

Bat Survey Report



MIX Manchester
3rd April 2025

10031_R01_LC



DUNHAM
ECOLOGY

Project No:	Report No.	Date	Author	Revision
10031	R01	3 rd April 2025	Lisa Campbell BSc (Hons) MA ACIEEM	-

Disclosure:

This report, all plans, illustrations, and other associated material remains the property of Dunham Ecology Ltd until paid for in full. Copyright and intellectual property rights remain with Dunham Ecology Ltd.

The contents of this report are valid at the time of writing. Dunham Ecology shall not be liable for any use of this report other than for the purposes for which it was produced. Owing to the dynamic nature of ecological resources, if more than twelve months have elapsed since the date of this report, further advice must be taken before you rely on the contents of this report. Notwithstanding any provision of the Dunham Ecology Ltd Terms & Conditions, Dunham Ecology Ltd shall not be liable for any losses (howsoever incurred) arising as a result of reliance by the client or any third party on this report more than 12 months after the date of this report.



Contents:

Summary

Section 1: Legislation and Conservation Status	4
Section 2: Survey Methodology	6
Section 3: Survey Results	8
Section 4: Conclusions and Recommended Further Work	12



Summary

- S.1. This report has been prepared by Dunham Ecology Ltd on behalf of Buro Happold. This report sets out the findings of a Ground Level Tree Assessment (GLTA) on land north of Manchester Airport, formerly known as Airport City North, now MIX Manchester, hereafter referred to as 'the site'.
- S.2. This report details relevant legislation, the methodologies followed and the survey results, together with recommendations for further survey.
- S.3. Six trees were assessed to have Preliminary Roost Features (PRFs). All trees are anticipated to be PRF-I, however, reduced visibility due to the cluttered nature of the trees meant four trees were categorised as 'further assessment required' (FAR).
- S.4. Should the six trees be impacted by development proposals, further aerial inspections should be undertaken. If following one aerial inspection, the trees can confidently be assessed as PRF-I, then no further surveys will be required and development proposals can proceed under a Precautionary Working Method Statement (PWMS), with incorporation of suitable roost compensation measures into the proposals.



Section 1: Legislation and Conservation Status

Introduction

- 1.1. This report has been prepared by Dunham Ecology Ltd on behalf of Buro Happold. This report sets out the findings of a Ground Level Tree Assessment (GLTA) on land north of Manchester Airport, formerly known as Airport City North, now MIX Manchester (OS Grid Reference SJ 81594 85892), hereafter referred to as 'the site'. See **Figure 1** below for the study area, delineated by green hatching.



Figure 1 Study Area Indicated by Green Hatching.

Legislation and Conservation Status

- 1.2. All UK bat species are listed on Appendix II of the Bern Convention and on Annexes II and IV of the EU Natural Habitats Directive. In England and Wales bats are protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence, with certain exceptions, to:

- Intentionally or deliberately capture, kill, or injure a bat;
- Intentionally or recklessly damage, destroy, and disturb bats in a place used for shelter or protection, or obstruct access to such areas;
- Damage or destroy a bat breeding site or resting place;
- Possess a bat, or any part of it, unless acquired lawfully; and
- Sell, barter, exchange, transport, or offer for sale a bat or parts of them.



- 1.3. Actions that are prohibited can be made lawful by a licence issued by the appropriate Statutory Nature Conservation Organisation.
- 1.4. Several species of bats barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, brown long-eared *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *Rhinolophus hipposideros*, noctule *Nyctalus noctula* and soprano pipistrelle *Pipistrellus pygmaeus* are listed as Priority Species under the 'UK Post-2010 Biodiversity Framework which provides a statutory list of priority species in England, Scotland, Wales and Northern Ireland, as required under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (England), Section 7 of the Environment (Wales) Act 2016, Section 2(4) of the Nature Conservation (Scotland) Act 2004, and Section 3(1) of the Wildlife and Natural Environment Act (Northern Ireland) 2011. Decision-makers such as Local Planning Authorities must have regard for Priority species in all their activities, including when making decisions on planning applications.
- 1.5. Bats are also included in the Greater Manchester Local Biodiversity Action Plans (LBAP).



