Manchester International Office Centre, Styal Road, M22 5WB

ECOLOGICAL SURVEY AND ASSESSMENT

October 2020

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Document Control

Survey Type:	**Surveyors**	**Survey Date(s)**
Phase 1 Habitat survey	Amy Sharples B.Sc. (Hons) M.Sc. GradCIEEM	14th August 2020
Reporting	**Personnel**	**Date**
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SUMMARY

Introduction and Scope

i. This ecological survey and assessment presents the ecological, biodiversity and nature conservation status of Manchester International Office Centre, Styal Road, M22 5WB. The assessment was requested in connection with proposals to build a new office building on the existing lawn at the front of the Manchester International Office Centre.

ii. This report presents the results of a desktop study and an extended Phase 1 Habitat Survey carried out in August 2020. The scope of survey undertaken is appropriate to identify potential ecological constraints, the remit of mitigation required and opportunities for biodiversity associated with the development proposals.

iii. The site comprises a lawn of close mown amenity grassland with ornamental boundary vegetation, scattered trees and hard standing.

Results of Survey and Assessment

iv. The proposals will have no direct or indirect adverse effect on statutory or non-statutory designated sites for nature conservation.

v. None of the habitats within the site are of significant interest in terms of their plant species composition. None of the habitats present are representative of semi-natural habitat or are Priority Habitat. The NVC communities present are typical of the geographical area and conditions present. The site contains only common and widespread plant species.

vi. The vegetation at the site provides limited opportunities for nesting birds.

vii. Invasive plant species listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) namely Rhododendron and Japanese Rose were detected. This does not preclude development but it is an offence to cause the spread of these species in the wild. Guidance on the control of these species is described at **Section 5.3**.

Recommendations

viii. The recommendations in **Section 5.0** outline all the mandatory measures and additional actions to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice.

ix. The proposals will secure an opportunity to implement beneficial measures such as habitat creation that will safeguard habitats for wildlife such as birds and bats, with the aim of providing a net gain in biodiversity in accordance with the principles of the NPPF.

Conclusion

x. It is concluded that the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy. Development at the site will provide an opportunity to secure ecological enhancement for wildlife associated with the development of a new office building.

1.0 INTRODUCTION

1.1 Background and Rationale

1.1.1 ERAP (Consultant Ecologists) Ltd was commissioned by Infinity (MIOC) LLP to carry out an ecological survey and assessment of land at the Manchester International Office Centre, Styal Road, M22 5WB (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SJ 8402 8529. An aerial image of the site and its surrounding habitats is appended at **Figure 1** (source image: ESRI World Imagery).

1.1.2 The assessment was requested in connection with a planning application to build a new office building on the existing lawn at the front of the Manchester International Office Centre.

1.2 Scope of Works

1.2.1 The scope of ecological works undertaken in August 2020 comprised:

a. A desktop study for known ecological information at the site and the local area;

b. An Extended Phase 1 Habitat Survey and assessment;

c. Assessment of the ecological value of the habitats within the site with the use of the National Vegetation Classification (NVC) and the Ratcliffe criteria, as presented in *A Nature Conservation Review* (Ratcliffe, 1977);

d. Survey and assessment of all habitats for relevant statutorily protected species[1] and other wildlife including badger (*Meles meles*), great crested newt (*Triturus cristatus*), water vole (*Arvicola amphibius*), otter (*Lutra lutra*), bird species and reptiles;

e. A preliminary daylight survey of the trees at the site in relation to suitability for use by roosting bats;

f. The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and

g. The identification of any further surveys or precautionary actions that may be required prior to the commencement of any development activities.

2.0 METHOD OF SURVEY

2.1 Desktop Study

2.1.1 The following sources of information and ecological records were consulted:

a. MAGiC: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites; and

b. Greater Manchester Biodiversity Action Plan (BAP).

