

Land at Phase 3, Crown Street, Manchester M15 4NP

BAT ACTIVITY SURVEY AT BUILDING 1 (GADDUM HOUSE)

September 2023

ERAP (Consultant Ecologists) Ltd Reference: 2022-117c

ERAP (Consultant Ecologists) Ltd
Building N2
Chorley Business and Technology Centre
East Terrace
Euxton Lane
Euxton
Chorley
PR7 6TE

Tel: 01772 750502

mail@erap.co.uk
www.erap.co.uk



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Document Control

Survey Type:	Surveyors	Survey Date(s)
Bat activity survey	Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM and assistants	7 th August 2023
Reporting	Personnel	Date
Author	Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM Senior Ecologist	13 th September 2023
Signature(s)		
Checked	Victoria Burrows B.Sc. (Hons) M.Sc. CEnv MCIEEM	13 th September 2023
Revised and issued	Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM	14 th September 2023
Report issued to	Renaker Build Ltd	
Version Number	1	

SUMMARY

Introduction and Scope

- i. This report presents the results of a bat activity survey undertaken at Building 1 (Gaddum House), Phase 3, Crown Street, Manchester M15 4NP. The survey was required to inform proposals to develop the site to four residential buildings.
- ii. A daylight licensed bat survey and assessment undertaken at the site in January 2023 did not detect any evidence of use of Building 1 (Gaddum House) by roosting bats and assessed the building to be of 'low' suitability for use by roosting bats.
- iii. This report presents the results of a bat activity survey (one dusk emergence survey) carried out at Gaddum House in August 2023. The survey was carried out by a qualified and experienced ecologist, with assistants, and is in accordance with recognised survey guidelines namely *Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition* (Collins, J. (Ed), 2016).
- iv. All other buildings were assessed to be of 'negligible' suitability for use by roosting bats; no further survey was required.

Results of Survey and Assessment

- v. No evidence of use of the buildings in the site boundary by roosting bats was detected during the daylight survey and assessment (January 2023) or during the bat activity survey undertaken in August 2023.
- vi. Building 1 (Gaddum House) is assessed to be of 'low' suitability for use by roosting bats owing to the presence of gaps at the timber soffits and under lifted slates and gaps in the mortar along the ridge tiles. In accordance with the survey guidelines, one dusk emergence presence / absence survey was carried out at Building 1 (Gaddum House); no bat emergence or re-entry was detected. The current / recent presence of roosting bats is reasonably discounted at Building 1 (Gaddum House).

Recommendations

- vii. The recommendations in **Section 5.0** outline all the mandatory measures and additional actions to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice.
- viii. No further surveys in relation to bats are required to inform the planning application.

1.0 INTRODUCTION

1.1 Background and Rationale

- 1.1.1 ERAP (Consultant Ecologists) Ltd carried out an ecological assessment of land at Phase 3, Crown Street, Manchester M15 4NP (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SJ 83273 97293. An aerial image of the site and its surrounding habitats is appended at **Figure 1** (source image: ESRI World Imagery).
- 1.1.2 The results of an ecological survey and assessment undertaken in January 2023, including a daylight licensed bat survey, are presented at *2023-117 Land at Phase 3, Crown Street, Manchester M15 4NP, Ecological Survey and Assessment* (ERAP (Consultant Ecologists) Ltd, 2023), hereafter referred to as the 'ecology report'.
- 1.1.3 The assessment was requested to inform a planning application proposing the development of the site to four residential buildings. The proposals will involve the demolition of the buildings at the site including Building 1 (Gaddum House).
- 1.1.4 The daylight licensed bat survey and assessment of the buildings did not detect any evidence of use of the buildings by roosting bats. Building 1 (Gaddum House) was assessed to be of 'low' suitability for use by roosting bats owing to the presence of gaps at the timber soffits and under lifted slates and gaps in the mortar along the ridge tiles. To inform the planning application and to comply with *Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition* (Collins, J. (Ed), 2016) a minimum of one bat activity survey was required at Gaddum House.
- 1.1.5 All other buildings were assessed to be of 'negligible' suitability for use by roosting bats; no further survey is required.