Section 2: Survey Methodology

Data Search

- 2.1. A desk-based study and local record data request to Greater Manchester Ecology Unit (GMEU) was conducted whereby records of protected bat species were purchased and interrogated for the site and the surrounding landscape. The aim of the data search is to collate existing ecological records for the site and adjacent areas. Obtaining existing records is an important part of the assessment process as it provides information on issues that may not be apparent during a single survey, which by its nature provides only a 'snapshot' of the ecology of a given site.

GLTA

- 2.2. A GLTA was undertaken on 13th March 2025 by Helen Hamilton BSc (Hons), MSc, Natural England Level 2 bat licence holder 2015-15840-CLS-CLS-L2 and Full member of CIEEM. All trees within and adjacent to the site were assessed to determine the level of potential of these features to support roosting bats, including hibernation roosts. During this survey, Potential Roost Features (PRFs) that may be used by bats, as identified within published guidance^{1 2}, were looked for. These PRFs include:
- Woodpecker holes;
 - Rot holes;
 - Hazard beams;
 - Other vertical or horizontal cracks and splits (such as frost-cracks) in stems or branches;
 - Partially detached platey bark;
 - Knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar;
 - Man-made holes (e.g. cavities that have developed from flush cuts) or cavities created by branches tearing out from the parent stems;
 - Cankers (caused by localised bark death) in which cavities have developed;
 - Other hollows or cavities, including butt-rots;
 - Double-leaders forming compression forks with included bark and potential cavities;
 - Gaps between overlapping stems or branches;
 - Partially detached ivy with stem diameters in excess of 50mm; and
 - Bird, bat or dormouse boxes.
- 2.3. Signs of a bat roost, as identified by the Bat Conservation Trust (BCT), besides the actual presence of bats themselves, were also looked for. These signs include:
- Bat droppings in, around or below a PRF;
 - Odour emanating from a PRF;

¹ Collins, J. (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th edition. Bat Conservation Trust, London.

² Bat Tree Habitat Key (2018) *Bat Roosts in Trees: a guide for identification and assessment for tree-care and ecology professionals*. Pelagic Publishing, Exeter.



- Audible squeaking at dusk or in warm weather; and
- Staining below the PRF.

2.4. The potential of the trees to support roosting bats was assessed using the criteria shown in **Tables 2.1** and **2.2** below, reproduced from BCT guidance¹.

Table 2.1 Guidelines for Assessing Suitability of Trees on Proposed Development Sites for Bats, to be Applied Using Professional Judgement

Suitability	Description
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

Table 2.2 Guidelines for Categorising the Potential Suitability of PRFs on a Proposed Development Site for Bats

Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Quality Control

2.5. All ecologists or subcontractors at Dunham Ecology Ltd are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) or are working towards membership and act under the direction of members, and abide by the Institute's Code of Professional Conduct³.

Limitations and Assumptions

2.6. Due to the cluttered nature of the trees, visibility from the ground was limited, reducing certainty in the conclusions.

³ CIEEM (2022) Code of Professional Conduct, CIEEM, Winchester



Section 3: Survey Results

Desk Study

- 3.1. GMEU returned a number of records of bat signs, for multiple species, immediately to the north of the site. A search of Natural England's MAGIC returned records of protected species licence applications in 2015, 850m to the south of the site, for the destruction of a resting place for multiple bat species.

GLTA

- 3.2. All trees in the green hatched area on **Figure 1** were assessed for bat roost potential during the survey. **Table 3.1** below summarises the results of these surveys, highlighting which trees require further survey effort, and locations of trees with roost potential are presented in **Figure 2** below. Photographs of all trees are provided in **Photographs 1-6** below.



