The Ecology Consultancy

Murphy Site, Kentish Town / Preliminary Ecological Appraisal / **Report for Folgate Estates Ltd**

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Murphy Site, Kentish Town

Preliminary Ecological Appraisal

Report for Folgate Estates Ltd

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Author	Gemma Watkinson MBiolSci (Hons) ACIEEM			
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The Ecology Consultancy, Tempus Wharf, 33a Bermondsey Wall West, London SE16 4TQ
T. 02073 781914 **E**. enquiries@ecologyconsultancy.co.uk **W**. www.ecologyconsultancy.co.uk

Contents

Summary of key issues

The Ecology Consultancy was commissioned to carry out a Preliminary Ecological Appraisal (PEA), comprising a Phase 1 habitat survey, protected species assessment and ecological evaluation of land at the Murphy Site in Kentish Town, London. The development proposals for the site have not been finalised, but will involve the removal of many of the existing workshop buildings on site to allow the redevelopment of the site. The main findings of the PEA are as follows:

- The site comprised several industrial buildings and an office block, mostly surrounded by hardstanding with small areas of landscaping around the office block, and tall ruderal and ephemeral vegetation on the margins of the site. Semi-mature scattered trees have been planted along the boundaries of the site. Habitats present are considered of local value.
- The site is not subject to any statutory or non-statutory nature conservation designations. The closest statutory designated site is Belsize Wood Local Nature Reserve, located 0.9km south-west of the site. The nearest non-statutory designated site is Kentish Town City Farm, Gospel Oak Railsides and Mortimer Terrace Nature Reserve Site of Borough Importance for Nature Conservation (SBINC), located adjacent to the site on the northern, north-eastern and south-western boundaries. The height and aspect of proposed new buildings adjacent to SBINC may lead to shading impacts on adjacent habitats. Should further information on shading impacts be required then specialist input is recommended.
- **Bats** – three buildings (B4, B5 and B6) with low potential to support a bat roost were identified within the site boundary and will be affected by the development of the site. Further survey is required to ascertain if any bats are using these buildings for roosting. Should a bat roost be present a Natural England licence and mitigation strategy may be required.
- **Breeding birds** – habitats with the potential to support breeding birds were present on site. Existing buildings, introduced shrub and scattered trees on site all have potential to support breeding birds. Where these habitats need to be removed, this should occur September to February inclusive which is outside of the main bird breeding season. Where this is not possible, a check for nesting birds prior to vegetation clearance must be undertaken by an experienced ecologist and, if any nests are found, the nests must be protected until such time as the young have left the nest. If any nesting birds are found at any time during clearance works, work must stop immediately and an ecologist consulted.
- Recommendations to enhance the biodiversity value of the site in accordance with national and local planning policies comprise the inclusion of green roofs, Sustainable

urban Drainage Systems (SuDS), wildlife planting, and the provision of bird nesting and bat roosting opportunities.

1 Introduction

BACKGROUND TO COMMISSION

1.1 The Ecology Consultancy was commissioned by Folgate Estates Ltd on 19 April 2019, to carry out a Preliminary Ecological Appraisal (PEA) of land at the Murphy yard site in Kentish Town, within the London Borough of Camden. The appraisal was carried out in order to provide ecological information to inform an outline planning application for a proposed redevelopment of the site. This appraisal considers land within the planning application site boundary (hereon referred to as 'the site') as indicated on the plan provided by the client (SEW, 2018). A Preliminary Roost Assessment (PRA) was carried out at the same time as the PEA survey, and is reported separately (The Ecology Consultancy, 2019).

SCOPE OF THE REPORT

1.2 The aim of this appraisal is to provide baseline ecological information about the site. This will be used to identify any potential ecological constraints associated with the proposed development and/or to identify the need for additional survey work to further evaluate any impact that may risk contravention of legislation or policy relating to protected species and nature conservation. Where necessary, avoidance, mitigation/compensation and/or enhancement measures have been recommended to ensure compliance.

1.3 This appraisal is based on the following information sources:

- a desk study of the site and land within a 1km surrounding radius;
- a Phase 1 habitat survey (JNCC, 2010) of the site to identify and map the habitats present;
- a protected species assessment of the site to identify features with potential to support legally protected species; and
- an evaluation of the site's importance for nature conservation.

1.4 This appraisal has been prepared with reference to best practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017) and as detailed in British Standard 42020:2013 *Biodiversity - Code of Practice for Biodiversity and Development* (BSI, 2013).

1.5 The survey, assessment and report were conducted and written by Gemma Watkinson MBiolSci ACIEEM, an Ecologist with over four years' experience who is competent in carrying out Phase 1 habitat surveys and protected species assessments.

SITE CONTEXT AND STATUS

1.6 The proposed development site is 6.25 hectares (ha) in size and is centred on Ordnance Survey National Grid reference TQ 2859 8544. The site lies within the urban area of Kentish Town, to the west of Sanderson Close. It is not subject to any nature conservation designations, but it is bordered by railway lines to the north, north-east, south-west and south, which make up part of the Kentish Town City Farm, Gospel Oak Railsides and Mortimer Terrace Nature Reserve Sites of Borough Importance for Nature Conservation (SBINC grade I). The wider landscape is dominated by urban development to the west, east and south, comprising residential and industrial use, with scattered trees and amenity greenspaces. The Site of Metropolitan Importance for Nature Conservation (SMINC) of Hampstead Heath, which is a large greenspace with ponds, grassland and woodland, is situated approximately 220m to the north-west of the site.

DEVELOPMENT PROPOSALS

1.7 The development proposals for the site have not been finalised, but will involve the removal of many of the existing workshop buildings on site to allow the redevelopment of the site to include employment, residential and community uses with new parks and open spaces, including a new green connection to Hampstead Heath (Camden, 2018).

RELEVANT LEGISLATION AND PLANNING POLICY

1.8 The following key pieces of nature conservation legislation are relevant to this appraisal. A more detailed description of legislation is provided in Appendix 4:

- The Conservation of Habitats and Species Regulations 2017 (commonly referred to as the Habitats Regulations);
- Wildlife and Countryside Act 1981 (as amended);
- Natural Environment and Rural Communities Act 2006;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

1.9 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2019) requires local authorities to avoid and minimise impacts on biodiversity and to provide net gains in biodiversity when taking planning decisions.

1.10 Other planning policies at the local level which are of relevance to this development include the Kentish Town Draft Planning Framework (Camden, 2018) and The Camden Local Plan (Camden, 2017). Further information is provided in Appendix 4.

2 Methodology

DESK STUDY

2.1 The following data sources were reviewed to provide information on the location of statutory designated sites[1], non-statutory designated sites[2], legally protected species[3], Species and Habitats of Principal Importance[4] and other notable species[5] and notable habitats[6] that have been recorded within a 1km radius of the site. The search for statutory internationally designated sites was extended to include sites within a 5km radius of the site:

- GiGL, the local Biological Records Centre, principally for species records and information on non-statutory sites within 1km of the site;
- London Bat Group, principally for records of bats within 2km of the site;
- MAGIC (http://www.magic.gov.uk/) - the Government's on-line mapping service; and
- Ordnance Survey mapping and publically available aerial photography.

2.2 The full data search results are not presented in the report. However, relevant records provided by the desk study are provided in Section 3 of this report. Records for relevant protected or noteworthy species have been used to inform the assessment of the potential for protected species at the site and to provide a preliminary view of the site's ecological value.

