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BAT SURVEY REPORT

42-50 THOMAS STREET, MANCHESTER

REC REFERENCE: 1CO101531EC1R1

REPORT PREPARED FOR: REAL ESTATE INVESTMENT PARTNERSHIP LIMITED

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DELIVERING ENVIRONMENTAL AND RISK MANAGEMENT SOLUTIONS

QUALITY ASSURANCE

Issue/revision	Issue 1	Revision 1	Revision 2
Remarks	Bat Scoping Survey	Emergence survey added	
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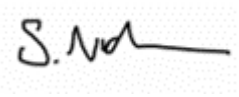
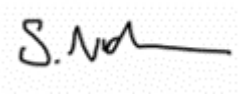
Signature			
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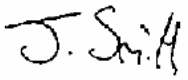
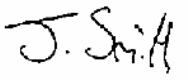
Signature			
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EXECUTIVE SUMMARY

Site Address	42-50 Thomas Street, Manchester, M4 1NA
Grid Reference	SJ 84380 98607
Site Area	Approximately 0.02 hectares
Current Site Use	Existing and vacant retail units used as commercial businesses.
Proposed Development	The conversion of the existing premises into a five-storey unit with retail units within the basement and ground floor, as well as residential units to the upper floors.
Adjacent Site Use	Commercial and retail businesses.
Results and Conclusions	The buildings on site were assessed as being of **low potential** for roosting bats. Subsequently, a single bat emergence survey was undertaken in August 2019. No bats were seen emerging from the building during the emergence survey and are considered to be likely absent.
Recommendations	In the highly unlikely event that a bat is encountered on site during works, work should stop immediately and a suitably qualified ecologist informed. Ecological enhancements have been recommended including the installation of bat roosting boxes and native planting.

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1. INTRODUCTION

1.1 Background

Resource and Environmental Consultants (REC) Ltd has been commissioned by Real Estate Investment Partnership Limited to undertake a Bat Survey at 42-50 Thomas Street, Manchester; hereafter referred to as the 'site'. The development proposals include the conversion of the existing premises into a five-storey unit with retail units within the basement and ground floor, as well as residential units to the upper floors. The Site Location Plan is available as **Drawing 1** (appended).

The assessment has been produced in line with best practice guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2015) and the Bat Conservation Trust (Collins (ed.), 2016).

1.2 Previous Surveys

A Bat Scoping Survey was conducted by REC Ltd. in 2016 which deemed the structures on site to be of low potential for roosting bats in accordance with best practice guidelines (Collins, 2016). Consequently, a dusk emergence survey was carried out in August 2016. No bats were recorded emerging from the building and limited bat activity was observed. No further surveys or mitigation measures were recommended.

1.3 Objectives

The purpose of the Bat Scoping Survey and further emergence/re-entry survey is to:

- complete an inspection the building on site to determine whether it is used by roosting bats;
- evaluate the potential of the site to support bats for roosting, foraging and commuting purposes;
- determine the need for mitigation and compensation with regards to legislation, best practice guidance and planning policy;
- identify any need for licensing by Natural England; and,
- assess the potential for enhancement of the natural features identified on the site/habitat creation in line with best practice and planning policy.

1.4 Site Description

The site is situated amongst a row of shops within Manchester city centre which can be accessed by foot via Thomas Street. The site is surrounded by commercial and retail buildings, as well as roads. The site previously comprised two shops; however, the corner of the building on Kelvin Street has recently been demolished (prior to the 2016 Emergence Survey).

1.6 Legislative Framework

All bat species are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act (2000) and the Conservation of Habitats and Species Regulations 2017. Together, this legislation makes it illegal to:

- intentionally or deliberately take, kill or injure a bat;
- cause damage to, destruction of, and obstruction of access to, a bat roost; and,
- disturb a bat occupying a roost.

A bat roost is defined in the legislation as "*any structure or place which a bat uses for shelter or protection*".