2.1.2 In accordance with *Guidelines for Accessing and Using Biodiversity Data* (CIEEM, 2016), the proposals at the site are small scale and will be of limited impact upon the site and local area. As such, it is considered

[1] In accordance with *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact on the Planning System* (Ministry of Housing, Communities & Local Government, 2005) developers should not be required to undertake surveys for protected species unless there is reasonable likelihood of the species being present and affected by the development.

that the purchase of ecological records (as provided by Greater Manchester Local Record Centre) is not required in this instance.

2.2 Vegetation and Habitats

2.2.1 An Extended Phase 1 Habitat Survey of the site was carried out by Amy Sharples B.Sc. (Hons) M.Sc. GradCIEEM on 14th August 2020. The weather was dry with scattered cloud with a light air (Beaufort scale 1) and an air temperature of 20°C at 10am. The conditions and time of year were favourable for the ecological survey.

2.2.2 A habitat and vegetation map was produced for the site and the immediate surrounding area at a scale of 1:750 (refer to **Figure 2**). The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC, 2010) with minor adjustments to illustrate and examine the habitats with greater precision.

2.2.3 The plant species within the site boundary were determined with estimates of the distribution, ground cover, abundance and constancy of individual species. The estimation of abundance was based on the DAFOR system, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare, this being a widely used and accepted system employed by ecological surveyors. The terms L = Locally and V = Very were additionally used to describe the plant species distributions with greater precision.

2.2.4 Stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and is a reliable framework for nature conservation and land-use planning.

2.2.5 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and uncommon plant communities. Plant nomenclature follows *New Flora of the British Isles 3rd Edition* (Stace, 2010).

2.2.6 Searches were carried out for the presence of invasive plant species, including those listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), including Japanese Knotweed (*Fallopia japonica*), Indian Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*).

2.3 Animal Life

Badger

2.3.1 The survey area for badger covered the site (as annotated on **Figure 1**) and extended to accessible land within a radius of 50 metres from the site boundary. Private gardens / land were excluded from the survey.

2.3.2 The survey was conducted in accordance with guidance presented within *Badgers and Development* (Natural England, 2007) and *Badgers: surveys and mitigation for development projects* (Natural England, 2015).

2.3.3 The following signs of badger activity were searched for:

a. Sett entrances, e.g. entrances that are normally 25 to 35cm in diameter and shaped like a ‘D’ on its side;

b. Large spoil heaps outside sett entrances;

c. Bedding outside sett entrances;

d. Badger footprints;

e. Badger paths;

f. Latrines;

g. Badger hairs on fences or bushes;

h. Scratching posts; and

i. Signs of digging for food.

2.3.4 Habitats within and surrounding the site were assessed in terms of their suitability for use by foraging and sheltering badger in accordance with their known habitat preferences as detailed in current guidance and *Badger* (Roper, 2010).

Bat Species

Daylight Survey: Trees

2.3.5 A preliminary assessment of the trees within the site was conducted to assess their suitability for use by roosting bats, and to inform whether further surveys or precautionary measures were required.

2.3.6 Trees were assessed from the ground using binoculars and a high-powered torch. Each tree was searched for the presence of the following features:

Woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed platey bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between overlapping stems or branches, partially detached Ivy (Hedera helix) with stem diameters in excess of 50mm and bat, bird or dormouse (Muscardinus avellanarius) boxes.

2.3.7 Terms used to describe any features present follow (where possible) those outlined and described in *Bat Tree Habitat Key, 2nd Edition* (Andrews, H (ed), 2013) and *Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-care and Ecology Professionals* (BTHK, 2018).

2.3.8 The requirement for further presence / absence surveys at each tree was then considered.

Habitat Assessment for Commuting / Foraging Bats

2.3.9 Habitats within and adjacent to the site were assessed for their value and suitability for commuting and foraging bats in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn),* (Collins, J. (ed), 2016). Reference has been made to the categories and descriptions / examples, presented at **Table 2.1**, below.

Table 2.1: Consideration of Suitability of Foraging and Commuting Habitat for Bats

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

Bird Species

2.3.10 Bird species observed and heard during the survey were recorded.

2.3.11 Habitats throughout the site and in the immediate surrounding area were assessed for their value to roosting, feeding and nesting birds, as indicated by the amount of shelter, feeding value, woody vegetation structure and species diversity of tree and shrub species in the site.

