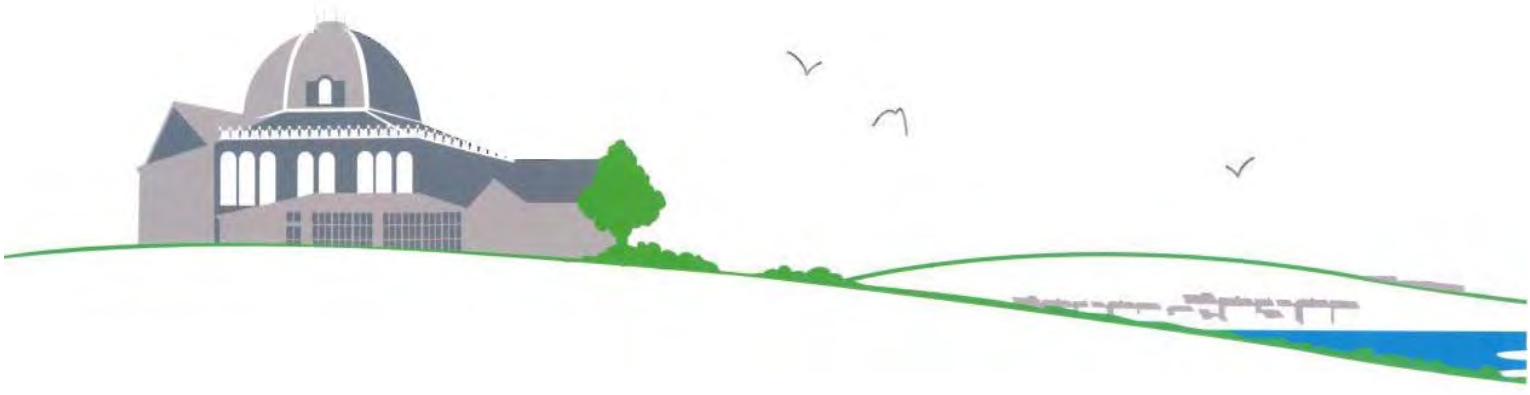
Penny Anderson Associates Ltd
CONSULTANT ECOLOGISTS

BRUNTWOOD AND OXFORD PROPERTY TRADING LIMITED

THE FORMER BBC SITE, OFF OXFORD ROAD, MANCHESTER

EXTENDED PHASE 1 HABITAT SURVEY AND BAT INSPECTION



BRUNTWOOD AND OXFORD PROPERTY TRADING LTD

THE FORMER BBC SITE, OFF OXFORD ROAD, MANCHESTER

EXTENDED PHASE 1 HABITAT SURVEY AND BAT INSPECTION

Penny Anderson Associates Limited
'Park Lea'
60 Park Road
Buxton
Derbyshire
SK17 6SN

Project Manager
Gerard Hawley BA (Hons), MSc, DipPSE (Dist), MCIEEM

January 2016

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

Signed: 

CONTENTS

Page

1. INTRODUCTION 3

Site Description 3

Legislative Context 3

Protected Species 5

Invasive Species 5

2. METHODS 6

Desk Study 6

Phase 1 Habitat Survey 6

Bat Building Inspection 6

Limitations 8

3. RESULTS 9

Desk Study 9

Statutory Protected Sites 9

Special Areas of Conservation (SACs) 9

Sites of Special Scientific Interest (SSSIs) 9

Non-Statutory Protected Sites 9

Sites of Biological Interest (SBIs) 9

Protected and Notable Species 10

Badgers 10

Bats 10

Hedgehog 10

Birds 10

Invertebrates 11

Plant Species 11

Phase 1 Habitats 11

Bat Inspection 12

Other Protected Species 13

Evaluation 14

4. RECOMMENDATIONS 15

Bats 15

Nesting Birds 15
Other Protected Species 15
Invasive Non-native Species 15
Habitat Enhancements 15
Native Species 15
Green Roofs 16
Species Composition and Planting 16
Artificial Refugia 17
Bird Boxes 17
Bat Boxes 17
Bat Bricks 18
5. REFERENCES 19

TABLES

1 Building Assessment Criteria 7
3 Bird Species of Principal Importance Records from GMEU 11
2 Bat Records from GMEU 10

FIGURE

1 Phase 1 Habitat Survey showing development phases and location of Armstrong House

PLATES

1 Un-vegetated hard standing
2 Vegetated hard standing
3 Amenity grass
4 Neutral grassland
5 Building 1, former garage
6 River Medlock, showing Japanese knotweed and Himalayan balsam
7 Building 1b from rear car park
8 Building 1c foreground showing louvered ventilation grills in Building 1b
9 Flat roof and air conditioning condensers on Building 1a
10 Boiler room
11 Telecom cabin Building 1b
12 Lift room back ground Building 1a stairs to the right
13 Stairs Building 1b
14 Building 1c showing hipped roof and Building 1b in background

APPENDICES

I Summary Species Legislation: Bat, Black Redstart and Breeding Birds
II GMEU Desk Study Results
III Phase 1 Plant Species List

1. INTRODUCTION

1.1 Penny Anderson Associates Ltd (PAA) was commissioned by Bruntwood and Oxford Property Trading Limited to carry out an Extended Phase 1 Habitat survey and bat inspection of buildings and trees at the former BBC site, off Oxford Road, Manchester (hereafter referred to as the 'Site').

1.2 The surveys were commissioned in relation to enabling works and proposals for the re-development of the Site. Inspections of any buildings within the survey Site boundary were carried out with regards to their use, or potential use, by bats and/or nesting birds.

1.3 The Extended Phase 1 Habitat survey also included a desk study for the Site and the area within 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.

1.4 This report refers more specifically to proposals for the development of a section of the wider survey area referred to as Phase 1B. This proposes two new commercial buildings fronting Oxford Road with one 14-storey building and one 18-storey building. Also proposed is a residential building consisting of 411 apartments with commercial ground floor use and a further 17 storey residential building of 266 apartments also with ground floor commercial use. A multi-storey car park is included in the Phase 1B development and provision is made for a significant area of public amenity greenspace.

1.5 This report details the results of the desk study, the Extended Phase 1 Habitat survey and the building inspection for bat roosts of Armstrong House (labelled 1a, 1b and 1c on Figure 1), which is to be demolished, and evaluates the results in the context of the proposed re-development of the Site (Phase 1B), making recommendations for any further survey work as required and general recommendations for habitat enhancements.

Site Description

1.6 The Site is primarily located in the north-eastern section and south-western area of the Former BBC Masterplan Site. Oxford Road lies to the west and the Mancunian Way forms the southern boundary with Charles Street to the north. .

1.7 The survey area, together with much of the former BBC site, was until previously used for surface level car parking, which was accessed from a vehicle entrance off Charles Street. The majority of the Site was characterised by hard surfacing with small areas self-colonised by neutral grassland along with amenity planting. Existing trees are located along the southern and eastern boundaries of the survey area, adjacent to Brancaster Road and Upper Brook Street. and also along Oxford Road

Legislative Context

1.8 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 2010[1] (further amended in 2011 and 2012); further details can be obtained from the Joint Nature Conservation Committee (JNCC) web site at www.jncc.defra.gov.uk.

1.9 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).

1.10 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.

1.11 Finally, the National Planning Policy Framework (NPPF), published in 2012 provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. The NPPF has replaced much existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for 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 should be refused. Biodiversity 2020 Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England within Section 74 of the CRoW Act 2000, and Sections 41 (England) of the NERC Act 2006. The NPPF states that the planning system should contribute to and enhance the natural environment through a range of actions, including:

a) protecting and enhancing valued landscapes, geological interests and soils;

b) recognising the wider benefits of ecosystem services; and

[1] *Please note: the text provides a brief summary of the legislation in England and Wales and the original Acts and any amendments should be referred to for the precise wording.*

c) minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Protected Species

1.12 Details of the protected species legislation relevant to this Site can be found in Appendix I.

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.

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 A request for details of protected species and wildlife sites within 2km of the centre of the Site (SJ 84298 97393) was made to Greater Manchester Ecology Unit (GMEU). The desk study consisted of a consultation exercise whereby statutory and non-statutory authorities were contacted to gather local and site-specific ecological information.

2.2 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. Protected species are often under-recorded in county wildlife databases.

Phase 1 Habitat Survey

2.3 The Phase 1 Habitat Survey was undertaken by Principal Ecologist Helen Hamilton MCIEEM[2] (Natural England Bat Survey Licence Level 2) and Principal Scientist Gerard Hawley MCIEEM, on 9th July 2015. The habitat description in this report relates to the former BBC site prior to enabling works that commenced in November 2015. Subsequently, the habitat has been removed and the land is currently an active construction site.

2.4 The survey was carried out by experienced surveyors and the methodology was based upon guidance set out in the *Handbook for Phase 1 Habitat Survey* (Joint Nature Conservation Committee 2010). This entailed mapping, describing and collating plant species lists for habitats within the Site boundary. The broad habitat types were mapped, with each habitat type coded according to the standard JNCC Phase 1 Habitat Survey procedure.