Furthermore, bats and their roost sites are a material planning consideration under the National Planning Policy Framework (NPPF) (2019). This report provides information to allow the local planning authority to consider any potential impacts upon bats when making a planning decision.

1.7 Confidentiality

REC has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from REC. A charge may be levied against such approval.

2. METHODOLOGY

2.1 Desk Study and Consultation

The desk study involved conducting database searches for statutory and non-statutory designated sites within 1 kilometre (km) of the site that may include bats or bat habitats as a qualifying feature. A search for statutory European designated sites qualified for bat species within 10 km of the site was also conducted. Furthermore, a search for priority habitats within 1 km of the site was undertaken. The perimeter of the site was used as the border for all searches. The following resources were used:

- MAGIC (Multi-Agency Geographical Information for the Countryside) website;
- Ordnance Survey (OS) mapping (to identify potentially notable habitats);
- aerial photography (e.g. Google mapping); and,
- priority habitats and species derived from Section 41 of the Natural Environment and Rural Communities Act (NERC Act, 2006).

2.2 Bat Scoping Survey

The Bat Scoping Survey of the site was carried out on the 21st May 2019 by suitably qualified ecologist James Smith (B.Sc. (Hons), GradCIEEM). Weather conditions on the day were warm and dry. Any features that had the potential to be used by bats for roosting were assessed following the criteria in **Table 2.1**.

Any linear features on site, with good habitat connectivity to the wider landscape and potential foraging areas, were also assessed. Habitats were classified into categories depending on potential roost features and habitat connectivity. These categories (adapted from Collins 2016) can be found in **Table 2.2.**

Table 2.1. Bat roosting potential criteria

Roosting Habitats	
Suitability	**Description**
Confirmed Roost	Presence of bats or evidence of bats identified. For example, through droppings, sightings, or previously undertaken surveys (dependent on time elapsed). Confirmed roosts may require additional surveys.
High	Building/Structure or tree with multiple opportunities for one or more species of roosting bat. Likely to be used as a maternity roost. Optimal orientation. Good connectivity to optimal foraging habitats including waterbodies, woodlands, or grasslands.
Medium	Building/Structure or tree with some opportunities for roosting bats. Preferable orientation. Connectivity to moderate to high quality foraging habitat available.

Low	Building/Structure or tree with limited opportunities for roosting bats. Poor connectivity to foraging habitat (may be located within an urban setting). No potential for high numbers of bats, or a maternity roost.
Negligible	Building/Structure or tree with no or very limited opportunities for roosting bats. Little to no connectivity to foraging habitat.

Table 2.2. Bat foraging and commuting potential criteria

Commuting and Foraging Habitats	
Suitability	**Description**
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, treelined watercourses and grazed parkland. Site is close to and connected to known roosts.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.

2.3 Bat Emergence/re-entry Surveys

As the proposals include the demolition of the building with low bat potential, one bat emergence survey was carried out. Two surveyors were utilised to ensure all points of interest were able to be surveyed. Surveyor position (vantage points) can be seen in **Drawing 2** (appended). The surveys were undertaken by suitably qualified ecological consultants James Smith (B.Sc. (Hons), GradCIEEM) and Sarah Nicholson (B.Sc. (Hons), M.Sc., GradCIEEM).

The surveys were undertaken in line with best practice guidelines (Collins, 2016). Surveys were conducted with Batbox Duet heterodyne/split frequency bat detectors and full spectrum Echo Meter Touch 2 Pro (for android). Batbox Duet recorded to Zoom and Roland recorders, for further analysis of sonograms where necessary. The details of the timings, weather, and sunset/sunrise can be found in **Table 2.3.**

Table 2.3 Bat emergence survey timings

Date	Start Time	End Time	Sunset/Sunrise	Weather
15/08/2019	20:23	20:08	20:38	15°C with 10% cloud cover, a light breeze and no rain.

