



HIVE Projects Ltd.

North Manchester General Hospital

Bat Survey Report – Buildings 45b, 45c

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EXECUTIVE SUMMARY

1. This report presents the results of bat surveys associated with the North Manchester General Hospital, on behalf of HIVE Projects Ltd. The information provided within this report is in support of the proposed planning application, which focuses on two areas of land within the hospital complex (Northern Zone Planning Application). The buildings surveyed fall within Area 1 – land to the north east of the hospital complex.
2. An update preliminary roost assessment (PRA) was undertaken by RSK Biocensus in October 2020, updating those undertaken by Ramm Sanderson in February 2020.
3. Buildings 45b and 45c were assessed to offer moderate suitability for roosting bats. Following best practice guidelines, two bat surveys; a dusk emergence and dawn re-entry were undertaken at these buildings.
4. A further dusk emergence survey was carried out to allow categorisation of roosts detected during the above visits in accordance with the Bat Conservation Trust Guidelines.
5. Two common pipistrelle day roosts were identified during surveys. This included the eaves on building 45b and the ridge tile line for building 45c.
6. Registration of the site under a Bat Mitigation Class Licence (BMCL) is recommended to satisfy legislative requirements in relation to the above roosts.
7. Habitat enhancements through landscape management, landscaping provisions, bat boxes and lighting strategies are recommended to comply with local and national policy.
8. The data provided within this report are valid for 12 to 18 months. If the proposed works commence after this, then the surveys will need to be repeated to ensure up-to-date information is available to support the development.

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1.0 INTRODUCTION

1.1 Purpose of this report

- 1.1.1 This report presents the results of dusk and dawn emergence and re-entry surveys for bats, associated with the North Manchester General Hospital project, on behalf of HIVE Projects Ltd. The information provided within this report is in support of the proposed planning application for proposed demolition of buildings, which focuses on an area land within the hospital complex (Northern Zone Planning Application – as shown on *Figure 1* and North Manchester General Hospital Masterplan drawing¹).

1.2 Landscape context

- 1.2.1 The North Manchester General Hospital is located c. 4 km to the north of Manchester city centre, covering an area of c. 28 ha. The hospital buildings include a varied arrangement of structures, with older buildings dating back over 100 years. Large areas of hospital car parking are located to the north and east. Soft landscaping raised planting and scattered trees are present throughout the hospital grounds.
- 1.2.2 A linear area of woodland is located to the east of the hospital complex, with smaller pockets to the north-east and south. The River Irk runs through the centre of the eastern woodland. Both the woodland and the River Irk sit within the hospital ownership boundary. Residential areas flank the hospital along all aspects, with large commercial areas to the south-east.

1.3 Background Information

- 1.3.1 Preliminary roost assessments (PRA) were completed at the site by RSK Biocensus in October 2020 (RSK Biocensus, 2020), updating surveys undertaken by Ramm Sanderson (2020).
- 1.3.2 Two buildings (B45b and B45c), were assessed to offer moderate suitability for roosting bats.
- 1.3.3 Four buildings (B43, B47, B70 and B71), were assessed to offer low suitability for roosting bats, whilst four buildings (45a, 45d, 45e and 54) were moderate suitability. These buildings were also subject to presence / absence surveys with no roosts recorded, the results of which are reported separately.

1.4 Validity of data

- 1.4.1 According to CIEEM guidance (CIEEM 2019), survey data are valid for a period of 12 to 18 months from the date of the first survey. Between 18 months and 3 years a professional ecologist will need to undertake a site visit and may also need to update

¹ Sheppard Robson (15/09/20): 6512 North Manchester General Hospital Masterplan – Site Location Plan (Stage 2), drawing number 6512 – SRA – MC – XX – DR – A – 00000 Rev. P08.

desk study information (effectively updating the PEA / PRA) and review the validity of the reports.

