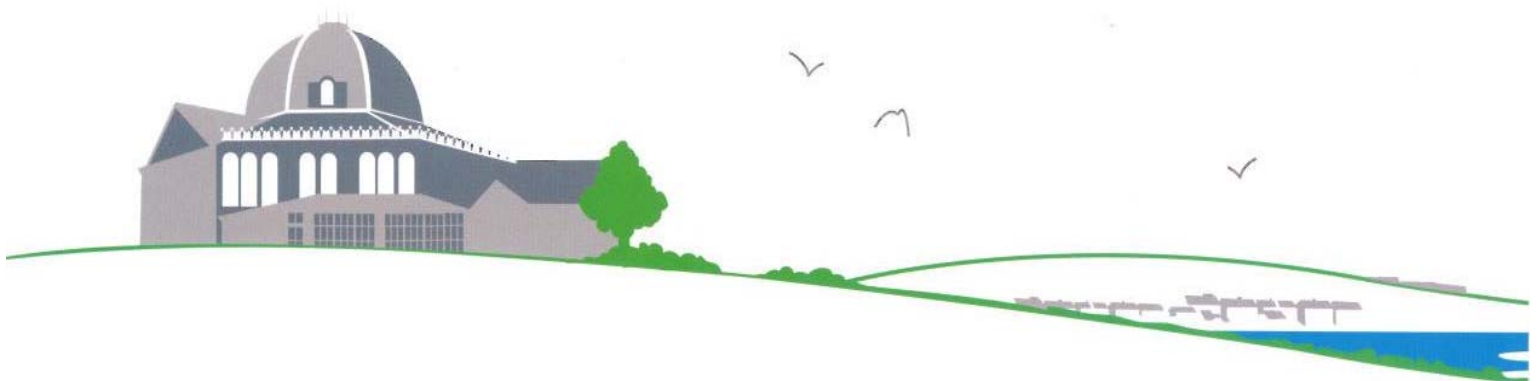




MULBURY HOMES LTD

GOULDEN STREET, NEW CROSS,
MANCHESTER

EXTENDED PHASE 1 HABITAT SURVEY
AND ASSESSMENT FOR BATS



MULBURY HOMES LTD

GOULDEN STREET, NEW CROSS, MANCHESTER

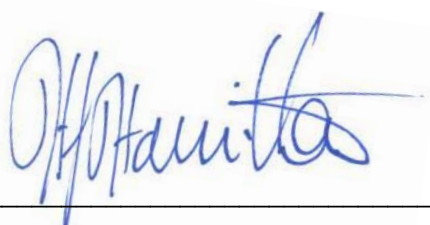
EXTENDED PHASE 1 HABITAT SURVEY AND ASSESSMENT FOR BATS

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This project has been undertaken in accordance with PAA policies and procedures on quality assurance.

Signed: 

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EXECUTIVE SUMMARY

Penny Anderson Associates Ltd (PAA) was commissioned to carry out an ecological assessment at a site on Goulden Street, Manchester (Grid Ref: SJ 8470 9889).

A search for protected species and sites within approximately 2km of the application site was provided by Greater Manchester Ecology Unit (GMEU) in July 2018. In addition, the Multi Agency Geographic Information for the Countryside (MAGIC) web site was viewed on-line to identify any further protected sites or species of importance in the same search area.

An Extended Phase 1 Habitat survey was undertaken on 20th July 2018, led by Sarah Ross (MCIEEM) and assisted by Victoria Burton (ACIEEM) following the *Handbook for Phase 1 Habitat Survey* (JNCC 2010) methodology. The survey was 'extended' (IEA 1995) to include a general assessment for the presence or potential presence of protected species.

Building inspections for bat roosts were undertaken at the same time following Collins (2016). The overall suitability of the habitat within and around the application site was also evaluated in terms of its foraging and commuting value to bats. Evidence of, or potential for, nesting birds using the buildings or habitat on site was undertaken at the same time. Three follow-on evening bat surveys were undertaken between August and September 2018.

The desk study identified a number of protected sites and species although all records returned were considered sufficiently distant and isolated from the application site to not be impacted by the development proposals, with the exception of the highly mobile species - bats and birds.

The Extended Phase 1 Habitat survey highlighted no areas of habitat of significant nature conservation interest, with small areas of grassland, tall herb and scrub being present. Scrub areas (since cleared to enable structural surveys) could support nesting birds and a variety of insect species were noted. Habitats were considered to be of value to foraging bats. The plant species list was typical of abandoned urban sites and no non-native invasive Schedule 9-listed plants were observed across the site.

The survey identified medium potential for roosting bats on the site associated with the chimney structure. Boundary walls held low potential only. Evening bat activity surveys found evidence of a day roost for small numbers (one or two) of common pipistrelle bats within the chimney structure. The chimney structure is being retained.

Evidence of use by nesting birds was observed within the chimney structure and the scrub habitat had potential to support nesting birds. The site was not considered suitable for use by nesting black redstart (*Phoenicurus ochruros*) or peregrine falcon (*Falco peregrinus*), but the tall chimney stack could provide a suitable song perch for black redstart breeding males.

Re-development of the site will require a Natural England European Protected Species Licence in respect of bats and their roosts to ensure any impacts on the bat roost are reviewed and potentially impacting work undertaken in a managed way. Mitigation and compensation options are proposed.

Any future site clearance should be completed in the autumn/winter period, i.e. September to March, inclusive. If winter clearance is not possible, it is recommended that a suitably experienced and qualified Ecologist re-inspects the site before clearance is undertaken and advises.

Recommendations for ecological enhancement measures are made.

1. INTRODUCTION

- 1.1 Penny Anderson Associates Ltd (PAA) was commissioned by Mulbury Homes Ltd to carry out an Extended Phase 1 Habitat survey at a site on Goulden Street, Manchester (Grid Ref: SJ 8470 9889), in relation to proposals for the re-development of the site. In addition, inspections of the building within the application site boundary were carried out to assess use, or potential use, by roosting bats and/or nesting birds, along with a follow-on evening bat activity surveys.
- 1.2 The Extended Phase 1 Habitat survey also included a desk study for the site and the area within approximately 2km of its centre. This examined all data records for protected sites, habitats and species held by Greater Manchester Ecology Unit (GMEU) and other data repositories, in order to ecologically characterise and contextualise the site within the surrounding area.
- 1.3 This report details the results of these assessments and evaluates the results in the context of the proposed re-development of the site, making recommendations for any further survey work and/or mitigation measures required.

Site Description

- 1.4 The Goulden Street site is Plot 3 of three Plots within the New Cross development proposals. The area proposed for re-development is located on Goulden Street and bounded by Cross Keys Street, Chadderton Street and a footpath linking two sections of Bendix Street. The site is dominated by hardstanding with a single 'chimney' structure known to be a former ventilation shaft for the pre-existing police/fire station. The site is surrounded by a mixture of red-brick and stone walls and wooden hoarding. The site is within a city centre location with adjacent land comprising buildings, car parking, roads and other hardstanding areas.
- 1.5 The site comprises:
- A single red-brick 'chimney' structure;
 - Area of hardstanding with sparse self-seeded vegetation around the edges;
 - Unmanaged grassland, tall herb and scrub vegetation, mostly self-seeded; and
 - Series of boundary walls of either brick/stone or wood construction.
- 1.6 Current re-development proposals would result in the re-development of the site for residential use with associated highways and other works. The 'chimney' structure is to be retained.

Legislative Context

- 1.7 A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2017; further details can be obtained from the Joint Nature Conservation Committee (JNCC) web site at www.jncc.defra.gov.uk.
- 1.8 Other international conventions include: the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA) (1981) (as

amended) and Countryside and Rights of Way (CRoW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).

- 1.9 At the national level, the UK Post-2010 Biodiversity Framework published in 2012 is the Government's response to the Convention on Biological Diversity (2010). It describes the UK's biological resources, commits a detailed plan for the protection of these resources within the UK's devolved framework across England, Wales, Scotland and Northern Ireland. The document identifies future priorities for nature conservation and adopts a more strategic approach, including ecosystem services and sustainability alongside biodiversity. Despite administrative changes following devolution, there is still an underlying objective of protecting and enhancing a range of priority species and habitats, often still based on the objectives and classifications of the original UK Biodiversity Action Plan. *Biodiversity 2020* is England's national biodiversity strategy. Building on the *Natural Environment White Paper* published in 2011, this provides a means of delivering the international and EU commitments to biodiversity. Under Biodiversity 2020, Priority Species and Habitats referred to are those of 'Principal Importance' for the conservation of biodiversity in England listed on Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.
- 1.10 Finally, the National Planning Policy Framework (NPPF 2019) provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for habitats and biodiversity, with a particular focus on the maintenance and creation of ecological networks. Furthermore, the NPPF also states that any planning proposals for which significant negative impacts on biodiversity cannot be avoided, mitigated or compensated for should be refused. The NPPF states that the planning system should contribute to and enhance the natural environment through a range of actions, including:
- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
 - recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; and
 - minimising impacts on biodiversity and providing net gains for biodiversity including establishing coherent ecological networks that are more resilient to current and future pressures.
- 1.11 To protect and enhance biodiversity and geodiversity, plans should:
- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
 - promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Protected Species

- 1.12 Details of the protected species legislation relevant to this site can be found in Appendix 1.

Invasive Species

- 1.13 Certain non-native species that have been introduced into the UK are regarded as being a threat to native biodiversity. Legislative measures have, therefore, been put in place to prevent the spread of these invasive species in the wild.
- 1.14 Under section 14 of the WCA 1981 (as amended), it is illegal to introduce plants listed under Part II of Schedule 9 of the WCA into the wild or sell these species. Offences include causing the spread of viable plant material or neglecting to contain or appropriately manage non-native species. Up-to-date guidance can be found in Defra's review of Schedule 9 (Defra 2009).
- 1.15 Commonly introduced Schedule 9 species include non-native cotoneaster species, specifically, small-leaved cotoneaster (*Cotoneaster microphylla*) and wall cotoneaster (*C. horizontalis*), Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Fallopia japonica*).

2. METHODS

Desk Study

- 2.1 The desk study consisted of a search to gain local and site-specific ecological information. The results help to place the site within a wider ecological context and inform any requirements for further survey work. A search zone of approximately 2km radius from the centre of the site was used, and the following sources of information were consulted for details of statutory and non-statutory designations for nature conservation and for records of protected species or species of conservation concern within the search area:
- GMEU; and
 - Multi-Agency Geographic Information for the Countryside (MAGIC¹).

Extended Phase 1 Habitat Survey

- 2.2 An Extended Phase 1 Habitat survey of the application site was undertaken on 20th July 2018. The survey was led by Dr Sarah Ross (MCIEEM², CEnv³) and assisted by Victoria Burton (ACIEEM⁴). The survey followed standard methods as set out in the *Handbook for Phase 1 Habitat Survey* (JNCC 2010) for classifying and mapping British habitats. This entailed mapping, describing and collating plant species lists (nomenclature following Stace 2010) for habitats across the area delineated for the survey.
- 2.3 Each plant species was assigned abundance codes within each habitat. This was done using the 'DAFOR' scale (where: D = dominant; A = abundant; F = frequent; O = occasional; R = rare), which provides an indication of the relative abundance of each plant species present within a particular habitat. The survey aimed to provide a record of habitats that are present within the site and to further investigate those that are likely to be ecologically important.
- 2.4 The survey was 'extended' (IEA 1995) to include a general assessment for the presence or potential presence of protected species, noting any areas of suitable habitat and the location and type of any incidental field signs of protected species. In particular, this component of the field survey focused on the potential for bats and breeding birds to be present on site, taking into account any contemporary, relevant desk study records.

