

Cambridge Halls, Manchester

Ecological Impact Assessment Report

Draft

1520/Version 2.0

Client: Unite Students and the Manchester Metropolitan University

Date: 15 April 2025

DOCUMENT CONTROL

Report prepared for:

Unite Students and Manchester Metropolitan University

Main contributors:

Ellie Brine BSc (Hons)

Consultant Ecologist

Reviewed by:

Liz Johns BSc (Hons) MSc CEnv MCIEEM MRSB

Director

Tessa Pepler BSc (Hons) MSc MCIEEM

Principal Ecologist

Issued by:

Matt Johns BSc (Hons) MSc CEnv MCIEEM FGS

Director

Green Tree House, 11 St Margaret's St, Bradford on Avon, Wiltshire, BA15 1DA
T: 01225 723652 | E: info@johnsassociates.co.uk | W: www.johnsassociates.co.uk

DOCUMENT REVISIONS

Version	Details	Date
1.0 Draft	Draft Ecological Impact Assessment Report issued to Client for review	25 March 2025
2.0 Draft	Draft Ecological Impact Assessment Report issued to Client for review following amendments to proposals and inclusion of BNG calculations and post-development plans	15 April 2025

Third party disclaimer

Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by Johns Associates at the instruction of, and for use by, our client named on the front of the report. It does not in any way constitute advice to any third party who is able to access it by any means. Johns Associates excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage howsoever arising from reliance on the contents of this report. We do not however exclude our liability (if any) for personal injury or death resulting from our negligence, for fraud or any other matter in relation to which we cannot legally exclude liability.

NON-TECHNICAL SUMMARY

Purpose of the Report	To provide the results of an extended UKHab Survey, Potential Roost Assessment and an ecological impact assessment conducted at Cambridge Halls, Manchester to inform the requirement for further ecological surveys and to identify potential effects on the ecological receipts present within/ adjacent to the site and the need for avoidance, mitigation, compensation and/or enhancement measures.
Surveys Undertaken	An extended UKHab survey and Biodiversity Net Gain (BNG) habitat condition surveys were initially conducted on 11 th July 2024 at the Site to provide a habitat baseline, which was reassessed in December 2024 and March 2025 to ensure no changes had occurred. A Statutory BNG Metric assessment has been conducted and the BNG Report is provided as Appendix B to this EclA. A Potential Roost Assessment (PRA) was also conducted at the site to determine the suitability of the existing building for roosting bats.
Summary of Results	Cambridge Halls offers very limited opportunities for biodiversity at the present time, other than in terms of botanical species associated with areas of improved grassland, hedgerow and individual trees. No potential bat roost features are present. The site is unsuitable for a wide range of other protected or notable species including reptiles, badger, amphibians and many invertebrates of note. The development will result in a -0.36 unit BNG and a -30.14% BNG for habitats and a 0.02 and 40.02% BNG for hedgerows. In order to reach the required 10% net gain and meet trading rules off-site compensation to a value of 0.48 individual tree units (or higher distinctiveness) is required.
Conclusions	The Site is of no more than negligible to low value to foraging and commuting bats. Apart from nesting birds in certain locations (trees and hedgerows and potentially roof parapets), Cambridge Halls is unsuitable for most protected species of plants and animals, and no evidence of their presence has been recorded. The modified grassland within the Site was of low distinctiveness and was limited ecological value. The boundary habitats including small areas of managed grass and ornamental planting. The BNG has concluded that the proposed development contributes to ecological compensation on Site where possible however due to spatial limitations off-site compensation is required.
Further Surveys Required	No further species and habitat surveys are required to be conducted at the Site.
Avoidance	Avoid vegetation clearance during bird nesting season (March to August inclusive) or a suitably qualified ecologist to inspect for nesting birds prior to clearance occurring. Should nesting birds be present, works will be halted in proximity to the nest whilst it remains active.
Mitigation	A Construction Environmental Management Plan (CEMP) will be implemented during the construction works to mitigate accidental damage to retained habitats, pollution incidents and dust deposition.
Compensation	The creation of rain gardens and biodiverse green roof sufficiently compensate for the loss of grassland and garden habitats. Due to the loss of several mature trees off-site compensation to a value of 0.48 individual tree units (or higher distinctiveness) is required. This should be obtained through an off-site habitat bank within the same local planning authority or national character area.
Enhancement	Due to the loss of all habitats on Site, no enhancement is to take place.
Data Valid Until	March 2026

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Background.....	1
1.2	Summary of Proposals	1
1.3	About This Ecological Impact Assessment	1
1.4	Personnel	2
1.5	Site Description and Location	2
1.6	Legislation and Policy	2
2	METHODOLOGY	4
2.1	ZONE OF INFLUENCE AND SCOPE	4
2.2	Desk study.....	4
2.3	Data Search.....	5
2.4	HABITAT field survey	5
2.4.1	ArcGIS Symbology.....	6
2.4.2	Minimum Mapping Units.....	7
2.5	BNG.....	7
2.6	Species SURVEYS	7
2.6.1	Foraging and Community Habitat for Bats	7
2.6.2	Potential Roost Assessment.....	8
2.6.3	Ground Level Tree Assessment (GLTA)	10
2.6.4	Limitations Constraints and Assumptions.....	10
3	RESULTS	12
3.1	Desk study.....	12
3.1.1	Statutory Designated Sites	12
3.1.2	Non-Statutory Designated Sites.....	12
3.1.3	Local Species Records.....	12
3.1.4	Granted Protected Species Licenses	13
3.2	Great Crested Newt (GCN) Pond Surveys 2017 to 2019.....	15
3.3	Zone of Influence	15
3.4	Field Survey Results – Habitats	15
3.4.1	On-Site Baseline Habitats	15
3.5	Field Survey Results – Species	23
3.5.1	Great Crested Newt (GCN).....	23
3.5.2	Bats.....	23
3.6	Summary BNG Results.....	26
3.7	Potential Ecological Receptors and Significant Effects	31
4	ENVIRONMENTAL MEASURES INTEGRATED AND EMBEDDED INTO THE PROPOSALS	35
4.1	Introduction	35
5	ASSESSMENT OF RESIDUAL EFFECTS AND EMBEDDED MITIGATION MEASURES	39
5.1	Introduction	39
5.2	Likely Significant Effects	39
5.3	Inter-Related Effects	39
5.4	Assessment of Residual Effects: Habitat loss.....	40
5.4.1	Damage/Harm to Flora from Construction	40
5.4.2	Pollution Incidents from Construction	40
5.4.3	Habitat Management from Operation.....	41
5.5	Assessment of Residual Effects: Adjacent habitat	41
5.5.1	Pollution Incidents from Construction	41
5.6	ASSESSMENT OF Residual EFFECTS: BATS.....	42

5.6.1	Habitat Loss to Bats from Construction	42
5.6.2	Light Disturbance to Bats from Operation	42
5.6.3	Habitat Management from Operation.....	42
5.7	ASSESSMENT OF Residual EFFECTS: Invasive species	43
5.7.1	Invasive species removal	43
5.8	ASSESSMENT OF Residual EFFECTS: BIRDS	43
5.8.1	Habitat Loss from Construction.....	43
5.8.2	Damage/Harm to Fauna from Construction.....	44
5.8.3	Habitat Management from Operation.....	44
6	CUMULATIVE EFFECTS	45
7	ADDITIONAL MITIGATION OR COMPENSATION REQUIREMENTS	46
8	IMPLEMENTATION OF BIODIVERSITY MEASURES & MONITORING	47
9	CONCLUSIONS OF SIGNIFICANCE EVALUATION	48
10	REFERENCES	49
APPENDIX A – LEGISLATION AND PLANNING POLICY		

1 INTRODUCTION

1.1 BACKGROUND

Unite Students and the Manchester Metropolitan University commissioned Johns Associates Ltd to undertake an Ecological Impact Assessment (EclA) of the existing site at Cambridge Halls of Residence, Manchester in support of a phased delivery planning application. The site is located at Cambridge Halls of Residence, Cavendish Street, Manchester, M15 6TT (central Ordnance Survey (OS) grid reference SJ 84152 96972). Figure 1 provides the Site location plan.

1.2 SUMMARY OF PROPOSALS

Demolition of existing halls of residence and erection of two buildings of 30 and 24 storeys above ground, plus basement and rooftop plant levels, comprising purpose-built student accommodation with internal and external rooftop communal amenity space (Sui Generis). Ground floor commercial and community uses (Flexible Use Classes E, F1 or F2). Hard and soft landscaping and associated highway works.

1.3 ABOUT THIS ECOLOGICAL IMPACT ASSESSMENT

The EclA assessment methodology used has been adapted from the Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2019). EclA is a process of identifying, quantifying, and evaluating potential effects of development-related or other proposed actions on habitats, species and ecosystems. The findings of this EclA will inform Manchester City Council of the ecological issues when determining the planning application for the site.

A key consideration in scoping and subsequently assessing the impacts of any development is to define the habitats and species that need to be considered. The approach set out below follows the standard guidance published by CIEEM and is widely considered to be current best practice.

Ecological features (habitats, species and ecosystems) present within the site and its zone of influence are scoped through the desk study and field survey process and their ecological importance determined with reference to a geographical context. In identifying these 'features' or receptors, it is important to recognise that a development can affect habitats and species directly (e.g. the land-take required) and indirectly, (e.g. through noise generation or lighting).

The key elements of the assessment process are as follows:

- Identifying and characterising impacts which may be beneficial (positive) or adverse (negative);
- Incorporating measures to avoid and/or mitigate these impacts;
- Assessment of the significance of any residual effects after mitigation has been applied;
- Where there are significant residual effects, identification of appropriate compensation measures to offset these; and
- Identifying opportunities for ecological enhancement.

A key principle of EclA is to identify those impacts that are ecologically significant. A significant effect is an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the ecological consequences of permitting such a project (CIEEM, 2019).

Importantly, the design process has been iterative, drawing on ecological information from data search results and field surveys undertaken by Johns Associates in 2024, and making use of best practice design principals to ensure that avoidance, mitigation, compensation and enhancement measures have been formally incorporated into the final design taken forward for the planning submission.

The report also provides the results of a Statutory BNG assessment as an appendix. A 10% BNG must be delivered as part of development proposals under the terms of the Environment Act 2021 and as implemented through the Town and Country Planning Act 1990. If 10% BNG cannot be met, an off-site compensation area or compensation payment to a habitat banking scheme may be required. This report will outline the results of the baseline habitats UKHab survey and provide the results of the BNG habitat condition assessments, the post-development habitat condition assessments and the BNG calculations.

The post-development landscape and ecological plans produced by Cartwright Pickard have informed the post-development BNG calculations and the plans were designed with ecological advice and through consultation with Cartwright Pickard and Unite Students to avoid habitats of higher distinctiveness and to maximise the BNG through the proposed plans connecting habitats within the site to the wider landscape.

1.4 PERSONNEL

The work was undertaken by a combined team of ecologists. Core team members were:

- Ellie Brine BSc (Hons), a Consultant Ecologist at Johns Associates Ltd who is proficient in botanical identification, Field Identification Skills Certificate (FISC) level 4, and has worked and studied within the environmental sector since 2015;
- Matthew Johns BSc MSc CEnv MCIEEM Director at Johns Associates with 30 years of experience of ecological consultancy, who holds Natural England Class 2 survey, EPS and Earned Recognition licences for bats, and who has led and managed numerous ecological impact assessments, mitigation design and delivery.
- Liz Johns BSc MSc CEnv MCIEEM MRIOB Director at Johns Associates with 30 years of experience of ecological consultancy.