2.4 Limitations

Bat Scoping Surveys are limited by a variety of factors which affect the presence of flora and fauna (e.g. climatic variation, season and species behaviour). A lack of evidence of roosting bats during a survey does not mean that roosting bats are absent; hence the survey also records and assesses the suitability of habitats to support such species. The time frame in which the survey is implemented provides a snapshot of activity within the survey area and cannot necessarily detect all evidence of use by bats which can occupy buildings at different times of year. The survey was completed in May 2019. It should be noted that every effort has been made to provide a comprehensive description of the site.

The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. This is based on the suitability of the habitat, known distribution of the species in the local area and any direct evidence within the survey area. It should not be taken as providing a full and definitive survey of bats. Desk study information is not likely to be exhaustive and it is therefore possible that bat species not identified during the data search do in fact occur within the vicinity of the site.

3. SURVEY FINDINGS

3.1 Desk Study

3.1.1 Aerial Photography, MAGIC and OS Maps

Aerial photography suggests that the site is located in an urban area of Manchester, with few trees and parks nearby. The River Irwell is located approximately 560 metres (m) west of the site. The area comprises retail units and connecting roads, with very little suitable habitat for foraging and commuting bats.

There are no statutory designated sites, which include bats within the citation, within 1 km of the site boundary. There are no European designated sites within 10 km which include bats as a qualifying feature.

There have been 12 granted European Protected Species Mitigation (EPSM) licences within 1 km of the site with the closest located approximately 200 m from the site. The licence applications include:

- one application for the destruction of a common pipistrelle (*Pipistrellus pipistrellus*) resting roost in 2013;
- three applications for the destruction of a common pipistrelle resting roost in 2014;
- three applications for the destruction of a common pipistrelle resting roost in 2015;
- three applications for the destruction of a common pipistrelle resting roost in 2016; and,
- two applications for the destruction of a common pipistrelle resting roost in 2017.

3.1.2 Priority Habitats

Consultation with Natural England's 'Magic Map' website identified several areas of deciduous woodland within 1 km of the site; however, the closest is approximately 820 m north.

3.2 Survey Visit

3.2.1 Bat Roosting

The three-storey brick-built building (B1) on site was a disused shop at the time of survey. A further building (B2) had been partially demolished prior to the survey visit, and the remaining section could not be inspected internally due to health and safety concerns. A detailed description of the buildings is provided below, with photographs available in **Table 3.1**. The location of the buildings can be found in **Drawing 1**. The result of this survey corresponded with the previous survey in 2016.

3.2.1.1 External Inspection of B1

The main building consisted of a three-storey brick-built building with a slate roof. The brickwork was in good condition on the northern facing; however, the eastern facing had gaps where the neighbouring building had been demolished. The wooden fascia boards were in poor condition which had created gaps. The main body of the roof could not be viewed from outside of the building; however, some aspects of the roof could be observed from inside and appeared to be in good condition. No evidence of bats (e.g. droppings, scratch marks, feeding remains, or urine stains) were observed on the building. There were street lights to the north of the building which are likely to illuminate the building.

3.2.1.2 Internal Inspection of B1

3.2.1.2.1 Ground Floor

The ground floor was a disused shop consisting of five rooms. A false ceiling was in place with the occasional ceiling tiles missing with patches of water damage. Where the true ceiling could be observed, through missing tiles, it appeared to consist of well-sealed boarding.

3.2.1.2.2 First Floor

The second floor had a solid floor and ceiling, however the ceiling had collapsed in the north western corner. A light gap was present between the floor and wall in the corner of the north eastern facing. An area of wooden cladded wall is present to the south east of the building. This cladding was broken in some places revealing an open window potentially giving access for bats behind the cladding.

3.2.1.2.3 Second Floor

There appeared to be no roof void present but the roof was in poor condition and had collapsed in places. The windows on this level provided views onto the southern aspect of the roof. There were also gaps present where the roofing beams met the wall. The windows were broken in the southern room.

