
BAT EMERGENCE & TRANSECT SURVEYS

BRUNSWICK MILL, BRADFORD ROAD, MANCHESTER



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1.0 INTRODUCTION

Site Information

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2021 in Maryland Securities Group to undertake bat emergence surveys and a bat transect survey at Brunswick Mill, Bradford Road, Manchester. The site is located on the southern side of Bradford Road, Manchester (O.S. grid reference: SJ 85854 98728). The proposed development site currently comprises a large multi-storey mill building, set in areas of hardstanding, tall, ruderal herb, ephemeral/short perennial, continuous scrub and trees. The site is directly adjacent to Ashton Canal to the south with residential and commercial development, and other metropolitan infrastructure in all directions.
- 1.2 An ecology survey was undertaken earlier in 2021 (see *Extended Phase 1 Habitat Survey and Daytime Bat Survey at Brunswick Place, Bradford Road, Manchester - 2021 - REV.A*). No evidence of bat activity was found within the mill building but not all floors could be accessed. The external brickwork supports gaps and multiple openings exist. No roof voids are present and parts of the roof are missing. Whilst the building is open, well-lit and draughty, it does lie next to the Ashton Canal, which offers bat foraging

Description of Development

- 1.3 The site is the subject of a planning application with Manchester City Council for a new residential and commercial development, with associated access, landscaping and parking (planning reference: 130394/FO/2021).

Legal Context

- 1.4 All bat species are protected under the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit), which make it an offence to:
- Deliberately kill, injure or capture a bat;
 - Deliberately disturb bats;
 - Damage or destroy a breeding site or resting place of a bat.
- 1.6 The Wildlife & Countryside Act 1981 (as amended) contains further provisions making it an offence to intentionally or recklessly:
- Obstruct access to any structure or place which any bat uses for shelter or protection; or
 - Disturb any bat while occupying a structure or place which it uses for that purpose.
- 1.7 Proposed development works that are likely to disturb or destroy bats or their roosts will need to obtain a licence from the relevant Statutory Nature Conservation Organisation (e.g., Natural England) prior to work commencing.

2.0 METHODOLOGY

Bat Emergence Surveys

- 2.1 Two dusk bat emergence surveys were undertaken in accordance with the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (2016). For each survey, four surveyors monitored the building, as well as infra-red cameras, to ensure complete coverage for any emerging bats. The emergence surveys began 15 minutes before dusk and continued for 90 minutes after dusk. The surveyors used Echometer Touch Pro and Batscanner bat detectors to record the echolocations of emerging bats.

Bat Transect Survey

- 2.2 One bat transect survey was carried out on Ashton Canal to ascertain the value of the canal as bat commuting and foraging habitat and to inform construction and post-construction mitigation plans, including the provision of a sensitive lighting scheme
- 2.3 On the transect survey, one surveyor walked a linear route along the canal and back, stopping every 50 metres (approx.) recording bat passes (waypoints). The transect had three waypoints, at which the surveyor paused and recorded bat passes.
- 2.4 The transect began just after sunset and continued for two hours after sunset. The surveyor used an Echometer Touch bat detector to record the echolocation calls of foraging bats.

Personnel and Seasonal Timing

- 2.5 Ben Crossthwaite, Kate Reed (Senior Ecologists), Joe Cooper, Hollie Ainley, Megan Fowler and Steve Smith (Ecologists) carried out the first emergence and transect survey on the 27th May 2021 and the second emergence survey on 2nd August 2021. All surveyors are fully trained and experienced in nocturnal bat surveys. Ben holds a Natural England Level 2 Class Licence for bats (Ref: 2020-48541-CLS-CLS).

Survey Constraints

- 2.6 The property was fully accessible and the survey was carried out in appropriate weather and temperature. There were no constraints to the surveys.

3.0 RESULTS

DUSK EMERGENCE SURVEYS

Surveyor Positions

- 3.1 Figure 2 shows the locations of the bat surveyors and infra-red cameras during the dusk emergence surveys.