1.5 SITE DESCRIPTION AND LOCATION

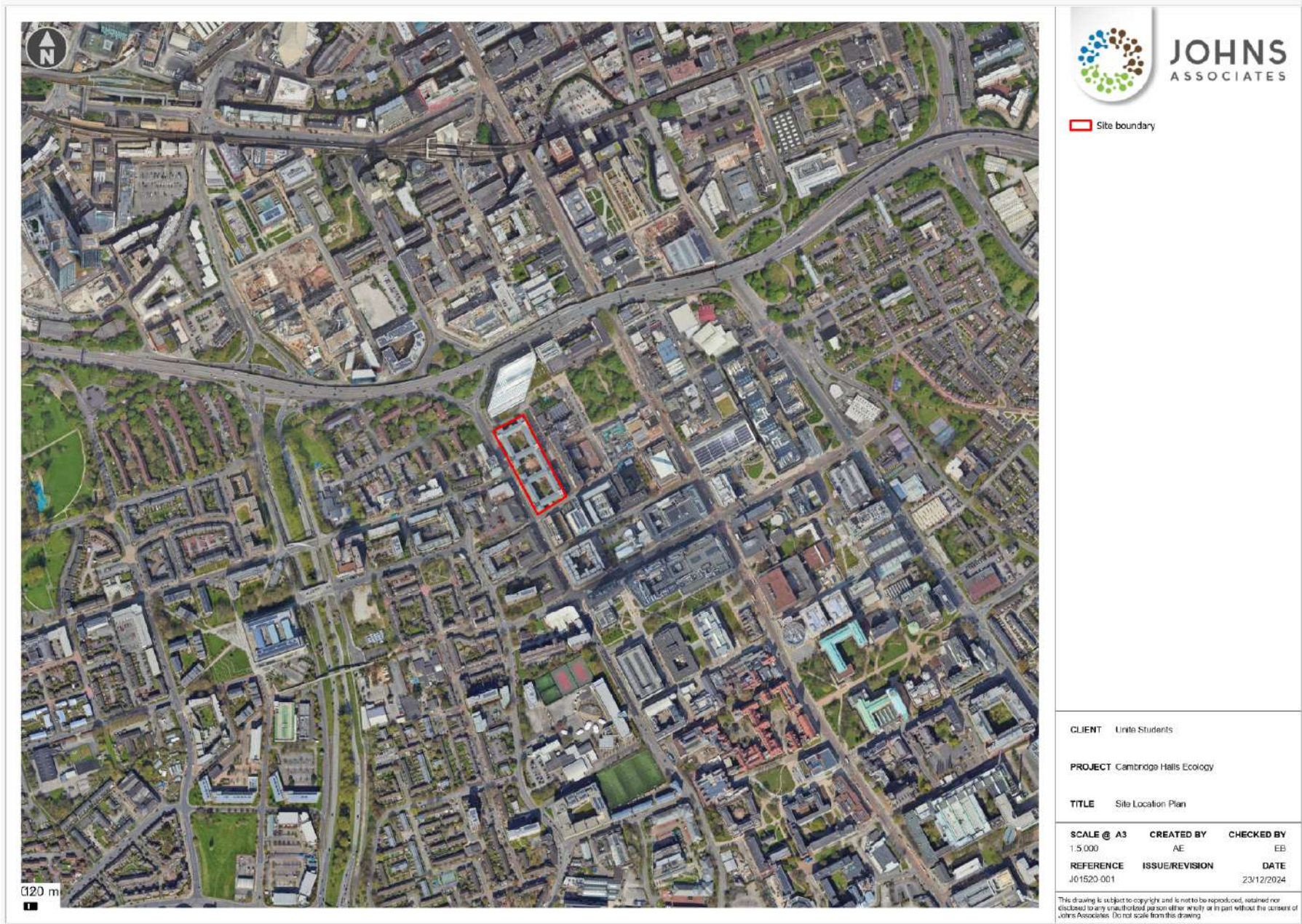
Cambridge Halls, which hereafter is referred to as the 'Site', currently comprises student accommodation for 757 residents, and was built in 1998. It is divided into 3 courtyards with ornamental planting running around some of the perimeter, small areas of amenity grassland and ornamental tree and shrub planting. It is located in central Manchester and is approximately 0.8 ha in size. The Site is bordered to the north by the Manchester Metropolitan University Business School and the A57. Properties associated with the university also border the east, south and west. There is a small pocket park 94m east of the Site.

At the landscape level, the Site is situated in an urban setting, with small, isolated areas of semi-natural habitat (see Figure 1). Connectivity to the wider landscape is sub-optimal; a lack of green corridors, and the presence of major roads, associated kerbs and buildings surrounding the Site present a barrier to dispersal for some mobile species and unsuitable or sub-optimal habitat for others.

1.6 LEGISLATION AND POLICY

The legislation and national and local planning policies which are relevant to this assessment are provided in Appendix A to this report.

Figure 1: Site Location Red Line Boundary Plan



2 METHODOLOGY

2.1 ZONE OF INFLUENCE AND SCOPE

The development proposals were reviewed by a suitably qualified ecologist, along with notable species records from the desk study and site survey results. Based on these parameters, a zone of influence was determined for the development. The key issues relating to biodiversity receptors and the proposed development are as follows:

The effects of temporary and permanent habitat loss from land taken by construction areas;

- Damage/harm to fauna;
- The effects of pollution (construction dust and pollution from accidental spillage of fuels, lubricants etc. that may affect terrestrial habitats);
- Noise, visual or light disturbance to fauna;
- The positive effects of ecological enhancement from creation, enhancement and management of habitats within the Site boundary.

Consideration of potential disturbance to ecological receptors from noise, vibration, visual or light was extended across the application Site and into adjacent habitats. These aspects were considered in detail as part of an Environment Impact Assessment Scoping Report, which was submitted to the Greater Manchester Combine Authority (GMCA) in support of a formal request for a Scoping Opinion. The case for scoping out ecology from any EIA was robustly made, but to report in and EclA and confirmed in the Scoping Report.

2.2 DESK STUDY

A desk study was undertaken to collate all relevant existing information relating to the Site and its surrounding area. The data was used to enable a full assessment of the likely effects of any development at the Site on any sites, habitats, or species of conservation interest to be carried out. The Multi Agency Geographic Information for the Countryside (MAGIC) website was used to conduct the following desk study searches on 11 January 2025:

- Records and citations to a 2 km radius for national statutory designated wildlife sites including Sites of Special Scientific Interest (SSSI), Local Nature Reserves (LNR) and National Nature Reserves (NNRs).
- Records and citations to a 5 km radius of international statutory wildlife sites including Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar Sites.
- Records and citations to a 10 km radius of SACs designated for supporting species of bat.
- Records of European Protected Species (EPS) Licenses issued by Natural England for the area within a 2 km radius of the Site for bats, dormice *Muscardinus avellanarius* and great crested newts (GCN) *Triturus cristatus*.
- Records to a 1 km radius of pond surveys conducted by Natural England from 2017 to 2019 for GCN.
- Records within a 250 m radius of Priority Habitats listed under Section 41 of the Natural Environment and Rural Communities Act (NERC) Act 2006

Google Maps aerial images were used to assess habitats at a landscape level (www.maps.google.com) in proximity to the Site.

2.3 DATA SEARCH

A data search was conducted through the Greater Manchester Ecology Unit on the 3rd December 2024 to identify the presence of legally protected and/or notable species records and non-statutory sites within 2 km of the Site.

2.4 HABITAT FIELD SURVEY

An extended UKHab survey of the Site and BNG habitat condition assessments were undertaken on 11th July 2024, with subsequent re-inspections in December 2024 and March 2025. The weather on all occasions was dry and bright and with good visibility. This survey was completed in accordance with Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and BS42020:2013 Biodiversity - Code of practice for planning and development (British Standards Institute, 2013).

The on-Site and off-Site (where accessible) habitats were classified following the UK Habitat Classification (UKHab) Version 2.01 (2023) guidelines, which provides a more detailed interpretation of baseline habitat survey data than previous habitat classifications systems, such as Phase 1 Habitat Assessments. The professional edition of UKHab "UK Habitat Classification – Professional Edition1" (UKHab-P) was used which includes Priority Habitat Types, all Annex 1 Habitats and the habitats listed in EUNIS.

The classification of primary habitats is hierarchical with five levels with a list of Secondary Codes, the latter is sub-divided into Essential codes and Additional codes. It is mandator that each recorded habitat parcel is allocated single primary Habitat Code and to record the presence of all Essential Secondary Code features associated with that habitat parcel. Additional Secondary Codes can also be associated with habitat parcels, where it is relevant to the whole parcel. Up to six Secondary Codes can be allocated to a single habitat.

UKHab v2.0 has a total of 268 Secondary Codes, sub-divided into 15 major groupings. Secondary codes are added to habitat parcels to:

- Confirm the identity of habitat mosaic and complexes.
- Add information about habitat origin and modifications.
- Add information on environmental context, management and land use in a consistent manner.

Essential Secondary Codes are identified as 2-digit numbers (10 – 90). Additional Secondary Codes (100 – 853) are 3-digit numbers and cover features including land management, land use (incorporating green infrastructure), environmental qualifiers, species features and hydrological regime descriptors. The UK Habitat Classification v2.01 Secondary Code Groupings are provided in Table 1.

Table 1: The UK Habitat Classification v2.0 Secondary Code Groupings

UKHab v2.0 Secondary Code Grouping	Description	UKHab v2.0 Codes
Secondary Essentials – Grasslands and Heathland	Habitat mosaic types and complexes that occur in the grassland, heathlands, hedgerows and scrub habitat	10 – 19
Secondary Essentials – Woodlands and Trees	Habitat complexes, origins and mosaic types that principally occur in woods associated with trees	25 – 34
Secondary Essentials – Freshwater	Habitat complexes and origins that principally occur in freshwater habitats	40 – 51
Secondary Essentials – Wetlands	Habitat complexes and environmental qualifiers that principally occur in wetlands	55 – 57
Secondary Essentials – All habitats	Habitat descriptors that can occur on any habitat	60 – 63
Secondary Essentials – Coast	Habitat complexes that principally occur on the coast	70 – 77
Secondary Essentials – Built environment	Habitat complexes, mosaics, land uses and green	80 – 90

UKHab v2.0 Secondary Code Grouping	Description	UKHab v2.0 Codes
	infrastructure principally associated with the built environment	
Additional Secondary Codes – Grasslands and Heathlands	Habitat management, land use, environmental qualifier and species features principally associated with grassland, heathlands, hedgerows and scrub habitat	100 – 131
Additional Secondary Codes – Woodlands and Trees	Habitat management, land use, environmental qualifiers and species features principally associated with woods and trees	200 – 217
Additional Secondary Codes – Freshwater	Habitat management, land use, environmental qualifiers and species features principally associated with freshwater habitats	300 – 323
Additional Secondary Codes – Wetlands	Hydrological regime, habitat management and species features principally associated with wetlands	400 – 425
Additional Secondary Codes – All habitats	Additional habitat descriptors that can occur on any habitat	500 – 532
Additional Secondary Codes – Farming	Habitat management and land uses principally associated with farmlands	600 – 618
Additional Secondary Codes – Coast	Land use and environmental qualifiers principally associated with coastal areas	700 – 703
Additional Secondary Codes – Built environment	Land use and green infrastructure descriptors principally associated with the built environment	800 – 853

Where appropriate, maps were supplemented with target notes which provided specific information on habitats present that were too limited in extent to map at the scale at which data is presented, or the presence of species and habitats of ecological interest.

An annotated habitat map together with descriptions of the recorded habitat types was produced, which was subsequently digitised using a geographical information system (ArcGIS). The survey also included identification of any non-native invasive plant species. Flora taxonomy follows the nomenclature detailed in New Flora of the British Isles (4th Edition) (Stace C., 2019). Flora, where appropriate, are given a descriptive score of abundance using the DAFOR scale, as follows:

- D – Dominant
- A – Abundant
- F – Frequent
- O – Occasional
- R – Rare
- L – Locally (to be used as a prefix for any of the above)
- V – Very (to be used as a prefix for any of the above)

2.4.1 ArcGIS Symbology

At the time of production, a complete symbology for all habitats in the UK Habitat Classification Professional Edition (UKHab-P) was not available. The UK Habitat Classification Basic Edition (UKHab-B) symbology has therefore been used, and where necessary to add in habitats not included in UKHab-B we have designed our own hatching system

within the Level 2 colours for those habitats – following the guidance provided in the UK Habitat Classification Basic Edition: Suggested Symbolology for Maps document (UKHab, 2020).

2.4.2 Minimum Mapping Units

UKHab guidance indicated that UKHab has 3 Minimal Mapping Units (MMU's):

- 25 m² and 5 m length for urban and small-scale development projects, fine scale mapping of designated sites
- 400 m² and 20 m length for landscape scale surveys
- 2500 m² for larger unenclosed upland habitats.

Large scale, simple habitats or feasibility surveys should use a larger MMU. For this project, given the size of the site and the scale of the map the 25 m² and 5 m length MMU has been applied. This will allow all habitats to be clearly visible on the map whilst enabling enough fine detail to remain to clearly show all habitats present.

2.5 BNG

The Statutory BNG Metric methodology is provided in Appendix B to this Report.

2.6 SPECIES SURVEYS

The survey was 'extended' to assess the suitability of the Site and immediately adjacent habitats to support legally protected and/or notable species, including (but not limited to) plants, badger *Meles meles*, bats, dormouse, amphibians, reptiles and breeding birds. This included recording visible signs of species presence and/or features that may indicate likely presence. Hedgerows/corridors were assessed for likely value for dormice, trees on Site were assessed for their suitability for roosting bats and waterbodies/ watercourses assessed for suitability for great crested newt, otter and water vole. A search for Invasive Non-Native Species e.g. Japanese knotweed *Reynoutria japonica* was also conducted within the Site and immediately adjacent areas.

2.6.1 Foraging and Community Habitat for Bats

The overall suitability of the Site and adjacent habitats for foraging and commuting bats was also assessed to determine its importance within the wider local context, particularly with reference to the location of known roosts obtained through the Desk Study and the outcome of the Potential Roost Assessment. The assessment was conducted using the criteria described in Table 2

Table 2: Guidelines for assessing the potential suitability of proposed development sites for bats, based on presence of habitat features within the landscape, to be applied using professional judgement (Bat Conservation Trust, 2023)

Suitability	Description Roosting Habitats	Commuting and Foraging Habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flightpaths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at	Habitat that could be used by small numbers of bats as flightpaths such as a gappy hedgerow or

	any time of year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site but could be used by individual hibernating bats ^c).	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 (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flightpaths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland, or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flightpaths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses, and grazed parkland. Site is close to and connected to known roosts.
a. Negligible is defined as ‘so small or unimportant as to be not worth considering, insignificant’. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute). b. For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance. c. Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2016 and Jansen et al., 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlison, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.		

2.6.2 Potential Roost Assessment

Pre-Assessment Preparation

Before conducting the potential roost assessment, relevant background information was obtained and reviewed to help plan the survey to ensure compliance with best practices. The Potential Roost Assessment was conducted in accordance with detailed best practice guidance from Bat Conservation Trust (2023).

