



Ecological Enhancement Plan University of Manchester Greater Manchester

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This report is prepared by an ecological consultant and does not constitute legal opinion. If legal opinion is required, the advice of a qualified legal professional should be sought.



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1. Introduction

Northwest Ecology was commissioned by the University of Manchester in July 2025 to complete an Ecological Enhancement Plan for the University of Manchester campus, located in Manchester City Centre.

Surveys were undertaken between 4th July – 19th July to establish the baseline figures of any existing bat, bird and insect enhancement features installed throughout the site and to assess their current suitability and occupation status.

A total of 37 enhancement features were identified across the site during the baseline surveys, comprising eight bat boxes, 24 bird boxes and five insect houses.

This Ecological Enhancement Plan has been produced to provide a 20% uplift in bat roost boxes, bird nest boxes and insect house enhancement features installed throughout the site, as well as identifying suitable hedgehog provisions. Eight additional enhancement features are required to meet the 20% uplift in bat, bird and insect enhancements installed across the site.

This report details the provision of suitable bat, bird, insect and additional hedgehog enhancements, including information on suitable siting, installation, specification and maintenance of these enhancements.

It is recommended that four bat boxes, two bird boxes and two insect houses are installed within the site to meet the 20% uplift. Recommendations for hedgehog enhancements are also provided.

Site Location

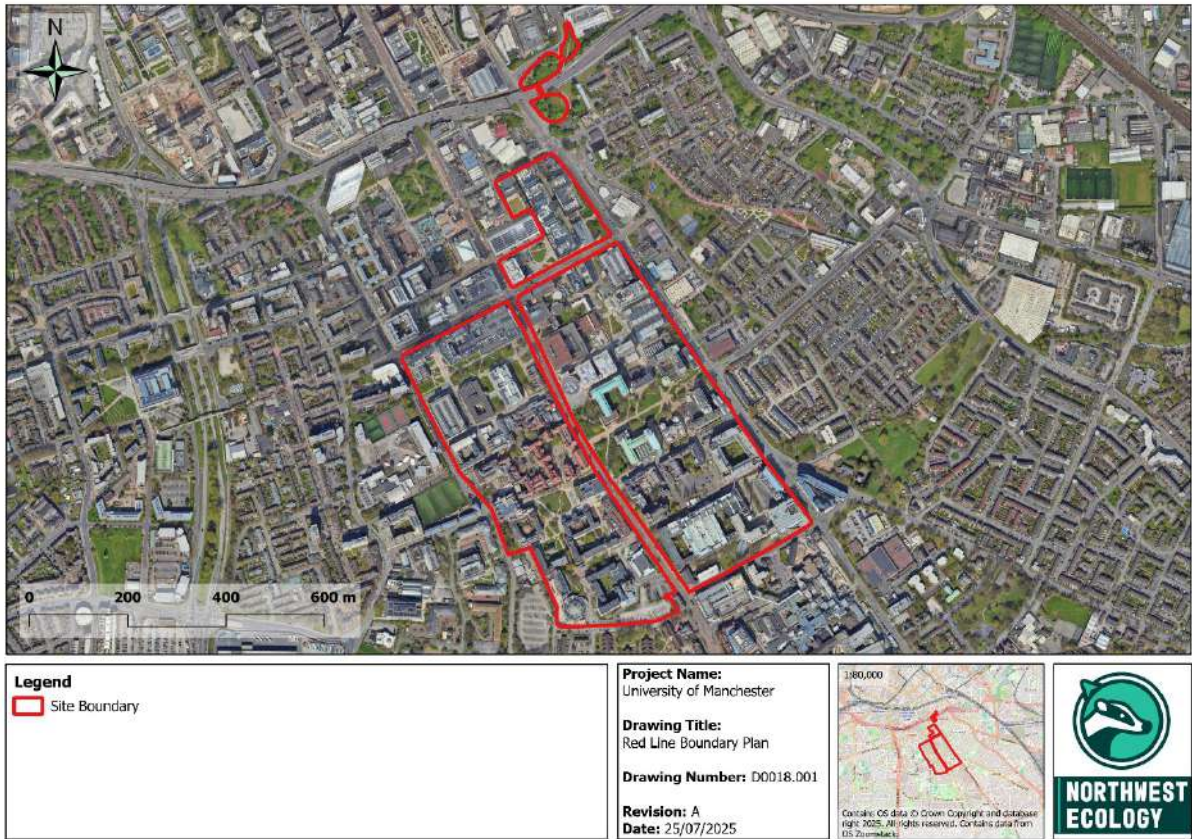
The site is located at central grid reference SJ 84584 96631 and lies within the administrative area of Greater Manchester. A red line boundary of the site is shown in Figure 1.

The University of Manchester campus lies south of the Manchester Ring Road (A57(M)), surrounded by commercial and residential development. The site is bound by the A34 to the east, and by Higher Cambridge St / Lloyd Street North to the west.

Although the site lies in a largely urban setting, greenspace is present in the form of Brunswick Park within the centre of site, Gartside Gardens located 100m east and Whitworth Park located 225m south. Residential gardens and street planting do provide connectivity for the site to the wider area including Birchfields Park and Platt Fields Park located 1.5km south. The River Irwell, Rochdale Canal and the River Medlock also provide connectivity, located 150m north of site at their closest point.



Figure 1: Site Location Boundary





2. Baseline Survey

The number, type and occupation status of the currently existing enhancement boxes are described within Table 1. Additional enhancement features identified during the survey, such as log piles and rock pools are also listed within Table 1. The location and reference numbers of existing enhancements are shown within Drawing D0018.002 within Appendix A.

16 existing enhancement features were found to be actively used or contain evidence of previous use, this is equivalent to 43% of the existing enhancements. Existing occupied enhancement features are shown within Drawings D0018.005 – D0018.005.4 within Appendix A.

No currently existing bat boxes were occupied during the endoscope inspection surveys or have evidence of previous use. A number of existing bat boxes are located in unsuitable locations or with unsuitable placement – recommendations for re-location or re-positioning are described within Section 3 of this report, in order to increase the chance of occupation.

Four bird nest boxes were found to be defunct at the time of survey and are no longer suitable for support nesting birds. These four boxes are recommended for replacement, as described within Section 4 of this report and shown within Drawings D0018.004 – D0018.004.2 within Appendix A.

Table 1: Existing Enhancement Features

Enhancement Ref	Enhancement Type	Occupation Status	Orientation of Entrance	Further Comments
1	Bird Box	Occupied	Southeast	Nesting material present from 2025 season.
2	Bird Box	Unoccupied	Northeast	Nest box is defunct and no longer providing suitability for nesting.
3	Log Pile	N/A	N/A	Suitable for use by hedgehogs and invertebrates.
4	Log Pile	N/A	N/A	Suitable for use by hedgehogs and invertebrates.
5	Bird Box	Unoccupied	Southwest	Evidence of a previous bird box but only back panel remains. Box is no longer providing suitability for nesting.
6	Insect Box	Occupied	Southwest	Woodlice present during inspection. No other invertebrates recorded.
7	Bird Box	Occupied	Northeast	Nesting material present from 2025 season.
8	Bird Box	Unoccupied	Northeast	Nest box is defunct and no longer providing suitability for nesting.
9	Bat Box	Unoccupied	Southeast	Entrance obscured by thick cobwebs, no evidence of bat use within. Cobwebs cleared of entrance during inspection.
10	Bat Box	Unoccupied	Southeast	Box clean, no evidence of occupation.
11	Rock Pool	N/A	N/A	No aquatic vegetation and periodically dry.



12	Log Pile	N/A	N/A	Numerous small log piles situated within introduced scrub. Suitable for use by hedgehogs and invertebrates.
13	Bat Box	Unoccupied	South	Box appears relatively new and unused.
14	Bird Box	Occupied	North	Nesting material present from 2025 season.
15	Bat Box	Unoccupied	Southwest	Box appears relatively new and unused.
16	Bird Box	Occupied	Northeast	Nesting material present from 2025 season.
17	Rock Pool	N/A	N/A	No aquatic vegetation and periodically dry.
18	Log Pile	N/A	N/A	Numerous small log piles situated within introduced scrub. For use by hedgehogs and invertebrates.
19	Bat Box	Unoccupied	Southwest	Box appears relatively new and unused.
20	Bird Box	Occupied	Northeast	Nesting material present from 2025 season.
21	Bird Box	Occupied	Northeast	Nesting material present from 2025 season.
22	Insect House	Occupied	N/A	Supporting spiders, flies, small white butterfly, lady birds.
23	Bird Box	Occupied	Northeast	Nest box is defunct, only south and west panels remain. No longer providing suitable for nesting however, a previous nest was present at the time of survey.
24	Bat Box	Unoccupied	Northwest	Box situated east of a busy road, adjacent to street lighting. Recommend relocation to increase change of occupation.
25	Bat Box	Unoccupied	Northeast	Box situated east of a busy road, adjacent to street lighting. Recommend relocation to increase change of occupation.
26	Bird Box	Occupied	Northeast	Nesting material present from 2025 season.
27	Bird Box	Unoccupied	Northeast	Small number of spiders present.
28	Bird Box	Unoccupied	East	Box clean, no signs of use.
29	Bird Box	Unoccupied	East	Earwigs breeding within.
30	Bird Box	Unoccupied	East	Box clean, no signs of use.
31	Bird Box	Unoccupied	East	Earwigs breeding within.
32	Bird Box	Unoccupied	East	Box beginning to rot internally and is likely to require placement within the next year.



33	Bird Box	Unoccupied	North	Front of the nest box is split through the centre. Still providing suitability but may require replacement in the near future if the box deteriorates further.
34	Bird Box	Unoccupied	North	Lid does not shut fully and this may be contributing to the nest box being disused.
35	Bird Box	Occupied	Northeast	Entrance hole has been bitten, likely by squirrels. Thick spider webs within and nesting material present from the 2025 season.
36	Insect House	Occupied	N/A	Spiders, woodlice, small white butterfly, orange tip butterfly, seven spot lady bird, snails, flies, bees, wasps.
37	Insect House	Occupied	N/A	Spiders, small white butterfly, small tortoiseshell butterfly, lady birds, flies, bees.
38	Bird Box	Unoccupied	Northeast	Box clean, no signs of use.
39	Bat Box	Unoccupied	East	Box situated at 2m in height. Recommend to readjust the height of installation to increase chance of occupation.
40	Bird Box	Occupied	East	Nesting material present from 2025 season.
41	Bird Box	Occupied	Southwest	Nesting material present from 2025 season.
42	Bird Box	Occupied	North	Nesting material present from 2025 season.
43	Insect House	Unoccupied	N/A	Unoccupied. Recommend more material to be placed within and additional native planting / wildflower seeding of flower bed.
44	Rock Pool	N/A	N/A	Unconfirmed occupation. No aquatic vegetation and periodically dry.
45	Rock Pool	N/A	N/A	Unconfirmed occupation. No aquatic vegetation and periodically dry.

Desk Study

Information regarding designated sites, notable habitats and existing protected as well as notable species records within 2km of the site were collated and reviewed to inform this Ecological Enhancement Plan. An absence of records does not indicate the absence of protected species from the search area.

Species records from within the last 20 full years were obtained from Greater Manchester Local Record Center in July 2025. This Desk Study lists protected and notable species records obtained from the Record Centre that are listed under any of the following:



- Protected species listed under Schedule 2 (animals) or Schedule 5 (plants) under the Conservation of Habitats and Species Regulations 2017 (EPS);
- Protected species under Schedule 1, Schedule 5 and Schedule 8 of the Wildlife and Countryside Act 1981;
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Protection of Badgers Act 1992 (PBA);
- Species of principal importance (SPI) listed by requirements under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

Table 2 details the protected and notable species returned within the data search. This information has been used to inform recommendations for locally protected and notable species that are known to be within 2km of the site and therefore are likely to benefit from installed enhancements. Maps of bat and LBAP species are provided within Appendix A.

Table 2: Protected Species Records within 2km of the site

Species	Relevant Legislation	Number of records	Closest record to site
Birds			
Bullfinch	S41	25	1.5km southwest, Alexandra Park
Dunnock	S41	114	On site
Herring Gull	S41	10	On site
House Sparrow	S41	47	On site
Lapwing	S41	1	1km north
Lesser Redpoll	S41	1	1.5km southwest, Alexandra Park
Song Thrush	S41	47	On site
Starling	S41	75	On site
Yellow Wagtail	S41	1	1km north
Peregrine	WCA	64	250m east
Black Redstart	WCA	44	350m southwest
Grey Heron	WCA	3	1.5km southwest, Alexandra Park
Kingfisher	WCA	7	150m north, River Medlock
Little Ringed Plover	WCA	2	750m west
Mammals			
Common pipistrelle bat	WCA	57	Roost recorded adjacent to southeast of site.
Soprano pipistrelle bat	WCA	2	1.5km north
Pipistrelle species	WAC	24	On site (non roost)
Brown long-eared bat	WCA	2	900m south
Noctule bat	WCA	5	50m southeast of site



Myotis bat	WCA	1	Roost recorded 500m northeast
Hedgehog	S41	59	On site
Otter	WCA	1	Bridgewater Canal
Invertebrates			
Cinnabar moth	S41	28	225m south, Whitworth Park



3. Bat Roost Enhancements

Specifications

Bat enhancements have been chosen to suit crevice dwelling species known to be present within the local area, including Pipistrelle and Myotis species, as well as noctule bats which have been recorded within the site and surrounding 2km.