1.2 Scope of Works

- 1.2.1 The scope of ecological works undertaken in August 2023 comprised:
 - a. A bat activity (dusk emergence) survey supplemented with the use of night vision aids (NVAs);
 - b. The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and
 - c. The identification of any further surveys or precautionary actions that may be required to inform the progression of the site through the planning process or prior to the commencement of construction activities.

2.0 METHOD OF SURVEY

2.1 Presence / Absence Survey: Dusk Emergence Survey 7th August 2023

- 2.1.1 One dusk emergence survey, supplemented by night vision aids (NVAs), was conducted at Building 1 (Gaddum House) on 7th August 2023. The survey was conducted under suitable conditions.
- 2.1.2 The dusk emergence survey commenced at least 15 minutes before sunset, and continued until at least 1.5 hours after sunset.
- 2.1.3 Surveyors, experienced in conducting bat surveys, were positioned at suitable locations to maximise the coverage of the building to determine any entry or emergence by roosting bats. Any bat emergence or re-entry activity was recorded, with brief notes relating to bat activity at each survey position collated at the end of the survey.

- 2.1.4 Heterodyne detectors were used to determine any bat detected to species or group (*Myotis* species, for example, often cannot be reliably identified to species from their echolocation calls). Recording bat detector units¹ were also used to record and analyse echolocation calls after the survey using Anabat Insight bat call analysis software.
- 2.1.5 Night vision aids (NVA)², supplemented with additional infra-red lighting (comprising Nightfox XB5 torches and infra-red floodlights) were used at the surveyor positions described in **Table 2.1** and shown on **Figure 2**. Footage was subsequently reviewed using VLC Media Player to determine any bat emergence / re-entry at the building.
- 2.1.6 Photographs showing each survey position from the darkest point of the surveys are appended at **Photos 1 to 4**.
- 2.1.7 The date of the survey, surveyors, equipment used and weather conditions are presented at **Table 2.1**.

Table 2.1: Dusk Emergence Survey Date, Weather Conditions and Surveyors

Date	7 th August 2023
Sunset time:	20:55
Start & end time	20:40 until 22:35
Weather	15°C with scattered cloud and a light breeze (Beaufort scale 2)
Survey Position	Surveyor, Detector and NVA
1	Amy Sharples, Batbox III, Anabat Express & Canon XA60
2	Marisa Hensey, Anabat Scout & Nightfox Red
3	Stuart Laverick, Anabat Scout & Nightfox Red
4	Sue Lonsdale, Anabat Scout & Nightfox Red

2.2 Survey Limitations

- 2.2.1 The site was artificially lit during the survey. Internal lighting at Gaddum House was on throughout the survey and the northern area of the building (associated with Great Jackson Street and Silvercroft Street) were lit by street lighting.
- 2.2.2 No significant survey limitations were experienced.

2.3 Evaluation Methods

- 2.3.1 Government advice on wildlife, as set out in the *National Planning Policy Framework* (Ministry of Housing, Communities and Local Government, 2021) and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedules 1, 5, 6 and 8 of the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*, is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.

3.0 SURVEY RESULTS

3.1 Ecology Report

- 3.1.1 In accordance with the ecology report:

'Building 1 (Gaddum House) is a detached 3 storey office building which is partially used for storage. It is constructed from walls of mortared brick which support a hipped roof of slate with clay ridge tiles.'

¹ i.e. Anabat Express and Anabat Scout

² Canon XA60 and Nightfox Red infra-red binoculars

Gaps suitable for access by bats are present at the timber soffits and under lifted slates and gaps in the mortar along the ridge tiles.

Internally the building supports a vaulted ceiling; no access was possible to the void located under the ridge beam due to its height from the floor of the upper storey. The roofing slates are supported on traditional timber trusses.