Great Crested Newt

2.3.12 In accordance with current Natural England guidance (Natural England, 2015) all ponds within an unobstructed 500 metres of a site should be considered for their suitability to support breeding great crested newts. The potential of the proposed development to impact upon any great crested newt population(s) whose breeding ponds are within 500 metres must be considered.

2.3.13 There are no ponds within an unobstructed 500 metres radius from the site boundary; no further surveys for amphibian species are necessary.

Reptile Species

2.3.14 The site and its surroundings were assessed in terms of their suitability for use by reptile species using the important characteristics for reptiles outlined in the draft document '*Reptile Mitigation Guidelines*' (Natural England, 2011), and the *Reptile Habitat Management Handbook* (Edgar, et al., 2010). These habitat characteristics are outlined in **Table 2.2**, below.

Table 2.2: Important Habitat Characteristics for Reptiles

1. Location (in relation to species range)	7. Connectivity to nearby good quality habitat
2. Vegetation Structure	8. Prey abundance
3. Insolation	9. Refuge opportunity
4. Aspect	10. Hibernation habitat potential
5. Topography	11. Disturbance regime
6. Surface geology	12. Egg-laying site potential

Water Vole and Otter

2.3.15 The site and the surrounding habitat does not support any watercourses suitable for use by water vole or otter. The presence of water vole and otter is reasonably discounted, and no further survey is required.

2.4 Survey and Reporting Limitations

2.4.1 All areas of the site were fully accessible at the time of the survey; no survey limitations were experienced.

2.4.2 All measurements within this report are approximate only, and have been either measured (using QField) or estimated whilst on site or calculated using mapping software (QGIS) or internet-based mapping services such as MAGiC and Google Earth.

2.5 Evaluation Methods

2.5.1 The habitats, vegetation and animal life were evaluated with reference to standard nature conservation criteria as described in *A Nature Conservation Review* (Ratcliffe, 1977) and *Guidelines for the Selection of Biological SSSIs* (Bainbridge, et al., 2013). These are size (extent), diversity, naturalness, rarity, fragility, typicality, recorded history, position in an ecological or geographical unit, potential value and intrinsic appeal.

2.5.2 Habitats have been assessed to determine whether they meet those described in *UK Biodiversity Action Plan: Priority Habitat Descriptions* (Maddock, A (ed), 2008); these lists are used to help draw up the statutory lists of Priority Habitats, as required under Section 41 of the *Natural Environment and Rural Communities*

(NERC) *Act 2006*. Where suitable, the ecological value of the habitats present have been assessed using the terms outlined in *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018).

2.5.3 Government advice on wildlife, as set out in the *National Planning Policy Framework* (Ministry of Housing, Communities and Local Government, 2019) and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedules 1, 5, 6 and 8 of the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitats and Species Regulations 2017*, is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.

2.5.4 The presence of any Priority Species, as listed under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006* is noted, and habitats are assessed in terms of their suitability and value for these species. The presence of habitats and/or species listed by the Greater Manchester Biodiversity Action Plans has been taken into account in the evaluation of the site.

3.0 SURVEY RESULTS

3.1 Desktop Study

Statutory Designated Sites for Nature Conservation

3.1.1 The site has no statutory designation for nature conservation and no statutory designated sites for nature conservation lie within 2 kilometres of the site.