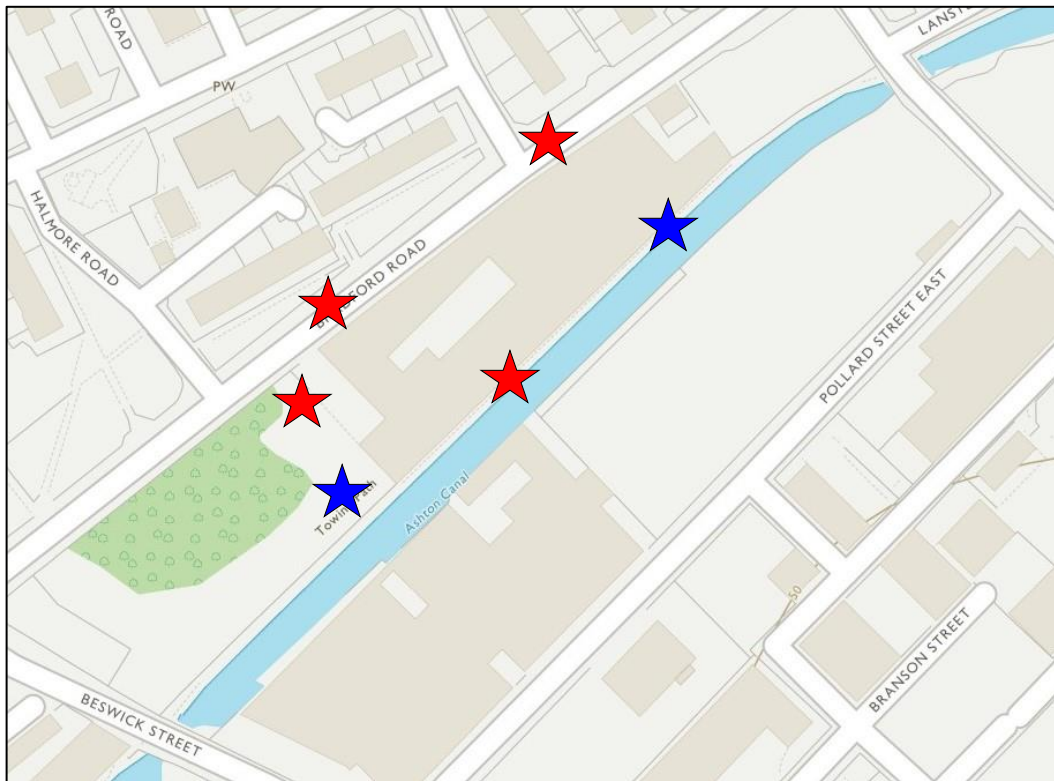


Figure 2 showing the locations of the surveyors during the emergence surveys (red stars) and cameras (blue stars)

Survey Results

- 3.2 A maximum of one Common Pipistrelle *Pipistrellus pipistrellus* bat was observed emerging from an open window on the third floor of the mill at the northern end during the second dusk survey (see Photograph 1). No bats were recorded emerging from the property during the first dusk survey. Low levels of bat activity were recorded during the surveys, with Common Pipistrelle and Soprano Pipistrelle *Pipistrellus pygmaeus* recorded foraging intermittently over the site during the surveys.



Photograph 1 showing the location of the Common Pipistrelle emergent point (red arrow)

Bat Activity Table

3.3 Bat activity from the emergence surveys is recorded in Tables 1 and 2 below.

Table 1. Results from the first dusk emergence survey			
Date	Average Temp (°C)	Sunset/Sunrise	Weather
27/05/2021	16°C	21:20	Dry, calm, scattered cloud
Results			
Single Common Pipistrelle bats observed and recorded foraging intermittently (approximately every 10 minutes) over the building and to the south-east between 21:44 to 22:28.			
Two x Soprano Pipistrelle bats observed foraging over the site at 21:37 and 21:20.			

Table 2. Results from the second dusk emergence survey			
Date	Average Temp (°C)	Sunset/Sunrise	Weather
02/08/2021	14°C	21:01	Mostly cloudy, dry, calm
Results			
One Common Pipistrelle bat observed and recorded emerging from the mill at 21:25			
Single Common Pipistrelle bats observed and recorded foraging intermittently (approximately every 20 minutes) over the building and to the south between 21:15 to 22:17.			