Desktop Study

Information obtained as part of the desk study and client was reviewed.

- Historical bat records from local biological record centers, bat groups, and ecological databases (e.g., National Biodiversity Network Atlas).
- Identify designated sites (SSSIs, SACs, LNRs) within 2km that may be linked to bat activity.
- Examine previous ecological reports or surveys for the site.
- Assess aerial maps and LiDAR data for surrounding habitat connectivity (e.g., tree lines, rivers).

Equipment Preparation

Suitable equipment was taken on the building and tree inspections.

- High-powered torch
- Endoscope for internal cavity inspections.
- Ladders and PPE (helmet, gloves, harness if needed).
- Binoculars and camera (infrared if necessary).
- Survey sheets

Initial Scoping Survey (Preliminary Roost Assessment – PRA)

A non-intrusive daytime inspection of the building's external and internal features to assess bat roost potential was initially undertaken in June 2024, and again in December 2024 and March 2025. A survey of the buildings was carried out on 3rd December 2024 by Matthew Johns (class licence registration number: 2019-40584-CLS-CLS-1 replacing 2016-25380-CLS-CLS). The inspection followed the professional survey guidance as detailed in Bat Survey Guidelines for Professional Ecologists: Good Practice Guidelines (Bat Conservation Trust, 2023).

The surveyor systematically examined all elevations for potential bat roosting features and features suitable to provide access to internal features, including:

- Roof structures: missing or lifted tiles, gaps in lead flashing, ridge tiles, and underfelt access points.
- Walls and facades: cracks in brickwork, cladding gaps, weatherboarding, timber soffits, and mortar erosion.
- Windows and door frames: gaps in wooden frames, behind shutters, or under eaves.
- Chimneys and ventilation ducts: cracks, cavities, and external flues providing roost potential.
- Drainpipes and gutters: access points under tiles or within hollow spaces.

Signs of bat presence include the following:

- Bat droppings (crumbly texture, does not smear like rodent droppings)
- Staining or grease marks from bat fur around roost entry points
- Audible bat calls or chittering from roosting bats
- Dead bats or feeding remains (moth wings, insect parts)

Where external features providing access to potential internal roosts were present, and where accessible/safe, then internal inspection of these potential roosting features would be undertaken. They can include:

- Roof voids and attics: inspection of beams, ridge boards, and felt linings/insulation for staining, droppings, or roosting bats.

- Basements: consideration of hibernation suitability (stable humidity, cool temperatures).
- Cavity walls and ceilings: look for bat access points into internal spaces and evidence such as staining/droppings/bats.

The survey entailed a direct search for evidence of bats on the external features of the buildings. The buildings were examined externally for features that could support roosting bats and features that could lead to internal potential roost features (PRFs) which could then be inspected.

The presence of roosting bats can be observed through signs such as accumulations of moth or butterfly wings or bat droppings and staining and/or scratch marks around potential entrance and exit points. However, the absence of droppings/evidence cannot be treated as conclusive proof that bats are not present, and therefore an assessment was also made of the potential of the building to support bats based on the criteria detailed by the Bat Conservation Trust (2023) and provided in Table 2.

2.6.3 Ground Level Tree Assessment (GLTA)

A survey of the trees and built structures was carried out on 3rd December 2024 by Matthew Johns (class licence registration number: 2019-40584-CLS-CLS-1 replacing 2016-25380-CLS-CLS). The inspection followed the professional survey guidance as detailed in Bat Survey Guidelines for Professional Ecologists: Good Practice Guidelines (Bat Conservation Trust, 2023).

All trees within the Site boundary were inspected systematically for Potential Roost Features (PRFs) that could be used by bats including woodpecker holes, squirrel holes, rot holes, knot holes, pruning cuts, tear outs, wounds, cankers, compression forks, butt rots, lightning strikes, hazard beams, subsidence, cracks, shearing cracks, transverse snaps, welds, lifting bark, desiccation, fissures, frost cracks, fluting and ivy. The assessment was conducted using the criteria described in Table 3.

Table 3: Guidelines for Assessing the Suitability of Trees on Proposed Development Sites for Bats (Bat Conservation Trust, 2023)

Suitability	Description
None	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

All trees were numbered and marked on a plan of the site. The tree species, height, whether the tree is alive or dead and a tree tag number (if present), the diameter at breast height, number of stems and whether the tree has been coppiced were recorded. Information regarding any PRFs present was collected including whether the PRF is on a stem or a limb, the PRF type, height and what direction the PRF faces. The height and orientation of the entrance was recorded if this was different.

2.6.4 Limitations Constraints and Assumptions

The findings of this report remain valid for a period of 12 – 18 months following the most recent Site survey (March 2025). Should there be delays to the project timetable and/or implementation of the proposed development, updated desk study and/or survey work may be required. In this instance, advice should be sought to ensure the data, recommendations and conclusions set out in this report remain valid.

It has been assumed that the development proposals are as described in this document and that all proposed mitigation and enhancement measures will be implemented in full.

No other limitations or constraints with regard to the field survey or desk study were encountered and therefore the assessment is considered valid.

3 RESULTS

3.1 DESK STUDY

3.1.1 Statutory Designated Sites

There were no Statutory designated sites identified within 2 km of the proposed Site. Within 5 km there were no European/International statutory designated sites and within 10km there were no SACs designated for supporting species of bat.

3.1.2 Non-Statutory Designated Sites

There were 2 non-statutory Sites of Biological Importance identified within 2 km of the Site; described in Table 4.

Table 4: Non-Statutory Designated Local Wildlife Sites within 2 km

LWS name	Reason for designation	Distance from Site
Rochdale Canal SBI	The canal supports important populations of floating water-plantain <i>Luronium natans</i>; the national importance of this species and the canal's assemblage of pondweed species <i>Potamogeton</i> spp were recognised by the designation of a SSSI in August 2000. The site was designated a European Special Area for Conservation (SAC) on the 1st April 2005. The statutory designations are applied to the Oldham and Rochdale sections of the canal only. Canals are a Greater Manchester Biodiversity Priority Habitat. Nine species of pondweed have been recorded and/or reported in the past. Of these, five have been recorded in recent surveys by the Canal & River Trust in the Oldham and Rochdale sections of the canal. American pondweed <i>P. epihydrus</i>, a Red Data Book species, is present in the Manchester section of the canal. The population of this species is considered the best in Great Britain. Populations of white-clawed crayfish <i>Austropotamobius pallipes</i> (UK Biodiversity Priority Species) and freshwater sponge <i>Spongilla lacustris</i> have been recorded in crevices and on the stonework elsewhere on the canal. Water vole <i>Arvicola amphibious</i> has also been recorded.	1.3 km north-east
Ashton Canal SBI	The canal is an important wildlife corridor and provides an important, accessible, natural greenspace in an otherwise urban landscape. Canals are a Greater Manchester Biodiversity Priority Habitat. The aquatic moss <i>Fontinalis antipyretica</i> was observed growing in the leats adjacent to locks and on lock walls. Curly, slender, hair-like, fennel <i>Foeniculum vulgare</i> and grasswack pondweeds <i>Potamogeton</i> sp. have been recorded. The European Protected Species floating water-plantain <i>Luronium natans</i> is also recorded. Both floating water-plantain and grasswack pondweed are UK Priority Biodiversity Species. Marginal vegetation including stands of reed sweet-grass <i>Glyceria maxima</i>, lesser pond-sedge <i>Carex acutiformis</i>, water dock <i>Rumex hydrolapathum</i>, yellow flag- <i>Iris Iris pseudacorus</i>, water mint <i>Mentha aquatica</i> and reedmace <i>Typha latifolia</i>, all of which are rare. The canal is said to be rich in invertebrate life, with species recorded including common blue damselfly <i>Enallagma cyathigerum</i>, blue-tailed damselfly <i>Ischnura elegans</i>, large brown hawkers <i>Aeshna grandis</i>, emperor dragonfly <i>Anax imperator</i> and broad bodied chaser dragonfly <i>Libellula depressa</i> recorded.	1.3 km north-east

3.1.3 Local Species Records

The Greater Manchester Local Records Centre (GMLRC) returned records of notable and protected species within 2 km of the Site from the last 10 years. Results are summarised in Table 5.

Table 5: Local species records (GMLRC, 2024)

Species/Groups	Details
Plants	There are records of bee orchid <i>Ophrys apifera</i> within 1km of the Site.
Amphibians	There were no records of amphibians within 2km of the Site.
Badger	There were 3 records of badger <i>Meles meles</i> within 2km of the Site dating from 2011 and 2013.
Bats	There were 50 records of common pipistrelle <i>Pipistrellus pipistrellus</i> within 2km of the Site, with a total of 67 roosts recorded (the closest record was 650m southeast of the Site). Two recorded roosts were maternity roosts; one was recorded at Weft Walk (SJ853984 - 100 individual bats counted, 1.7km northeast of the Site) in 2003 and the other was recorded at First Street (SJ83729744 - 33 individual bats counted, 500m northeast of the Site) in 2011. There were 3 records of soprano pipistrelle <i>Pipistrellus pygmaeus</i> presence (activity/foraging) between 2014 and 2022. There were 2 soprano pipistrelle roosts recorded in 2013 (Stephensons Approach Viaduct and Aytoun Street). There were 8 records of pipistrelle species activity (foraging, commuting, or grounded bats) between 2014 and 2023. There were 3 records of noctule <i>Nyctalus noctula</i> between 2019 and 2022 (the closest being 1km southeast). There was one record of brown long-eared bat <i>Plecotus auritus</i> in 2016 (1.8km southeast). There was a record of Daubenton's bat <i>Myotis daubentonii</i> (possible roost) at grid reference SJ82889792 in 2004 (1.4km northwest). A <i>Myotis</i> sp. roost was recorded at grid reference SJ8498597749 in 2015 (1km northeast).
Birds	The following bird species protected under Schedule 1 of the W&CA were recorded within 2km of the Site: black redstart <i>Phoenicurus ochruros</i> (26 records, closest being 615m north); little ringed plover <i>Charadrius dubius</i>; kingfisher <i>Alcedo atthis</i> (39 records); peregrine <i>Falco peregrinus</i> (52 records recording 156 individuals); hobby <i>Falco subbuteo</i>; firecrest <i>Regulus ignicapilla</i>; goldeneye <i>Bucephala clangula</i>; and red kite <i>Milvus milvus</i>. The following Red List species of Conservation Concern were recorded within 2km of the Site: herring gull <i>Larus argentatus</i>; house sparrow <i>Passer domesticus</i> (64 records); lapwing <i>Vanellus vanellus</i>; linnet <i>Linaria cannabina</i>; skylark <i>Alauda arvensis</i>; spotted flycatcher <i>Muscicapa striata</i>; starling <i>Sturnus vulgaris</i> (63 records); yellow wagtail <i>Motacilla flava</i>; cuckoo <i>Cuculus canorus</i>; curlew <i>Numenius arquata</i>; greenfinch <i>Chloris chloris</i> (70 records); house martin <i>Delichon urbicum</i>; house sparrow <i>Passer domesticus</i> (48 records); mistle thrush <i>Turdus viscivorus</i> (60 records); swift <i>Apus apus</i>; and tree sparrow <i>Passer montanus</i>.
Other mammals	There were 2 records of otter <i>Lutra lutra</i> dating from 2022 at grid references SJ82749811 and SJ8306997575. There were 26 records of hedgehog <i>Erinaceus europaeus</i> between 2014 and 2022.
Reptiles	There were no records of reptiles returned for the area within 2km of the Site.

3.1.4 Granted Protected Species Licenses

Twenty-six European Protected Species (EPS) licenses issued by Natural England were identified for the area within 2 km of the Site. Results are summarised in Table 6.

