

Bat Surveys and Mitigation Strategy

Moss Lane East, Manchester, Manchester City Centre.

A Report To: Alumno Group
Report Number: 162772-02 Rev A
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Quality Assurance

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Declaration of Compliance

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of Practice for Planning and Development”. The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Disclaimer

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment. Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, it may be necessary to undertake an updated survey to allow any changes in the status of bats on site to be assessed, and to inform a review of the conclusions and recommendations made.

Non-Technical Summary

Project Background

In May 2024, Alumno Group commissioned Middlemarch to undertake bat surveys at Moss Lane East, Manchester. These surveys are required to inform planning application conditions associated with the proposed demolition of building number 470 (B1) to make way for new student accommodation, and redevelopment works on building 466 (B2).

Middlemarch has previously carried out a number of surveys for CS Moss Lane Ltd and Alumno Group at this site. The findings of these surveys are detailed in Preliminary Bat Roost Assessment 158021-02 (PRA), Habitat Condition Assessment 158021-01 (PEA), and Bat Emergence Surveys RT-MME-158448-01. In 2022, building B1 was identified as a confirmed day roost for a small number of common pipistrelles.

Scope of Survey

Updated surveys were in the form of an updated Bat Roost Assessment carried out on 15th May 2023. Further survey work, in the form of dusk emergence surveys, were undertaken between 15th May 2023 and 26th June 2024.

Summary of Key Bat Features

Roosting Bats: Building B1 is a known bat roost for common pipistrelles. Building B2 was found to hold potential roosting locations of high potential to support roosting bats. Building B3 (Bike shed) was found to hold potential roosting locations of low potential to support roosting bats.

B1: 15th May 2024 a common pipistrelle emerged from a gap under the fascia boards to the north-west elevation. On the 26th June, two common pipistrelles were observed emerging from the western gable end. No bats emerged from buildings B2 or B3.

Commuting/Foraging Bats: One bat species was recorded during the dusk and dawn surveys: common pipistrelle. Both commuting and foraging activity was recorded during all surveys, this was noted predominantly along the street associated with the northern boundary of the site which is connected to a larger belt of trees within Whitworth Park off site and gardens to the west.

Potential Impacts on Bats

The proposed works could impact upon bats through roost loss and/or direct harm/injury.

Any new lighting, either temporary or permanent, at the site has the potential to impact foraging and commuting bats. The sites value for bats could be increased via the incorporation of wildlife friendly planting and/or bat box installation on site.

Recommendations

R1: As a bat roost/resting place has been identified in building B1, no unlicensed work can be undertaken.

R2: B2 has been subject to a full suite of activity surveys in line with Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2023), and no bat roosts were identified. The survey data obtained for the site is valid for 12 months from the survey date. If the development is delayed for longer than this period, then the bat surveys will need to be updated.

R3: The proposed development should be designed to minimise effects on bats in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG).

R4: Lighting: In accordance with best practice guidance relating to lighting and biodiversity any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.

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1. Introduction

1.1 Project Background

In May 2024, Alumno Group commissioned Middlemarch to undertake bat surveys at Moss Lane East, Manchester. These surveys are required to inform planning application conditions associated with the proposed demolition of building 470 (B1) to make way for new student accommodation, and redevelopment works on building 466 (B2).

Middlemarch has previously carried out a number of surveys for CS Moss Lane Ltd and Alumno Group at this site. The findings of these surveys are detailed in

- Preliminary Bat Roost Assessment 158021-02 PRA.
- Habitat Condition Assessment 158021-01 PEA.
- Bat Emergence Surveys RT-MME-158448-01.

Middlemarch has also been commissioned to undertake the following:

- Updated Biodiversity Net Gain Assessment RT-MME-162772-01.
- Updated Walkover Assessment RT-MME-162772-03.

To fulfil the above brief to assess the potential for the existing buildings on site to support roosting bats, an updated Preliminary Bat Roost Assessment was undertaken on 15th May 2024.

Further survey works, in the form of dusk emergence and dawn re-entry surveys, were undertaken between 15th May 2024 and 26th June 2024.

All UK bat species are legally protected species and they are capable of being material considerations in the planning process. A summary of the legislation protecting bats is included within Appendix 1.

1.2 Site Description and Context

Table 1.1 provides a brief summary of the site and its surroundings.

Attribute	Description
Site Location	Moss Lane East, Manchester
National Grid Reference	SJ 84858 95654
Site Area (ha)	0.16 ha
Topography	Flat
Land Cover (on site)	The entire site area was approximately 0.16 ha in area and as well as the buildings, included a large hardstanding carpark with access paths, amenity grassland, scattered trees throughout and occasional scattered privet and laurel planted borders.
Land Cover (site surrounds)	The wider landscape consisted of the urban area of Hulme, dominated with businesses, residential houses, flats and gardens, hospitals, schools, car parks and carriageways. Whitworth Park is situated immediately to the north of the survey area.

Table 1.1: Summary of Site and Surroundings

1.3 Documentation Provided

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.2.

Document / Drawing Number	Author
Landscape Site Plan, Drawing no. 5938 OOBZZ- 00-D-L-0001 Rev P02	Oobe

Table 1.2: Documentation Provided by Client

2. Methods

2.1 Desk study

As part of the Preliminary Ecological Appraisal Report RT-MME-158021-01) an ecological desk study (which included a search for records of bats) was undertaken within a 2 km radius of the site. The consultee for the desk study was Greater Manchester Record Centre.

Middlemarch Environmental Ltd then assimilated and reviewed the desk study data provided by this organisation. Relevant bat data are discussed in Chapter 3. In compliance with the terms and conditions relating to its commercial use, the full desk study data are not provided within this report.

The desk study included a search for statutory nature conservation sites designated for bats within a 10 km radius of the site.

2.2 Preliminary Bat Roost Assessment

A Preliminary Bat Roost Assessment of the buildings was carried out on site in line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2023)¹ and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023)².

The assessment was conducted on 15th May 2023 by

- Charlotte Richardson (Senior Ecological Consultant).
- Amy Carter (Ecological Project Officer).

Weather conditions were recorded and are presented in Table 2.1.

Parameter	Condition
Temperature (°C)	17
Cloud (%)	60
Wind (Beaufort)	F0
Precipitation	Dry

Table 2.1: Weather Conditions During Field Survey

A visual assessment was conducted during daylight hours of the buildings to determine the presence of any Potential Roost Features (PRFs), together with a general appraisal of the suitability of the site for foraging and commuting bats. Please refer to Appendix 2 for a list of example PRFs. Any accessible PRFs were inspected using binoculars, a torch and endoscope for evidence of possible bat presence. Buildings were surveyed externally and internally.

¹ English Nature. (2023). Bat Mitigation Guidelines. English Nature.

² Collins, J. (ed). (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Ed.)*. The Bat Conservation Trust, London.

For reasons of health and safety, the survey was only undertaken in areas accessible from 3.5 m ladders.

Based on the PRF's present, the survey area was assessed using the suitability classes detailed within Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023)¹, as detailed in Table 2.2.

Suitability	Description
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.
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 unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
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 conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Negligible	Negligible habitat features on site likely to be used by roosting bats.