BAT TRANSECT SURVEY

3.4 Figure 3 shows the route and waypoints used during the dusk transect survey.

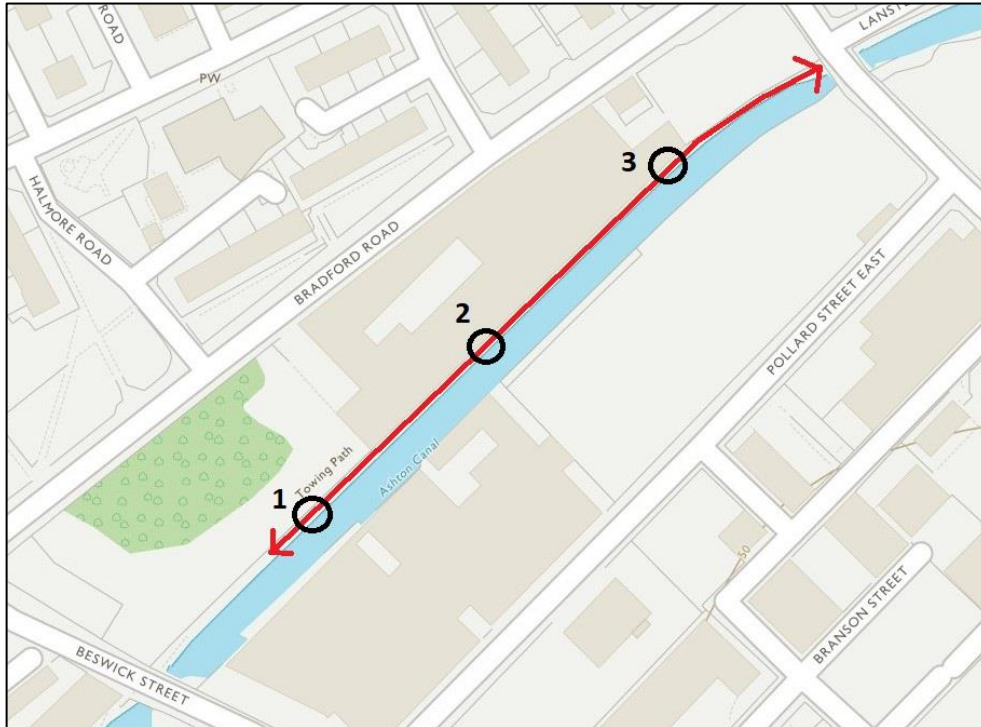


Figure 3 showing the transect route in red and three waypoints

3.5 Low levels of bat activity were recorded during the transect survey, with only Common Pipistrelle observed and recorded using Ashton Canal. The bat foraging and commuting activity was fairly consistent throughout the survey, with Waypoint 1 having the most passes. This could be due to the greater amount of vegetation at Waypoint 2 compared to Waypoints 2 and 3. The canal is well-lit at night (see Photograph 2), reducing its suitability for foraging and commuting bats.



Photograph 2 showing the canal at dusk

3.6 Full results of the transect surveys are shown in Table 3 below.

Table 3. Results from Transect Visit					
Survey Brunswick Mill		Date	Average Temp (°C)	Sunset	Weather
		27/05/2021	16°C	21:20	Dry, calm, scattered cloud
Waypoint	Time	Results			
1	21:45– 21:49	Common Pipistrelle bat(s) passed x 6 foraging			
2	21:51- 21:58	Common Pipistrelle bat(s) passed x 6 foraging and 1 Common Pipistrelle foraging along building line at 21:55			
3	22:00- 22:09	Common Pipistrelle bat(s) passed x 4 foraging			
2	22:11- 22:15	Common Pipistrelle bat(s) passed x 5 foraging			
1	22:18- 22:22	Common Pipistrelle bat(s) passed x 9 foraging			
2	22:24- 22:27	Common Pipistrelle bat(s) passed x 7 foraging			
3	22:29- 22:45	Common Pipistrelle bat(s) passed x 4 foraging			



4.0 SUMMARY AND RECOMMENDATIONS

Summary of Findings

- 4.1 A single Common Pipistrelle bat was observed emerging from a window opening at Brunswick Mill during the second dusk emergence survey. No bats were seen emerging from the building during the first dusk survey. Low levels of bat activity were recorded during the emergence surveys.
- 4.2 Whilst it is possible that the emerging bat entered the building earlier, at one of the multiple openings, to use the building as foraging habitat, and was not observed entering, it is safer to assume that a bat roost exists at Brunswick Mill. The given the results across both surveys, the mill building is considered to support a **transitory/day roost** for a small number of Common Pipistrelle bats.
- 4.3 There were no impediments to any of the emergence survey visits. The surveys were undertaken during optimum weather conditions. The temperatures were optimum prior to and during the surveys. Buildings of this type are inherently difficult to watch thoroughly but it is considered that the roost type can be robustly characterised from the daytime bat survey findings and the two dusk emergence survey findings. No further survey work is considered to be necessary.
- 4.4 The transect survey recorded a low number of Common Pipistrelle bats foraging and commuting along the surveyed length of the Ashton Canal. The canal is well-lit at night. The canal can be described as offering only local importance for foraging bats.

Recommendations

- 4.5 Prior to work commencing on the mill, a Bat Mitigation Licence from Natural England will need to be obtained. The site qualifies for a Low Impact Class Licence for bats. The licence can only be obtained following the granting of full planning permission.
- 4.6 The licence will include a Method Statement, including timings of the work, ecological supervision of the work to the roost site and compensatory habitat.
- 4.7 For the compensatory habitat, two cavity bat boxes, such as two Beaumaris Woodstone Bat Boxes or two Ibstock Enclosed Bat Box C's, will be incorporated into the external brickwork of the mill during renovation. These must face south or west and be at least 5 metres in height. One Schwegler 2F Bat Box will be positioned on site prior to work commencing to act as a repository for any bats found during works.
- 4.8 The canal is currently well-lit at night and only the mill building lies directly adjacent to the canal within the application boundary. The mill building is to be retained. Therefore there is expected to be loss of bat foraging and commuting habitat from the development. Where possible, lighting should be reduced along the canal, where safe, to encourage wildlife.

6.0 REFERENCES

Collins, J. (ed.). (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition*. Bat Conservation Trust. London.

Mitchell-Jones, A.J, & McLeish, A.P. Ed., (2004) *3rd Edition Bat Workers' Manual*. Joint Nature Conservation Committee, Peterborough.

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National Planning Policy Framework (February 2019). Ministry of Housing, Communities & Local Government