2.5 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 text largely uses common names according to Stace (2010). Common names and scientific names are provided in the species lists but only common names are referred to in the text.

Bat Building Inspection

2.6 Armstrong House (see Figure 1), which is to be demolished, was inspected for bats and bat roost potential by Gerard Hawley on 12th January 2016 working as an accredited agent of Dr Sarah Ross (Level 2 Class Licence for Bats Registration Number 2015-12600-CLS-CLS) with competent assistance from Ecologist Victoria Burton (Grad CIEEM), following standard methodologies. This entailed using high-powered torches and binoculars, making detailed notes, taking photographs and following survey guidance (Hundt 2012).

2.7 During the inspections, the exterior of the building was walked around and examined for any signs (such as staining or droppings on surfaces including walls and window ledges) or features suitable for roosting bats. Features of interest would include gaps around doorframes, beneath

[2] *Member of the Chartered Institute of Ecology and Environmental Management*

felt/lead flashing, at the wall plates and eaves of pitched roofs, and any crevices beneath fascia boards, barge boards, within soffits or created by missing mortar within the brickwork.

2.8 The internal inspections involved systematically examining all parts of the building with the potential to support roosting bats, and searching for any evidence of such use (e.g. bat droppings, staining on crevices by fur oils or urine, and feeding remains, as well as the bats themselves). Areas of particular interest included any loft voids present in the buildings.

2.9 The bat inspection assigned an overall roost potential category, based on its suitability for supporting roosting bats and any evidence found, using criteria in Table 1 adapted from the *Bat Mitigation Guidelines* (Mitchell-Jones 2004) and *Bat Surveys Good Practice Guidelines* (Hundt 2012).

2.10 During the survey any evidence of the buildings being used by nesting birds (e.g. old nest material) was also looked for.

Table 1 Building Assessment Criteria

Roost Potential Category	Category Description	Indicator
Confirmed Roost	Building with evidence of current use by bats i.e. confirmed roost.	• Sighting/hearing of bats (including emergence). • Presence of fresh droppings/staining.
	Building with evidence of recent use by bats.	• Small numbers of old droppings/old staining, smoothing and lack of cobwebs, feeding remains. • Roosts identified by personal communication from reliable source (e.g. property owner).
High	Building has high potential to support bat roost(s).	• Buildings of early or pre 20th century origin with numerous access points for bats e.g. gaps under eaves, loose lead flashing and/or roof tiles. • Agricultural buildings of traditional, stone or timber construction and/or with exposed large wooden beams (>200mm thick) and mortise joints, cracks and holes. • Large and complicated roof voids, with unobstructed flying spaces. • Roof warmed by the sun, especially south facing roofs, free of strong draughts. • Undisturbed roof spaces. • Weatherboarding and/or hanging tiles with gaps. • Buildings in proximity to each other providing a variety of roosting opportunities. • Within 200m of good foraging habitat, particularly trees, parkland, woodland or waterbodies. • Well connected to wider landscape through presence of continuous linear features such as hedgerows, watercourses, farm-tracks etc.
Medium	Building has moderate potential to support bat roost(s)	• Buildings with some of the above features but are considered to be less suitable on account of their age, location and disturbance levels.

Roost Potential Category	Category Description	Indicator
Low	Building has low potential to support bat roost(s)	• Modern well maintained buildings with few or no access points for bats. • Small cluttered roof space. • Buildings comprised predominantly of prefabricated steel and sheet materials. • Roof sections with a dense cover of cobwebs and no sections of clean ridge board. • High levels of regular disturbance • Buildings with exposed roosting features which are open to the elements. • Location with few or no mature trees, parkland, woodland or water features and isolated due to a lack of commuting routes.
None	Building has no potential to supports bat roost(s)	• Buildings with no features that could be utilised by bats for roosting.

Limitations

2.11 No significant limitations to the assessment were encountered during the surveys. The Phase 1 habitat survey took place in fine weather and at an appropriate time of the year. Access to all parts of the Site was available.

2.12 Access was available to the roof areas of Armstrong House and the upper floor and it considered and there were no significant limitations to the building inspection.

3. RESULTS

Desk Study

3.1 Please note: the desk results returned by GMEU are presented as figures in Appendix II.

Statutory Protected Sites

Special Areas of Conservation (SACs)

3.2 SACs are protected sites with strict conservation protection, designated under Article 3 of the European Commission Habitats Directive.

3.3 There are no SACs in the 2km search zone for the Site. However, Rochdale Canal which is 800m from the Site becomes a SAC approximately 6.3km from the Site. The Canal has been designated as a SAC due to the presence of floating water plantain[3].

Sites of Special Scientific Interest (SSSIs)

3.4 SSSIs 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 SSSIs 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/SPAs and Ramsar sites. Rochdale Canal, which is located 800m from the Site, becomes a SSSI approximately 5.3km from the Site.

Non-Statutory Protected Sites

Sites of Biological Interest (SBIs)

3.6 An SBI is a site locally important for wildlife. They are the most important non-statutory sites for nature conservation in Manchester. SBIs have no legal protection, but do receive some protection through different policies and they must be taken into consideration by the planning authority when planning applications affect the site.

3.7 Rochdale Canal, Stott's Lane - Ducie Street Basin (800m from the Site to the north-east) and Ashton Canal to the north-east (800m from the Site) are both SBIs.

[3] *Floating water-plantain is protected under Schedule 8 of the Wildlife and Countryside Act 1981. It is also protected under the European Communities Directive 92/43/EEC, on the Conservation of Natural Habitats and of Wild Fauna and Flora - the Habitats Directive and is a priority species under the UK Biodiversity Action Plan.*

Protected and Notable Species

Badgers

3.8 In the search area there is one badger (*Meles meles*) sett recorded 1.8km from the Site. There is one other badger sign recorded 0.5km from the Site (please note that information related to badger setts is confidential and the map provided by GMEU showing the location of the sett is, for this reason, not included in the Appendices).

Bats

3.9 Table 2 shows the number of each species of bat recorded in the search zone and the proximity to the Site of the closest roost for each. The most recorded species in the area are pipistrelles and a pipistrelle roost is the closest roost to the Site.

Table 2 Bat Records from GMEU

Species	No. Roosts	No. Other Signs	Closest Roost (distance from Site)
Brown long-eared	0	1	n/a
Common pipistrelle	7	33	500m
Daubenton's bat	1	1	1,500m
Pipistrelle sp.	10	27	n/a
Soprano pipistrelle	1	0	650m
Bat sp.	0	4	n/a

Hedgehog

3.10 West European hedgehog is classed as a Species of Principal Importance under Section 41 of the NERC Act 2006.

3.11 There are three hedgehog records in the search area, the nearest being separated by the Mancunian Way approximately 300m to the south-east of the Site.

Birds

3.12 Eight bird species listed as Species of Principal Importance are recorded in the Site's search area. These are listed in Table 3, along with the distance from the Site of the closest recorded bird of each species.

3.13 There are nine records of common kingfishers in the search area. The closest is about 0.5km on a canal branch next to the Bridgewater Hall to the north-west. Six are on the River Irwell to the west and north, and two on the canal network and basins near to the River Irwell. Common kingfishers are protected under the Schedule 1 of the WCA 1981 and are therefore additionally protected from disturbance when breeding (see Appendix I).

Table 3 Bird Species of Principal Importance Records from GMEU

Species	No. Records	Closest Record (distance from Site)
Bullfinch	8	1.5km
Dunnock	19	0.4km
Herring Gull	1	1.9km
House Sparrow	7	1.0km
Lapwing	8	1.4km
Skylark	1	1.5km
Song Thrush	8	1.4km
Starling	6	1.0km

3.14 Seven records of black redstarts exist to the west and north of the Site. The closest record is 0.45km to the west. This bird is also a Schedule 1 species of the WCA 1981 and is therefore additionally protected from disturbance when breeding.

Invertebrates

3.15 The cinnabar moth (*Tyria jacobaea*) has been recorded at five locations within the search area, three times to the west of the Site along the River Irwell and the closest records are for two 1.2km to the south-east. This is also a Species of Principal Importance.

Plant Species

3.16 The European protected species floating water plantain (*Luronium natans*) is recorded along the Ashton Canal 1.7km north-east from the Site. The Rochdale Canal also supports this species. However, there are no records of it within the search area.

3.17 Grass-wrack pondweed (*Potamogeton compressus*) is a Species of Principal Importance. It has been recorded at the canal branch next to the Bridgewater Hall to the north-west and a basin off the Ashton Canal and on the Ashton Canal approximately 1.5km to the north-east of the Site.

Phase 1 Habitats

3.18 Figure 1 presents the habitat map. Botanical species lists for the habitats encountered are presented in Appendix III. The main habitats present on Site were:

- un-vegetated hard standing;
- hard standing with scattered vegetation;
- urban amenity planting and trees;
- amenity grass;
- neutral grassland;
- buildings; and
- River Medlock.