Building Inspections

- 2.5 The external 'building' inspection was also undertaken on 20th July 2018. Surveys were led by Dr Sarah Ross (MCIEEM, CEnv, Natural England Class Survey Bat Licence) and assisted by Victoria Burton (ACIEEM).
- 2.6 The surveys followed the guidance of Collins (2016) and involved carrying out a visual inspection of all structures (walls and 'chimney' structure) to assess their potential for bat roosting and to search for any evidence of such use.

¹ <http://magic.defra.gov.uk/home.htm> (accessed 06/09/2018)

² Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM)

³ Chartered Environmentalist, Society for the Environment

⁴ Associate Member of CIEEM

- 2.7 The survey comprised an assessment of features on the structures that could be used by roosting bats such as small holes and crevices and also features that would provide entry/exit points for bats to access the interior of the building. Binoculars and torch were used to inspect potential roost features where necessary. In addition to this, a search was made for any evidence of bat presence on the structures, such as accumulations of droppings and feeding remains or sightings of the animals themselves.
- 2.8 Structures were assigned to a roost potential category, based on their suitability for supporting bat roosts. These criteria have been devised using information obtained from the *Bat Mitigation Guidelines* (Mitchell-Jones 2004) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins 2016), as well as through professional experience. Along with these texts, reference was made to current Defra guidance <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects> (last accessed 06/09/2018) for survey and evaluation protocols.
- 2.9 The assessment of suitability for bats is to some extent subjective and relies on the professional judgement and experience of the surveyor in recognising suitable habitat features and field signs of bats, however, the broad criteria used are outlined in Table 1.

Table 1 Bat Roost Assessment Criteria (Collins 2016)

Suitability	Description
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically, but does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation.)
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost type of high conservation significance.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Confirmed Roost	A structure with evidence of bat presence, i.e. droppings, feeding remains, audible bat calls heard during daytime survey or sightings of the animals themselves, existing record of bats roosting at the location.

- 2.10 The overall suitability of the habitat within and around the application site was also evaluated in terms of its roosting, foraging and commuting value to bats.
- 2.11 Evidence of, or potential for, nesting birds using the buildings or other areas on site was also undertaken at the same time.

Evening Bat Activity Surveys

- 2.12 Structures identified as holding some potential for use by roosting bats are subject to further bat activity surveys to provide further data on which to make an assessment of the likelihood of bats being present. For structures/sites assessed as having Medium potential the

recommended survey effort is two evening bat activity surveys (Collins 2016). If roosts are confirmed then a further activity survey may be required to confirm the species of bat and status of the roost. The dates and survey conditions are presented in Table 2.

- 2.13 Three evening bat activity surveys were completed at this site over the August and September period. The surveys commenced at approximately 20 minutes prior to sunset and continued for approximately 1.5 hours, taking in the typical emergence times for the species considered likely to be present at this location. Weather conditions were recorded at the start and end of the survey. Surveys were led by either Sarah Ross or Celia Barton (GradCIEEM⁵, Natural England Class Survey Bat Licence) and assisted by Gerard Hawley (MCIEEM).
- 2.14 Surveyors were positioned at vantage points close to the structures of interest to observe any bats entering or exiting potential roost features. Each was equipped with a Batbox Duet bat detector to aid detection in the field and an Anabat SD1 to record all calls and enable sonogram analysis for confirmation of species identification.
- 2.15 Recorded bat calls from the survey were analysed using specialist sound analysis software Analook W. Based on parameters such as peak frequency and call duration, each call was assigned to a particular bat species to confirm the identification recorded in by surveyors in the field.

Table 2 Bat Activity Survey Dates and Conditions

Date	Type of Survey	Start Time	Sunset/ Sunrise	End Time	Weather Conditions
28/08/18	Dusk emergence	19:47	20:08	21:10	Dry and calm throughout. Temperature 18°C, decreasing to 16°C. Relative humidity 57%, increasing to 69%. Cloud cover 100% throughout.
05/09/18	Dusk emergence	19:40	19:50	21:00	Dry and light breeze throughout. Temperature 17.8°C, decreasing to 13.5°C. Relative humidity 48%, increasing to 77%. Thin cloud cover, 5% throughout.
10/09/18	Dusk emergence	19:20	19:38	20:40	Dry at start then intermittent very light rain (mizzle) until 20:07. Dry after this. Light wind throughout. Temperature 16.2°C, decreasing to 14.2°C. Relative humidity 62%, increasing to 82%. 100% cloud cover throughout.

Limitations

- 2.16 The 'chimney' structure could not be inspected closely due to the size of the structure, however, the use of three bat activity surveys ensured sufficient data were able to be collected for this stage of the evaluation process.

⁵ Graduate Member of CIEEM

- 2.17 One section of the external boundary walls was not accessible for close visual inspection due to the adjacent construction site, however, inspection using binoculars and access to the interior face of these walls indicated the walls were in a similar condition to elsewhere on the site.
- 2.18 No other significant limitations were identified during the surveys.

3. RESULTS

Desk Study

- 3.1 The desk study consisted of web-based research to gain local and site-specific ecological information. The results help to place the survey site within a wider ecological context and inform any requirements for further survey work. The desk study data are presented in Appendix 2 (excluding any sensitive records, which are available on request).
- 3.2 It is important to note that the desk study results provide an indication of the species present in and around the site and do not confirm current presence or absence of any particular species.

Statutory Protected Sites

Special Areas of Conservation

- 3.3 Special Areas of Conservation (SAC) are protected sites with strict conservation protection, designated under Article 3 of the European Commission Habitats Directive. There are no SAC in the search zone for the site.

Sites of Special Scientific Interest

- 3.4 SSSI are statutory sites designated to support species of plants and animals that find it more difficult to survive in the wider environment. They represent a selection of this country's best wildlife and geological sites, and cover approximately 7% of the terrestrial area of the country (with over 4,000 separate sites in England).
- 3.5 There are no SSSI in the search zone for the site. The site is within an SSSI Impact Risk Zone which relates to assessing planning applications for likely impacts on SSSI/SAC/Special Protection Area(s) (SPA) and Ramsar sites. Rochdale Canal, which is located some 480m south-east of the site, becomes a SSSI 5km from the site.

Non- Statutory Protected Sites

- 3.6 There are three Non-Statutory Sites within or partially within the 2km search area. These are the following Sites of Biological Importance (SBI):
- River Irwell. The river SBI just comes in at the edge of the 2km search zone, to the west of the site.
 - Rochdale Canal, Stott's Lane – Ducie Street Basin. This waterway is to the east and south-east of the site and connects with the Ashton Canal below Ducie Street. The nearest point of the canal to the site is approximately 400m to the south-east.
 - Ashton Canal (West). The nearest point to the site is where the canal connects with Rochdale Canal at Ducie Street, approximately 600m to the south.

Protected and Notable Species

European Badgers

- 3.7 There were five records of badger (*Meles meles*) setts and four records of activity within the 2km buffer, with one sett record within 500m of the site. The detailed information is not presented in this report (due to the sensitive nature of the record), but is available on request if required.

Bats

- 3.8 Table 3 shows the number of roosts and other signs of each species of bat recorded in the buffer zone, and the proximity to the site of the closest roost for each species.
- 3.9 There are several different bat species recorded within the search area: common (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*), Daubenton's (*Myotis daubentonii*), Natterer's (*Nyctalus noctula*) and brown long-eared bats (*Plecotus auritus*). Other bat records were listed as 'pipistrelle species' for common and soprano pipistrelle combined. In addition, 'Myotis sp' was recorded for the mouse-eared (*Myotis*) bat species which can be difficult to distinguish, along with 'bat species' where the individual species was not determined.
- 3.10 Common pipistrelle is the most frequently recorded species with 75 field signs and 19 roosts identified within the 2km search area. The closest roost to the site, a pipistrelle species roost, is approximately 200m to the south-east of the site. Signs of soprano pipistrelle are recorded within 50m of the site, to the south-west and common pipistrelle signs are also reported nearby. A Daubenton's bat is recorded at approximately 750m towards the west and connected with the River Irwell.

Table 3 Bat Records from GMEU, courtesy of South Lancashire Bat Group

Species	No. Roosts	No. Other Signs	Closest Roost (distance from site)
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	19	75	400m
Pipistrelle sp. (<i>Pipistrellus</i> spp.)	15	31	200m
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	2	4	700m
Daubenton's bat (<i>Myotis daubentonii</i>)	1	1	2.2km
<i>Myotis</i> sp.	1	2	1km
Brown long-eared bat (<i>Plecotus auritus</i>)	0	1	n/a
Natterer's bat (<i>Myotis nattereri</i>)	0	1	n/a
Bat species	1	7	2km

- 3.11 In addition, the MAGIC web site shows three bat mitigation European Protected Species Licences within the Loom Street area just south of the A62 Oldham Road. These mitigation licences identify that three separate day roosts of common pipistrelle bats have been recorded in this area, approximately 270m from the application site.

West European Hedgehog

- 3.12 Hedgehog (*Erinaceus europaeus*) is classed as a Species of Principal Importance (Section 41 species). There are three hedgehog records at scattered locations within the buffer zone with the nearest record at approximately 1.5km to the west of the site.

Birds

- 3.13 There are a number of Schedule 1 protected bird species and Species of Principal Importance (Section 41 species) recorded within the 2km buffer zone. These are listed in Table 3 with their scientific name and designation along with the distance from the site of the closest recorded bird of each species. The majority of the species are in the southern half of the search zone, with few to the north of the site.

- 3.14 Four of the bird species listed: black redstart⁶, kingfisher, little ringed plover and peregrine are protected under Schedule 1 of the WCA 1981, which gives additional protection from disturbance when breeding. Nearly all of the 24 black redstart records are in the urban area in the southern part of the search zone, with an outlying record to the far north of the site. Several of the records are clustered near to the site with the closest record at 300m away. Peregrine is also recorded close to the site, with further records scattered about the search area. Little ringed plover is recorded further away, with the nearest record 600m from the site. The 53 kingfisher records are mostly connected with the River Irwell to the west and south-west of the site.
- 3.15 Twelve bird species listed as Species of Principal Importance are recorded in the site's search area, with the majority of the records connected with the River Irwell to the west and south-west of the search zone. There are four bird species recorded close to the site, the nearest record being bullfinch at 200m away. House sparrow, dunnock and lapwing are located further away, at 375m and 400m. The other S41 bird species listed in Table 4 are recorded at greater distances from the site.

Table 4 Protected Bird Species Records from GMEU

Common Name	Scientific Name	No. of Records	Designation	Closest Record (Distance from Site)
Black redstart	<i>Phoenicurus ochruros</i>	24	*Schedule 1	300m
Bullfinch	<i>Pyrrhula pyrrhula</i>	16	**S41	200m
Dunnock	<i>Prunella modularis</i>	58	S41	400m
Herring gull	<i>Larus argentatus</i>	3	S41	800m
House sparrow	<i>Passer domesticus</i>	21	S41	375m
Kingfisher	<i>Alcedo atthis</i>	53	Schedule 1	800m
Lapwing	<i>Vanellus vanellus</i>	13	S41	400m
Lesser redpoll	<i>Carduelis cabaret</i>	4	S41	700m
Linnet	<i>Carduelis cannabina</i>	5	S41	875m
Little ringed plover	<i>Charadrius dubius</i>	7	Schedule 1	600m
Peregrine	<i>Falco peregrinus</i>		Schedule 1	Available on request
Skylark	<i>Alauda arvensis</i>	3	S41	1.9km
Song thrush	<i>Turdus philomelos</i>	45	S41	1.1km
Spotted flycatcher	<i>Muscicapa striata</i>	3	S41	1.1km
Starling	<i>Sturnus vulgaris</i>	38	S41	400m
Yellow wagtail	<i>Motacilla flava</i>	1	S41	600m

KEY * = Schedule 1 Part 1 of the WCA 1981; ** = Species of Principle Importance (Section 41 of the NERC Act 2006)

⁶ See Table 4 for scientific names

Invertebrates

- 3.16 There are nine records of a S41-listed moth species, scattered across the search area close to waterways. The closest record is approximately 500m from the site.