Four bat roost boxes are to be installed on mature trees throughout the site, as shown within Drawings D0018.003 (Insert 1 – Insert 5), provided within Appendix A.

Specifications of the bat roost boxes to be installed upon the trees within the site are provided below. Several options have been described within Table 3 and have been chosen based on species known to be within the local area and therefore are likely to use the site.

Table 3: Bat Roost Enhancement Specifications

Description / Specification	Picture
Option 1 – Bat Box Chillon	
<p>This box can accommodate up to 15 Pipistrelle bats and provides cavity roost space suitable for individuals or small groups of cavity dwelling bat species.</p> <p>This box is comprised of WoodStone®, which is constructed from a mix of concrete and wood fibres, guaranteeing longevity and durability as well as providing thermal stability for roosting bats.</p> <p>This box requires no maintenance as droppings fall from the open entrance below.</p> <p>Weight: 5kg</p> <p>Dimensions: Height – 46.2cm, Width – 13.2cm, Diameter – 31.5cm</p> <p>Available suppliers: Wildcare, NHBS, CJ Wildlife Approximately £40</p>	
Option 2 – Schwegler 1FFH Universal Bat Box	
<p>The 1FFH bat box contains two roosting compartments which each provide different climate options for roosting bats, making the box suitable from early summer to late autumn.</p> <p>The rear compartment is designed for larger species and provides sufficient space for maternity roosts of Pipsitrelle species, Myotis species and noctule bats.</p> <p>Made from long lasting Schwegler wood-concrete and is maintenance free as droppings fall from the open entrance below.</p> <p>Weight: 16kg</p> <p>Dimensions: Height – 87.5cm, Width – 24.5cm, Diameter – 19cm</p> <p>Available suppliers: Wildcare, CJ Wildlife Approximately £200</p>	



Option 3 – Schwegler 2FN Bat Box	
<p>The Schwegler 2FN has two entrances, one at the rear which lies against the tree and one at the front. Bats often creep into the rear entrance but leave by the front. It has a domed roof with increased internal height to allow bats to form roosting clusters for additional warmth.</p> <p>The 2FN is very successful for species including noctule and Bechstein's bats and is suitable for maternity roosts. The design is very effective against small predators and excludes draughts and light.</p> <p>Made from long lasting Schwegler wood-concrete and is maintenance free as droppings fall from the open entrance below.</p> <p>Weight: 4.9kg</p> <p>Dimensions: Height – 36cm, Diameter – 16cm</p> <p>Available suppliers: Wildcare, NHBS Approximately £70</p>	
Option 4 – Miramare Woodstone Bat Box	
<p>The Miramare bat box is designed to provide accommodation that mimics a natural roost site in a hollow tree. The woodstone construction is composed of concrete and wood fibre mix to provides insulation and offers an environment that experiences limited temperature fluctuations.</p> <p>There are four internal roosting compartments ideal for crevice dwelling species including Pipistrelle and Myotis species. Also known to support brown long-eared bats and noctule bats. The box is maintenance free as droppings fall from the open entrance below.</p> <p>Weight: 24kg</p> <p>Dimensions: Height – 85cm, Diameter 25cm</p> <p>Available suppliers: Wildcare, NHBS Approximately £130</p>	

Siting / Location

Proposed locations of the bat boxes are shown on Drawing D0018.003 (Insert 1 – Insert 5) provided within Appendix A. Locations have been chosen to be optimal for roosting bats within the site and should not be changed unless discussed with an ecologist. Failure to comply with the specified locations of enhancements may result in sub-optimal positioning that could lead to a lower use. Proximity to suitable commuting and foraging habitat for bats has also been considered during the siting process.

All recommended enhancements should be installed in line with the manufacturer's specifications to ensure that no hazard is posed to members of the public.

The boxes should be installed at a minimum height of 4m and a maximum height of 6m, with the entrance holes facing the ground. The boxes should be installed facing south to provide optimal conditions, with no direct artificial light shining on the access points. It must be ensured that there is unobstructed access for bats entering and leaving the roost site (i.e. foliage / branch growth across the entrance).



Relocation of Existing Bat Boxes

Three existing bat boxes were identified to be positioned in suboptimal locations. These are box numbers 24, 25 and 39 as described in Table 1 and shown on Drawing D0018.002.

Boxes 24 and 25 are installed at 4m in height on ash trees adjacent to Upper Brook Street (A34). This location is subject to heavy light and noise pollution from the road. It is recommended that these boxes are re-located to Brunswick Park and / or within the tree line and wildflower meadow area west of the Main Library building in the southwest of site.

Box number 39 is positioned at 2m in height on a crack willow south of the Dover Street Building. In order to increase chance of occupation, it is recommended that this box is repositioned to between 4m and 6m in height, upon the same tree.

When relocated and re-positioned, it should be ensured that box entrances are facing south, southwest or southeast and that entrances are clear for bats to enter and exit. A bat licensed ecologist will be required to inspect the boxes immediately prior to re-location to confirm that the boxes are unoccupied.



4. Bird Nesting Enhancements

Specifications



Bird enhancements have been chosen to suit amber and red listed species and those listed in Section 41 of the NERC Act, that are also known to be present within the local area, including swifts, starlings, song thrush and house sparrows.

Two swift nest boxes are to be installed upon existing buildings within the site, as shown within Drawings D0018.003 (Insert 1 – Insert 5), provided within Appendix A.

Four bird nest boxes were identified to be defunct at the time of survey and are recommended for replacement. Boxes identified as defunct are numbers 2, 5, 8 and 23, all located within the west of site. The locations and reference numbers of the boxes to be replaced are shown within Drawings D0018.004 to D0018.004.2 within Appendix A. It is recommended that replacement boxes are selected from the starling and song thrush nest box options listed within Table 4.

Specifications of the nest boxes to be installed within the site are provided within Table 4. Several suitable options have been described.

Table 4: Bird Nesting Enhancement Specification

Description / Specification	Picture
Swift Nest Box Options	
<p>Option 1 – Woodstone Burgos Swift Box</p> <p>The Burgos Swift Box is made entirely from woodstone material for thermal stability and longevity, with one entrance on the front of the box.</p> <p>This nest box is made to be installed on the exterior of a building, hung directly under a roof overhang or gutter, avoiding direct sunlight. This box comes with a metal bracket for mounting to the wall.</p> <p>Weight: 6kg</p> <p>Dimensions: Width - 38cm, Depth - 22cm, Height - 26cm</p> <p>Available suppliers: Wildcare Approximately £50</p>	
<p>Option 2 – CJ Wildlife Woodstone Swift Nest Box</p> <p>Constructed from woodstone for thermal stability and to safeguard against attacks from predators including woodpeckers, cats and squirrels. One entrance is located on the bottom on the box.</p> <p>There is an opening at the back of the box for easy cleaning or inspection. This nest box is designed to be placed near the eaves of a building or below roof overhang / gutters, in a spot that is sheltered from direct sunlight.</p> <p>Weight: 6kg</p> <p>Dimensions: Width – 40.5cm, Depth – 26.9cm, Height – 29cm</p> <p>Available suppliers: CJ Wildlife Approximately £50</p>	





Starling Nest Box Options

Option 1 – Schwegler 3S Starling Nest Box

The Schwegler 3S provides a large diameter brood chamber and large entrance hole (45mm) specifically designed for starlings.

Starlings tend to nest close to each other so installing multiple nestboxes close together is encouraged.

Cleaning will be required once a year in the winter, once the chicks have fledged. To open the nest box simply turn the two screw hooks at the front 180 degrees, the front of the nest box can then be removed to facilitate cleaning.

Weight: 4.4kg

Dimensions:

Height – 28cm, Diameter 19cm

Available suppliers: Wildcare, NHBS | Approximately £55



Option 2 – Vivara Pro NK SP 02 Starling Nest Box

This nest box provides nesting opportunities for starlings and can also be used by various other small species. An extra block is placed on the inside beneath the entrance opening, allowing young starlings to sit on it to defecate outside, helping to keep the nest box clean.

The nest box can be cleaned by opening the front. This should be done after the young birds have fledged or during the winter months following a few days of frost.

Weight: 7.5kg

Dimensions:

Width - 21.5cm, Height – 39.5cm, Depth – 20cm

Available suppliers: Wildcare, NHBS | Approximately £40



Song Thrush Nest Box Options

Option 1 – Woodstone Alicante Open Nest Box

The woodstone structure provides a breathable construction to keep nests dry, well ventilated and also provide consistent temperatures.

This nest box provides suitable nesting space for song thrush but can also be used by robins, blackbirds and wrens.

Cleaning will be required once a year in the winter, once the chicks have fledged.

Weight: 5kg

Dimensions:

Width – 34.6cm, Height – 30.4cm, Depth – 25.6cm

Available suppliers: CJ Wildlife | Approximately £40





Option 2 – Vivara Pro Barcelona Woodstone Open Nest Box

The woodstone structure provides a breathable construction to keep nests dry, well ventilated and also provide consistent temperatures.

These open nest boxes are suitable for song thrush and will also provide nest space for wrens, robins, wagtails and blackbirds.

Dimensions:

Width – 19cm, Height – 25.5cm, Depth – 17cm

Available suppliers: NHBS, CJ Wildlife | Approximately £35



Siting / Location

Proposed locations of the bird nest boxes are shown on Drawing D0018.003 (Insert 1 – Insert 5) provided within Appendix A. Locations have been chosen to be optimal for nesting birds within the development and should not be changed unless discussed with an ecologist. Failure to comply with the specified locations of enhancements may result in sub-optimal positioning that could lead to a lower use. Proximity to suitable sheltering, commuting and foraging habitat for birds has also been considered during the siting process.

All bird nest box locations have been chosen to avoid being installed directly above windows and doors. It must be ensured that there is unobstructed access for birds entering and exiting the nest box. Entrances should face north / northeast where possible.

All recommended enhancement should be installed in line with the manufacturer's specifications to ensure that no hazard is posed to occupants of the buildings or members of the public.

Swift Nest Boxes

Swift nest boxes should be sited near the eaves of the building, ideally under an overhang or under the eaves to give shade and protection from heat. The nest boxes should be sited at least 5m above ground, with clear access to the entrance hole to ensure that swifts can access the nest box in high-speed direct flight.

Starling Nest Boxes

Starling nest boxes should be placed on existing trees at 3m or higher. Starlings often nest in a loose colony so installing several boxes on adjacent trees or in close proximity may encourage a colony to occupy the boxes.

Song Thrush Nest Boxes

Song thrush nest boxes should be placed on existing trees at 2.5m – 3m in height, close to greenspaces. Ideally the box will be placed within the canopy to obscure the box while ensuring the entrance is unobstructed.





5. Invertebrate Enhancements

Invertebrate enhancements have been chosen to maximise opportunities for invertebrate species within the site by providing diverse materials and spaces suitable for multiple species.

Two insect houses are to be installed within wildflower meadow areas throughout the site, as shown within Drawings D0018.003 (Insert 1 – Insert 5), provided within Appendix A.

Specifications of the insect houses to be installed within the site are provided below. Several options have been described within Table 5.

Table 5: Insect House Enhancement Specification

Description / Specification	Picture
Option 1 – Nectar Solitary Bug Hotel	
<p>The hotel's design accommodates numerous invertebrate species including ladybirds, bees, spiders and isopods/ woodlice. These crucial microhabitats provide shelter from environmental stressors, protected egg-laying sites, nursery spaces for developing larvae and refuge from natural predators.</p> <p>The "Nectar" model features a diverse structure with five specialised compartments, each engineered to attract and support different insect populations throughout the seasons.</p> <p>Weight: 5.5kg</p> <p>Dimensions: Height – 35cm, Width – 30cm, Depth – 19.4cm</p> <p>Available suppliers: Nestore the Planet Solutions Approximately £40</p>	
Option 2 – Insect Study Centre	
<p>This insect house provides several areas designed to support a diverse range of insects, including a 'hay loft' shelter, bamboo tubing for solitary bees and overwintering ladybirds or lacewings, a separate overwintering chamber, and bee trays designs for mason bees and leafcutter bees.</p> <p>Weight: 16kg</p> <p>Dimensions: Height – 80cm, Width – 26.5cm, Depth – 29cm</p> <p>Available suppliers: RSPB Shop Approximately £150</p>	



Option 3 – Extra Large Bee and Insect Hotel Corsica

This extra large insect hotel provides nesting space for solitary bees, spiders, lacewings, ladybirds and earwigs, as well as bumblebees and moth species.