HABITAT SURVEY

2.3 A habitat survey of the site was carried out on the 14 May 2019 in warm, clear, dry conditions. It covered the entire site including boundary features. Habitats were

1 Statutory designations include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR).

2 Non-statutory sites are designated by local authorities (e.g. Sites of Importance for Nature Conservation or Local Wildlife Sites).

3 **Legally protected species** include those listed in Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981; Schedule 2 of the Conservation of Habitats and Species Regulations 2017; or in the Protection of Badgers Act 1992 (as amended).

4 **Species of Principal Importance** are those listed on Section 41 of the Natural Environment and Rural Communities Act, 2006.

5 **Notable species** include Species of Principal Importance under the Natural Environment and Rural Communities Act 2006; Local Biodiversity Action Plan (LBAP) species; Birds of Conservation Concern (Eaton *et al.*, 2015); and/or Red Data Book/nationally notable species (JNCC, undated).

6 **Notable habitats** include Habitats of Principal Importance under the Natural Environment and Rural Communities Act, 2006; those included in an LBAP; Ancient Woodland Inventory sites; and Important Hedgerows as defined by the Hedgerow Regulations 1997.

described and mapped following standard Phase 1 habitat survey methodology (JNCC, 2010). Habitats were marked on a paper base map and subsequently digitised using ESRI ArcGIS software. Habitats were also assessed against descriptions of Habitat of Principal Importance as set-out by the JNCC (BRIG, 2008)[7].

2.4 Records for dominant and notable plants are provided, as are incidental records of birds and other fauna noted during the course of the habitat survey.

2.5 Common names are used where widely accepted – for amphibians, birds, fish, mammals, reptiles and vascular plants. Scientific names are provided for other groups but at first mention only if there is also an accepted common name.

2.6 The site was also surveyed for the presence of invasive plant species as defined by Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, detailed mapping of such species is beyond the scope of this commission and the locations on the habitat plan are indicative only.

2.7 Target notes are used to provide information on specific features of ecological interest (e.g. a badger sett) or habitat features that were too small to be mapped.

PROTECTED AND INVASIVE SPECIES ASSESSMENT

2.8 The suitability of the site for legally protected species was assessed on the basis of relevant desk study records[8] combined with field observations from the habitat survey. The likely value of habitat for protected species occurrence was ranked on a scale from 'negligible' to 'present' as described in Table 2.1.

2.9 The assessment of habitat suitability for protected or notable species was based on professional judgement drawing on experience of carrying out surveys of a large number of urban and rural sites and best practice survey guidance on habitat suitability and identifying field signs. Further information is provided in CIEEM's Sources of Survey Methods[9].

[7] Data required to confirm that certain habitats (including rivers and ponds) meet criteria for Habitats of Principle Importance is beyond that obtained during a Phase 1 habitat survey. In these cases the potential for such habitats to meet relevant criteria is noted but further surveys to confirm this assessment may be recommended

[8] Primarily dependent on the age of the records, distance from the site and types of habitats at the site.

[9] http://www.cieem.net/sources-of-survey-methods-sosm-

Table 2.1: Protected species assessment categories

Category	Description
Present	Presence confirmed from the current survey or by recent, confirmed records.
High	Habitat present provides all of the known key requirements for a given species/species group. Local records are provided by desk study. The site is within or close to a national or regional stronghold for a particular species. Good quality surrounding habitat and good connectivity.
Moderate	Habitat present provides all of the known key requirements for a given species/species group. Several desk study records and/or site within national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, barriers to movement and disturbance.
Low	Habitat present is of relatively poor quality for a given species/species group. Few or no desk study records. However, presence cannot be discounted on the basis of national distribution, nature of surrounding habitats or habitat fragmentation.
Negligible	Habitat is either absent or of very poor quality for a particular species or species group. There were no desk study records. Surrounding habitat unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known national range for a species.

2.10 The findings of this assessment establish the need for protected species surveys that are required to achieve compliance with relevant legislation. Surveys are commonly required for widespread species such as bats, great crested newt, reptiles and badger; but may be necessary for other species if suitable habitat is present.

2.11 Surveys may be required where a site is judged to be of low suitability for a particular species/species group. However, in some cases there may be opportunities to comply with legislation, without further survey, through precautionary measures prior to and during construction.

SITE EVALUATION

2.12 The site's ecological value has been evaluated broadly following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) which ranks the nature conservation value of a site according to a geographic scale of reference: international, national, regional, county/metropolitan, district/borough, local/parish or of value at the site scale. In evaluating the nature conservation value of the site the following factors were considered: nature conservation designations; species/habitat rarity; naturalness; fragility and connectivity to other habitats.

2.13 An initial assessment of the site's contribution to green infrastructure and ecosystem services, as recommended by *BS 42020:2013 Biodiversity. Code of practice for planning and development,* is also included.

DATA VALIDITY AND LIMITATIONS

2.14 Every effort has been made to provide a comprehensive description of the site, however, the following limitations apply to this assessment.

- The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. It should not be taken as providing a full and definitive survey of any protected species group. Additional surveys may be recommended if on the basis of the preliminary assessment or during subsequent surveys it is considered reasonably likely that protected species may be present.
- The ecological evaluation is preliminary and may change subject to the findings of further ecological surveys (should these be required).
- Even where data for a particular species group is provided in the desk study, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest, the area may simply be under-recorded.
- Where only four figure grid references are provided for protected species by third parties, the precise location of species records can be difficult to determine and they could potentially be present anywhere within the given 1km x 1km square. Equally six figure grid references may be accurate to the nearest 100m only.
- The Phase 1 habitat survey does not constitute a full botanical survey or provide accurate mapping of invasive plant species.
- Ecological survey data is typically valid for two years unless otherwise specified.

2.15 Despite these limitations, it is considered that this report accurately reflects the habitats present, their biodiversity values and the potential of the site to support protected and notable species.

3 Results

DESIGNATED SITES

Statutory designated nature conservation sites

3.1 The proposed development site is not subject to any statutory nature conservation designations. There is one national statutory designated site within 1km of the site; Belsize Wood Local Nature Reserve (LNR) is located approximately 0.9km south-west of the site. There are no European statutory sites within a 5km radius of the site.

Table 3.1: Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
Belsize Park (LNR)	0.9km south-west	Belsize Wood has a broad diversity of insect species, probably due to the floral diversity within the LNR. There is a pond, bird feeding area, bird boxes and stag beetle loggeries on site.

Non-statutory designated nature conservation sites

3.2 The proposed development site is not subject to any non-statutory nature conservation designations. Four non-statutory sites designated as Sites of Importance for Nature Conservation at the Metropolitan (SMINC) and Borough (SBINC) grades are present within 1km of the site (see Table 3.1).