Amphibians

- 3.17 There are two records of great crested newt (*Triturus cristatus*, GCN) 2.4km away from the site. This is a European Protected Species and is also protected under the WCA.
- 3.18 One record of common toad (*Bufo bufo*) very close to the same location as the GCN record. Common toad is classed as a Section 41 species under the NERC Act 2006 and is also protected under the WCA.

Plant Species

Protected Species

- 3.19 One plant species recorded in the search area, floating water-plantain (*Luronium natans*), has protection under the WCA and is listed as 'Near Threatened' in the *Vascular Plant Red Data List for England* (Stroh *et al.* 2014). The plant records are, however, some distance from the site (the closest 900m away) towards the east, in the Ashton Canal.
- 3.20 There are two S41 plant species recorded in the search area – grass-wrack pondweed (*Potamogeton compressus*) and yellow bird's-nest (*Hypopitys monotropa*). Both are also recorded as 'Endangered' in Stroh *et al.* (2014). The two sightings of the pondweed are in the Ashton Canal SBI. However, the nearest record to the site is 800m. The yellow bird's-nest is located at 800m from the site, in an area of woodland to the north.

Invasive Species

- 3.21 There are no Schedule 9-listed invasive species recorded in the 2km buffer zone.

Extended Phase 1 Habitat Survey

Habitats

- 3.22 The site comprised areas of hardstanding along with unmanaged grassland, tall herb and scrub plus scattered short self-seeded vegetation within the hard standing areas (Figure 1). In addition there is a tall chimney/ventilation shaft present on site and the site is bounded by high walls and fencing/gates. The habitats are described below with structure described in the section covering the assessment for bats. Plant species recorded across the site are listed in Table 5. The Plates included illustrate these features on the application site.
- 3.23 Please note that the grassland, tall herb and the majority of the scrub was cleared in August 2018 to facilitate access for structural assessments.

Unmanaged Neutral Grassland

- 3.24 This grassland habitat was dominated by the grasses creeping bent and Yorkshire-fog with frequent perennial rye-grass. The most frequent forbs were black medick, Canadian fleabane and Michaelmas-daisy along with colt's-foot and weld – species typical of previously disturbed urban areas. Occasional species are those typical of grasslands of this type with curled dock, dandelion, greater plantain, purple toadflax, red clover, smooth hawk's-beard, spear thistle and white clover all being recorded. Other plant species were recorded only at low occurrences.

- 3.25 Overall, the habitat was tall and unmanaged and had developed a relatively dense litter except in localised areas where species typical of more open habitat were able to persist (black medick, for example). All species were flowering well and setting seed.

Tall Herb

- 3.26 Common nettle, field horsetail and rosebay willowherb were the main constituents of this vegetation, again reflecting the disturbed nature of the habitat. Michaelmas-daisy and mugwort were also frequent along with occasional purple toadflax, spear thistle, creeping thistle and weld. Bittersweet and cleavers were found scrambling through the taller vegetation.
- 3.27 In a similar way to the grassland area, the tall herb habitat had developed a tall, relatively dense structure and plant species were flowering well.

Scrub

- 3.28 Butterfly-bush was by far the most frequent species within the scrub habitat on site with bramble being occasional. Other less frequent species were birch, cherry and goat willow. This habitat formed a dense area around the chimney structure and the south-east section of the site, with smaller patches found throughout the hard-standing area.

Ephemeral/Short Perennial Vegetation

- 3.29 Other plant species comprise those sparsely self-sown on other areas of the site, such as in gaps and crevices of the hard standing and within the eroded mortar of walls and the chimney structures. Incidental plant species include those typical of urban areas such as autumn hawkbit, Canadian fleabane, creeping bent, dandelion, hart's-tongue, Michaelmas-daisy species, prickly lettuce, purple toadflax, ragwort, red fescue, smooth sow-thistle, spear thistle and weld. All occur as occasional to rare abundance across the site with a small number being locally more frequent.
- 3.30 No non-native invasive plant species as listed in Schedule 9 of the WCA (1981 as amended) were recorded on site.

Table 5 Plant Species Recorded on Site

Common Name	Latin Name	Phase 1 Habitat Type and Code			
		Ephemeral/ Short Perennial (J1.3)	Neutral Grassland (B2.2)	Tall Ruderal (C3.1)	Introduced Shrub/ Dense Scrub (J1.4/A2.1)
Trees and Shrubs					
Birch species	<i>Betula sp.</i>				R
Butterfly bush	<i>Buddleja davidii</i>	O - F			F
Cherry species	<i>Prunus sp. cf padus</i>				R
Cherry species	<i>Prunus sp.</i>				R
Goat willow	<i>Salix caprea</i>				R
Herbs, Grasses and Ferns					
Autumn hawkbit	<i>Scorzoneroides autumnalis</i>	O	R		
Barren brome	<i>Anisantha sterilis</i>		R		
Bittersweet	<i>Solanum dulcamara</i>			LO	
Black medick	<i>Medicago lupulina</i>		F		

Common Name	Latin Name	Phase 1 Habitat Type and Code			
		Ephemeral/ Short Perennial (J1.3)	Neutral Grassland (B2.2)	Tall Ruderal (C3.1)	Introduced Shrub/ Dense Scrub (J1.4/A2.1)
Bramble	<i>Rubus fruticosus</i> agg.	R			O
Canadian fleabane	<i>Conyza canadensis</i>	F	F		
Cleavers	<i>Galium aparine</i>			LO	
Colt's-foot	<i>Tussilago farfara</i>		LF		
Common mouse-ear	<i>Cerastium fontanum</i>		R		
Common nettle	<i>Urtica dioica</i>			LA	
Common ragwort	<i>Senecio jacobaea</i>		R		
Common valerian	<i>Valeriana officinalis</i>		R		
Creeping bent	<i>Agrostis stolonifera</i>	O - F	A		
Creeping thistle	<i>Cirsium arvense</i>			R - O	
Curled dock	<i>Rumex crispus</i>		R - O		
Dandelion	<i>Taraxacum officinale</i> agg.	R	O		
Field horsetail	<i>Equisetum arvense</i>			LF	
Greater plantain	<i>Plantago major</i>		O		
Hart's-tongue	<i>Asplenium scholopendrium</i>	R			
Herb-Robert	<i>Geranium robertianum</i>		R		
Hoary willowherb	<i>Epilobium parviflorum</i>		R		
Hop trefoil	<i>Trifolium campestre</i>		R		
Michaelmas-daisy species	<i>Aster</i> sp.	F	F	F	
Mugwort	<i>Artemisia vulgaris</i>			O - LF	
Perennial rye-grass	<i>Lolium perenne</i>		O - F		
Prickly lettuce	<i>Lactuca serriola</i>	R			
Purple toadflax	<i>Linaria purpurea</i>	O	O	O	
Ragwort species	<i>Senecio</i> sp.	O			
Red campion	<i>Silene dioica</i>		R		
Red clover	<i>Trifolium pratense</i>		O		
Red fescue	<i>Festuca rubra</i>	R			
Rosebay willowherb	<i>Chamerion angustifolium</i>			F	
Selfheal	<i>Prunella vulgaris</i>		R		
Smooth hawk's-beard	<i>Crepis capillaris</i>		O		
Smooth sow-thistle	<i>Sonchus oleraceus</i>	O	R		
Spear thistle	<i>Cirsium vulgare</i>	O	O	O	
Spleenwort species	<i>Asplenium</i> sp.	R			
Weld	<i>Reseda luteola</i>	O - F	O - F	O	
White clover	<i>Trifolium repens</i>		O		
Willowherb species	<i>Epilobium</i> sp.(annual)	O - F			
Yorkshire fog	<i>Holcus lanatus</i>		A		

Key: D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally / local

Inspections of Structures for Bats

- 3.31 External inspections of the chimney and boundary walls were undertaken. The inspections focused on roosting bats and the potential for their presence on site, with evidence of nesting bird activity also being noted.

Chimney Structure

- 3.32 The chimney (Figure 1, Target Note 4) is constructed mainly of red-brick with stone corbels, cornicing and sills/lintels along with cast iron grilles and concrete slabs capping the top. The structure is approximately 24m high and appeared to have a number of voids within. The exterior of the chimney was inspected using powerful torches and binoculars. The interior was not able to be viewed. A number of external cracks and crevices were identified as holding potential for roosting bats and the ornate iron grille at the top of the structure was also considered to provide some access into any internal voids/flues.
- 3.33 The structural assessment report for the chimney was also reviewed (CRL Surveys 2018). This inspection was undertaken by mobile elevated work platform (MEWP) allowing closer inspection of the condition of the structure and some of the interior of the structure was also viewed. The report confirms a number of gaps and crevices are present and that access to the internal voids (flues within the upper 15m section of the structure) was possible from the top of the structure through displaced capping slabs, the grille and via a small pipe opening to the lower section (north-east elevation).
- 3.34 These voids appeared relatively clean and potentially suitable for use by roosting bats from the photographs included in the structural assessment report. The lower section (approximately 8.5m high) of the structure is reported as having no obvious accessible voids although external gaps and crevices are present.
- 3.35 Overall, the chimney structure is assessed as holding Moderate potential for use by roosting bats. Further bat activity surveys were, therefore, undertaken.

Boundary Structures

- 3.36 Red-brick walls enclose three sides of the application site, with the fourth side to the north-east (along the footpath between two sections of Bendix Street) comprising metal columns with wooden hoarding/doors between. The site is, therefore, fully enclosed and access is gained through large metal gates of the south-west elevation (along Goulden Street, Figure 1, Target Note 5). All boundary features are approximately 2m high and the inspection was undertaken using a high powered torch, an endoscope and close-focussing binoculars.
- 3.37 The wall was in variable condition, with an area on the corner of Cross Keys Street and the footpath (Target Note 6) showing significant deterioration with some courses of bricks missing. This section and the rest of the exterior face of the wall along Cross Keys Street holds few crevices and on inspection they were found to be shallow and exposed and unlikely to hold significant potential as bat roost features (Target Note 8). The interior face of this wall (Target Note 7) did have a small crevice behind a wooden batten running approximately 2.5m high (the batten held old electrical cabling).
- 3.38 Along Goulden Street a number of deeper gaps and crevices were present particularly around the stonework by the gates. The exterior section of wall along Chadderton Street could not be inspected due to being closed off by adjacent development. Both these boundary walls had only superficial brick and mortar erosion on the interior face, providing little in the way of potential roost features for bats.
- 3.39 The wooden hoarding/gates and metal pillars were in generally poor condition but the nature of the materials and their structure (with large gaps and being exposed to daylight and weather) made it unlikely that bats would roost in this boundary structure.

- 3.40 Overall, the boundary structures were assessed as having Low potential for use by roosting bats and further bat activity surveys were completed.

Habitat Assessment for Bats

- 3.41 The application site holds some potential in terms of bat commuting routes and foraging habitat for bat species due to the linear boundary walls and the habitats within the site, particularly as the enclosed, sheltered nature of the site is likely to increase night-time insect activity.