To install, the legs of the hotel should first be mounted vertically to the hotel using the fixing material provided. Then dig the holes in the ground, put the hotel in place and fill the holes again. Make sure that the part of the pole with the protective black layer is just above ground level and that the posts are placed at least 50cm into the ground.

Dimensions:

Height – 117cm, Width – 76.5cm, Diameter – 26.5cm

Available suppliers: CJ Wildlife | Approximately £400



Siting / Location

Proposed locations of the insect houses are shown on Drawing D0018.003 (Insert 1 – Insert 5) provided within Appendix A. Locations have been chosen to be optimal for insect uptake and should not be changed unless discussed with an ecologist. Failure to comply with the specified locations of enhancements may result in sub-optimal positioning that could lead to a lower use. Proximity to suitable sheltering and foraging habitat for insects has been considered during the siting process.

All insect house are to be installed within existing wildflower meadow areas and entrances (fronts) are to face south. Vegetation should be present surrounding the insect house to allow access to all areas of the structure. Planting of nectar rich species and strongly fragrant native wildflowers will encourage uptake. All recommended enhancements should be installed in line with the manufacturer's specifications to ensure that no hazard is posed to members of the public.



6. Hedgehog Enhancements

Hedgehog enhancements have been chosen to provide opportunities for this species within the site by providing shelter and hibernation potential across the site.

Two hedgehog house locations are recommended, to be installed within wildflower meadow areas within the site, as shown within Drawings D0018.003 (Insert 1 – Insert 5), provided within Appendix A.

Specifications of the hedgehog houses to be installed within the site are provided within Table 6. Two options have been described.

Table 6: Hedgehog Enhancement Specifications

Description / Specification	Picture
Option 1 – Woodside Hedgehog Outdoor Hibernation / Habitat Shelter	
<p>This pine wood shelter is designed for shelter, breeding and hibernation and provides a sturdy, durable construction that can be covered in soil, brash and leaf litter to blend the structure into the surrounding environment and provide more stable temperature conditions.</p> <p>The small entrance tunnel is designed to deter predators such as badgers and dogs.</p> <p>Dimensions: Height – 20cm, Width – 35cm, Depth – 36cm</p> <p>Available suppliers: Outdoor Value Approximately £20</p>	
Option 2 – Igloo Hedgehog Home	
<p>The Igloo Hedgehog Home has a round painted steel frame, felted water-proof roof and wicker construction.</p> <p>The Igloo can accommodate family groups of mothers and hoglets. The small entrance tunnel is designed to deter predators such as badgers, cats and dogs. The Igloo is predominately designed for shelter but may be used for hibernation if additional brushwood cover is provided over the igloo in winter.</p> <p>Weight: 1.55kg</p> <p>Dimensions: Height – 22cm, Width – 53cm, Depth – 59cm</p> <p>Available suppliers: NHBS Approximately £30</p>	

Siting / Location

Proposed locations of the hedgehog houses are shown on Drawing D0018.003 (Insert 1 – Insert 5) provided within Appendix A. Locations have been chosen to be optimal for hedgehog uptake and should not be changed unless discussed with an ecologist. Failure to comply with the specified locations of enhancements may result in sub-optimal positioning that could lead to a lower use. Proximity to suitable commuting, sheltering and foraging habitat has been considered during the siting process.



All hedgehog houses are to be installed within existing wildflower meadow areas. Leaves and soil should be placed over the house to camouflage the structure and provide additional temperature stability. Dry grass or leaves may be placed within the shelter to encourage uptake. Placing adjacent log piles and brush piles will provide additional shelter and foraging opportunities. It is not recommended to offer food in proximity to the shelters to avoid attracting natural predators. Water stations are encouraged and can be provided in the form of ponds / shallow pools.

The houses may be anchored down to provide more security. All recommended enhancement should be installed in line with the manufacturer's specifications to ensure that no hazard is posed to members of the public.

Appendix A – Drawings

Existing Enhancements - D0018.002 (Insert 1 – Insert 8)

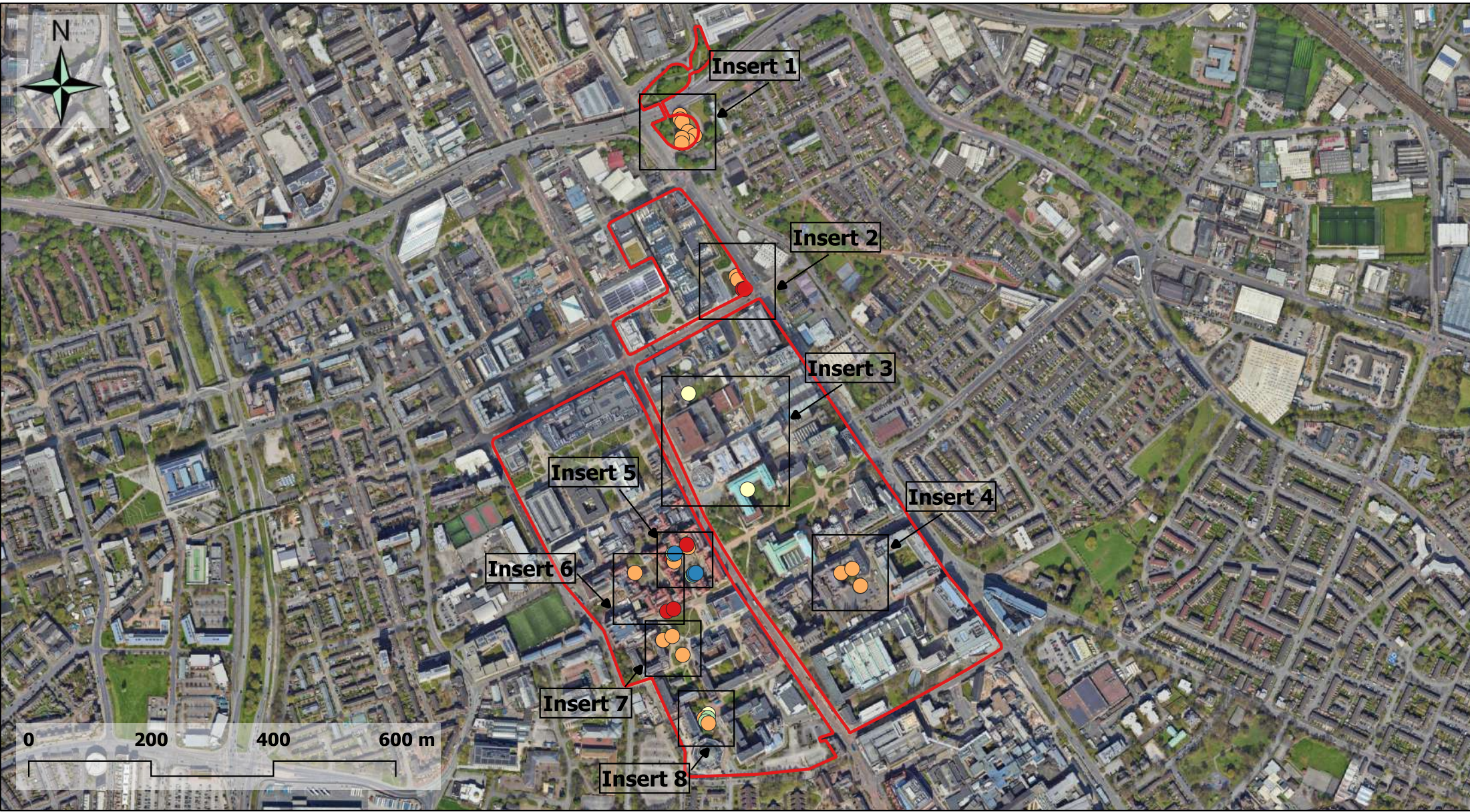
Proposed Enhancements – D0018.003 (Insert 1 – Insert 5)

Enhancements to be Replaced – D0018.004 to D0018.004.2

Occupied Enhancements – D0018.005 to D0018.005.4

Greater Manchester Ecology Unit Bat Species Map

Greater Manchester Ecology Unit LBAP / S41 Species Map



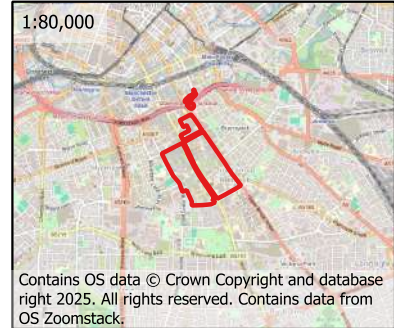
- Legend**
- Site Boundary
 - Bat Box
 - Bird Box
 - Insect Box
 - Log Pile
 - Rock Pool

Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.002

Revision: A.
Date: 25/07/2025





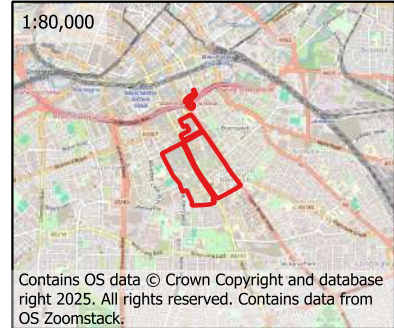
Legend
 Site Boundary ● Bird Box

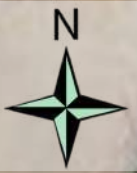
Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.002
- Insert 1

Revision: A. **Date:** 25/07/2025





26




27

24

25

0 6 12 18 m

Legend

-  Site Boundary
-  Bat Box
-  Bird Box

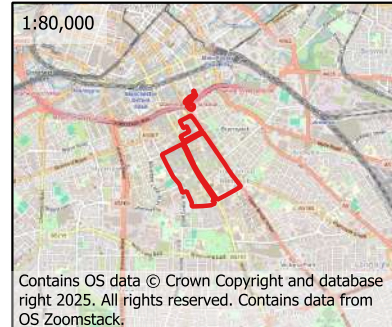
Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.002
- Insert 2

Revision: A. **Date:** 26/07/2025

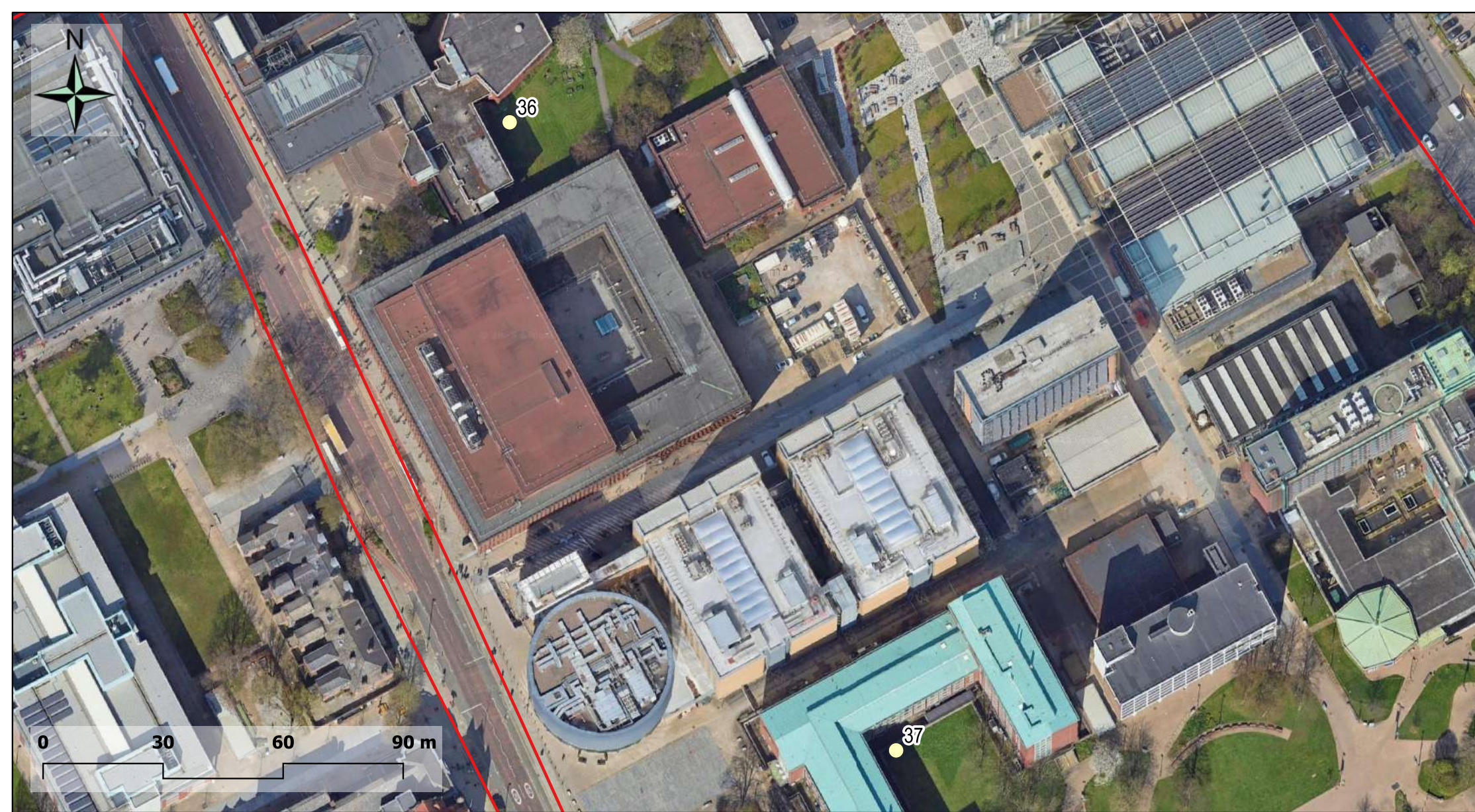
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**NORTHWEST
ECOLOGY**