Table 3.2: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
Kentish Town City Farm, Gospel Oak Railsides and Mortimer Terrace Nature Reserve (SBINC grade I)	Adjacent to site at the northern, north-eastern, southern and south-western boundaries.	The railsides of the complex junction at Gospel Oak support a mosaic of habitats including secondary woodland interspersed with scrub, grassland and tall herbs. Kentish Town City Farm has a good wildlife garden with a pond planted with native marginal plants such as reed sweet-grass, yellow iris and water mint, with common frogs present. Most of the hedges and trees planted on site are native species although self-established sycamore is quite common. The farm has an excellent bog-garden where insectivorous plants are grown, including all three native species of sundew (Drosera. spp.). The farm is a good place to see butterflies and one of the few places in Camden that still supports a healthy population of house sparrows.
Hampstead Heath (SMINC)	220m north-west	An extensive site with a mix of semi-natural and formal habitats. Ancient woodlands contain old and over-mature trees, providing dead wood habitat for a range of specialist

Table 3.2: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
		invertebrates, including the nationally rare jewel beetle *Agrilus pannonicus*. Another important habitat is the small wet flush (or bog) containing several species of bog-mosses (Sphagnum spp.) and water horsetail (Equisetum fluviatile), all very rare in London. Acid grassland occurs on the upper slopes, supporting heath bedstraw, pill sedge, pignut and other characteristic plants. Relict heathland invertebrates include the tube-web spider at its only known London site. The many ponds and watercourses on the site are of further botanical, entomological and ornithological interest. Other rare plants include creeping willow, lemon-scented fern and hard fern.
Junction Road Railway Cutting (SBINC grade 1)	0.7km north-east	An isolated but well-vegetated section of the Crouch Hill line, which supports an extensive mosaic of open and wooded habitats, valued by birds, mammals and insects. The sides of the cutting support secondary woodland and scrub dominated by sycamore, ash and bramble.
Dartmouth Park Hill and Reservoir (SBINC grade 1)	0.75km north-east	A covered reservoir and adjacent park supporting a variety of grassland wildflowers. A variety of grassland communities is present here, which grade from neutral to acidic types. Locally uncommon plants include burnet saxifrage, grey sedge, sheep's sorrel and common sorrel and field woodrush. Associated fauna includes the small copper butterfly, which feeds on the sorrels.

Habitat inventories and landscape-scale conservation initiatives

Ancient woodland

3.3 There is one area of ancient and semi-natural woodland within a 2km radius of the site shown on the ancient woodland inventory, located at Ken Wood, approximately 1.7km north-west of the site.

Habitats of Principal Importance

3.4 The area of woodland located adjacent to the site at the north and north-east (on the adjacent railway sidings), is shown as a deciduous woodland HPI on MAGIC's Priority Habitat Inventory.

3.5 A search of MAGIC's Priority Habitat Inventory also revealed the presence of four other HPI habitat types within 2km of the survey area. These HPIs are not found on or adjacent to the site: good quality semi-improved grassland, lowland heathland, woodpasture and parkland, and traditional orchard.

3.6 There are no records of veteran trees on site[10].

PHASE 1 HABITAT SURVEY

Overview

3.7 The site consists of several industrial buildings and structures, mostly surrounded by hardstanding with small areas of tall ruderal and ephemeral vegetation on the margins of the site. There are also semi-mature scattered trees that have been planted adjacent to the boundaries of the site.

3.8 Phase 1 habitats types are mapped in Figure 1, areas are given in Table 3.3. A description of dominant and notable species and the composition of each habitat is provided below, and a plant list for the site is provided in Appendix 3.

Table 3.3: Phase 1 Habitat Areas

Phase 1 Habitat	Extent (ha)	%
Buildings and hardstanding	6.1854	98.96%
Introduced shrubs (flower bed planting and planters)	0.0089	0.14%
Tall ruderal	0.0495	0.79%
Ephemeral/Short perennial	0.0069	0.11%
Total	**6.2507**	**100**

Habitat description

Buildings and hardstanding

3.9 There were ten buildings located across the site and these are briefly described in Table 3.4 below. They are described in more detail in the accompanying Preliminary Roost Assessment report (The Ecology Consultancy, 2019).

Table 3.4: Murphy Site, Kentish Town - building descriptions

Building number	Description	Potential roosting features
1	A series of single storey pitched roof workshops in constant use (Appendix 2, Photograph 1). They are constructed of a steel frame, open to the apex, and covered with corrugated metal sheeting, with plastic daylight panels in the roof covering. There was only one workshop with timber boarding beneath the metal sheeting roof covering, which would enclose a void (inaccessible). There were	None

[10] https://ati.woodlandtrust.org.uk/tree-search/?v=1583362&ml=map&z=13&nwLat=51.44185494634243&nwLng=-0.8322949218749964&seLat=51.366680570365645&seLng=-0.5027050781249964

Table 3.4: Murphy Site, Kentish Town - building descriptions

Building number	Description	Potential roosting features
	metal frame windows on the south-western elevation, with no gaps present.	
2	Prefabricated portacabin type office (Appendix 2, Photograph 2).	None
3	Training building. Old warehouse building with brick skin added after, gap around existing windows on northern elevation, but wide and considered unsuitable for roosting bats. Pitched steel frame roof with corrugated metal sheeting and plastic daylight panels. Flat roof single-storey extension at west of building with bitumen felt.	None
4	Canteen. This is a solid brick building with a cross gabled roof of slate at the south and a flat roof at the north. All roof and ridge tiles were noted to be tight (Appendix 2, Photograph 3). There were several gaps in the brickwork on the eastern elevation of the building, where the existing sign is bolted to the wall, where a brick has twisted and exposed a cavity within the wall and around the parapet wall. Building 5 is adjacent on the western elevation.	Yes
5	Large adjoining warehouse buildings, in constant use. Solid brick walls with no gaps noted within exterior or interior brickwork, with the exception of some gaps around a bricked-up window on the southern elevation. Steel frame supporting pitched (north) and flat roof (south) sections with corrugated steel sheeting and plastic daylight panels (Appendix 2, Photograph 4 and 5). Gaps at eaves but no potential roosting feature between brickwork and metal sheeting. Hanging clay tiles are present on a small section on the south-western elevation of Building 5, and there are gaps under the tiles on the corner of the building. Flat roof canopy constructed of timber adjacent on the eastern elevation.	Yes (southern and south-western elevations)
6	Vehicle wash. Brick building with stone flat roof, with water tank above (Appendix 2, Photograph 6). Grill leading to a cavity within the brickwork on southern elevation, and gaps within stonework where mortar has eroded.	Yes
7	Two-storey office building with solid brick walls and PVC windows, no gaps noted around windows. Appears to have been recently re-roofed, with no tiles missing or lifted, and PVC skylights within the roof covering. PVC soffit boxes on the eastern, northern and southern elevations, no gaps noted (Appendix 2, Photograph 7).	None
8	Modern workshop constructed of a steel frame with profile metal sheeting on walls and roof covering, with plastic daylight panels (Appendix 2, Photograph 8). Within the modern building there is also an old warehouse building with brick walls, and a steel frame supporting a pitched roof of corrugate sheeting and plastic daylight panels. Netting has been used within the building to prevent birds nesting within the building. No gaps were noted within the brickwork of the old warehouse within B9.	None
9	Brick chimney structure for the railway tunnel beneath the site, towards the south-west of the site (Appendix 2, Photograph 9). No gaps noted within the exterior brickwork, interior not visible.	None
10	Gatehouse building (Appendix 2, Photograph 10). This is a modern building with cavity brick walls and timber cladding in places, supporting a flat roof, L-shaped on plan. No gaps noted within the brickwork or cladding.	None

3.10 The majority of the site comprised areas of hardstanding around the existing buildings, used as car parking and machinery and vehicle storage. On the margins of the site there was occasional ephemeral and short vegetation.

Introduced shrub

3.11 There was also a small courtyard garden to the south-west of Building 3, with raised planters.

Tall ruderal and ephemeral vegetation

3.12 Around the margins of the site, adjacent to the boundary fences and buildings and on the edges of the car parks and walkways, there were tall ruderal and ephemeral species colonising these areas (Appendix 2, Photograph 11). Species present were those typically associated with enrichment, disturbance and/or waste ground including barren brome, herb-Robert, prickly sow-thistle, groundsel, bent species, cleavers, ribwort plantain, wall barley, creeping thistle, purple toadflax, colt's-foot, wood avens and goat's rue. A full list of species noted on site is provided in Appendix 3.