Table 3.1 Summary of Trees with PRFs, their Category in Accordance with BCT and Recommendations for Further Survey

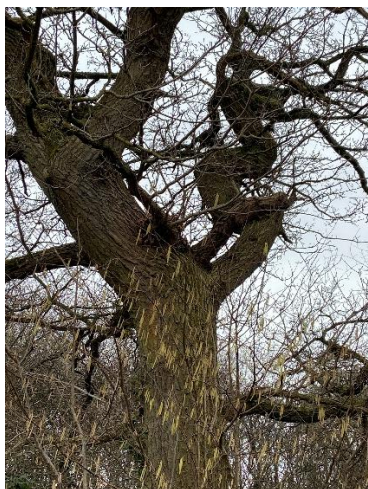
Surveyor	Helen Hamilton (Bat Licence 2015 - 15840 -CLS-CLS)			Date	13/03/2025	
Tree Ref	HHE Tree1	HHE Tree2	HHE Tree3 (T1)	HHE Tree4 (T3)	HHE Tree5 (T2)	HHE Tree6
NGR	SJ 81719 85564	SJ 81655 86029	SJ81624 85881	SJ 81716 85817	SJ 81722 85827	SJ 81722 85843
Species	<i>Quercus robur</i>	<i>Salix fragilis</i>	<i>Quercus robur</i>	<i>Quercus robur</i>	<i>Quercus robur</i>	<i>Quercus robur</i>
Alive/dead	A	A	A	A	A	DEAD
Description	Semi-mature, healthy woodland edge, part of old tree line by pond	Leaning tree with union with birch causing upward tending cavity	ivy-clad semi-mature	Large tree, ivy on main stem, mature, part of old tree line by pond	Semi-mature, part of old tree line by pond	Dead small semi-mature, part of old tree line by pond
DBH	90	35	70	90	55	45
Tree height	12m	12m	12m	12m	12m	10m
Tree photo	Yes	Yes	Yes	Yes	Yes	Yes
Aerial inspection	Yes	Accessible from ground	Yes	Yes	Yes	Yes
Aeiral Method	Rope	Ground	Ladder	Rope	Rope	Ladder (DEAD)
PRF						
PRF Ref	1	1	1	1&2	1&2	1 to 5
PRF Photo	Yes	Yes	Yes	Yes	Yes	Yes
On stem/limb	Limb	Stem	Stem/Main limbs	Limbs	Limbs	Stem/limbs
Type	Upfacing rot hole	Rot around union	Gaps around big ivy stems	Rot on stubs	Rotted stubs	Flaking bark, mainly
Facing Direction	up	north	all	up	east	various
Height	5m	1.5m	all up main stem	6&7m	6&7m	3-4m
Diameter at PRF	80cm	35cm	various			
POTENTIAL						
PRF Individual / PRF Multiple	FAR	PRF-I	PRF-I	FAR	FAR	FAR/PRF-I
Comment	Possibly others on tree not visible from ground	Check from ground with endoscope. Cavity goes upward	Quite cluttered, check larger lower cavities only			Most look blind, but worth a check with ladder whilst doing other
Recommendation	Needs further assessment	Check cavity before tree is removed	Check cavities before tree is removed	Needs further assessment	Needs further assessment	Needs further assessment





Figure 2 Location of Trees with PRFs





Photograph 1: HHE Tree1



Photograph 2: HHE Tree2



Photograph3: HHE Tree3



Photograph 4: HHE Tree4



Photograph 5: HHE Tree5



Photograph 6: HHE Tree6



Section 4: Conclusions and Recommended Further Work

Key Issues

- 4.1. A total of six trees were assessed to have PRFs. All trees are anticipated to be PRF-I, however, reduced visibility due to the cluttered nature of the trees meant four trees were categorised as FAR.

Potential Further Work

- 4.2. Should the six trees identified with PRFs be subject to impacts as a result of development proposals, further assessment should be undertaken. All trees are suitable for aerial inspection or further inspection using an endoscope from a ladder, as detailed in **Table 3.1**. Table 6.4 of the BCT guidance⁴ recommends 3 aerial inspections between May and September with at least two in the period May to August. However, if following the initial aerial inspection, the trees can confidently be categorised as PRF-I, further surveys will not be required and development can proceed under a Precautionary Working Method Statement (PWMS), with suitable compensation included in development proposals.

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