Legend

- Site Boundary
- Insect House

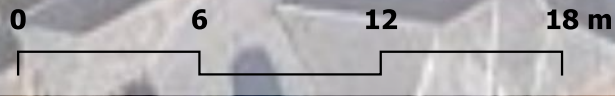
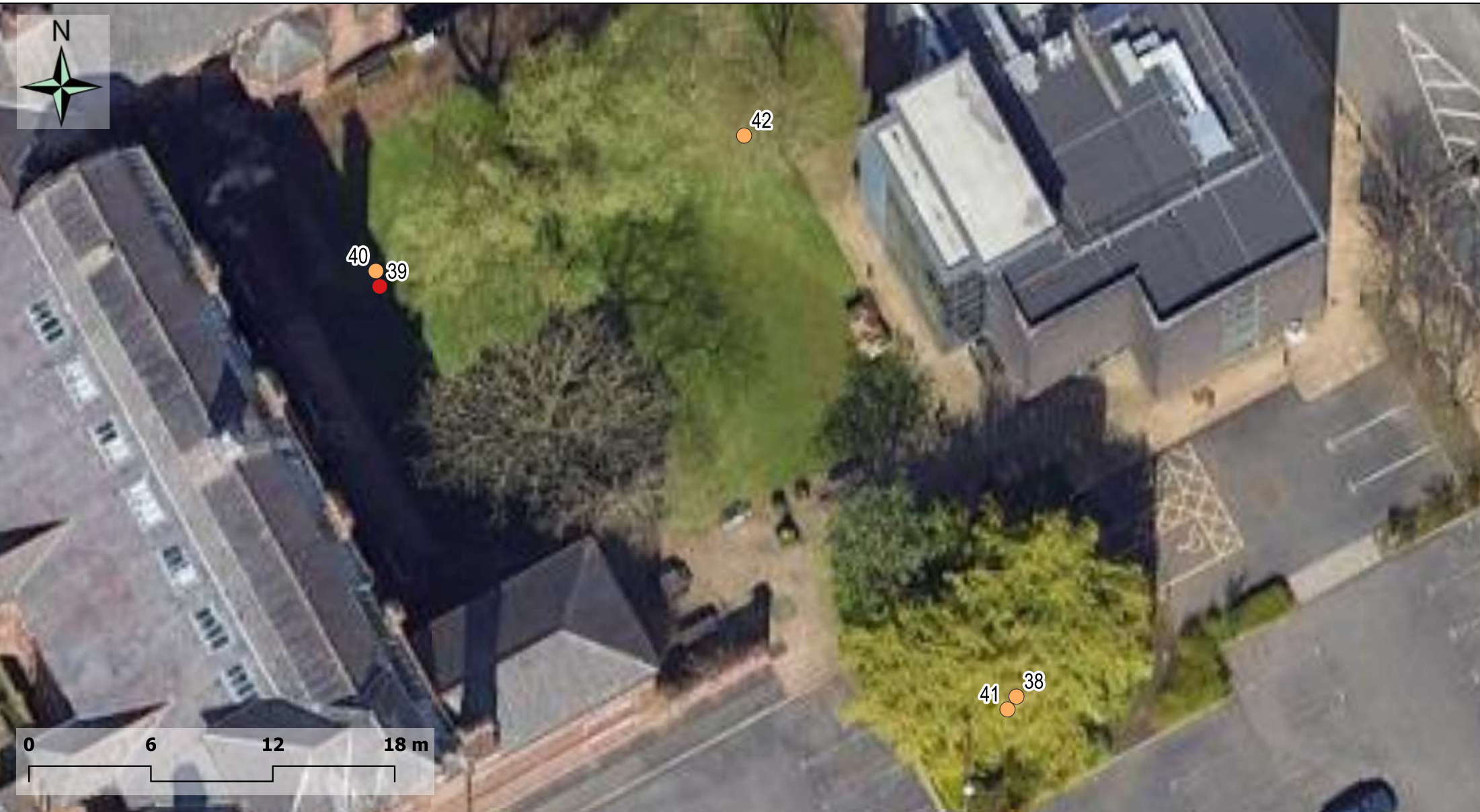
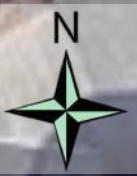
Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.002
- Insert 3

Revision: A. **Date:** 26/07/2025





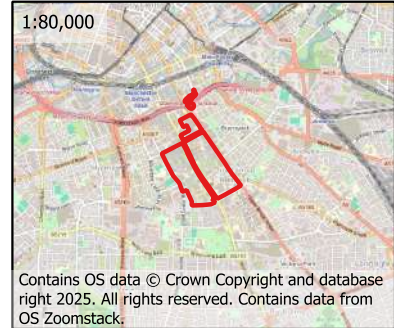
- Legend**
-  Site Boundary
 -  Bat Box
 -  Bird Box

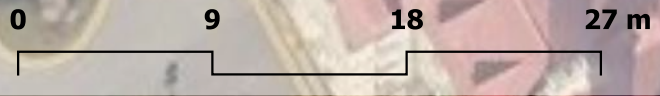
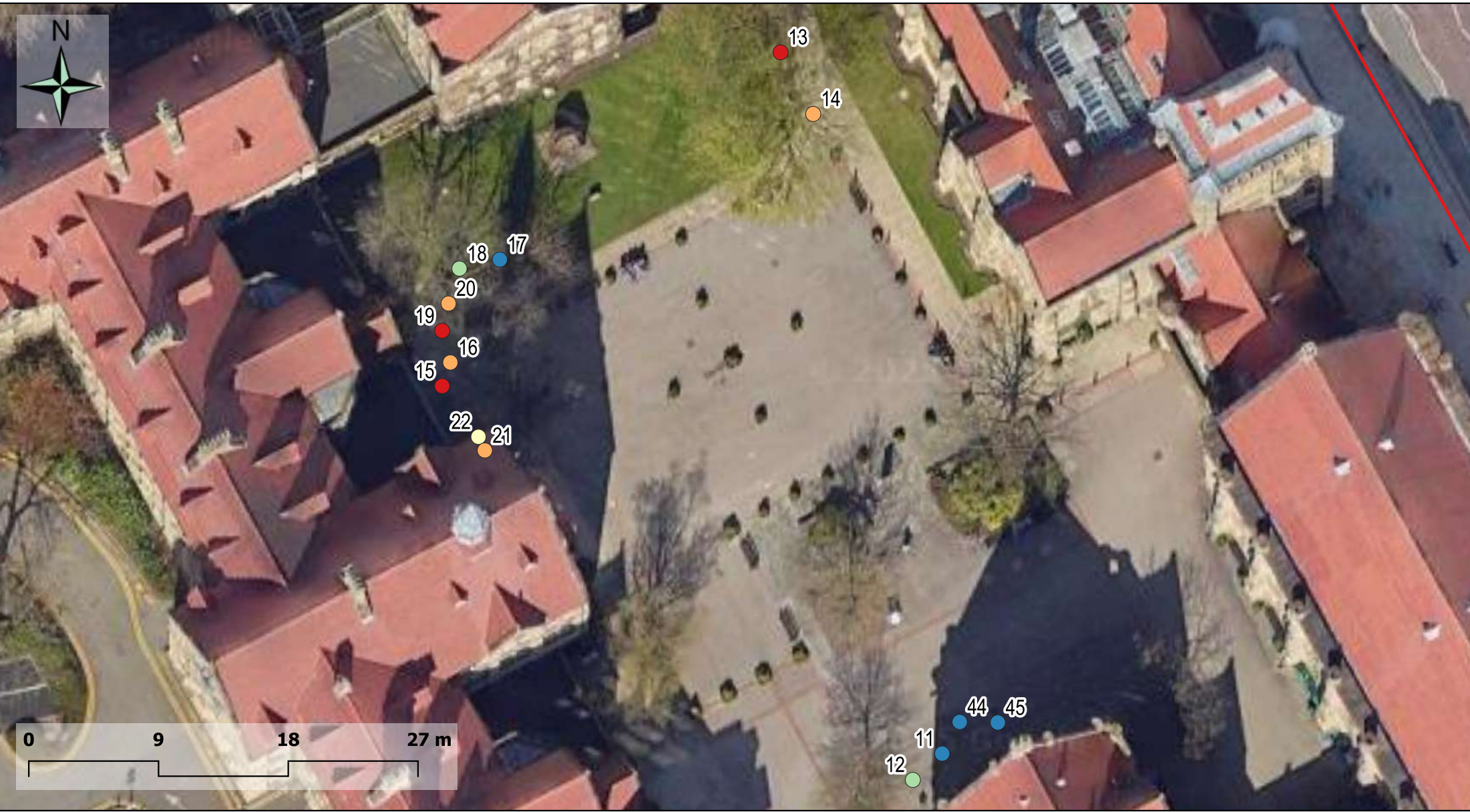
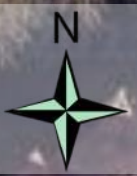
Project Name:
University of Manchester







Drawing Title:
Existing Enhancements

Drawing Number: D0018.002
- Insert 4

Revision: A. **Date:** 26/07/2025





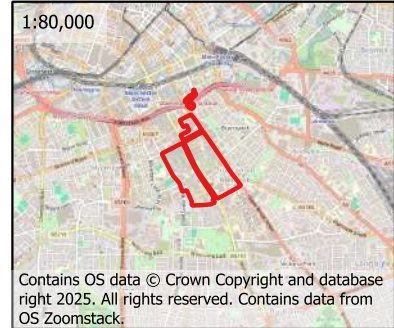
- Legend**
-  Site Boundary
 -  Bat Box
 -  Bird Box
 -  Insect House
 -  Log Pile
 -  Rock Pool

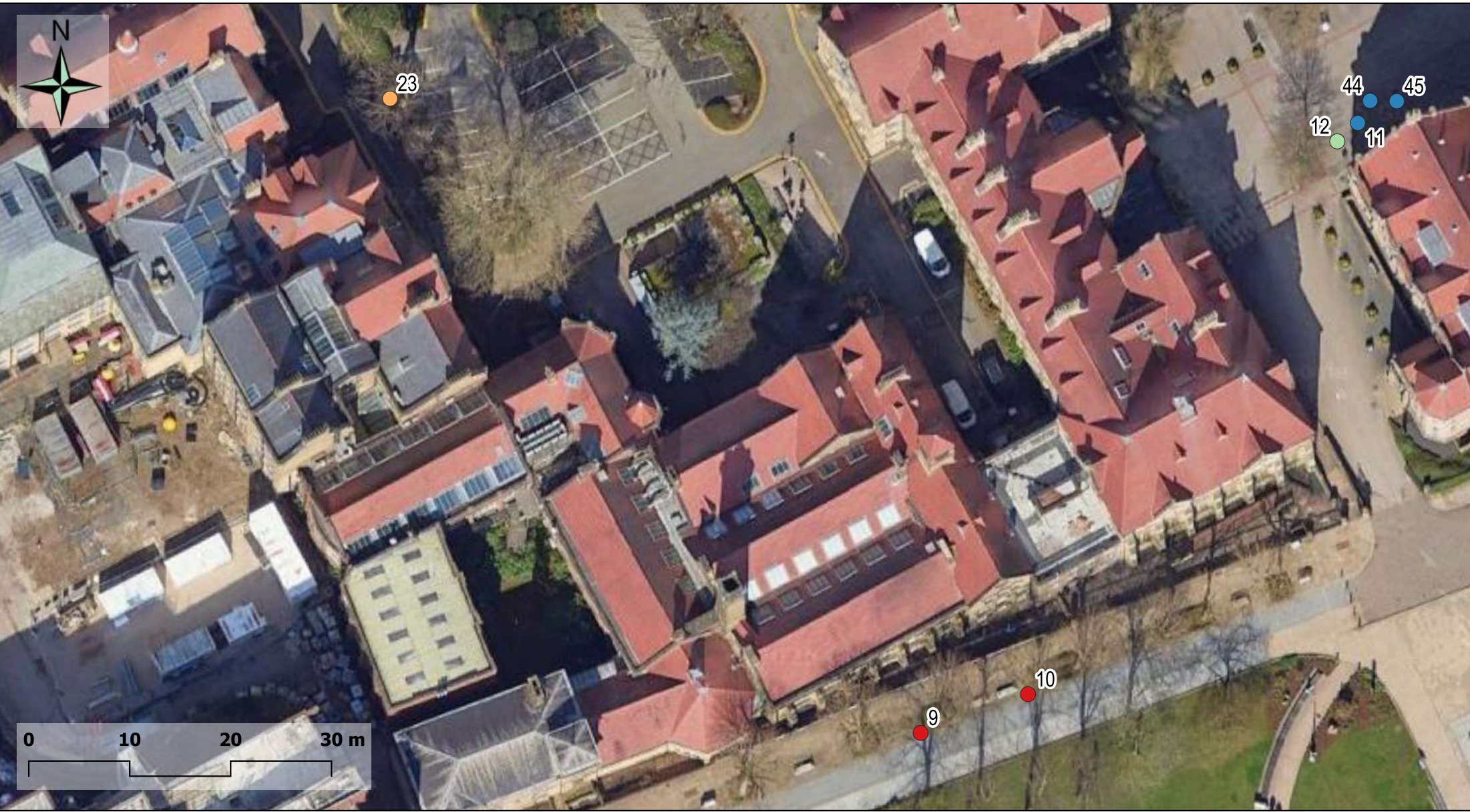
Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.002
- Insert 5