Table 2.2: Classification of Structures with Bat Potential (Adapted from Collins, 2023)

2.3 Dusk Emergence and Dawn Re-entry Surveys

Overview

Building B1: Three common pipistrelle *Pipistrellus pipistrellus* day roosts (peak count 1) were identified during dusk emergence and dawn re-entry surveys undertaken in August 2022 (details of this can be found in report RT-MME-158448). As such, a full suite of updated bat surveys were undertaken in 2024 to bring the data in line with 2023 updated BCT Bat Survey Guidelines. The aim of these surveys was to determine the current status of the roost within the buildings, and to enable a profile of site utilisation by bats to be compiled in preparation for a Natural England Mitigation Licence.

The surveys were undertaken by the following personnel:

- Jemma Gaskin (Principal Ecological Consultant) and licensed bat worker Class 18.
- Charlotte Richardson (Senior Ecological Consultant) and licensed bat worker class 17.
- Sian Comlay (Senior Biodiversity Consultant).
- Amy Carter (Ecological Project Officer).
- Anna Evans (Senior Ecological Consultant).

The weather conditions were recorded on each survey and are presented in Table 2.3.

Type of Survey	Date	Time	Parameter			
			Temperature °C	Cloud %	Precipitation	Wind (Beaufort Scale)
Dusk	15/05/24	Start 20:15	14	90	Dry	F0
		End 22:05	11	80	Dry	F0
Dusk	05/06/24	Start 20:55	15	90	Dry	F1
		End 22:35	11	80	Dry	F1
Dusk	26/06/24	Start 21:10	24	30	Dry	F1
		End 22:45	23	30	Dry	F1

Table 2.3: Weather Conditions During Field Surveys

Dusk Emergence Bat Surveys

In line with the specifications detailed in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023)², the dusk surveys commenced 20 minutes prior to sunset and continued until 90-120 minutes after sunset.

Equipment and Analysis

The dusk emergence surveys were conducted using electronic bat detectors (Echometer Touch 2) and night vision aids (Cannon XA 40 with associated infrared illuminators) to facilitate the detection of bats and to aid in the determination of species of bat using the site.

Subsequent computer analysis of sound and video recordings was used to facilitate the identification of bat species/families present during the surveys.

Some species of bats echolocate at similar frequencies and the characteristics of their calls can overlap, e.g.. *Myotis* species, and calls can vary dependant on the environment that the bats are in. It is widely accepted that if there is any doubt identifying a bat to species level then identification to family level is satisfactory (Russ, 1999)³. If echolocation calls more closely resemble one species than another, then they will be assigned to species level based on the parameters set out in Russ (2012)⁴ for guidance. Identification of overlapping species should, however, be interpreted with caution.

Grey long-eared bats *Plecotus austriacus* are very rare and found only in a few places in southern England (Mathews, *et al.* 2018)⁵. It can be very difficult to distinguish this species from the more common brown long-eared bat *Plecotus auritus*. Therefore, based on the location of the site it is presumed that any calls by *Plecotus* species are brown long-eared bat.

2.4 Constraints

Due to the small nature of the roof areas, and the flooring being inadequate to move along, the areas were deemed unsafe and did not allow a full internal inspection of the loft space within B2. Additionally, due to its small size, it was not possible to fully inspect the loft space within B1.

These were not considered a constraint to the overall findings of the surveys, as a full suite of dusk emergence surveys were undertaken on both B1 and B2.

No other constraints or limitations were noted during the bat surveys.

³ Russ, J. (1999). *The Bats of Britain and Ireland. Echolocation calls, sound analysis, and species identification (1st Ed.)*. Alana Ecology Ltd, London.

⁴ Russ, J. (2012) *British Bat Calls: A Guide to Species Identification*. Pelagic Publishing, Exeter.

⁵ Matthews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., Shore, R.F. (2018) *A Review of the Population and Conservation Status of British Mammals: Technical Summary*. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough.

3. Desk Study

3.1 Statutory Nature Conservation Sites

The site is not located within 10 km of any statutory nature conservation sites designated for the presence of bats.

3.2 Species Records

The data search was carried out in May 2024 by Manchester Record Centre. Records of bat species within a 1 km radius of the survey area provided by the consultee are summarised in Table 3.1.

It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Brown long-eared bat <i>Plecotus auritus</i>	1	2016	440 m East	✓	ECH 4, WCA 5, WCA 6
Common pipistrelle <i>Pipistrellus pipistrellus</i>	6	2017	320 m south	-	ECH 4, WCA 5, WCA 6
Pipistrelle <i>Pipistrellus sp.</i>	1	2010	800 m North-East	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Unidentified bat <i>Chiroptera sp.</i>	1	2015	850 m East	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Key: #: Dependent on species. ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation. ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection. WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods. Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.					

Table 3.1: Bat Species Records Within 1 km of Survey Area

3.3 Previous Bat Surveys

Dusk Emergence and Dawn Re-entry Bat Surveys RT-MME-158448 (September 2022)

In 2022 Middlemarch Environmental Ltd were commissioned by CS Moss Last East Ltd to undertake dusk emergence and dawn re-entry surveys. These were undertaken between 2nd August and 2nd September 2022.

Following the suite of survey work undertaken on site in 2022 it could be confirmed that Building B1 contained day roosts used by low numbers of common pipistrelles. The following three common pipistrelle day roosts were identified in Building B1 in 2022:

- Day roost (peak count 1) at eaves on northwest elevation.
- Day roost (peak count 1) vent on southwest elevation.
- Day roost (peak count 1) at eaves at apex on southwest gable.

4. Survey Results

4.1 Updated Bat Roost Assessment

4.1.1 Buildings

Two buildings and a structure were subject to assessment. Building B1 (470 Moss Lane East), was a large detached irregular shaped building, Building B2 (466/468 Moss Lane East), was a detached grade II listed building and Building B3 was a bike shed (B3).

Drawing C162772-02-01 in Chapter 7 details the results of the preliminary roost assessment.

Building B1

External Assessment

The first building (B1) was a three-story building constructed of red brick with an irregular shaped roof, covered in slate tiles, some of which were broken or dislodged (Plates 4.1 & 4.2).

Windows and doors were noted to have uPVC frames in places but wooden in other areas (predominantly to the north and east) with brick and concrete window ledges (Plates 4.2). The front of the building (to the north) had black wooden fascial boards with ornate designs, which were worn in places (Plate 1). The building also had a flat roof porch area to the east, and a converted basement area. Multiple areas of degraded mortar and gaps between the bricks and above windows were noted but were too high to fully inspect (Plates 4.3 and 4.4).

Numerous features were recorded around the building which could be utilised by bats to gain entry into the building and potential roost locations. These features include:

- Missing, lifted or warped roof tiles.
- Missing, lifted or warped ridge tiles.
- Gaps at the eaves.
- Gaps around the soffit box.
- Lifted lead flashing.
- Cracks or holes in brickwork.
- Gaps around door frames and window frames.

It was not possible to inspect all of the gaps in mortar, above windows and gaps around fascia boards due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the external features that could be fully inspected during the survey.



Plate 4.1: Dislodged and Warped Tiles Near Skylights



Plate 4.2: Eastern Elevation.



Plate 4.3: Ornate Fascia Boards on Southern Elevation



Plate 4.4: Flat Roof Porch Area to East With Some Mortar Degradation in Areas.

Internal Assessment

Internally, B1 had been split into flats on every floor, with connecting stairs and corridors (Plate 4.5). The flats had been converted up into the attic spaces with the addition of skylights and with only a very small area of intact attic that remained accessible within one of the flats (Plate 4.6).