3.19 Most of the Site was un-vegetated hard standing (Plate 1), used as city centre car parking. Some areas of car parking were on the concrete foundation/ground floor of buildings, which had formerly occupied the Site on several levels. These areas were largely devoid of vegetation.

3.20 Where car parking was located on permeable brickwork (Plate 2) or disintegrating tarmac, more cracks and crevices for vegetation were present and the hard standing here supported scattered individual plants of a range of common plants typical of urban disturbed and developed land.

3.21 Around the remaining buildings, managed amenity shrub planting and trees were present, plus close-mown amenity grass areas. A good diversity of garden and amenity shrub and tree species were present, but included few native species.

3.22 The areas of amenity grass present (Plate 3) were all close-mown and supported predominantly grassy vegetation with several flowering herbs such as common mouse-ear, daisy and selfheal.

3.23 Around the car park areas some localised areas of steep rough ground (formed over rubble left after the building removal) had self-colonised with a diverse mix of neutral grassland and flowering plants of disturbed habitats (Plate 4). These areas were tall as they were unmanaged. They supported species typical of such habitats in urban centres.

3.24 The former garage (Plate 5) is to be demolished as part of the Phase 1A redevelopment and was subject to an inspection for bats at the time of the Phase 1 habitat survey. This was found to have no potential of bat roosts.

3.25 The River Medlock (Plate 6) flows at the eastern boundary of the Site, emerging from culvert under Upper Brook Street and draining northwards. The river is deeply incised between vertical artificial banks. These are of brick and stone and have become vegetated with ivy, bramble and other vegetation typical of the Site. The river itself contains a lot of litter including a boot and car tyres within the short open section examined. Although the water was fairly clear, the bed was silty and looked somewhat polluted. Japanese knotweed and Himalayan balsam were abundant on the river banks. The river itself is not included within the development boundary.

3.26 In summary, the habitats present are typical of developed (or post-developed) land in central Manchester and are common and widespread across urban Britain. Furthermore, while they support a good range of plant species, these are either non-native cultivars, horticultural varieties or common and widespread native species typical of similar habitats across England.

Bat Inspection

3.27 Armstrong House (Building 1a, 1b and 1c) is due for demolition as part of the redevelopment. Armstrong House formed part of the Manchester Technology Centre, located on Oxford Road. It consists of three connected buildings of similar design and materials.

3.28 Both buildings 1a and 1b in Figure 1 are essentially rectangular in planform with a brick exterior and five storeys in height. The main entrance on the ground floor is situated where the two buildings join. The window frames are plastic, each of the same dimensions and run in parallel. The building is well maintained and there are no gaps in the mortar and no cracks in the brickwork (Plate 7). Building 1b has a series of louvered grills, assumed to be for ventilation, that are backed by a narrow gauge metal mesh (Plate 8) that would prevent entry by bats.

3.29 The roofs of buildings 1a and 1b are flat, with a low brick parapet (~0.7m), with a tin coping cover and some sections have tubular safety rails. The majority of the roof area has a cover of large rounded and sub-rounded pebbles and there are a number of paved walkways running parallel with the parapet and around some of the rooftop structures (Plate 9). The latter include a brick building with a flat roof housing the boiler room (Plate 10), a box telecom cabin of galvanised tin (Plate 11), a brick building with a flat roof containing the lift motor (Plate 12). The brick buildings have a short parapet with tin coping cover. There are two similar concrete structures at the top of the stair wells that provide access to the roof from buildings 1a and 1b. Each has a graded plastic-coated tin roof supported by four steel purlins (Plates 12 and 13). There are also a number of air conditioning condenser units and some of the buildings have external antennae attached.

3.30 All of the roof structures were well-maintained. The brick buildings (boiler room and lift motor) had no cracks or gaps in the mortar and no gaps beneath the tin coping covers on the parapets. Internal inspection found no evidence of bat use and no features suitable for roosting. No evidence was found for nesting birds and the buildings 1a, 1b and structures on the roof are assessed as having negligible potential for roosting bats.

3.31 Building 1c is a single-story brick building with a parapet and tin coping cover (Plate 14). The roof is hipped and of slate. The window frames are plastic. The brickwork is in good condition with no cracks and there are no gaps in the mortar or gaps around the window frames. Building 1c is assessed as having negligible potential for roosting bats.

3.32 No trees in the areas of ornamental planting or amenity grassland surrounding Armstrong House were of sufficient size or age to support bat roosts.

3.33 In summary, Armstrong House is considered to have no value for roosting bats and to require no further survey in respect of bat species.

Other Protected Species

3.34 No evidence of other protected species was found during the Extended Phase 1 Habitat survey. However, the shrub and trees have limited potential to support breeding birds of widespread urban species. There are no waterbodies that would be suitable for great crested newt (*Triturus cristatus*) or water vole (*Arvicola amphibius*). Otter (*Lutra lutra*) are colonising watercourses across the UK and in the North West but the River Medlock is culverted and open sections have vertical revetments that would deter otter use. Furthermore, poor water quality is unlikely to sustain a significant fish population. The busy city centre location and hard standing with no banks to excavate setts make the Site wholly unsuitable for badger.

3.35 The Site falls within the Black Redstart Priority Area. This identifies an area in central Manchester where the Schedule 1 black redstart (*Phoenicurus ochruros*) has been recorded. This species is a rare breeder, passage migrant and winter visitor with a small population concentrated in London and the West Midlands. There are also records of black redstarts attempting to breed in the Piccadilly Basin area of Greater Manchester. A Species Action Plan (Greater Manchester Biodiversity Project 2009) aims to maintain a breeding population in Greater Manchester.

3.36 The habitats on Site were not considered suitable for use by nesting or foraging black redstart, with no high song perches favoured by this species, few sheltered, quiet, high ledges for nesting, limited insect activity due to the dry nature of the Site, and a high degree of disturbance from the busy adjacent roads.

Evaluation

3.37 The desk study identified two protected sites and a number of protected species within the search area. All sites and records of species returned during the desk study were considered sufficiently distant and isolated from the Site to not be impacted by the development proposals, with the exception of the highly mobile species - bats and birds.

3.38 The Extended Phase 1 Habitat survey highlighted no areas of habitat of nature conservation interest. The plant species list was much reduced with all plant species recorded being common and typical of disturbed ground associated with sites dominated by hard standing and buildings. No non-native invasive Schedule 9-listed plants were observed within the Site, though Himalayan balsam and Japanese knotweed were noted on the opposite bank of the River Medlock.

3.39 The survey identified negligible potential for roosting bats to be present within the buildings on the Site and no evidence of roosting was found during the building inspection. Habitats on the Site were considered to be of low value to foraging and commuting bats.

3.40 Some limited potential for nesting birds was identified on Site. However, no active or disused birds' nests were observed. The habitats on Site were not considered suitable for use by nesting or foraging black redstart (a species known to nest in central Manchester).

4. RECOMMENDATIONS

Bats

4.1 No further survey or special measures are recommended in relation to bats and their roosts.

4.2 It would be considered good practice to repeat the inspection of buildings for bats if building demolition has not commenced after two years from the date of this survey. This is because derelict buildings can become more suitable for bats over time and some species of bat are quick to make use of new roosting opportunities.

Nesting Birds

4.3 The scrub vegetation on Site holds some limited opportunity for nesting birds and this may increase over time. It is, therefore, recommended that any future demolition work and scrub vegetation removal is undertaken in the autumn/winter period, i.e. September to March inclusive.

4.4 If winter demolition/clearance is not possible, it is recommended that a suitably experienced ecologist check any buildings and vegetation no more than 48 hours prior to site clearance to ensure no active nests are present. If nesting birds are confirmed to be present then works should 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 work is completed.

Other Protected Species

4.5 Additional surveys or special measures for other protected species are not considered necessary.

Invasive Non-native Species

4.6 If Japanese knotweed or any other invasive, non-native species colonise the Site, appropriate control and eradication measures to prevent spread of the species would need to be implemented, with the guidance of a prepared method statement by a suitably experienced ecologist and specialist agency.

Habitat Enhancements

4.7 The Site presently is generally of low ecological value. The re-development will consist largely of buildings and hard standing yet it does present some opportunities to increase biodiversity and add ecological value. Below are a number of general considerations and enhancement measures.

Native Species

4.8 Planting schemes used in urban environments often include non-native species. These may be selected for their aesthetic appeal, pollution tolerance, evergreen foliage and low maintenance, and many nectar-bearing exotic species do support insects and provide foraging and nesting opportunities for birds. However, native species, preferably of local provenance, tend to

support greater biodiversity as they have evolved to the local conditions. It is recommended that, wherever practical, native trees and shrubs are selected for landscape designs. However, there are limitations to the strict adherence to an all-native landscaping scheme as it does restrict plant choices. Across the site it may be more productive to use a combination of native and exotic species (although the latter should constitute a small fraction of the total planted, particularly as BREEAM accreditation is being sought for the development) to maximise the range of annual and perennial, deciduous and evergreen, foliage and flowering, climbing and creeping species.