Table 6: EPS License Returns

Species	Case reference	Date	Reason	Location from Site
Common pipistrelle <i>Pipistrellus pipistrellus</i>	EPSM2013-5575	23/05/2013 - 30/09/2016	Damage of a breeding site, damage of a resting place	0.557km northwest
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-4400-EPS-MIT	23/12/2014 - 30/04/2015	Damage of a resting place	0.85km east
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-4400-EPS-MIT-1	25/03/2015 - 30/04/2015	Damage of a resting place	0.85km east
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2019-38955-EPS-MIT	14/02/2019 - 8/02/2021	Destruction of a resting place, damage of a resting place	0.91km northeast
Common pipistrelle	2020-50604-EPS-MIT	22/01/2021 - 16/01/2022	Destruction of a resting	0.93km

Species	Case reference	Date	Reason	Location from Site
<i>Pipistrellus pipistrellus</i>			place	northeast
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2015-15766-EPS-MIT	1/11/2015 – 31/07/2016	Destruction of a resting place	0.95km southeast
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2015-15766-EPS-MIT-1	20/07/2016 - 20/07/2016	Destruction of a resting place	0.95km southeast
Common pipistrelle <i>Pipistrellus pipistrellus</i> , soprano pipistrelle <i>Pipistrellus pygmaeus</i>	2014-490-EPS-MIT	23/04/2014 – 0/06/2017	Destruction of a resting place	1km north
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2020-45213-EPS-MIT	5/3/2020 - 28/02/2021	Destruction of a resting place	1km north
Brown long-eared <i>Plecotus auritus</i>	EPSM2012-5061	10/12/2012 – 1/08/2015	Impact on a breeding site, destruction of a breeding site, destruction of a resting place	1.14km northwest
Common pipistrelle <i>Pipistrellus pipistrellus</i>	EPSM2012-4767	28/08/2012 - 30/09/2013	Destruction of a resting place	1.14km northwest
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2018-33674-EPS-MIT	12/3/2018 - 30/04/2040	Destruction of a resting place, damage of a resting place	1.15km north
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2015-16009-EPS-MIT	28/01/2016 - 27/01/2021	Destruction of a resting place	1.6km northwest
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-6380-EPS-MIT	18/02/2015 – 16/02/2020	Destruction of a resting place	1.7km north
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-6380-EPS-MIT-1	1/12/2015 – 16/02/2020	Destruction of a resting place	1.7km north
Common pipistrelle <i>Pipistrellus pipistrellus</i>	EPSM2013-5644	4/7/2013 - 1/3/2015	Destruction of a resting place	1.7km northeast
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2016-21779-EPS-MIT	1/4/2016 - 1/4/2021	Destruction of a resting place	1.7km southeast
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-6380-EPS-MIT-2	15/08/2017 - 30/06/2023	Destruction of a resting place	1.7km north
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2016-24504-EPS-MIT	15/07/2016 - 1/1/2018	Destruction of a resting place	1.78km northeast
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2016-24504-EPS-MIT-1	21/11/2016 - 21/11/2016	Destruction of a resting place	1.78km northeast
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2017-31569-EPS-MIT	26/10/2017 - 31/10/2019	Destruction of a resting place	1.8km north
Common pipistrelle <i>Pipistrellus pipistrellus</i> ,	2018-35287-EPS-MIT	5/6/2018 - 30/09/2019	Destruction of a resting place, damage of a resting	1.8km southwest

Species	Case reference	Date	Reason	Location from Site
soprano pipistrelle <i>Pipistrellus pygmaeus</i>			place	
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-4219-EPS-MIT	27/10/2014 - 31/10/2020	Destruction of a resting place	1.8km north
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-3531-EPS-MIT-2	1/12/2016 - 1/12/2016	Destruction of a resting place	1.81km northeast
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-3531-EPS-MIT	1/10/2014 - 30/09/2019	Destruction of a resting place	1.81km northeast
Common pipistrelle <i>Pipistrellus pipistrellus</i>	2014-3531-EPS-MIT-1	6/1/2015 - 30/09/2020	Destruction of a resting place	1.81km northeast

3.2 GREAT CRESTED NEWT (GCN) POND SURVEYS 2017 TO 2019

There were no records of pond located within 1 km of the Site or any ponds being surveyed between 2017 to 2019 for great crested newts and no class survey license returns for this species.

3.3 ZONE OF INFLUENCE

The proposed development design was reviewed by an ecologist and a zone of influence for species scoped into the assessment was determined. The Site is in a highly urbanised location and is isolated from other areas of semi-natural habitat in the local area by buildings and the local road network and associated infrastructure. Due to the nature of the proposals and the location of the Site, there is the potential for airborne pollutants (e.g. dust) to be carried to the nearby pocket park and groups of trees. Therefore, the zone of influence is considered to be 100 m from the proposed construction activities.

3.4 FIELD SURVEY RESULTS – HABITATS

3.4.1 On-Site Baseline Habitats

The Existing UKHab Plan (Figure 2) and the baseline BNG habitat condition sheets (Appendix B – within the BNG Report) should be referred to throughout this section. *Cotoneaster horizontalis*, a Schedule 9 non-native invasive species, was encountered during the survey in an area of amenity planting within the existing courtyards.

Grassland - Modified Grassland g4

G1 – Poor Condition:

Grassland located within the central courtyards of the Site. This area has high pedestrian pressures due to open access, and areas of bare ground were abundant and excessive trampling is evident. These areas have a lower species diversity (Table 7) than the inaccessible areas of grassland due to increased footfall by residents. Management consisted of regular mowing to a height of approximately 10cm and collection of arisings for off-Site disposal. The species recorded per m² are presented in Table 8.

Plate 1: Area G1 context photo

Plate 2: Area G1 1m²

Table 7: Overall species composition of Area G1

Species	Common name	DAFOR
<i>Lolium perenne</i>	Perennial rye-grass	D
<i>Bellis perennis</i>	Daisy	F
<i>Prunella vulgaris</i>	Self-heal	O
<i>Dactylis glomerata</i>	Cock's foot	O
<i>Ranunculus repens</i>	Creeping buttercup	R
<i>Trifolium repens</i>	White Clover	R
<i>Taraxacum officinale</i> agg..	Dandelion	R

Table 8: Species per m² in Area G1

Species	Common name	DAFOR
<i>Lolium perenne</i>	Perennial rye-grass	D
<i>Bellis perennis</i>	Daisy	F
<i>Prunella vulgaris</i>	Self-heal	O
<i>Trifolium repens</i>	White Clover	R

G2 – Good Condition

Area G2 comprised numerous parcels of grassland around the periphery of the Site. It was blocked from regular access by fencing and hedging, undergoing a management regime of regular mowing to a height of approximately 2-5cm and collection of arisings for off-Site disposal. This, alongside an apparent absence of nutrient enrichment from lawn care practices, resulted in a more botanically diverse sward (Table 9). The species recorded per m² is presented in Table 10.

Plate 3: Area G2 context photo



Plate 4: Area G2 1m²



Table 9: Overall species composition of Area G1

Species	Common name	DAFOR
<i>Lolium perenne</i>	Perennial rye-grass	A
<i>Soleirolia soleirolii</i>	Mind your own business	F
<i>Festuca sp.</i>	Fescue sp.	F
<i>Bellis perennis</i>	Daisy	O
<i>Prunella vulgaris</i>	Self-heal	O
<i>Trifolium repens</i>	White clover	O
<i>Dactylis glomerata</i>	Cock's foot	O
<i>Veronica filiformis</i>	Slender speedwell	R
<i>Ficaria verna</i>	Lesser celandine	R
<i>Jacobaea vulgaris</i>	Ragwort	R
<i>Cardamine sp.</i>	Cardamine sp.	R
<i>Epilobium sp.</i>	Willow herb sp.	R
<i>Erigeon sp.</i>	Erigeon sp.	R
<i>Plantago major</i>	Broadleaved plantain	R

Table 10: Species per m² Area G2

Species	Common name	DAFOR
<i>Festuca sp.</i>	Fescue sp.	A
<i>Prunella vulgaris</i>	Self-heal	F
<i>Bellis perennis</i>	Daisy	O
<i>Lolium perenne</i>	Perennial ryegrass	O
<i>Ficaria verna</i>	Lesser celandine	R

Species	Common name	DAFOR
<i>Jacobaea vulgaris</i>	Ragwort	R
<i>Dactylis glomerata</i>	Cock's foot	R
<i>Cardamine sp.</i>	Cardamine sp.	R

U3 - Urban – Suburban Mosaic of Developed and Natural Surface u1d

Plate 5: Area U3



Plate 6: Small area of VG with Cotoneaster



One area of vegetated garden was present within the Site boundary was below the minimum mapping unit (MMU) of >25m² required for mapping (Area U3, Plate 5). This comprised one small ash tree *Fraxinus excelsior*, hornbeam *Corpinus betula* hedging and *Liriope muscari* with abundant bare ground. Other areas of regularly maintained planting, too small to map, were located at the entrances to the halls either side of the Site. The species recorded included ornamental species of choisia, heucera, hebe, cyclamen, grasses and the Schedule 9 species *Cotoneaster horizontalis*.

Hedgerow

Plate 7: Hedgerow H1



There was one short section of ornamental hedgerow within the Site that met the minimum mapping unit requirement. This comprised a single non-native ornamental species (hornbeam *Corpinus Betula* var.) and was

approximately 51m in length. Due to its location and management this hedge is considered to lack functionality and was therefore classified as ornamental.

Small sections of *Cotoneaster* hedgerow were planted around the periphery areas G2, however these were not of the required minimum mapping unit size and were considered to have negligible biodiversity value.

Trees

A number of individual trees were recorded on Site. These are described in Table 11.

Table 11: Tree species and descriptions

Tree number	Species	Condition	Size	Photo
T1	Acer sp.	Moderate	Small	
T2	Cherry sp.	Poor	Medium	
T3	Cherry sp.	Poor	Medium	
T4	Cherry sp.	Poor	Medium	
T5	Cherry sp.	Poor	Medium	
T6	Pear sp.	Poor	Medium	
T7	Pear sp.	Poor	Medium	
T8	Pear sp.	Poor	Medium	
T9	Pear sp.	Poor	Medium	
T10	<i>Betula utilis</i>	Poor	Medium	
T11	<i>Betula utilis</i>	Poor	Medium	

Tree number	Species	Condition	Size	Photo
T12	Ash <i>Fraxinus excelsior</i>	Moderate	Small	

U1 – Urban – buildings u1b5

Plate 8: Entrance to building



Plate 9: windows and façade



Plate 10: Ledges and flat roofs



Plate 11: Bicycle storage



The existing buildings were of brick construction with two inner courtyards and four storeys high. Construction included cavity walls with air bricks (plastic faced with openings protected by small <1cm inserts preventing bat/bird entry). Windows were uPVC, single paned with a top hinge and concrete sill, flush to the building with metal

cladding. The building had plastic guttering with down pipes and no barge boards, and the roof was sealed with no gaps.

The Site was highly illuminated with pole mounted street LEDs, with eight in each courtyard. Further to this, the high density of windows resulted in increased illumination from internal rooms.

Figure 2: Baseline UKHab Habitat Plan & Target Notes



3.5 FIELD SURVEY RESULTS – SPECIES

3.5.1 Great Crested Newt (GCN)

Due to the absence of suitable ponds and other GCN habitat and major barriers to dispersal GCN is scoped out of further assessment.

3.5.2 Bats

Cambridge Halls comprise well maintained modern multi-story student accommodation, fully occupied apart from student holiday periods, but regularly inspected, maintained and managed throughout the year.

The four-storey high buildings were of brick construction (with cavity), with pre-fabricated metal and uPVC cladding, glazed windows, and gently sloping metal roofing. The buildings and individual features were all well maintained, with no signs of deterioration, or missing bricks, facias, guards or other features.

The buildings contain three courtyards, with small numbers of trees and vegetation. Streetlights are abundant on the outer faces of Cambridge Halls – associated with the road network and pavements. The internal courtyards also have numerous lighting columns. Artificial lighting is also generated and spills from the numerous bedrooms and other living spaces associated with the Halls and adjacent buildings. Security lighting is also present in certain locations.

The building was carefully and systematically inspected from the ground (initially), using close focusing binoculars and a high-powered spotting scope. Features such as brickwork and pointing, cladding, facias, air vents and other protective grills alongside any other features potentially suitable for bats were viewed. All of these appeared to be in good condition, with no missing materials or gaps that could either admit a bat to a recess or potential roost associated with the external feature or an internal feature (e.g. wall cavities). The roof is a composite of reinforced tightly fitting and overlapping sealed surfaces, with no visible features suitable for bats. The likely thermal properties of the roof also reduce its suitability (exacerbating heat and cold).

Construction included cavity walls with air bricks (plastic faced with openings protected by small <1cm inserts preventing bat/bird entry). Windows were uPVC, single paneled with a top hinge and concrete sill, flush to the building with metal cladding. The building had plastic guttering with down pipes and no barge boards, and the roof was sealed with no gaps.

The Site was highly illuminated with pole mounted street LEDs, with 8 in each courtyard. Further to this, the high density of windows resulted in increased illumination from internal rooms.

Based on these criteria, the site only offers negligible to low suitability for foraging by common and more light tolerant species. The opportunities for this are limited, however. It is considered that the character of Cambridge Halls and the immediate surrounds do not support any notable bat commuting corridors.

External Inspection

The plates below illustrate the building and these features.

Plate 12



Plate 13

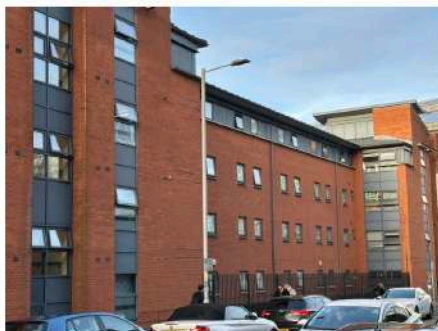
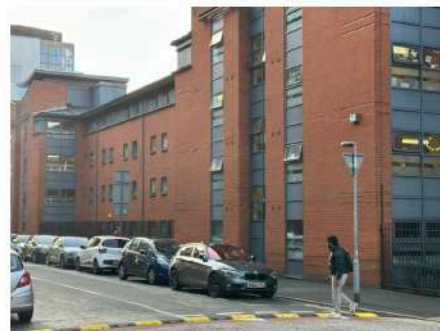


Plate 14



Plates 12 to 14, illustrating the well maintained and consistent build style of Cambridge Halls, with street lighting.

Plate 15



Plate 16



Plate 17



Plates 15 to 17 provide further illustration of the outer areas of Cambridge Halls and adjacent land/lighting

Plate 18



Plate 19



Plate 20



Plates 18 to 20 show limited areas of vegetation, an an example of the internal courtyard and different brickwork.

Plate 21



Plate 22



Plates 21 and 22 show the close-fitting nature of soffits, fascias, cladding that is evident throughout.