The building supports features suitable for use by roosting bats, and in particular crevice dwelling species such as pipistrelle species. Features are present which cannot be thoroughly searched during a daylight inspection, such as gaps under roofing slates and any roofing membrane which may be present.

Taking into consideration the features present which are suitable for use by roosting bats, and the suitability of habitats present in the wider area for foraging and commuting bats, it is considered that Building 1 (Gaddum House) is of 'low' suitability for use by roosting bats. Further surveys will be required to determine the presence or absence of roosting bats at the building.'

3.2 Dusk Emergence Presence / Absence Survey 7th August 2023

- 3.2.1 The survey data from the 7th August 2023 are appended at **Table 8.1**.
- 3.2.2 No bat emergence or re-entry was detected at Building 1 (Gaddum House). Subsequent review of the NVA footage did not detect any emergence or re-entry activity.
- 3.2.3 Common pipistrelle (*Pipistrellus pipistrellus*) was the only bat species recorded during the survey with the pass detected to the south of the building at 21:14, 19 minutes after sunset. The first bat recorded to the north of the building was at 21:33, 38 minutes after sunset. Common pipistrelle passes were recorded throughout the survey with the last recorded pass at 22:35.

4.0 EVALUATION AND ASSESSMENT

4.1 Introduction and Description of Proposals

- 4.1.1 It is proposed to develop the site to residential buildings including an underground car park and associated landscaping, as presented at the following documents:
 - a. *Zone 1, Courtyard Elevation – East, Great Jackson Street, Dwg. No. Z1-SHP-G251-EL-XX-101 Rev. X01 (SimpsonHaugh, 2022);*
 - b. *Zone 1, Courtyard Elevation –West, Great Jackson Street, Dwg. No. Z1-SHP-G251-EL-XX-102 Rev. X01 (SimpsonHaugh, 2022);*
 - c. *Zone 1, Internal Elevation – North, Great Jackson Street, Dwg. No. Z1-SHP-G251-EL-XX-103 Rev. X01 (SimpsonHaugh, 2022); and*
 - d. *Zone 1, Internal Elevation – South, Great Jackson Street, Dwg. No. Z1-SHP-G251-EL-XX-104 Rev. X01 (SimpsonHaugh, 2022).*

- 4.1.2 **Section 4.2** provides an assessment of any impacts of the proposed development on bat species.

4.2 Bats

- 4.2.1 No evidence of use of Building 1 (Gaddum House) by roosting bats was detected during the daylight survey and assessment carried out in January 2023. Building 1 (Gaddum House) is assessed to be of 'low' suitability for use by roosting bats owing to the presence of gaps suitable for access by bats at the timber soffits and under lifted slates and gaps in the mortar along the ridge tiles.

- 4.2.2 No bat emergence or evidence of a roost was detected during the dusk emergence survey on 7th August 2023. The current / recent presence of roosting bats is reasonably discounted at Building 1 (Gaddum House).
- 4.2.3 Common pipistrelle was recorded flying over the site. Subject to adherence to the guidance provided in relation to the avoidance lighting and / or implementation of an appropriate lighting strategy, as detailed in Section 5.3 of the ecology report, the proposed works are not likely to affect the suitability of the site and surrounds for use by foraging bats.

5.0 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Survey Validity for Roosting Bats

- 5.1.1 If the demolition works have not commenced before the next bat activity survey season (i.e. May / June 2024) then an updated survey will be required to ensure that the findings of this assessment remain accurate for the site.

5.2 Scope of Recommendations

- 5.2.1 For completeness the recommendations presented in the ecology report are replicated below.
- 5.2.2 These recommendations aim to ensure that the development is implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice.
- 5.2.3 In accordance with Chapter 15, paragraph 180(d) of the NPPF:
'opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate'.
- 5.2.4 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified.
- 5.2.5 All recommendations are appropriate to the geographical area, the habitats in the wider area, the wildlife present in the local area (and likely to use the site post-construction) and take into consideration the end use of the site as a residential development.