3.2.1.3 Summary

No evidence of bats (live bats, dead bats, droppings, urine stains, scratch marks, smudge marks, audible noises, piles of moth wings) were seen on, or inside any of the structures to be demolished. B1 was deemed as being of **low potential** for roosting bats due to the opportunities for roosting bats within the exterior of the building.

3.2.1.4 External inspection of B2

B2 consisted of a partially demolished brick-built building with scaffolding. The demolition had resulted in gaps in the brick work. No evidence of bats was observed; but, due to health and safety reasons, the northern view of the building could only be observed from behind a fence.

3.2.1.5 Summary

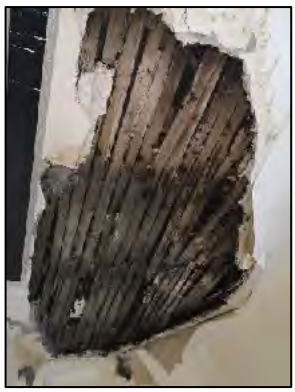
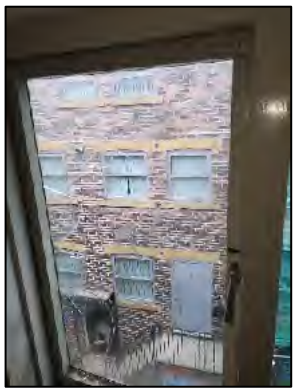
No evidence of bats (live bats, dead bats, droppings, urine stains, scratch marks, smudge marks, audible noises, piles of moth wings) were seen on, or inside any of the structures to be demolished. As there were some suitable roosting features in the form of access points within the brickwork, and as there are limited foraging and commuting habitats present, B2 is assessed as having **low potential** for roosting bats.

Table 3.1 Photographs of the building and features.

Feature	Description of feature
	The exterior (north facing) view of the front of B1. This is a three-storey brick-built disused building.

 	A view of the eastern side of B1.
	The wooden fascia boards of B1 were in poor condition.
	A view of a ground floor room of B1. Some of the ceiling tiles were missing.

	An example of a missing ceiling tile exposing the boarded ceiling of the ground floor in B1.
	A gap between the floor and adjoining walls within a room on the second floor of B1.
 	A gap exposing behind the cladding on the second floor of B1.

	A gap in the ceiling on the first floor exposing the wooden slats of the roof of B1.
	A third floor room of B1.
	Broken window on the third floor of B1.
	A gap in the ceiling exposing the wooden slats of the roof of B1.

	A gap in the ceiling exposing the slate roofing tiles of B1.
	A gap where the beam meets the ceiling on the third floor of B1.
	The northern side of B2.

3.2.2 Bat Foraging and Commuting

The site, which is mainly hardstanding and buildings, is considered to be of **negligible** potential for foraging and commuting bats.

3.2.3 Bat Emergence Surveys

The bat emergence survey was carried out on the on the 16th August 2019. A low amount of bat activity was recorded, with only one unidentified pipistrelle (*Pipistrellus* sp.) observed foraging adjacent to the west of the building. A summary of the results can be seen in **Table 3.2.**

Table 2.3 Bat emergence survey timings

Time	Species	Map reference	Comment
21:00	Unidentified pipistrelle	A	Seen not heard due to the distance from the surveyor. The bat was foraging above the building.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Evaluation and Potential Impacts

B1 and B2 were considered to be of **low potential** to support roosting bats. There is limited available habitat with the wider area being predominantly urban with little foraging habitat; however, there are some suitable bat access points (broken windows and gaps in the roof) and there have been 12 EPSM licences granted for the destruction of bat roosts within 1 km of the site suggesting common pipistrelles are using the surrounding urban area.

No bats emerged from the building during the bat emergence survey and are therefore considered to be likely absent. Subsequently, no further surveys or mitigation measures are considered necessary.

4.2 Recommendations

In the highly unlikely event that a bat is encountered on site during works, work should stop immediately and a suitably qualified ecologist informed.