Plate 23

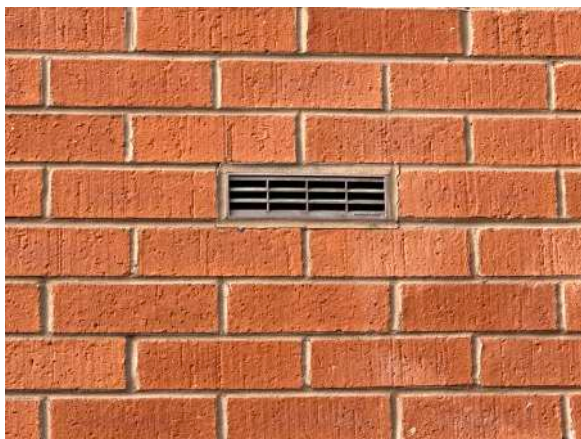


Plate 23 shows the context for the brickwork, windows, cladding and location of cavity wall 'slot' air vents. None of these features offer suitability for roosting bats or access to any internal voids.

Plate 24



Plate 25



Plates 24 and 25 provide a close up view of the cavity wall brick air vents, none of which are suitable for even small bat species such as common pipistrelle to pass through.

Trees at Cambridge Halls are shown and described in Table 11. None of the trees offered any suitability as potential roosts.

Internal inspection

Due to the absence of external features that could lead to internal potential roost features, no internal inspection was considered necessary.

Conclusion:

Cambridge Halls is a well-maintained building that does not offer external features that either provide potential suitability as roosts for bats or provide access to internal spaces that could support roosting bats. Whilst light tolerant species such as common and soprano pipistrelle are known to be present in the surrounding area, the habitat opportunities for foraging are limited at Cambridge Halls due to the very limited areas of vegetation, that in itself is closely managed and disturbed, together with considerable artificial lighting at night. The immediate areas are also similar in character and all together, this combines to limit the current opportunities for bats at Cambridge Halls. Due to this, no further internal survey is required.

Dormouse

No habitats within or adjacent to the Site were suitable to support dormouse and this species is therefore scoped out of the assessment.

Reptiles and Amphibians

The Site was isolated from any suitable areas for reptiles and amphibians. On-Site habitats were not suitable for these species as sward height within the grassland areas was too short and the hedgerow was isolated within the wider landscape. No suitable hibernacula or refugia were present, and the Site had a high level of anthropogenic disturbance, further reducing its suitability for these species. Reptiles and amphibians are therefore scoped out of the assessment.

Breeding Birds

The Site offers limited suitability for breeding birds. The roof and ledges may be used by pigeon, which nests year-round. Multiple records of black redstart were returned with the closest being 600m north. The Site does have some structures that offer nesting potential to this species. Furthermore, there are perching opportunities for birds of prey such as hobby and peregrine.

The hedgerow and individual trees offer some nesting potential for common urban species.

Hedgehog

No evidence of hedgehog was present due to an absence of suitable habitat and major barriers to dispersal. Hedgehog is scoped out of further assessment.

Badger

No evidence of badger including runs through vegetation, setts, latrines, snuffle holes and tracks/prints were present due to an absence of suitable habitat and major barriers to movement. Badger is scoped out of further assessment.

3.6 SUMMARY BNG RESULTS

The full BNG assessment spreadsheet is provided separately to this report. Figure 3, 4 and 5 provides the post-development UKHab plan which was developed through consultation with the project team. In summary the development will result in a -0.36 unit BNG and a -30.14% BNG for habitats and a 0.02 and 40.02% BNG for hedgerows.

Off-site compensation to a value of 0.48 individual tree units (or higher distinctiveness) is required to achieve 10% BNG and satisfy the trading rules. This will be obtained through an off-site habitat bank.

Figure 3: On-Site Post-Development UKHab Habitat Plan Ground Floor (L00)

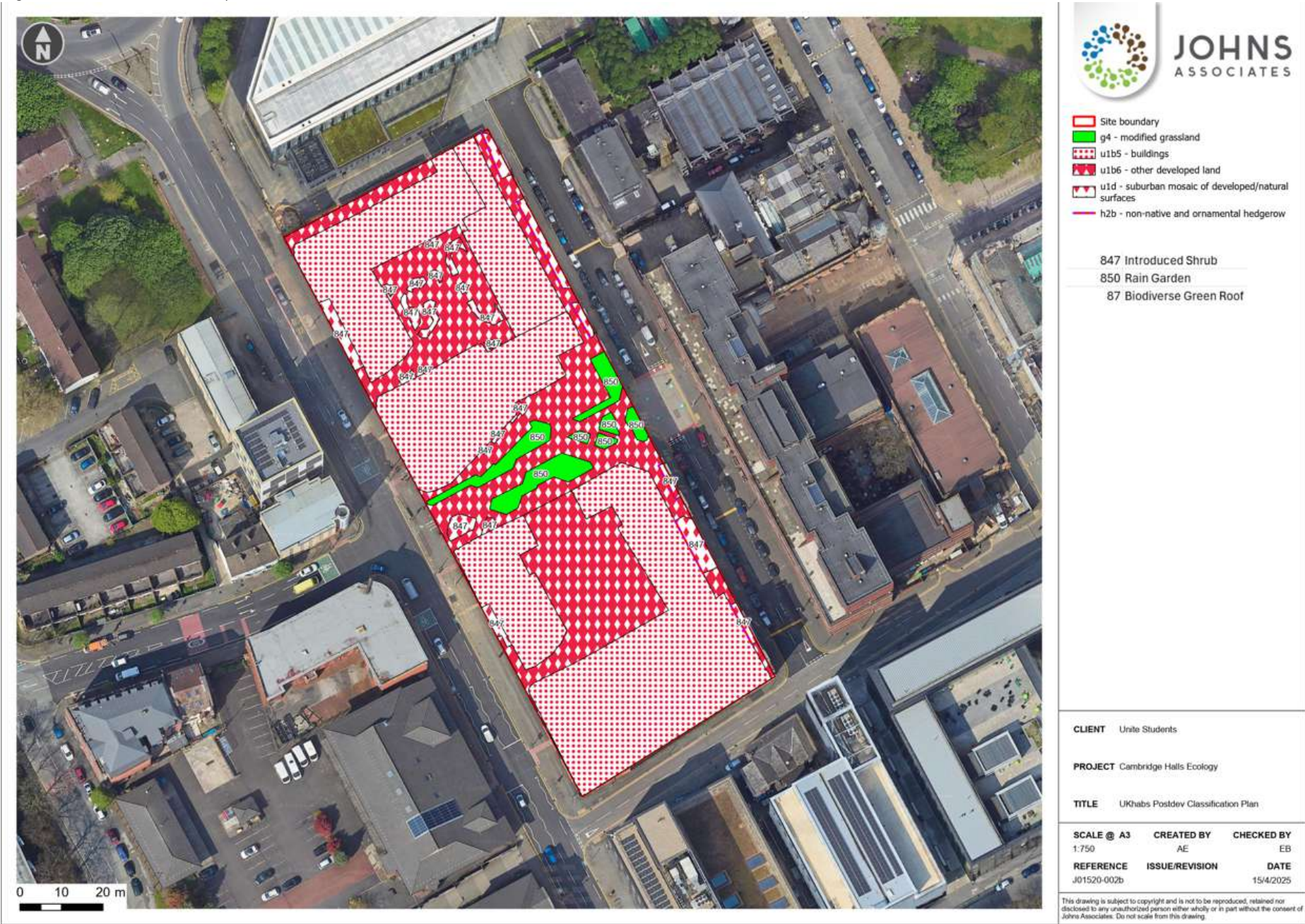


Figure 4: On-Site Post-Development UKHab Habitat Plan First Floor (L01)

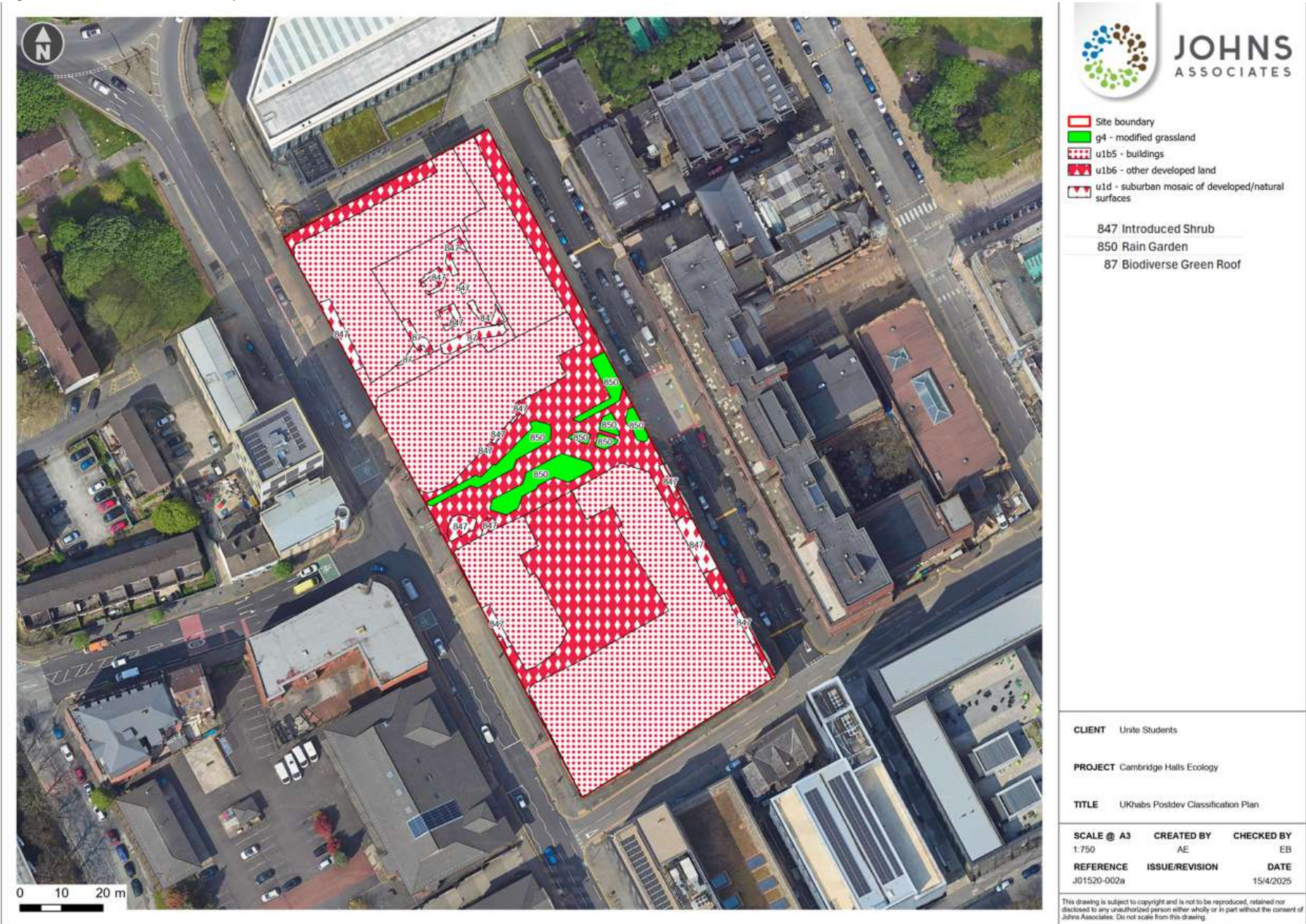
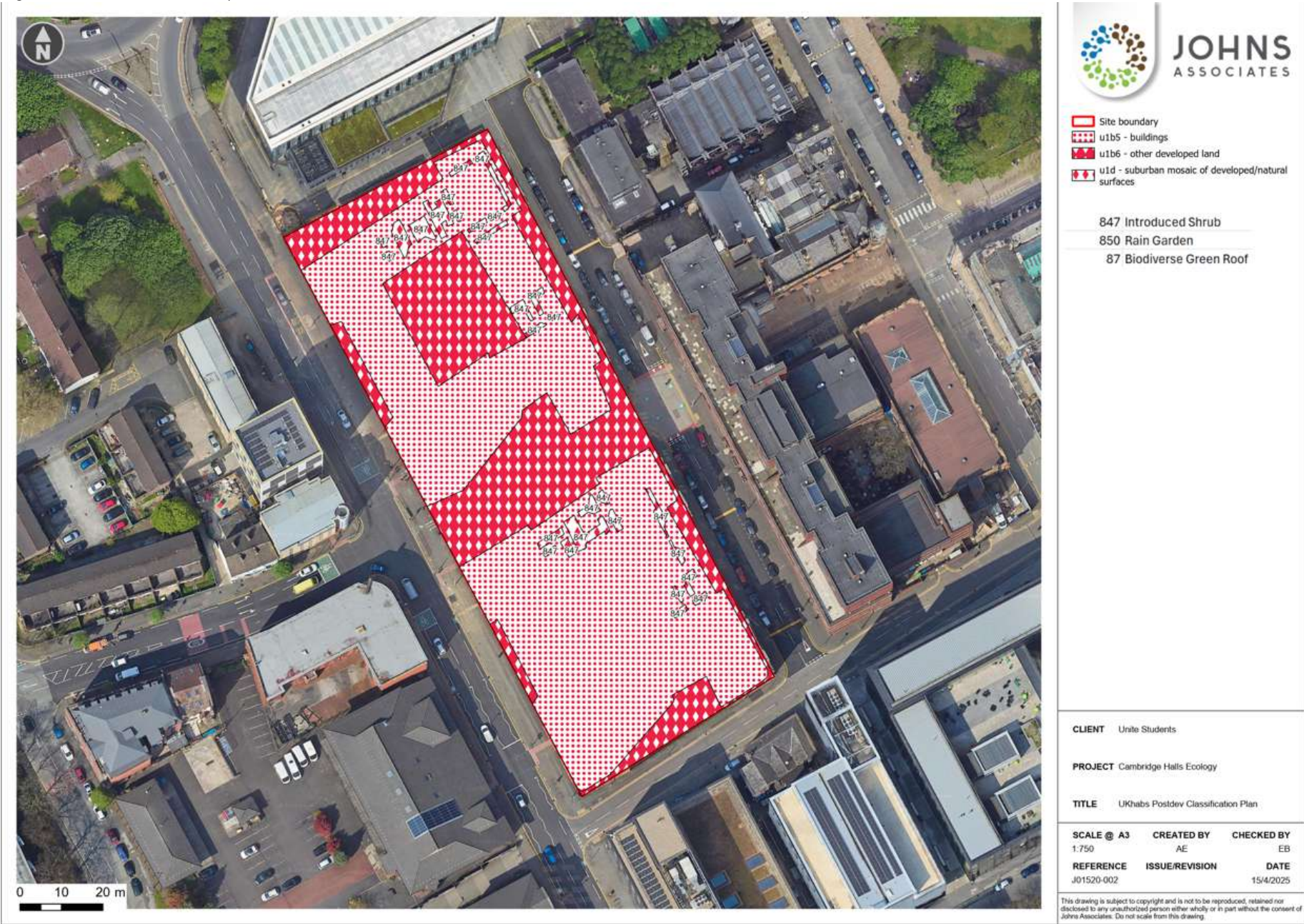