The dimensions of the attic space was approximately 2m from floor to apex with a steep pitch. The visible areas had wooden floors, wooden beams, and purlins and the loft was sectioned by breezeblock walls. Insulation was noted on the floor to the west but was not present across the entire roof space (Plate 4.7). An area of light was seen to be shining into the attic from the north (Plate 4.8), and mouse droppings were also noted within the loft space.

It was not possible to fully inspect all features within the loft space e.g. the area between the felt and roof tiles and as such the bat roosting potential of this area could not be determined. Whilst no evidence of bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the internal inspection of the building, not all areas could be fully assessed.



Plate 4.5: Narrow Corridors and Stairwells



Plate 4.6: Skylights



**Plate 4.7: Area within The Attic Space,
Separated By Breezeblocks**



**Plate 4.8: Some Areas of Insulation within
the Roof Space**

Roosting Potential

Building B1 has been assessed as having high bat roosting potential due to the presence of crevice features between the roof edge and brick wall structures, vented bricks, lifted lead flashing, gaps between bricks and worn fascias. The features were recorded at height, therefore a detailed assessment could not be undertaken to confirm the presence/absence of roosting bats. In 2022, B1 was identified as a confirmed day roost for a low number of common pipistrelles.

Building B2

External Assessment

The second building (B2) was also a three-story building constructed of red brick with a Mansard shaped roof which was covered in slate tiles, some of which were broken or dislodged (Plate 4.10).

Windows and doors were noted to have wooden painted frames with brick and concrete window ledges. Gaps were noted around windows and window ledges. The front of the building (to the north) was fronted with white painted stucco on brick extending all the way up to the roof. (Plates 4.10 to 4.12).

To the north, the building had exposed red brick, with black fascia's boards that had been worn in areas. Multiple areas of degraded mortar and gaps between the bricks and above windows were noted to the south, east and west but were too high to fully inspect with the endoscope (Plates 4.13 and 4.14).

Numerous features were recorded around the building which could be utilised by bats to gain entry into the building and potential roost locations. These features include:

- Missing, lifted or warped roof tiles.
- Missing, lifted or warped ridge tiles.
- Gaps at the eaves.
- Gaps around Aerial Wires to the Internal Areas
- Lifted lead flashing.
- Cracks or holes in brickwork.
- Gaps around door frames and window frames.



Plate 4.10: Lifted Tiles and Degraded Fascia to the South.



Plate 4.11: Mansard Style Roof, Wooden Fascia Boards, and Wooden Framed Windows Consistent Throughout The Building.



Plate 4.12: North Elevation; Painted and Found in Good Condition .



Plate 4.13: South Elevation; Showing Worn Fascia Boards and Broken Windows.

Internal Assessment

Similarly to B1, the internal of the building had been modified and redeveloped into separate flats with narrow corridors and stairwells (Plate 4.15). The flats extended all the way into the attic space, apart from one small area within a flat which was accessible. The area was small and was 2 m from floor to apex, with insulation lining the floor (Plates 4.16 & 4.17). The area consisted of wooden eaves, purlins and rafters, which had been replaced in places recently. Foil backed roof felting was also recorded along the western side but was not consistent throughout with some exposed slate visible (Plate 4.17).

A breezeblock wall was noted to the east and extended up to the eaves. A small gap was noted on an exposed slate, with a small gap between the felt and the tiles. There was also a small hole created for an aerial cable to enter the building. A wasp nest and mouse droppings were noted in this area.

It was not possible to fully inspect all features within the loft space e.g. the area between the felt and roof tiles and as such the bat roosting potential of this area could not be determined. Whilst no evidence of bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded during the internal inspection of the building, not all areas could be fully assessed.

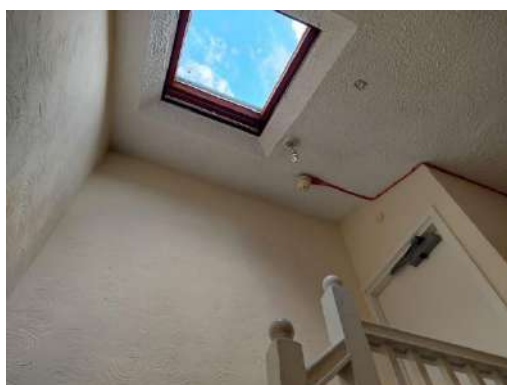


Plate 4.15: Inside of Building Redeveloped Into Flats with Narrow Corridors and Stairwells.



Plate 4.16: Inside of the Attic Space with Insulation and Aerial Cables Visible.



Plate 4.17: Foil Lined Roof Felting Visible to the West

B3 – Bike Shed

External Assessment

The bike shed was situated to the south of the two buildings next to a refuse area. The structure was small and was constructed of red brick and had a hipped clay tile roof. The doors and windows were open, with metal grating for security (Plate 4.18). The structure also had black wooden fascia boards in good condition with heavy cobwebbing (Plate 4.19).



Plate 4.18: Small Bike Shed Structure to The South of The Main Buildings



Plate 4.19: Cobwebbing along Fascia Boards

Internal Assessment

The internal of the structure was visible and open. There were wooden supports across the roof with no roof void and the building was draughty and light (Plate 4.20). The inside was clean and no evidence of bats, e.g. droppings, urine staining, feeding remains or scratch marks were recorded.

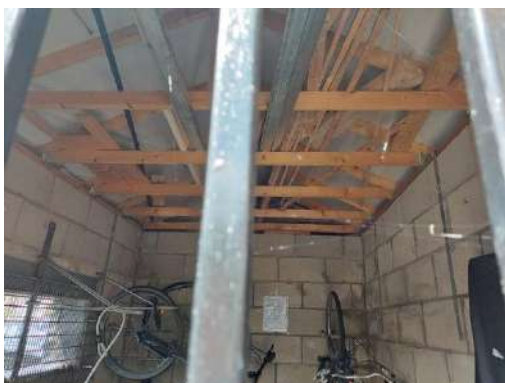


Plate 4.20: Inside of the Bike Shed visible up to the roof space

4.1.3 Site and Surrounding Habitats

The site was dominated by residential buildings, gardens and hardstanding, with Whitworth Park located 20 m to the north. Although the site itself offers little in the way of foraging habitat, the immediately adjacent park provides good foraging and commuting opportunities, as well as links to the wider surrounding landscape.

Whilst the lighting associated with the site and the surrounding buildings and car parks may deter light-sensitive bat species (such as brown long-eared bat and *Myotis* species), it is considered likely that species such as pipistrelles could utilize the site and its adjacent habitats for roosting and/or foraging/commuting purposes.

Habitats within 1 km of the site suitable for roosting, commuting and foraging include:

- Residential houses and associated gardens;
- Scattered trees;
- Parkland (i.e. Whitworth Park) with tree lined boundaries;
- Churches, schools and associated grounds;

4.2 First Dusk Emergence Survey

The first dusk emergence survey commenced 15 minutes prior to sunset and continued until 120 minutes after sunset. Sunset was at 21:03 hrs (BBC Weather Centre Data for Manchester). One species of bat was recorded during the survey: common pipistrelle. Survey results are plotted on Drawing C162772-02-02 in Chapter 7.

At 21:01 (2 minutes before sunset), a common pipistrelle was observed emerging from the northwest corner of B1, before flying towards Whitworth park.

At 21:08 (5 minutes after sunset) a second common pipistrelle emerged from the location and flew straight towards Whitworth Park.