5.3 Protection of Existing Features and Wildlife During Construction Phase

Protection of Existing Vegetation

- 5.3.1 During the construction phase, temporary protective demarcation fencing will be used to protect any off-site habitats to be retained. Where relevant the fencing will be in accordance with BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations* (BSI, 2012).

Dust Suppression, Incidents and Accidents

- 5.3.2 The risk of adverse effects on off-site habitats and wildlife as a result of dust, spills and leaks will be controlled by the application of best practice measures and appropriate environmental controls such as dust suppression, appropriate storage of chemicals and fuel, presence of spill kits and appropriate training of on-site personnel.

Lighting

- 5.3.3 Paragraph 185c of the NPPF (Ministry of Housing, Communities and Local Government, 2021) states that development should:

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

- 5.3.4 Any lighting to be used during the construction phase must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over the retained habitats as lighting overspill may deter use by wildlife such as foraging bats.

Invasive Plant Species and Biosecurity

- 5.3.5 To minimise the risk of introduction of invasive species to the site all machinery / plant to be brought to the site must be clean. Wheels / tracks of machinery / plant must have been pressure washed before use at the site. No excessive remnant soil or plant material from other sites must be present on the machinery / plant or in the tyre treads as this may increase the risk of spread of non-native and invasive plant species e.g. Japanese Knotweed (*Fallopia japonica*) and Giant Hogweed (*Heracleum mantegazzianum*).

Protection of Nesting Birds

- 5.3.6 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. It is advised that any works such as vegetation clearance that will affect habitats suitable for use by nesting birds are scheduled to commence outside the bird nesting season. Commencement of works in the nesting season must be informed by a pre-works nesting bird survey, carried out by a suitably experienced ecologist. The bird breeding season typically extends between March to August inclusive.
- 5.3.7 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

5.4 Provision of Opportunities for Nesting Birds

General and Swift Bird Boxes

- 5.4.1 The installation of two general bird nest boxes and two swift nest boxes is recommended at the proposed new buildings.
- 5.4.2 The boxes will not be positioned over windows or doorways where droppings may become a nuisance. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest. Suitable bird nest boxes are available from NHBS Ecology (www.nhbs.com) or Wild Care (www.wildcare.co.uk) and an example is presented at **Insert 1**:



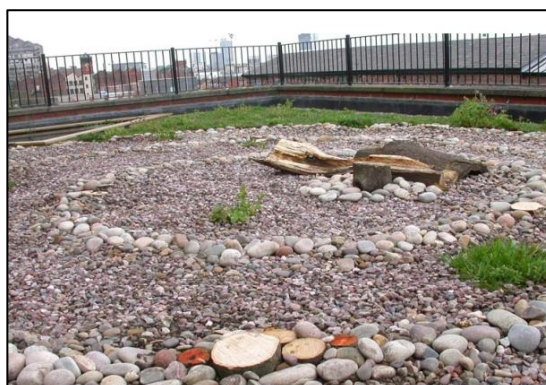
Insert 1: Schwegler 1MR Avianex and swift nest box

Black Redstart

- 5.4.3 If flat roofs are proposed at the new development at the sites, the opportunity to create suitable habitats for use by black redstart (*Phoenicurus ochruros*), a GMBAP Priority Species, should be taken.
- 5.4.4 The species action plan states that '*Records held from 1992 to 2007 show that black redstarts have bred or attempted to breed within the Piccadilly Basin area of central Greater Manchester every year except 2003. The total city population is unknown, but may be as low as 2 to 3 pairs.*' (Greater Manchester Biodiversity Project, 2008).
- 5.4.5 The inclusion of feeding and nesting habitat onto any proposed areas of flat roof at the proposed development will enhance the ecological value of the sites.