Revision: A. **Date:** 26/07/2025





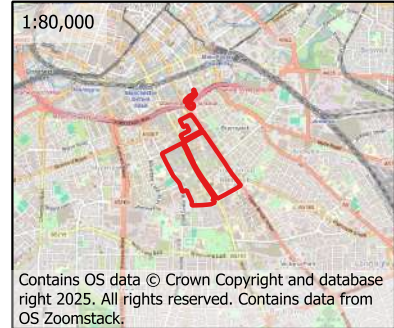
- Legend**
- Site Boundary
 - Bat Box
 - Bird Box
 - Log Pile
 - Rock Pool

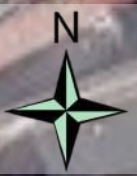
Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.002
- Insert 6

Revision: A. **Date:** 26/07/2025



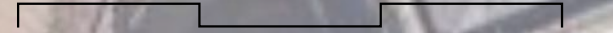


6 7

8

5

0 6 12 18 m



Legend

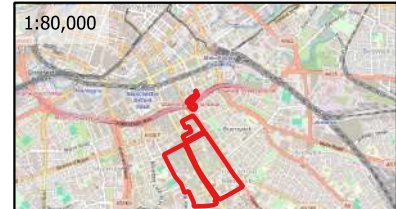
-  Site Boundary
-  Bird Box
-  Insect House

Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.002
- Insert 7

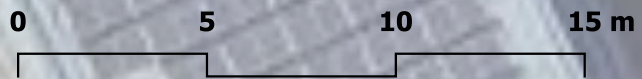
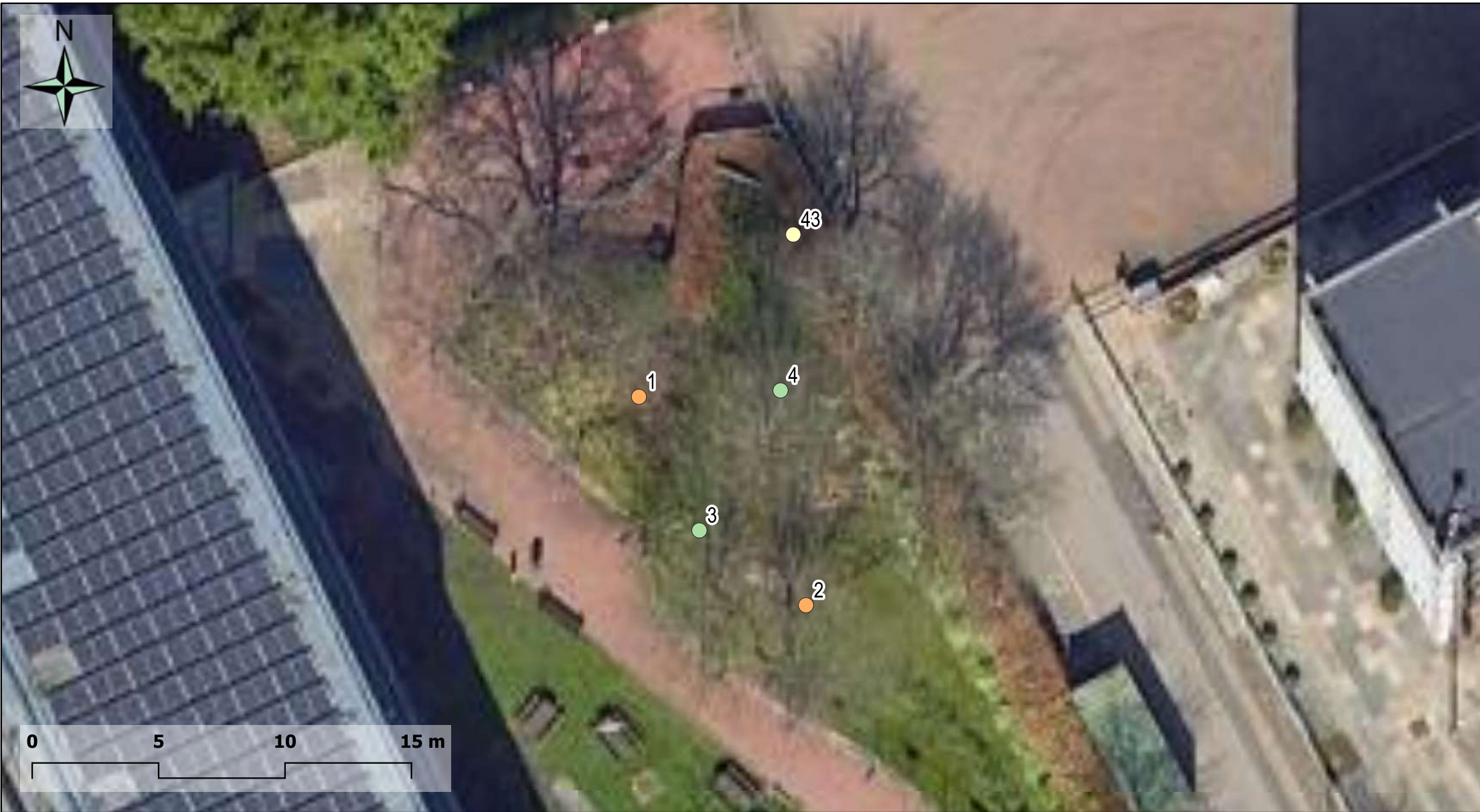
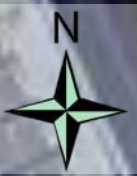
Revision: A. **Date:** 26/07/2025







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Legend

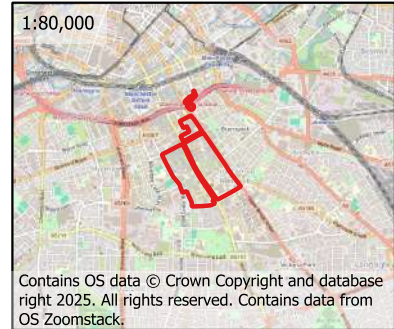
-  Site Boundary
-  Bird Box
-  Insect House
-  Log Pile

Project Name:
University of Manchester

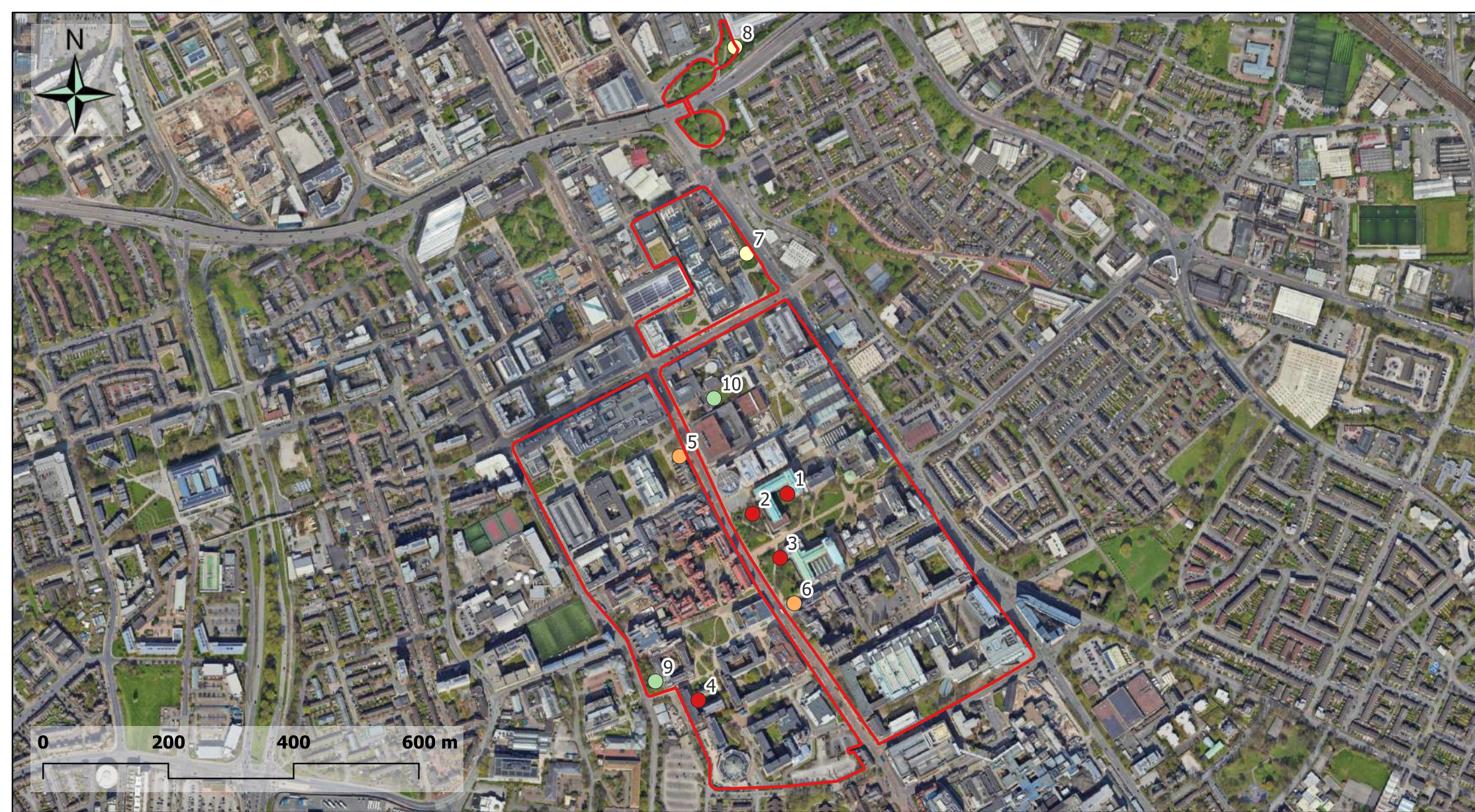
Drawing Title:
Existing Enhancements

Drawing Number: D0018.002
- Insert 8

Revision: A. **Date:** 26/07/2025



**NORTHWEST
ECOLOGY**



Legend

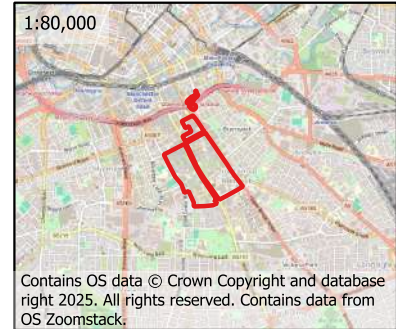
- Site Boundary
- Bat Box
- Bird Box
- Insect House
- Hedgehog house