At 21:24 (21 minutes after sunset), two common pipistrelles were detected and seen moving south to north between B1 and B2 toward Whitworth park.

At 21:33 (30 minutes after sunset) a common pipistrelle was observed both commuting and foraging from Whitworth park towards the south, between B1 and B2.

Between 21.11 and 21.51 common pipistrelles were detected foraging along the tree line of Whitworth park.

No other species of bat were detected or observed during this survey.

Analysis of the sound recordings and video analysis did not identify any further species of bat or bat roost locations.

4.3 Second Dusk Emergence Survey

The second dusk emergence survey commenced 15 minutes prior to sunset and continued until 120 minutes after sunset. Sunset was at 21:32 hrs (BBC Weather Centre Data for Manchester). One species of bat was recorded during the survey: common pipistrelle. Survey results are plotted on Drawing C162772-02-03 in Chapter 7.

At 21:56 (24 minutes after sunset) the first common pipistrelle was detected from the north-east of B1 commuting towards Whitworth park. No visuals were noted.

At 21:59 (27 minutes after sunset) a common pipistrelle was observed flying south to north across site from the offsite adjacent western street, across to Whitworth park.

At 22:16 (44 minutes after sunset) a common pipistrelle was detected and seen moving along the front of B1 (north) flying west to east.

At 22:28 (56 minutes after sunset) a common pipistrelle was observed to pass along the south-west corner of the site.

From 22:28 until the end of survey, common pipistrelles were detected intermittently foraging within Whitworth park to the north of site.

No other species of bat were detected or observed during this survey.

Analysis of the sound recordings and video analysis did not identify any further species of bat or bat roost locations.

4.4 Third Dusk Emergence Survey

The third dusk emergence survey commenced 15 minutes prior to sunset and continued until 120 minutes after sunset. Sunset was at 21:42 hrs (BBC Weather Centre Data for Manchester). One species of bat was recorded during the survey: common pipistrelle. Survey results are plotted on Drawing C16772-02-04 in Chapter 7.

At 21:44 (2 minutes after sunset) a single common pipistrelle emerged from the southern gable end of B1 and flew southwards to the residential gardens.

At 22:00 (18 minutes after sunset) a common pipistrelle was observed emerging from the western gable end and flew north from B1 toward Whitworth park.

At 22:03 (21 minutes after sunset), a common pipistrelle was detected flying on to site from the east around the back of building B1 and then flew northwards off site towards Whitworth Park.

22:08 (26 minutes after sunset) a common pipistrelle was observed commuting to the east along the adjacent street commuting towards Whitworth park.

22:11 (29 minutes after sunset) a single common pipistrelle was heard but not seen.

From 22:25 (43 minutes after sunset) until the end of the survey, intermittent common pipistrelle passes were recorded, predominately along the along the boundary tree line within Whitworth park to the north.

No other species of bat were detected or observed during this survey.

Analysis of the sound recordings and video analysis did not identify any further species of bat or bat roost locations.

5. Impact Assessment

5.1 Summary of Proposals

It is thought that building B1 is to be demolished to make way for new student accommodation. Building B2 will remain in-situ but will undergo internal redevelopment in order to repurpose the building for student amenities on the site.

5.2 Summary of Key Bat Features

Roosting Bats

Buildings B1 and B2 on site were noted to have high potential to support roosting bats. B3 (Bike shed) had previously been given negligible due to the disturbance of people storing bikes, however due to the building being empty for an extended period of time and disturbance lowering, B3 was given low potential to support roosting bats.

During the full suite of survey undertaken in 2022 and 2024 three common pipistrelle day roosts have been recorded, Drawing C162772-02-05 details the summary of the bat roost locations. These were as follows:

- One common pipistrelle day roost at the western gable end (peak count 2).
- One common pipistrelle roost on the south gable end (peak count 1).
- One common pipistrelle day roost in vent on south elevation (peak count 3).

Commuting/Foraging Bats

Low numbers of common pipistrelle were identified both foraging and commuting on site. A commuting corridor between the trees and amenity grassland within Whitworth Park to the north and the residential gardens to the west was identified during the surveys.

5.3 Potential Impacts on Bats

The proposed works could impact upon bats through roost loss and/or direct harm/injury if undertaken unmitigated.

Demolition of Building B1 will have a negative impact at site level as it will result in the loss of three-day roosts for a low number (peak count 6) of common pipistrelles, a common and widespread species. Recommendations in regard to roosting bats on site are made in Chapter 6.

As the site has been identified as a commuting corridor between the trees within Whitworth Park to the north and the residential gardens to the west, any new lighting, either temporary or permanent, at the site has the potential to impact foraging and commuting bats. Recommendations with regards to lighting are made in Section 6.

The sites value for bat species could be increased via the incorporation of wildlife friendly planting and/or bat box installation on site. Recommendations in relation to this is made in Section 6.

6. Mitigation Strategy for a Low Impact Bat Licence

6.1 Introduction

Buildings B2 and B3

Buildings B2 and B3 were found to not hold bat roosts. Therefore, no further works in regard to bat species are required for these two buildings. However, if unexpected bats are found during works, please stop works and contact the licensed ecologists for this site.

Building B1

The following approaches are recommended to ensure that works proceed without any breaches in wildlife legislation and no bat roosts are disturbed/destroyed as a result of the works during works to Building B1.

This building is to be demolished to allow for the construction of new student accommodation. During the suite of surveys conducted at the site over 2022 and 2024, a total of three common pipistrelle day roosts for low numbers of bats were identified in Building B1; This included

- 1 day roost on southern gable end (peak count 1).
- 1 day roost on western gable end (peak count 2).
- 1 day roost in vent on southern elevation (peak count 3 (in 2022)).

Drawing C162772-02-05 details the location of the bat roosts.

6.2 Method Statement

Toolbox Talk

A 'toolbox talk' will be held with the contractor's team before any work starts. The 'toolbox talk' will include the following:

- Ensure that the contractors are aware of the bat issues associated with the site.
- Make all contractors aware of the legal protection afforded all species of bats in the UK, and the licence requirements under which they will be working.
- Communicate safe working methods, including what can and cannot be done during works.
- Procedures to be followed should an incidental bat be discovered during site works (this includes finding of an injured bat).
- Contact details (Ecologists and licence Holders) for further advice or information.

A written record of this 'toolbox talk' will be made by the ecologist and also the site manager to confirm that it was undertaken in line with measures outlined in this method statement.

The toolbox talk will include the adoption of appropriate methodologies to ensure no harm occurs to any potential roosting locations identified during the renovation works to building B2.

Pre-Works Survey

A pre-works survey will be carried out during the daytime by a suitability qualified ecologist, immediately prior to works commencing on site. This will include a daytime assessment (externally and internally) and a dusk emergence survey (where the works are undertaken during the bat activity season).

This is to ensure that the status of the site and bat roost has not changed since the survey work was carried out. If it is identified that the status of the roosts has altered/increased no destructive works will be carried out to Building B1 until advice from Natural England has been sought. If the status of the roost has not altered, then the works will proceed as per this method statement.

Timing of Works

As only three days roost for a common and widespread bat species (common pipistrelle) will be directly affected by the development;

- Works can be undertaken at any time of year.
- Works must not start prior to one hour before sunrise.
- Works must stop a minimum of one hour prior to sunset.
- Roost destruction works will be carried out under suitable weather conditions only (e.g. not during adverse rain etc).