Evening Bat Activity Surveys

- 3.42 Three evening bat activity surveys were completed at the site.
- 3.43 No bats were seen exiting any part of the boundary structures (wall and wooden hoarding/doors) during the surveys.
- 3.44 During Visit 1 (28th August 2018) a single common pipistrelle bat was observed emerging from the south-east elevation of the chimney structure, at 20:14 (six minutes after sunset). The roost was approximately 8m high where the lower and upper sections of the structure met, at a point with a number of small crevices (Figure 2). Throughout the remainder of this survey, two common pipistrelles were observed feeding and foraging within the site boundary up to 20:48 with occasional single foraging bats after this point and the final record of a commuting bat at 21:06.
- 3.45 During Visit 2 (5th September 2018) no bats were recorded emerging from any structures on site. There was, however, good evidence of foraging and feeding within the site, mostly one or two bats at a time but with three common pipistrelle bats observed over the period 20:18 to 20:22. The bats arriving to site appeared to come from both the north-west and south-east areas outside of the site and the early time of the first registrations (within 20 minutes of sunset) suggests they are roosting in the local area but off the application site.
- 3.46 During Visit 3 (10th September 2018) no bats were recorded emerging from any structures on site. As for Visit 2, there were records of foraging and feeding within the site, mostly one and occasionally two bats at a time. The bats arriving to site appeared to come from the south-east and south-west areas outside of the site and the early time of the first registrations (within 20 minutes of sunset) again suggests they are roosting in the local area but off the application site.
- 3.47 Two recently killed feral pigeon (*Columba livia*) carcasses were recorded at the site, with the remains potentially indicative of bird of prey activity such as a peregrine falcon, a species known to be in the local area. No bird activity was noted at the site during the evening survey, except continued roosting of feral pigeons.
- 3.48 Immediately prior to this third evening survey, the accessible crevices along the external face of the Goulden Street wall were closely inspected using ladders and an endoscope. A small number at the stone cornice level were not able to be inspected as they were beyond the safe reach of the ladders. No bats were observed within any of the crevices inspected. The majority of crevices inspected were shallow (<5cm deep) and/or considered too exposed to support roosting bats (i.e. deeper crevice but wider in height due to degradation of the exterior face of the brick).
- 3.49 No other species of bat were detected during the evening activity surveys.

Nesting Birds

- 3.50 Feral pigeon were noted as nesting within the chimney structure, in the lower section. There was no evidence of other specially protected bird species present on site that may use the tall chimney structure (such as peregrine falcon or black redstart) and the structural survey reported no evidence of material suggesting use by nesting birds. There is potential for black

redstart to use the chimney as a song post. The scrub held some potential for nesting birds but has since been cleared to allow for structure surveys. A chaffinch (*Fringilla coelebs*) was noted foraging on site during the Phase 1 Habitat survey but no birds (other than feral pigeon) were noted on site during the evening bat surveys.

Other Animal Species

- 3.51 No evidence of any other protected species utilising the site was found during the visits.

4. EVALUATION AND RECOMMENDATIONS

Evaluation

- 4.1 The desk study identified a number of notable sites and protected species within the wider search area. All sites and records of species returned during the desk study were considered sufficiently distant and isolated from the application site to not be impacted by the development proposals, with the exception of the highly mobile species - bats and birds.
- 4.2 The Extended Phase 1 Habitat survey highlighted no areas of habitat of significant nature conservation interest, with small areas of grassland, tall herb and scrub being present. Scrub areas (since cleared to facilitate structural surveys) could support nesting birds and a variety of insect species were noted. The plant species list was typical of abandoned urban sites with no rare or protected species present.
- 4.3 No non-native invasive Schedule 9-listed plants were recorded at the site during the survey.
- 4.4 Habitats were considered to be of value to foraging bats and likely to support a range of insects.
- 4.5 The survey identified medium potential for roosting bats on the site associated with the chimney structure. Boundary walls held low potential only.
- 4.6 Evening bat activity surveys confirmed a bat roost was present within the chimney structure with evidence indicating this is a day roost for small numbers (one or two) of common pipistrelle bats. The chimney structure is being retained under the current development proposals.
- 4.7 Evidence of use by nesting feral pigeon was observed within the chimney structure and the scrub habitat had potential to support nesting birds. The site was not considered suitable for use by specially protected bird species known in the local area, such as nesting black redstart or peregrine falcon, but the tall chimney stack could provide a suitable song perch for breeding males from local populations of black redstart.

Recommendations

Bats

- 4.8 A day roost of small numbers of common pipistrelle bats is confirmed within the chimney structure. Re-development of the site will require a Natural England European Protected Species Licence (EPSL) in respect of bats and their roosts to ensure any impacts on the bat roost are reviewed and any potentially impacting work is undertaken in a managed way. An EPSL cannot be applied for until planning permission has been granted.
- 4.9 The application for an EPSL will require up-to-date bat surveys. We recommend undertaking bat activity surveys over the May to July period in the season before the EPSL is required, to update and complement the late summer surveys completed in 2018.
- 4.10 A method statement will be required to support any licence application and will likely include:
 - Tool-box talk to Contractor prior to any works on site;
 - Pre-works inspection of the site by the licensed Ecologist prior to any works on site, including a close inspection of the chimney structure via scaffold or MEWP;
 - Licensed Ecologist to be present on site when works to the chimney structure occur due to the presence of the bat roost;
 - Roost to be retained *in situ* with appropriate bat access points retained or replaced. Access points are likely to comprise small gaps within the brick mortar to enable bats to

access the interior voids of the chimney. This can be included as a gap left within the normal mortar of the brickwork and/or via installation of a purpose-made free access Bat Brick⁷ to replace an existing brick; and

- Consideration of any changes in roost conditions (e.g. temperature and humidity) as a result of any repairs or changes to the chimney structure and measures to address these.

4.11 The development of a sensitive lighting strategy is essential to ensure the retained roost access points are not directly lit and that a flight path to/from the roost is retained under light levels no brighter than at present.

4.12 The precise impacts of the works to the chimney on the bat roost will need to be reviewed by a suitably experienced and licensed Ecologist as further details of the structural surveys and timeframes for re-development become available.

Nesting Birds

4.13 It is recommended that any future site clearance and demolition work is undertaken in the autumn/winter period (i.e. September to March, inclusive) and is preceded by a site inspection by a suitably experienced and qualified Ecologist. This is because all nesting birds, including feral pigeon, are protected when actively nesting and feral pigeons can continue to nest into the winter period if conditions are suitable.

4.14 If winter demolition/clearance is not possible, it is recommended that a suitably experienced and qualified Ecologist inspects the site no more than 48 hours prior to works to ensure active birds' nests are not present.

4.15 If nesting birds are confirmed to be present then works would need to be postponed until young have fledged and/or nesting had been completed. It may be necessary to cordon off the nest and monitor it until it is completed.

4.16 The Ecologists' checks should include the potential for presence of peregrine falcon on site, as despite the site not having evidence of nesting to date there is the possibility that this species may use the site in the future.

Ecological Enhancements

4.17 The proposed roof terrace and ground level residents garden area provides opportunities to integrate native and/or wildlife friendly planting schemes along with insect shelters such as 'bee bricks' or 'bug hotels' into the design. Suitable low maintenance and durable designs include the Beepot⁸ concrete planter with integrated bee house, the Bee Brick and Bee Block, or similar.

4.18 It is recommended that a number of new bat roosting opportunities for bats are installed at suitable locations across the roof design and at roof level as this will provide roosting opportunities and support the continued use of the site and the wider area by local populations of bats. Options for inclusion are as follows:

- The roof-top building providing access to the roof terrace may be a suitable location for wall-mounted bat box installation if sufficient height is available for secure placement.

⁷ For example, as available from <https://www.nhbs.com/bat-brick> and <https://www.ibstockbrick.co.uk/kevington/eco-products>

⁸ Available from Green and Blue <https://greenandblue.co.uk/product-category/bees>

There may also be opportunities for bat boxes/shelters to be installed on the inside faces of the proposed roof parapets;

- Suitable bat boxes include those specifically designed to provide day roosting opportunities for crevice roosting species (such as common pipistrelle bats, known to be present in the local area) and that require minimal maintenance. Bat boxes should be positioned as high up on this building as possible in a location avoiding high light levels, preferably south-east-facing for solar gain and to be positioned away from the roof terrace. Examples include the 2FE Schwegler Wall-Mounted Bat Shelter and the Beaumaris Woodstone Bat Box;
- On the internal faces of the brick parapets the inclusion of an enclosed Norfolk Bat Brick⁹ or similar would provide small self-contained cavities for bats to use. A single brick within each parapet would be appropriate; and
- The pitched roof design provides opportunities to integrate small external roost features for use by crevice-dwelling bats, such as slightly raised flashing, raised ridge tiles and/or bat slates. Two or three roost features should be positioned on any of the darker, more sheltered roof pitches. Suitable features for integrating into roof designs include the Bat Access Slate¹⁰ (available in natural slate, clay or plastic), a lead Bat Access Slate¹¹ and Bat Ridge Tile¹².

4.19 An ecologically sensitive lighting scheme is essential for this development, given the presence of the bat roost on site and the recommendation for additional bat roost features at roof level. As a minimum the existing bat roost should not be lit during the night (during either construction or operational phases) and there should be darker corridors retained at light levels no greater than existing (ideally at lower levels) to allow bats to emerge and re-enter the roost undisturbed.

4.20 An ecologically-sensitive night-time lighting schemes (ILP and BCT 2018) should consider the following:

- Use of dark buffer zones and/or screening around habitats/features installed specifically for light sensitive wildlife (e.g. for bats);
- Use specialist bollards or low-level downward directional luminaires to retain dark areas at height;
- Use only luminaires with an upward light ratio of 0%;
- Consider reducing height of columns to minimise light spill;
- Avoid upward lighting, and ensure luminaires are mounted on the horizontal;
- Minimise the effects of security lighting by using short duration motion sensors or timers;
- Dim or turn off specific lighting when not required;
- Use of LED luminaire specifications using 'warm white' 2700°K colour temperatures or lower to reduce the blue light component; and

⁹ <https://www.nhbs.com/norfolk-bat-brick>

¹⁰ For example, those available from <http://www.habibat.co.uk/category/bat-access-tiles/habibat-access-slate> and <https://www.slate.uk.com/product/bat-access-slate-natural>

¹¹ For example, those available from <https://www.justlead.co.uk/product/bat-access-tile-weathering>

¹² For example, those available from <https://www.tudorrooftiles.co.uk/bat.html>

- Use luminaires with peak wavelengths greater than 550nm, which avoid the component of light considered most disturbing to bats.

- 4.21 For internal lighting, locating luminaires back from windows and using recessed fittings (rather than pendant fittings) can help reduce glare and light spill from building windows.
- 4.22 Careful design of balconies can also help reduce light spill and glare from internal lighting by intercepting the light, depending on materials used.
- 4.23 It is possible to integrate bird nesting features into some urban high rise buildings, however, in this case it is not recommended as the available roof top locations are better suited to providing bat roost features. As such, no enhancements for nesting birds are made for this site.
- 4.24 All the above recommendations and enhancements would be compatible with the aims of maintaining and supporting local biodiversity features, as identified in the NPPF (2019) and other planning guidance documents. They should be reviewed and further developed as appropriate at the detailed design stage, with input from an appropriately qualified and experienced Ecologist.