3.1.2 The site lies within a Site of Special Scientific Interest (SSSI) Impact Risk Zone for Cotteril Clough SSSI, located 3.1 kilometres south-west of the site. The SSSI Impact Risk Zone requires the Local Planning Authority to consult with Natural England on likely risks from the following development categories (Ordnance Survey, 2020):

'*Infrastructure:* *Airports, helipads and other aviation proposals.*

Minerals, oils and gas: *Oil and gas exploration / extraction.*

Air pollution: *Livestock and poultry units with floorspace greater than 500m^2, slurry lagoons greater than 750m^2 and manure stores greater than 3500 tonnes.*

Combustion: *General combustion processes greater than 50 megawatt energy input including energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis / gasification, anaerobic digestion, sewage treatment works and other incineration / combustion.'*

Non-statutory Designated Sites for Nature Conservation

3.1.3 The site and adjacent land have no non-statutory designation for nature conservation.

3.2 Vegetation and Habitats

General Description

3.2.1 The approximately 0.5 hectare site is located within the existing Manchester International Office Centre site and comprises a close mown lawn of amenity grassland with ornamental boundary vegetation, scattered trees and hard standing.

3.2.2 The site boundaries are all defined by boundary vegetation. Existing buildings and hard-standing associated with the Manchester International Office Centre lie beyond the northern, eastern and southern site boundaries. Styal Road (B5166) lies beyond the western site boundary.

3.2.3 A Phase 1 Habitat Survey map is appended at **Figure 2**, and can be referred to for all habitat descriptions. Photographs are appended at **Table 8.2**.

Amenity Grassland

3.2.4 The amenity grassland at the site was short mown at the time of the survey, refer to **Photos 1** and **2**.

3.2.5 The vegetation is characterised by constant and abundant Perennial Rye-grass (*Lolium perenne*), constant and frequent Creeping Buttercup (*Ranunculus repens*) and White Clover (*Trifolium repens*), abundant Yorkshire-fog (*Holcus lanatus*), frequent Smooth Meadow-grass (*Poa pratensis*) and occasional Annual Meadow-grass (*Poa annua*), Red Fescue (*Festuca rubra*), Common Bent (*Agrostis capillaris*), Creeping Bent (*Agrostis stolonifera*) and Daisy (*Bellis perennis*).

3.2.6 The amenity grassland is characteristic of an *MG7 Perennial Rye-grass* ley grassland community of the NVC community (Rodwell, 1992). A plant species list is appended at **Table 8.1**.

Boundary Vegetation

3.2.7 The boundary vegetation at the site comprises ornamental planting with scattered trees, refer to **Photos 3** to **6**.

3.2.8 The boundary vegetation is characterised by constant and frequent ornamental species, abundant Ivy (*Hedera helix*), occasional Bramble (*Rubus fruticosus* agg.) and locally abundant Silver Birch (*Betula pendula)*, Ash (*Fraxinus excelsior*), Holly (*Ilex aquifolium*), Poplar species (*Populus* sp.), Cherry Laurel (*Prunus laurocerasus*), Blackthorn (*Prunus spinosa*), Lime species (*Tilia* sp.) and Leyland Cypress (*X Cuprocyparis leylandii)*.

3.2.9 The boundary vegetation is not characteristic of an NVC community. A plant species list is appended at **Table 8.1**.

Invasive Plant Species

3.2.10 No Japanese Knotweed is present at the site.

3.2.11 As illustrated on **Figure 2**, stands of Rhododendron (*Rhododendron ponticum*) shrubs and Japanese Rose (*Rosa rugosa*) were detected associated with the boundary vegetation. These species are listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended); it is an offence to spread or cause their spread in the wild. This is considered further at **Section 5.3** below.

3.3 Animal Life

Badger

3.3.1 No badger or signs of badger were detected within the site. No evidence of badger such as setts / holes, prints, hairs, dung pits or snuffle holes were detected at the site or in the immediate surrounding area. Due to the absence of any field signs of badger, the presence of badger at the site is reasonably discounted. No further survey is required.

Bat Species

Daylight Survey: Trees

3.3.2 The scattered broadleaf trees within the site are all associated with the boundary vegetation. No trees support any features suitable for use by roosting bats. The presence of roosting bats is reasonably discounted and no further survey is required.

Habitat Assessment for Commuting and Foraging Bats

3.3.3 The site lies within the existing Manchester International Office Centre; the habitats within the site boundary are unlikely to provide an abundance or diversity of invertebrate prey, and are therefore considered to be of low suitability for use by foraging bats.