2.0 METHODS

2.1 General

- 2.1.1 The surveys were carried out in accordance with the Bat conservation Trust (BCT) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins 2016). It contains the methodologies for undertaking bat emergence and re-entry surveys. Buildings with low suitability were subject to one dusk emergence or dawn re-entry, whilst those with moderate suitability were subject to one dusk and one dawn survey. Therefore, the surveys complied with BCT guidelines.
- 2.1.2 The surveys were carried out by Lewis Wright (survey lead), Tom West (survey lead), Steven Whitcher, Jason Ashworth, Ben Lappage, Sally Wilding, Adam Penney, Claire Hesketh, Daniel Berry and George Offer. Lewis is a senior consultant, with over seven years' experience and is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Lewis holds a Natural England (NE) class 2 license for bats (2016-19937-CLS-CLS). Tom also holds an NE class 2 license for bats (2019-40871-CLS-CLS).

2.2 Emergence and re-entry surveys

- 2.2.1 Surveyors were positioned in locations with a good view of potential roost access points identified during the PRA (*Figure 2*). The dusk emergence surveys started 15 minutes before sunset and continued for 90 minutes after. The dawn re-entry surveys started 90 minutes before sunrise and continued for 15 minutes after.
- 2.2.2 Electronic equipment capable of detecting and recording the ultrasonic echolocation calls of bats in flight was used to record bat activity (Elekon Batlogger M and Peersonic RPA3 bat detectors). Species were identified from the characteristics of their calls (including peak frequency, minimum and maximum frequency, call duration, and inter-pulse interval). In addition, two infra-red cameras (Canon XA11 infra-red video camera with additional infra-red spotlight) were used to monitor difficult to see areas and/or the most suitable bat roosting features on each survey.
- 2.2.3 The surveys were carried out in weather suitable for bats to be active i.e. no rain, no strong wind and sunset air temperature 10°C or above. See *Table 1* for survey weather.

Table 1: Emergence and re-entry survey weather conditions

Date	Building Refs	Survey Type	Sunset/sunrise time	Start/end time	Temperature (°C) Start / End	Wind (Beaufort)	Cloud (Octas)	Precipitation
26.04.21	B45b	Dusk emergence	20:29	20:14 – 22:00	13 / 10	2	6	None
28.04.21	B45c	Dusk emergence	20:33	20:18- 22:03	10 / 10	2	5	None
11.05.21	B45b	Dawn re-entry	05:15	03:47 – 05:31	8 / 7	3	5	None

Date	Building Refs	Survey Type	Sunset/sunrise time	Start/end time	Temperature (°C) Start / End	Wind (Beaufort)	Cloud (Octas)	Precipitation
12.05.21	B45c	Dawn re-entry	05:13	03:49 – 05:30	7 / 8	1	5	None
08.06.21	B45b, B45c	Dusk emergence	21:34	21:19 – 23:04	19 / 16	1	1	None

2.3 Constraints and limitations

- 2.3.1 Available vantage points and the complex nature of building shape meant that not all areas of roof were viewable during each survey. However, vantage points were positioned appropriately to allow the identification of fly overs or emergences from these areas.
- 2.3.2 Two survey visits were carried out in a last week of April. Best practice guidelines suggest that surveys are carried out from May – August inclusive. As shown in section 3bats were recorded during these surveys and the weather conditions on these visits and in the preceding days was suitable for bat activity (see section 2.2.3). These surveys results are therefore considered to be valid.
- 2.3.3 The dawn re-entry surveys were carried out on mornings where the preceding evenings temperatures were above 10°C, as per guidance (Collins 2016). Bat activity was recorded during these surveys and the temperature on these surveys is not considered a constraint.

3.0 RESULTS

3.1 Dusk Emergence Survey 26.04.2021

- 3.1.1 A single common pipistrelle (*Pipistrellus pipistrellus*) emerged from the eaves (see *Plate 1*) on the south-west facing aspect of B45b at 20:41 (12 minutes after sunset), before flying south over the carpark and circling back to head north.

Plate 1. Location on eaves where single common pipistrelle emerged at 20:41.



- 3.1.2 The first bat recorded during the survey was a noctule (*Nyctalus noctula*) social call, recorded at 20:36 (7 minutes after sunset), which was heard not seen. Throughout the remainder of the survey, both common pipistrelle and soprano pipistrelle (*Pipistrellus pygmaeus*) were recorded, with most of the activity attributed to individuals continually foraging between a green area to the east of B45b and north of B45c, with occasional heard not seen calls recorded in other areas.