5. REFERENCES

- Collins, J. (ed.), 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn.)*. The Bat Conservation Trust.
- CRL Surveys, 2018. *Condition Assessment of Goulden Street Chimney for Scott Hughes Design*.
- Defra, 2009. *Government response to the public consultation: Review of Schedule 9 to the Wildlife and Countryside Act 1981 and the Ban on Sale of Certain Non-native Species*. Defra.
- IEA, 1995. *Guidelines for Baseline Ecological Assessment*. Chapman and Hall.
- Institution of Lighting Professionals and Bat Conservation Trust, 2018. *Bats and Artificial Lighting in the UK. Guidance Note 08/18*. ILP/BCT.
- JNCC, 2010. *Handbook for Phase 1 Habitat Survey - a technique for environmental audit*. JNCC.
- Mitchell-Jones, A.J., 2004. *Bat Mitigation Guidelines*. English Nature 2004.
- NPPF, 2019. *National Planning Policy Framework, updated February 2019*. Ministry of Housing, Communities and Local Government.
- Stace, C., 2010. *New Flora of the British Isles. Third Edition*. Cambridge University Press.
- Stroh, P.A., Leach, S.J., August, T.A., Walker, K.J., Pearman, D.A., Rumsey, F.J., Harrower, C.A., Fay, M.F., Martin, J.P., Pankhurst, T., Preston, C.D. and Taylor, I., 2014. *A Vascular Plant Red List for England*. Botanical Society of Britain and Ireland.

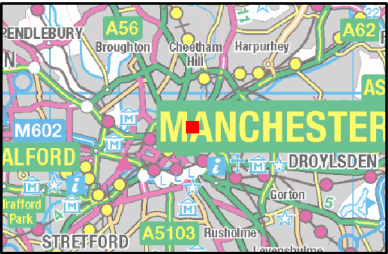
6. ABBREVIATIONS

EPSL	European Protected Species Licence	NERC	Natural Environment and Rural Communities
EU	European Union		
GCN	Great Crested Newt	NPPF	National Planning Policy Framework
GMEU	Greater Manchester Ecology Unit	PAA	Penny Anderson Associates Ltd
JNCC	Joint Nature Conservation Committee	SAC	Special Area(s) of Conservation
MAGIC	Multi Agency Geographic Information for the Countryside	SBI	Site(s) of Biological Importance
MEWP	Mobile Elevated Work Platform	SPA	Special Protection Area(s)
		SSSI	Site(s) of Special Scientific Interest
		WCA	Wildlife and Countryside Act

FIGURES



- TARGET NOTES**
- 1: Stored materials
 - 2: Accumulated debris
 - 3: Debris from anti-social behaviour
 - 4: Chimney/ventilation shaft
 - 5: Entrance gates
 - 6: Dilapidated red brick wall
 - 7: Small gap behind wooden batten along inside wall
 - 8: Red brick and stone wall with few small crevices on exterior



Legend

- Boundary
- Habitat
 - Building
 - Ephemeral/short perennial
 - Hardstanding
 - Self-seeded shrub/dense scrub
 - Tall ruderal
 - Unmanaged neutral grassland
- Fence - wooden hoarding with iron pillars
- Wall - red brick and stone

British National Grid
Projection: Transverse Mercator
False Easting: 400000.000000
False Northing: 100000.000000
Central Meridian: -2.000000
Scale Factor: 0.999601
Latitude Of Origin: 49.000000

ISO A3

0 1 2 4 6 8 metres

MULBURY HOMES

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Project Name: New Cross Sites

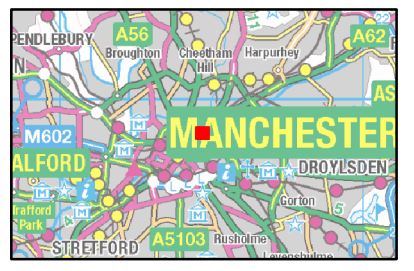
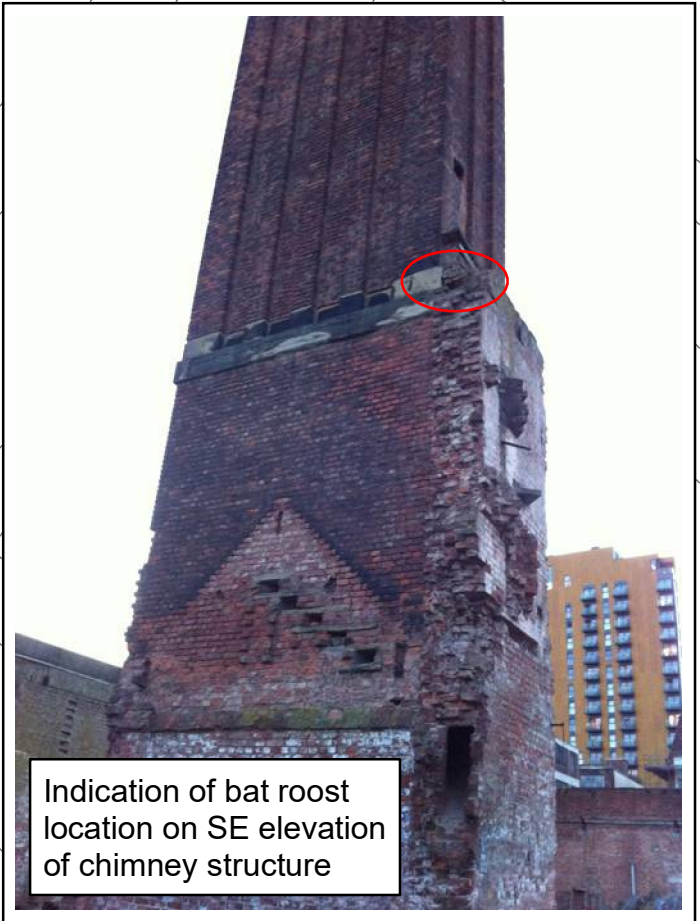
Discipline: Ecology

Title: Goulden Street (Plot 3)
Phase 1 Habitat Survey

Scale: 1:200 Drawing No. Figure 1

Drawn By: MDM Originator: VB Date: 10/09/2018

PAA Ref: G:\MULB04_Mulbury_New_Cross Maps Revision: 1.0



Legend

- Site boundary
- Surveyor locations
- Bat roost location
- x1 Ppi emerged from roost on Visit 1
- Bat activity Visit 1
- Bat activity Visit 2
- Bat activity Visit 3
- Remains of fresh pigeon carcass

Habitat

- Building
- Ephemeral/short perennial
- Hardstanding
- Self-seeded shrub/dense scrub
- Tall ruderal
- Unmanaged neutral grassland

NB: All bats are Common pipistrell (Ppi)

British National Grid
Projection: Transverse Mercator
False Easting: 400000.000000
False Northing: 100000.000000
Central Meridian: -2.000000
Scale Factor: 0.999601
Latitude Of Origin: 49.000000

ISO A3

0 1 2 4 6 8 10 metres

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Project Name: New Cross Sites

Discipline: Ecology

Title: Goulden Street (Plot 3) Bat Survey Results

Scale: 1:300	Drawing No. Figure 2
Drawn By: CC	Originator: SRS
Date: 12/09/2018	Revision: 1.0

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Figure 2 - Goulden St - Bat Survey Results - CC 100918.mxd

PLATES



Plate 1 The exterior of the building facing onto Goulden Street, showing brick and stone exterior walls



Plate 2 Exterior elevation, facing onto Cross Keys Street, showing exterior wall construction



Plate 3 Degraded brickwork on external corner of Cross Keys Street and Bendix Street



Plate 4 Close up of crevice within degraded brickwork

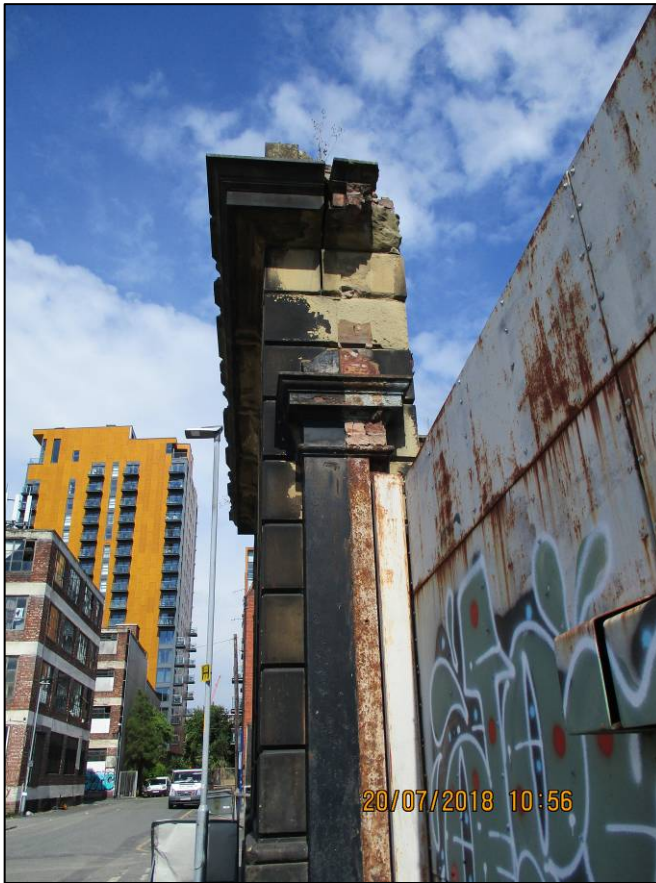


Plate 5 Stone detail and cornicing by entrance gates on Goulden Street

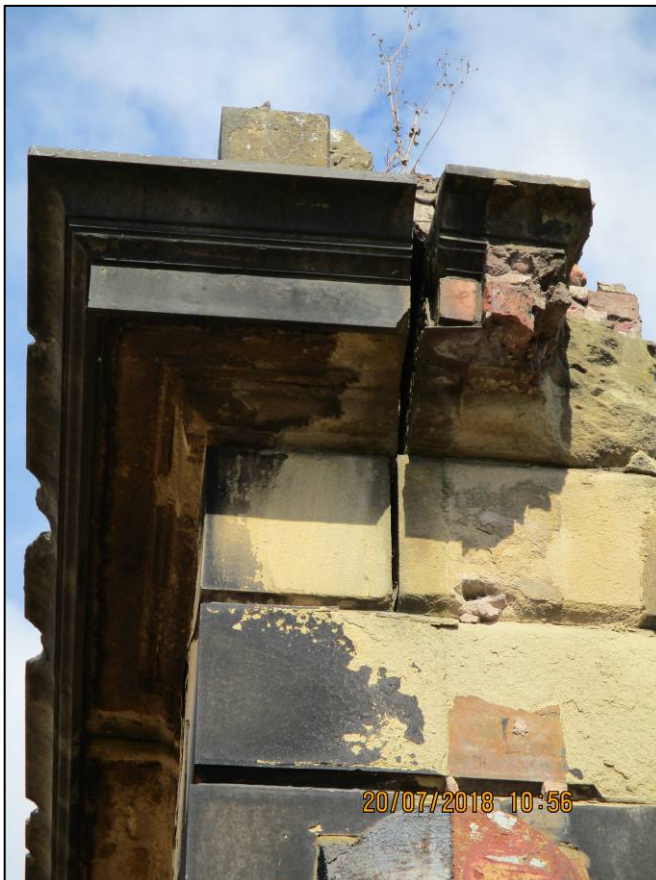


Plate 6 Close up of crevice in stone cornicing by entrance gate



Plate 7 Interior of site showing stored materials and self-seeded shrubs



Plate 8 Interior of site showing unmanaged grassland and tall herb, plus base of chimney / ventilation shaft