Scattered trees

3.13 Scattered trees had been planted on site, along the boundaries of the site, comprising Leyland cypress, sycamore, poplar species, Norway maple, cherry species, silver birch and crack willow (Appendix 2, Photograph 12). The trees were all semi-mature.

PROTECTED AND INVASIVE SPECIES ASSESSMENT

3.14 The potential for the site to support protected species has been assessed using criteria provided in Table 3.5, based on the results of the desk study and observations made during the site survey of habitats at the site. Other legally protected species are not referred to as it is considered that the site does not contain habitats that would be suitable to support them. The following species/species groups are potentially present at the site:

- bats;
- breeding birds;
- reptiles; and
- invasive species.

3.15 The table also summarises relevant legislation and policies relating to protected and invasive species. Key pieces of statute are summarised in Section 1 and set-out in greater detail in Appendix 4.

Table 3.5: Protected and Invasive Species Assessment

Habitat/ species	Status [11, 12]	Likelihood of occurrence
Bats	HR WCA S5	**LOW:** The majority of the buildings on site did not have any potential roosting features for bats. Building 4 was considered to have potential roosting features within the exterior brickwork on the eastern elevation, and Building 5 had gaps around a bricked up window and hanging tiles with gaps beneath on the southern elevation. Missing mortar was noted in the stonework of Building 6, and there was a grill with a void behind. The semi-mature trees on site did not have any suitable features for roosting bats. There are a total of 384 desk study records of eight species of bats within 2km of the site, returned in the GiGL and London Bat Group data searches including common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, Daubenton's, Leisler's, noctule, brown long-eared, and Natterer's, dating from 1984 to 2017. The closest records are for a brown long-eared from 2011 located approximately 0.29km west, and a noctule and a pipistrelle from 2012 located 0.34km east of the site. The most recent records date from 2017, and are for Daubenton's bat, located approximately 1.35km north-west of the site. **Buildings 4, 5 and 6 have low bat roosting potential and are likely to be impacted within the development of the site. As such bats are considered further in Section 4 of this report.**
Breeding birds	WCA S5	**LOW**: There are scattered semi-mature trees on site, along the boundaries of the site, which have the potential to provide suitable nesting habitat for common breeding bird species. Gaps within the brickwork of the buildings may also provide suitable nesting habitats. Several common bird species were observed during the habitat survey including feral pigeon and a pied wagtail carrying a food item. No active or disused nests were noted during the survey. The data search returned records of several Species of Principal Importance including house sparrow, most recently in 2018 located approximately 340m north of the site. The London BAP species of common redpoll, herring gull, linnet, spotted flycatcher, dunnock, sand martin, starling and song thrush have also been recorded within 1km of the site. **It is likely that breeding birds will occur at the site in low numbers and may use the buildings and boundary trees on site for nesting. As such, they are considered further in Section 4 of this report.**
Reptiles	WCA S5	**NEGLIGIBLE:** The adjacent railway line habitats have some potential to support common reptile species. However, there were no habitats present on site that have potential to provide cover or are considered suitable to support breeding or foraging reptiles. The tall ruderal

[11] The following abbreviations have been used to signify the legislation regarding different species: HR = Conservation of Habitats and Species Regulations 2017; WCA S1 = Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); WCA S5 = Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); WCA S9 = Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); PBA = Protection of Badgers Act, 1992.

[12] The following abbreviations have been used to signify the policy of conservation assessments applying to notable species: SPI = Species of Principal Importance under the NERC Act 2006; LBAP = Local Biodiversity Action Plan species; BoCC = Birds of Conservation Concern - amber list / red list (Eaton *et al.*, 2015); and/or RD/NN = red data book/nationally notable species (JNCC, undated).

Table 3.5: Protected and Invasive Species Assessment

Habitat/ species	Status [11, 12]	Likelihood of occurrence
		vegetation was sparse and restricted to the margins of the site, and the areas of introduced shrub were not connected to the railway sidings habitats. The desk study returned no records of reptile within 1km of the site. **Considering the above, there is negligible potential for widespread reptiles to occur at the site and as such they are not considered further in this report.**
Invasive species	WCA S9	**NEGLIGIBLE:** There are several desk study records for invasive species within 2km of the site, including some listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). There were no species listed on Schedule 9 recorded on the site during the habitat survey. **As there is a negligible likelihood of presence, invasive species listed on Schedule 9 are not considered further in this report.**

NATURE CONSERVATION EVALUATION

3.16 The proposed development site is not subject to any nature conservation designations. It is dominated by hardstanding and industrial buildings, and none of the habitats present on site are Habitats of Principal Importance, London or Camden BAP habitats. The site is situated within an urban area surrounded by residential and commercial property and roads to the east. The active trainlines adjacent to the site at the north, north-east and south-west make up part of the 'Kentish Town City Farm, Gospel Oak Railsides and Mortimer Terrace Nature Reserve SBINC'. These railway lines and the semi-mature trees on the boundaries of the site provide a potential commuting corridor for bats and other wildlife through the landscape, and connect the site to Hampstead Heath SMINC, which is a large greenspace with ponds, grassland and woodland, situated approximately 220m to the north-west of the site.

3.17 The habitats on site were suitable for a range of note-worthy species, including Species of Principal Importance, London and Camden BAP species, as reported in the desk study or recorded during the survey, as follows:

- bats;
- widespread but declining species of birds that are also species of conservation concern[13] such as house sparrow; and
- invertebrates associated with widespread wasteland habitats such as wall butterfly.

3.18 The habitats at the site and populations of the above species are likely to be of local value. It is unlikely that the site would support rare species, or diverse assemblages or large populations of any noteworthy species.

3.19 Records for soprano pipistrelle and brown long-eared bats, which are both Species of Principal Importance, were provided in the desk study. It is not possible to confirm the value of bat populations that may be present at the site until further surveys have been undertaken. Recommendations for further survey are provided in Section 4.

[13] Birds of Conservation Concern - amber list / red list (Eaton *et al.*, 2015);

4 Potential Impacts and Recommendations

4.1 This section summarises the potential impacts on habitats and notable species that may be present at this site. The impact assessment is preliminary and further detailed assessment and surveys will be required to assess impacts and design suitable mitigation, where appropriate.

4.2 The following key ecological issues have been identified:

- Kentish Town City Farm, Gospel Oak Railsides and Mortimer Terrace Nature Reserve SBINC, located adjacent to the site;
- habitat suitable for roosting bats is present – further survey will be required to establish their presence/likely absence in Building 4, 5 and 6 that will be impacted by the redevelopment of the site;
- habitat suitable for breeding birds is present – measures must be taken to avoid killing birds or destroying their nests;
- a range of measures should be undertaken to satisfy the requirement for ecological enhancement included in planning policy.

CONSTRAINTS AND MITIGATION/COMPENSATION

Designated Nature Conservation Sites

4.3 The boundary trees should be retained within the development proposals and appropriate lighting should be implemented on site during the development and post construction to avoid illumination of the boundary trees and adjacent habitats. The inclusion of residential housing within the development may cause an increase in recreational pressure on the nearby Hampstead Heath SMINC to the north-west. The Hampstead Heath SMINC is already heavily used for recreation and provided that the designs for the proposed development include pocket parks and greenspaces within the development for alternative greenspace provision on site, the effects of increased recreational pressure on the habitats at Hampstead Heath SMINC will be minimised.

4.4 The height and aspect of proposed new buildings immediately adjacent to the non-statutory designated site Kentish Town City Farm, Gospel Oak Railsides and Mortimer Terrace Nature Reserve SBINC may lead to shading impacts on adjacent habitats, however should further information on shading impacts be required then specialist input is recommended.