Bird Species

3.3.4 The boundary vegetation within the site provide habitat suitable for use by nesting passerine (i.e. perching) species.

3.3.5 Birds detected in the site on 14th August 2020 are listed in **Table 3.1**, below.

Table 3.1: Bird species Detected on 14th August 2020

Scientific Name	Common Name (number seen)	BOCC Status[1]	Priority Species?
Columba palumbus	Wood pigeon (2)	Green	No
Erithacus rubecula	Robin (1)	Green	No
Parus caeruleus	Blue tit (2)	Green	No
Pica pica	Magpie (1)	Green	No
Turdus merula	Blackbird (2)	Green	No
[1]BOCC: Birds of Conservation Concern (Eaton, et al., 2015)			

Reptiles

3.3.6 The site supports an even topography and supports regularly maintained and close mown vegetation. The habitats within the site are reasonably unlikely to support a large populations or a variety of invertebrate prey and the site is not located in proximity to or adjacent to more favourable habitats for use by reptile species. The presence of reptiles within the site is reasonably discounted. No further survey is required.

4.0 EVALUATION AND ASSESSMENT

4.1 Introduction and Description of Proposals

4.1.1 It is proposed to build a new office building on the existing lawn at the front of the Manchester International Office Centre, refer to *Manchester International Office Centre, Proposed Site Plan, P5549_2000* (Pozzoni Architecture Ltd, 2020), hereafter referred to as the 'proposed site plan'.

4.1.2 **Section 4.2** provides an assessment of any impacts of the proposed development on the designated sites for nature conservation present in the wider area. The ecological value of habitats within the site are evaluated at **Section 4.3**, and the presence of protected and notable species is considered at **Section 4.4**.

4.2 Designated Sites for Nature Conservation

4.2.1 The proposals have no habitat or hydrological connectivity to the designated sites in the wider area. adverse impacts on designated sites for nature conservation within the wider area as reasonably discounted.

4.3 Vegetation and Habitats

4.3.1 None of the habitats within the site are of significant interest in terms of their plant species composition. None of the habitats present are representative of semi-natural habitat or are Priority Habitat. The NVC communities present are typical of the geographical area and conditions present.

4.3.2 The presence of Rhododendron and Japanese Rose, invasive species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), has been detected within the site. It is considered that the proposals present an opportunity for the management of these species as part of the proposed development. Further guidance is presented at **Section 5.3** of this report.

4.4 Protected Species and Other Wildlife

4.4.1 Habitats within and adjacent to the site are suitable for foraging and commuting bats. Recommendations relating to the retention of features suitable for use by foraging and commuting bats, avoidance of impacts on foraging bats and features to enhance habitats for roosting bats at the site are presented at **Section 5.4**.

4.4.2 The boundary vegetation provides favourable foraging and nesting habitat for the species of birds detected within the site. Consideration of birds (including protection of breeding birds and recommended enhancements for Priority Species) are presented at **Section 5.5** of this report.

5.0 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Introduction

5.1.1 These recommendations aim to ensure that the development is implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice.

5.1.2 In accordance with Chapter 15, paragraph 175 point ‘d’ of the NPPF, when determining planning applications, local planning authorities should encourage opportunities to incorporate biodiversity improvements in and around developments, especially where this can secure measurable net gains for biodiversity.

5.1.3 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified, as required by the NPPF and other relevant planning documents.

5.1.4 All recommendations are appropriate to the geographical area, the habitats in the wider area, the wildlife present in the local area (and likely to use the site post-construction) and take into consideration the end use of the site as an office development.

5.2 Site Layout and Protection of Existing Vegetation

5.2.1 The site layout has been designed to ensure the new building lies on the amenity grassland to secure the retention of the majority of the boundary vegetation. This has minimised the extent of trees, vegetation and opportunities for nesting birds scheduled for removal. In accordance with the proposed site plan it is estimated that 10 trees are scheduled for removal.