Plate 9 Wooden hoarding / doors with metal pillars

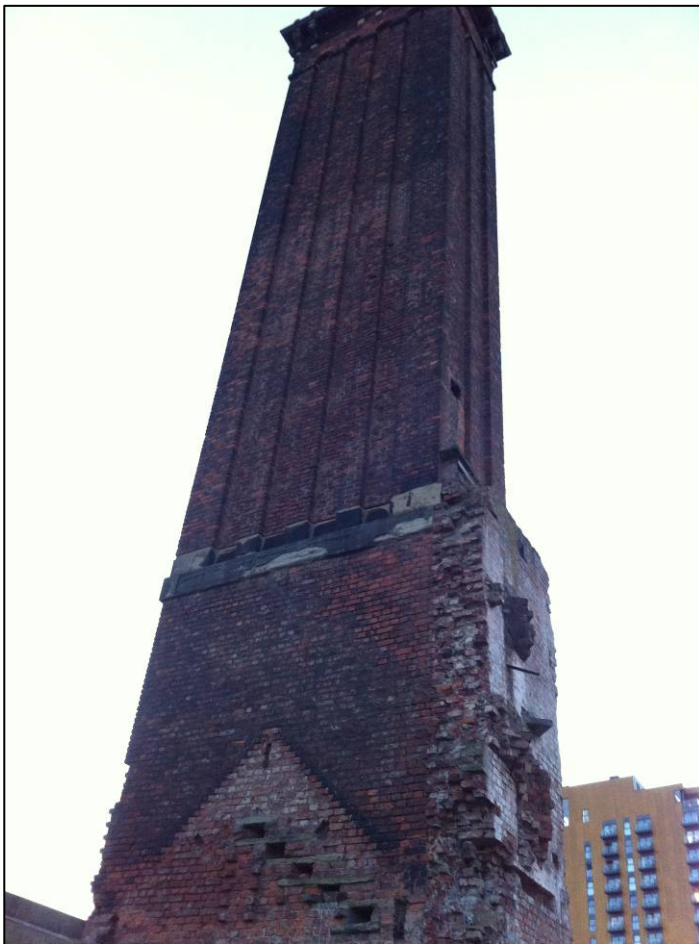


**Plate 10
Chimney/ventilation shaft
structure**

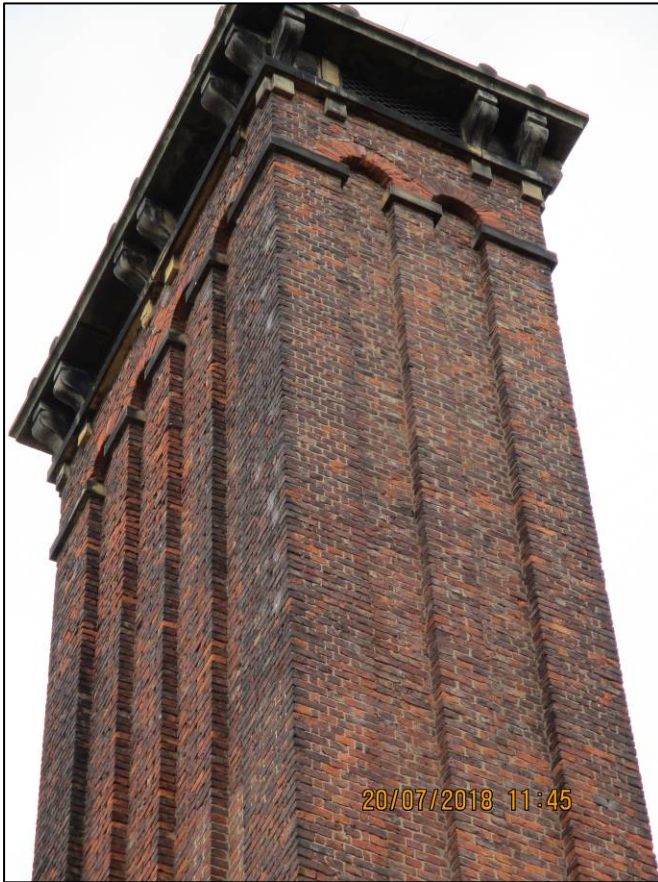


**Plate 11 Stone detail
at top of
chimney
structure**



**Plate 12 Indication of bat
roost location on
south-east
elevation of
chimney structure**

APPENDICES

APPENDIX 1

Protected Species Legislation

SUMMARY OF THE LEGISLATION RELATING TO BATS

All wild species of bat are protected under the Wildlife and Countryside Act (WCA) 1981, which has also been amended by later legislation, including the Countryside and Rights of Way (CROW) Act 2000 and the Conservation of Habitats and Species Regulations 2017, and this legislation is applicable to England and Wales. Bats are listed on Schedule 5 of the WCA and are therefore subject to some the provisions of Section 9 which, with the amendments, make it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection (S9:4b).
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat (S9:4c).

There are additional offences in relation to buying and selling (S9:5) any live or dead animal of this species or anything derived from them.

Bat species are also listed under Annexes IIa and IVa of the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 state that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead bat or part of such an animal.

In addition, seven native British bat species, including the soprano pipistrelle (*Pipistrellus pygmaeus*) and the brown long-eared bat (*Plecotus auritus*), that are frequently found in buildings, are listed as a 'Priority Species' under the under the 2011 biodiversity strategy for England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, under the 2012 UK Post-2010 UK Biodiversity Framework. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England and Wales within Section 74 of the CROW Act 2000, and Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006.

In addition, the National Planning Policy Framework (NPPF 2019) has an overall focus on sustainable development, and states that developments should aim to engender positive outcomes for habitats and biodiversity, with a particular focus on the maintenance and creation of ecological networks. Furthermore, the NPPF also states that any planning proposals for which significant negative impacts on biodiversity cannot be avoided, mitigated or compensated for should be refused. Reference is made to Circular 06/2005 *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System* in respect of statutory obligations for biodiversity and geodiversity conservation.

The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Please note: the above text provides a brief summary of the legislation in relation to bats in England and Wales and the original Acts, Regulations and any amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO BREEDING BIRDS

All wild species of breeding birds and their nests are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CROW) Act 2000. This legislation applies in England and Wales.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CROW Act 2000) refers to specific birds listed on Schedule 1 of the WCA, and states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

Schedule 1 includes birds such as barn owl (*Tyto alba*), black redstart (*Phoenicurus ochruros*), wood lark (*Lullula arborea*) and Cetti's warbler (*Cettia cetti*). Please refer to the WCA for a complete list of Schedule 1 species.

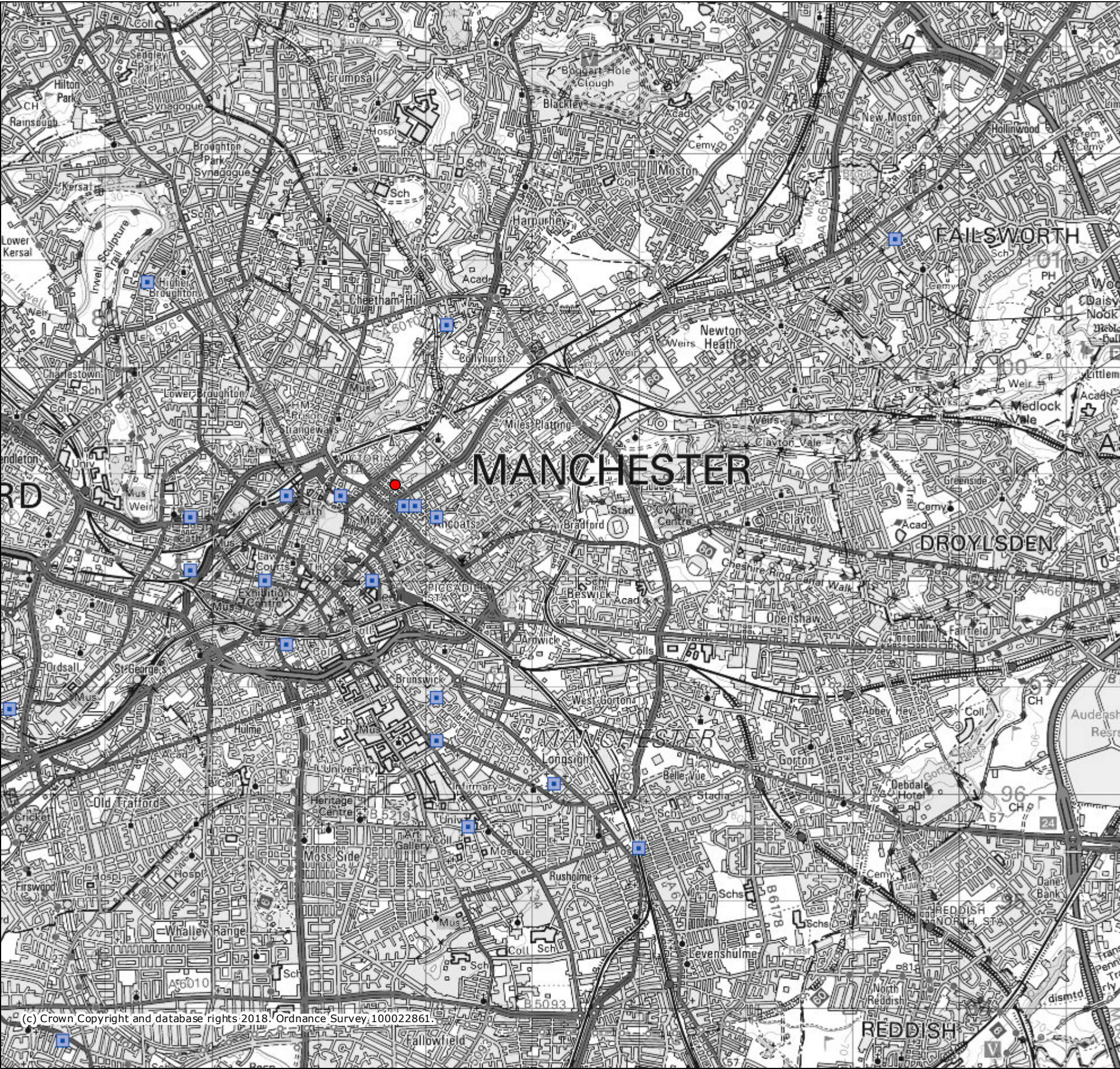
Some provisions are made to allow the killing and taking of certain species under certain circumstances, as follows:

- Birds listed on Schedule 2 (Part 1) of the Act may be taken or killed outside of the 'close season' for each individual species (the 'close season' is defined by the Act). This includes various wild duck and geese species.
- Birds listed on Schedule 2 (Part 2) of the Act may be killed or taken by authorised persons at all times. This includes species such as carrion crow (*Corvus corone*), black-billed magpie (*Pica pica*), feral pigeon (*Columba livia*) and greater Canada goose (*Branta canadensis*). An 'authorised person' is defined as a person who has written authorisation to undertake the act from the relevant statutory authority. The written authority is in the form of a licence, either a general licence which covers a number of the more typical 'pest' species, or an individual licence for other individual species. In England these licences are issued by Natural England and in Wales by the Welsh Assembly Government.

Please note: the above text provides a brief summary of the legislation in relation to breeding birds in England and Wales and the original Act and any amendments should be referred to for the precise wording.