Habitats

4.5 No particular constraints were identified in relation to the intrinsic value of the habitats present.

4.6 Scattered trees on the boundaries of the site should be retained and protected within the development where possible, to retain the potential wildlife commuting corridor, and also to act as a buffer between the site and the SBINC habitats. Environmental best practice measures, in accordance with British Standards Institution (2012) guidelines, should be implemented during the management works to protect trees. Any trees removed as part of the development should be replaced on site with at least two comparable trees.

Bats

4.7 All British species of bat are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. Under this legislation it is an offence to deliberately capture, kill, disturb and damage or destroy a bat roost. Some species of bat are also Species of Principal Importance, and all species are Camden BAP species.

4.8 Buildings 4, 5 and 6 were assessed to have low potential to support roosting bats, and these buildings are likely to be removed or refurbished within the redevelopment of the site. Therefore, further survey is required to determine the presence/likely absence of roosting bats as outlined below and to comply with legislation. Should a bat roost be present a Natural England licence and mitigation strategy may be required.

4.9 The site is linked to suitable off-site foraging and commuting habitat via the railway lines adjacent to the west and north of the site, which would connect the site to Hampstead Heath at the north-west, which contains habitats suitable for foraging bats.

4.10 It is recommended that measures are implemented to avoid night-time lighting of areas that could provide flight lines and foraging habitats for bats, in particular the adjacent railway sidings habitats at the north, west and south. Further advice on the locations and appropriate methods for controlling light emissions should be sought when commissioning the bat surveys noted above.

Breeding birds

4.11 All wild birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended). The site is considered likely to support common species of breeding bird, in the scattered trees on the boundary of the site and also within gaps within the brickwork of the buildings.

4.12 It is reported that the boundary trees will be retained within the redevelopment of the site. However, where the proposed works require the removal of boundary trees, demolition of buildings or repointing of brickwork with potential to support breeding birds, this should be carried out September to February inclusive, to avoid any potential offences relating to breeding birds during their main bird breeding season (Newton *et al.*, 2011).

4.13 If site clearance or repointing works during the breeding season is unavoidable, then potential nesting habitat must be inspected shortly before work commences to identify active birds' nests. Should they be present, the nest and a suitable buffer of habitat around it must be retained until the young have left the nest.

Other protected species

4.14 In the unlikely event that any protected species are found during site clearance or construction, works must stop immediately and advice sought from a suitably qualified ecologist on how to proceed

Environmental best practice

4.15 Appropriate storage of fuels and chemicals will minimise the risk of accidental spillage. Sources of best construction practice and environmental management include CIRIA guidance (Connolly and Charles, 2005) and various Defra/ Environment Agency guidelines. This guidance relates to various pieces of legislation including the Environmental Damage (Prevention and Remediation) Regulations 2009.

4.16 Retained trees on the boundaries of the site should be protected in accordance with British Standards Institution (2012) guidelines.

FURTHER SURVEY REQUIREMENTS

4.17 Table 4.1 lists further survey requirements as recommended in the constraints section.

Table 4.1: Further survey requirements

Species/ Habitat	Survey Requirement	Number of surveys and seasonal considerations
Bats	To survey Building 4, 5 and 6 with roosting potential. Preliminary Roost Assessment (PRA) followed by emergence/re-entry surveys as required.	Following a Preliminary Roost Assessment (the PRA report accompanies this PEA report), a single emergence/ re-entry survey is required for the features that have been identified with low roosting potential. The emergence/ re-entry survey must be carried out between May and August (Collins, 2016).
Breeding birds	Nesting bird check	If vegetation clearance, building demolition or repointing works are carried out between September and the end of February, no survey is required. Otherwise, individual surveys are required up to 48 hours prior to demolition/vegetation clearance/ repointing works (Newton *et al.*, 2011).

OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

4.18 Planning policy at the national and local level and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects. Ecological enhancements can also contribute to green infrastructure and ecosystem services such as storm water attenuation and reducing the urban heat island effect, and the enhancement of green infrastructure is a key principle in the development of the new neighbourhood (Camden, 2018). These should be included within the design to enhance the ecological value of the proposed new 'Heath Line' green corridor linking Kentish Town and Hampstead Heath. The following measures would be suitable for integration into the site's design, but would require a more detailed design to successfully implement.

Biodiverse roof

4.19 It is recommended that the proposed buildings incorporate areas of biodiverse roof where possible. To demonstrate the highest feasible and viable sustainability standards in line with London Plan Policies (GLA, 2016) and the draft Kentish Town Planning Framework (Camden, 2018) it is recommended that a specification for a biodiverse roof be drawn up by a company with a proven track record in delivering these features in London. Any biodiverse green roof should support at least 25 plant species.

4.20 A biodiverse green roof would provide additional benefits such as protecting and prolonging the life of the roof membrane, reducing building energy use by insulating the building in winter and keeping it cooler in summer, providing a SuDS function by

reducing storm water run-off from the roof, reducing the urban heat island effect and local air/noise pollution. Combining a biodiverse roof with PV panels (biosolar roof) would also provide further benefits, such as the cooling effect the vegetation has on the PV cells, increasing their productivity in hot weather, as well as resulting in a more efficient use of roof space.

4.21 The green roof should follow UK standards (GRO, 2014) and include additional habitat features such as deadwood, varying substrate depths and areas of bare rocky substrate. This will provide good habitat for a range of invertebrates and birds including Camden BAP species such as stag beetle.

Sustainable Drainage System (SuDS)

4.22 SuDS comprise a linked system of soft landscaping, green roofs, rain-water harvesting technologies including ponds, below ground drainage and porous surfacing which can be designed into a development to intercept and attenuate surface water and prevent flooding. Design of a SuDS would be appropriate to this development and should be considered as part of the site master plan. A SuDS would also increase biodiversity, for example by providing a series of habitats for wildlife to use, if appropriately planted – see below.

Wildlife planting

4.23 Wildlife planting should be integral to the soft landscape plans and in the creation of the proposed new neighbourhood parks. Planting plans should include native species and/or species of recognised wildlife value[14]. The use of nectar-rich and berry producing plants will attract a wider range of insects, birds and mammals and continue to accommodate those already recorded at the site. Trees should also be provided and can be under-planted to improve structure and cover for wildlife.

4.24 Consideration could also be given to creation of habitats which reflect the existing character of habitats found in Hampstead Heath, especially where the landscaping forms part of the proposed 'Heath Line' green corridor which will link Kentish Town to Hampstead Heath (Camden, 2018).

[14] For example The Royal Horticultural Society (RHS) Perfect for Pollinators Scheme https://www.rhs.org.uk/science/conservation-biodiversity/wildlife/encourage-wildlife-to-your-garden/plants-for-pollinators and the joint RHS/Wildlife Trust's Gardening With Wildlife In Mind Database http://www.joyofplants.com/wildlife/home.php

4.25 Good horticultural practice should be utilised, including the use of peat-free composts, mulches and soil conditioners, native plants with local provenance and avoidance of the use of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

4.26 Landscaping should include the use of climbing plants growing on a support structure to provide vertical nesting habitat and foraging resources for birds and invertebrates. The support structure should ideally be placed 50-100mm off the façade. Plants should comprise native species or non-native species of recognised wildlife value and either deciduous or evergreen species depending on the specification.

4.27 It is proposed that community growing spaces are included within the new development. The inclusion of orchards within the development would contribute to achieving Camden BAP habitats.