Green Roofs

4.9 Green roofs (living roofs) are intrinsically of greater benefit to biodiversity than more traditional roofing methods. Green roofs can vary in their appearance and character. They can be designed to support low-growing mosses and sedums, wildflowers and grasses.

4.10 Sedums are widely-used plants for living roofs as they have many advantages in terms of hardiness and frost resistance. Sedums are succulents and actively store water in their tissues that increases drought tolerance and it has been demonstrated that sedum roofs provide a number of ecological benefits.

4.11 Commonly used species on living roofs include non-native white stonecrop (*Sedum album)* and native biting stonecrop (*Sedum acre*). White stonecrop and biting stonecrop have some of the most impressive flowering displays and are very attractive to bees, butterflies and other insects. Sedum can also form a closed sward that is colonised by mosses and ruderal species. Surveys of sedum roofs at Canary Wharf found they supported a wide range of notable and scarce invertebrate species (Jones 2002).

Species Composition and Planting

4.12 Native species, such as ivy (*Hedera helix*), dog rose (*Rosa Canina*), old man's beard (*Clematis vitalba*), common hop (*Humulus lupulus*) and honeysuckle (*Lonicera periclymenum*), all provide important food and nesting resources. Although native species are more likely to attract wildlife, some exotic species are also effective in this respect, such as Virginia creeper (*Parthenocissus quinquefolia*) and wisteria (*wisteria* sp.).

4.13 The aspect of a climbing plant on a wall can have significant ancillary effects, such as insulation and moisture retention. For example, north-facing walls are more suitable for supporting native herbs and a wider range of plants due to the higher moisture regime. Care must also be taken when using ivy if there are cavities in the walls, as the root systems may cause damage (www.livingroofs.com).

4.14 Plants that do well in a stone wall are varied in nature - from small, delicately leaved, creeping plants such as woolly creeping thyme (*Thymus pseudolanuginosus*) or prostrate rosemary (*Rosmarinus officinalis*), to drought-tolerant plants with minimal root systems such as hens and chicks (*Echeveria* 'Imbricata') or other succulents. Other candidate species include annuals such as wallflowers (*Erysimum cheiri*), trailing lobelia (*Lobelia erinus)* and snapdragons (*Antirrhinum majus*) that re-seed themselves from year to year.

4.15 Species known to grow well on stone walls include:

- meadow foxtail (*Alopecurus pratensis*);

- false oat-grass (*Arrhenatherum elatius*);
- soft brome (*Bromus hordeaceus*);
- creeping thistle (*Cirsium arvense*);
- hawthorn (*Crataegus monogyna*);
- cock's-foot (*Dactylis glomerata*);
- ash (*Fraxinus excelsior*);
- cleavers or goose-grass (*Galium aparine*);
- perennial rye grass (*Lolium perenne*);
- honeysuckle (*Lonicera periclymenum*);
- ivy-leaved toadflax (*Cymbalaria muralis*);
- ivy (*Hedera helix*);
- bramble (*Rubus fruticosus* agg.); and
- wall pennywort (*Umbilicus rupestris*).

4.16 As a general rule, young, drought tolerant plant species, whose roots will easily fit in the planting pockets, should be used.

Artificial Refugia

Bird Boxes

4.17 It is recommended that a variety of bird boxes should be installed, targeted towards species currently known to utilise the site and its surrounds, to potentially accommodate a range of small birds. Traditional nest boxes should be attached in various locations around the site on the south-west or south-eastern side of trees, near to foraging areas but away from disturbance.

Bat Boxes

4.18 It is recommended that various boxes, facing south-west, south-east and north, are erected to provide additional roosting opportunities for commuting/feeding bats in various weather conditions. Recommended bat boxes include Schwegler 2F for smaller bats and 2FN for larger bats. The addition of traditional wooden bat boxes may reduce the number of small birds attempting to use boxes provided for bats.

4.19 Most modern designed bat boxes are now produced from Woodcrete, a formulation of wood sawdust, concrete and clay. This material allows natural respiration, a stable temperature and is extremely long-lasting, being both rot- and predator-proof. Woodcrete also has the highest rates of occupation of all box types. There is a wide range of box designs available for trees and buildings, all of which have specific installation requirements:

- boxes must be sited at least 3.5m above ground. A box placed 4.5 to 6m high will potentially attract more species;

- boxes should not be placed in an overly exposed position on trees. Crucially, the entrance should face south-west to south-east;
- when considering wooden boxes, paint or preservatives must not be used as these may discourage or even kill bats;
- boxes are more likely to be occupied if sited near to a food source (insects), such as open greenspace and riverside locations.

4.20 It is also important to stress that high levels of lighting around the site may have important implications for bats. High densities of bats are often detected near white street lamps (mercury lamps) and, as a consequence, such street lighting may offer enhanced feeding opportunities for various species. This has proved beneficial for certain species, including pipistrelle bats that forage on invertebrates drawn to the lights. Both low-flying species and those feeding at lights are, however, more vulnerable to collisions with traffic. Other species, particularly long eared bats, actively avoid bright lights. Consequently, continuous external lighting may also function as a barrier to species movement, thereby effectively increasing habitat fragmentation. It is therefore suggested that directional lighting is carefully designed to limit unnecessary excess illumination. With regard to potential health risks associated with bats, these are considered to be minimal.

Bat Bricks

4.21 Bat bricks could be incorporated within the structure of new buildings in place of the usual building bricks (e.g. Bioquip www.bioquip.net/acatalog/boxes_for_building.html). These would be best placed on the south-west or south-east side of the building.

4.22 A slight gap between the exterior wall and an eave's soffit may provide access into the soffit box or over the top of the wall and into the roof space itself. This is especially useful if located towards the gable apex of end walls. Bats also regularly roost behind exterior cladding on buildings, such as hanging tiles, shingles and weather or barge boarding, especially if this has a southerly aspect. Providing small gaps between the individual overlapping components of this will enhance access opportunities.

5. REFERENCES

Greater Manchester Biodiversity Project, 2009. *Black Redstart Species Action Plan*.

Hundt, L., 2012. *Bat Surveys Good Practice Guidelines. 2nd Edition*. Bat Conservation Trust, London.

Joint Nature Conservation Committee, 2010. *Handbook for Phase 1 habitat survey: a technique for environmental audit*. Revised reprint, JNCC.

Jones, R.A., 2002. *Tecticolous Invertebrates: A preliminary investigation of the invertebrate fauna on green roofs in urban London.* English Nature.

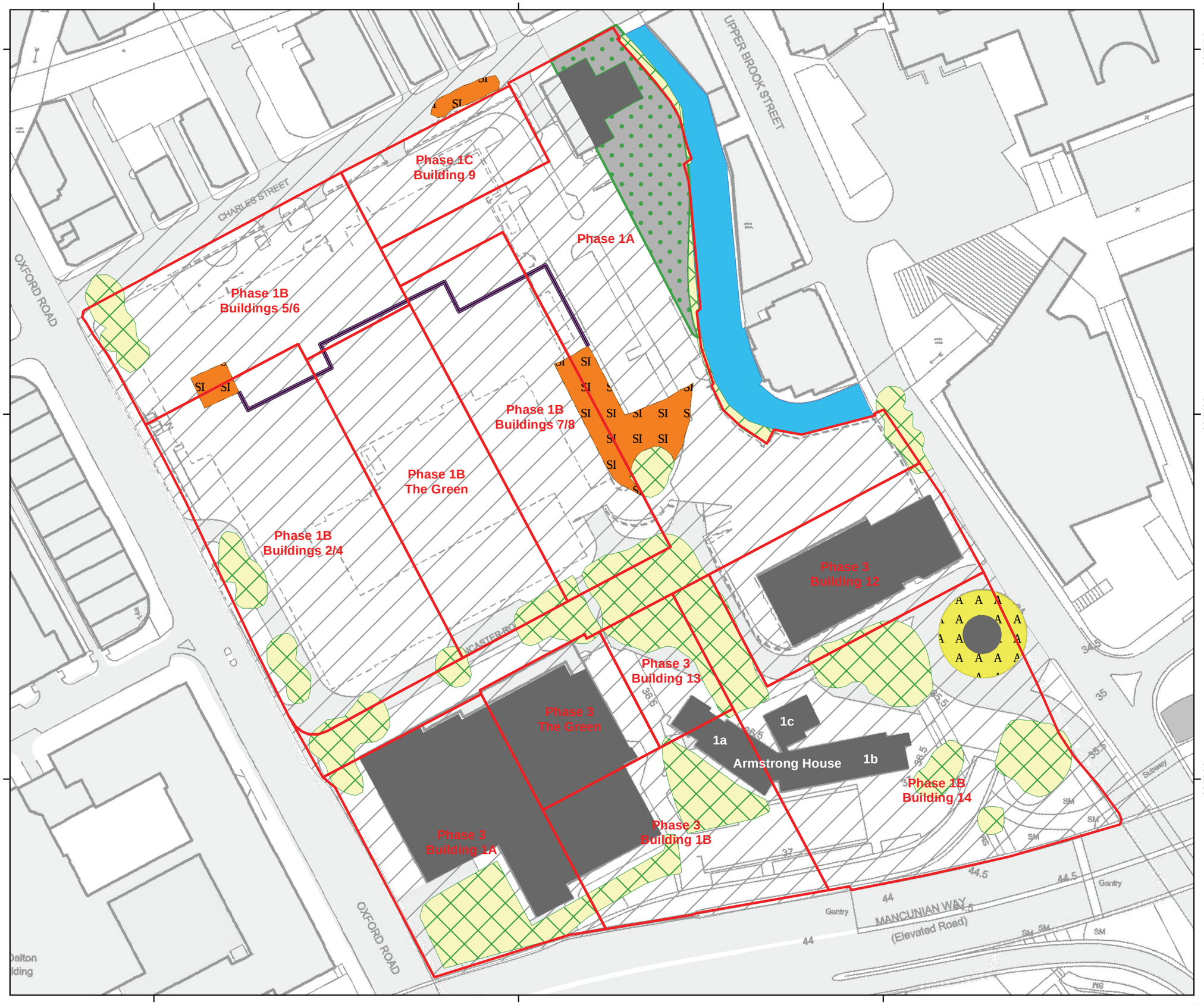
Mitchell-Jones, A.J., 2004. *Bat Mitigation Guidelines*. English Nature, Peterborough.