Habitat for Feeding Black Redstart

- 5.4.6 To boost the availability of invertebrate food for black redstart it is recommended that a section of the roof is covered with a mixed sized aggregate to a varied depth of between 0.05 and 0.2 metres.
- 5.4.7 The aggregate pieces should range in size from 0.10 to 0.15 metres diameter. The aggregate must cover a minimum area of 30m² to be effective.
- 5.4.8 **Insert 2** shows an example of a more extensive aggregate covered roof as an example. The aggregate will be colonised by small plants and will attract invertebrates for foraging black redstart and their young.



Insert 2: Example of aggregate placed on city roof for the attraction of Black Redstart

Installation of Two Black Redstart Boxes

- 5.4.9 Two Schwegler 2HW nest boxes will be installed on a north-facing wall within the roofing area. These nest boxes are recommended in the GMBAP for black redstart.
- 5.4.10 The model of box is shown at **Insert 3**.



Insert 3: Suitable bird boxes for black redstart

5.4.11 Suitable boxes can be purchased from www.nhbs.com.

Management and Maintenance

5.4.12 The black redstart nest boxes are to be checked annually in September / October. Old nest material and other debris will be removed and any damaged or fallen boxes to be repaired / reinstated.

5.5 Landscape Planting

5.5.1 It is recommended that the landscape planting within the site is composed from native species and species known to be of value for the attraction of wildlife.

5.5.2 It is recommended that trees which support blossom and fruit which will attract insects are incorporated into the landscape planting. Suitable species are presented at **Table 5.2**.

Table 5.1: Suitable Native Species for Tree and Shrub Planting

Scientific Name	Common Name	Scientific Name	Common Name
<i>Acer campestre</i>	Field Maple	<i>Prunus spinosa</i>	Blackthorn
<i>Corylus avellana</i>	Hazel	<i>Rosa arvensis</i>	Field Rose
<i>Crataegus monogyna</i>	Hawthorn	<i>Rosa canina</i>	Dog-rose
<i>Ilex aquifolium</i>	Holly	<i>Sambucus nigra</i>	Elder
<i>Malus sylvestris</i>	Crab Apple	<i>Sorbus aucuparia</i>	Rowan
<i>Prunus avium</i>	Wild Cherry	<i>Ulmus glabra</i>	Wych Elm
<i>Prunus padus</i>	Bird Cherry	<i>Viburnum opulus</i>	Gelder Rose

5.5.3 The understorey and ground cover planting design should be prepared to optimise the attraction of invertebrates such as feeding bumblebees and butterflies. Where possible the use of native species should be maximised but where necessary non-native species known to be attractive to invertebrates should be used.

5.5.4 Planting schemes that include flowering species such as *Viburnum*, *Ceanothus*, *Hebe*, *Lavandula*, *Lonicera*, *Potentilla*, *Rosmarinus* and *Vinca* can maximise opportunities for feeding invertebrates and for the attraction of foraging bats and birds.

5.5.5 For further plants suitable for the attraction of pollinators please refer to the *Perfect for Pollinators Plant List* (Royal Horticultural Society, 2012). It is recommended that the selection of plant species at the site ensures that a variety of flowering species are available throughout the year.

6.0 CONCLUSION

6.1 Following completion of one bat activity survey as required at Building 1 (Gaddum House), the presence of roosting bats at the site is reasonably discounted. This report, in connection with the ecological survey and assessment presented at the ecology report, has demonstrated that development at the site is feasible and acceptable in accordance with ecological considerations and the National Planning Policy Framework.

6.2 It is possible to implement reasonable actions for the protection and long-term conservation of fauna such as nesting birds associated with the habitats surrounding the sites.

6.3 Development at the sites will provide an opportunity to secure ecological enhancement for fauna typically associated with urban areas such as breeding birds.