Provision of bird nesting and bat roosting opportunities

4.28 The provision of bird boxes would be appropriate at this site. Many different designs are available including boxes to support colonial species such as house sparrow, a Species of Principal Importance and Camden BAP species. Woodcrete bird boxes (Schwegler, 2011) are recommended as they are long lasting compared to wooden boxes, insulate occupants from extremes of temperature and condensation and are available in a broad range of designs.

4.29 The provision of artificial bat roosting opportunities will also be appropriate at this site. These may include bat boxes located on retained trees on the boundaries of the site, or incorporated into the design of the new buildings, adjacent to suitable foraging and commuting habitats for bats. Bat boxes should be positioned between 3-5m above ground level, facing south-east to south-west, in a location that will not be lit by artificial lighting. Models from Schwegler such as 1FF Flat Bat Box are appropriate for use on retained trees and do not require any cleaning. Integrated bat features such as Schwegler Bat Tube 1FR should be included within the designs of the new buildings, and are maintenance free. More information regarding the bat boxes are available through the Schwegler website[15].

[15] www.schwegler-natur.de

Stag beetle loggeries

4.30 It is recommended that, where possible, deadwood habitats are included on site including stag beetle loggeries, created using untreated timber, to provide habitat for invertebrates and fungi on site, including stag beetle which have been recorded within 1km of the site.

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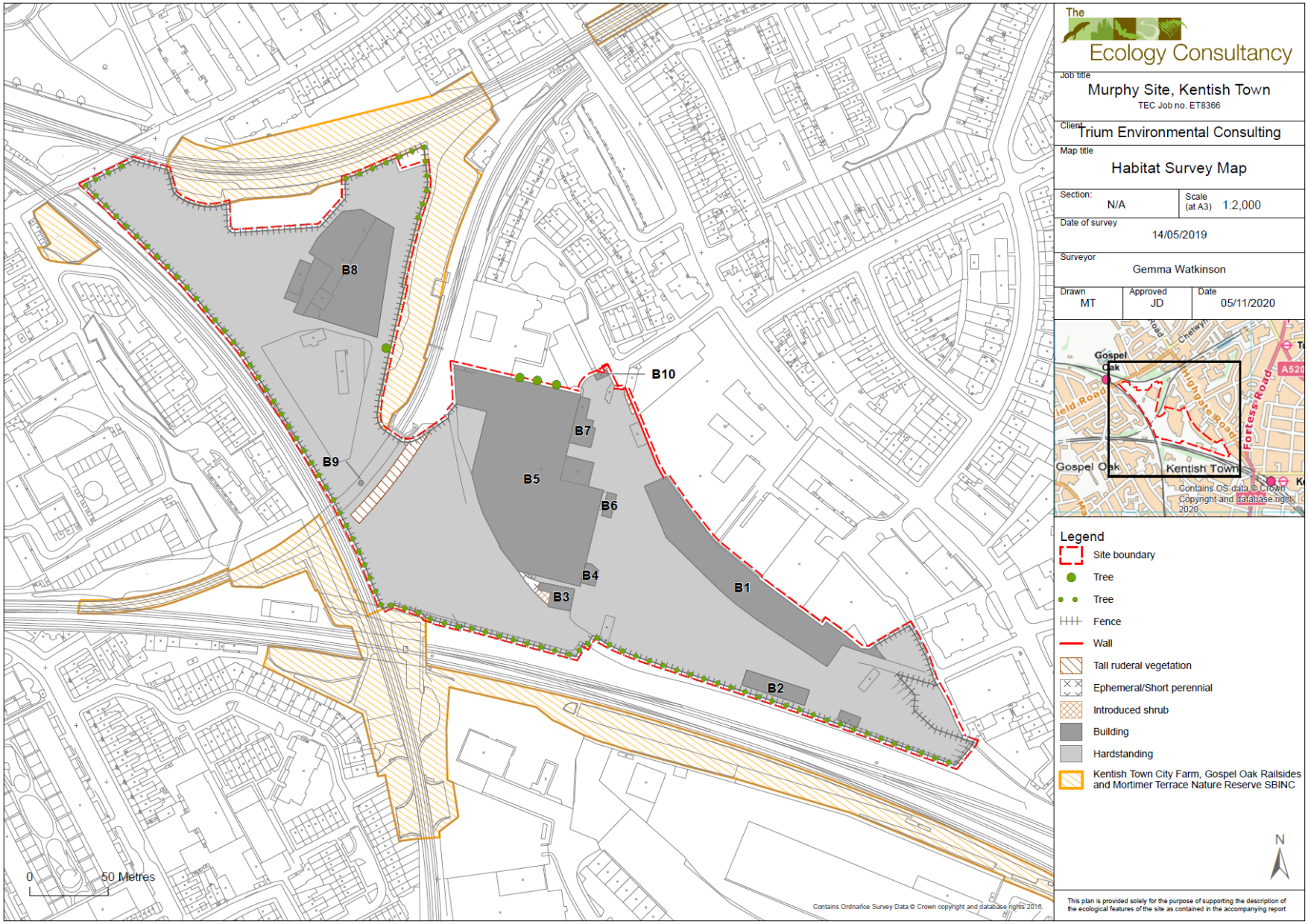
Appendix 1: Habitat Map

Figure 1: Habitat Survey Map



Appendix 2: Photographs

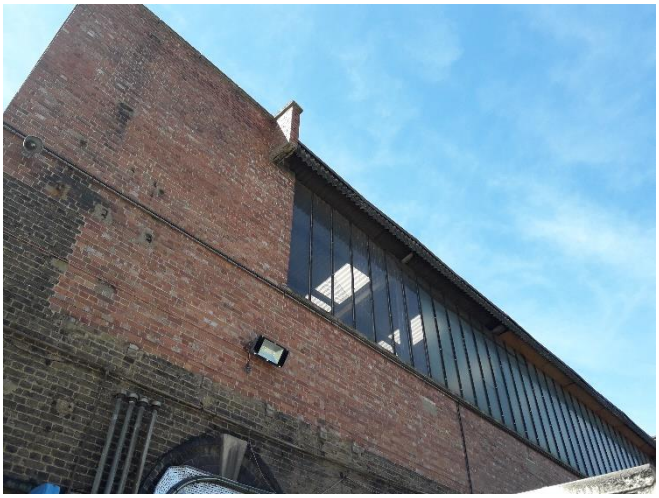
Photograph 1
Building 1 (series of single storey wokshops) towards the north-east of the site, viewed from the north-west of the buildings.

Photograph 2
Building 2, a prefab type office building, located at the south of the site, viewed from the north.

Photograph 3
Building 4 as viewed from the south, with Building 5 adjacent to the west, and Building 6 in the background.

Photograph 4
Interior view of Building 5.

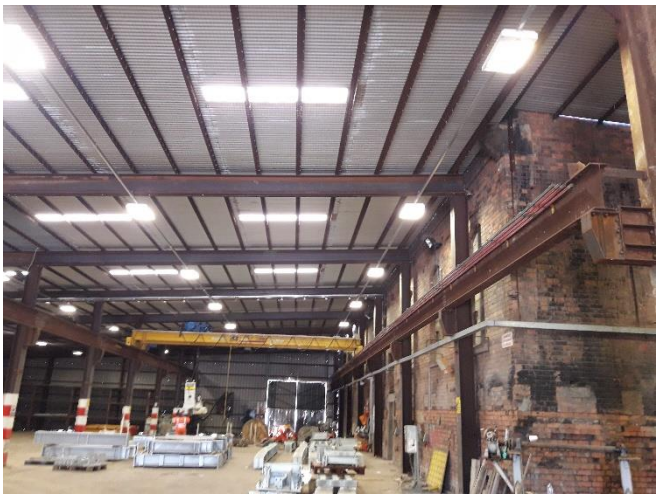
Photograph 5
Eastern elevation of Building 5.