5.2.2 During the construction phase, temporary protective demarcation fencing will be used to protect the trees and shrubs to be retained. The fencing must extend outside the canopy of the retained trees and must remain in position until all areas have been developed to ensure protection is provided throughout the construction phase.

5.2.3 The fencing will be in accordance with BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations* (BSI, 2012).

5.3 Invasive Plant Species

5.3.1 It is an offence under the *Wildlife and Countryside Act 1981* (as amended) to cause the spread of Rhododendron and Japanese Rose in the wild. It is concluded that the preparation of an Invasive Species Management Plan is not necessary in this case and the spread of the invasive species can be controlled within the development site. If any invasive species will be disturbed by the proposed development it is recommended that it is grubbed out by the roots during site clearance and disposed of either by burying on site or removal to a suitable tip. Care must be taken with any soil removed from areas associated with an invasive species and the soil must be disposed of either by burying on site or removal to a suitable tip.

5.4 Bats

Lighting

5.4.1 Paragraph 180, bullet point 'c' in Chapter 15 (conserving and enhancing the natural environment) of the NPPF states that development should:

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

Construction Phase

5.4.2 Any lighting to be used at the site during construction should be directional and screened where possible, this specification should be included within a Construction Environment Management Plan (CEMP), or similar.

Development Lighting Design

5.4.3 The lighting scheme to be implemented at the developed site must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over the retained boundary vegetation and any landscape planting, as lighting overspill may deter use by wildlife such as foraging bats.

5.4.4 The lighting scheme will be designed with reference to current guidance, namely:

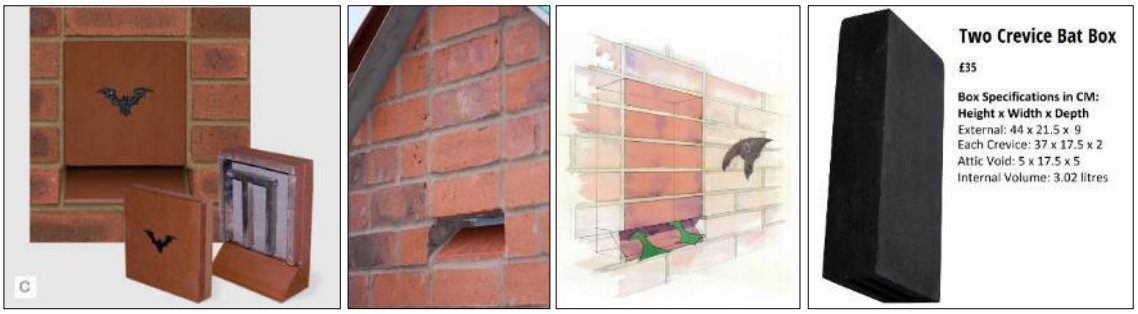
a. *Guidance Note 8: Bats and Artificial Lighting in the UK* (Institution of Lighting Professionals & Bat Conservation Trust, 2018); and

b. *Bats and lighting: Overview of current evidence and mitigation guidance* (Stone, 2014).

Enhancing Habitats for Roosting Bats

5.4.5 It is recommended that the development incorporates the installation of one bat access panel at the new building.

5.4.6 The bat access panel should be sited at least four metres above ground level, ideally facing or close to areas of landscape planting or existing linear features. The access panel should not be positioned over windows or doorways where bat droppings may become a nuisance. Once the development layout has been finalised, an ecologist should advise on appropriate positions for the bat access panel. Suitable bat access panels are available from NHBS Ecology (www.nhbs.com) or Wild Care (www.wildcare.co.uk) and are presented at **Insert 1**, below:



Insert 1: Examples of integrated bat access panels and an externally mounted box[2]

5.5 Birds

Protection

5.5.1 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. It is advised that any works such as vegetation clearance that will affect habitats suitable for use by nesting birds are scheduled to commence outside the bird nesting season. Commencement of works in the nesting season must be informed by a pre-works nesting bird survey, carried out by a suitably experienced ecologist. The bird breeding season typically extends between March to August inclusive (Natural England, 2015).