Figure 5: On-Site Post-Development UKHab Habitat Plan Seventh Floor (L07)



3.7 POTENTIAL ECOLOGICAL RECEPTORS AND SIGNIFICANT EFFECTS

Table 12 summarises information regarding the ecological receptors that have been identified through the scoping process as having the potential to be significantly affected by the development proposals. The ecological receptors scoped out of further assessment are also highlighted.

Table 12: Scoping Results of Potential Ecological Receptors and Legislation

Potential receptor	Important/ values and/or legally protected?	Relevant criteria and legislation	Potentially significant effects
Non-statutory designated sites Rochdale Canal SBI and Ashton Canal SBI	Biodiversity conservation value Designated for aquatic invertebrates and plants	Local importance – Greater Manchester Biodiversity Priority Habitat NERC Act 2006 S.41 Habitats and Species of Principal Importance	These sites are located approximately 1.3 km northeast of the Site. The development Site does not support the species or habitats for which these sites are designated and does not provide functionally linked habitats. No likely source-receptor pathways have been identified. No potentially significant effects or legal contravention predicted. Scoped out of the assessment.
Hedgerows	Biodiversity conservation value	Local importance Biodiversity Net Gain	The hedgerows within the Site boundary are species poor and are not considered to meet the JNCC criteria for S41 Priority Habitat status. The hedgerow has low ecological value and is not considered to provide suitable commuting or foraging habitat for bats due to its poor species diversity and physical structure and relative short length. It is isolated within the wider landscape and is not linked to other areas of semi-natural habitat. The hedgerow is also subject to a high level of anthropogenic disturbance owing to its urban location. The hedgerow provides limited nesting habitat for common urban bird species. Under Biodiversity Net Gain, the loss of the hedgerow is required to be mitigated. Scoped into the assessment.

Potential receptor	Important/ values and/or legally protected?	Relevant criteria and legislation	Potentially significant effects
Modified grassland	No	Biodiversity Net Gain N/A	This habitat type is widespread and of negligible ecological value. 0.067ha of good condition grassland is to be lost, with 8 species per m². The loss in modified grassland has been compensated within the BNG assessment with the creation of rain garden and biodiverse green roof. Scoped out of the assessment.
Individual trees	Biodiversity conservation value	Local importance	The trees on Site provide suitable nesting habitat for common urban bird species. Individual trees are important in an urban context. The loss in trees has been partially compensated for within the BNG assessment. Off-site units are required to mitigate the remainder of tree units lost. Scoped into the assessment.
Adjacent habitat	Biodiversity conservation value	Local importance	The trees directly adjacent to the Site provide low suitability nesting habitat for birds. There are to areas of green roof immediately north of the Site, which could provide nesting habitat. Construction may result in accidental damage and disturbance through noise and debris/dust. Scoped into the assessment.
Plants (protected or invasive species)	Biodiversity conservation value	EC Habitats Directive Wildlife & Countryside Act 1981	Notable plant species are considered to be absent from the Site however the high forb diversity of the good condition grassland on Site may be locally rare. Schedule 9 invasive species <i>Cotoneaster horizontalis</i> was noted during the Site survey. Scoped into the assessment.
Bats	Biodiversity conservation value Legal status	International and national importance Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	The site was assessed to provide no more than low foraging opportunity for bats not sensitive to light with the presence of trees and grassland. Increased lighting beyond current levels could result in modification of bat activity, although this is unlikely to affect the viability of local populations. There

Potential receptor	Important/ values and/or legally protected?	Relevant criteria and legislation	Potentially significant effects
		NERC Act 2006 S.41 Species of Principal Importance Wildlife & Countryside Act 1981	are no trees within the application site with suitability for roosting bats that could be disturbed/damaged by construction activities. Opportunities for enhancement do exist, however. Scoped into the assessment.
GCN	Biodiversity conservation value Legal status	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Wildlife & Countryside Act 1981 NERC Act 2006 S.41 Species of Principal Importance	There were no records and no suitable habitat for GCN within 1km of the Site. Scoped out of the assessment.
Common Reptiles	Biodiversity conservation value Legal status	Local Importance Wildlife & Countryside Act 1981	There were no records of common reptiles within 2km of the Site and no suitable habitat on Site. Scoped out of the assessment.
Badger	Legal status	Local Importance Protection of Badgers Act 1992	No evidence of badger was recorded within the site and there was no suitable habitat. Scoped out of the assessment.
Birds	Biodiversity conservation value Legal status	National importance (BoCC Red List Species) Wildlife & Countryside Act 1981 NERC Act 2002 S41 Species of Principal Importance	Suitability for common species of nesting birds was recorded within vegetation and buildings on site. There is considered to be limited habitat suitability for rarer bird species. Vegetation removal could result in the risk of accidental disturbance of nesting birds/ loss of adults/ young/ eggs. Building height could result in accidental bird strike. Scoped into the assessment.
Other NERC S.41 Mammals (Hedgehog)	Biodiversity conservation value Legal status	NERC Act 2006 S.41 Species of Principal Importance Wildlife & Countryside Act 1981	There is no suitable habitat for NERC S.41 mammals on Site. Scoped out of the assessment.
Invertebrates	Biodiversity conservation value Legal status	NERC Act 2006 S.41 Species of Principal Importance	There is considered to be limited habitat suitability for common invertebrate species only. Habitat creation/ enhancement and management at the Site will provide additional areas of suitable habitat for this group of species.

Potential receptor	Important/ values and/or legally protected?	Relevant criteria and legislation	Potentially significant effects
			Scoped out of the assessment.

4 ENVIRONMENTAL MEASURES INTEGRATED AND EMBEDDED INTO THE PROPOSALS

4.1 INTRODUCTION

A range of environmental measures have been integrated and embedded into the development proposals as outlined in this Section. The design process for the proposed development has included consideration of the ecological constraints and has incorporated measures to reduce the potential for adverse ecological effects in accordance with the 'mitigation hierarchy' and relevant planning policy. The measures identified and adopted include those that are inherent to the proposed development and can be expected to be applied as part of the construction environmental best practice a result of legislative requirements.

The development design and impact avoidance measures will be adopted during the construction and operation phases of the proposed development. Table 13 outlines how these embedded measures will influence the biodiversity assessment. A Construction Ecological Management Plan (CEMP) and a Landscape and Ecological Management Plan will be produced via Condition that will set out the full detail of all appropriate measures for the delivery/aftercare/monitoring and long-term management for these measures.

Table 13: Summary of Integrated and Embedded Biodiversity Mitigation and Enhancement Measures

Receptor	Changes and Effects	Integrated/Embedded Measures and Influence on Assessment
Hedgerow	Loss of 51m of hedgerow due to Site-wide redevelopment. Potential direct effects on birds, young and/or eggs due to disturbance, damage or destruction of active nests associated with vegetation removal/disturbance. 74m of ornamental hedgerow planting.	Construction: 1. Preparation of a CEMP through Condition to avoid and minimise all potential construction related pollution (water quality) and water quantity effects using best practice tried and tested industry methods (such as the NetRegs Guidance for Pollution Prevention Documentsⁱ and Ciria Control of water pollution from construction sites. Guidance for consultants and contractors (C532)ⁱⁱ) and a monitoring program. Installation of site demarcation fencing to prevent accidental access. Use of appropriate dust suppression technology. 2. Ecological toolbox talk and supervision of certain tasks by Ecological Clerk of Works (ECoW). 3. Preparation of a Landscape and Ecological Management Plan (LEMP) through Condition to introduce a long-term programme of high quality and appropriate management of all created

Receptor	Changes and Effects	Integrated/Embedded Measures and Influence on Assessment
		compensation habitats to increase habitat diversity, quality and ecological value. All works to be supervised where necessary by a suitably qualified ecologist and carried out by appropriate ecological 4. Avoidance of potential effects on actively nesting birds, young, eggs and nest through the avoidance of vegetation clearance between March to August inclusive, or through the use of a suitably qualified ecologist who has confirmed no nesting activity present within 48 hours of clearance occurring between March and August. 5. Creation of 74m native hedgerow along western boundary of Site. Operational: 6. LEMP will be implemented during operation to manage the retained, enhanced and created habitats within the Site. Monitoring Site visits will be conducted on Years 1, 2, 3, 5, 7, 10, 15, 20, 25 and 30 and follow up Site visits will also be required following any remediation measures being implemented to ensure success.
Trees	Loss of 12 trees due to Site-wide redevelopment. Potential direct effects on birds, young and/or eggs due to disturbance, damage or destruction of active nests associated with vegetation removal/disturbance. Planting of 34 small trees.	Construction: Measures 1 to 4 7. Planting of 34 small trees, including native species outlined in the planting strategy produced by re-form landscape architecture. Operation: Measure 7
Adjacent habitat	Potential for accidental damage to habitat adjacent to the proposed Site from dust deposition, machinery and spillages during construction activities.	Construction: Measures 1 to 3 8. A 10-30m construction buffer from habitats adjacent to the Site.

Receptor	Changes and Effects	Integrated/Embedded Measures and Influence on Assessment
	Potential direct effects on birds, young and/or eggs due to disturbance.	
Plants	Loss of 0.107 ha modified grassland including 0.067ha of good condition grassland with 8 species per m2. Removal of Schedule 9 invasive species <i>Cotoneaster horizontalis</i>. Creation of 0.041ha of rain garden composed of pollinator friendly and native plant species. Creation of 0.008 ha of biodiverse green roof populated with of dry grassland wildflowers and Sedum species.	Construction: Measures 1 to 4 9. Creation of rain garden composed of suitable species as outlined in the planting strategy produced by re-form landscape architecture. 10. Appropriate invasive species control including spraying before removal and controlled transportation off Site to be destroyed. Operation: Measure 7
Bats	Loss of negligible to low suitability and artificially lit potential foraging habitat of 0.107bha of modified grassland, 12 trees and 51 m of native hedgerows. Creation of 0.041 ha of rain garden composed of pollinator friendly and native plant species. Creation of 0.008 ha of biodiverse green roof populated with of dry grassland wildflowers and Sedum species. Creation of 74m of hedgerow. Planting of 34 individual trees.	Construction: Measures 1 to 3 11. Provision of 3No. Greenwood small hollow or crevice bat boxes in established trees within the pocket park located 94 m east of the Site with input from licensed bat ecologist. Operation: Measure 7 12. Monitoring plan (general)
Birds	Potential direct effects on birds, young and/or eggs due to disturbance, damage or destruction of active nests associated with vegetation removal/disturbance. Potential impact on flight lines and therefore bird strike due to height of building. Loss of foraging and potential nesting habitat of 0.107ha of modified grassland, 12 trees and 51 m of native hedgerows.	Construction: Measures 1 to 4 13. Pre-works inspection by a suitably qualified ecologist to ensure absence of nesting birds. 14. Provision of 3No. 1B Schwegler bird nest boxes in established trees within the pocket park located 94 m east of the Site with input from ecologist. 15. Ensuring Site remains uninhabitable during construction phase.

Receptor	Changes and Effects	Integrated/Embedded Measures and Influence on Assessment
	Creation of 0.041ha of rain garden composed of pollinator friendly and native plant species. Creation of 0.008 ha of biodiverse green roof populated with of dry grassland wildflowers and Sedum species. Creation of 74 m of native hedgerow. Planting of 34 individual trees.	Operation: Measure 7 16. Building location and proposed structure are not considered to pose a risk of bird strike.

5 ASSESSMENT OF RESIDUAL EFFECTS AND EMBEDDED MITIGATION MEASURES

5.1 INTRODUCTION

A range of environmental measures have been integrated and embedded into the development proposals as outlined in Section 4. The design process for the proposed development has included consideration of the ecological constraints and has incorporated measures to reduce the potential for adverse ecological effects in accordance with the 'mitigation hierarchy' and relevant planning policy. The measures identified and adopted include those that are inherent to the proposed development and can be expected to be applied as part of the construction environmental best practice as a result of legislative requirements.