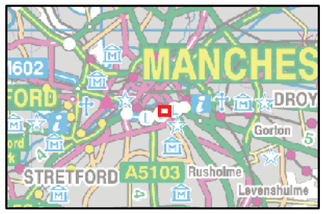
Stace, C., 2010. *New Flora of the British Isles. Third Edition*. Cambridge University Press.

FIGURE

384200 384300 384400

397500 397400 397300





Legend

- Development phases

Habitats

- Neutral grassland - semi-improved (B2.2)
- River Medway (G2)
- Short amenity grassland (J1.2)
- Urban amenity tree planting
- Hardstanding with scattered trees
- Unvegetated hardstanding
- Buildings (J3.6)
- Wall (J2.5)

N

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

Metres

0 5 10 20 30 40

Penny Anderson Associates Ltd
Consultant Ecologists

Penny Anderson Associates Ltd,
Parklea, 60 Park Road,
Buxton, Derbyshire, SK17 6SN.
Telephone 01298 27086

Project Name: Oxford Property Tradings

Discipline: Ecology

Title:

Phase 1 Habitat Survey showing development phases and location of Armstrong House

Scale	Drawing No.
1:1,000	Figure 1

Drawn By	Originator	Date
CC	GJH	15/01/2016

PAA Ref.	Revision
G:\OXPT01_UpperBrookSt_Manc\Maps	1.3

Reproduced from Ordnance Survey Data © Crown Copyright [2015]. All rights reserved.

PLATES



Plate 1 Un-vegetated hard standing



Plate 2 Vegetated hard standing

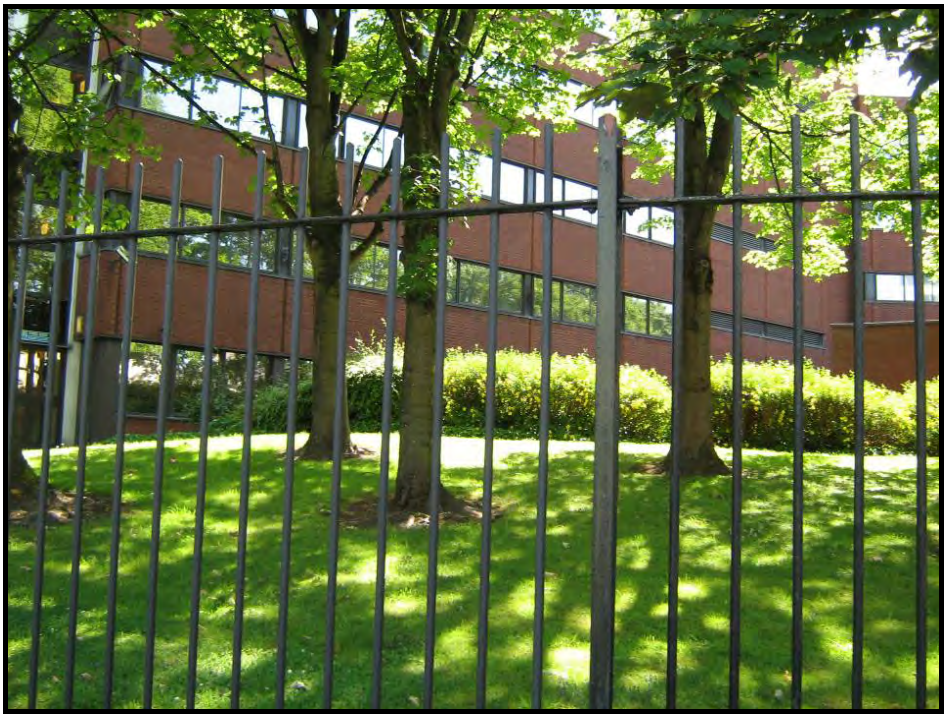


Plate 3 Amenity grass



Plate 4 Neutral grassland



Plate 5 Former garage



]

Plate 6 River Medlock, showing Japanese knotweed and Himalayan balsam



Plate 7 Building 1b from rear car park



Plate 8 Building 1c in foreground, with Building 1b behind showing louvered ventilation grills



Plate 9 Flat roof and air conditioning condensers on Building 1a



Plate 10 Boiler room



Plate 11 Telecom cabin on Building 1b



Plate 12 Lift room background and Building 1a stairs to the right



Plate 13 Stairs Building 1b



Plate 14 Building 1c showing hipped roof and Building 1b in background

APPENDICES

APPENDIX I

Summary Species Legislation: Bats, Black Redstart and Breeding Birds

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 2010, 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 2010.

The Conservation of Habitats and Species Regulations 2010[1] 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. Section 11 of the National Planning Policy Framework (NPPF) states that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible. The NPPF also includes the requirement to contribute to the Government's commitment to halt the overall decline in biodiversity and to promote the reservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets. Reference is made to Circular 06/2005 *Biodiversity and*

[1] *These regulations have been slightly amended by The Conservation of Habitats and Species Regulations 2012*

Geological Conservation - Statutory Obligations and Their Impact within the Planning System in respect of statutory obligations for biodiversity and geodiversity conservation.

Local authorities in England are required to ensure that where significant harm resulting from development cannot be avoided (through locating on alternative sites with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, planning permission is refused. 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.

Penny Anderson Associates Ltd
CONSULTANT ECOLOGISTS

SUMMARY OF LEGISLATION RELATING TO BLACK REDSTART

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.

Black redstarts (*Phoenicurus ochruros*) are additionally protected as they are listed on Schedule 1 of the WCA. Therefore, black redstarts, their nests, eggs and young are fully protected at all times throughout 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) 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.'

In addition, the black redstart is identified as a bird species of moderate conservation concern (‘Amber’ listed) due to its declining breeding population and its rarity as a breeding species within Britain.

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

Penny Anderson Associates Ltd
CONSULTANT ECOLOGISTS

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.