Mitigation of Roost Features

A total of three bat boxes will be required as direct mitigation for the loss of three day roosts for common pipistrelles (peak count 6). Three boxes are direct mitigation for the Natural England Bat Low Impact Class Licence (one for the loss of each roosting location).

Due to restrictions with /limitations on space within the site boundary, the following methodology will be employed to ensure the continuing ecological functionality for bat species will be retained on site both during and post works.

Temporary Mitigation:

3 no. 2F Schwegler bat boxes (or similar) are attached to a suitable pole within the site boundary. (All boxes must be at attached to the pole at a height above 4 m to avoid negative interference (e.g vandalism)).

Drawing C162772-02-06 details the location of the bat boxes for mitigation.

Permanent Mitigation: A total of three Beaumaris bat boxes (or similar) will be installed on the south, west and north elevation within locations of close proximity to the original roosting locations recorded within building B2.

Removal of Temporary Mitigation: This will only be removed once all permanent mitigation has been inspected and signed off by a suitably qualified ecologist. The following methodology will be employed during the removal of the three boxes, to ensure that no harm will occur to any bats if present. Immediately prior to removal each box will be Inspected by a licensed bat worker; If no bats are present, the boxes are to be removed immediately. If bats are present, then they will be transferred across to the new mitigation boxes. If more than one bat is present with a box, they will be translocated as a group to the same bat box. If bat if found to roosting along it will be placed in a new box on its own. The temporary box will then be removed immediately.

Under the Bat Low Impact Class Licence, the provision of a suitable unit (i.e. a Schwegler bat box or crevice unit within a structure) is appropriate mitigation to relocate any bats found into and as such to maintain the Favourable Conservation Status of the species.

Any bat boxes installed as either bat mitigation or bat enhancement should be retained for a minimum of 5 years.

Retention of Important Foraging/Commuting Features

Though the site is dominated by areas of hard standing, during the surveys undertaken, it was identified that the site provided a direct commuting route between the trees and amenity grassland located within Whitworth Park to the north and the residential gardens to the west. Therefore, the proposed landscaping must be designed in a manner considerate to reduce any impacts on both commuting and foraging bat species across the site.

Lighting

No additional lighting should be installed on site (either during or post development) which will cause illumination to the bat boxes, or segregate identified commuting routes across the site This can be implemented through design of a lighting strategy that is sensitive to the requirements of bat species on site. Any illumination should be approved by Middlemarch to ensure no bat roosts are impacted.

Where lighting is required for health and safety/security reasons, it will be low level (i.e. installed at the ground level) and directional (i.e. downwards pointing and directed away from the roof / bat boxes).

Ecological Clerk of Works

Where it is necessary under the low impact bat licence, a licensed bat worker will be on site during key areas (during the removal of known or high potential roosting locations) to ensure that legislation in respect of bats is not breached.

Any bats discovered during works will be caught by hand, placed in a cotton bag and transferred to the bat boxes installed on site prior to the start of works.

Once the site has been cleared of known bat roosts, or potential roosting features of high potential to support roosting bats, the building will be signed over by the attending ecologist to the contractors for complete demolition.

In the unlikely event that a bat becomes injured, any injured bats will be immediately taken into care (as directed by Bat Workers Manual, 2004). Details of a bat carer are known.

Unexpected Bats

If at any point a bat is discovered, and an ecologist is not present, all work that may result in disturbance will cease. The site will be reassessed by a licensed bat worker, and a decision will be made regarding the progression of the work. If individual bats are discovered unexpectedly, including during periods of adverse weather, then the following steps must be taken:

- Do not expose the bat or cause it to fly out of the roost on its own accord.
- Where it is possible re-cover (without crushing).
- Unless it is in immediate danger, the bat must only be handled by a licensed bat worker.

In the unlikely event that a bat becomes injured, any injured bats will be immediately taken into care (as directed by Bat Workers Manual, 2004). Details of a bat carer are known.

6.3 Conclusion

Provided that the methodologies, work timings and recommendations within this method statement are followed, it is anticipated that works can commence without any breaches in wildlife legislation occurring.

7. Recommendations

All recommendations provided in this section are based on Middlemarch's current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

R1 Building B1: As a bat roost/resting place has been identified in buildings B1, no unlicensed work can be undertaken which will contravene the legislation outlined in Appendix 1. Examples of works which will breach this legislation include:

- Roof modifications/repairs/removal;
- Timber treatment;
- Noise, vibrations and storage of odorous and dangerous chemicals;
- Alterations to bat entrance/exit points;
- Investigations works in the roof as this can cause bats to abort their young/awake from hibernation and can alter the roof temperature/humidity; and,
- Works in the main body of the building.

N.B. This is not an exhaustive list and a bat worker should be consulted to determine if the works are likely to breach any legislation.

Prior to any works being undertaken which are likely to result in a breach of the legislation, a development licence must be obtained from Natural England. The licence application process will include the submission of a method statement as set out in Chapter 6 detailing the current status of bats on site and how the favourable conservation status of the bat population will be maintained. Prior to a licence being issued, planning permission must be granted and relevant conditions (e.g. listed building consent if required) relating to protected species and habitat issues must be discharged.

An appropriate level of survey work has been undertaken within this study; however, should any delays occur in the planning process which results in a delay in the bat licence application beyond July 2025, the bat activity surveys may have to be updated.

R2 Buildings B2 and B3: B2 and B3 have been subject to a full suite of activity surveys in line with Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2023). **Error! Bookmark not defined.**, and no bat roosts were identified. The survey data obtained for the site is valid for 12 months from the survey date. If development works to the surveyed buildings have not commenced within this timeframe it will be essential to update the survey effort to establish if bats have colonised the buildings in the interim. Updated Preliminary Bat Roost Assessments can be undertaken at any time of year. Updated surveys requiring nocturnal assessments will need to adhere to the Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2023). **Error! Bookmark not defined.** with the surveys undertaken between April and September inclusive. In the unlikely event that a bat is found during site works all works in that area must immediately cease and a suitably qualified ecologist should be contacted.

R3 Lighting: In accordance with best practice guidance relating to lighting and biodiversity (Bat Conservation Trust and Institute of Lighting Professionals,(2023)⁶; Gunnell et al, (2012)⁷), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species. Examples of good practice include:

- Avoiding the installation of new lighting in proximity to key ecological features, such as hedgerows.
- Using modern LED fittings rather than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.
- The use of directional lighting to reduce light spill, e.g. by installing bespoke fittings or using hoods or shields. For example, downlighting can be used to illuminate features such as footpaths whilst reducing the horizontal and vertical spill of light.
- Where the use of bollard lighting is proposed, columns should be designed to reduce horizontal light spill.
- Implementing controls to ensure lighting is only active when needed, e.g. the use of timers or motion sensors.
- Use of floor surface materials with low reflective quality. This will ensure that bats using the site and surrounding area are not affected by reflected illumination.
- For internal lights, recessed light fittings cause significantly less glare than pendant type fittings. The use of low-glare glass may also be appropriate where internal lighting has the potential to influence sensitive ecological receptors.