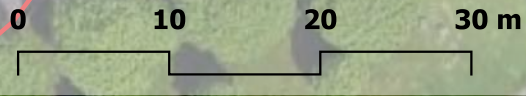
Project Name:
University of Manchester

Drawing Title:
Proposed Enhancements



Drawing Number: D0018.003

Revision: A.
Date: 26/07/2025





Legend

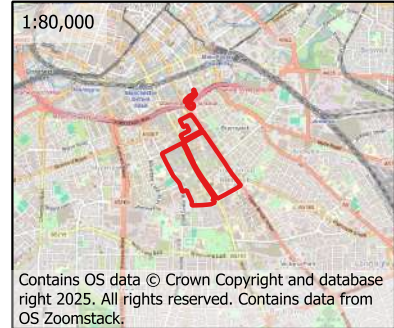
-  Site Boundary
-  Insect House

Project Name:
University of Manchester

Drawing Title:
Existing Enhancements



Drawing Number: D0018.003
- Insert 1

Revision: A. **Date:** 26/07/2025





Legend

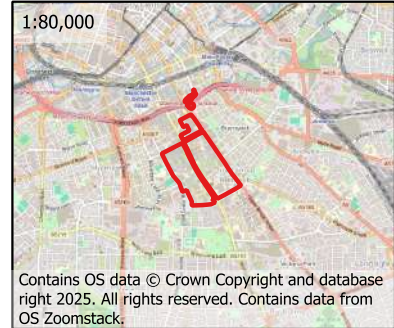
-  Site Boundary
-  Insect House

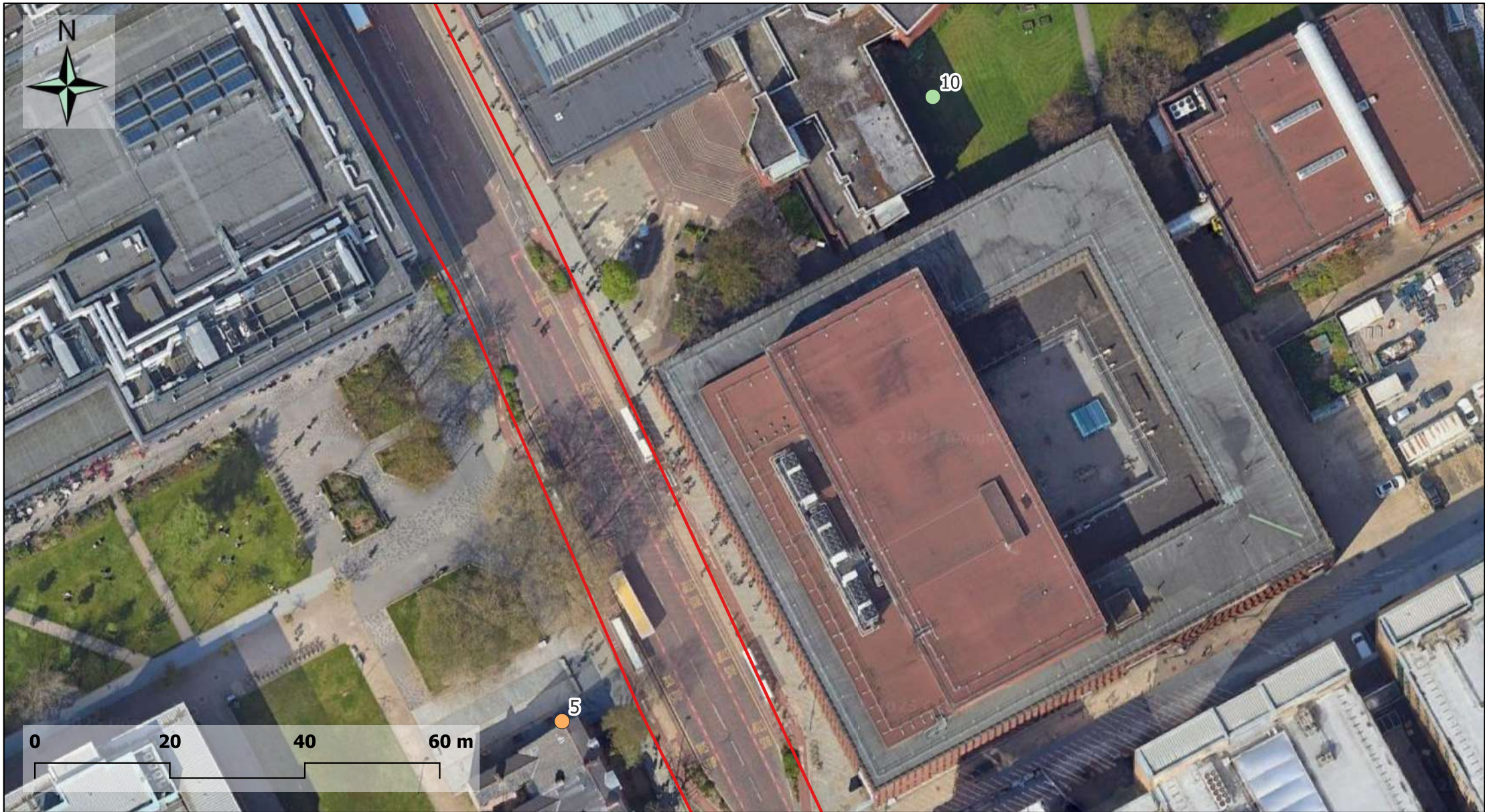
Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.003
- Insert 2

Revision: A. **Date:** 26/07/2025





Legend

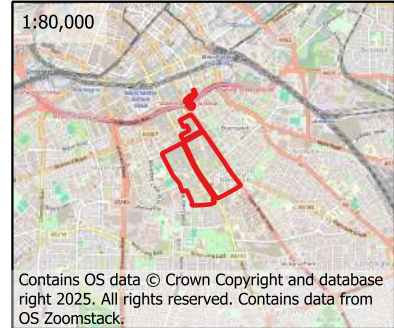
- Site Boundary
- Bird Box
- Hedgehog house

Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.003
- Insert 3

Revision: A. **Date:** 26/07/2025





Legend

- Site Boundary
- Bat Box
- Bird Box

Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.003
- Insert 4

Revision: A. **Date:** 26/07/2025





9

4

0 10 20 30 m

Legend

-  Site Boundary
-  Bat Box
-  Hedgehog house

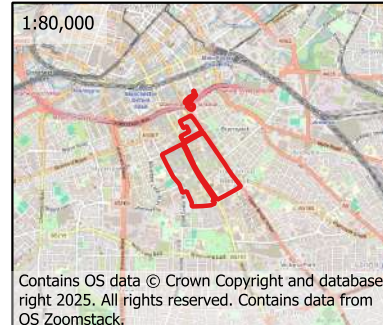
Project Name:
University of Manchester

Drawing Title:
Existing Enhancements

Drawing Number: D0018.003
- Insert 5

Revision: A. **Date:** 26/07/2025

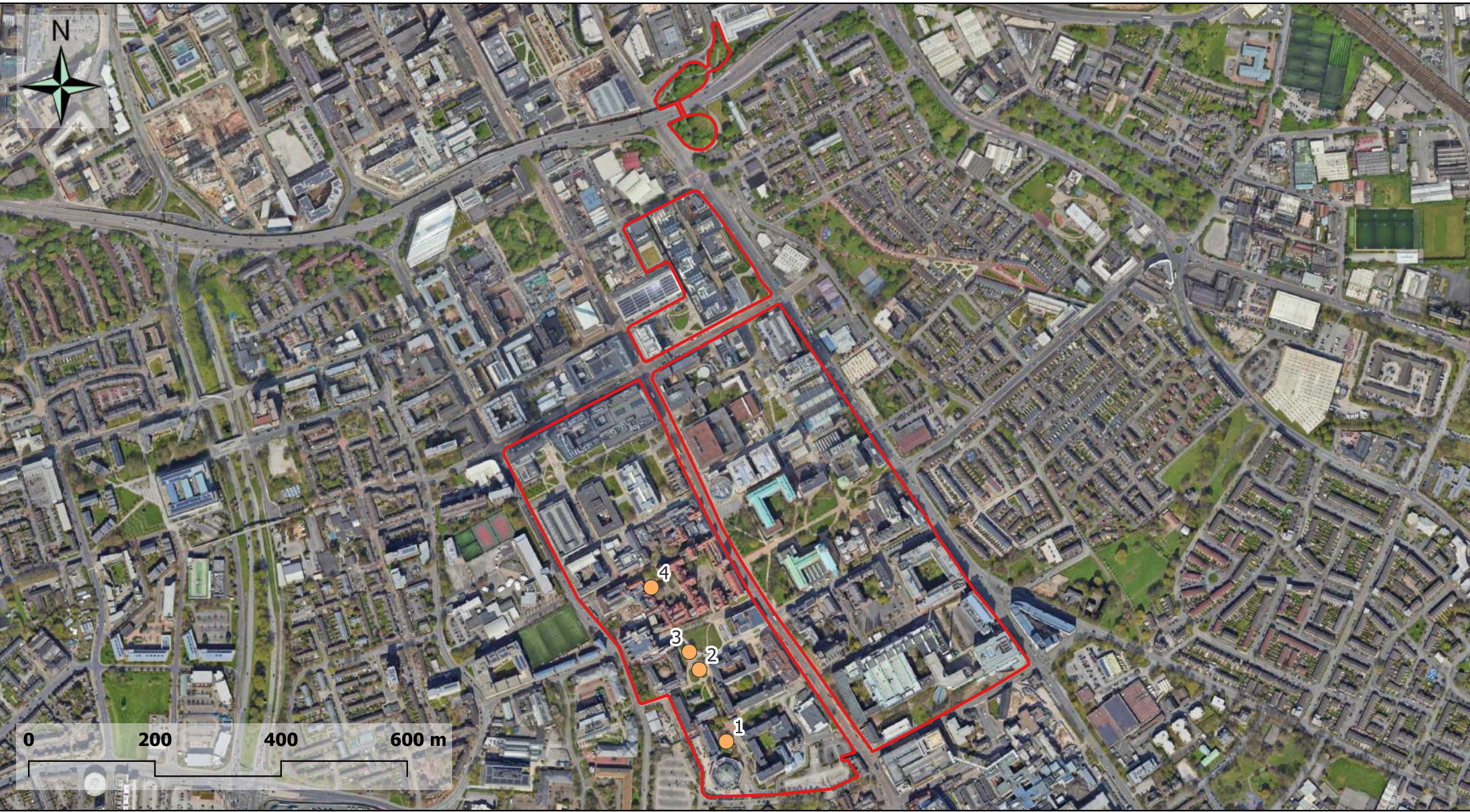
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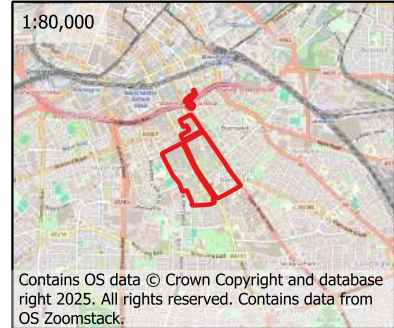
Legend
 Site Boundary ● Bird Box