The development design and impact avoidance measures will be adopted during the construction and operation of the proposed development. A Construction Ecological Management Plan (CEMP) and a Landscape and Ecological Management Plan (LEMP) will be produced via Condition that will set out the full detail of all appropriate measures for the delivery/aftercare/monitoring and long-term management for these measures. Table 9 outlines the embedded measures that will be implemented as part of the proposed development to avoid and mitigate potential effects to ecological receptors.

5.2 LIKELY SIGNIFICANT EFFECTS

The ecological changes that are likely to be caused by the proposed development where a valued receptor is considered sensitive to these and which therefore have the potential to cause significant effects and/or contravention of wildlife legislation, have been identified as:

- Construction phase habitat loss;
- Construction phase damage/harm to flora and fauna;
- Construction and operational phase deposition of particulates and nutrient enrichment from air emissions (in particular from dust and nitrogen);
- Construction and operational phase increase in noise, disturbance and vibration;
- Accidental construction phase pollution incidents; and
- Construction biodiversity net gain through creation and enhancement of habitats and subsequent management at the proposed development site.

5.3 INTER-RELATED EFFECTS

There are two types of inter-related effect:

- Combined effects: when individual effects of the proposed development combine to create a cumulative effect; and
- Interactive effects: consideration of interactions between different effects in relation to a specific receptor.

Combined effects normally occur when different activities associated with a project act upon the same environmental receptor (e.g. the additive effect of physical disturbance from construction activities upon nesting birds may occur at the

same time as transport related noise and lighting, that may act upon the same receptor(s) during the construction phase). In determining such effects, consideration would be given to the sensitivity of the receptor and the magnitude of environmental change. This is considered directly within the assessments included in this EclA and, as such, is not reported separately.

Interactive effects are assessed in relation to a specific receptor where the effect could be caused by the interactions of different types of effect from project activities even if individually these are insignificant (e.g. the interaction of noise disturbance on bats).

The assessment of effects on biodiversity receptors has the potential to be exacerbated by climate change, and this has been incorporated into the approach to integrated and embedded mitigation as set out in this EclA.

5.4 ASSESSMENT OF RESIDUAL EFFECTS: HABITAT LOSS

Site-wide demolition and redevelopment will result in the loss of 0.04 ha of poor condition **modified grassland**, 0.067 ha of good condition **modified grassland** (with 8 species per m²), 0.002 ha of vegetated garden, 51m of **hedgerow** and 12 individual **trees**. Consideration of how construction and operation of the proposed development will affect habitat and therefore cause a negative (or positive) effect on its ecological status is set out below.

5.4.1 Damage/Harm to Flora from Construction

All flora on Site is to be removed. The production of a CEMP (Measure 1) will minimise the potential construction related effects through the implementation of standard industry working methods. Ecological toolbox talks will be mandatory for all construction personnel, with tree and hedgerow removal being supervised by an Ecological Clerk of Works (ECoW) and occurring outside of the bird nesting season (march – august) (Measures 2, 4).

Where possible, on-Site habitat mitigation loss will be implemented. This includes the creation of 0.041ha of rain garden composed of pollinator friendly and native plant species and 0.008 ha of biodiverse green roof populated with dry grassland wildflowers and Sedum species to partially mitigate the loss of modified grassland (Measure 9). Planting of 74 m of ornamental hedgerow will result in a **40.02% hedgerow BNG** (Measure 5) and planting of 34 small individual trees will partially mitigate the loss of trees on Site (Measure 7). Where 10% on Site BNG and the trading rules cannot be met, off Site credits will be purchased to a value of 0.48 individual tree units (or higher distinctiveness).

Preparation of an LEMP through condition will introduce a long-term programme of high quality and appropriate management of all created compensation habitats to increase habitat diversity, quality and ecological value (Measure 3). All works to be supervised where necessary by a suitably qualified ecologist and carried out following appropriate ecological guidance. With the mitigation measures including a CEMP in place and regular inspections conducted by an ECoW it is considered that there is **a minor but not significant negative** effect predicted as a result of destruction to habitats on the proposed development site.

5.4.2 Pollution Incidents from Construction

There is the potential for accidental pollution to occur during the construction phase of the proposals through the accidental release of pollutants/silt/soils into the adjoining habitats from a spillage of pollutants such as hydrocarbons from site machinery/vehicles onto soil. This could result in a change to water soil chemistry or siltation and as such there is the potential that it could cause damage to vegetation, animals or birds by direct contact with the contaminant (especially fuels), leading to chronic or acute effects.

The implementation of embedded mitigation measure 1 (preparation of CEMP) will avoid or minimise potential construction related effects through the implementation of standard industry methods. The establishment of bundled

storage compounds for fuels (or self-bunded tanks) and soils will ensure that no accidental discharge will enter the soil. Mandatory ecological toolbox talks prior to works commencing on Site and the supervision of key tasks with the potential to affect the habitats on-Site by an ECoW will minimise the potential for negative effects to the retained habitat to the north.

Although the likelihood or frequency of accidental pollution risks are low, a one-off event could be acute to retained habitats. However, with the implemented avoidance measure of locating fuel and soil to the south of the Site and the additional mitigation measures including a CEMP in place and regular inspections conducted by an ECoW it is considered that there is **a minor but not significant negative** effect predicted as a result of construction pollution incidents to the retained treeline habitat.

5.4.3 Habitat Management from Operation

The on-going management of the compensation rain garden, biodiverse green roof, trees and hedgerow in accordance with the proposed LEMP by Condition (Measure 6), will result in maintaining the compensation habitats in a moderate to good condition. It is considered that there is a **minor but not significant positive** effect predicted as a result of habitat management from operation to created habitats on Site.

5.5 ASSESSMENT OF RESIDUAL EFFECTS: ADJACENT HABITAT

Potential effects associated with the proposed development to the adjacent trees, grasslands and green roofs may occur as a result of the development. Consideration of how construction and operation of the proposed development will affect the habitat and therefore cause a negative (or positive) effect on its ecological status is set out below.

5.5.1 Pollution Incidents from Construction

There is the potential for accidental pollution to occur during the construction phase of the proposals through the accidental release of pollutants/silt/soils into the adjoining habitats from a spillage of pollutants such as hydrocarbons from site machinery/vehicles onto soil. This could result in a change to water soil chemistry or siltation within the adjacent habitats and as such there is the potential that it could cause damage to vegetation, animals or birds by direct contact with the contaminant (especially fuels), leading to chronic or acute effects.

There is the potential for dust generation as a result of construction and construction traffic and dust could become deposited on the adjoining retained habitats.

The implementation of embedded mitigation measure 1 (preparation of CEMP) will avoid or minimise potential construction related effects through the implementation of standard industry methods such as dust and noise suppression technology. The establishment of bunded storage compounds for fuels (or self-bunded tanks) and soils will ensure that no accidental discharge will reach the adjacent habitats.

Although the likelihood or frequency of accidental pollution risks are low, a one-off event could be acute to retained habitats. However, with the implemented avoidance measure of locating fuel and soil to the south of the Site and the additional mitigation measures including a CEMP in place and regular inspections conducted by an ECoW it is considered that there is **a minor but not significant negative** effect predicted as a result of construction pollution incidents to the adjacent habitats.

5.6 ASSESSMENT OF RESIDUAL EFFECTS: BATS

Potential effects associated with the proposed development on small numbers of foraging and commuting bats could occur during the construction phase, although the habitat opportunities are very limited. The implemented development will result in a net gain in habitat diversity and extent, so is likely to increase opportunities for small numbers of more light tolerant bats in this respect. Furthermore, the measures proposed do create roosting features for light tolerant species. Further consideration of how construction and operation of the proposed development could affect bats and therefore cause a negative (or positive) effect on their ecological status is set out below.

5.6.1 Habitat Loss to Bats from Construction

There is a potential for direct effects to the foraging and commuting behaviour of bat species associated with the Site from loss of suitable habitat including grassland and scrub habitat. The proposed development will result in the loss of approximately 0.14 ha modified grassland spread out as individual 'boundary lawns', 51 m of closely managed species poor hedgerow and 12 trees none of which support potential roosting features and are all heavily impacted by artificial lighting.

Implementation of embedded mitigation measures 1 to 4 will ensure that the potential effect from habitat loss to retained adjacent habitats are avoided or minimised. The production of a CEMP will minimise the potential construction related effects of habitat loss to retained habitat through the implementation of standard industry working methods. There will be no overnight lighting of the construction working area, which will reduce potential disturbance of bats, a nocturnal species. The installation of Site demarcation fencing to prevent accidental access will protect adjacent grassland, scrub and treeline habitats from damage by vehicle movements and plant/machinery, with signage to be used as appropriate. Trees adjacent to the Site will be protected through the use of appropriate root protection fencing. Ecological toolbox talks will be mandatory for all construction personnel, with certain tasks being supervised by an ECoW.

Three bat boxes will be installed in suitable retained trees within the pocket park located 94 m east of the Site to enhance bat roosting habitat.

The embedded measure of creation of compensation habitat comprising pollinator friendly rain garden and biodiverse green roof habitats will be created within the Site to replace the habitats lost (Table 9, measure 5). Therefore there is a **minor but not significant negative** effect predicted as a result of habitat loss to foraging and commuting bats within the Site.

5.6.2 Light Disturbance to Bats from Operation

The proposed new scheme will include an appropriate lighting scheme for users. The change in lighting is unlikely to negatively affect any light sensitive species of bat because of the current unfavourable conditions, and lack of foraging/commuting/roosting opportunities. The lighting proposals will be based on high quality specifications, meeting with relevant Institute of Lighting Engineer guidance for this type of city centre / residential location. Therefore, a precautionary assessment concludes that there is a **minor but not significant negative** effect predicted as a result of habitat loss to foraging and commuting bats within the Site.

5.6.3 Habitat Management from Operation

There is the potential for on-site habitats used by bats to become degraded over time through disturbance and use. The production and implementation of an LEMP (mitigation measures 6 and 7) will introduce a long-term programme of high-quality and appropriate management of all retained, enhanced and newly-created habitats within the Site, which

will increase their ecological quality and function. All works will be supervised where necessary by a suitably qualified ecologist and carried out by appropriate ecological contractors.

The increased lighting from the operation of the new facility is not considered to increase light disturbance to bats, and this has been minimised through a carefully planned lighting strategy. It is therefore considered that there is a **non-significant minor negative** effect predicted upon foraging and commuting bats.

5.7 ASSESSMENT OF RESIDUAL EFFECTS: INVASIVE SPECIES

Schedule 9 invasive species *Cotoneaster horizontalis* was located on Site within an area of garden planting.

5.7.1 Invasive species removal

The Site wide loss in habitat will require the safe removal of *Cotoneaster horizontalis*, whilst implementing biosecurity measures and minimizing risk of spread to adjacent habitats (Measure 10). The plant will be sprayed by an appropriately ticketed individual (Pa1, Pa6 Pesticide Training) prior to removal from Site. Controlled transportation off Site for the plant to be incinerated will then occur, preventing any potential spread.

Although the likelihood or frequency of accidental spread of invasive species is low, a one-off event could occur. However, with the implemented removal measure and additional mitigation measures including a CEMP (Measure 1) in place and regular inspections conducted by an ECoW it is considered that there is a **minor but not significant positive** effect predicted as a result of the bio secure removal of invasive species off Site.

5.8 ASSESSMENT OF RESIDUAL EFFECTS: BIRDS

Common bird species likely use the wider Site. There is the potential for rarer bird species to use the Site for foraging and nesting. This includes black redstart using ledges and flat rooves as nesting habitat and the adjacent green roof as foraging habitat. During the construction phase, if the Site experiences low levels of disturbance for prolonged periods of time there is potential for little ringed plover. Post-development, the height of the building poses the risk of bird strike. Consideration of how construction of the development proposals could affect breeding birds will be set out in any CEMP, but will involve removing vegetation between September and February or after a careful check to confirm no nesting activity by a suitably qualified ecologist.

5.8.1 Habitat Loss from Construction

The proposed development will result in the loss of approximately 0.107 ha of modified grassland habitat, 12 trees and 51 m of native hedgerow within the Site which has the potential to be used by foraging and nesting birds.

The Site will be enhanced through the creation of 0.041ha of rain garden composed of pollinator friendly and native plant species and 0.008 ha of biodiverse green roof populated with of dry grassland wildflowers and Sedum species to partially mitigate the loss of modified grassland (Measure 9). Planting of 74m of native hedgerow will result in a **40.02% hedgerow BNG** (Measure 5) and planting of 34 small individual trees will partially mitigate the loss of trees on Site (Measure 7). This habitat creation will offer compensation for loss of foraging habitat. To compensate for loss of nesting habitat, 3 1B Schwegler bird boxes (or similar) will be installed within suitable retained trees in the pocket park located 94 m east of the Site with input from a suitably qualified ecologist (Measure 14).

Preparation of an LEMP through condition will introduce a long-term programme of high quality and appropriate management of all created compensation habitats to increase habitat diversity, quality and ecological value (Measure 3). All works to be supervised where necessary by a suitably qualified ecologist and carried out following appropriate ecological guidance. With the mitigation measures including a CEMP in place and regular inspections conducted by an

ECoW it is considered that there is a **minor but not significant negative** effect predicted as a result of destruction to habitats on the proposed development site.

5.8.2 Damage/Harm to Fauna from Construction

Construction phase impacts on birds relate to the potential disturbance to foraging and active nests and breeding birds/eggs and young. The implementation of mitigation measures 1 to 4, 14 and 16 will avoid or minimise potential effects to breeding birds during the construction phase of the proposed improvement works. This includes pre-works inspections to assess for the presence of nesting birds (Measure 14) and maintaining the Site to be uninhabitable throughout construction (Measure 16).

The production and implementation of a CEMP (mitigation Measure 1) will minimise potential construction related effects through the use of standard industry working methods. Potential effects to birds, their nests, eggs and/or young will be avoided through the implementation of mitigation measures 13 and 15. Vegetation clearance will occur outside the bird nesting season, (March to August inclusive). Where this is not possible, a suitably qualified ecologist will confirm no nesting activity is present within 48 hours of clearance by undertaking a careful search of the area of vegetation and buildings to be removed.

With the mitigation measures including a CEMP in place and regular inspections conducted by an ECoW it is considered that there is a **negligible not significant negative** effect predicted as a result of construction damage/harm incidents to breeding birds within the Site.

5.8.3 Habitat Management from Operation

The on-going management of the compensation rain garden, biodiverse green roof, trees and hedgerow in accordance with the proposed LEMP by Condition (Measure 6), will result in maintaining the compensation habitats in a favourable condition to support breeding bird species. It is considered that there is a **minor but not significant positive** effect predicted as a result of habitat management from operation to breeding birds within the Site.

The structure of the building (at present) lacking in large expanses of glass, making it more noticeable, and the Site location being set within other buildings of similar height, resulting in certain levels of habituation from birds resulting in a **minor but not significant negative** effect on bird strike upon the buildings.

It is considered reasonable to conclude that the nature of the development, in its city centre location, with much more extensive bird habitats between it and Manchester Airport (including open water, woodlands, parkland), there is a negligible risk of any increase in wildlife hazard to aircraft from flocking or large species of concern. As such, the proposals meet the requirement of the CAA's CAP 772 Wildlife Hazard Management at Aerodromes.

6 CUMULATIVE EFFECTS

Future phases of development may be considered at the wider Site. The proposed developments result in a **-30.14%** habitat BNG and **40.02%** hedgerow BNG. Off-site units will be purchased to offset loss to a value of 0.48 individual tree (or higher distinctiveness) units.

7 ADDITIONAL MITIGATION OR COMPENSATION REQUIREMENTS

No additional mitigation or compensation is considered to be required.

8 IMPLEMENTATION OF BIODIVERSITY MEASURES & MONITORING

Table 14 summarises the environmental measures embedded within the proposed development and the means by which they will be implemented, i.e. they will have been secured through planning conditions.

Table 14: Summary of Environmental Measures to be Implemented

Environmental measure	Responsibility for implementation	Compliance mechanism
Production and implementation of a Construction Ecological Management Plan (CEMP)	Contractor/Project Ecologist	Planning condition
Production and implementation of a Landscape and Ecological Management Plan (LEMP)	Unite Students/Project Ecologist	Planning condition
Ecological toolbox talk and register of attendance for all persons working within the construction area	Contractor/Project Ecologist	Planning condition
Suitably Qualified Ecologist/Ecological Clerk of Works/Ecological Contractors to manage, monitor and implement all ecological aspects of the development.	Unite Students/Project Ecologist	Planning condition
Protection of adjacent habitats and trees with suitable offsets and barriers	Unite Students/Contractor	Planning condition
Use of dust suppression techniques	Unite Students/Contractor	Planning condition
Use of pollution control and response methods during construction and operation	Unite Students/Contractor/Operator	Planning condition
Implementation of all on site landscape/habitat measures in accordance with CEMP/LEMP and the Integrated/Embedded Mitigation and Enhancement Plan submitted with the Planning Application.	Unite Students/Project Ecologist/ Contractor/Operator	Planning condition
Implementation of a programme of robust ecological monitoring, reporting and intervention to ensure all integrated and embedded mitigation and enhancement measures are successful in the short and long term.	Unite Students/Project Ecologist	Planning condition

Periodic UKHab condition habitat surveys to further inform the successful delivery of the habitat creation and management to confirm the delivery of the planned Biodiversity Net Gain will be undertaken following completion of the proposed works in years 1, 2, 3, 5, 7, 10, 15, 20, 25 and 30.

Habitat areas and conditions will be monitored during the site visits and prescriptions for amendments to management of the site will be provided to Unite Students to maximise the ecological benefit of ecological management actions for habitats at the site and fauna that may inhabit the site and to provide habitat gain that can be banked to offset future phases of development at the proposed Site.

9 CONCLUSIONS OF SIGNIFICANCE EVALUATION

Considering the detailed ecological baseline, the integrated and embedded ecological mitigation and enhancement measures and the assessment of likely significant effects as set out in Section 5 of this EclA; it is considered reasonable to conclude that no negative significant effects will occur to important biodiversity receptors, including legally protected species and designated sites, from either the construction or operational stages of the proposed development. A range of positive significant effects on biodiversity will arise through the development proposals with a measurable gain in habitats.

Furthermore, the development proposals are considered to meet the requirements of local and national planning policy alongside best practice in relation to the construction and long-term management of the Site.

The use of the Statutory Biodiversity Metric has demonstrated that the proposals will result in a **-30.14%** BNG and therefore off-Site compensation is required. The proposed habitats creation on Site is considered to meet the mitigation hierarchy due to the creation of suitable habitat where possible however the loss of several mature trees has resulted in an overall net loss which will be compensated for with the purchase of 0.48 off Site individual tree (or higher distinctiveness) units.

It is recommended that a CEMP be produced in order to set out avoidance and mitigation measures during construction, particularly in relation to **retained and enhanced** habitats, and root protection zones. A LEMP will need to also be required to ensure that the required habitats and habitat conditions are created, maintained and monitored appropriately to ensure that the BNG conditions stated within this assessment are achieved. Monitoring Site visits will be required to be conducted on Years 1, 2, 3, 5, 7, 10, 15, 20, 25 and 30 and follow up Site visits will also be required following any remediation measures being implemented to ensure success.

If any significant changes to the proposals shown in Figure 3 occur, a reassessment of the potential impacts may be required.

10 REFERENCES

British Standards Institution, (2013). *BS42020 Biodiversity – A code of practice for planning and development*. Available at <https://www.n-somerset.gov.uk/sites/default/files/2022-06/16%20-%20biodiversity%20-%20code%20of%20practice%20for%20planning%20and%20development%20%282013%29%20BS%20420202013.pdf>

CIEEM, (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester. Available at: <https://cieem.net/wp-content/uploads/2018/01/Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-typo-edit.pdf>

Collins, J. (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th edition. Bat Conservation Trust, London.

DEFRA The Statutory Biodiversity Metric User Guide, November 2023

MAGIC Map <https://magic.defra.gov.uk/MagicMap.aspx>

NARRS, Reptile Habitat Guide. [Online] Available at: http://narrs.org.uk/documents/Reptile_habitat_guide.pdf

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

Stace, C., (2019). *New Flora of the British Isles*. 4th Edition. Cambridge University Press, Cambridge, UK.

Surveying Badgers, The Mammal Society, 1989

UK Government, (2021). *Environment Act 2021*. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

UK Government, (2019). *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. Available at: <https://www.legislation.gov.uk/uksi/2019/579/contents/made>

UK Government, (2006). *Natural Environment and Rural Communities Act 2006*. Available at: <https://www.legislation.gov.uk/ukpga/2006/16/contents>

UK Government (1990) *Town and Country Planning Act 1990*. Available at <https://www.legislation.gov.uk/ukpga/1990/8/contents>

UK Government, (1981). *Wildlife and Countryside Act 1981 (as amended)*. Available at: <https://www.legislation.gov.uk/ukpga/1981/69>

UK Habitat Classification, Habitat Definitions Version 2.01, UKHab July 2023 Natural England Biodiversity Metric 4.0 User Guide JP039, March 2023.

APPENDIX A – LEGISLATION AND PLANNING POLICY

LEGISLATION

Many species of animal and plant receive some degree of legal protection. For the purposes of this report, legal protection refers to: species included on Annex II of the Habitats Directive 1992 (Council of European Communities, 22/07/1992) , Schedules 2 and 5 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended) , excluding species that are only protected in relation to their sale (see Section 9[5] and 13[2]) reflecting the fact that the proposed development does not include any proposals relating to the sale of species.

Legal offences associated with species listed on Schedule 2 of the Conservation of Habitats and Species Regulations and Schedule 5 of the Wildlife and Countryside Act in England and Wales include inter alia:

- Deliberate capture, injury or killing of animals or taking or destroying their eggs;
- Deliberately disturb animals in a way that would significantly affect their local distribution or abundance, or affect their ability to survive, breed or rear young;
- Intentional or reckless disturbance of an animal in its place of shelter or protection;
- Damaging or destroying a resting place or breeding site;
- Intentionally or recklessly obstructing access to a place of shelter or protection; and
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead animal or any part of an animal.

Relevant species listed on these Schedules that are potentially associated with this Site include bats and reptile species (e.g. slow worm). All species of bat receive full protection from all legal offences listed above. Common reptile species receive partial protection under the Wildlife and Countryside Act in that they are protected from killing and injury only.

All species of wild bird are protected under the Wildlife and Countryside Act (1981) (as amended) from killing or injury. In addition, it is an offence to take or damage/ destroy their eggs and to damage or destroy a nest whilst it is in use. Species listed on Schedule 1 (such as barn owl) receive additional protection in that it is illegal to disturb birds or their young whilst occupying, or near to, an active nest.

A number of wild plants, habitats and animals (including reptiles, hedgehog and most species of bat) are also included within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 which lists flora, fauna and habitats considered by the Secretary of State to be of principal importance for conserving biodiversity. The publication of the "England Biodiversity List" satisfies the requirements of Section 41 of the NERC Act 2006 for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires public bodies, including local planning authorities, to have regard for the conservation of biodiversity in England, when carrying out their normal functions.

Badgers are protected under the Protection of Badgers Act 1992 (UK Government, 1992) which makes it an offence to willfully kill, injure or take (or attempt to kill, injure or take) a badger; or to disturb badgers whilst occupying their setts.

NATIONAL PLANNING POLICY

NPPF

There are numerous national and local planning policies associated with flora and fauna (also referred to as biodiversity) that need to be addressed as part of the planning process. The Government has issued its National Planning Policy Framework (NPPF) December 2024, which requires impacts to biodiversity to be minimised. Paragraph 194 of the NPPF applies the same protection to Ramsar sites as that conferred by the Habitats Regulations

to SACs and SPAs, it also applies the same protection to sites identified or required as compensatory measures for adverse effects on habitat sites.

To protect and enhance biodiversity plans should:

- 192a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;
- 192b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

The NPPF requires development to apply the following principles (Paragraph 193):

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁷⁰ and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Planning authorities should follow key principles to ensure that the potential impacts of planning decisions on biodiversity conservation are considered. Circular 06/05: Biodiversity and Geological Conservation provides guidance on the application of the law relating to planning and nature conservation and complements the NPPF.

The Natural Environment Paper

“The Natural Choice: Securing the Value of Nature” outlines the Government’s approach and vision for nature in the UK including protecting and improving our natural environment, growing a green economy and reconnecting people and nature.

Biodiversity 2020

A strategy for England’s wildlife and ecosystem services, are the country level strategies for England and builds on the natural Environment White Paper. It sets out the strategic direction for biodiversity policy for the next decade on land (including rivers and lakes) and at sea. The priorities for action include a more integrated large-scale approach to conservation, putting people at the heart of biodiversity policy, reducing environmental pressure and improving knowledge.

LOCAL PLANNING POLICY

Policy SO6 States:

Objective 6 Environment

Protect and enhance both the natural and built environment of the City and ensure the sustainable use of natural resources, in order to mitigate and adapt to climate change, support biodiversity and wildlife, improve air, water and land quality, recreational opportunities and provide networks of high quality green infrastructure, ensuring that the City is inclusive and attractive to residents, workers, investors and visitors.

- A high quality environment is at the core of everything the Council hopes to achieve upto 2027. The economic growth of the City depends upon attracting and retaining the best businesses and workers, and it is increasingly apparent that decisions on where to live and work hinge on the quality of environment available. Manchester has opportunities to bring forward significant development over the next 15 years, but this development will define the City for many years beyond this period. The future success of the City depends not on the level of development it fosters but on the quality of place that emerges as a result.
 - There is also a growing understanding of the threat of climate change and the City's responsibility to face this challenge effectively, which has added a further dimension to the concept of environmental quality. A successful city will be one which has minimised its detrimental impact on the local and global environment. Not only is this the right thing for Manchester to do, it is also an important issue for people and businesses. Their choices over where to live and work will reflect areas' commitment to environmental responsibility.
 - These issues are already recognised by the Council, in its Sustainable Community Strategy, its Strategic Regeneration Frameworks and the Climate Change Action Plan (Manchester: A Certain Future). The Local Development Framework has an important role in complementing the Council's broader priorities.
 - Consequently, the Core Strategy includes a range of policies which promote the enhancement of the built and natural environment, and incorporate local and global environmental protection in all planning activity.
-