R4 Scheme Design: The proposed development should be designed to minimise effects on bats in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG). The ecological mitigation hierarchy requires all development schemes to apply the following principles:

- *Avoidance and Mitigation* – the proposed development should seek to avoid/minimise losses of features with bat potential, in the first instance and incorporate these features in the landscaping layout of the scheme accordingly. Similarly, protection measures for retained features and surrounding habitats should be considered to prevent incidental damage or disturbance during the construction phases. These measures will help to reduce the likelihood of impacting bats and minimise losses of suitable bat roosts and habitat. Where significant harm cannot be wholly or partially avoided, adverse impacts should be minimised by design or through the use of effective mitigation measures such as minimising light spill (see below).
- *Compensation* – where unavoidable losses occur and mitigation cannot be provided, compensation for significant residual harm will be required as a last resort or planning permission could be refused. Where there is a significant effect on a bat roost, a compensation strategy sufficient to obtain a development licence from Natural England may also be required.

⁶ Bat Conservation Trust and Institute of Lighting Professionals (2023) *Guidance Note 08/23: Bats and artificial lighting at night*. ILP, Rugby

⁷ Gunnell, K., Grant, G. and Williams, C. (2012) *Landscape and urban design for bats and biodiversity*. Bat Conservation Trust.

8. Drawings

Drawing C162772-02-01 – Preliminary Bat Roost Assessment

Drawing C162772-02-02 – First Dusk Emergence Survey

Drawing C162772-02-03 – Second Dusk Emergence Survey

Drawing C162772-02-04 – Third Dusk Emergence Survey

Drawing C162772-02-05 – Summary of Bat Roosts

Drawing C162772-02-06 – Proposed Mitigation

Drawing C162772-02-07 – Proposed Mitigation



C162772-02-01

Legend

Site boundary

Building with high potential to support roosting bats

Building with low potential to support roosting bats

Target note

1 Gaps under fascia boards

2 Damaged brickwork / vented bricks

3 Lifted lead flashing

4 Broken or lifted roof tiles

5 Gaps in window arch brickwork

6 Broken window

Project

466 and 470 Moss Lane East, Manchester

Drawing

Preliminary Roost Assessment

Client

Alumno Group

Drawing Number

C162772-02-01

Revision

00

Scale @ A3

1:300

Date

July 2024

Approved By

AC

Drawn By

VO

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C162772-02-02

Legend

Site boundary

Building

Surveyor location

Camera location

Bat activity

Common pipistrelle emergence

Common pipistrelle commuting

Common pipistrelle foraging

Project

466 and 470 Moss Lane East, Manchester

Drawing

First Dusk Emergence (15/05/24)

Client

Alumno Group

Drawing Number

C162772-02-02

Revision

00

Scale @ A3

1:300

Date

July 2024

Approved By

AC

Drawn By

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C162772-02-03

Legend

Site boundary

Building

Surveyor location

Camera location

Bat activity

Common pipistrelle commuting

Project

466 and 470 Moss Lane East, Manchester

Drawing

Second Dusk Emergence (05/06/24)

Client

Alumno Group

Drawing Number

C162772-02-03

Revision

00

Scale @ A3

1:300

Date

July 2024

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C162772-02-04

Legend

Site boundary

Building

Surveyor location

Camera location

Bat activity

Common pipistrelle emergence

Common pipistrelle commuting

Common pipistrelle foraging

Project

466 and 470 Moss Lane East, Manchester

Drawing

Third Dusk Emergence (26/06/24)

Client

Alumno Group

Drawing Number

C162772-02-04

Revision

00

Scale @ A3

1:300

Date

July 2024

Approved By

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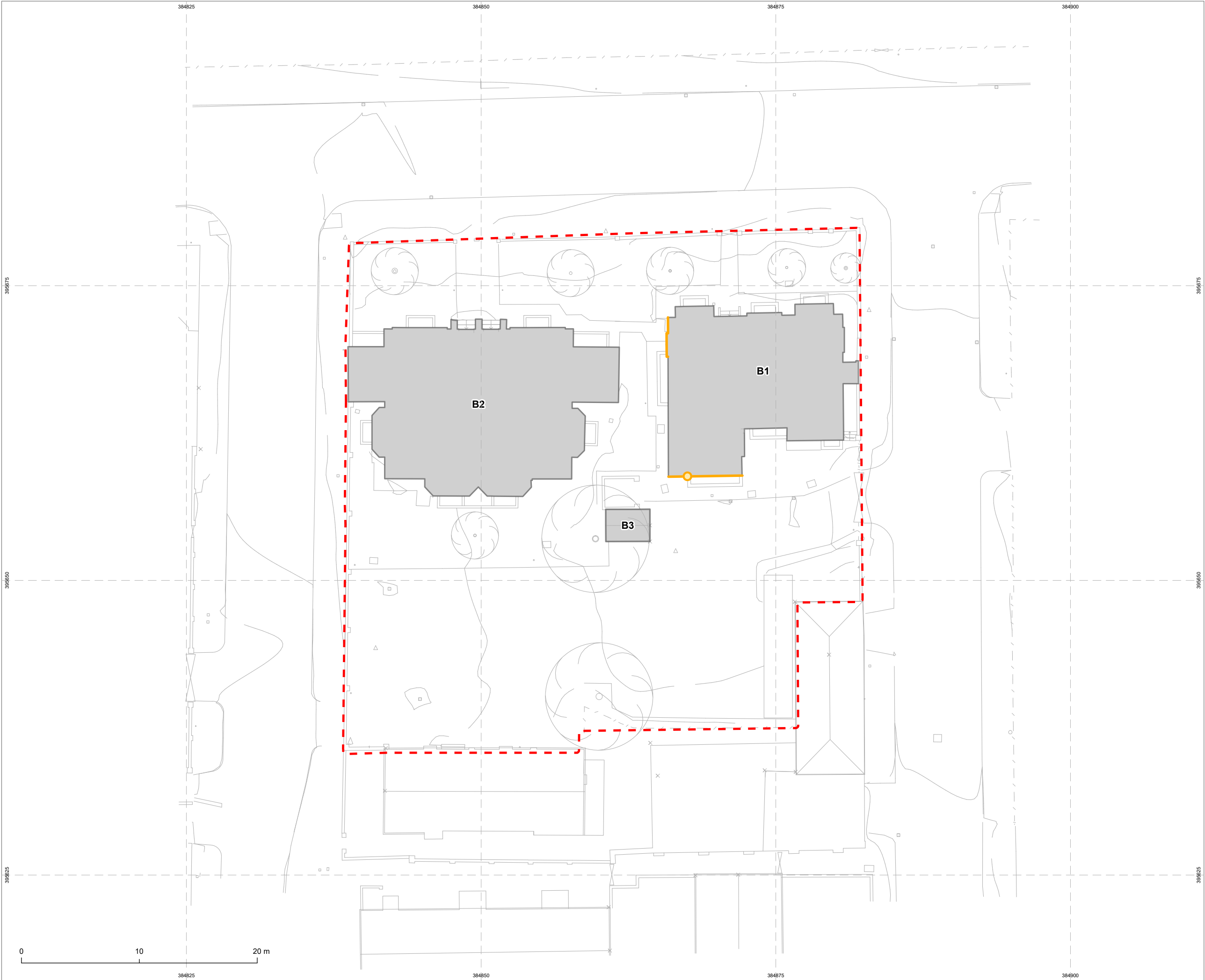
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C162772-02-05

Legend

Site boundary

Building

Common pipistrelle roost location (gable end)

Common pipistrelle roost location (air vent)