3.2 Dusk Emergence Survey 28.04.2021

- 3.2.1 A single common pipistrelle emerged from a gap beneath ridge tiles towards the north-eastern end of the roof (see *Plate 2*) on B45c at 20:59 (26 minutes after sunset), before commuting south.

Plate 2. Location on ridge line where single common pipistrelle emerged at 20:59.



- 3.2.2 Common pipistrelle were the only species recorded during the survey, with the first bat noted at 20:58 (40 minutes after sunset). Individual passes were recorded sporadically throughout the survey, with bats seen commuting south and north-west from the buildings towards tree lines on site.

3.3 Dawn Re-entry Survey 11.05.2021

- 3.3.1 No bats were recorded re-entering any of building 45b on any aspect.
- 3.3.2 Common pipistrelle were the only species recorded, with only low numbers of past recorded during the survey. Individuals were observed flying northwards towards the woodland adjacent to site. The last bat recorded was at 04:57 (18 minutes before sunrise).

3.4 Dawn Re-entry Survey 12.05.2021

- 3.4.1 No bats were recorded re-entering B45c on any aspect.
- 3.4.2 Individual common pipistrelle calls were recorded occasionally throughout the survey, most were heard, not seen. However, commuting was observed to the north of the building complex, with the bat likely heading towards the woodland adjacent to site.

3.5 Dusk Emergence Survey 08.06.2021

- 3.5.1 No bats were recorded emerging from any aspect of B45b or B45c.
- 3.5.2 The first bat recorded was a common pipistrelle at 21:47 (13 minutes after sunset), heading west to east over B45b. Sporadic passes from common pipistrelle and soprano pipistrelle were recorded throughout the survey, with most activity foraging along the east of B45b and commuting south-north and north-south. A single noctule pass was recorded at 23:03 (1 hour, 29 minutes after sunset).

4.0 EVALUATION AND CONCLUSIONS

4.1 Roosting Bats

4.1.1 Two bat roosts were identified during the surveys undertaken between April and June 2021. This includes:

- Common pipistrelle **day roost** with single bat emerging from eaves of B45b on the first dusk survey. Bats were not observed using this feature during the remaining surveys and therefore the low usage of this access point is sufficient to conclude this feature is used for day roosting.
- Common pipistrelle **day roost** with access point within a ridge tile gap on B45c. Bats were not observed using this feature during the remaining surveys and for similar reasons as above it is concluded this feature is used for day roosting.

4.2 Mitigation and Enhancement

Bat Mitigation Class Licence

4.2.1 The Conservation of Habitats and Species Regulations 2017 (as amended) contain three derogation tests for which the LPA and Natural England consider these when deciding whether to grant a license to a person carrying out as an activity that would harm an European Protected Species (EPS). Licensing is usually completed after planning and the three tests considered are:

- The licensed activity must be for imperative reasons of overriding public interest (IROPI);
- There must be no satisfactory alternative; and
- The favourable conservation status of the species must be maintained.

4.2.1 Two common pipistrelle roosts are to be lost as part of the proposed demolition works and future development. Common pipistrelle are considered 'common or widespread species, whilst day roosts are considered 'low conservation status roosts'. Therefore, the proposed development falls within criteria for registration under a Bat Mitigation Class Licence (BMCL). This approach offers a streamlined application process (usually turned around within 10 working days), but still takes into account the above three tests.

4.2.2 Mitigation under the BMCL will be finalised by the registered consultant. Broadly, this will comprise of:

- Provision of two bat boxes (one per roost) on suitable trees within the woodland to the east of B45b and B45c.
- A toolbox talk to all contractors to discuss working methods, risk of bats being present work areas, what to do if bats are found unexpectedly in and legal status of UK bat species;
- Working methodology will be agreed in collaboration between the BMCL holder and contractors on site.