Best practice building measures for bats are recommended, including:

- the use of breathable roofing membranes or similar (poly-spun fibres that may increase bat entanglement and death) is to be avoided. It is recommended that a 'bat friendly' alternative is used; and,
- the use of chemical timber treatment and/or chemically treated wood for pests and fungi must comply with Natural England current guidance on products that are safe to use for a bat roost (https://www.gov.uk/guidance/bat-roosts-use-of-chemical-pest-control-products-and-timber-treatments-in-or-near-them).

4.3 Ecological Enhancements

The proposed development includes a number of landscaping features. A number of habitat enhancements are proposed in accordance with the NPPF (2019) which states that development should: *"contribute to conserving and enhancing the natural environment".* The following ecological enhancements are proposed in order to provide ecological enhancements on the site.

4.3.1 Native Planting Scheme

In line with the NPPF, it is recommended that if any tree and shrub planting is proposed for landscaping/screening purposes, the planting should include native fruit bearing specimens to increase foraging opportunities for insects (and subsequently bats) within the site. Species such as dogwood (*Cornus sanguinea*), hazel (*Corylus avellana*), rowan (*Sorbus aucuparia*) and wild cherry (*Prunus avium*) are considered appropriate for this development as they have both aesthetic and nature conservation qualities.

4.3.2 Bat Boxes

To further enhance this tree lines for bats through providing greater roosting opportunities, it is recommended that multipurpose bat boxes are to be installed on the existing or newly created buildings. The recommended bat boxes are detailed in **Table 4.1** below.

Table 4.1 Bat Box Specifications

Bat Box Specifications	Photograph
1FF Schwegler Bat Boxes With Built-in Wooden Rear Panel Height: 43.0 cm; Width: 27.0 cm; Depth: 14.0 cm Entrance hole: 12.0 cm x 24.0 cm; Weight 9.5 kg The Schwegler 1FF bat box is spacious enough for bats to use as a summer roost or nursery sites and is open at the bottom, allowing droppings to fall out so it does not need cleaning. The 1FF is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years. Source:http://www.nhbs.com/title/158636/1ff-schwegler-bat-box-with-built-in-wooden-rear-panel	
Kent Bat box Two 25 mm cavities provide plenty of roost space in this self-cleaning box which has been left untreated. The two protruding nail heads on the front of the box provide a handy anchor point when strapping the box to a tree or pole. These bat boxes are suitable for crevice-dwelling species, such as common, soprano and Nathusius pipistrelle, Barbastelle, Brandt's and whiskered bats. These boxes should be sited at least 2 metres above ground and away from artificial light sources. Suitable for attaching to trees, fences and external walls. Source: https://www.nhbs.com/nhbs-kent-bat-box	