5.5.2 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

Enhancing Habitats for Nesting Birds

5.5.3 The installation of two general bird boxes is recommended at the proposed extension. The boxes will not be positioned over windows or doorways where droppings may become a nuisance. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest. Once the development layout has been finalised, an ecologist should advise on appropriate positions for the bird boxes. Suitable bird boxes are available from NHBS Ecology (www.nhbs.com) or Wild Care (www.wildcare.co.uk) and are presented at **Insert 2**, below:



Insert 2: Vivara Pro Seville 32mm WoodStone Nest Box and 1MR Schwegler Avianex

5.6 Landscape Planting

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

[2] Left to right: IBstock Enclosed Bat Box 'c' (left); Habibat Bat Access Panels (centre left and centre right) and Greenwood's Ecohabitats two crevice bat box (right). Products with a brick face are illustrated, however the Habibat bat access panels can be supplied unfaced to enable the additional of matching material.

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

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

6.0 CONCLUSION

6.1 This ecological survey and assessment has demonstrated that the construction of a new office building at the site is feasible and acceptable in accordance with ecological considerations and the National Planning Policy Framework.

6.2 It is possible to implement reasonable actions for the protection and long-term conservation of fauna such as roosting bats, nesting birds and commuting/foraging bats associated with the site.

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8.0 APPENDIX: TABLES AND FIGURES

Table 8.1: Plant Species List for the Amenity Grassland and Boundary Vegetation at the Site

Scientific Name	Common Name	DAFOR[1]	Cover
Boundary Vegetation			
	Ornamental species	F*	15%
Acer sp.	Maple species	LA	2%
Alnus glutinosa	Alder	LA	3%
Betula pendula	Silver Birch	LA	5%
Buddleja davidii	Butterfly-bush	LA	2%
Fraxinus excelsior	Ash	LA	5%
Geranium robertianum	Herb-Robert	LF	1%
Hedera helix	Ivy	A	5%
Ilex aquifolium	Holly	LA	5%
Ligustrum ovalifolium	Garden Privet	LA	2%
Populus sp.	Poplar species	LA	5%
Populus tremula	Aspen	LA	1%
Prunus laurocerasus	Cherry Laurel	LA	5%
Prunus sp.	Cherry species	LA	3%
Prunus spinosa	Blackthorn	LA	5%
Rhododendron ponticum	Rhododendron	LF	2%
Rosa rugosa	Japanese Rose	VLA	1%
Rosa sp.	Rose species	LF	5%
Rubus fruticosus agg.	Bramble	O	5%
Salix caprea	Goat Willow	LA	2%
Salix cinerea	Grey Willow	LA	2%
Sorbus aucuparia	Rowan	LA	3%
Taxus baccata	Yew	LA	1%
Tilia sp.	Lime species	LA	5%
X Cuprocyparis leylandii	Leyland Cypress	LA	10%
Amenity			
Agrostis capillaris	Common Bent	LA	2%
Agrostis stolonifera	Creeping Bent	O	3%
Bellis perennis	Daisy	O	5%
Chamerion angustifolium	Rosebay Willowherb	VLA	<1%
Cirsium arvense	Creeping Thistle	LA	<1%
Festuca rubra	Red Fescue	O	5%
Holcus lanatus	Yorkshire-fog	A	15%
Lolium perenne	Perennial Rye-grass	A*	25%
Poa annua	Annual Meadow-grass	O	5%
Poa pratensis	Smooth Meadow-grass	F	10%
Ranunculus repens	Creeping Buttercup	F*	15%
Sagina procumbens	Procumbent Pearlwort	LA	<1%
Stellaria media	Common Chickweed	VLA	<1%
Trifolium repens	White Clover	F*	15%

[1]**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

Table 8.2: Photographs



Photo 1: Amenity grassland



Photo 2: Amenity grassland



Photo 3: Boundary vegetation (eastern and southern area)



Photo 4: Boundary vegetation (western boundary)



Photo 5: Boundary vegetation (western boundary)



Photo 6: Boundary vegetation (northern boundary)