Project

466 and 470 Moss Lane East, Manchester

Drawing

Summary of Roost Locations

Client

Alumno Group

Drawing Number

C162772-02-05

Revision

00

Scale @ A3

1:300

Date

August 2024

Approved By

AC

Drawn By

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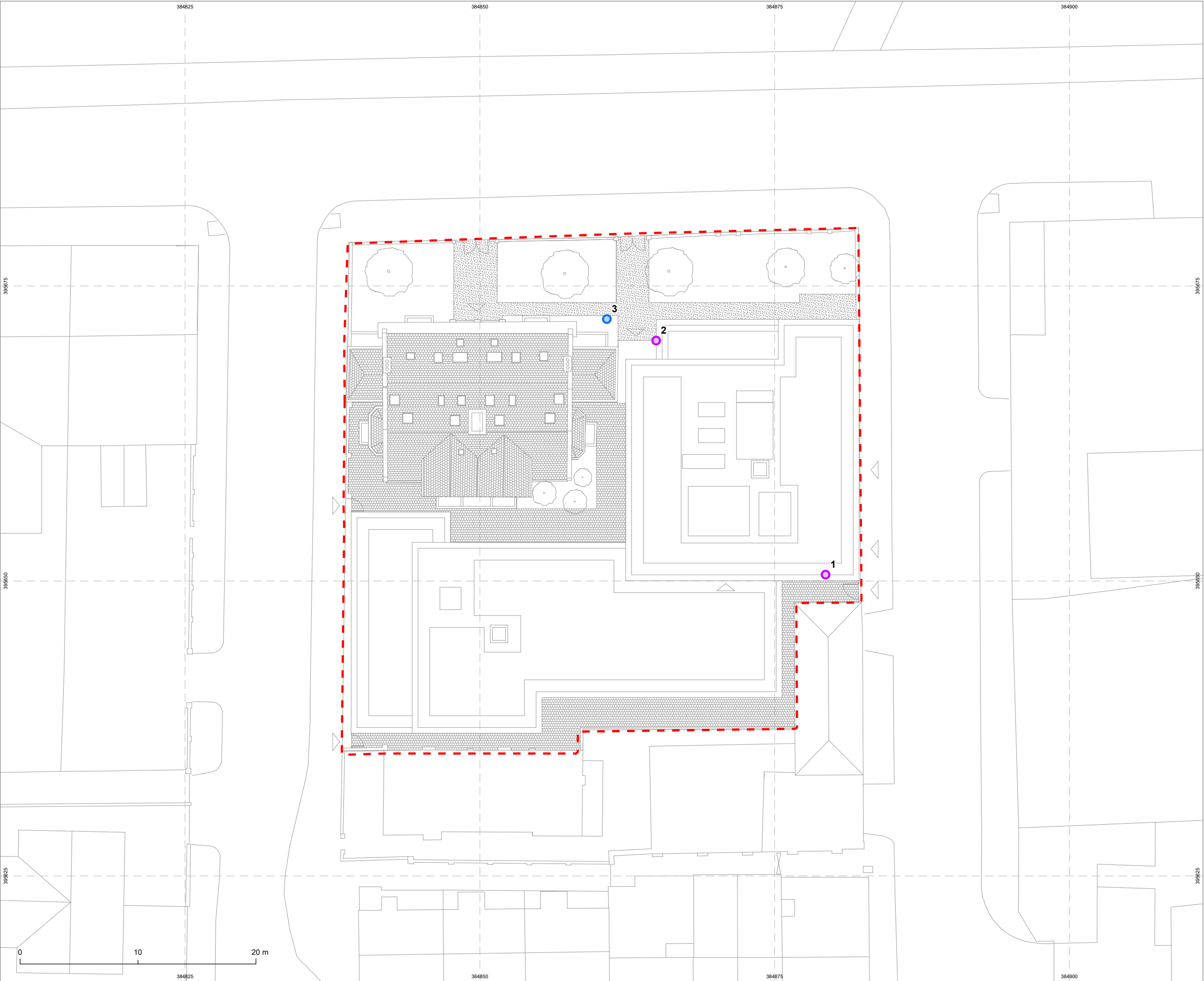
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C162772-02-06

Legend

Site boundary

Permanent bat box mounted on building - Beaumaris (or similar)

Temporary bat box mounted on telegraph pole - Schwegler 2F (or similar)