APPENDIX 2

Desk Study Results



Legend

Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile

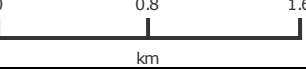
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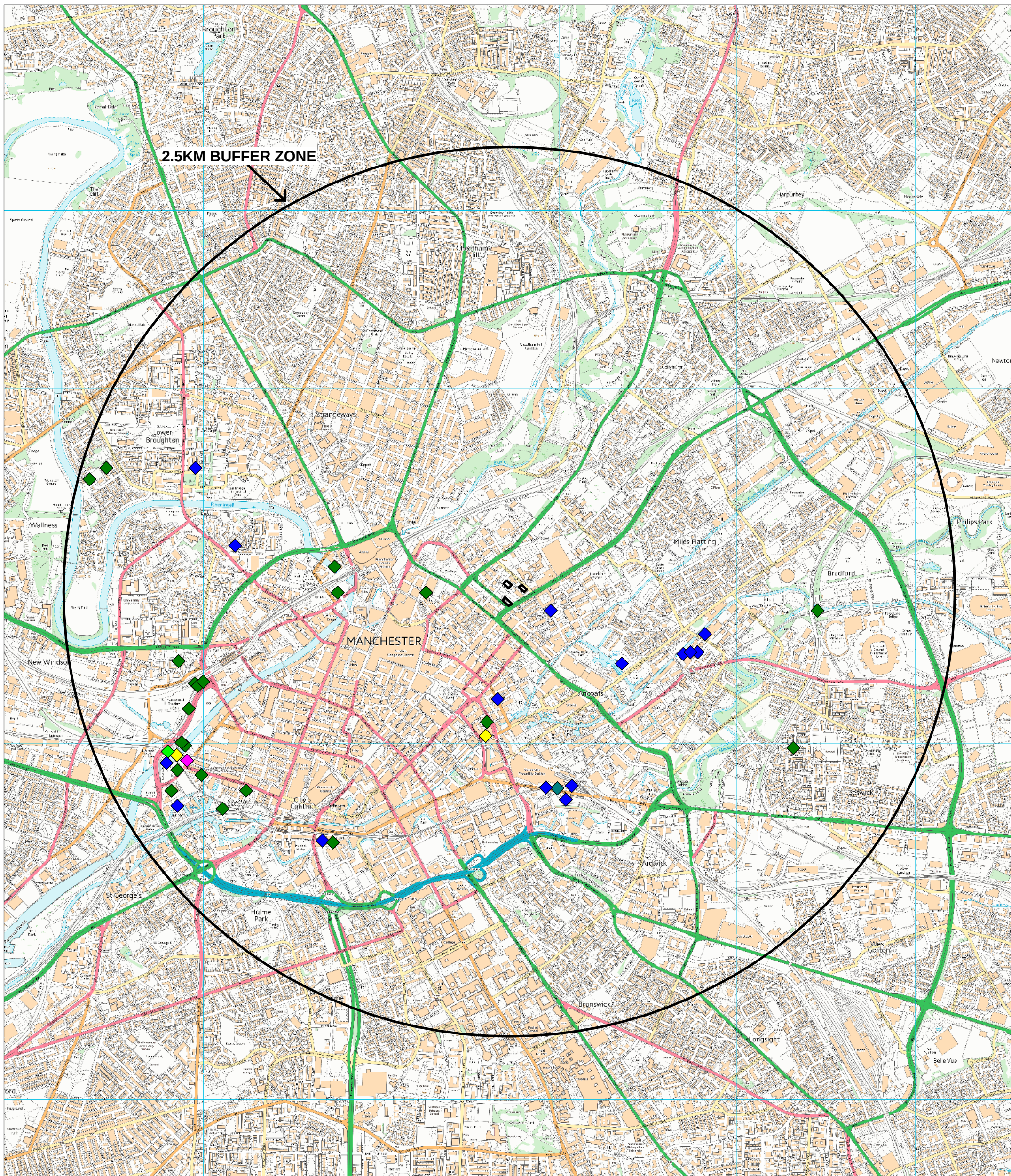
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KEY **BAT ROOSTS**

- ◆ BAT SP
- ◆ COMMON PIPISTRELLE
- ◆ DAUBENTON'S BAT
- ◆ MYOTIS SP
- ◆ PIPISTRELLE SP
- ◆ SOPRANO PIPISTRELLE

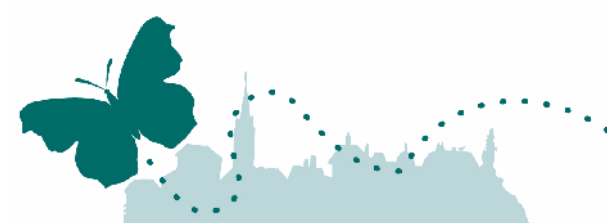
GREATER MANCHESTER ECOLOGY UNIT **ECOLOGICAL SEARCH - SJ84719885** **CHADDERTON STREET - MAP 4**

SCALE 1:20,000

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

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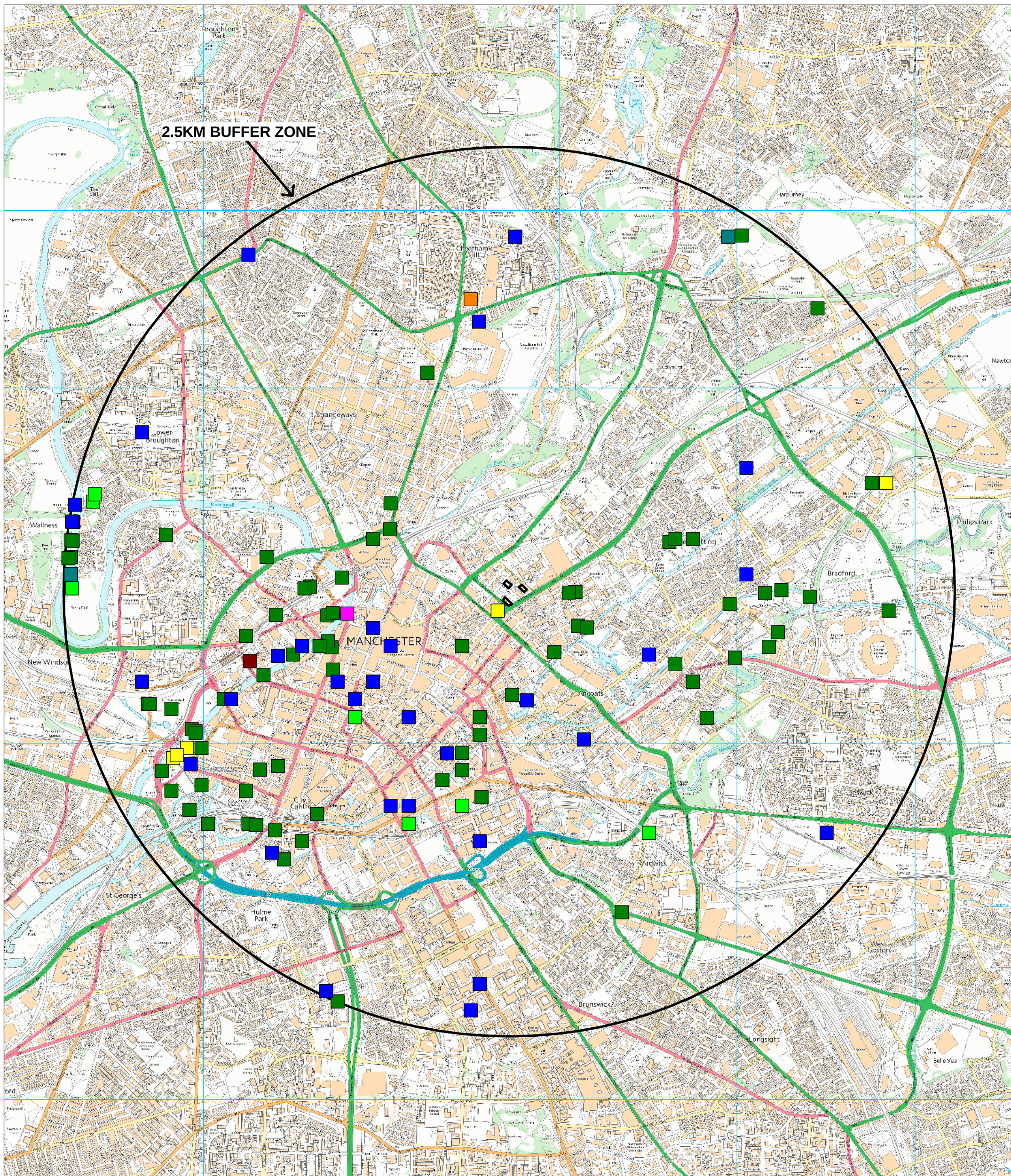
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KEY
BATS OTHER SIGNS

- BAT SP
- BROWN LONG-EARED BAT
- COMMON PIPISTRELLE
- DAUBENTON'S BAT
- MYOTIS SP
- NATTERER'S BAT
- PIPISTRELLE SP
- SOPRANO PIPISTRELLE

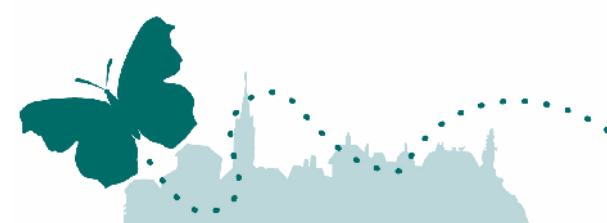
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CHADDERTON STREET - MAP 5

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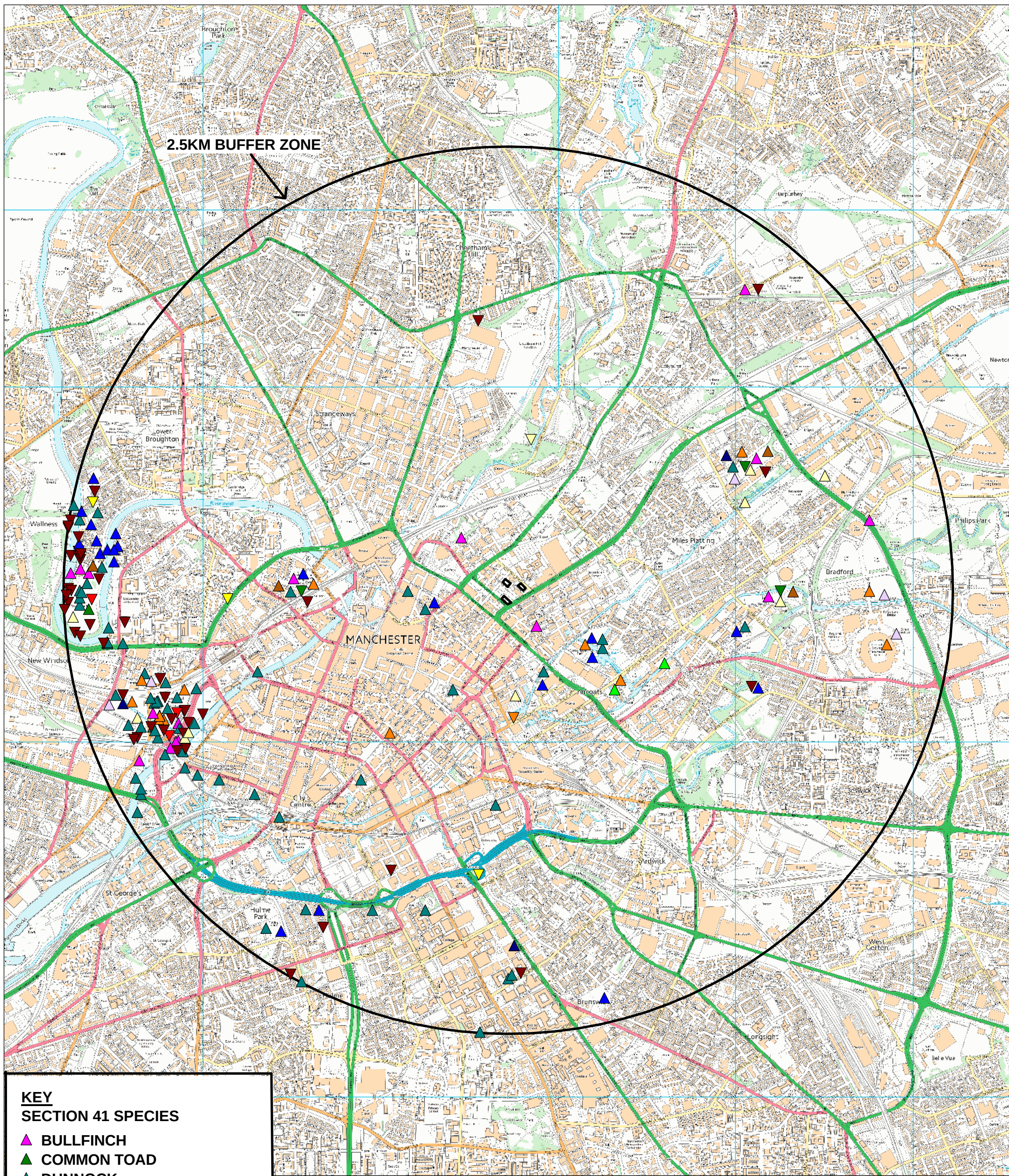
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KEY
SECTION 41 SPECIES