Figure 1: **Plan to Illustrate the Site Boundary**

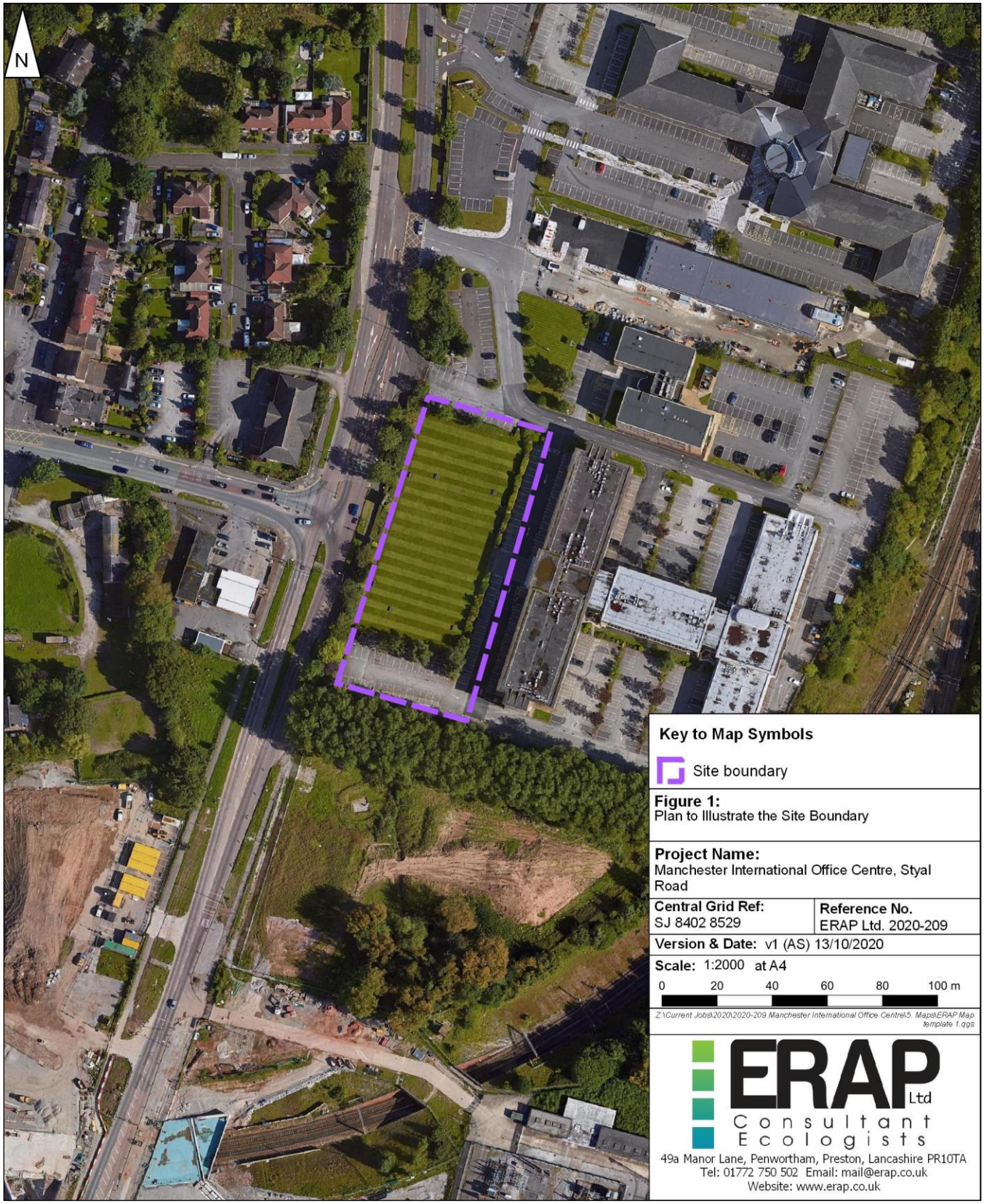

Figure 2: **Phase 1 Habitat and Vegetation Map**