Photograph 6
Southern elevation of Vehicle Wash, Building 6, with water tank above.

Photograph 7
Eastern elevation of Building 7 with Building 5 just seen behind.

Photograph 8
Interior of Building 8, with old brick warehouse within the modern warehouse structure.



Photograph 9
Building 9, the brick chimney structure for the tunnel beneath, at the south-west of the site.

Photograph 10
Building 10, the modern gatehouse building on the eastern boundary of the site, with amenity planters.

Photograph 11
View of eastern boundary fenceline with tall ruderal and ephemeral vegetation, and eastern elevation of Building 8.

Photograph 12
Representative view of scattered semi-mature trees on the south-western boundary of the site.

Appendix 3: Plant Species List

Plant Species List for the Murphy Site in Kentish Town compiled from Phase 1 habitat survey carried out on the 14 May 2019.

Scientific nomenclature and common names for vascular plants follow Stace (2019). Please note that this plant species list was generated as part of a Phase 1 habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated results section of this PEA.

Abundance was estimated using the DAFOR scale and additional notes taken as follows:
D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally c=clumped, e=edge only, g=garden origin, p=planted, y = young, s=seedling or sucker, t=tree, h=hedgerow, w=water

SCIENTIFIC NAME	COMMON NAME	ABUNDANCE	QUALIFIER
Acer platanoides	Norway maple	O	t, p
Acer pseudoplatanus	Sycamore	O	t, p
Acer sp.	Maple species	R	t, p
Agrostis sp.	Bent sp.	O	
Alliaria petiolata	Garlic mustard	R	
Anisantha sterilis	Barren brome	O	
Anthriscus sylvestris	Cow parsley	R	
Arrhenathreum elatius	False oat-grass	O	
Artemisia vulgaris	Mugwort	R	
Asplenium scolopendrium	Hart's-tongue fern	R	p
Ballota nigra	Black horehound	R	
Betula pendula	Silver birch	R	t, p
Betula sp.	Birch species	R	t, p
Buddleja davidii	Buddleia	O	e
Calystegia sepium	Hedge bindweed	O	
Cerastium fontanum	Common mouse-ear	R	
Cirsium arvense	Creeping thistle	R	
Cirsium vulgare	Spear thistle	R	
Clematis sp.	Clematis	R	
Crataegus monogyna	Hawthorn	R	s
Cupressus x leylandii	Leyland cypress	O	t, p
Dryopteris filix-mas	Male-fern	R	p
Epilobium sp.	Willowherb species	O	
Euphorbia sp.	Spurge species	R	
Fraxinus excelsior	Ash	R	t, p, s
Galega officinalis	Goat's Rue	O	e
Galium aparine	Cleavers	R	
Geranium robertianum	Herb-Robert	O	
Geum urbanum	Wood avens	R	
Hedera helix	Ivy	O	e
Helminthotheca echiodies	Bristly oxtongue	R	
Hordeum murinum	Wall barley	R	
Hyacinthoides non-scripta	Bluebell	R	p
Iris sp.	Iris species	R	p
Lactuca virosa	Great lettuce	R	
Lavendula sp.	Lavender species	R	p
Linaria purpurea	Purple toadflax	R	
Malva sylvestris	Common mallow	R	
Oxalis corniculata	Procumbent yellow-sorrel	R	
Plantago lanceolata	Ribwort plantain	R	
Plantago major	Greater plantain	R	

Poa trivialis	Rough meadow-grass	O	
Populus sp.	Poplar species	O	s
Prunus sp.	Cherry	O	t, p
Quercus cerris	Turkey oak	R	p
Quercus sp.	Oak species	R	s
Ranunculus repens	Creeping buttercup	R	
Ribes sp.	Currant	R	p
Rubus fruticosus agg.	Bramble	O	
Salix euxina	Crack willow	R	t, p
Senecio squalidus	Oxford ragwort	R	
Senecio vulgaris	Groundsel	R	
Sisymbrium officinale	Hedge mustard	R	
Sonchus asper	Prickly sow-thistle	R	
Tilia sp.	Lime species	R	t, p
Tragopogon pratensis	Goat's-beard	R	
Trifolium repens	White clover	O	
Tussilago farfara	Colt's-foot	R	
Verbascum thapsus	Great mullein	R	
Veronica persica	Common field-speedwell	R	
Vibernum opulus	Guelder rose	R	p
Vicia sativa	Common vetch	R	
Vinca sp.	Periwinkle	R	p

Appendix 4: Legislation and Planning Policy

Important notice: This section contains details of legislation and planning policy applicable in Britain only (i.e. not including the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

A NATIONAL LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive[16] is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991;
- Countryside and Rights of Way (CRoW) Act 2000;
- Natural Environment & Rural Communities (NERC) Act 2006;
- Protection of Badgers Act 1992:
- Wild Mammals (Protection) Act 1996.

Species and species groups that are protected or otherwise regulated under the aforementioned domestic and European legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds,

[16] Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

dormouse, invasive plant species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2017 (which includes smooth snake, sand lizard, great crested newt and natterjack toad), all bat species, otter, dormouse and some plant species) are given below. **These should be read in conjunction with the relevant species sections that follow.**

- In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.
- The Conservation of Habitats and Species Regulations 2017 does not define the act of 'migration' and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.
- In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests': i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:

  a) to impair their ability:

  (i) to survive, breed, or reproduce, or to rear or nurture young;

  (ii) to hibernate or migrate[3]

  b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also currently protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded de facto protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost[17].

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy an egg of any wild bird:
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European

[17] Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. **150**. The Mammal Society, Southampton.

Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young;
- Intentional or reckless disturbance of dependent young of such a bird.

How is the legislation pertaining to birds liable to affect development works?

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird breeding season which typically runs from March to August[18]. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are additionally protected against disturbance during the breeding season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Herpetofauna (Amphibians and Reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita* and great crested newt *Triturus cristatus* receive full protection under The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2. The pool frog *Pelophylax lessonae* is also afforded full protection under the same legislation. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of species listed on Schedule 2
- Deliberate disturbance of any Schedule 2 species as:

  a) to impair their ability:

  (i) to survive, breed, or reproduce, or to rear or nurture young;

  (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate

[18] It should be noted that this is the main breeding period. Breeding activity may occur outwith this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

b) to affect significantly the local distribution or abundance of the species

- Deliberate taking or destroying of the eggs of a Schedule 2 species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

With the exception of the pool frog, these species are also currently listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Species such as the adder *Vipera berus*, grass snake *Natrix natrix,* common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to Section 9(1) & (5). For these species, it is prohibited to:

- Intentionally (or recklessly in Scotland) kill or injure these species
- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *L. helveticus* are listed in respect to Section 9(5) only which affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale.

How is the legislation pertaining to herpetofauna liable to affect development works?

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect the breeding sites or resting places of those amphibian and reptile species protected under The Conservation Habitats and Species Regulations 2010 (as amended). A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the Wildlife and Countryside Act 1981 (as amended).

Invasive Plant Species

Certain species of plant, including Japanese knotweed *Fallopia japonica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera* are listed on Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) in respect to Section 14(2). Such species are generally non-natives whose establishment or spread in the wild may be detrimental to native wildlife. Inclusion on Part II of Schedule 9 therefore makes it an offence to plant or otherwise cause these species to grow in the wild.

How is the legislation pertaining to invasive plants liable to affect development works?