7.0 REFERENCES

- BSI, 2012. *Trees in relation to design, demolition and construction. Recommendations*. London: BSI Standards Limited.
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- SimpsonHaugh, 2022. *Zone 1, Internal Elevation – North, Great Jackson Street, Dwg. No. Z1-SHP-G251-EL-XX-103 Rev. X01*. Manchester: SimpsonHaugh.
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8.0 APPENDIX: TABLES AND FIGURES

8.1 Raw Data from Bat Activity Surveys

Table 8.1: Activity Survey 1, 7th August 2023, Sunset Time 20:55, Start Time 20:40

Survey Position 1: Amy Sharples

Time	Species	Notes
		No bat emergence or re-entry recorded
The Anabat Express made the following recordings: 44 common pipistrelle call sequences between 21:14 and 22:35.		

Survey Position 2: Marisa Hensey

Time	Species	Notes
		No bat emergence or re-entry recorded
The Anabat Scout made the following recordings: 22 common pipistrelle call sequences between 21:14 and 22:19.		

Survey Position 3: Stuart Laverick

Time	Species	Notes
		No bat emergence or re-entry recorded
The Anabat Scout made the following recordings: 3 common pipistrelle call sequences between 22:11 and 22:22.		

Survey Position 4: Sue Lonsdale

Time	Species	Notes
		No bat emergence or re-entry recorded
The Anabat Scout made the following recordings: 18 common pipistrelle call sequences between 21:33 and 22:22.		