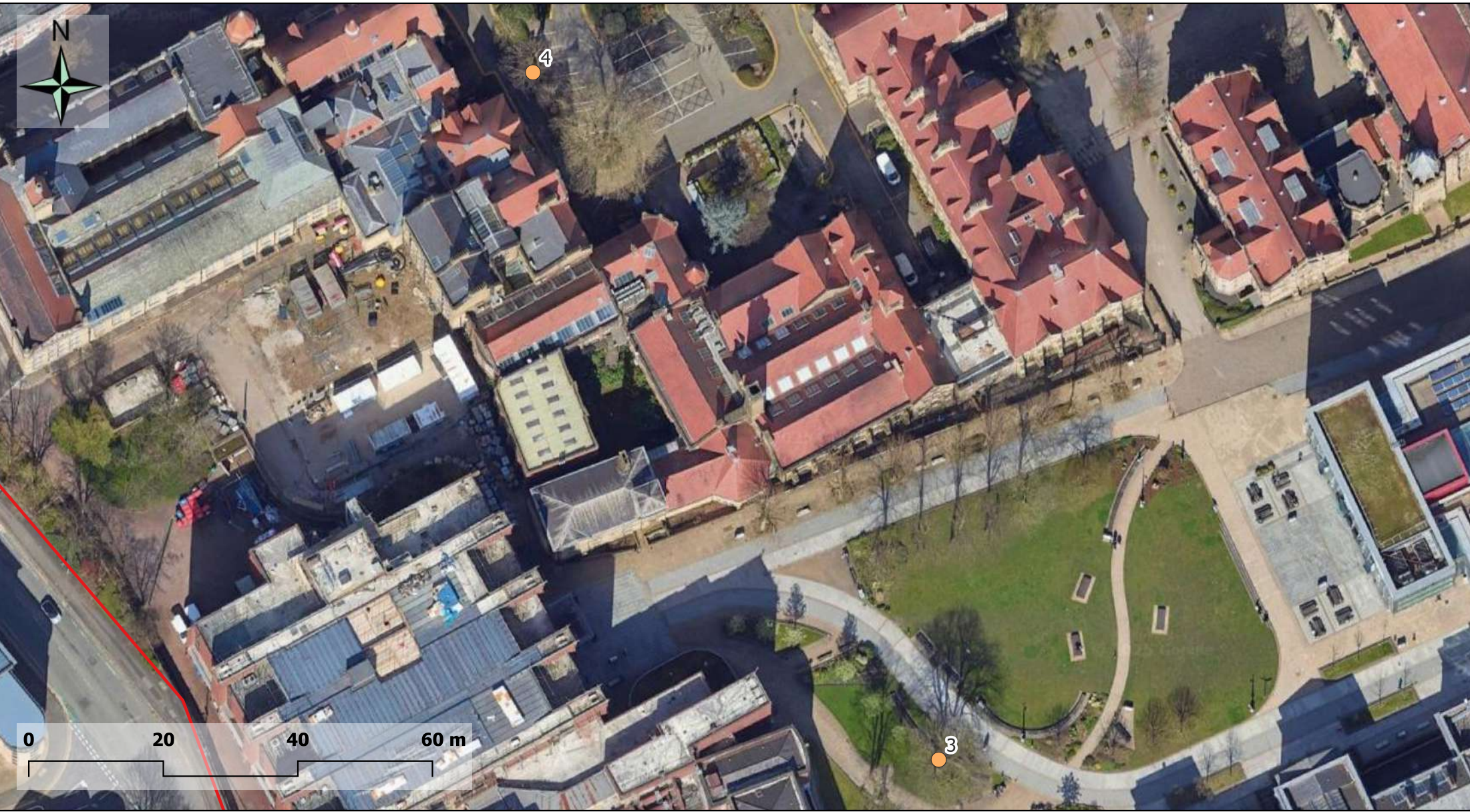
Project Name:
University of Manchester

Drawing Title:
Enhancements to be Replaced

Drawing Number: D0018.004

Revision: A.
Date: 26/07/2025





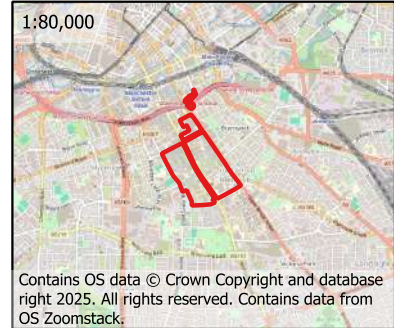
Legend
 Site Boundary ● Bird Box

Project Name:
University of Manchester

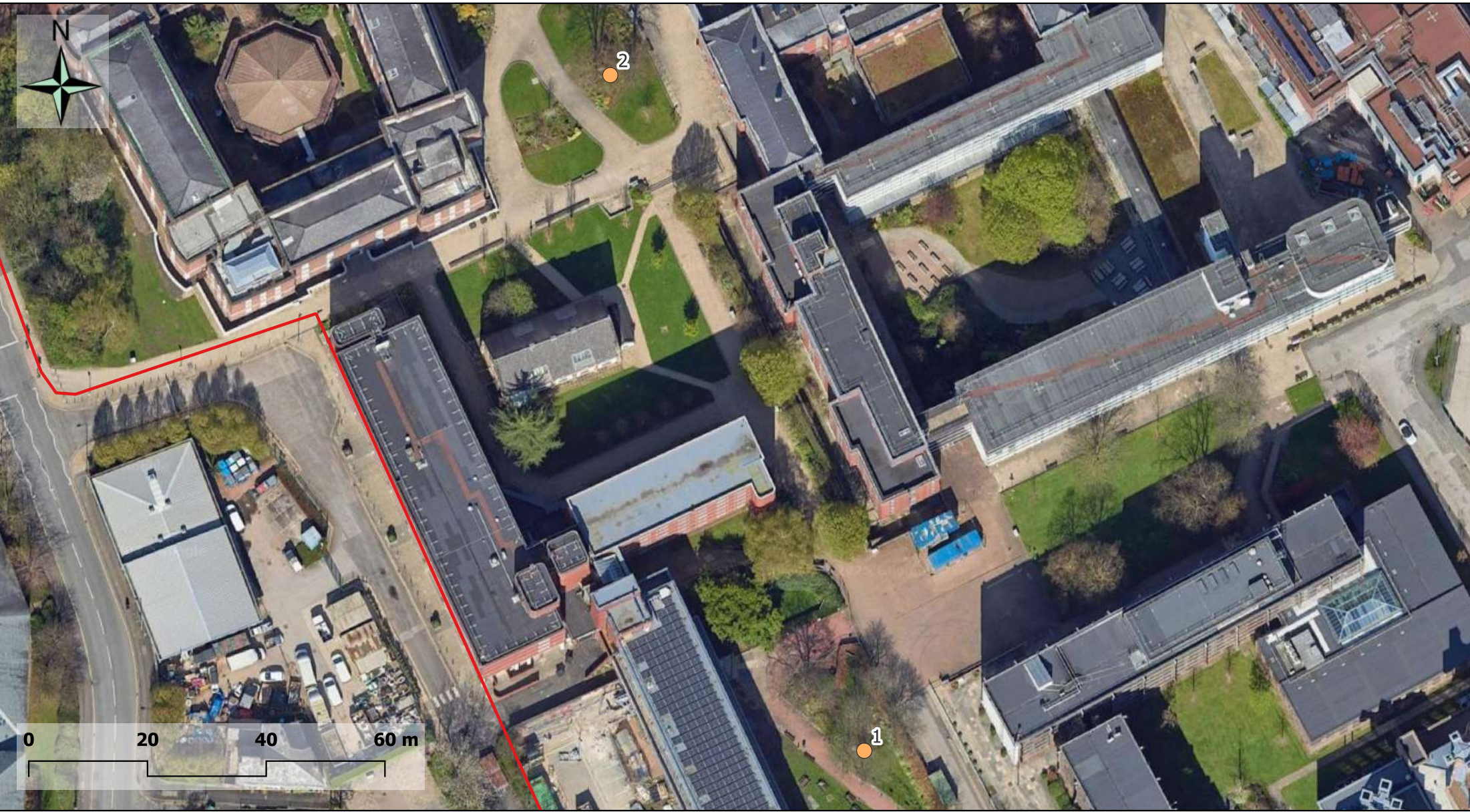
Drawing Title:
Enhancements to be Replaced

Drawing Number:
D0018.004.1 - Insert 1

Revision: A. Date: 26/07/2025



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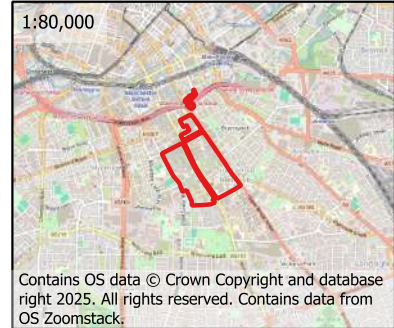
Legend
[Red outline] Site Boundary [Orange dot] Bird Box

Project Name:
University of Manchester

Drawing Title:
Enhancements to be Replaced

Drawing Number:
D0018.004.2 - Insert 2

Revision: A. Date: 26/07/2025





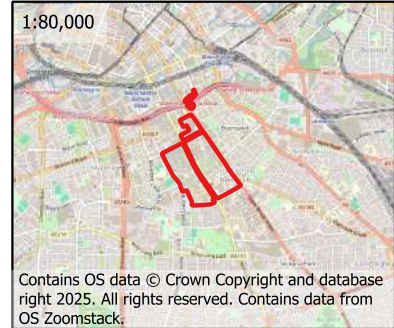
Legend
 Site Boundary ● Occupied

Project Name:
University of Manchester

Drawing Title:
Occupied Enhancements

Drawing Number: D0018.005

Revision: A.
Date: 26/07/2025





Legend

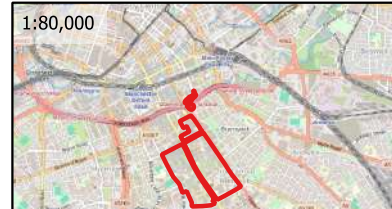
-  Site Boundary
-  Occupied

Project Name:
University of Manchester

Drawing Title:
Occupied Enhancements

Drawing Number:
D0018.005.1 - Insert 1

Revision: A. Date: 26/07/2025



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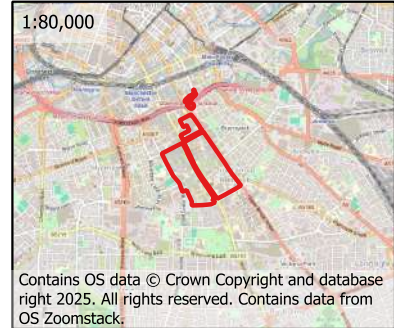
Legend
 Site Boundary ● Occupied

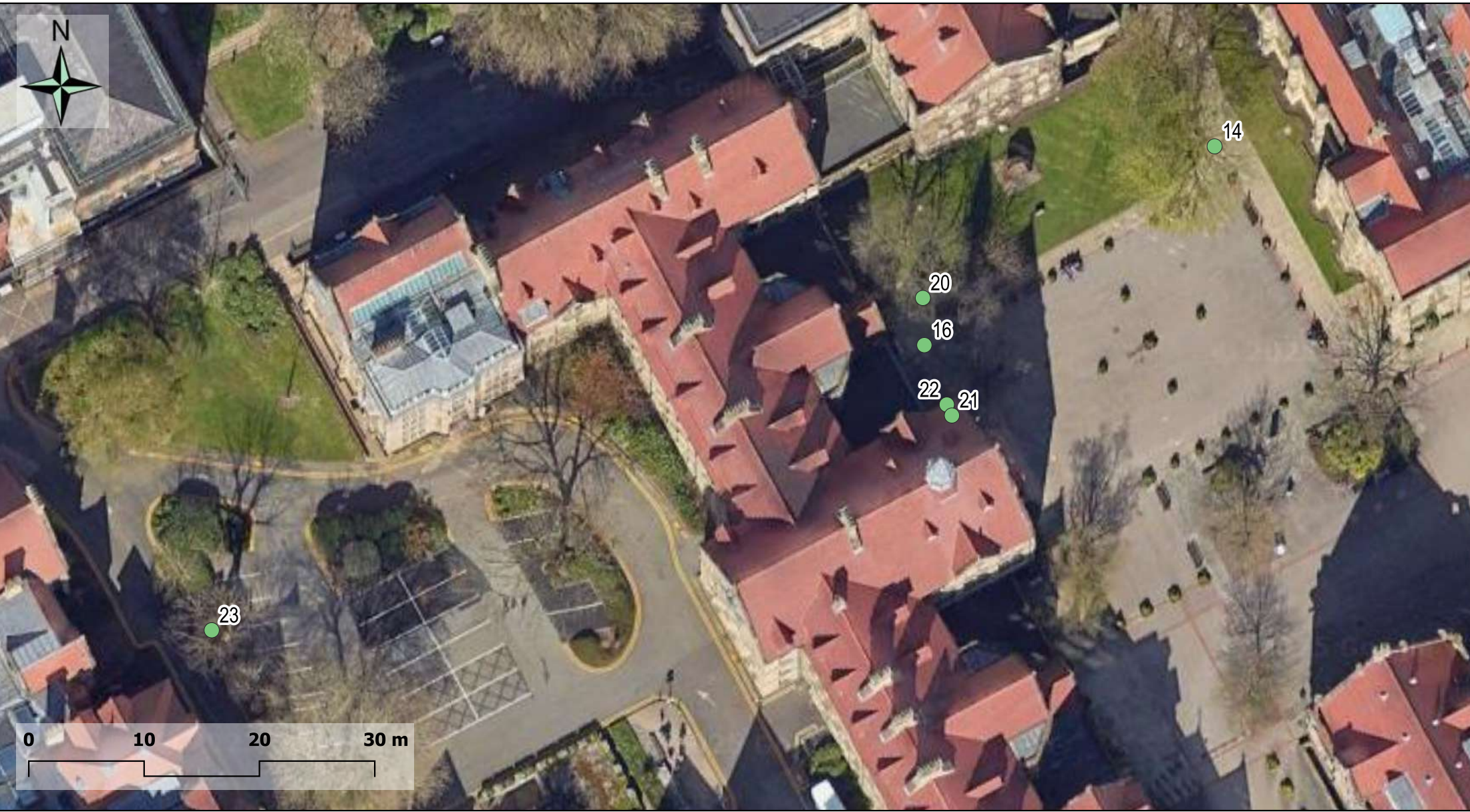
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University of Manchester