5. REFERENCES

- Bat Conservation Trust (2018). Guidance Note 08/18; Bats and artificial lighting in the UK.
- Chartered Institute of Ecology and Environmental Management (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland.
- Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition. Bat Conservation Trust.
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- Natural England (2019) MAGIC Map. URL https://magic.defra.gov.uk/
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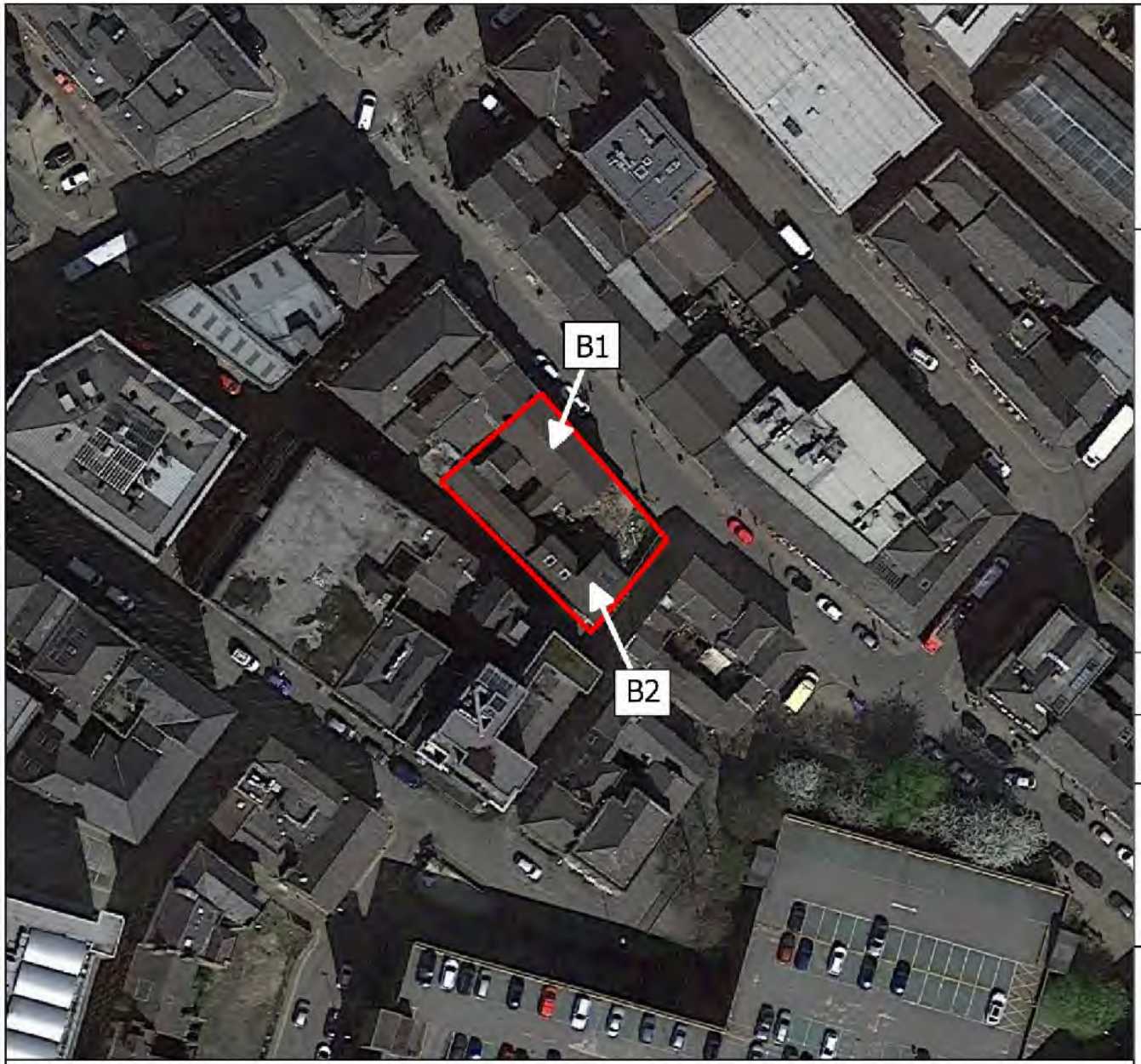
- QGIS Development Team (2019) QGIS Geographic Information System. Open Space Geospatial Foundation Project. URL http://qgis.org

Drawings

- Drawing 1 - Site Location Plan
- Drawing 2 – Bat Activity

DRAWING 1 – Site Location Plan



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Key

Site boundary

Site: 42-50 Thomas Street, Manchester

Title: Site Location Plan

Job number: 1CO101531
Drawing: 1CO101531-001
Version: 01
Date: May 2019
Author: SN