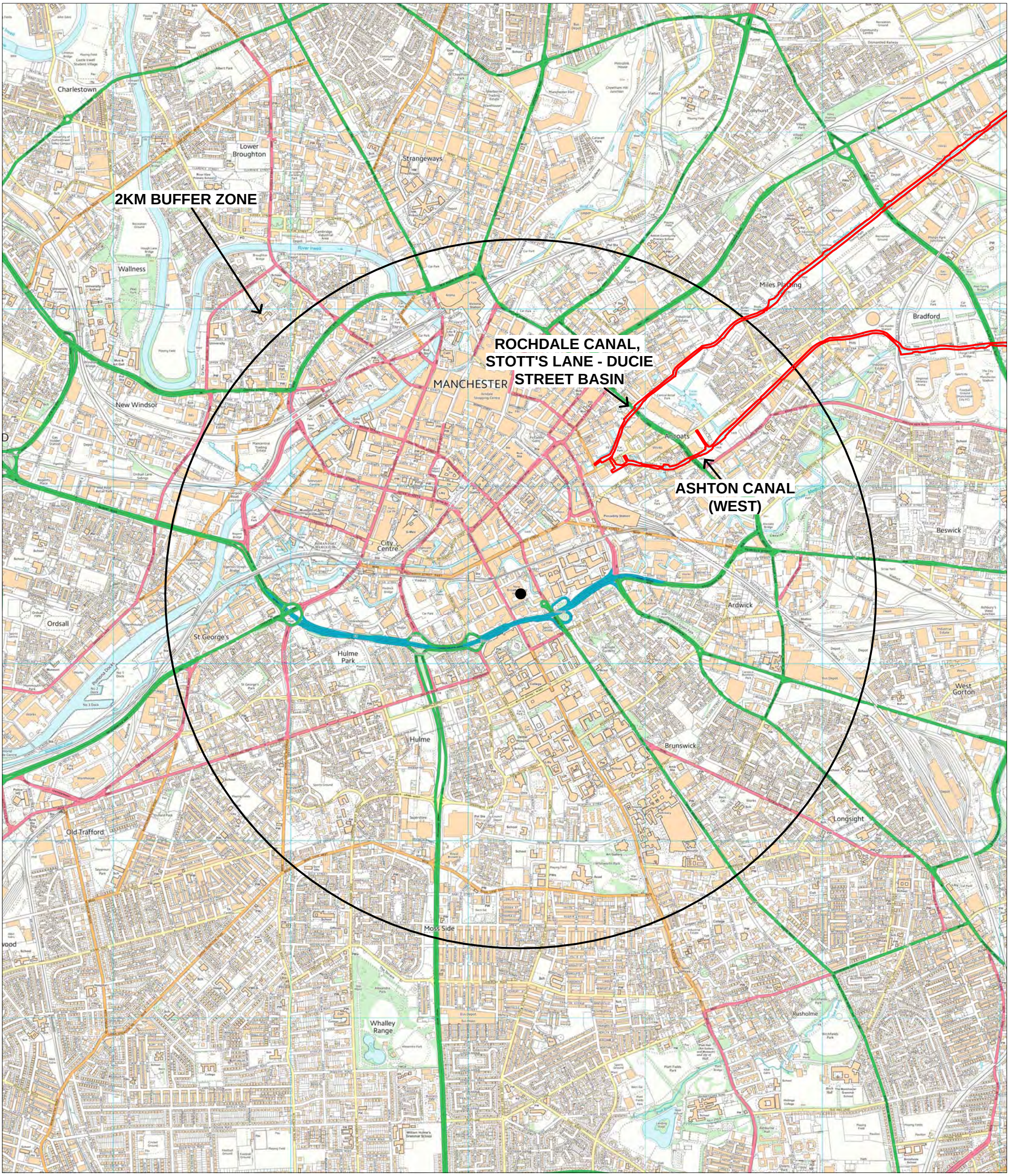
Some provisions are made to allow the killing and taking of certain species under certain circumstances, as follows:

- 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 II

GMEU Desk Study Results



KEY

SITE OF BIOLOGICAL IMPORTANCE

SBI BOUNDARY

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ8429897393
OXFORD ROAD - MAP 1

SCALE 1:20,000

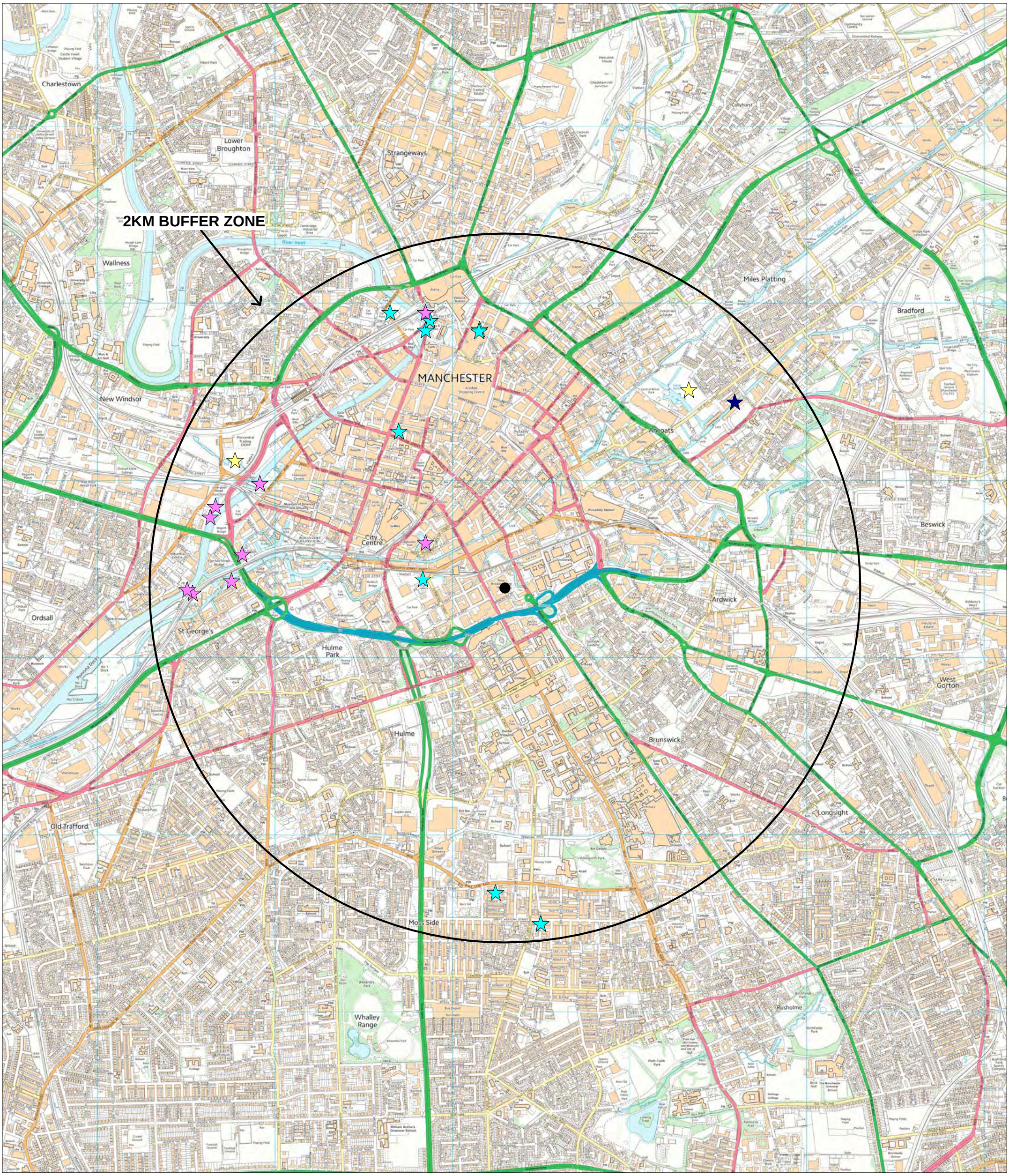
THE MAP IS BASED UPON ORDNANCE SURVEY MATERIAL WITH THE PERMISSION OF ORDNANCE SURVEY ON BEHALF OF THE CONTROLLER OF HMSO ©CROWN COPYRIGHT UNAUTHORISED REPRODUCTION INFRINGES CROWN COPYRIGHT AND MAY LEAD TO PROSECUTION OR CIVIL PROCEEDINGS

TAMESIDE MBC LICENCE NO LA100022697, 2015

Greater Manchester Ecology Unit

Telephone 0161 342 3723
Email: gmeu@tameside.gov.uk

Date Produced: 27/07/2015



KEY:
PROTECTED SPECIES

- ★ BLACK REDSTART
- ★ FLOATING WATER-PLANTAIN
- ★ KINGFISHER
- ★ LITTLE RINGED PLOVER

▭ LOCAL NATURE RESERVE

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ8429897393
OXFORD ROAD - MAP 2