Drawing Title:
Occupied Enhancements

Drawing Number:
D0018.005.2 - Insert 2

Revision: A. Date: 26/07/2025





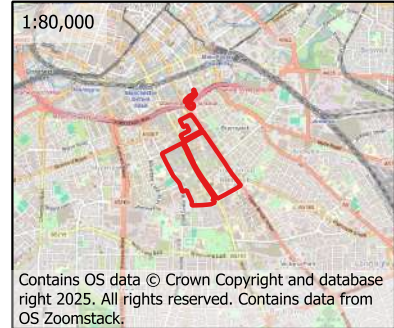
Legend
 Site Boundary ● Occupied

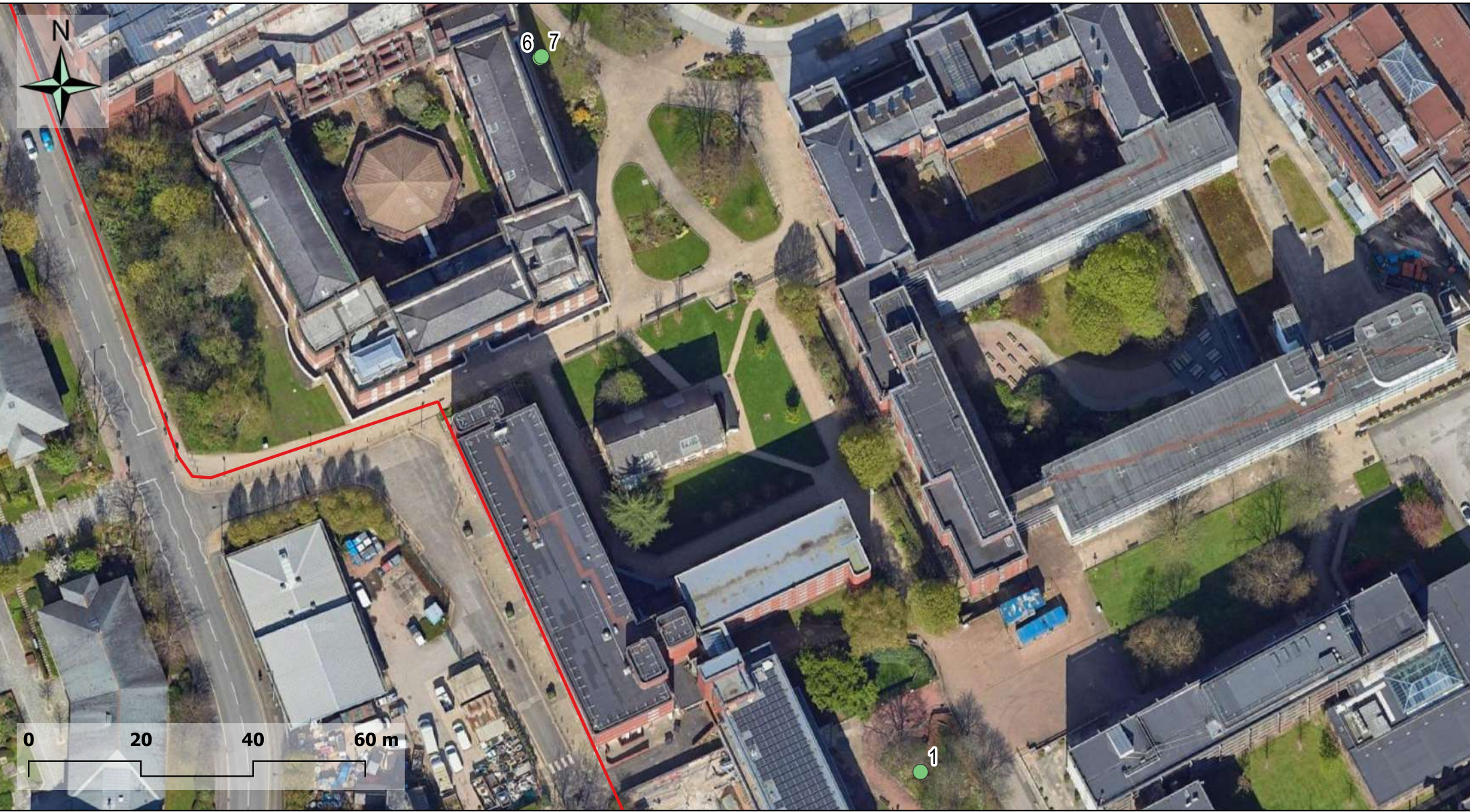
Project Name:
University of Manchester

Drawing Title:
Occupied Enhancements

Drawing Number:
D0018.005.3 - Insert 3

Revision: A. Date: 26/07/2025





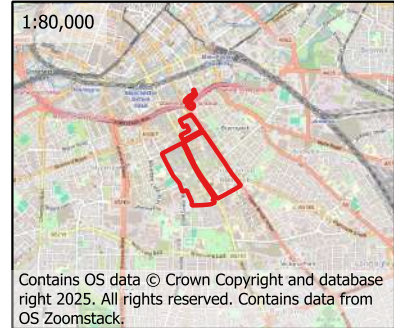
Legend
 Site Boundary ● Occupied

Project Name:
University of Manchester

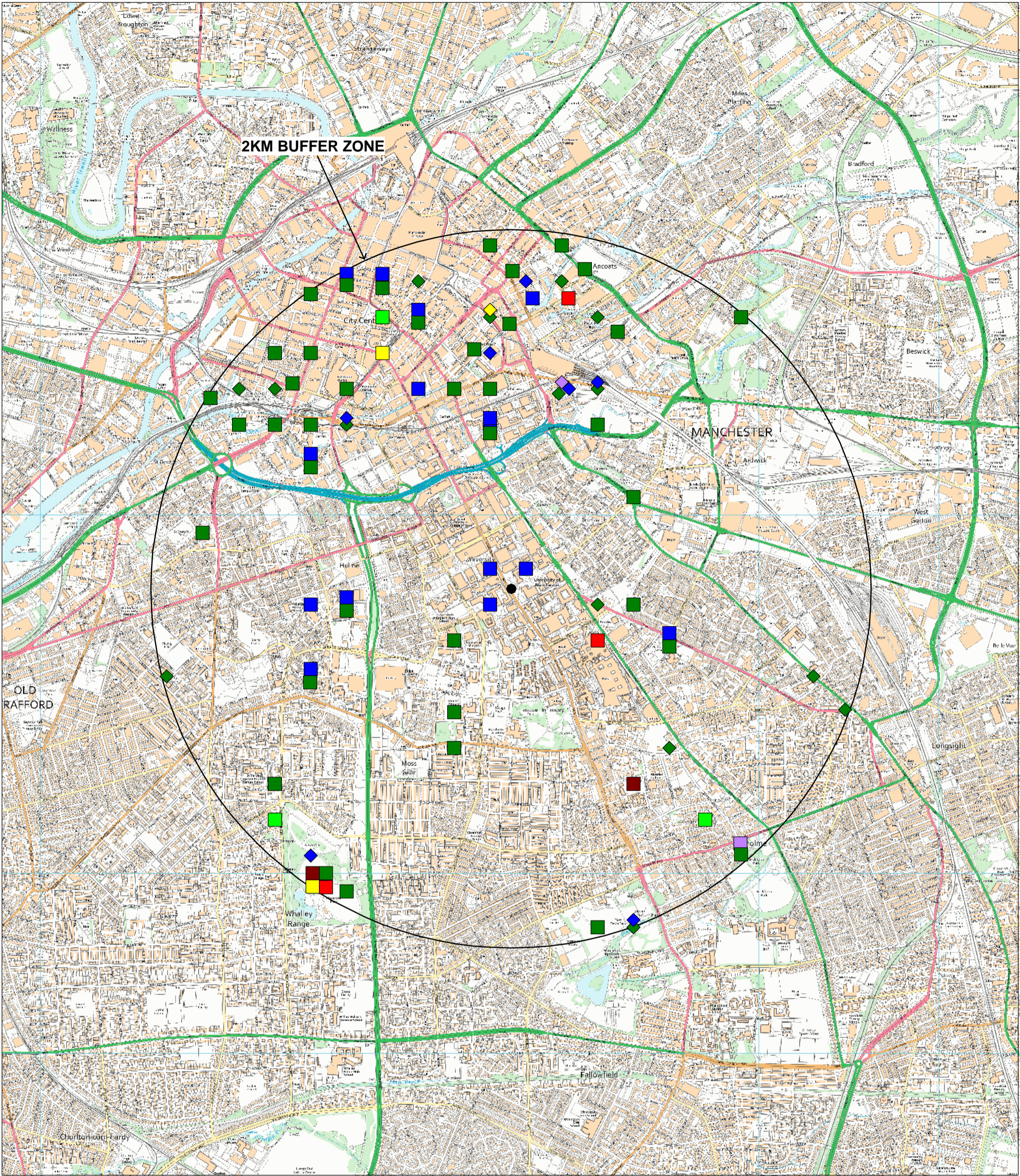
Drawing Title:
Occupied Enhancements

Drawing Number:
D0018.005.4 - Insert 4

Revision: A. Date: 26/07/2025



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KEY

BAT ROOSTS

- ◆ COMMON PIPISTRELLE
- ◆ MYOTIS SP
- ◆ PIPISTRELLE SP
- ◆ SOPRANO PIPISTRELLE

BATS OTHER SIGNS

- BAT SP
- BROWN LONG-EARED BAT
- COMMON PIPISTRELLE
- MYOTIS SP
- NOCTULE BAT
- PIPISTRELLE SP
- SOPRANO PIPISTRELLE

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ 84617 96587
UNIVERSITY OF MANCHESTER - MAP 4

SCALE 1:20,000

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

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 AND MAY LEAD TO PROSECUTION OR CIVIL PROCEEDINGS

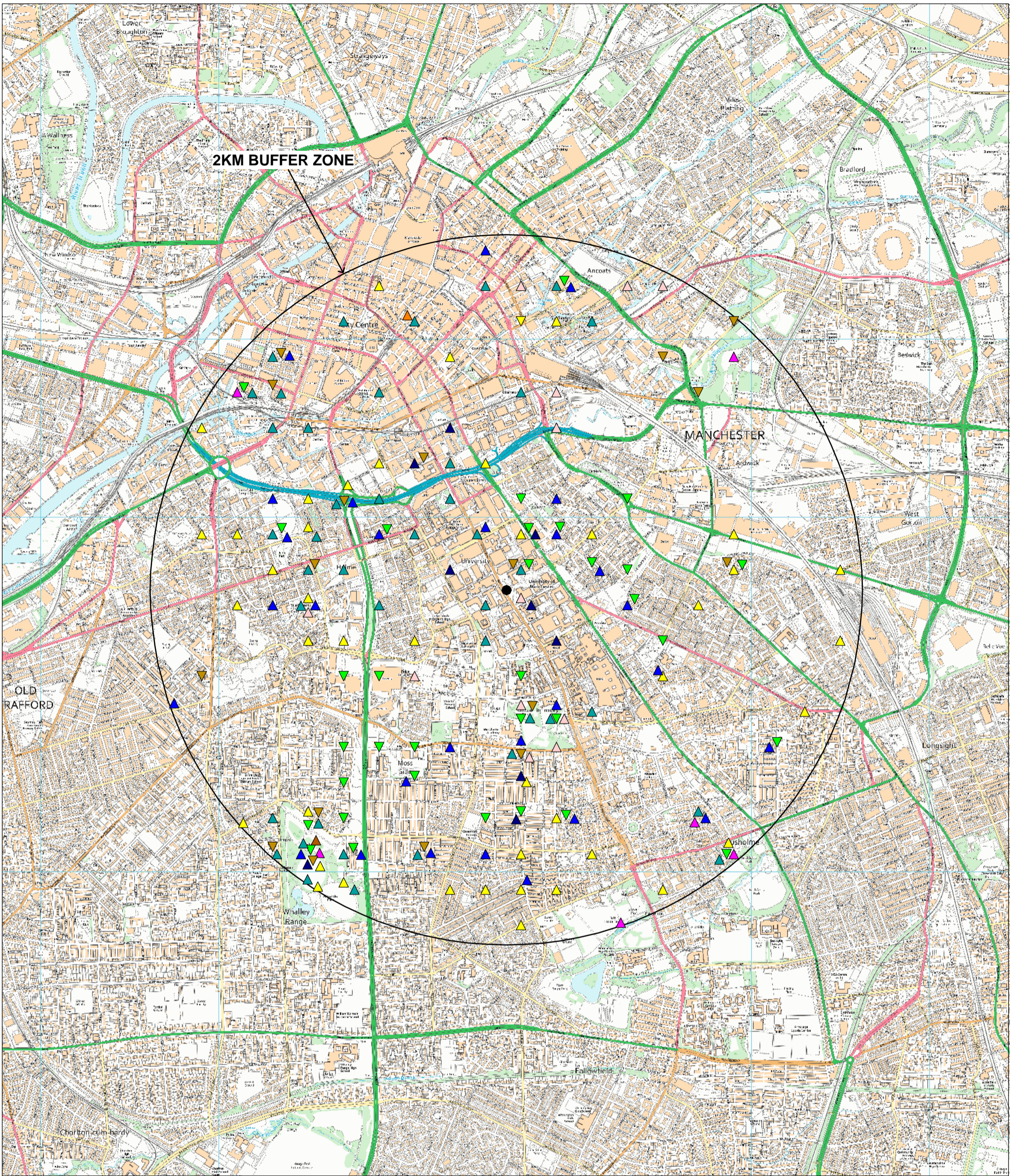
TAMESIDE MBC LICENCE NO LA100022697, 2025



Greater Manchester Ecology Unit

Telephone 0161 342 4409
 Email: gmeu@tameside.gov.uk

Date Produced: 21/07/2025



KEY
SECTION 41 SPECIES

- ▲ BULLFINCH
- ▲ DUNNOCK
- ▲ HEDGEHOG
- ▲ HERRING GULL
- ▲ HOUSE SPARROW
- ▲ LAPWING
- ▲ LESSER REDPOLL
- ▲ S41 MOTH
- ▲ SONG THRUSH
- ▲ STARLING
- ▲ YELLOW WAGTAIL

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ 84617 96587
UNIVERSITY OF MANCHESTER - MAP 5

SCALE 1:20,000

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Ecology Unit

Telephone 0161 342 4409
Email: gmeu@tameside.gov.uk

Date Produced: 21/07/2025