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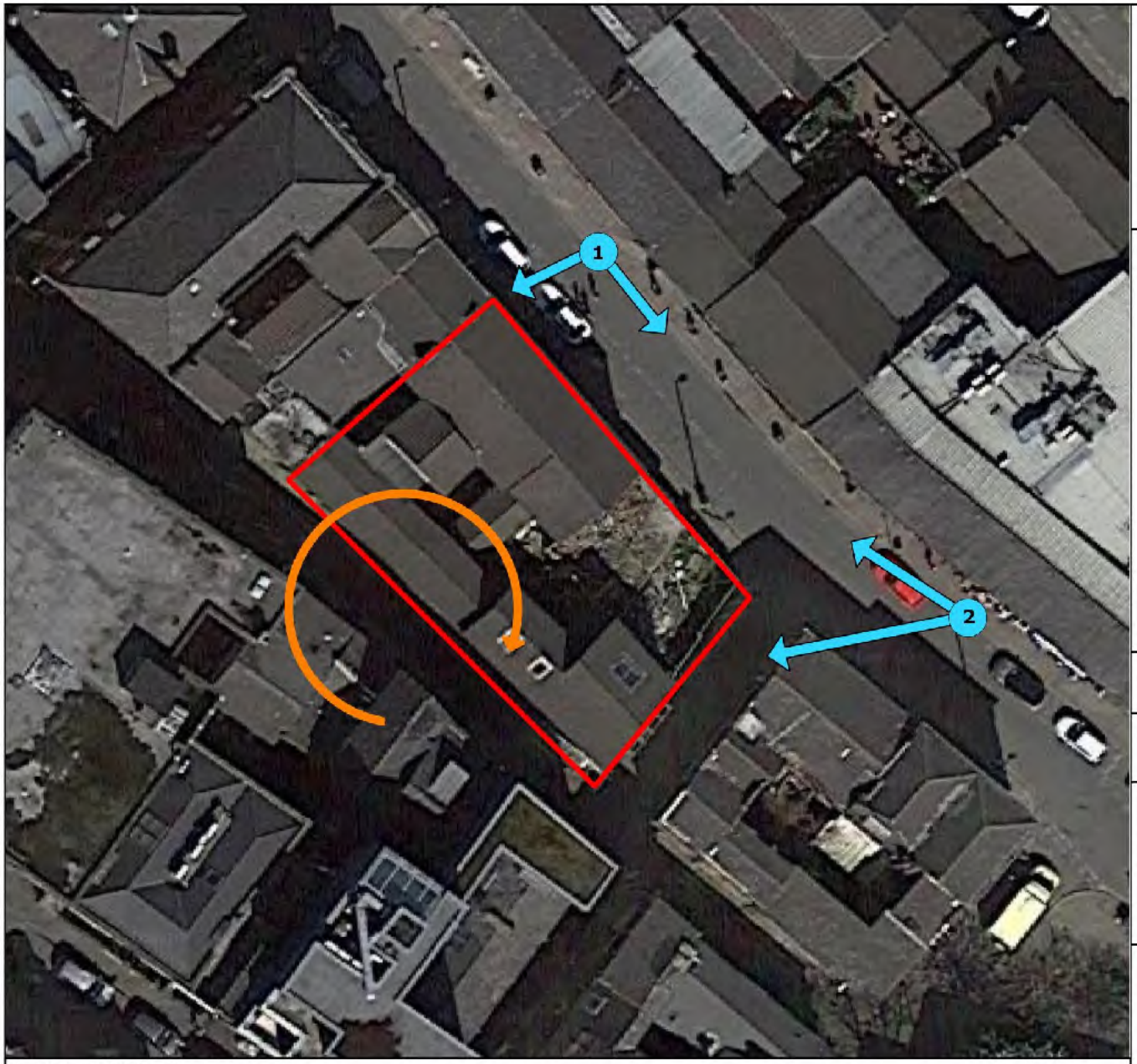
DRAWING 2 – Bat Activity



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Key
Site boundary
Vantage point
Vantage positions
Bat activity

Site: 42-50 Thomas Street, Manchester

Title: Bat Activity

Job number: 1CO101531
Drawing: 1CO101531-002
Version: 01
Date: August 2019
Author: SN

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