Although it is not an offence to have these plants on your land per se, it is an offence to cause these species to grow in the wild. Therefore, if they are present on site and development activities (for example movement of spoil, disposal of cut waste or vehicular movements) have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this happening prior to the commencement of works.

Wild Mammals (Protection) Act 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to:

- Mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

B NATIONAL AND EUROPEAN LEGISLATION AFFORDED TO HABITATS

Statutory Designations: National

Nationally important areas of special scientific interest, by reason of their flora, fauna, or geological or physiographical features, are notified by the countryside agencies as statutory **Sites of Special Scientific Interest** (SSSIs) under the National Sites and Access to the

Countryside Act 1949 and latterly the Wildlife & Countryside Act 1981 (as amended). As well as underpinning other national designations (such as **National Nature Reserves** which are declared by the countryside agencies under the same legislation), the system also provides statutory protection for terrestrial and coastal sites which are important within a European context (Natura 2000 network) and globally (such as Wetlands of International Importance). See subsequent sections for details of these designations. Improved provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales).

The Wildlife & Countryside Act 1981 (as amended) also provides for the making of **Limestone Pavement Orders**, which prohibit the disturbance and removal of limestone from such designated areas, and the designation of **Marine Nature Reserves**, for which byelaws must be made to protect them.

Statutory Designations: International

Special Protection Areas (SPAs), together with **Special Areas of Conservation** (SACs) form the **Natura 2000** network. The Government is obliged to identify and classify SPAs under the EC Birds Directive (Council Directive 2009/147/EC (formerly 79/409/EEC)) on the Conservation of Wild Birds). SPAs are areas of the most important habitat for rare (listed on Annex I of the Directive) and migratory birds within the European Union. Protection afforded SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles (nm) is given by The Conservation of Habitats & Species Regulations 2010 (as amended). The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of SPAs in UK offshore waters (from 12-200 nm).

The Government is obliged to identify and designate SACs under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora). These are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive within the European Union. SACs in terrestrial areas and territorial marine waters out to 12 nm are protected under The Conservation of Habitats & Species Regulations 2010 (as amended). The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of SACs in UK offshore waters (from 12-200 nm).

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation

and wise use, in particular recognizing wetlands as ecosystems that are globally important for biodiversity conservation. Wetlands can include areas of marsh, fen, peatland or water and may be natural or artificial, permanent or temporary. Wetlands may also incorporate riparian and coastal zones adjacent to the wetlands. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CRoW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. This effectively extends the level of protection to that afforded to sites which have been designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs).

Statutory Designations: Local

Under the National Sites and Access to the Countryside Act 1949 **Local Nature Reserves** (LNRs) may be declared by local authorities after consultation with the relevant countryside agency. LNRs are declared for sites holding special wildlife or geological interest at a local level and are managed for nature conservation, and provide opportunities for research and education and enjoyment of nature.

Non-Statutory Designations

Areas considered to be of local conservation interest may be designated by local authorities as a **Wildlife Site**, under a variety of names such as **County Wildlife Sites** (CWS), **Listed Wildlife Sites** (LWS), **Local Nature Conservation Sites** (LNCS), **Sites of Biological Importance** (SBIs), **Sites of Importance for Nature Conservation** (SINCs), or **Sites of Nature Conservation Importance** (SNCIs). The criteria for designation may vary between counties.

Together with the statutory designations, these are defined in local and structure plans under the Town and Country Planning system and are a material consideration when planning applications are being determined. The level of protection afforded to these sites through local planning policies and development frameworks may vary between counties.

Regionally Important Geological and Geomorphological Sites (RIGS) are the most important places for geology and geomorphology outside land holding statutory designations such as SSSIs. Locally-developed criteria are used to select these sites, according to their value for education, scientific study, historical significance or aesthetic qualities. As with local Wildlife Sites, RIGS are a material consideration when planning applications are being determined.

C NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) replaced Planning Policy Statement (PPS9) in April 2012, and was updated in 2019, as the key national planning policy concerning nature conservation. The NPPF emphasises the need for suitable development. The Framework specifies the need for protection of designated sites and priority habitats and priority species. An emphasis is also made for the need for ecological networks via preservation, restoration and re-creation. The protection and recovery of priority species – that is those listed as UK Biodiversity Action Plan priority species – is also listed as a requirement of planning policy. In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 40 of the Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' They are referred to in this report as Species of Principal Importance and Habitats or Principal Importance. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

D LOCAL PLANNING POLICY

The Camden Council Local Plan (2017) deals with matters of strategic importance for Camden and Kentish Town. Key chapters include Chapter 6 – Protecting Amenity, in particular Policy A3 for the protection, enhancement and management of biodiversity, and Chapter 8 – Sustainability and Climate change, in particular Policy CC2.

Policy A3: Protection, enhancement and management of 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.

Policy CC2: Adapting to Climate Change

The Council will require development to be resilient to climate change. All development should adopt appropriate climate change adaptation measures such as:

a. the protection of existing green spaces and promoting new appropriate green infrastructure;

b. not increasing, and wherever possible reducing, surface water runoff through increasing permeable surfaces and use of Sustainable Drainage Systems;

c. incorporating bio-diverse roofs, combination green and blue roofs and green walls where appropriate; and

d. measures to reduce the impact of urban and dwelling overheating, including application of the cooling hierarchy.

Any development involving 5 or more residential units or 500 sqm or more of any additional floorspace is required to demonstrate the above in a Sustainability Statement.

Sustainable design and construction measures

The Council will promote and measure sustainable design and construction by:

e. ensuring development schemes demonstrate how adaptation measures and sustainable development principles have been incorporated into the design and proposed implementation;

f. encourage new build residential development to use the Home Quality Mark and Passivhaus design standards;

g. encouraging conversions and extensions of 500 sqm of residential floorspace or above or five or more dwellings to achieve "excellent" in BREEAM domestic refurbishment; and

h. expecting non-domestic developments of 500 sqm of floorspace or above to achieve "excellent" in BREEAM assessments and encouraging zero carbon in new development from 2019.

F REGIONAL AND LOCAL BAPS

Many local authorities in the UK have also produced a local Biodiversity Action Plan (LBAP) at the County or District level. The Camden Biodiversity Action Plan (Camden, 2013) is based

on the UK list of Species and Habitats of Principal Importance. It encourages the inclusion of biodiversity to help mitigate the effects of climate change through living roofs, landscaping schemes, gardens, tree planting and urban greening projects. Priority habitats and species of relevance to this report are:

- Green roofs
- Green corridors
- Public parks/ amenity grass
- Woodland
- Acid grassland
- Ponds and standing water
- Meadows
- Orchards
- Bats
- Hedgehog
- Butterflies
- Stag beetle
- Sparrows
- Swifts
- Slow worm

The Ecology Consultancy is part of the Temple Group.

Making places better for people and wildlife

London - Tempus Wharf, 33a Bermondsey Wall West, London, SE16 4TQ
T. 020 7378 1914 **W.** www.ecologyconsultancy.co.uk **E.** enquiries@ecologyconsultancy.co.uk

- **Sussex -** 3 Upper Stalls, Iford, Lewes, East Sussex BN7 3EJ **T.** 01273 813739
- **East Anglia -** 60 Thorpe Road, Norwich, Norfolk NR1 1RY **T.** 01603 628408
- **Midlands -** 1-2 Trent Park, Eastern Avenue, Lichfield, Staffordshire WS13 6RN **T.** 01543 229049
- **North -** Trinity Walk, Unit G37b, Market Walk, Wakefield, West Yorkshire WF1 1QR **T.** 01924 683558