Enhancement

4.2.3 In line with the National Planning Policy Framework (NPPF 2019) and the Manchester City Councils Core Strategy (2012-2027) (Policy EN15), a number of the following mitigation and enhancement options should be considered to maximise the ecological value of the site's habitats following implementation of the proposed development:

- Input from an ecologist regarding landscape management, with the aim of providing details in regard to habitat management and maintenance in order to ensure the long-term viability of the site for local wildlife.
- To enhance the sites attractiveness for foraging and commuting bats it is recommended that soft landscaping is implemented incorporating night-scented plants and linear features (such as hedgerows and tree lines). The plants will attract night-flying insects which in turn offer foraging resources for local bats, whilst linear features will provide commuting corridors across site and connections to off site habitats.
- To enhance the sites suitability for roosting bats, at least 12 additional bat boxes should be incorporated within the final scheme. This should ideally be using integrated bat boxes (i.e. built into building fabric) or mounted boxes on new builds or suitable retained trees. These should installed at a height of at least 4 m, and orientated on the south-east, south, or south-west aspect of the building or trees.
- External lighting as part of proposals should be designed in line with the Institute of Lighting Professionals (ILP, 2018) *Guidance Note 08/18 'Bats and Artificial Lighting in the UK'* and aim to keep a <1 lux increase in light levels of current and any newly established potential foraging and commuting resources both during the construction and operational phases.

5.0 REFERENCES

CIEEM (2019), *On the Lifespan of Ecological Reports & Surveys*, Advice Note, <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

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

HMSO, *The Wildlife and Countryside Act 1981* (Variation of Schedule 9) (England and Wales) Order 2010.

Institute of Lighting Professionals (ILP) (2018) *Bats and artificial lighting in the UK – Guidance Note 08/18*, Bats and the Built Environment series.

Manchester City Council (2012), *Manchester Core Strategy 2012-2027*, Available at: https://secure.manchester.gov.uk/info/200074/planning/6573/core_strategy_2012-2027

National Planning Policy Framework (NPPF). (2019). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

6.0 FIGURES

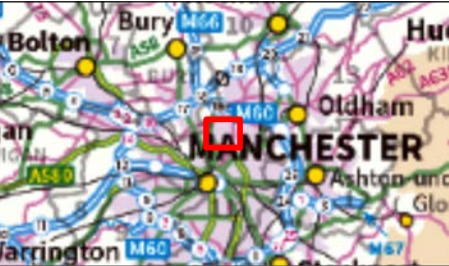
Figure 1 – Site Location Plan

Figure 2 – Surveyor & Roost Locations



Legend:
 Site boundary

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

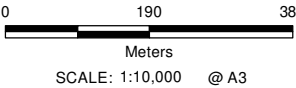


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North Manchester General Hospital



TITLE: Figure 1:
Site Location Plan



REV 00





- Legend:
- Site boundary
 - Building bat roost potential**
 - Moderate
 - Low
 - Negligible
 - Survey results reported Separately
 - Bat Surveyor Location
 - Line of sight
 - Bat Roost