Number of boxes in location

Project

466 and 470 Moss Lane East, Manchester

Drawing

Mitigation and Compensation

Client

Alumno Group

Drawing Number

C162772-02-06

Revision

00

Scale @ A3

1:300

Date

August 2024

Approved By

JG

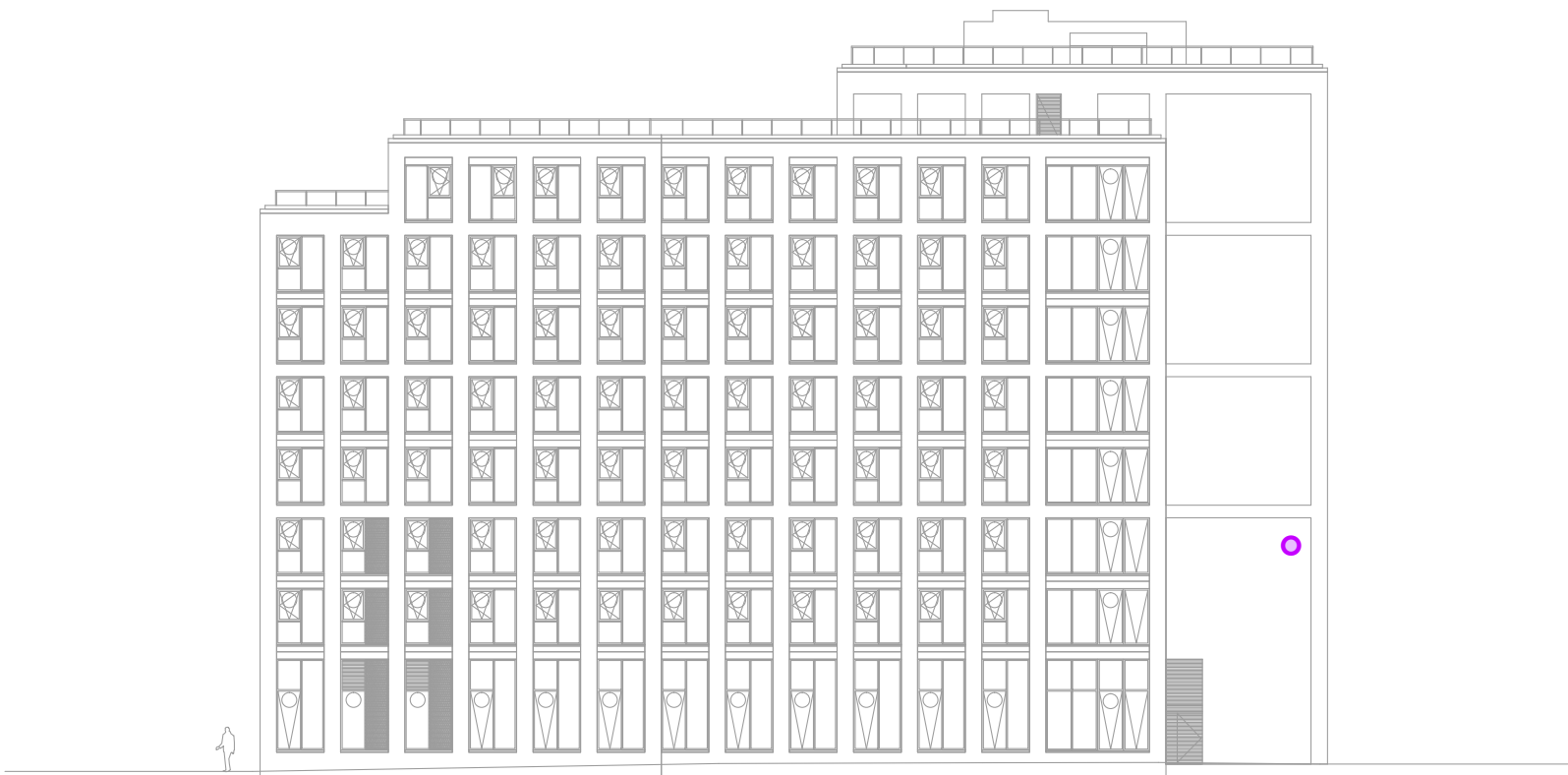
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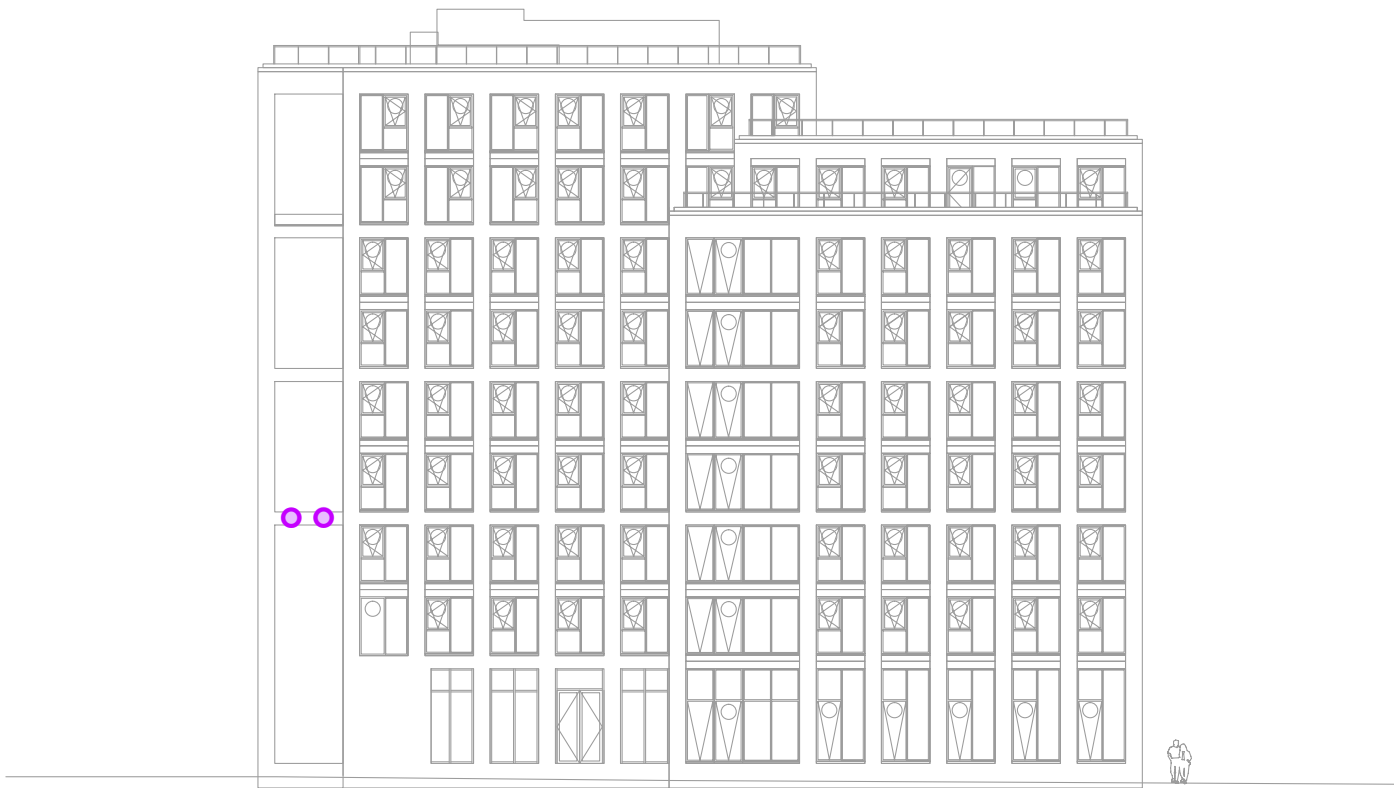
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Southern elevation



Western elevation

- Legend
- Permanent bat box mounted on building - Beaumaris (or similar)

REFERENCE ONLY

Project 466 and 470 Moss Lane East, Manchester	
Drawing Mitigation and Compensation - Elevations	
Client Alumno Group	
Drawing Number C162772-02-07	Revision 00
Scale @ A3 1:300	Date August 2024
Approved By JG	Drawn By VO/CD
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C162772-02-07

Appendix 1

Relevant Legislation

Bats and the places they use for shelter or protection (i.e. roosts) receive legal protection under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, or *obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The reader should refer to the original legislation for the definitive interpretation.

The following bat species are Species of Principal Importance for Nature Conservation in England: barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*. Species of Principal Importance for Nature Conservation in England are material considerations in the planning process. The list of species is derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006.

Appendix 2

Examples of Potential Roost Features

External Features

- access through window panes, doors and walls;
- behind peeling paintwork or lifted rendering;
- behind hanging tiles;
- weatherboarding;
- eaves;
- soffit boxes;
- fascias;
- lead flashing;
- gaps under felt (even including those of flat roofs);
- under tiles/slates;
- existing bat and bird boxes; and
- any gaps in brickwork or stonework permitting access into access to cavity- or rubble-filled walls.

Internal Features

- behind wooden panelling;
- in lintels above doors and windows;
- behind window shutters and curtains;
- behind pictures, posters, furniture, peeling paintwork;
- peeling wallpaper, lifted plaster and boarded-up windows;
- inside cupboards and in chimneys accessible from fireplaces.
- within attic voids:
- the top of gable end or dividing walls;
- the top of chimney breasts;
- ridge and hip beams and other roof beams;
- mortise and tenon joints;
- all beams (free-hanging bats);
- the junction of roof timbers, especially where ridge and hip beams meet;
- behind purlins;
- between tiles and the roof lining; and
- under flat felt roofs.

Potential Roost Features (Adapted from Collins, 2023)²

Appendix 3

Screen shot images (Photos A3.1 – A3.12) have been extracted from all cameras on site to show both the positioning of the cameras, and the light levels recorded on site both at the start and end of each survey.

Dusk Emergence Survey 1 – 15th May 2024



Plate A3.1: Building B1; Start of survey.



Plate A3.2: Building B1; End of survey.



Plate A3.3: Building B2; Start of Survey



Plate A3.4: Building B2; End of Survey

Dusk Emergence Survey 2 – 5th June 2024



A3.5: Building B1; Start of Survey



A3.6: Building B1; End of Survey



A3.7: Building B2, Start of Survey



A3.8: Building B2; End of Survey

Dusk Emergence Survey 3 – 26th June 2024



A3.9: Building B1; Start of Survey



A3.10: Building B1; End of Survey



A3.11: Building B2; Start of Survey



A3.12: Building B2; End of Survey