

The University of Manchester are looking to renovate and partially demolish the Zochonis Building on campus. Accordingly, a survey for bat roost potential within the building was conducted by Urban Green, which found negligible potential for the building to host a roost. As such, no further surveys for bats are thought to be required for the proposed development to go ahead.

6 References

Bat Conservation Trust (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (Third Edition). The Bat Conservation Trust, London.

Bat Conservation Trust / Institution of Lighting Professionals (2018). Guidance Note o8/18: Bats and artificial lighting in the UK. Bats and the Built Environment series.

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

English Nature (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Hutson A. M. (1993). Action Plan for Conservation of Bats in the United Kingdom. The Bat Conservation Trust, London.

Institute of Lighting Engineers (2005). Guidance Notes for the Reduction of Obtrusive Light.

Joint Nature Conservation Committee (2004). Bat Workers Manual. JNCC, Peterborough.

Appendix 1 – Relevant Legislation

Bats

All species of bat are listed on Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and Schedule 2 of *The Conservation of Habitats and Species Regulations 2017*, making them *European Protected Species*. They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations. These make it an offence to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb any such animal, including in particular any disturbance which is likely to:
 - impair its ability to survive, breed, or rear or nurture their young;
 - impair its ability to hibernate or migrate.
 - affect significantly the local distribution or abundance of that species; or
- damage or destroy a breeding site or resting place of any such animal; or
- intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*)
- Lesser horseshoe bat (*Rhinolophus hipposideros*)
- Bechstein's bat (*Myotis bechsteinii*)
- Barbastelle (*Barbastella barbastellus*)
- Greater mouse-eared bat (*Myotis myotis*)

Appendix 2 – EPSL Granted for Bats within 5km of site

Case reference of granted application	Species on the licence	Licence Start Date	Licence End Date	Does licence impact on a breeding site	Does licence allow damage of breeding site	Does licence allow damage of a resting place	Does licence allow destruction of breeding site	Does licence allow destruction of a resting place
EPSM2012-5061	BLE	10/12/2012	31/08/2015	Y	-	-	Y	Y
2014-490-EPS-MIT	C-PIP S-PIP	23/04/2014	30/06/2017	N	N	N	N	Y
2014-6380-EPS-MIT	C-PIP	18/02/2015	16/02/2020	N	N	N	N	Y
2014-6380-EPS-MIT-1	C-PIP	01/12/2015	16/02/2020	N	N	N	N	Y
2015-15766-EPS-MIT	C-PIP	01/11/2015	31/07/2016	N	N	N	N	Y
2015-16009-EPS-MIT	C-PIP	28/01/2016	27/01/2021	N	N	N	N	Y
2015-15443-EPS-MIT-1	BLE	20/10/2015	19/10/2020	N	N	N	N	Y
2015-18385-EPS-BDX	S-PIP	01/04/2016	30/04/2016	Y	Y	Y	Y	Y
2015-17752-EPS-MIT	C-PIP	04/01/2016	30/09/2016	N	N	N	N	Y
2015-7649-EPS-MIT	C-PIP	27/03/2015	31/12/2015	N	N	N	N	Y
EPSM2013-6051	C-PIP	26/07/2013	01/12/2014	N	-	-	N	Y
EPSM2012-4767	C-PIP	28/08/2012	30/09/2013	N	-	-	N	Y
EPSM2013-5644	C-PIP	04/07/2013	01/03/2015	N	-	-	N	Y
EPSM2010-1888	C-PIP;S-PIP	25/10/2010	29/02/2012	N	-	-	N	Y
2016-22910-EPS-MIT	C-PIP	25/04/2016	24/04/2021	N	N	Y	N	Y
2016-22910-EPS-MIT-1	C-PIP	08/09/2016	24/04/2021	N	N	Y	N	Y
2016-24504-EPS-MIT	C-PIP	15/07/2016	01/01/2018	N	N	N	N	Y
2016-21779-EPS-MIT	C-PIP	01/04/2016	01/04/2021	N	N	N	N	Y
2014-6380-EPS-MIT-2	C-PIP	15/08/2017	30/06/2023	N	N	N	N	Y
2015-15766-EPS-MIT-1	C-PIP	20/07/2016	20/07/2016	N	N	N	N	Y
2017-28375-EPS-MIT	C-PIP NATT	13/04/2017	30/06/2022	N	N	N	N	Y
2017-31569-EPS-MIT	C-PIP	26/10/2017	31/10/2019	N	N	N	N	Y
2014-3531-EPS-MIT-2	C-PIP	01/12/2016	01/12/2016	N	N	N	N	Y
2016-24504-EPS-MIT-1	C-PIP	21/11/2016	21/11/2016	N	N	N	N	Y
2018-33674-EPS-MIT	C-PIP	12/03/2018	30/04/2040	N	N	Y	N	Y
2018-35287-EPS-MIT	C-PIP S-PIP	05/06/2018	30/09/2019	N	N	Y	N	Y
2018-38076-EPS-MIT	C-PIP	01/12/2018	30/09/2019	N	N	N	N	Y
2019-38955-EPS-MIT	C-PIP	14/02/2019	28/02/2021	N	N	Y	N	Y
2019-43484-EPS-MIT	C-PIP	14/11/2019	31/08/2020	N	N	N	N	Y
2020-45213-EPS-MIT	C-PIP	05/03/2020	01/01/2025	N	N	N	N	Y

2020-50604- EPS-MIT	C-PIP	22/01/2 021	16/01/2 022	N	N	N	N	Y
2019-41924- EPS-MIT-1	C-PIP	13/01/2 020	31/08/2 031	Y	N	N	Y	Y
2014-3531-EPS- MIT	C-PIP	01/10/2 014	30/09/ 2019	N	N	N	N	Y
2014-3531-EPS- MIT-1	C-PIP	06/01/2 015	30/09/ 2020	N	N	N	N	Y
2014-3569- EPS-MIT	C-PIP	07/10/2 014	30/11/2 014	N	N	N	N	Y
2014-3598- EPS-MIT	C-PIP	15/10/2 014	01/12/2 014	N	N	N	N	Y
2014-4400- EPS-MIT	C-PIP	23/12/2 014	30/04/ 2015	N	N	Y	N	N
2014-4400- EPS-MIT-1	C-PIP	25/03/2 015	30/04/ 2015	N	N	Y	N	N
2015-13055- EPS-MIT	C-PIP	01/08/2 015	01/09/ 2020	N	N	N	N	Y
2015-13055- EPS-MIT-1	C-PIP	07/10/2 015	01/09/ 2020	N	N	N	N	Y
EPSM2013- 5575	C-PIP	23/05/2 013	30/09/ 2016	N	-	-	N	N
2015-15443- EPS-MIT	BLE	08/10/2 015	01/07/ 2016	N	N	N	N	Y
EPSF2011- 2990	C-PIP;S- PIP	18/04/2 011	31/07/2 013	Y	-	-	Y	Y
2014-4219- EPS-MIT	C-PIP	27/10/2 014	31/10/2 020	N	N	N	N	Y