8.2 Views from NVAs

Table 8.2: Photographs of Views from NVAs

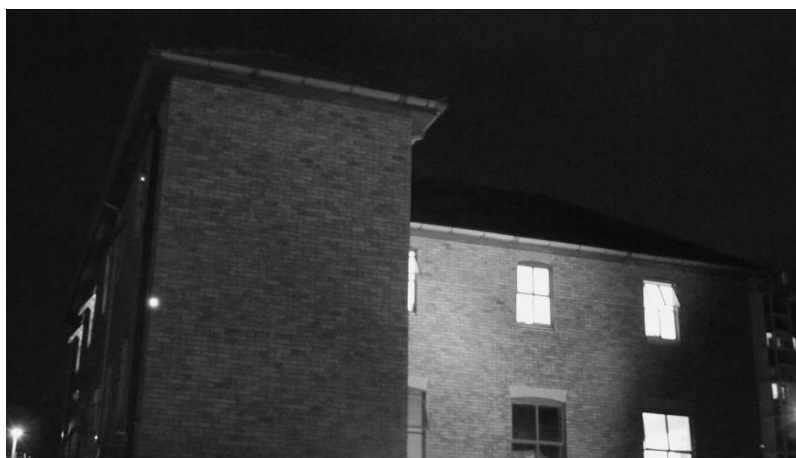


Photo 1: View from NVA at survey position 1



Photo 2: View from NVA at survey position 2

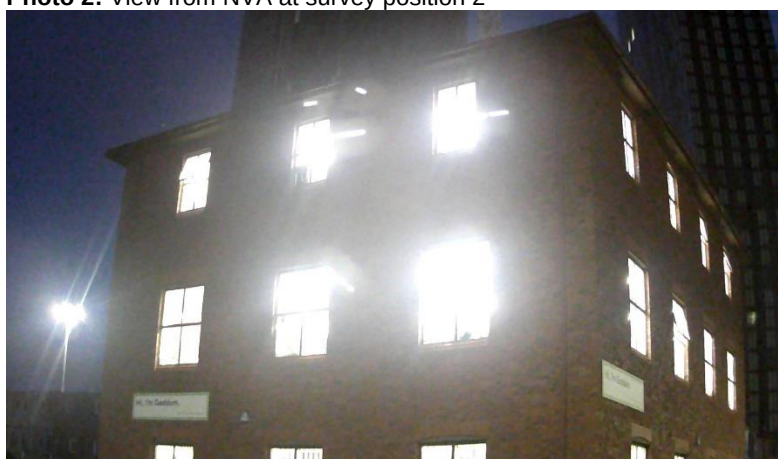


Photo 3: View from NVA at survey position 3



Photo 4: View from NVA at survey position 4

8.3 Figures

Figure 1: Aerial Image of the Site and its Surroundings

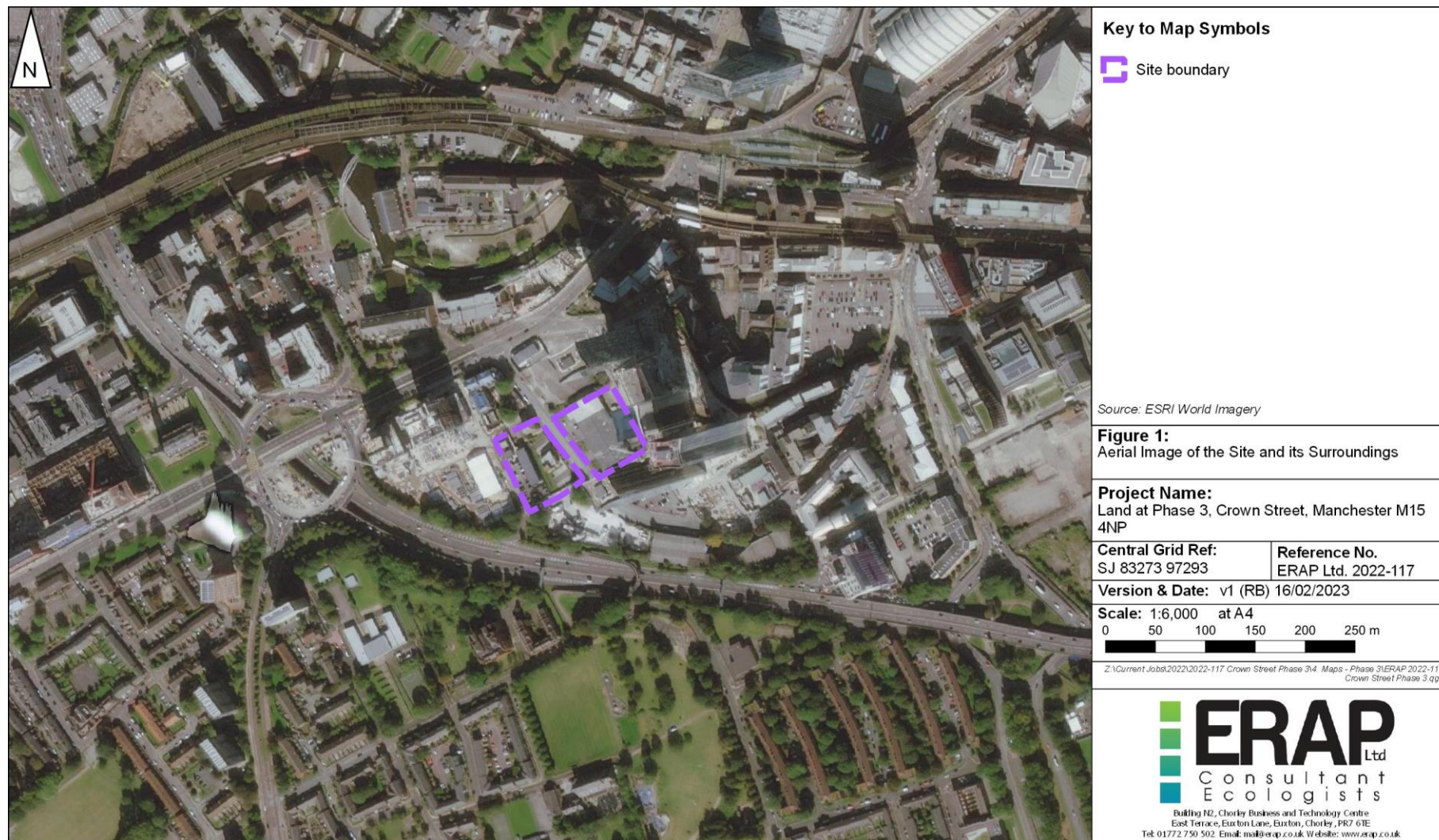


Figure 2: Plan to Show Survey Positions and NVA Locations