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter



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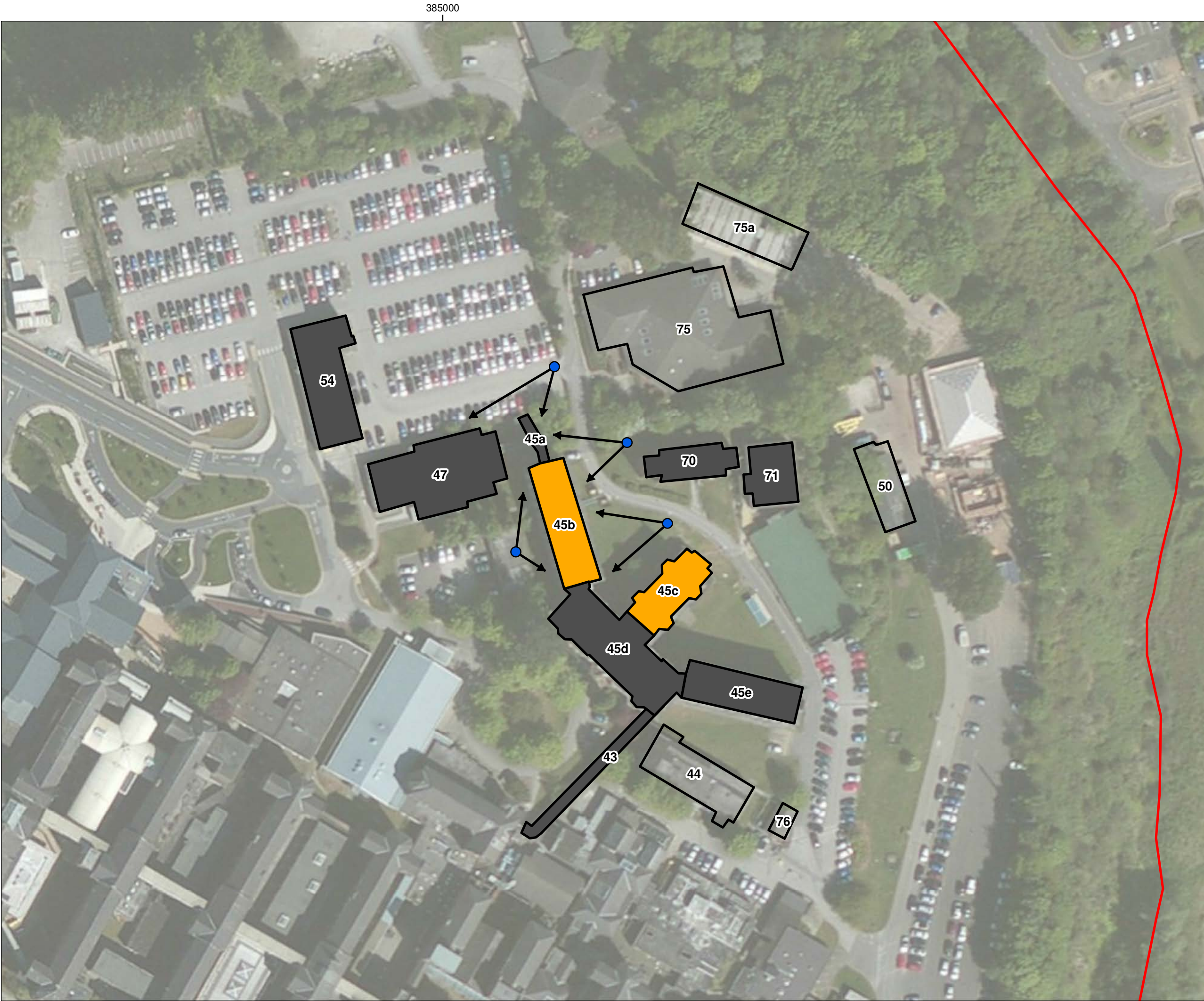


TITLE: Figure 3:
Bat Surveyor Locations
28th April 2021 Dusk Survey

02040MetersSCALE: 1:1,000 @ A3

NWSE

REV 00



Legend:

- Site boundary
- Building bat roost potential**
 - Moderate
 - Low
 - Negligible
- Survey results reported Separately
- Bat Surveyor Location
- Line of sight

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter



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TITLE: Figure 4:
Bat Surveyor Locations
11th May 2021 Dawn Survey