SCALE 1:20,000

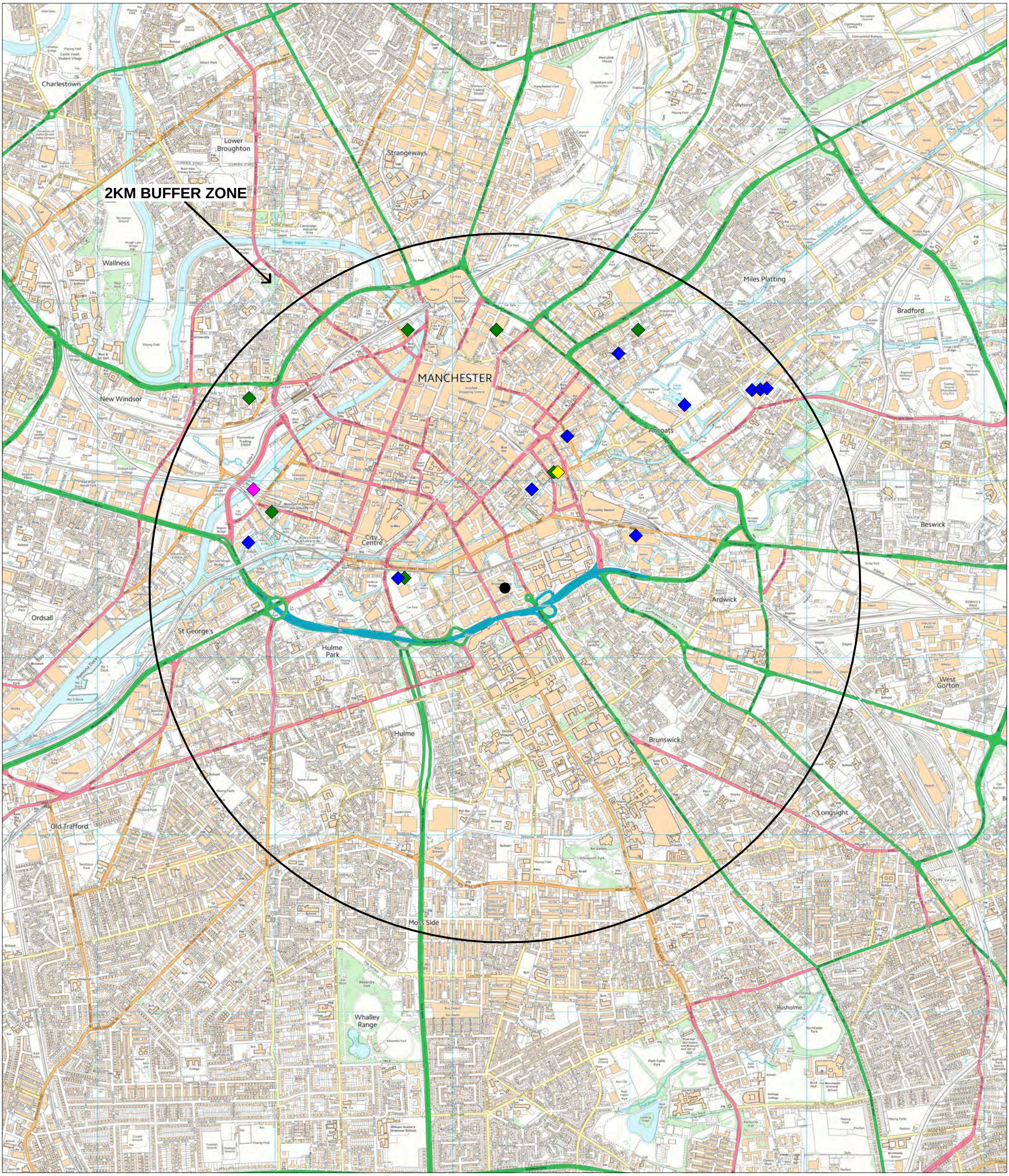
THE MAP IS BASED UPON ORDNANCE SURVEY MATERIAL WITH THE PERMISSION OF ORDNANCE SURVEY ON BEHALF OF THE CONTROLLER OF HMSO ©CROWN COPYRIGHT
UNAUTHORISED REPRODUCTION INFRINGES CROWN COPYRIGHT AND MAY LEAD TO PROSECUTION OR CIVIL PROCEEDINGS

TAMESIDE MBC LICENCE NO LA100022697, 2015

Greater Manchester Ecology Unit

Telephone 0161 342 3723
Email: gmeu@tameside.gov.uk

Date Produced: 27/07/2015



KEY
BAT ROOSTS

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

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ8429897393
OXFORD ROAD - MAP 4

SCALE 1:20,000

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

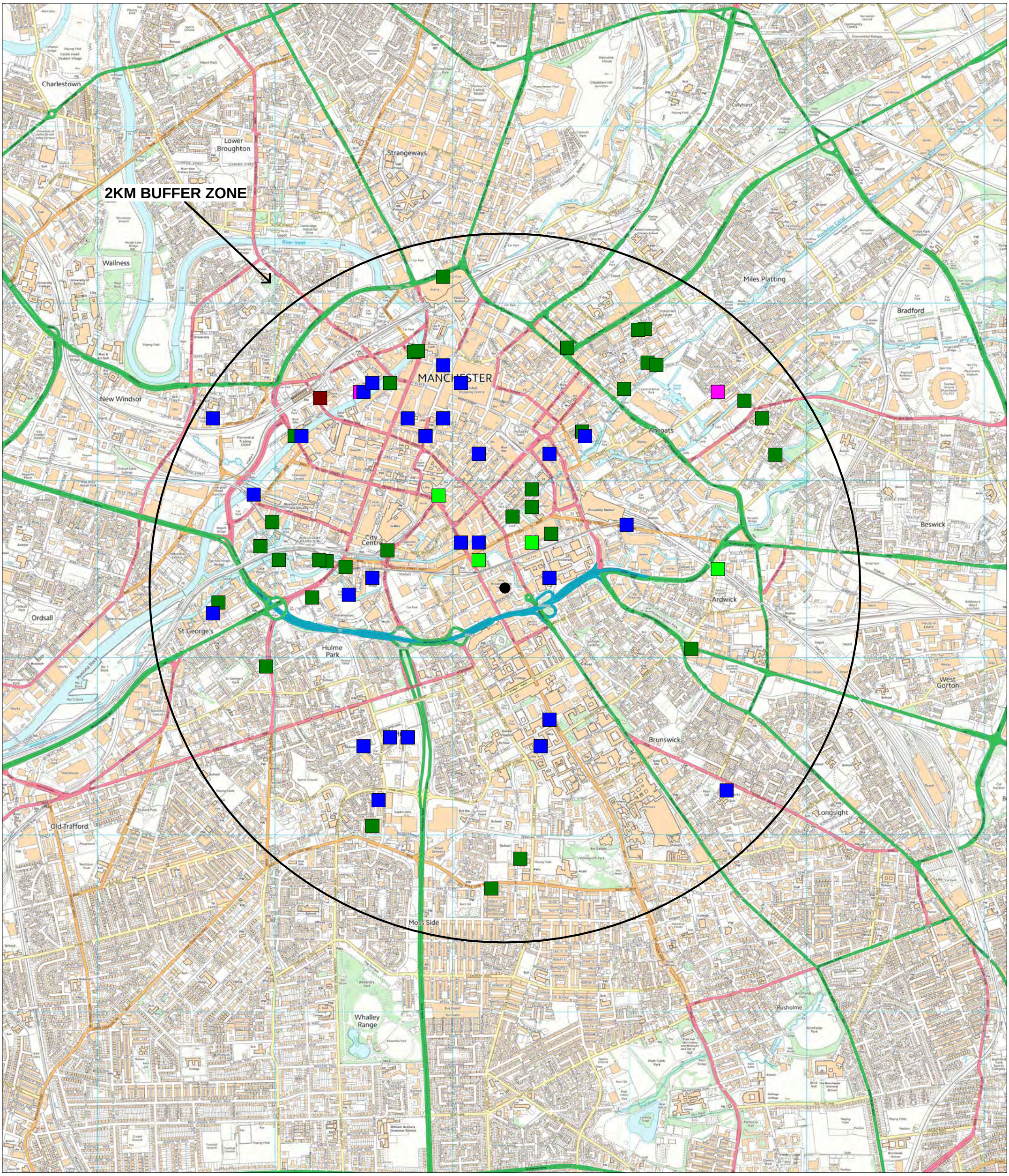
THE MAP IS BASED UPON ORDNANCE SURVEY MATERIAL WITH THE PERMISSION OF ORDNANCE SURVEY ON BEHALF OF THE CONTROLLER OF HMSO ©CROWN COPYRIGHT UNAUTHORISED REPRODUCTION INFRINGES CROWN COPYRIGHT AND MAY LEAD TO PROSECUTION OR CIVIL PROCEEDINGS

TAMESIDE MBC LICENCE NO LA100022697, 2015

Greater Manchester Ecology Unit

Telephone 0161 342 3723
Email: gmeu@tameside.gov.uk

Date Produced: 27/07/2015



KEY:
BATS OTHER SIGNS

- BAT SP
- BROWN LONG-EARED
- COMMON PIPISTRELLE
- DAUBENTON'S BAT
- PIPISTRELLE SP

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ8429897393
OXFORD ROAD - MAP 5

