

DAYTIME BAT SURVEY OF STATION BUILDING, MUSEUM OF SCIENCE AND INDUSTRY, MANCHESTER

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1.0 INTRODUCTION

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2020 by the Science Museum Group to undertake a daytime bat survey of Station Building at the Museum of Science and Industry, Manchester. The building will be the subject of a roof replacement and maintenance works.
- 1.2 The Station Building is located on the site of the Museum of Science and Industry off Liverpool Road in Manchester (O.S. grid reference: SJ 82966 97863– see Figure 1). The Station Building is a brick and stone-built building with a pitched, tiled roof. The site is surrounded by similar commercial and industrial buildings set on hardstanding. The River Irwell is located a short distance to the west of the site offering potential bat foraging and commuting opportunities.
- 1.3 The proposed works to the property are potentially intrusive and therefore consideration should be given to roosting bats and other protected and notable species, which could potentially utilise the building.
- 1.4 All bat species are protected under the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit) and the Wildlife and Countryside Act 1981 (as amended).



Figure 1 showing the building location

2.0 METHODOLOGY

- 2.1 A daytime bat survey at the Station Building was undertaken to search for, and to assess the potential for, a bat roost within the site.
- 2.2 An external survey was carried out, which included, for example, looking for gaps between any soffit boards and walls, gaps between window frames and the walls, and looking for bat droppings on the walls and window ledges.
- 2.3 The building was also searched internally for evidence of a bat roost, which included looking for the following signs:
 - live or dead bats
 - bat droppings
 - bat entry/exit points
 - bat urine staining
 - grease marks on any timbers
 - feeding remains such as insect wings
 - areas clear of cobwebs.
- 2.4 A pair of close-focussing binoculars, a high-powered torch and an endoscope were used to search for evidence of bats externally and internally.

Personnel and Timing

- 2.5 Joel Hacking (Senior Ecologist) carried out the daytime bat survey on the 25th November 2020. Joel is an experienced Ecologist and holds a Natural England Level 2 Class Survey Licence for bats (Licence Reference: 2016-24701-CLS-CLS). The weather on the day of the survey was overcast and dry.

Survey Constraints

- 2.6 Daytime bat surveys can be conducted at any time of the year. The whole property could be surveyed internally and externally, therefore there were no constraints to the survey.

3.0 RESULTS

External Survey

- 3.1 The building is a large, linear, two-storey building with an upper level 'platform' section adjacent to the railway track. The building is constructed from brick and the upper section has a pitched, tiled roof.
- 3.2 The external brickwork and stone frontage are in good material condition (see Photographs 1 and 2). The window and door frames are flush to the surrounding masonry. The stone window lintels are complete and intact, offering no gaps or cracks for bats to exploit. The upper brick courses and coping stones are intact, offering no suitable gaps for bats to exploit.



Photograph 1 showing the exterior of the station building



Photograph 2 showing the exterior of the station building

- 3.3 The roof of the Station Building is pitched and has slate roof tiles (see Photographs 3 and 4). The tiles and ridge tiles are all intact and in place, leaving no potential access points for bats. Lead flashing is present in some areas. This is well-sealed to the masonry and tiles. The elevations facing east and onto Liverpool Road are sealed with brick courses and a small parapet wall (see Photograph 4).



Photograph 3 showing the roof of the station building



Photograph 4 showing the roof of the station building

Internal Survey

- 3.4 The building has two storeys, with an additional floor on the former station platform adjacent to the railway track (see Photographs 5 and 6). This upper section is open, with a small section sealed off and used as an office space. The wooden roof joists are complete and without gaps

or cracks for bats to exploit (see Photograph 5). The roof lining is intact, with no major tears in the lining. This space is well-lit and sections of the roofing are covering with mesh netting to prevent bird access.



Photograph 5 showing the canopy of the former rail station



Photograph 6 showing the canopy of the former rail station

- 3.5 The western section of the former station platform area has several internal spaces that are used as a museum exhibit room and for storage. None of these rooms offer suitable bat roosting habitat. A large roof void exists covering two of these rooms. The roof has wooden roof joists, which are complete and intact. The roof is lined throughout, and the lining is complete and intact, with no major tears or rips in the lining (see Photograph 7).



Photograph 7 showing the roof void of the Station Building

- 3.6 The roof void is fully insulated throughout (see Photograph 8). The internal brickwork is complete and mortared, offering no suitable cavities for crevice-dwelling bat species (see Photograph 9). The roof void is well-sealed, with no daylight visible at the roof edges.



Photograph 8 showing the roof void of the Station Building



Photograph 9 showing the internal brickwork in the roof void

- 3.7 No evidence of bat activity, such as bat droppings, could be found anywhere in the interior or exterior of the Station Building. The property is well-sealed and in good material condition.

Surrounding Land

- 3.8 The Station Building is enclosed entirely by hardstanding. No material changes to the structure or footprint of the building are proposed. No mature trees exist on the site.

4.0 SUMMARY AND RECOMMENDATIONS

- 4.1 No evidence of bat activity was found at the Station Building at the Museum of Science and Industry, Manchester. The building is in good condition and is well-sealed with no potential access points for bats. The roof voids are sealed spaces. No evidence of bat activity was found internally or externally. Given the results of the survey, the Station Building is considered to offer **negligible bat roost suitability**.
- 4.2 It is the opinion of the author of this report that the maintenance works can proceed without the need for further survey work (e.g. bat activity surveys) or bat mitigation due to the negligible potential of the building to support bats.
- 4.3 It should be noted that bat absence is very difficult to prove definitively due to their mobility and size, and single or small numbers of bats are able to roost in extremely small spaces, such as in gaps between panels. The maintenance work should be undertaken with care, for example with roof tiles lifted rather than dragged.
- 4.4 **If during the maintenance works a bat (or an accumulation of bat droppings) is discovered at any time, work is to temporarily cease whilst an experienced bat ecologist is contacted for guidance and assistance.** This can be Rachel Hacking Ecology (0161 465 8971) who undertook the initial survey, any licensed bat worker, or the Bat Conservation Trust (BCT) helpline (0845 1300 228).
- 4.5 No evidence of other protected species, such as nesting birds, was found within the building.

REFERENCES

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

Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature.