Ecological Appraisal

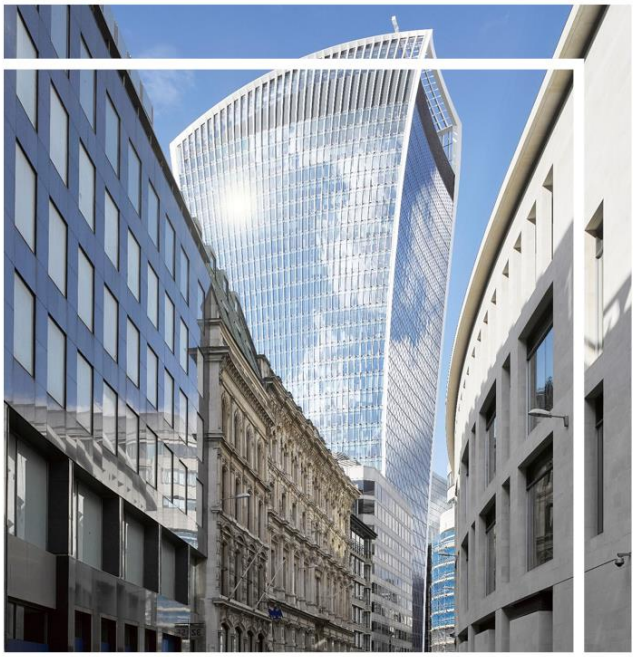
Kingsway House Aparthotel

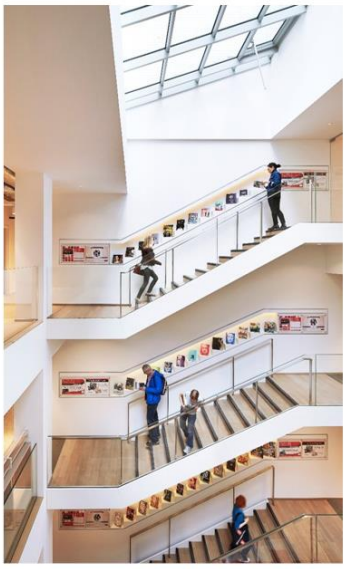
GMS Estates

22 July 2024

35445-HML-XX-XX-RP-U-880001

Issue P02





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Contents

Executive Summary

Hilson Moran has been commissioned by GMS Estates to develop a Preliminary Ecological Appraisal to inform the planning application for the proposed development at Kingsway House, Holborn.

The Ecological Appraisal assesses the baseline of the site prior to development, determining the ecological value of the site and the presence of any species as determined by legislation or local policy.

The site is not situated within a designated site; however it does have a non-statutory sites located within 200m, this being Lincoln's Inn Field. The site is also located predominantly within an area deemed to have low biodiversity potential as reported by Greenspace Information for Greater London (GIGL). Ecological data searches were conducted, however nothing of note was highlighted to be present in or around the site.

At the time of survey, the site was entirely hardstanding, with the site boundary comprising entirely of a building. There were no natural or semi-natural habitats present at the time of survey. The site was deemed to be of low to moderate ecological value owing to the urban context and lack of natural habitats, however there is a potential for nesting birds to move into the site, although nesting birds were not observed at the time of survey.

The proposed development incorporates blue roofs within the roof of the development.

The baseline assessment of the habitat deemed the site to have 0 habitat and is therefore exempt from mandatory net gain. The Urban Greening Factor (UGF) of the proposed development was calculated, achieving a score of 0.04, which does not reach the targeted 0.4, however there are limited areas in which enhancement could be installed across this development.

Further enhancements with specific reference to protected and Biodiversity Action Plan (BAP) species have been recommended, which consist of:

- 2 x no. General Species Nest Boxes
- 2 x no. Invertebrate Habitat Boxes.

1. Introduction

1.1. Site Location and Information

Hilson Moran have been commissioned by GMS Estates to provide a Preliminary Ecological Appraisal (PEA) in support of the proposed development at Kingsway House, Holborn, TQ 30536 81393.

The location of the site is identified below in **Figure 1.1**. The site will hereafter be referred to as the 'Proposed Development' or 'Application Site.'

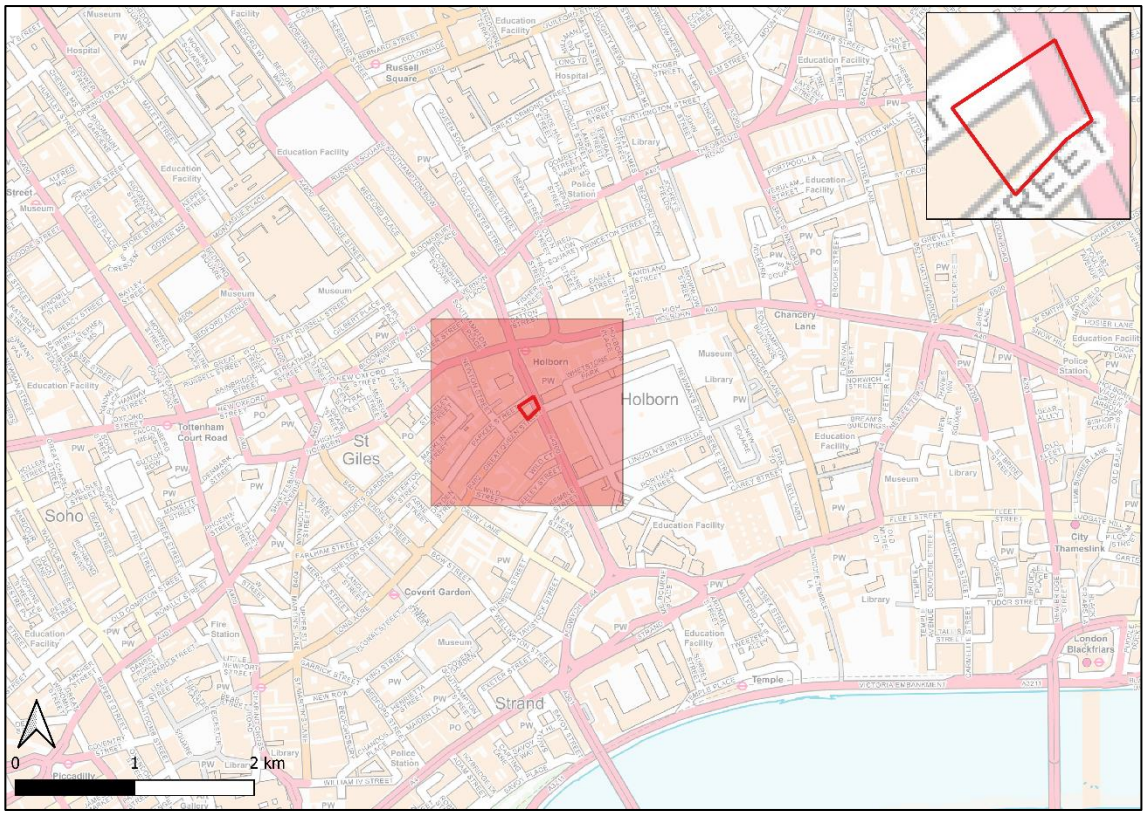

Figure 1-1 ***Kingsway House Aparthotel Site Boundary*** *(Contains Ordnance Survey Data © Crown copyright database right 2023)*

The Application Site is located within the Camden Opportunity Area, with Holborn station less than a 5-minute walk to the north of the site, meaning the site is well connected to public transport and wider London. The site is situated amongst many London attractions, namely Covent Garden, The British Museum and the Opera House amongst many more.

1.2. Purpose of Report

The purpose of this ecological appraisal is to assess any existing habitats or species use within the baseline site and confirm the achievement potential of the proposed development within biodiversity net gain criteria and BREEAM Refurbishment and Fitout 2014. This will be completed through a review of existing ecological information,

including that submitted for planning and any post-planning work associated with planning conditions, and updated to ensure these reflect current conditions.

1.3. Structure

Following this introductory section, a brief overview of the relevant legislation and planning policy framework is given in Section 2. Section 3 summarises the methodology applied in the ecological appraisal and Section 4 details the baseline in biodiversity terms based on the findings of the desk-study and field survey. Section 5 presents a discussion of the potential implications from the development upon biodiversity features present and recommendations for mitigation, with landscaping proposals and the enhancement of biodiversity presented in Section 6. Provisional input into a Landscape and Ecology Management Plan, comprising the long-term recommendations for management of features of biodiversity value, are included in Section 7 with Section 8 providing a Summary and Conclusions.

Appendices and references can be found at the end of the document, with document control information included at the front.

1.4. Declaration of Conformity

The appraisal has been carried out by Tanishia Gearing MRes, BSc holds membership of the Chartered Institute of Ecology and Environmental Management (CIEEM) and, as such, is a suitable qualified ecologist.

I confirm that the field survey and reporting has been completed in accordance with best practice principles outlined by CIEEM and is an accurate and realistic assessment of site conditions and potential enhancement works. The report complies with the CIEEM Code of Conduct and British Standard 42020 and BREEAM Refurbishment and Fitout Criteria.

1.5. Disclaimer

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4) Hilson Moran Partnership Ltd has not taken any steps to update this report since it was produced, and it accepts no liability for any part of this report that has or may become inaccurate as a result of circumstances that have occurred or arisen in relation to the project after the date of this report.

2. Legislative and Policy Context

This report has been prepared with due regard and consideration to applicable legislation and national and local planning policy. Detailed information regarding these documents is provided in Appendix A.

2.1. Legislation

Legislative protection is afforded to a range of sites, habitats and species through a number of national statutes. The principal means by which features of biodiversity interest are protected are:

- The Environment Act 2021[1];
- The Conservation of Habitats and Species Regulations 2017 (as amended)[2];
- The Wildlife and Countryside Act 1981 (as amended)[3];
- The Countryside and Rights of Way (CRoW) Act 2000[4]; and,
- The Natural Environment and Rural Communities (NERC) Act 2006[5].

The various national legislative statutes, including those identified above, provide protection to a range of ecologically significant sites and species. The legislative protection for the different sites and different species varies according to their sensitivity, rarity and the scale at which they are intrinsically valuable. Those of relevance to this assessment including: Local Nature Reserve (LNR), breeding birds, bats and plant species. Full details of the legislative protection for these sites and species are listed in Appendix A.

Additional sites of ecological importance can be identified by the local authority, such as Sites of Borough Importance for Nature Conservation, however these are not statutorily protected.

The Environment Act 2021 makes provision for targets, plans and policies for improving the natural environment. Section 98 in Part 6 of the Act makes provision for biodiversity gain to be a condition of planning permission, with Schedule 14 identifying the objective being at least 10 % when comparing the post-development site to the pre-development site. However, as planning permission was granted for the development prior to the being passed into statute, and completion of the transitional period of 2 years, it is not considered relevant for this appraisal.

2.2. Planning Policy

2.2.1. National

The National Planning Policy Framework (NPPF)[6] sets out policies which will apply to the preparation of local plans, and to development management decisions. The framework sets out the Government's economic, environmental and social planning policies for England. Taken together, these policies articulate the Government's vision of sustainable development, which should be interpreted and applied locally to meet local aspirations.

The NPPF is supported by planning practice guidance[7], which provides further information on key issues in the implementation of policies identified in the NPPF. Further information on the NPPF and supporting planning practice guidance are given in Appendix A.

2.2.2. Regional

The London Plan[8] is the strategic planning document for London, produced by the Greater London Authority (GLA), setting out an integrated economic, environmental, transport and social framework for the development of London over 20 – 25 years. The London Plan requires all Borough development plans to be in general conformity with it.

Relevant policies within the current London Plan include:

- Policy D7 Public Realm;
- Policy G1 Green Infrastructure;
- Policy G3 Metropolitan Open Land;
- Policy G4 Open Space;
- Policy G5 Urban Greening;
- Policy G6 Biodiversity and Access to Nature; and,
- Policy G7 Trees and Woodland.

2.2.3. Local

Local planning policy for Camden is derived from the Camden Local Plan[9], which was adopted in July 2017. The Camden Local Plan sets out the council's strategic objectives and policies for planning in the Camden district, helping to create conditions to harness the benefits of economic growth, reducing inequality and securing sustainable neighbourhoods.

The vision of the Local Plan is to "make Camden a better borough- a place where everyone has a chance to *succeed and where nobody gets left behind. A place that works for everyone*". The vision is supported by three key objectives, which are:

1. Developing new solutions with partners to reduce inequality and improve health and wellbeing.
2. Creating conditions for and harnessing the benefits of economic growth.
3. Investing in our communities to ensure sustainable neighbourhoods.

The plan includes a number of policies of relevance to the development, biodiversity and nature conservation, which are:

- Policy A1- Managing the impact of development.
- Policy A2- Open Space.
- Policy A3- Biodiversity.
- Policy A4- Noise and Vibration.

2.3. Biodiversity Action Plans

2.3.1. National

The UK BAP has been replaced by the Post-2010 Biodiversity Framework[10], which addresses the changes in the strategic thinking of the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011 – 2020. The new Framework includes new priorities for UK-level work for the convention on Biological Diversity and provides a broad structure to enable action across the UK.

Whilst the BAP has been replaced, the UK priority habitat and species continue to be regarded as conservation priorities in the UK Post-2010 Biodiversity Framework[11].

The UK BAP identifies 65 habitats and 1,150 species that are considered to be of conservation concern.

2.3.2. Regional

The London BAP[12] was prepared by the London Biodiversity Partnership to protect and enhance London's biodiversity. The Plan aimed to ensure that rare species are maintained and that common species remain common, and so contribute to the maintenance of national and global biodiversity. It also aimed to enable the local community to be in contact with nature, especially those that do not have ways to access the countryside.

Although the London Biodiversity Partnership has been disbanded as a result of a lack of funding, regional and organisational delivery of the Plan continues and the aims of the Plan remain relevant.

In order to achieve the aims of the Plan, the BAP identified a number of habitat and species of nature conservation importance taking into account the UK BAP, and targets and actions have been set up to be implemented for their enhancement.

The London BAP identified 15 priority habitats and 214 priority species. A number of Habitat Action Plans and Species Action Plans have been developed, including some important habitats identified for which no action plans have been developed. Those habitats and species of particular note for the assessment include:

Habitats	**Species**
Parks and Urban Greenspaces	Bats
Built Structures	House sparrow (*Passer domesticus*)
Private Gardens	Black redstart (*Phoenicurus ochruros*)
	Dunnock (*Prunella modularis*)
	Peregrine (*Falco peregrinus*)
	Song thrush (*Turdus philomelos*)
	Spotted flycatcher (*Muscicapa striata*)

	Starling (*Sturnus vulgaris*)
	Hedgehog (*Erinaceus europaeus*)

2.3.3. Local

The Camden Biodiversity Strategy[13] provides a strategic focus to ensure species and habitats are understood and considered throughout the decision-making process, and directly supports the overall aim of the Camden Council's Local Planning Policy to shape the local environment. The BAP provides a framework to ensure all legislative requirements and regional and national targets for protecting, conserving and enhancing biodiversity are met at a local level.

In order to achieve the aims of the Plan, the BAP identified a number of habitat and species of nature conservation importance taking into account the UK BAP, and targets and actions have been set up to be implemented for their enhancement.

The Biodiversity Strategy identities BAP identifies eight priority habitats and nine priority species

Habitats	**Species**
Woodland (native broadleaved)	Bats (*Chiroptera sp.*)
Meadows and Pastures	House sparrow (*Passer domesticus*)
Standing water (including canals)	Black redstart (*Phoenicurus ochruros*)
Acid Grassland	Dunnock (*Prunella modularis*)
Reedbed	Peregrine (*Falco peregrinus*)
Heathland	Song thrush (*Turdus philomelos*)
Rivers and Streams	Hedgehog (*Erinaceus europaeus*)
Orchards	Toads (*Bufonidae sp.*)
	Stag beetles (*Lucanidae sp.*)

3. Methodology

3.1. British Standard 42020: Biodiversity- Code of Practice for Planning and Development

This ecological appraisal and reporting has been completed in line with, and with reference to, British Standard (BS) 42020: Biodiversity- Code of Practice For Planning and Development[14]. BS 42020 was developed to bridge the gap between specific best practice guidelines and professional Codes of Conduct and build upon relevant legislation and policy relating to biodiversity.

BS 42020 provides a framework for the assessment of biodiversity and recommendations for the content and detail of reporting on biodiversity features with the aim of improving standards within the profession. This ecological appraisal, including reporting, has been produced in consideration of and compliance with BS 42020.

3.2. Desk Study

Information regarding local biological records was collected through an online search of information sources and a data request to the local biological records centre, Greenspace Information for Greater London (GIGL). Information requested from the local biological records centre included statutory and non-statutory designated sites, notable habitats and legally protected and ecologically significant species. To supplement this request, the following web-based resources were used to collate historical biological records and site conditions within the study area:

- Multi-Agency Geographic Information for the Countryside (MAGIC) website (**www.magic.defra.gov.uk**);
- National Biodiversity Network (NBN) Atlas website (**www.nbnatlas.net**)[i];
- Aerial imagery from Google Earth;
- UK Biodiversity Action Plan website (**http://jncc.defra.gov.uk**);
- London Biodiversity Action Plan (now hosted by **https://www.gigl.org.uk**);
- London Tree Map (**https://london.gov.uk**);
- Greenspace Information for Greater London Biodiversity Hotspots for Planning (**https://data.london.gov.uk**); and,
- Camden Biodiversity Strategy

As species distributions are variable over time, information obtained through the desk study has been restricted to records from 2005 and onwards to ensure records are up-to-date. Any species with no record in the last 16 years are unlikely to remain present within the study area.

[i] Data available under Open Government Licence (OGL), Creative Commons No rights reserved licence (CC0) and Creative Commons licence with attribution (CC-BY) utilised.

3.3. Habitat Appraisal

The habitats present within the field survey have been classified and mapped following the UK Habitat (UKHab) Classification methodology[15], a comprehensive habitat classification system that was developed to establish a single system that can be used to identify habitats and provide better coordination between the various existing classifications *(e.g*., Annex I habitats and BAP priority Habitats). The methodology is well suited to urban areas, with secondary classifications enabling clearer mapping of features of urban greening and is well suited to application by both remote-sensing observation and walkover surveys, or a combination of both methods.

The UKHab classification is hierarchical, with the professional edition utilised for the appraisal and all habitats and assessments to be taken to Level 4 where possible[ii]. Considering the scale of the proposal and the urban context of the site, where habitats are often present at small extent and provide contrast to the surrounding developed land, the fine-scale Minimum Mapping Unit (MMU) of 25m^2 for area-based habitats and 5m length for linear features has been utilised.

An initial appraisal of the site has been completed by remote sensing, using aerial imagery and existing site photography to establish habitats present on the site in as much detail as possible. As the site is principally urban in nature, many of the habitats are relatively common with a significant proportion of habitats present falling within the u1-built-areas category. From this, distinction between the Level 4 and, for developed land, Level 5 categories for the majority of the Application Site is relatively straight forward and whilst Level 5 is not required, mapping to this level has been undertaken for urban habitats to provide distinction across the Application Site. However, other habitats present in the survey area, including g-grassland and h3-dense scrub, can only be identified at a high level and require further investigation to identify accurately to Level 4.

Following on from the remote sensing exercise, a site walkover survey was carried out to ensure mapping of areas is accurate, establishing species lists for the various habitats and identify semi-natural habitats to Level 4 of the UKHab classification where this was not possible through remote sensing. The walkover survey was carried out on the 11th January 2024 by a suitably qualified ecologist, Tanishia Gearing MRes, CIEEM. The survey was undertaken on a day with fair weather. Vegetation present in the study area was identified in accordance with Blamey et al[16].

3.4. Assessment Methodology

CIEEM's guidelines on Preliminary Ecological Appraisal[17] identifies that the appraisals should provide an indication of the ecological value of features present following the methodology provided in CIEEM's Guidelines for Ecological Impact Assessment in the UK and Ireland[18].

For this, it is essential to distinguish between the biodiversity value of a receptor and its legal status. Features of high biodiversity value may not necessarily attract legal

[ii] The only exception being modified grassland, where sub-categories at Level 4 are not available for the habitat type.

protection and vice versa. For example, a viable area of ancient woodland is likely to be of high biodiversity value even if it does not receive any formal statutory designation.

In accordance with the CIEEM guidelines, each biodiversity features should be assessed as valuable, or potentially valuable, based on the following geographic frame of reference; some examples of ecological receptors that may be potentially valuable at each geographic scale are presented below:

- International – *e.g.*, existing or warranting designation as a Special Area of Conservation (SAC) and/or of significant conservation status for Europe;
- National – *e.g.*, existing or warranting designation as a Site of Special Scientific Interest (SSSI) and/or of significant conservation status for England;
- Metropolitan – *e.g.*, existing or warranting designation as a Site of Metropolitan Importance for Nature Conservation (SMINC) and/or of significant conservation status for Greater London;
- Borough – *e.g.*, existing or warranting designation as a Site of Borough Importance for Nature Conservation (SBINC) or Local Nature Reserve (LNR) and/or of significant conservation status for Newham;
- Local – *e.g.*, existing or warranting designation as a Site of Local Importance for Nature Conservation (SLINC) and/or of significant conservation status within a local context (*e.g.*, within 1 km of the proposed scheme);
- Within the immediate survey area only – *e.g.*, habitats or species populations of significant conservation status for the site and immediate surrounding lands;
- Negligible – *e.g.*, habitats or species whose presence does not contribute to the local biodiversity resource or has negative effects on local biodiversity (e.g., invasive species).

3.5. Certification

BREEAM Refurbishment and Fitout 2014 is an assessment system that allows the sustainability of a development to be established against a number of criteria, including energy and water efficiency, sustainable resource use, re-use of land, pollution prevention and impacts on biodiversity and ecology. Buildings are graded from 'Pass' to 'Outstanding' depending on their overall sustainability performance.

Details of each 'Land-use and Ecology' credit applicable to biodiversity are given below.

3.5.1. LE04 – Enhancing Site Ecology

The aim of these credits is to recognise any steps taken to enhance the site ecology, based upon the advice of a SQE.

1st credit is awarded where evidence is provided to demonstrate that the design team (or client) has implemented measures recommended by the SQE to enhance the ecological value of the site, based upon the site survey.

2nd credit- not appliable simple buildings only

3.5.2. LE05 – Long-Term Impact on Biodiversity

The aim of these credits is to encourage long term protection and enhancement of biodiversity on the site and the surrounding area. This includes the provision of Landscape and Habitat Management plan to outline measures and their implementation.

Credits are available where evidence of the implementation of measures to manage and maintain ecology throughout the project following relevant UK and EU legislation relating to the protection of biodiversity. Where the development of a landscape and ecology management plan, or equivalent, has been developed and implemented. **The number of credits applicable** is dependent upon the number of enhancements incorporated into the development**.** 1 credit is available when 0-2 enhancements are incorporated, and **2 credits are available** where 3+ enhancements have been incorporated.

3.6. Limitation

The methods employed for the completion of the ecological assessment are not considered to give rise to any significant limitations, following best practice guidance and utilising up-to-date information.

The roof of the building was not accessible at the time of survey, so the most up-to-date aerial and satellite imagery has been used to assume habitat type and quality.

4. Baseline Assessment

4.1. Desk Study

4.1.1. Statutory and Non-Statutory Designated Sites

No statutory designated sites were found within a 2km radius of the Application Site.

49 non-statutory sites were located within a 2km radius of the Application Site. This includes 40 sites of importance for nature conservation (SINCs), eight proposed SINCs and one recommended locally important geological site (LIGS). The sites present are identified in Table 4.1 and Figure 4.1.

Table 4.1 Designated Sites in the Study Area

Site	Area (ha)	Proximity to Application Site
Sites of Importance for Nature Conservation		
Metropolitan		
London's Canals	187.50	1.95 km northeast
River Thames and tidal tributaries	2312.73	0.87 km southwest
St James's Park, Green Park and Buckingham Palace Gardens	57.54	1.83 km southwest
Site of Borough Importance for Nature Conservation – Grade I		
Westminster Abbey, Great Cloister and College Garden	0.60	2.15 km southwest
Marlborough House Garden	1.41	1.67 km southwest
Site of Borough Importance for Nature Conservation – Grade II		
Temple Gardens	2.20	0.83 km southeast
The Barbican and St Alphage's Gardens	3.06	1.80 km northeast
Claremont Square Reservoir	0.68	1.69 km northeast
Claremont Close Lawns	0.20	1.77 km northeast
Charterhouse	0.85	1.39 km northeast
Park Square Gardens	2.24	2.00 km northwest
Middle Temple Garden (Westminster section)	0.07	0.82 km south-east
Site of Local Importance for Nature Conservation		
Phoenix Garden	0.12	0.67 km southwest
Calthorpe Community Garden	0.44	1.10 km northeast
St Andrew's Gardens	0.66	1.01 km northeast

Site	Area (ha)	Proximity to Application Site
St George's Gardens	1.06	1.01 km north
Russell Square	2.49	0.66 km northwest
Lincoln's Inn Fields	2.93	0.19 km southeast
Gordon Square	0.92	1.23 km northwest
Coram's Fields	2.70	0.90 km north
St Paul's Cathedral gardens	0.71	1.58 km southeast
Cleary Gardens	0.11	1.73 km southeast
Aldermanbury Gardens	0.10	1.85 km east
Roman Wall, Noble Street	0.06	1.66 km east
Spa Green Garden	0.32	1.55 km northeast
St John's Gardens	0.14	1.17 km northeast
Lloyd Square	0.19	1.41 km northeast
Wilmington Square	0.39	1.23 northeast
King Square Garden	1.25	1.81 km northeast
Moreland Primary School Garden	0.02	1.88 km northeast
Winton Primary School Garden	0.03	1.80 km northeast
Fortune Street Garden	0.37	1.85 km northeast
Skinner Street Open Space	0.38	1.31 km northeast
Spa Fields Gardens	0.84	1.25 km northeast
Waterloo Millennium Green	0.55	1.91 km southeast
Christchurch Gardens	0.51	1.60 km southeast
St James's Square	0.92	1.51 km southwest
Victoria Embankment Gardens: Main Garden	1.88	0.90 km southwest
Victoria Embankment Gardens: Whitehall Garden	0.84	1.23 km southwest
Victoria Embankment Gardens: Temple Section	0.27	0.76 km southeast
Proposed Sites of Importance for Nature Conservation		
Metropolitan		
River Thames and tidal tributaries	2314.90	0.75 km southwest
Site of Borough Importance for Nature Conservation – Grade I		

Site	Area (ha)	Proximity to Application Site
Barbican Estate, Barber Surgeons' Garden and St Alphage Garden	3.18	1.80 km northeast
Site of Borough Importance for Nature Conservation – Grade II		
The Temple Gardens	2.20	0.83 km southeast
Roman Wall, Noble Street and St. Anne & St. Agnes Churchyard	0.17	1.66 km east
Site of Local Importance for Nature Conservation		
St Paul's Cathedral Churchyard Gardens	0.72	1.58 southeast
Cleary Garden	0.11	1.73 southeast
St Mary Aldermanbury Garden	0.10	1.85 km east
Postman's Park	0.26	1.56 km northeast
Important Geological/Geomorphological Sites		
Recommended Locally Important Geological Sites (LIGS)		
Finsbury Gravel, Sadler's Wells	0.23	1.69 km northeast

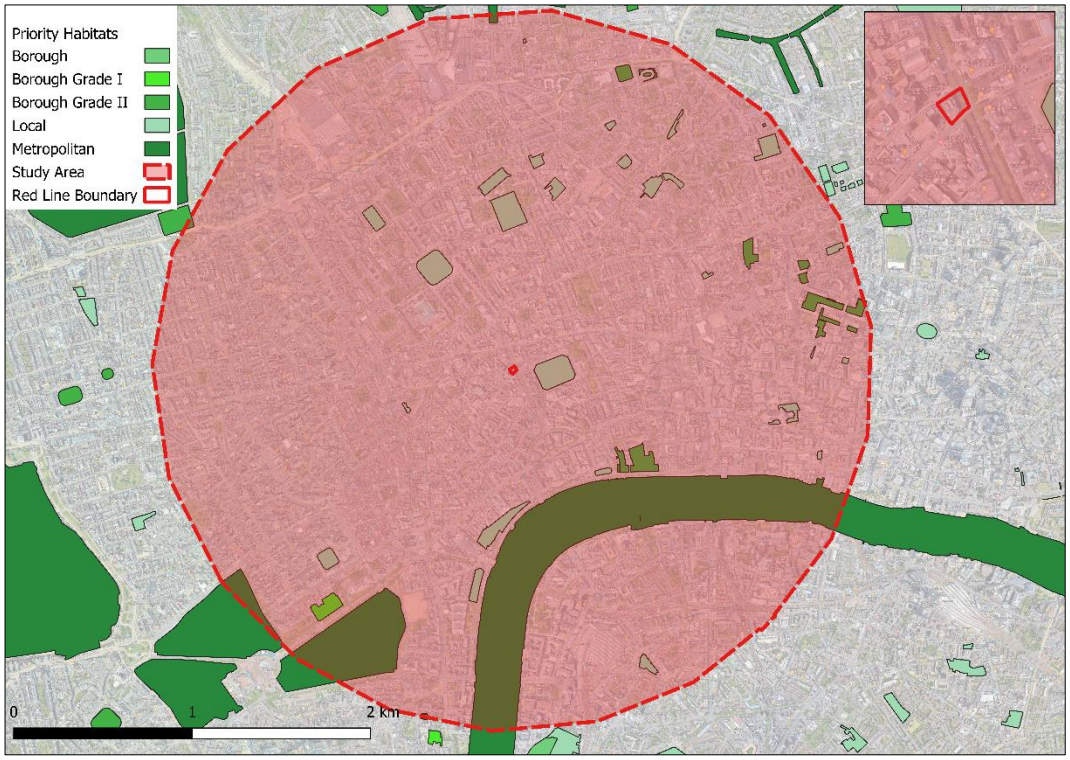

Figure 4-1 Non-Statutory Designated Sites within Study Area (Contains public sector information licensed under the Open Government Licence v3.0 and Ordnance Survey data © Crown copyright and database right 2024)

4.1.2. Notable Habitats

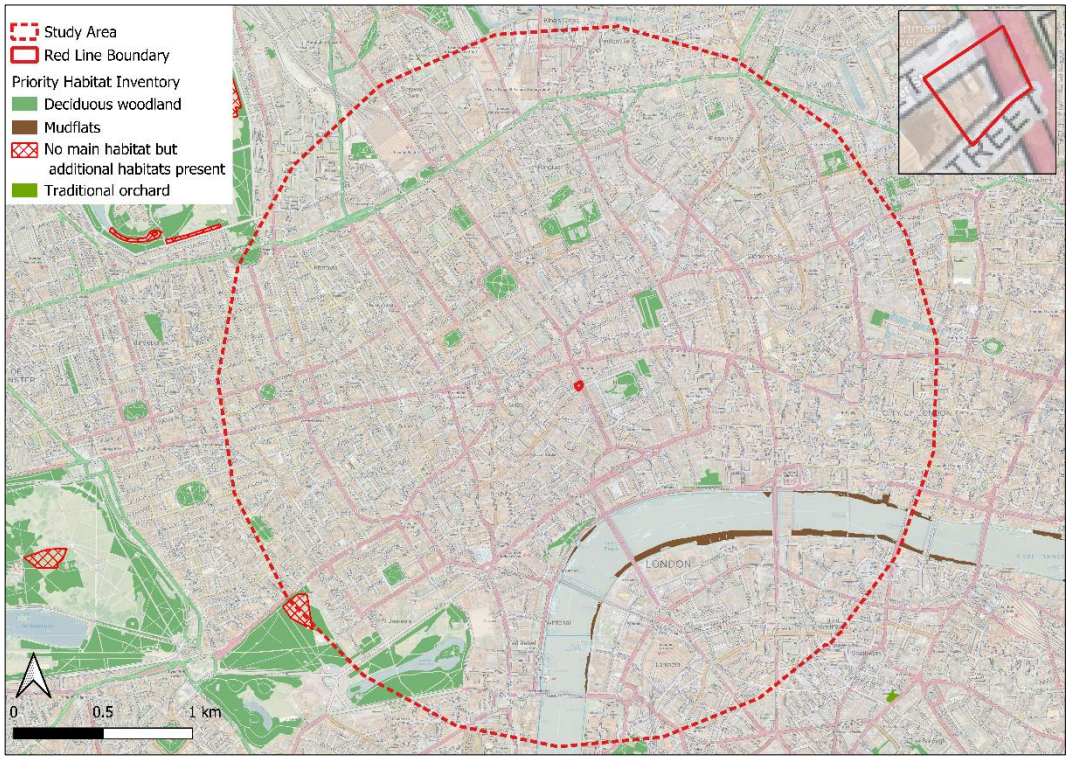

Figure 4-2 ***UK BAP Priority Habitats Within 2km of the Proposed Development***
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The study area does not have any areas of ancient woodland, however three priority habitats were found within the study area. These comprise deciduous woodland, mudflats and traditional orchard, as well as areas where no main habitat is identified but additional priority habitats are present. Deciduous woodland is seen across the majority of the study area, with the largest areas being seen to the southwest of the site within Green Park and St James Park. This is also where the additional habitat areas are found. There are several areas of mudflats, however these are concentrated to the banks of the Thames, seen on both the north and south bank. Traditional orchard is only found in one area, with a very small section bordering the study area in the south, found within the Lambeth Palace Garden. These priority habitats are identified within Figure 4-2

4.1.3. Biodiversity Indicators

The biodiversity potential of the development is also indicated in the GiGL's Biodiversity for Planning resource, which defines the areas according to the presence of known designated sites, BAP priority habitats as well as protected and priority species. Areas with a score of 0 identify locations with no currently known protected sites, habitats or species, whilst areas with a score of 3 indicate potential impact(s) on all three areas of the criteria. Scores in between these have the potential to impact one or two of the three categories identified.

As illustrated in Figure 4-3, the biodiversity potential of the site is 0.

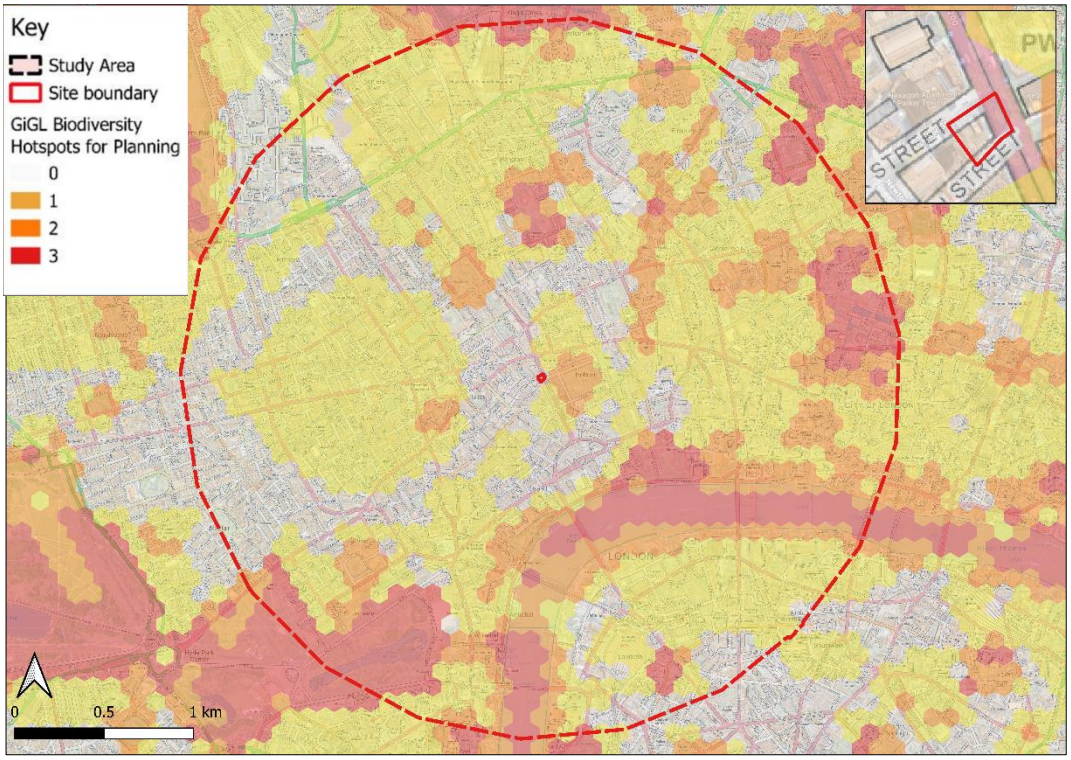


Figure 4-3 GiGL Biodiversity Hotspots for Planning (Map displays GiGL data, November 2019; Contains Ordnance Survey data © Crown copyright and database right 2024)

4.1.4. Protected and Ecologically Significant Species

4.1.4.1. Biological Records Centre

16398 records of protected or notable species were returned from GiGL across 151 species, within a 2km radius of the site, within the most recent records for each species dating from 2003 to present day.

The closest record returned was for grey wagtail (*Motacilla cinerea*), which was reported 102m to the northeast of the site boundary in June 2011.

The most recent records of relevance to the site include four species reported on 24th August 2023 and located 1727m southwest of the Application Site boundary, as follows:

- Herring Gull (*Larus argentatus*);
- Lesser Black-backed Gull (*Larus fuscus*);
- Pochard (*Aythya ferina*); and
- Gadwall (*Mareca strepera*).

4.1.4.2. Birds

7651 records of protected or notable bird species were returned across 75 species of bird within a 2km radius of the Application Site. The nearest and most recent records are provided in Section 4.1.4.1 above.

Those species potentially present within the development site and immediately surrounding habitats, based on proximity, most recent records and typical habitat requirements are identified in Table 4.2.

Table 4.2 Bird Species Associated with Development Site Habitats Identified within the Study Area

Species		Most Recent Record	Closest Record
Baltic Gull	*Larus fuscus fuscus*	2019	492m southwest
Barnacle Goose	*Branta leucopsis*	2022	1712m southwest
Bar-tailed Godwit	*Limosa lapponica*	2012	1910m southeast
Black Tern	*Chlidonias niger*	2013	907m south
Black-tailed Godwit	*Limosa limosa*	2009	1753m south
Brambling	*Fringilla montifringilla*	2017	1898m southwest
Common Redpoll	*Acanthis flammea*	2018	1351m north
Common Sandpiper	*Actitis hypoleucos*	2019	709m northwest
Common Scoter	*Melanitta nigra*	2018	1842m east
Common Tern	*Sterna hirundo*	2019	709m northwest
Cuckoo	*Cuculus canorus*	2019	709m northwest
Curlew	*Numenius arquata*	2013	1910m southeast
Dunnock	*Prunella modularis*	2023	216m east
European White-fronted Goose	*Anser albifrons albifrons*	2017	1893m southwest
Fieldfare	*Turdus pilaris*	2019	216m east
Firecrest	*Regulus ignicapilla*	2017	709m northwest
Gadwall	*Mareca strepera*	2023	492m southwest
Golden Plover	*Pluvialis apricaria*	2018	1842m east
Goldeneye	*Bucephala clangula*	2022	709m northwest
Green Sandpiper	*Tringa ochropus*	2018	1744m east
Greenfinch	*Chloris chloris*	2022	216m east
Grey Wagtail	*Motacilla cinerea*	2022	102m northwest
Herring Gull	*Larus argentatus*	2023	121m southeast
House Martin	*Delichon urbicum*	2019	709m northwest

Species		Most Recent Record	Closest Record
House Sparrow	*Passer domesticus*	2023	253m south
Kingfisher	*Alcedo atthis*	2019	901m south
Kittiwake	*Rissa tridactyla*	2011	878m south
Lapwing	*Vanellus vanellus*	2018	838m northeast
Lesser Black-backed Gull	*Larus fuscus*	2023	121m southeast
Lesser Redpoll	*Acanthis cabaret*	2018	838m northeast
Lesser Spotted Woodpecker	*Dryobates minor*	2015	1898m southwest
Lesser Whitethroat	*Curruca curruca*	2019	1260m southeast
Linnet	*Linaria cannabina*	2019	1172m south
Little Egret	*Egretta garzetta*	2019	1733m southeast
Little Gull	*Hydrocoloeus minutus*	2018	709m northwest
Marsh Harrier	*Circus aeruginosus*	2018	1434m north
Mediterranean Gull	*Ichthyaetus melanocephalus*	2019	709m northwest
Merlin	*Falco columbarius*	2019	1898m southwest
Mistle Thrush	*Turdus viscivorus*	2019	216m east
Nightingale	*Luscinia megarhynchos*	2012	1898m southwest
Osprey	*Pandion haliaetus*	2018	817m southwest
Pied Flycatcher	*Ficedula hypoleuca*	2017	842m southeast
Pochard	*Aythya ferina*	2023	492m southwest
Red Kite	*Milvus milvus*	2019	709m northwest
Red-breasted Goose	*Branta ruficollis*	2019	1722m southwest
Redwing	*Turdus iliacus*	2023	216m east
Reed Bunting	*Emberiza schoeniclus*	2019	1610m east
Ring Ouzel	*Turdus torquatus*	2019	1821m southeast
Ringed Plover	*Charadrius hiaticula*	2018	1842m east
Ruddy Shelduck	*Tadorna ferruginea*	2019	1566m southwest
Sand Martin	*Riparia riparia*	2019	709m northwest
Sandwich Tern	*Thalasseus sandvicensis*	2013	878m south
Scaup	*Aythya marila*	2019	1898m southwest
Shag	*Gulosus aristotelis*	2014	793m south

Species		Most Recent Record	Closest Record
Shelduck	*Tadorna tadorna*	2023	1566m southwest
Skylark	*Alauda arvensis*	2018	1260m southeast
Slavonian Grebe	*Podiceps auritus*	2017	1898m southwest
Smew	*Mergellus albellus*	2019	492m southwest
Song Thrush	*Turdus philomelos*	2022	216m east
Spoonbill	*Platalea leucorodia*	2018	1744m east
Spotted Flycatcher	*Muscicapa striata*	2019	364m north
Starling	*Sturnus vulgaris*	2022	216m east
Swift	*Apus apus*	2019	216m east
Tawny Owl	*Strix aluco*	2021	838m northeast
Tree Pipit	*Anthus trivialis*	2012	1910m southeast
Tree Sparrow	*Passer montanus*	2018	1699m east
Whimbrel	*Numenius phaeopus*	2018	1374m southeast
White Stork	*Ciconia ciconia*	2019	984m southwest
White-fronted Goose	*Anser albifrons*	2019	1898m southwest
White-tailed Eagle	*Haliaeetus albicilla*	2006	1898m southwest
Woodcock	*Scolopax rusticola*	2020	121m southeast
Wryneck	*Jynx torquilla*	2014	1259m east
Yellow Wagtail	*Motacilla flava*	2018	1744m east
Yellowhammer	*Emberiza citrinella*	2018	1744m east

4.1.4.3. Mammals

GiGL returned 8049 records of mammals (terrestrial and marine) within the search area across 10 species, dating between 2004 and present day. The most recent record returned was for West European Hedgehog (*Erinaceus europaeus*), which was reported in October 2022, approximately 1642m southeast of the Application Site. The closest record was for bat (*Chiroptera*), returned in August 2016 approximately 382m to the northwest.

Owing to the proximity of the Application Site to any waterbodies, marine mammals have been removed from Table 4.3, however all other mammal species recorded within the study area can be seen.

Table 4.3 Mammal Species Associated with Development Site Habitats Identified in the Study Area

Species		Most Recent Record	Closest Record
Common Pipistrelle	*Pipistrellus pipistrellus*	2021	216m east

Species		Most Recent Record	Closest Record
Pipistrelle Bat species	*Pipistrellus*	2021	313m east
Bats	*Vespertilionidae*	2020	533m northwest
Bat	*Chiroptera*	2019	382m northwest
Soprano Pipistrelle	*Pipistrellus pygmaeus*	2017	585m west
Nathusius's Pipistrelle	*Pipistrellus nathusii*	2013	1300m northwest
Noctule Bat	*Nyctalus noctula*	2011	1878m southwest
West European Hedgehog	*Erinaceus europaeus*	2022	469m southeast

4.1.4.4. Other Notable Species

GiGL returned 231 records of amphibians and reptiles within the search area across three species, dating between 2004 and 2024. The most recent record was for a common frog (*Rana temporaria*) in August 2022, which was observed approximately 1699m east of the Application Site. The closest record was for a common toad (*Bufo bufo*), which was approximately 663m to the southeast. A full list of reptile and amphibian species returned within the study area can be seen in Table 4.4.

Table 4.4 Amphibian and Reptile Species Associated with Development Site Study Area

Species		Most Recent Record	Closest Record
Common Frog	*Rana temporaria*	2022	606
Common Lizard	*Zootoca vivipara*	2021	1220
Common Toad	*Bufo bufo*	2015	663

4.1.4.5. Defra MAGIC

A search of the MAGIC database identified that the Application Site is within a SSSI risk zone, for Hampstead Heath SSSI ad Walthamstow Wetlands, however the restrictions of this impact zone do not include the proposed uses of the development.

Two granted European protected species application was returned within the study area approximately 1.35km northwest of the Application Site, referring to common pipistrelle bats, starting in September 2015 and ending in March 2020 (2014-6253-EPS-MIT) and one 1.8km northwest, referring to soprano pipistrelle bats, starting in September 2017 and ending in September 2022 (2017-30911-EPS-MIT).

4.2. Field Survey

4.2.1. Habitats

The following sections describe the habitats that were identified in the field survey area according to the UKHab classification definitions and following CIEEM best practice guidance. The habitat descriptions should be read in conjunction with the UKHab classification survey map, with **Figure 4.4** identifying the area-based. Site photographs are included in **Appendix B**.

The Application Site was dominated with hardstanding and buildings.

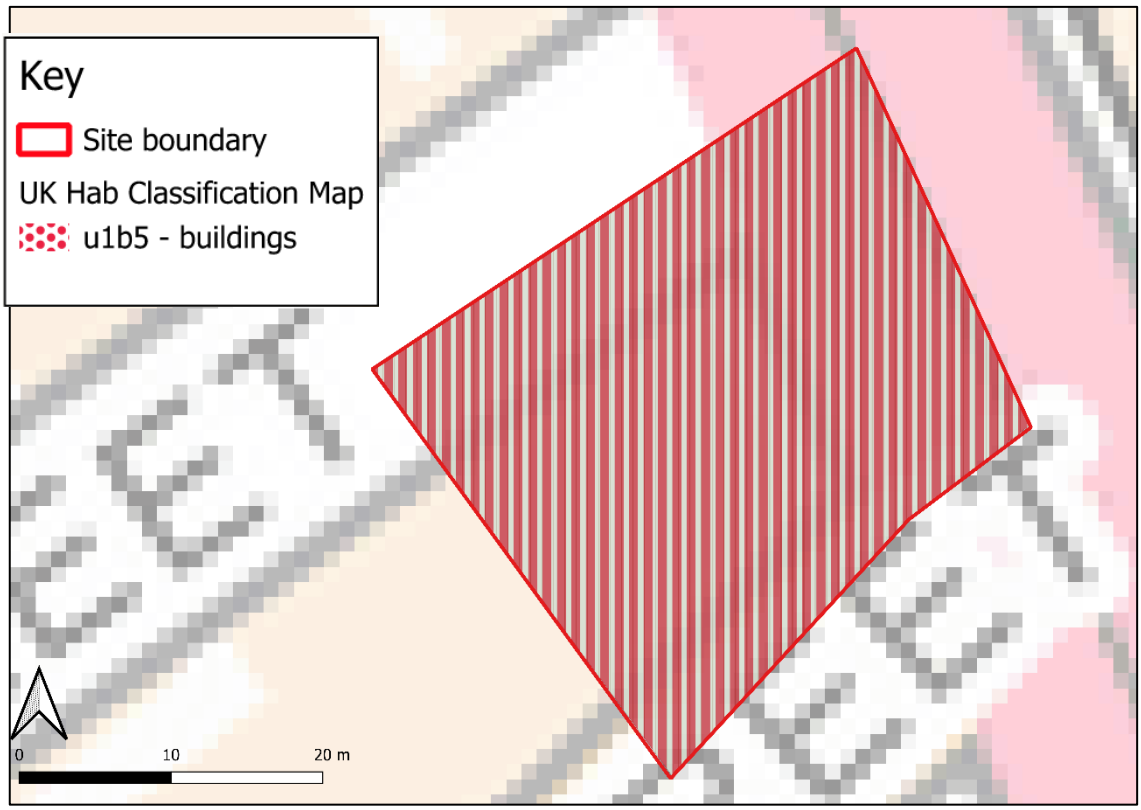


Figure 4-4 UK Habitat Classification Map

4.2.1.1. u1b- Developed Land: Sealed Surface

The site was dominantly artificial sealed surfaces, with that site being entirely encompassed within the footprint of the existing building These habitats held no ecological value.

4.2.2. Species

4.2.2.1. Flora

No flora present on site.

4.2.2.2. Birds

Rock doves (*Columba livia*) were observed within the site, seen within anti-bird measures at the centre of the site. Although pigeons were not directly observed nesting, the birds that were observed were collecting materials that could be used in a nest, so the occurrence of birds within the site cannot be ruled out.

4.2.3. Conclusion

The site had negligible to low ecological value owing to the urban nature of the site, and the dominance of artificial habitats within the site.

Considering the extent of the proposed development works, the construction zone within the site can be considered to be of 'low ecological value'. Consequently, the development is eligible for the first credit available under BREEAM LE02, provided the credit criteria are met following assessment by the BREEAM Assessor.

5. Ecological Impacts and Mitigation

The Proposed Development is described as change of the use of the existing building from Class E Office use to Class C1 apart hotel use with extension and remodelling of the upper storeys.

The objective is to retain the external envelope and the major structural elements utilising the plan form to deliver a more environmentally and economically responsible proposal to ensure a long term and viable use for the Site.

The recommendations have been made in consideration of Clause 10 of BS 42020, on the implementation of development: biodiversity on construction sites.

5.1. Potentially Damaging Activities

5.1.1. Design

The design of the proposed development has some implications to the sites existing biodiversity value, notably associated with the line of trees in the that run adjacent to the site boundary. The trees have the potential to provide shelter and food for a number of faunal species, as well as the benefits to other floral species.

The development design does provide opportunities for enhancement associated with greening, with proposed designs implementing green roof area and terrace landscaping.

5.1.2. Construction

The main potential for impacts associated with the proposed development would occur during the construction phase, with the undertaking of construction activities. Efforts should be made to not disrupt the surrounding ecological features and connectivity.

5.1.3. Operation

Considering the urban nature of the development site and level of activity in the surrounding area, adverse impacts upon biodiversity during the operation of the site are considered unlikely. Appropriate management of enhancements provided, discussed further in Section 1, will ensure the enhancements continue to benefit biodiversity in the long-term.

5.2. Changes in Habitat Extent

As discussed in Section 4.2, the habitats identified in the pre-planning ecological assessment of the development site are considered to be the most appropriate baseline against which to assess the BREEAM requirements. Based on the habitats characterised during the field survey, the development site was identified as supporting 0 biodiversity units, as identified in Appendix D. Within the statutory biodiversity net gain metric, a net gain score is not possible with a baseline of 0 units, however the landscaping designs meet trading standards for the sites net gain accreditation. Owing to the score of the baseline site habitats, the redevelopment of the site equates to a minimal change in

ecological values in line with the terms of the BREEAM LE03 credit. However, when considering the contribution of the landscaping proposals, including the addition of green roof and flower rich perennial planting, the development will deliver a positive impact in biodiversity.

5.2.1. Protection of Biodiversity

As the development baseline consists of hardstanding, damage to biodiversity is somewhat limited, however the trees adjacent to the site should be protected during construction and operation phases wherever possible.

The mitigation measures identified in this Section provide a precautionary approach to ensure the biodiversity is protected on site during the construction phases, particularly in the event of any changes in circumstance from the baseline surveys. The approach minimises potential risks to the contractor and construction programme associated with such changes (*e.g.* the establishment of nesting birds), as well as safeguarding biodiversity features.

5.3. General Measures

Ecology can often be seen as a hindrance to development, with the presence of protected species hampering development. However, this is often caused by a lack of awareness of the presence of flora and fauna on site, the reason for their protection, and the activities that can be lawfully conducted whilst animals in particular are using the site.

5.3.1. Lighting

Impacts upon potential biodiversity value associated with the developed site and their potential use by nocturnal species can be avoided by appropriate lighting establishment. Any lighting utilised within the development should consider the potential for impact on environmental receptors whilst creating a safe and accessible environment, and should follow best practice guidance provided by the Institute of Lighting Professionals (ILP)19. Whilst this is focussed on bats, it will have benefits to all nocturnal species and could include the following:

- All luminaires should lack UV elements when manufactured. Metal halide or fluorescent sources should not be used;
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability;
- A warm white spectrum (ideally < 2,700 Kelvin) should be adopted to reduce blue light component;
- Luminaires should feature peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats;
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill;
- The used of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. However, this often comes at a cost of

unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be used as directed by a lighting professional;

- Column heights should be carefully considered to minimise light spill;
- Only luminaires with an upward light ration of 0 % and with good optical control should be used;
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt;
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed; and/or,
- Ensure lights are switched off when they are not needed, where appropriate, either through the use of programmable fixtures or by PIR/motion sensor activation.

Inclusion of the above recommendations within the construction phase, in particular ensuring light is directed away from peripheral areas and are switched off overnight, will also ensure impacts in construction are minimised.

5.3.2. Habitats of Ecological Value

5.3.2.1. Species

The following best practice measures and mitigation options have been identified to minimise or negate the potential adverse effects on biodiversity, and have considered the potential for changes in circumstances as a result of species establishing themselves between the survey and commencement of construction activities.

It is recommended that routine inspections of the site are carried out to check for signs of the following species. An experienced ecological consultant should be available to provide advice and guidance where necessary.

5.3.2.2. Breeding Birds

The potential for the presence of breeding birds could compromise a constraint to the development, depending on the construction phase programme. Although direct evidence of breeding and/or nesting birds was not observed, several birds, namely domestic pigeons were observed throughout the site, so there is a moderate possibility for breeding birds within the site and therefore mitigation measures should be followed.

If works are scheduled to commence during the bird nesting season (typically March to August inclusive, although weather dependent) the site should be checked for any nesting birds, with areas more protected from the weather (*e.g*. terraces, roof, ledges).

In the event that a nest of any bird species is identified on site, works within the immediate vicinity should cease and further ecological advice be sought. If further assessment by a suitably qualified ecologist confirms the nest to be inactive, then works can proceed. However, if the further survey deems that the nest is active, then further consideration will be required as to whether to certain activities can be carried out. However, the structure supporting the nest will need to remain until the young have fledged the nest.

This approach will ensure that the development does not have a detrimental effect on birds using the site and the contractor/developer will remain compliant with wildlife legislation.

5.3.2.3. Bats

The site is considered to be of negligible potential for roosting bats.

5.3.2.4. Recording and Monitoring

It is recommended that a record is kept of the training given to site personnel in the induction and keeps a diary or log of site inspections carried out. The effectiveness of the measures described above should also be recorded, along with any actions required, such as the use of a falconer to discourage birds from the site.

For example, '*Thursday 24 March 2023. Site inspection carried out by [NAME]. Pair of pigeon noted investigating the 3rd floor steel frame. Falconer called in to discourage birds from the site and prevent them from nesting*'.

In addition to this, the environmental procedures outlined above should be subject to regular review to ensure the measure are effectively implemented and where deficiencies are identified remedial action should be taken and documented.

5.4. Conclusion

The site is deemed to be of low to moderate ecological value, owing to the presence of several medium trees. The protection of the site should follow the mitigation hierarchy (Table 5-1) wherever possible as to cause the least amount of disturbance to the biodiversity of the site and surrounding area.

Table 5-1 Mitigation Hierarchy

Hierarchy Level	Mitigation
Avoidance	Development of the urban site avoids development of greenfield sites or those of higher biodiversity value in the wider area, and associated impacts on habitats. Consideration of best practice guidance in any additional lighting design/provision will avoid impacts on nocturnal species during construction and operation. Recommendations in best practice guidance, provided by the ILP, should be followed.
Protection	If identified to be present, any active nests within the development site should be protected from removal and, depending on the species present,

Hierarchy Level	Mitigation
	potentially from disturbance until the young have fledged.
Reduction or Limitation of Negative Impacts	The inclusion of best practice measures for construction and appropriate measures for staff awareness (e.g. site inspection and training of staff) will reduce the likelihood or magnitude of negative effects on biodiversity.
On-Site Compensation	Not applicable
Enhancement	Enhancements proposed within the development proposal are discussed in full in Section 6, detailing the habitats included within the landscape design and habitat aids proposed for inclusion. A Landscape and Ecological Management Plan should be produced, in line with BS 42020, detailing the management recommendations, constraints and responsible person(s) for the management of biodiversity features

6. Ecological Enhancement

6.1.1. Habitats

Although the development site is not in an area of deficiency in relation to access to nature, identified in the biological records, enhancement of the local environment is proposed as part of the development to deliver a range of benefits locally, including biodiversity and other ecosystem services, such as surface water management and access to nature, complying with the planning policy requirements associated with the provision of a net gain in biodiversity terms.

The proposed development incorporates a range of planting within the proposed designs, including green roofs and flower planting within the terraces on the eighth floor.

Where relevant, recommendations have been made as to the types of plants that should be included, where possible, and a minimum number of plant species for the habitat types identified to support identification of the BREEAM credits that could be achieved.

6.1.2. Green Roof

Green roofs are one of the principal methods of providing biodiversity enhancement in the urban environment, and alongside biodiversity enhancement provide a range of ecosystem services that include the regulation of temperature[20], mitigation of the urban heat island effect[21], protection of watersheds by intercepting runoff[22], and uptake of pollution from rainwater[23] and air[24].

There are two types of green roof habitats, extensive green roof and intensive green roof habitats. Extensive green roof habitats are characterised by a thinner layer of growing medium/substrate, usually between 50mm and 200mm, and are relatively lightweight. However, because of the thin substrate layer, the extensive roof environment is a relatively harsh one for plant growth as a result of limited water availability, wide temperature fluctuation, high exposure to wind and solar radiation. As a result, a relatively small range of plant species is normally used for this type of green roof, with stonecrop (*Sedum*) species being the most commonly used[25]. An alternative to the sedum habitat is the provision of brownfield habitat, with a gravel and/or sandy substrate supporting ruderal species, often of local provenance such wild carrot (*Daucus carota*) and ox-eye daisy (*Leucanthemum vulgare*), as well as stonecrop species with a floral coverage of up to 70%. However, such habitats can appear to be untidy due to the visibility of bare substrate.

Intensive green roofs are characterised by a thick layer of growing medium/substrate, usually greater than 200mm, in which a wide range of plants and vegetation can be grown. Intensive green roofs are capable of supporting a relatively high species diversity, with complementary resource use allowing for greater productivity and stability of the environment. As a result, the habitat has a greater diversity in structure, with a range of species creating a varied three-dimensional structure which is capable of intercepting more light[26], and therefore temperatures on such roofs are lower than habitats with a monoculture[27]. The greater structural diversity and complementary use of resources also increases the habitat's resistance to environmental change, with the habitat naturally

responding to fluctuations in environmental conditions and being more resilient to pests or invasion by weeds[28].

The proposed designs include the provision of extensive green roof, owing to intensive green roof not being appropriate to the structural load of the building.

6.1.3. Terrace Landscaping

The inclusion of landscape planting on terrace areas can provide both amenity value to occupants and additional supporting value for biodiversity. As green roof habitats are not suitable for inclusion in high access areas, planting on roof terraces is often better suited to the introduction of more formal landscaping within raised planters or incorporated into the roof structure (similar to a green roof). Planting can comprise a range of types, typically wildflower or shrub species, with the latter providing natural screening to break terrace spaces up into different zones.

The final landscaping scheme should ensure the planting schedule incorporates a wide variety of wildflowers that have a known value to wildlife, such as those identified by the Royal Horticultural Society in their Plants and Pollinators resource. In addition to this, good horticultural practice should be implemented, such as the use of peat-free composts, mulches and soil conditioners.

6.1.4. Change in Habitat Area

The landscaping proposals have been assessed with regard to their ecological value to ascertain the change in value from pre-development site to the post-development site. The baseline assessment of the habitat deemed the site to have 0 habitat units. The proposed development, with further details given in Section 6, generate an additional 0.01 habitat. As the site has a baseline of 0 habitat units, the project is exempt from mandatory biodiversity net gain, however all trading rules are satisfied.

The Urban Greening Factor (UGF) of the proposed development was calculated, achieving a score of 0.0496, which does not reach the targeted 0.4, however the site is an existing building with limited areas in which natural habitat can be added.

6.2. Species

The following species enhancements are recommended to enhance habitat opportunities for bird, bat and invertebrate species likely to be present within the urban environment, and have been made in consideration of the targets contained within the Local and London BAPs. By linking to the BAP targets, enhancements associated with the development can help contribute to the improvement of biodiversity opportunities for significant species across a wider area.

6.2.1. Birds

CIRIA guidance identifies that artificial nesting boxes can make an important contribution to providing alternative wildlife refuges, enhancing the biodiversity value of buildings cheaply and easily[29]. Establishment of species within the boxes is, however, dependent

on the provision of the right conditions with the 4 basic components of habitat required in the locality: food, cover, water and space[30].

Further value to the enhancements can be achieved by identifying appropriate nest boxes that target species of conservation concern, where possible and suitable. The bird species with an identified presence in the study area that would utilise urban habitats, as informed by the desk study information, include a number of species of conservation concern. These species include 11 red listed species and 7 amber listed species. Although these do not confer any legislative protection, identification on one of the lists reflects the current status of a bird species as being of conservation value at either the UK or European level. In addition to this, 6 of the species are identified as Priority Species in the London BAP (identified in bold) present in the study area. Furthermore 5 species are specially protected under the Wildlife and Countryside Act 1981 (as amended).

Table 6-1 Bird Species of Conservation Concern Associated with Urban Habitats

Species				
Dunnock	*Prunella modularis*	Amber	Moderate decline	No
Fieldfare	*Turdus pilaris*	Red	-	Yes
Firecrest	*Regulus ignicapilla*	Green	-	Yes
Greenfinch	*Chloris chloris*	Red	Rapid decline	No
Grey wagtail	*Motacilla cinerea*	Amber	Moderate decline	No
Herring gull	*Larus argentatus*	Red	-	No
House martin	*Delichon urbicum*	Red	Rapid decline	No
House sparrow	*Passer domesticus*	Red	Rapid decline	No
Lesser black-backed gull	*Larus fuscus*	Amber	-	No
Lesser redpoll	*Acanthis cabaret*	Red	Rapid decline	No
Lesser spotted woodpecker	*Dryobates minor*	Red	Rapid decline	No
Mediterranean gull	*Ichtyaetus melanocephalus*	Amber	-	Yes
Mistle thrush	*Turdus viscivorus*	Red	Rapid decline	No
Redwing	*Turdus iliacus*	Amber	-	Yes

Species				
Song thrush	*Turdus philomelos*	Amber	Rapid decline	No
Spotted flycatcher	*Muscicapa striata*	Red	Rapid decline	No
Starling	*Sturnus vulgaris*	Red	Rapid decline	No
Swift	*Apus apus*	Red	Decline	No

The inclusion of nest boxes, has been deemed inappropriate for the site, owing to the lack of natural habitat within the site, and the lack of connectivity to the wider natural environment.

6.2.2. Invertebrates

To increase the potential of the landscaped enhancements to provide improved opportunities for invertebrates, it is recommended that a range of features are incorporated into the green roof habitats, with piles and log piles to be provided in appropriate areas of the roof to encourage a range of invertebrate species to use the habitats present.

In addition to this, it is recommended that **2x Schwegler Clay and Reed Insect Nests** are provided (see Figure 6.15). These should be positioned within the landscaped areas, ideally placed in a sunny yet sheltered spot.

Figure 6-1 Schwegler Clay and Reed Insect Nest

6.3. Conclusion

The proposed development incorporates green roofs and terrace landscaping. The inclusion of artificial habitats aids will enhance the ecological value of the site and provide benefit to both the site and the surrounding area. This report outlines additional

enhancements and recommendations that could be implemented into the development to increase the functionality of the site for both floral and faunal species, including those specifically targeted within national, regional and local biodiversity action plans.

7. Long-Term Recommendations

The following recommendations for long-term management of the site have been prepared in consideration of BS42020 Clause 11.1 on Post-development management of habitats and species. The recommendations outlined below should be adopted as part of a Landscape and Ecology Management Plan (LEMP) however it should be noted that the following section do not comprise such a plan in isolation. The following sections have been prepared such that they can be lifted into a LEMP with additions or updates to the text as required to provide detail regarding the final enhancements incorporated and additional detail not available at this time.

Although the landscape provision is subject to further development and may change to that presented, the following has been prepared in the basis of the current landscaping provision to demonstrate the long-term management requirements of the post-development site. The LEMP will need to be prepared in the basis of the following, incorporating any subsequent changes to design of type.

7.1. Biodiversity Features

7.1.1. On-Site

The development on 99-103 Kingsway site will include the provision of a green roof habitat at the roof level and terrace landscaping within the eighth level.

7.1.2. Surrounding Area

The site is located within a well-developed part of London, however there are semi-natural areas within the surrounding environment. These include Lincoln's Inn Field approximately 0.19km southeast of the site.

7.1.3. Benefits to Occupiers and Broader Community

Beneficials effects to the tenants and the broader community will be released through ecosystem services and directly to people as a result of beneficial effects to health and wellbeing through increased access to nature.

7.2. Post-Construction Review

Upon completion of the external elements of the construction phase with potential to influence biodiversity, *i.e.,* installation of habitat and species enhancements, it is recommended that an ecological review of the developed site is undertaken. The review should report on the outcomes of the development with particular attention given to the effectiveness of the implementation of the mitigation recommendations and enhancement design, celebrating success, and identifying areas for improvement.

7.3. Site Management

7.3.1. Aims and Objections

The overall aim of the long-term management of biodiversity is to 'realise the biodiversity potential of ecological enhancements provided by the completed development, maximising the biodiversity value of the final developed site and maintaining such value'.

In order to achieve this aim the following objectives have been set:

- To manage landscaped areas for the benefit of biodiversity whilst maintaining an aesthetically appealing amenity landscaping;
- To ensure artificial aids are maintained in an appropriate condition commensurate to their purpose; and,
- To ensure maintenance activities do not themselves have an adverse impact on biodiversity.

7.3.2. Management Recommendations

7.3.2.1. Habitats

New planting should be conducted by an appropriately qualified and experienced contractor at an appropriate time of year. Preferably, planting should be conducted during cooler months to avoid undue stress caused by higher summer temperatures and low rainfall. Watering should be undertaken for all new planting during the first summer post-planting to ensure a good first season establishment if required.

In order to maintain a diverse mix of species in landscaping areas and aid development, the following management actions, where applicable to the final planting, and best practice guidance from Bauder[31] for green roofs should be included:

- Removal of dead vegetation from landscape areas and, where applicable due to planting type, strimming of wildflowers in late autumn, except where seed heads are to be retained for autumn and winter interest, and grasses with the removal of all arisings from the site;
- Removal of invasive and undesirable species and all saplings;
- Maintenance of a variety of species to provide aesthetic and biodiversity benefits;
- Removal of unwanted leaf litter that has fallen onto the roof surface in spring and autumn, to ensure this does not smother the vegetation beneath;
- Inspect all drainage infrastructure, including removal of chamber lids, to ensure drainage infrastructure is clear of debris and vegetation are in working order;
- Ensure all flashing and termination bars are in good condition and sealants and mortar pointing are not degraded;
- Removal of any vegetation which has invaded into drainage outlets, inspection chambers, walkways and vegetation barriers;
- Ensure any new plant or equipment included at roof level is appropriately affixed and does not penetrate waterproofing;

- The application of fertiliser could help aid establishment and promote growth, with application limited to 80 mg/m2 slow-release organic fertiliser if required; and,
- Herbicides and insecticides should be avoided.
- For the remaining vegetation the following tasks are recommended:
- Plant encroachment – the edges of habitat areas and any areas intended to remain bare should be checked for signs of encroachment beyond the intended area of planting, and removed where appropriate. The vegetation should be retained during the maintenance visit and can be used to repair any unintentional bare patches in planting;
- Monitor plant colour and growth rate:
- the colour and growth rate of vegetation should be checked as an indicator of the health of the habitat and understanding of the dominance of the habitat by one species;
- if plants are showing signs of distress despite recent regular rainfall, then the application of fertiliser should be considered;
- Weeding – any undesirable species or saplings, such as grasses, thistles, nettles and butterfly bush, should be removed manually only, and the subsequent area treated as a bare patch as detailed below;
- Pruning – management of shrub and herbaceous planting, including pruning and cutting, should be conducted when flowering has completed (i.e. mid-Autumn), and all arisings should be removed from the site;
- Repairing bare patches – bare patches could be repaired using vegetation cuttings from surrounding areas of abundant growth during the main growing season of March/April or from late August until the end of September;
- Fertiliser – the application of fertiliser should be undertaken following the landscape architects or manufacturers specification, although may not be appropriate for green roof habitats within the landscaping;
- Irrigation – irrigation is dependent on requirements for visual appearance, although consideration is also required in relation to BREEAM credits relating to water use. If the intention is for maintenance of cover and interest over a prolonged period then irrigation will assist in this;
- Herbicides – the use of herbicides should be avoided in order to promote a health invertebrate population to establish in the landscape habitat.

The planting has the potential to offer refuge and resources to bird and invertebrate species, and therefore it is recommended that it is managed appropriately. Any significant management works associated with woody vegetation should avoid the bird breeding season, unless a check has been conducted by an experienced person to ensure no nesting birds are present or likely to be influenced by an activity.

7.3.2.2. Artificial Habitat Aids- Invertebrates

The artificial features provided for invertebrates within the landscaping will not require significant maintenance during the lifetime of the boxes or the application of wood preservative, provided the recommended habitat aids are provided. However, relatively simple maintenance can help to ensure the habitat aids continue to provide a habitat resource for invertebrate species. They should be inspected annually, during which removable parts should be checked and cleaned by hand to avoid accumulation of dirt and development of bacterial focuses. No preservatives should be used, as these can harm insects using the boxes, and the use of insecticides should be restricted. In the event that removable parts need to be replaced (for example reed elements), the removed material should be retained on site for a short period to allow any invertebrate species retained within the material to relocate on site.

7.3.3. Works Schedule

A number of constraints, which should be identified in the final Landscape and Ecology Management Plan, will influence the timing at which maintenance activities can be carried out. The constraints associated with the developed site are an important consideration in the implementation of management actions, with completion during unsuitable periods potentially damaging the ecological resource and working against the aims and objectives of the Landscape and Ecology Management Plan. Table 7.1 provides an indicative schedule for the management of biodiversity features for the first 5 years post-construction, although this could be adopted beyond this period and for as long as would be required. Although the schedule identifies appropriate times to implement commonly required management actions, such as weeding of landscape areas, it should be noted that if monitoring of the site identifies the requirement for immediate action this should be implemented regardless of the schedule but mindful of constraints.

The maintenance schedule provided has been aimed at the maintenance of features for biodiversity potential, and further input may be required from a landscape architect to ensure aesthetic and recreational considerations are incorporated.

Table 7-1 Landscape and Ecology Management Plan Works Schedule

Action	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Green Roof												
Weeding, where necessary												
Litter and debris collection												
Water (subject to weather												

Action	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
conditions), if required												
Strimming of wildflowers/grasses												
Plant encroachment												
Plant health check												
Repair of bare patches in habitats												
Inspection of drainage, flashing and termination bars												
Artificial Nest Boxes												
Invertebrate feature checking and maintenance												
Notes:		Timescale within which activity should be undertaken.										

The works schedule, in whatever form it is adopted, should be reviewed annually to ensure it remains fit for purpose and that the aim and objectives of the Landscape and Ecology Management Plan are being achieved. If the review suggests the aim and objectives are being missed, then the schedule should be revised accordingly.

7.3.4. Monitoring and Remedial Measures

Monitoring of the site is an important part of the Landscape and Ecology Management Plan, as this ensures that the management actions implemented are having a positive impact on the biodiversity of the site. Where actions are not working, or mitigation measures are ineffective for some reason, remedial measures can then be implemented to reduce such effects.

It is recommended that the Principal Contractor appoints a 'Biodiversity Champion', or similar, with sufficient authority to change Site practices, to raise awareness of ecological issues, and take the required steps to prevent harm to any species using the Site during the development programme. This could be achieved through toolbox talks and staff raining, for example.

The Biodiversity Champion should ensure they are familiar with all potentially applicable wildlife legislation, monitoring compliance with these during the execution of construction processes and activities.

The Biodiversity Champion should be given the authority to pause works whilst further ecological advice is sought and/or remedial actions are taken to reduce the risk of environmental harm and breach of wildlife legislation. It is recommended that they should also have an input into the construction phasing to ensure that ecological enhancements are conducted at an appropriate time of the year and an appropriate time in the construction programme.

It is recommended that the Biodiversity Champion ensures routine inspections of the existing site and new construction are carried out. The routine inspections should include a review of mitigation measures incorporated into the construction phase to ensure they are appropriate and effective in achieving their purpose and alterations necessary are carried out. Any measures, such as fencing, that appears to have become damaged should be replaced. The following monitoring should be carried out as part of the Plan to measure the success of the management against the aims and objectives of the Plan.

7.3.4.1. Construction

The installation of enhancement measures, including both habitat and artificial habitat aids, should be overseen to ensure installation is carried out in line with the recommendations and manufacturer guidelines. The habitats installed may require maintenance during the construction period, such as watering in the first few weeks to aid establishment. The record or actions/events kept should be updated to reflect any actions taken to maintain enhancements through the remainder of the construction period, including periodic review of such features to ensure they are in good condition. Where habitats will be in place for a prolonged period prior to handover, the implementation of management actions identified in Section 3 should be undertaken by the Principal Contractor to ensure the habitats remain as planted/installed.

Monitoring visits to review the condition of installed habitats should be increased during periods of extreme weather and importantly during periods of prolonged hot and dry weather and droughts. This will be necessary to ensure the health of the habitat is maintained and management actions, notably watering, can be implemented where necessary before the health of the system is affected.

7.3.4.2. Habitats

Any landscape planting should be monitored for the duration of the Plan to ensure the appropriate species establish and remain present, although the frequency of monitoring could be decreased over time as the habitat establishes.

It is recommended that monitoring is undertaken every other month by an experienced person during the first growing season, to ensure the appropriate species mix establishes and appropriate management actions are implemented. Where necessary, watering of the landscape planting may also be required. In the second growing season monitoring should be undertaken every third month, reducing to a minimum of twice a year during

the growing season from the third year. The monitoring should ensure the species present remain in accordance with the intended planting schedule, even if the species present do not fully match (i.e. there may be some losses of species), ensuring a monoculture does not develop.

In the event that monitoring identifies the establishment of an undesirable plant species or community or the failure for some species to establish, remedial actions should be implemented. The remedial measures should include the implementation of management actions to remove undesirable species or increase in management procedures such as watering and, if necessary, may require the provision of new planting to increase the presence of native species.

In addition to this, monitoring visits should also be undertaken in periods of extreme weather and importantly during periods of prolonged hot and dry water and droughts. This will be necessary to ensure the health of the habitat is maintained and management actions, notably watering, can be implemented where necessary before the health of the system is affected.

7.3.4.3. Artificial Habitat Aids

It is recommended that monitoring of the artificial nesting aids for birds, bats and invertebrates should be undertaken to ascertain whether they are being utilised or if they should be relocated to increase their likelihood of occupation. As a result, it is recommended that an annual monitoring check is undertaken to determine whether the boxes have been in use, and where they are unused measures to attract target species should be considered, if appropriate. The monitoring checks are likely to comprise visual assessments for field signs between April and August, although further detailed inspection between November and February, for bird boxes only, may be necessary during routine maintenance.

7.4. Responsibility

The final Landscape and Ecology Management Plan should identify, by name and role, the person that is responsible for the Plan's implementation. The named person will be responsible for ensuring the Plan is implemented and recommendations are followed and actions undertaken, but it is not necessary for them to be the person undertaking such actions.

As the Plan is associated with the long-term management post-development, it is likely that the responsible person will be part of the site management team. However, the Plan should also identify the person responsible for the implementation of ecological enhancements, during the construction period, within the Plan to ensure appropriate actions are undertaken in the construction phase and the document is included in the information handed over upon completion of the building construction works.

7.5. Reporting

The final Landscape and Ecology Management Plan should be a working document, and should be updated when circumstances require. For example, if monitoring identifies that a particular management practice is ineffective or the named responsible person changes, then the Plan should be revised and updated.

The responsible person should also prepare a yearly report to the site owner, providing a summary of the outcomes of the maintenance and monitoring works that have been carried out and detailing any remedial measures necessary. By providing this information for the annual site review the aim and objectives of the Plan can be reviewed regarding achievement.

7.6. Delivery Mechanisms

The delivery mechanisms, most important funding across the 5-year Plan period, is an important aspect of the Landscape and Ecology Management Plan, ensuring sufficient resource is made available to deliver a sustainable long-term Plan for the maintenance of biodiversity interest on the site.

The Landscape and Ecology Management Plan should set out the details for the legal and funding mechanism(s) by which the long-term implementation of the Plan will be secured by the developer with the management body responsible for its delivery. The Plan should also set out, where results from monitoring show that the aim and objectives of the Plan are not being met, how contingencies and/or remedial action will be secured to ensure the development still delivers the fully functioning biodiversity objectives of the approved scheme.

8. Summary and Conclusion

8.1. Baseline

The development site was dominated by artificial habitat, with the footprint of the development supporting commercial units, used as studios at the time of survey. There was no existing landscaping present at the time of survey, with managed modified grassland comprising majority of the greening present on site. The trees on site ranged from small to medium in moderate condition. The site is located in a densely urbanised area, with limited semi-natural areas within the immediate vicinity.

8.2. Impacts and Mitigation

Although the development at 99-103 Kingsway generates additional habitat with ecological value, the development still has some potential for adverse effects on local biodiversity, specifically as a result of the construction phase. The development will result in the addition of artificial habitat aids as well as a wider range of planting within the site.

Appropriate mitigation measures, in line with BS 42020, have been identified to ensure biodiversity is considered throughout the development and ensure any potential risk to programme and biodiversity is minimised throughout. These include appropriate measures and consideration of lighting implications on the site and consideration of the potential change in condition of potential features on the suite to ensure any subsequent changes are identified.

8.3. Enhancement

Enhancements of the development site is proposed through the inclusion of a variety of landscaping elements across the building, including the provision of a green roof habitat. General recommendations have been given to maximise the biodiversity element of planting.

The final development site will provide foraging resources for invertebrates and will enhance the habitat in the urban fabric locally. In addition to this, artificial faunal habitat aids have been recommended to improve the biodiversity value of the site, and the local area, for invertebrates.

8.4. Long-Term Management

Recommendations for the long-term management of the final site, specifically the green roof habitat and artificial habitat aids, have been provided in accordance with BS 42020, which will ensure the biodiversity enhancement continues to provide benefits for a minimum of five-years post-construction. The information provided should be used to create a Landscape and Ecology Management Plan that can be provided to the building management body and sets out the responsibility and delivery mechanisms. The latter two of these will require additional information to be fully compliant with BS 42020.

The Landscape and Ecology Management Plan could also be used to help the main Contractor through the construction phase, setting out the enhancement measures to be provided (including maintenance measures that are required to ensure habitat enhancements installed are maintained in a good condition up to handover).

8.5. Certification

The development site has been classified within this ecological appraisal, including the consideration of the pre-planning baseline as being of 'negligible ecological value' with habitats present in the pre-development site being dominated by artificial habitats. As there are no semi-natural or natural features within the site, no ecological features within the site need to be protected, this means that the development is not applicable for BREEAM LE02.

A SQE was appointed at the appropriate stage and conducted a site walkover, on which this ecological appraisal was based. Recommendations of further enhancements that could be incorporated into the design have been issued within this report. **Providing that enhancements are incorporated into the development, then the development would be eligible to achieve 1 credit for BREEAM LE04, provided that the credit criteria are met following assessment by the BREEAM assessor.**

Provisional inputs into a long-term management plan for the habitats and ecological enhancements created on the site, in accordance with BS 42020, has been prepared by Hilson Moran and included within this report. The information should be used to create a Landscape and Ecology Management Plan for the development which could support the introduction of enhancements by the Main Contractor and should be handed over to the building management body(ies) post-completion. **If all recommendations are incorporated into the development, then the final plan would satisfy the BREEAM LE05 and achieve 2 of the available 2 credits.**

Consequently, 3 of the 3 credits for BREEAM can be achieved, provided the necessary recommendations are implemented and evidenced and the BREEAM Assessor is satisfied that all of the credit criteria are met. Inclusion of the enhancement measures as part of the development will have a benefit to local biodiversity and contribute towards targets contained within the London and Camden BAPs. The credits available could provide a significant contribution to the overall BREEAM rating achieved by the proposed development and contribute to the biodiversity value locally.

Appendix A Legislative and Planning Context

A.1 Legislative Framework

A.1.1 Environment Act 2021

The Environment Act 2021 makes provision for targets, plans and policies for improving the natural environment. Part 6 of the Act deals with nature and biodiversity, principally setting out the requirement for biodiversity net gain in planning but also including requirements relating to local nature recovery strategies and conservation.

Section 98 of the Act makes provision for biodiversity gain to be a condition of planning permission, with Schedule 14 identifying the objective being at least 10 % when comparing the post-development site to the pre-development site. Schedule 14 also identifies the methodology by which this is established and the process by which offsite biodiversity gains can be delivered.

The Act incorporates a transition period for biodiversity net gain of 2 years between its Royal Assent and enforcement of the requirement, bringing the mandatory net gain requirement in place in late 2023.

A.1.2 Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended), which consolidate the Conservation of Habitats and Species Regulations 2010 and subsequent amending instruments, is the main legislation governing the protection of biodiversity and is derived from European Council Directive 92/43/EEC (otherwise known as the Habitats Directive). These Regulations provide protection for sites, habitats and species that are of conservation importance at the European or international level. The Regulations provide the framework for the designation and protection of 'European sites', including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). The Regulations also provide legislative protection to species, identified as 'European Protected Species' (EPS) within Schedule 2 of the Regulations.

The Conservation of Habitats and Species Regulations 2017 are amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which ensures the continuity of the legislation following the departure of the UK from the European Union.

A.1.3 Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) comprises the principal means of protecting wildlife in the UK, including the identification and protection of Sites of Special Scientific Interest (SSSIs), and provides the mechanism by which a number of international directives are implemented in the UK.

A.1.4 Countryside and Rights of Way (CRoW) Act 2000

The Countryside and Rights of Way (CRoW) Act 2000 strengthens the Wildlife and Countryside Act 1981 (as amended) in relation to the protection of SSSIs and threatened species.

A.1.5 Natural Environment and Rural Communities (NERC) Act 2000

The Natural Environment and Rural Communities (NERC) Act 2006 places an obligation on public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity.

A.2 Statutory Protected Sites and Species

A.2.1 Sites

Statutory protection for sites of ecological importance or value has derived from various international conventions, European Directives and national legislation. The designations for protected sites in the UK include:

- Special Area of Conservation (SAC) – designated under the European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, targeting particulate habitats (listed on Annex I) and/or species (listed on Annex II) identified as being of European Importance;
- Special Protection Area (SPA) – designated under the European Council Directive on the Conservation of Wild Birds for the protection of wild birds and their habitats (including particularly rare and vulnerable species listed in Annex I of the Directive, and migratory species);
- Ramsar – listed under the Convention on Wetlands of International Importance for the protection of internationally important wetland habitat, especially as waterfowl habitat. Although not directly legislated, through the NPPF the government expects them to be given the same level of protection as SACs and SPAs;
- Site of Special Scientific Interest (SSSI – notified under the Wildlife and Countryside Act 1981 (as amended) or the National Parks and Access to the Countryside Act 1914, as being of special nature conservation interest for its plant or animal communities, habitats, geological or landform features;
- National Nature Reserve (NNR) – designated under the Wildlife and Countryside Act 1981 (as amended) as a nationally important nature reserve on account of its habitat, flora or fauna interest;
- Local Nature Reserve (LNR) – established by Local Authorities under s21 of the National Parks and Access to the Countryside Act 1914 as a locally important nature reserve on account of its habitat, flora or fauna interest.

A.2.2 Species

The following summarises the legislative protection afforded to species identified as potentially present within the field survey area.

Flora

All wild plants are protected under Schedule 13 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to uproot a plant, defined as to '*dig up or otherwise remove the plant from the land on which it is growing*', without permission from the land owner or occupier. A number of higher and lower plants receive additional protection under Schedule 8 of the Act, which makes it an offence to intentionally pick, uproot, destroy or trade in these plants.

Schedule 9 of the Act identifies invasive plant species and makes it an offence to plant these species or otherwise cause them to grow in the wild. The protection has been strengthened through the inclusion of a new schedule, as a result of Section 23 of the Infrastructure Act 2015, which enables environmental authorities to required works to be undertaken to remove or prevent their establishment. Any material containing Japanese knotweed (*Fallopia japonica*) or giant hogweed (*Heracleum mantegazzianum*) is identified as 'controlled waste' under the Environmental Protection Act 1990 and must be disposed of appropriately.

Birds

All wild birds in England and Wales are protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs. Additional protection is afforded to species listed in Schedule 1 of the Act from disturbance whilst it is building a nest, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Furthermore, provisions under Section 10, Part 1, of the Conservation of Habitats and Species Regulations 2017 require local planning authorities to have regard to '*the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK*' in the exercising of their functions. As a result, it is important to consider any habitat loss as a result of development and opportunities for the provision of habitats.

European Protected Species

All European Protected Species (EPS) in England and Wales are fully protected through inclusion within the Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation it is an offence to deliberately capture, injure or kill individuals of any native EPS. It is also a strict liability offence to damage or destroy sites or places which EPS use as a breeding site or resting place. EPS are also protected under the Regulations from deliberate disturbance which is likely to:

a) impair its ability:
    i. to survive, breed or reproduce, or to rear or nurture their young; or,
    ii. in the case of animals of a hibernating or migratory species to hibernate or migrate; or,
b) to affect significantly the local distribution or abundance of the species to which they belong.

It may be possible to apply for a licence from Natural England to allow activities that would otherwise be an offence under these Regulations. However, it is an offence to breach a condition imposed by any such licence.

All EPS are also partially protected in England and Wales through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to intentionally or recklessly disturb a bat whilst it is using a place of rest or shelter.

EPS potentially present within the masterplan site and immediately surrounding areas include all species of bats.

A.3 Planning Policy

A.3.1 National Planning Policy

National planning policy guidance in relation to ecology and nature conservation is provided through the National Planning Policy Framework (NPPF), with planning practice guidance provided by the Ministry of Housing, Communities and Local Government. The conservation and enhancement of the natural environment is a key strategic policy in the NPPF, and Chapter 15 of the NPPF sets out the Government's planning policies on this. Paragraph 174 states that '*planning policies and decisions should contribute to and enhance the natural and local environment by:*

- *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;*
- *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*'.

The NPPF also states in Paragraph 175 that '*plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries*'.

Paragraph 180 of the NPPF identifies a number of principles that should be applied by local planning authorities in the determination of planning applications, which include:

- '*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;*
- *development on land within or outside a SSSI, 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 SSSIs;*
- *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 reasons and a suitable compensation strategy exists; and,*
- *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 practice guidance provided by the Ministry of Housing, Communities and Local Government includes further guidance on biodiversity, ecosystems and green infrastructure within the planning process. Paragraph 018 (Reference ID 8-018-20190721) identifies that information on biodiversity impacts and opportunities should inform all stages of development, with planning applications requiring an ecological survey where the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate. The guidance also identified that detailed species surveys should only be required by local planning authorities where clearly justified, for example if there is a reasonable likelihood of a protected species being present and affected by the development.

A.3.2 Metropolitan Planning Policy

The London Plan is the strategic planning document for London, produced by the Greater London Authority (GLA), setting out an integrated economic, environmental, transport and social framework for the development of London over 20 – 25 years. The London Plan requires all borough development plans to be in general conformity with it.

The following identify the London Plan policies of relevance to this assessment.

Policy D8 Public Realm

Development Plans and development proposals should:

a) encourage and explore opportunities to create new public realm where appropriate;
    i) incorporate green infrastructure such as street trees and other vegetation into the public realm to support rainwater management through sustainable drainage, reduce exposure to air pollution, moderate surface and air temperature and increase biodiversity.

Policy G1 Green Infrastructure

a) London's network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits;
b) Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A;
c) Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:
    i. Identify key green infrastructure assets, their function and their potential function;
    ii. Identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions;

d) Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.

Policy G3 Metropolitan Open Land

a) Metropolitan Open Land (MOL) is afforded the same status and level of protection as Green Belt:
   i. MOL should be protected from inappropriate development in accordance with national planning policy tests that apply to the Green Belt;
   ii. Boroughs should work with partners to enhance the quality and range of uses of MOL.

b) The extension of MOL designations should be supported where appropriate. Boroughs should designate MOL by establishing that the land meets at least one of the following criteria:
   i. It contributes to the physical structure of London by being clearly distinguishable from the built-up area;
   ii. It includes open air facilities, especially for leisure, recreation, sport, the arts and cultural activities, which serve either the whole or significant parts of London;
   iii. It contains features or landscapes (historic, recreational, biodiverse) of either national or metropolitan value;
   iv. It forms part of a strategic corridor, node or a link in the network of green infrastructure and meets one of the above criteria.

Policy G4 Open Space

b) Development proposals should:
   i. not result in the loss of protected open space;
   ii. where possible create areas of publicly accessible open space, particularly in areas of deficiency.

Policy G5 Urban Greening

a) Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage;

b) Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2 [of the Policy], but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses);

c) Existing green cover retained on site should count towards developments meeting the interim target scores set out in b) based on the factors set out in Table 8.2 [of the Policy].

Policy G6 Biodiversity and Access to Nature

a) Sites of Importance for Nature Conservation (SINCs) should be protected;

b) Boroughs, in developing Development Plans, should:

   i. Use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks;

   ii. Identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them;

   iii. Support the protection and conservation of priority species and habitats that sit outside of the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans;

   iv. Seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context;

   v. Ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.

c) Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:

   i. Avoid damaging the significant ecological features of the site;

   ii. Minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site;

   iii. Deliver off-site compensation of better biodiversity value.

d) Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process;

e) Proposals which reduce deficiencies in access to nature should be considered positively.

Policy G7 Trees and Woodland

a) London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London's urban forest – the area of London under the canopy of trees;

b) In their Development Plans, boroughs should:

   i. Protect 'veteran' trees and ancient woodland where these are not already part of a protected site;

   ii. Identify opportunities for tree planting in strategic locations.

c) Development proposals should ensure that, wherever possible, existing trees of value are retained. If planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT or other appropriate valuation system. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface areas of their canopy.

A.3.3 Local Planning Policy

Local planning policy for the Camden is derived from the Camden Local Plan, which was adopted in 2010. The Local Plan sets out the Boroughs vision, strategy, objectives and policies for planning in Camden, providing a spatial framework that brings together and co-ordinates a range of strategies. The Local Plan has been developed in the context of a range of other plans at the national and metropolitan level.

The plan sets out the key objectives, which are:

- provide democratic and strategic leadership fit for changing times;
- develop new solutions with partners to reduce inequalities and improve the physical and mental health and wellbeing of local residents;
- create conditions for and harnessing the benefits of economic growth;
- invest in our communities to ensure sustainable neighbourhoods; and
- deliver value for money services by getting it right first time.

Policy A1: Managing the impact of development

The Council will seek to protect the quality of life of occupiers and neighbours. We will grant permission for development unless this causes unacceptable harm to amenity. We will:

a) seek to ensure that the amenity of communities, occupiers and neighbours is protected;

b) seek to ensure development contributes towards strong and successful communities by balancing the needs of development with the needs and characteristics of local areas and communities;

c) resist development that fails to adequately assess and address transport impacts affecting communities, occupiers, neighbours and the existing transport network; and

d) require mitigation measures where necessary.

The factors we will consider include:

e) visual privacy, outlook;

f) sunlight, daylight and overshadowing;

g) artificial lighting levels;

h) transport impacts, including the use of Transport Assessments, Travel Plans and Delivery and Servicing Management Plans;

i) impacts of the construction phase, including the use of Construction Management Plans;

j) noise and vibration levels;

k) odour, fumes and dust;

l) microclimate;

m) contaminated land; and

n) impact upon water and wastewater infrastructure.

Policy A2: Open Space

The Council will protect, enhance and improve access to Camden's parks, open spaces and other green infrastructure.

Protection of open spaces

In order to protect the Council's open spaces, we will:

a) protect all designated public and private open spaces as shown on the Policies Map and in the accompanying schedule unless equivalent or better provision of open space in terms of quality and quantity is provided within the local catchment area;

b) safeguard open space on housing estates while allowing flexibility for the re-configuration of land uses. When assessing development proposals we will take the following into account:

   i. the effect of the proposed scheme on the size, siting and form of existing open space and the functions it performs;

   ii. whether the open space is replaced by equivalent or better provision in terms of quantity and quality; and

   iii. whether the public value of retaining the open space is outweighed by the benefits of the development for existing estate residents and the wider community, such as improvements to the quality and access of the open space.

c) resist development which would be detrimental to the setting of designated open spaces;

d) exceptionally, and where it meets a demonstrable need, support small-scale development which is associated with the use of the land as open space and contributes to its use and enjoyment by the public;

e) protect non-designated spaces with nature conservation, townscape and amenity value, including gardens, where possible;

f) conserve and enhance the heritage value of designated open spaces and other elements of open space which make a significant contribution to the character and appearance of conservation areas or to the setting of heritage assets;

g) give strong protection to maintaining the openness and character of Metropolitan Open Land (MOL);

h) promote and encourage greater community participation in the management of open space and support communities seeking the designation of Local Green Spaces through the neighbourhood planning process;

i) consider development for alternative sports and recreation provision, where the needs outweigh the loss and where this is supported by an up-to-date needs assessment;

j) preserve and enhance Hampstead Heath through working with partners and by taking into account the impact on the Heath when considering relevant planning applications, including any impacts on views to and from the Heath; and

k) work with partners to preserve and enhance the Regent's Canal, including its setting, and balance the differing demands on the Canal and its towpath.

New and enhanced open space

To secure new and enhanced open space and ensure that development does not put unacceptable pressure on the Borough's network of open spaces, the Council will:

l) seek developer contributions for open space enhancements using Section 106 agreements and the Community Infrastructure Levy (CIL). The Council will secure planning obligations to address the additional impact of proposed schemes on public open space taking into account the scale of the proposal, the number of future occupants and the land uses involved;

m) apply a standard of 9 sqm per occupant for residential schemes and 0.74 sqm for commercial and higher education developments while taking into account any funding for open spaces through the Community Infrastructure Levy;

n) give priority to securing new public open space on-site, with provision off-site near to the development only considered acceptable where provision on-site is not achievable. If there is no realistic means of direct provision, the Council may accept a financial contribution in lieu of provision;

o) ensure developments seek opportunities for providing private amenity space;

p) give priority to play facilities and the provision of amenity space which meet residents' needs where a development creates a need for different types of open space;

q) seek opportunities to enhance links between open spaces recognising the multiple benefits this may bring;

r) tackle deficiencies to open space through enhancement measures; and

s) seek temporary provision of open space where opportunities arise.

Policy A3: Biodiversity

The Council will protect and enhance sites of nature conservation and biodiversity. We will:

a) designate and protect nature conservation sites and safeguard protected and priority habitats and species;

b) grant permission for development unless it would directly or indirectly result in the loss or harm to a designated nature conservation site or adversely affect the status or population of priority habitats and species;

c) seek the protection of other features with nature conservation value, including gardens, wherever possible;

d) assess developments against their ability to realise benefits for biodiversity through the layout, design and materials used in the built structure and landscaping elements of a proposed development, proportionate to the scale of development proposed;

e) secure improvements to green corridors, particularly where a development scheme is adjacent to an existing corridor;

f) seek to improve opportunities to experience nature, in particular where such opportunities are lacking;

g) require the demolition and construction phase of development, including the movement of works vehicles, to be planned to avoid disturbance to habitats and species and ecologically sensitive areas, and the spread of invasive species;

h) secure management plans, where appropriate, to ensure that nature conservation objectives are met; and

i) work with The Royal Parks, The City of London Corporation, the London Wildlife Trust, friends of park groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden.

Trees and vegetation

The Council will protect, and seek to secure additional, trees and vegetation. We will:

j) resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation;

k) require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 ‘Trees in relation to Design, Demolition and Construction’ and positively integrated as part of the site layout;

l) expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;

m) expect developments to incorporate additional trees and vegetation wherever possible.

A.4 Biodiversity Action Plans

A.4.1 UK Biodiversity Action Plan

The UK BAP has been replaced by the Post-2010 Biodiversity Framework, which addresses the changes in the strategic thinking of the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011-2020. The new Framework includes new priorities for UK-level work for the Convention on Biological Diversity and provides a broad structure to enable action across the UK. Whilst the UK BAP has been replaced, the UK BAP priority habitats and species continue to be regarded as conservation priorities in the UK Post-2010 Biodiversity Framework.

The UK BAP identifies 65 habitats and 1,150 species that are considered to be of conservation concern.

Although a number of the species present within the study area are included in the UK BAP, only common pipistrelle and song thrush have been included in a Species Action Plan.

Common Pipistrelle

Although it remains the most abundant and widespread bat species in the UK, the pipistrelle is thought to have undergone a significant decline in numbers. Estimates from the National Bat Colony Survey suggest a population decline of approximately 70% between 1978 and 1993. Factors identified as causing loss or decline of the species population include:

- A reduction in insect prey abundance, due to high intensity farming practice and inappropriate riparian management;
- Loss of insect-rich feeding habitats and flyways, due to loss of wetlands, hedgerows and other suitable prey habitats;
- Loss of winter roosting sites in buildings and old trees;
- Disturbance and destruction of roosts, including the loss of maternity roosts due to the use of toxic timber treatment chemicals.

The Species Action Plan identifies the objectives and targets as the maintenance of existing populations and range of pipistrelle, and restoration of populations to pre-1970 numbers.

Song Thrush

Although a common and widespread species, song thrush are declining throughout the UK as a result of changes in food supply and availability of nest sites as a result of changes in farming practice, predation by corvids and foxes and competition with blackbirds. The aims of the Species Action Plan are to halt the decline in numbers by 2000, maintain the range and population levels of the species and, where possible, restore them to that of the 1970 estimate, and identify and implement priority research in order to formulate future conservation action.

A.4.2 London Biodiversity Action Plan

The London BAP was prepared by the London Biodiversity Partnership to protect and enhance London's biodiversity. The Plan aimed to ensure that rare species are maintained and that common species remain common, and so contribute to the maintenance of national and global biodiversity. It also aimed to enable the local community to be in contact with nature, especially those that do not have ways to access the countryside.

Although the London Biodiversity Partnership has been disbanded as a result of a lack of funding, regional and organisational delivery of the Plan continues and the aims of the Plan remain relevant.

In order to achieve the aims of the Plan, the BAP identified a number of habitat and species of nature conservation importance taking into account the UK BAP, and targets and actions have been set up to be implemented for their enhancement.

The London Plan identified 15 priority habitats and 214 priority species. A number of Habitat Action Plans and Species Action Plans have been developed, with the following action plans considered to be relevant to the assessment.

London Parks and Green Spaces

The Action Plan provides a focus to look at ways to improve the nature conservation value of London's parks and green spaces, alongside their other uses. It provides support to parks and green space managers and promotes the values and benefits of biodiversity for both parks and people. The scope of the plan includes, but is not limited to, housing estates, churchyards, cemeteries, squares, woodland, heaths and Commons and parks.

Bats

At least eight species of bat are known to breed in Greater London. The soprano pipistrelle is by far the most common and occurs in all London boroughs. The common pipistrelle, noctule and Daubenton's bats are also regularly recorded and widespread.

In London, some population trends are apparent that contradict those of the rest of the UK. A 1999 survey which sampled bat activity at sites across the region concluded that there was a significant decline in the overall bat population of Greater London within the preceding decade, reflected most obviously by a lack of records for noctule, Leisler's bat and serotine. Since then, soprano and common pipistrelle appear to be recovering well, the decline in noctule has gathered pace and apparently Daubenton's bat is now also causing concern.

The Species Action Plan aims to: reverse the current population declines in London's bats; and, to redress Londoner's misconceptions about bats and secure their status as culturally valued animals. To support this, the following relevant actions have been identified:

- resistance of development impacts on protected or priority species;
- mitigation of development impacts on protected or priority species.

House Sparrow

There is much evidence that this once abundant bird has declined dramatically in recent years. It is now common knowledge that house sparrows have disappeared, or become far less common, in many places where they were formerly abundant. This applies both

in the centre of London and many of the suburbs, as well as some of the surrounding towns and indeed a number of cities in other parts of the country such as Bristol and Edinburgh.

A number of factors have been identified for their decline, including a reduction in food supply, predation, disease, reduction in nest site availability and pest control.

The Species Action Plan aims to: raise awareness of the need for biodiversity conservation by focussing attention on the decline in house sparrow and its importance as a cultural emblem; and, to establish the cause(s) of decline in the population of house sparrow and, if possible, undertake measures to reverse the decline.

A.4.3 Local Biodiversity Action Plan

Croydon council has prepared Habitat Action Plans targeting specific habitats for protection in hopes to preserve both the habitats and the associated fauna, increasing and protected biodiversity within the borough. The plans highlight specific habitats deemed to be of importance to the local area.

Cemeteries and Churchyards

Aims

- To respect the primary purpose of cemeteries and churchyards, which is that of burial and as a space to accommodate grieving visitors, whilst sensitively promoting their nature conservation value.
- To protect, manage and enhance the nature conservation value of cemeteries and churchyards
- To involve all of Croydon's faiths groups and communities in the conservation of cemeteries and churchyards.

Cemeteries and churchyards are collectively called burial grounds in this Action Plan. They make a significant contribution to the provision of urban green space in Croydon, offering a quiet sanctuary for both people and wildlife. They therefore represent a real opportunity for new kinds of conservation and green space policy. Cemeteries can provide some of the functions of parks and, unlike parks, the reassuring presence of people is generally guaranteed. Some are visited by significant numbers of tourists, and they can be important to family history researchers. But this Action Plan recognises the prime purpose of burial ground is for burial of the dead, their veneration and commemoration, and many people desire memorials to be maintained with readable inscriptions.

Churchyards are burial grounds associated with an identifiable church building. Some churches have also established extensions and detached burial grounds to provide additional space. Many of these 'church gardens' have since been turned into public gardens. Once a Church of England burial ground has reached capacity and is closed for any future burials, the space remains 'consecrated' i.e. holy ground lying within the jurisdiction of the church. The maintenance of Church of England churchyard can be transferred to the local authority through an "Order in Council".

The majority of cemeteries are interdenominational burial grounds in municipal or private ownership found outside the confines of a religious meeting place. Within these parts can be consecrated for use by adherents to the Church of England, and other parts reserved for the exclusive use of other religious groups.

Croydon's burial grounds contain a wide variety of habitats, including grassland, woodland, scrub and occasionally wetland. Species associated with Croydon's burial grounds include woodland edge species such as bats, stag beetle, spotted flycatcher, tawny owl and song thrush, as well as holly blue, speckled wood and orange tip butterflies. The gravestones, monuments and walls of burial grounds provide an unusual 'masonry habitat' which may host ferns, invertebrates and lichens. Fungi and mosses are also a feature of certain burial grounds.

Croydon Councils Bereavement Services have adopted the Charter for the Bereaved and within this are assessed against a wide range of environmental initiatives.

Chalk grasslands

Aims

- To conserve, protect and restore Croydon's chalk grasslands
- To promote public understanding of the importance of chalk grassland

Chalk grassland is a rich mix of grasses and other herbaceous plant species growing on poor shallow soils overlying chalk. It supports a unique assemblage of insects, other invertebrates, birds and mammals. It includes chalk scrub which comprises trees and shrubs; this is a valuable habitat which provides shelter, but its tendency to encroach on the grassland necessitates active management to ensure the grassland remains open.

Grass species like red fescue, sheep's fescue and quaking grass are common, along with plants such as wild thyme, marjoram and common bird'sfoot trefoil. In addition, chalk grasslands support a range of orchids, many of which are nationally uncommon or scarce. The habitat is crucially important for butterflies, including those that are nationally or regionally scarce, such as grizzled skipper, dingy skipper, chalkhill blue, dark-green fritillary, marbled white and, most notably, the small blue.

Croydon possesses large and small chalk grassland sites which are concentrated in the southern part of the borough following the geology region.

Heathlands

Aims

- To protect, create and restore heathland within Croydon.
- To promote the value of heathland and secure the community involvement in its conservation.

Classic heathland is covered mainly by low-growing shrubs such as heather (or 'ling'), which turn it a rich purple in late summer and autumn. This habitat could once be seen on large areas of common land around London, where local people grazed animals and drovers stationed their stock on the way to market. Such grazing helped to keep scrub and trees from invading the open landscape. Heathlands also played a vital role in local communities, as gorse and peat yielded a valued source of fuel and the open nature of heaths presented a perfect setting for village celebrations.

On a global scale the habitat has declined drastically, the UK is responsible for looking after 20% of all that now remains. This decline has been acute in London too, where today heathland is limited to a few surviving fragments. Action is needed to save these

remnants, restore degraded areas and create new heathlands wherever it may be appropriate.

The heathland left in London is still a significant habitat type; important as the last refuge of a distinctive group of plants and animals. These include heather, dwarf gorse, the linnet, the green hairstreak butterfly and the adder, which is now a very rare and threatened species within the Capital.

Heathland is found on free-draining acid soils that are low in nutrients. It consists characteristically of an intimate mosaic of tussocky grasses and dwarf shrubs, with associated stands of common gorse, broom and hawthorn. Areas of bare ground may also be present, as well as boggy areas and small pools where the ground is locally wetter. Typical marginal habitats include acid grassland, bracken stands and young birch woodland.

Throughout this habitat action plan the term heathland will be used to represent both the heather dominated areas as well as associated acid mire communities.

Woodlands and hedgerows

Aims

- To conserve and enhance Croydon's Woodlands and hedgerows for the benefit of biodiversity and for both current and future generations of people.
- To promote, maintain and improve the active involvement by all sections of the community in the enjoyment, use and conservation of Croydon's woodlands and hedgerows.

Woodlands and hedgerows are an important element in the natural environment of the Borough. They provide opportunities for recreation, health and wellbeing, are a valued component of the landscape, an essential habitat for wildlife, provide employment, contribute to the supply of timber and are an effective means of absorbing carbon dioxide from the atmosphere. Much woodland is identified as being 'ancient woodland' (that which has been in existence since at least 1600); they are described as `semi-natural' because the woodlands have received past management. They represent the most important woodland habitats for wildlife, sometimes containing species of national rarity. The majority of woods are comprised of broad-leaved species, although some coniferous plantations exist. The Great Storm of 1987 had a widespread impact on trees and woodlands throughout the Borough; it also brought many benefits, including a profusion of deadwood habitats, the rebirth of woodland management and an increase in public involvement and interest to better manage Croydon's woods for now and for future generations.

Appendix B- Site Photographs

Photograph 1- Southern aspect of the existing building.

Photograph 2- Area of outside landscaping on the second floor.

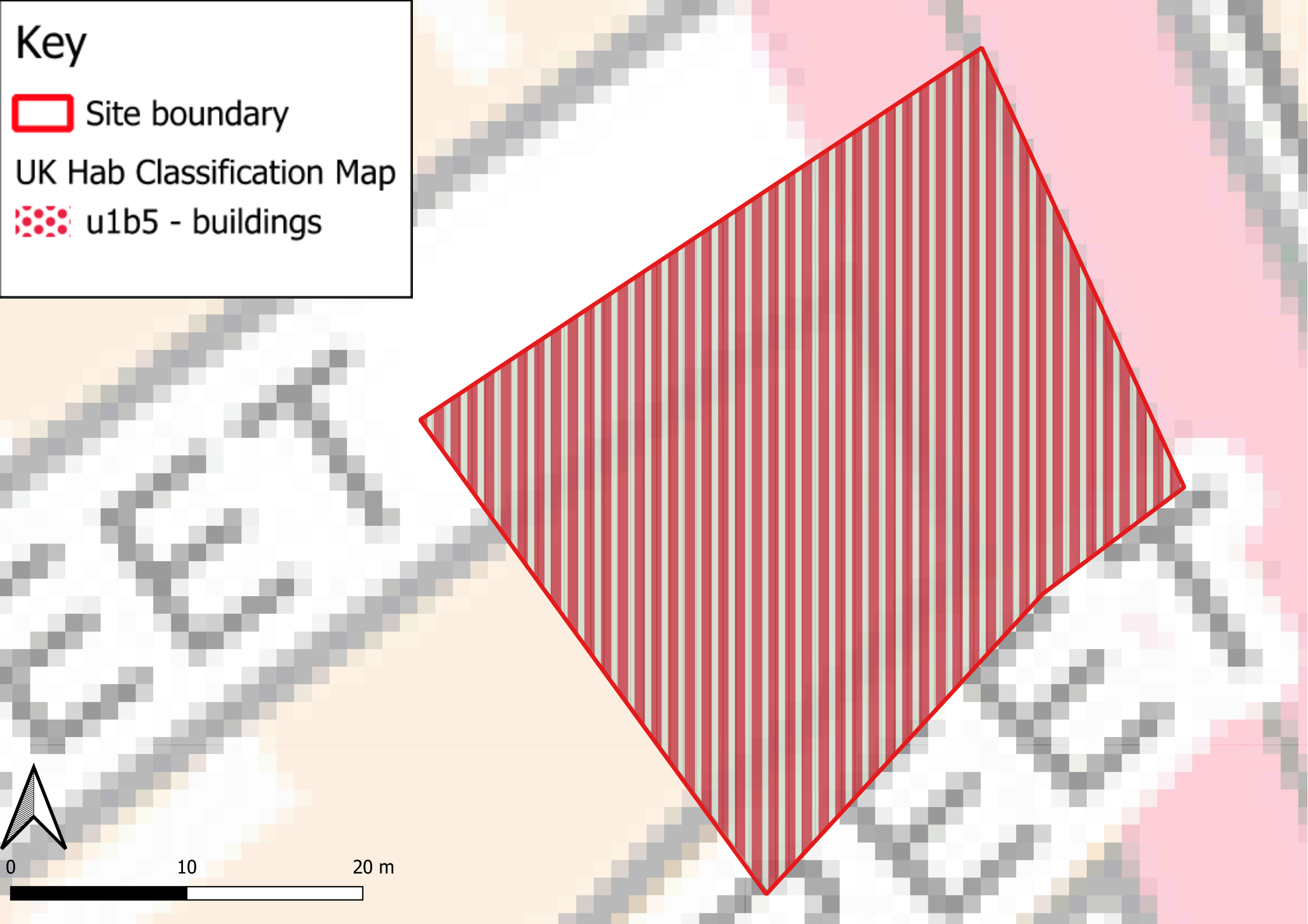
Photograph 3- Open area in centre of site, with feral pigeons.

Photograph 4- Ledge outside of windows.

Photograph 5- Ledge outside of window

Photograph 6- Front of site, eastern aspect.

Appendix C- Pre-Planning Habitat Map


Key
Site boundary
UK Hab Classification Map
u1b5 - buildings
0
10
20 m

Appendix D- Enhancement Calculations

Introduction
This calculator should be used in conjunction with London Plan Guidance 'Urban Greening Factor', 2021.

The Urban Greening Factor (UGF) is a tool that evaluates and quantifies the urban greening proposed in new developments. The UGF works by assigning a factor score to each surface cover type proposed in a planning application. Scores range from 1 for semi natural vegetation, through to 0 for impermeable sealed surfaces.

Instructions
- Cells highlighted in green should be completed by the applicant;
- Green cover should be categorised in accordance with Appendix 1 of the UGF guidance;
- The notes column should be used to record any assumptions (e.g. how expected tree canopy has been calculated) and to set
  out which features (e.g. the type of semi-natural habitat) have been included in the appropriate row;
- The calculation table should be copied to UGF drawing to be submitted for planning;
- The UGF should always be calculated on the total site area, equivalent to the red line boundary;
- Adjacent areas of land under the ownership or management of the applicant but not subject to the planning application must
  not be included; and
- Retained surface cover types should be included in the calculation.

Urban Greening Factor Calculator				
Surface Cover Type	**Factor**	**Area (m²)**	**Contribution**	**Notes**
Semi-natural vegetation (e.g. trees, woodland, species-rich grassland) maintained or established on site.	1		0	
Wetland or open water (semi-natural; not chlorinated) maintained or established on	1		0	
Intensive green roof or vegetation over structure. Substrate minimum settled depth of 150mm.	0.8		0	
Standard trees planted in connected tree pits with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.	0.8		0	
Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014.	0.7	65	45.5	
Flower-rich perennial planting.	0.7	9	6.3	
Rain gardens and other vegetated sustainable drainage elements.	0.7		0	
Hedges (line of mature shrubs one or two shrubs wide).	0.6		0	
Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6		0	
Green wall –modular system or climbers rooted in soil.	0.6		0	
Groundcover planting.	0.5		0	
Amenity grassland (species-poor, regularly mown lawn).	0.4		0	
Extensive green roof of sedum mat or other lightweight systems that do not meet GRO Code 2014.	0.3		0	
Water features (chlorinated) or unplanted detention basins.	0.2		0	
Permeable paving.	0.1		0	
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone).	0	961	0	
Total contribution			**51.8**	
Total site area (m²)			1045	
Urban Greening Factor			**0.049569378**	

Appendix E- Landscape Proposal

Only the original drawing should be relied upon. Contractors, sub-contractors and suppliers must verify all dimensions on site before commencing any work or making any shop drawings.

All shop drawings to be submitted to the architect / interior designer for comment prior to fabrication.

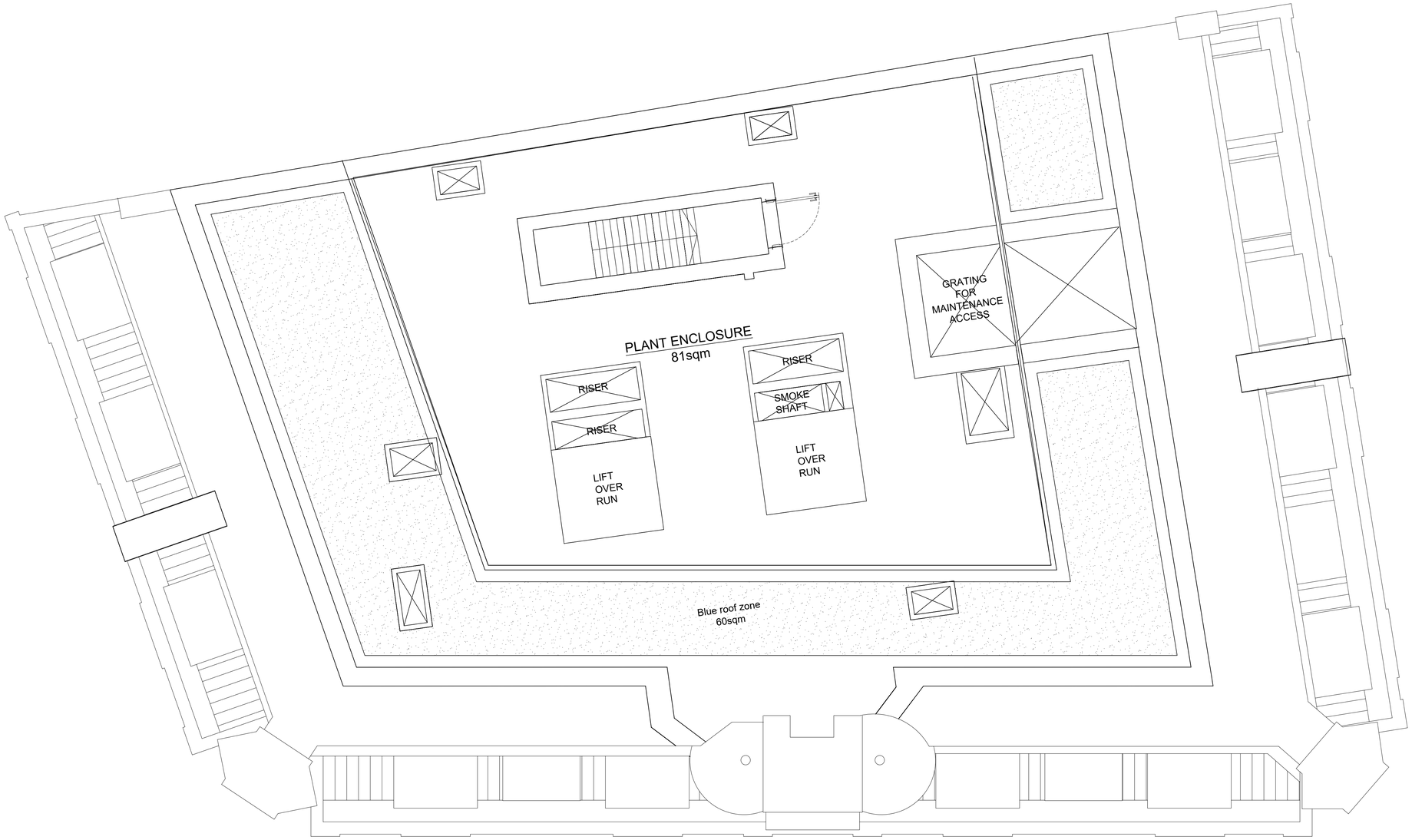
This drawing is to be read in conjunction with the architect's / interior designer's specification, bills of quantities / schedules, structural, mechanical & electrical drawings and all discrepancies are to be reported to the architect / interior designer.

Do not scale from this drawing. Dimensions are in millimetres unless otherwise stated.

All fire related elements and items as set out within the Fire Engineers Fire Strategy Report. Fire rating of elements / components require fire certification from certified test bodies to be provided to both the Fire Engineer & Building Control for review and sign off, prior to procurement and installation.

Studio Moren Ltd will coordinate with all other consultants in relation to statutory items / elements under that consultants control. These items may be shown on Studio Moren Ltd drawings for coordination purposes, however they remain under that consultants design and control.

NOTES



Proposed Roof Plan
Scale 1:50@A1

0 1 2 5

rev	amendments	date	by	chk
F2	Revised Scheme	14.06.24	TP	PW
F1	First issue following feasibility drawings	04.03.24	TP	PW

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architecture

project
99-103 Kingsway
Holborn

client
GMS Estates

drawing title
Proposed
Roof Plan

drawing status
FEASIBILITY

scale	date	drawn by
1:50 @ A1 1:100 @ A3	06.02.24	TP

job no.	drawing no.	revision
2017	A-100-109	F2


B.1
23 sqm
B.2
31 sqm
B.3
36 sqm
B.4
24 sqm
Void
110 sqm
Full
height
louvres

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