02040

Meters

SCALE: 1:1,000 @ A3

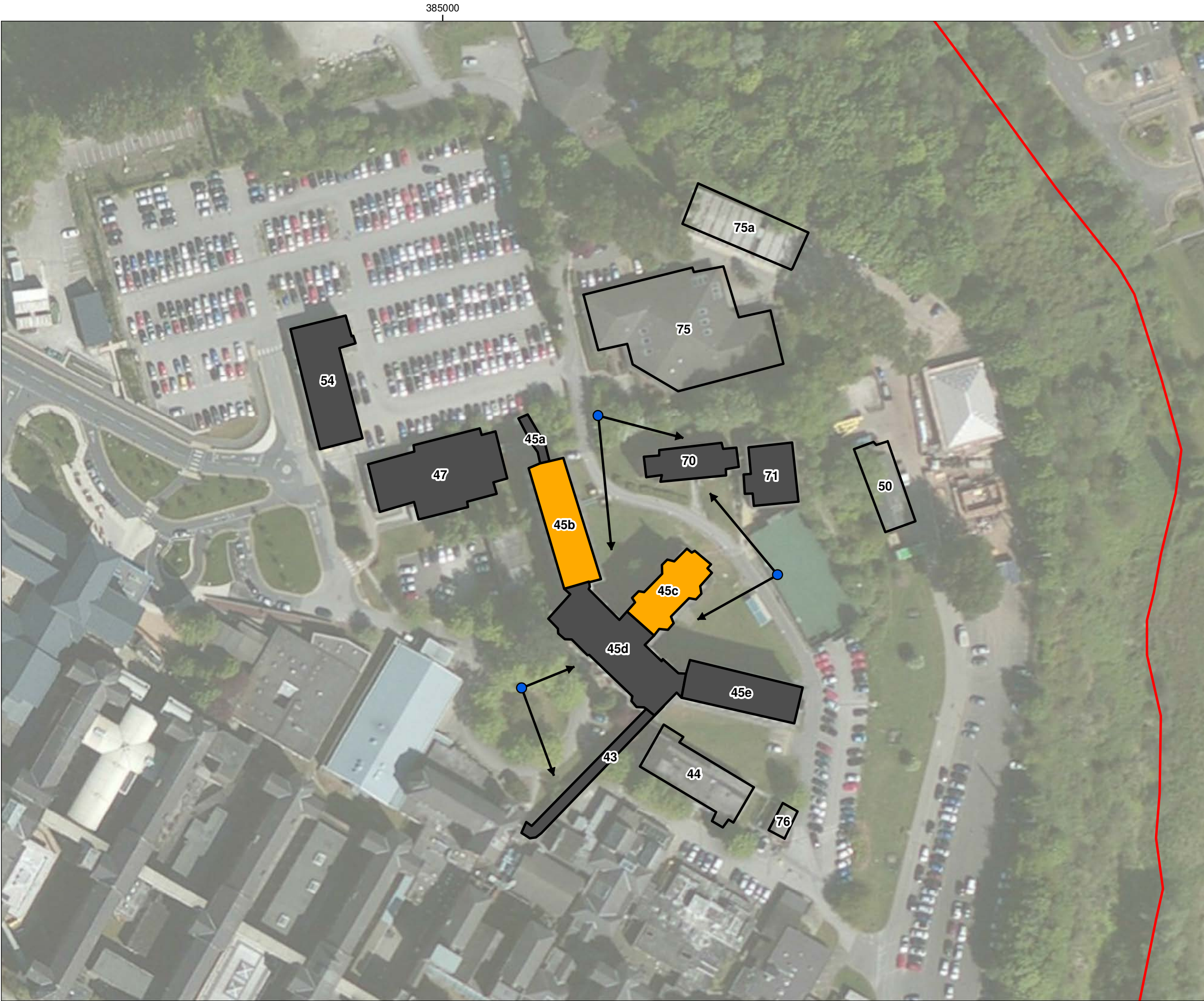
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REV 00



Legend:

- Site boundary
- Building bat roost potential**
 - Moderate
 - Low
 - Negligible
- Survey results reported Separately
- Bat Surveyor Location
- Line of sight

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter



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TITLE: Figure 5:
Bat Surveyor Locations
12th May 2021 Dawn Survey

02040MetersSCALE: 1:1,000 @ A3

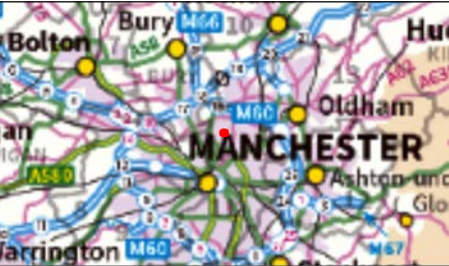
NWSE

REV 00



- Legend:
- Site boundary
 - Building bat roost potential**
 - Moderate
 - Low
 - Negligible
 - Survey results reported Separately
 - Bat Surveyor Location
 - Line of sight
 - Bat Roost

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

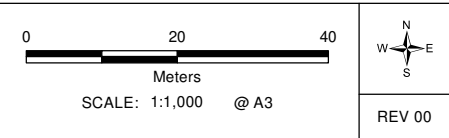


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Rev	Date	Description	Drm	Chk	App

North Manchester General Hospital



TITLE: Figure 6:
Bat Surveyor Locations
8th June 2021 Dusk Survey



APPENDIX A – LEGISLATION

All species of British bat are protected by The Wildlife and Countryside Act 1981 (as amended) extended by the Countryside and Rights of Way Act 2000. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat while it occupies a bat roost.

Bats are also European Protected Species listed on The Conservation of Habitats and Species Regulations 2010. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats, including in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii) hibernate or migrate, where relevant; or (b) to affect significantly the local distribution or abundance of the species to which they belong.
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.