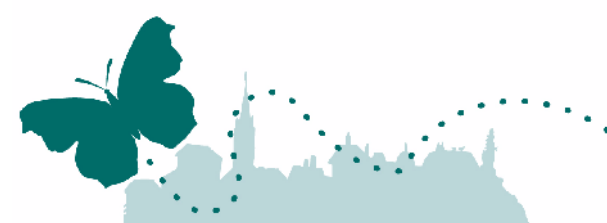
- ▲ BULLFINCH
- ▲ COMMON TOAD
- ▲ DUNNOCK
- ▲ GRASS-WRACK PONDWEED
- ▲ HEDGEHOG
- ▲ HERRING GULL
- ▲ HOUSE SPARROW
- ▲ LAPWING
- ▲ LESSER REDPOLL
- ▲ LINNET
- ▲ S41 MOTH
- ▲ SKYLARK
- ▲ SONG THRUSH
- ▲ SPOTTED FLYCATCHER
- ▲ YELLOW BIRD'S-NEST
- ▲ YELLOW WAGTAIL

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CHADDERTON STREET - MAP 6

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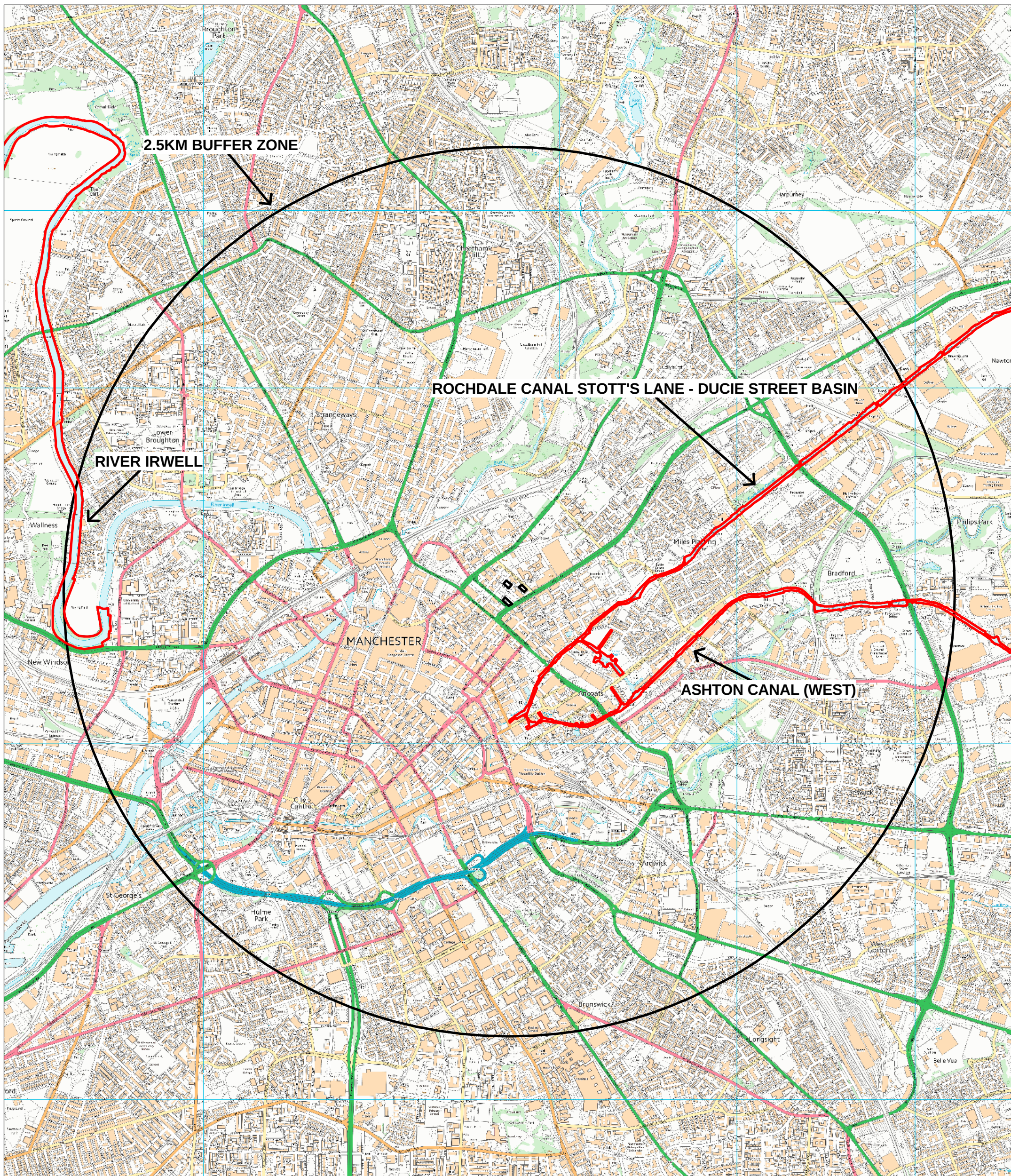
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KEY

SITE OF BIOLOGICAL IMPORTANCE

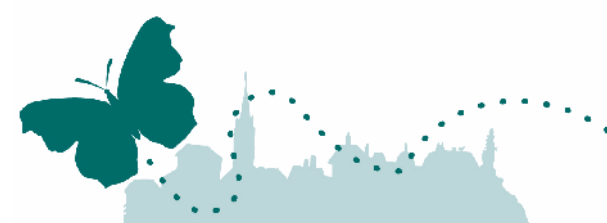
SBI BOUNDARY

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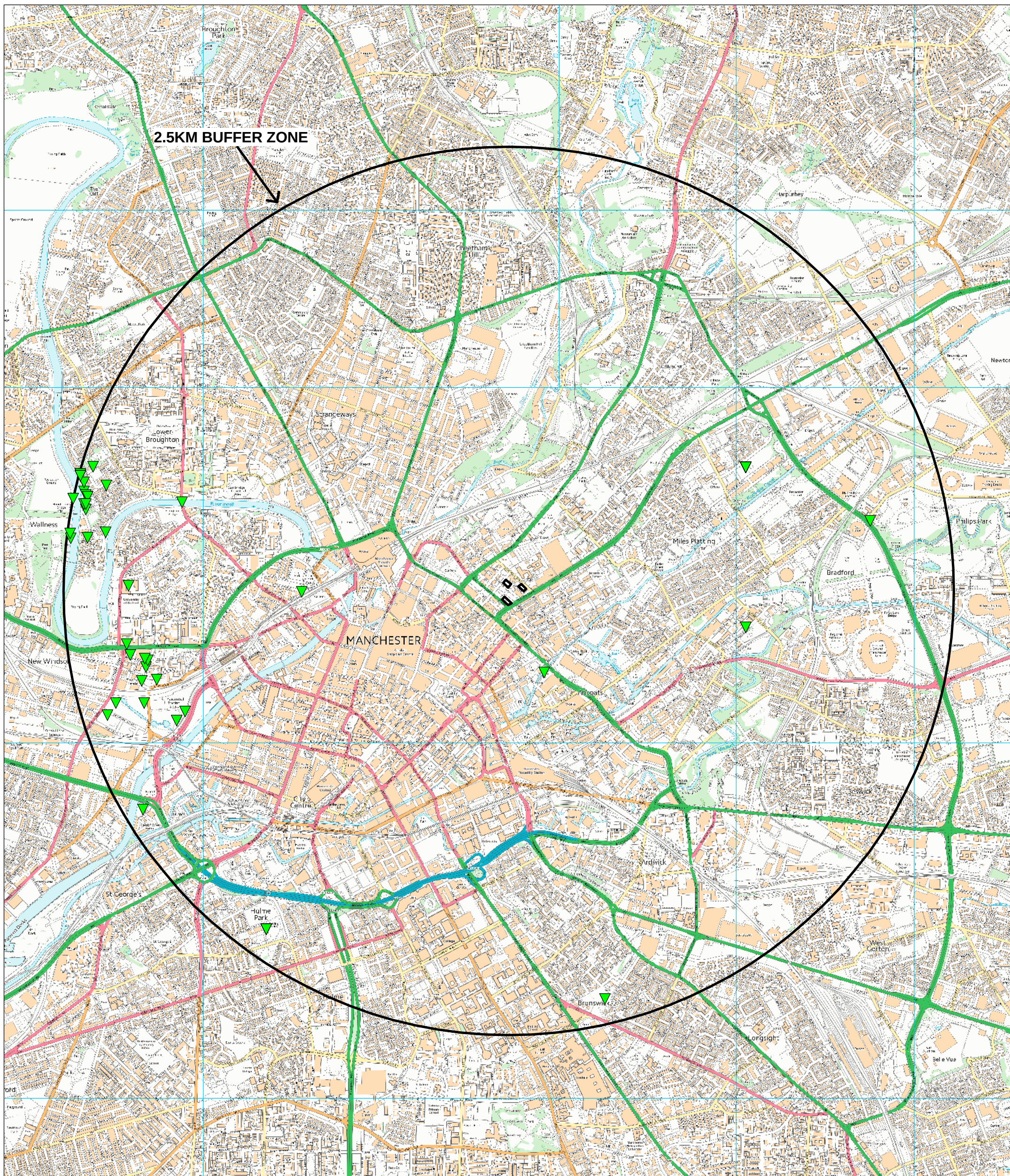
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KEY
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 CHADDERTON STREET - MAP 7**

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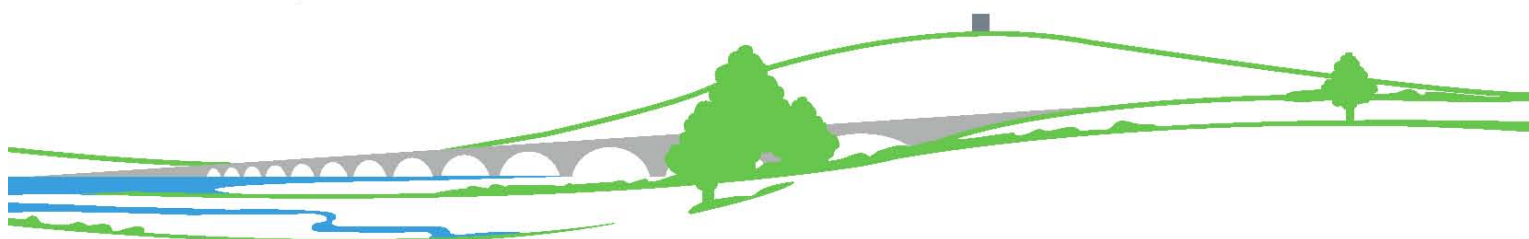


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