SCALE 1:20,000

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

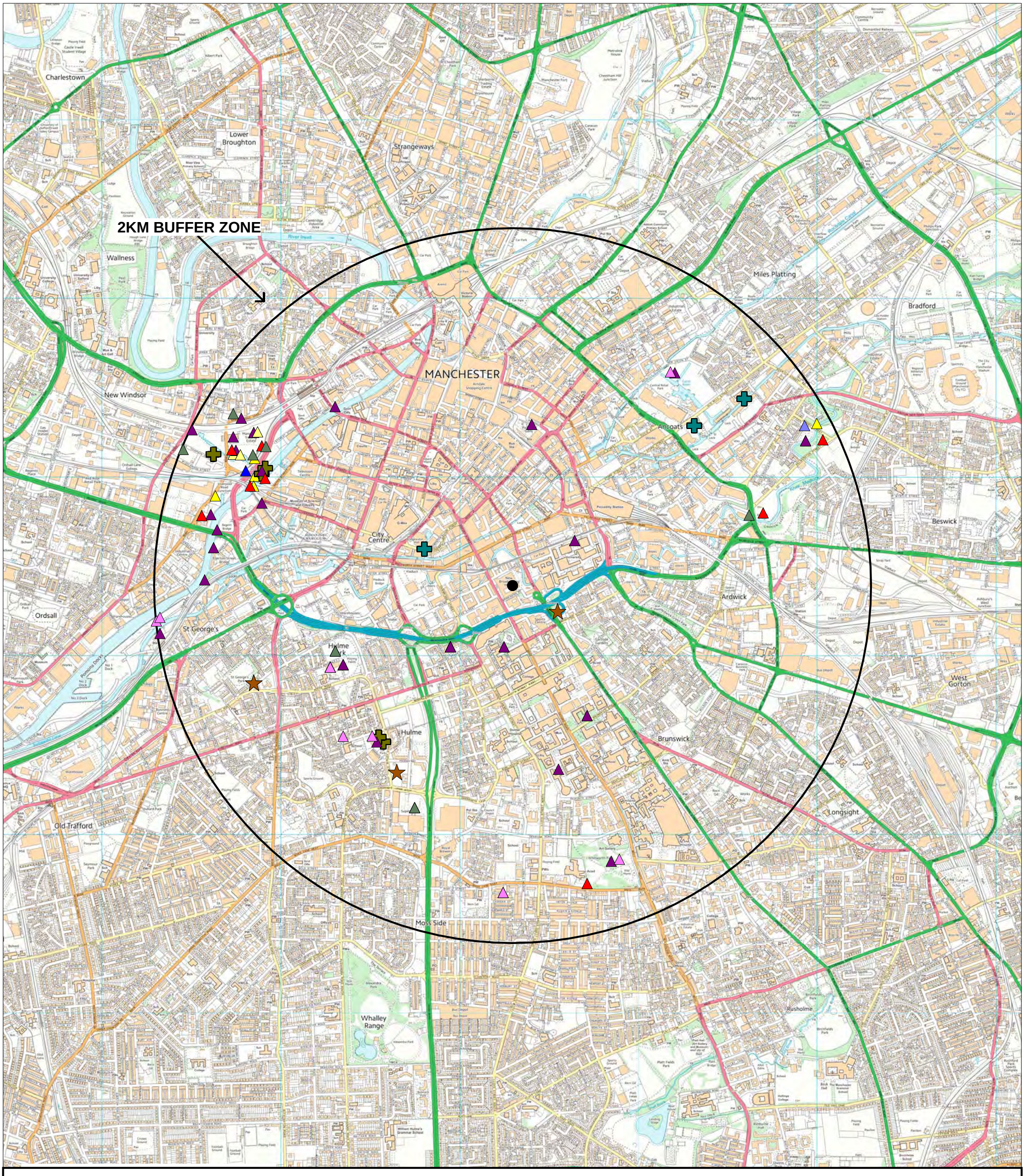
THE MAP IS BASED UPON ORDNANCE SURVEY MATERIAL WITH THE PERMISSION OF ORDNANCE SURVEY ON BEHALF OF THE CONTROLLER OF HMSO ©CROWN COPYRIGHT UNAUTHORISED REPRODUCTION INFRINGES CROWN COPYRIGHT AND MAY LEAD TO PROSECUTION OR CIVIL PROCEEDINGS

TAMESIDE MBC LICENCE NO LA100022697, 2015

Greater Manchester Ecology Unit

Telephone 0161 342 3723
Email: gmeu@tameside.gov.uk

Date Produced: 27/07/2015



KEY

SECTION 41 SPECIES

- BULLFINCH
- CINNABAR
- DUNNOCK
- GRASS-WRACK PONDWEED
- HERRING GULL
- HOUSE SPARROW
- LAPWING
- SKYLARK
- SONG THRUSH
- STARLING
- HEDGEHOG

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ8429897393
OXFORD ROAD - MAP 6

SCALE 1:20,000

THE MAP IS BASED UPON ORDNANCE SURVEY MATERIAL WITH THE PERMISSION OF ORDNANCE SURVEY ON BEHALF OF THE CONTROLLER OF HMSO ©CROWN COPYRIGHT UNAUTHORISED REPRODUCTION INFRINGES CROWN COPYRIGHT AND MAY LEAD TO PROSECUTION OR CIVIL PROCEEDINGS

TAMESIDE MBC LICENCE NO LA100022697, 2015

Greater Manchester Ecology Unit

Telephone 0161 342 3723
Email: gmeu@tameside.gov.uk

Date Produced: 27/07/2015

APPENDIX III

Phase 1 Plant Species List

Appendix III Phase 1 Plant Species List

		Abundance (DAFOR)			
Common Name	**Scientific Name**	**Hardstanding**	**Urban Amenity Planting**	**Amenity Grass**	**Neutral Grass**
Trees & Shrubs					
Apple	*Malus* sp.		o		
Ash	*Fraxinus excelsior*	r, seedling	o		
Barberry	*Berberis* sp.		o		
Box honeysuckle	*Lonicera nitida*		o		
Broom	*Cytisus* sp.		o		
Buddleia	*Buddleia davidii*		r		
Cherry	*Prunus* sp.		o		
Chinese bramble	*Rubus tricolor*		o		
common dogwood	*Cornus sanguinea*		o		
Cotoneaster	*Cotoneaster* sp.		o		
Elder	*Sambucus nigra*		o		
Firethorn	*Pyracantha* sp.		o		
Hawthorn	*Crataegus monogyna*		r		
Himalayan birch	*Betula utilis*		o		
Hornbeam	*Carpinus betulus*		o		
Ivy cultivar	*Hedera helix*		o		
Leyland cypress	*Cupressus × leylandii*		o		
London planetree	*Platanus x acerifolia*		o		
Mahonia species	*Mahonia* sp.		o		
Mexican orange blossom	*Choisya ternata*		o		
Mock orange	*Philadelphus* sp.		o		
New Zealand flax	*Phormium tenax*		o		
Norway maple	*Acer platanoides*	r, seedling	o		
Rose of Sharon	*Hypericum* sp.		o		r
Rose species	*Rosa* sp.		o		
Serviceberry	*Alemanchier sp.*		r		
Sycamore	*Acer pseudoplatanus*		r		
Whitebeam	*Sorbus* sp.		r		
Willow	*Salix* sp.		o		
Yew	*Ulex europaea*		o		
Herbaceous Plants					
A moss	*Rhytidiadelphus squarrosus*			a	
Alsike clover	*Trifolium hybridum*				r
Annual meadow-grass	*Poa annua*	r			
Broad-leaved dock	*Rumex obtusifolia*	r			o
Broad-leaved willowherb	*Epilobium montana*	r			r
Canadian fleabane	*Conyza canadensis*	r			r
Colt's-foot	*Tussilago farfara*	r			
Cock's-foot	*Dactylis glomerata*			o	o
Common couch	*Elytrigia repens*	r			f-a
Common mouse-ear	*Cerastium fontanum*	r			o
Common nettle	*Urtica dioica*	r			r
Creeping bent	*Agrostis stolonifera*	r			f-a
Creeping buttercup	*Ranunculus repens*			o	
Creeping soft-grass	*Holcus mollis*	r			o
Creeping thistle	*Cirsium arvense*	r			o
Daisy	*Bellis perennis*			o	
Dandelion	*Taraxacum officinalis* agg.	r			o
Field horsetail	*Equisetum arvense*	r			o
Greater plantain	*Plantago major*	r			
Greater willowherb	*Epilobium hirsutum*	r			r
Groundsel	*Senecio vulgaris*	r			r
Hedge bindweed	*Calystegia sepium*				o
Hedge mustard	*Sisymbrium officinale*	r			o
Hedge woundwort	*Stachys sylvestris*				o
Knotgrass	*Polygonum aviculare*	r			
Lesser trefoil	*Trifolium dubium*	r			o
Meadow vetchling	*Lathyrus pratensis*				o
Michaelmas daisy	*Aster* sp.	r			r
Nipplewort	*Lapsana communis*	r			r
Oxford ragwort	*Senecio squalidus*	r			r
Perennial rye-grass	*Lolium perenne*	r			o-f
Pineapple	*Matricaria discoidea*	r			
Prickly lettuce	*Lactuca serriola*	r			r
Prickly sow-thistle	*Sonchus asper*	r			
Red clover	*Trifolium pratensis*				o
Red fescue	*Festuca rubra*	r		a	o-f
Ribwort plantain	*Plantago lanceolata*	r			o
Scentless mayweed	*Tripleurospermum inodorum*	r			
Selfheal	*Prunella vulgaris*	r		f	r
Smooth sow-thistle	*Sonchus oleraceus*	r			
White clover	*Trifolium repens*	r		f	o
Wood speedwell	*Veronica montana*	r			r
Yarrow	*Achillea millefolium*				o
Yellow melilot	*Melilotus officinalis*	r			o
Yorkshire fog	*Holcus lanatus*			a	a-d

Dafor Key

d = dominant
a = abundant
f = frequent
o = occasional
r = rare

Penny Anderson Associates Ltd

CONSULTANT ECOLOGISTS



Park Lea, 60 Park Road, Buxton, Derbyshire SK17 6SN

Registered Office as Above | Registered in England & Wales | Company No. 4223109 | Directors: Mrs P Anderson Mr P Worrall Miss S Rogers