

# New Learning Centre development CAMLEY STREET NATURAL PARK King's Cross

# **Ecological Appraisal**

October 2017



### London Wildlife Trust

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# **Executive Summary**

London Wildlife Trust undertook an Ecological Appraisal of Camley Street Natural Park in September 2017as part of its application submission for the proposed development for a new Learning Centre at the site.

The aim of the appraisal is to provide the known current ecological condition of the nature reserve to evaluate and help determine the potential impacts of and constraints on the development proposal, identify the need for any further survey work, and set out the proposed measures for mitigating these impacts.

The development proposal is to construct a new Learning Centre upon the footprint of the existing visitor centre and improve and enhance access and the current ecological features. It involves the demolition of the existing buildings and infrastructure, realignment of existing and laying of new paths, and restorative landscaping.

An Extended Phase I survey was undertaken on 29<sup>th</sup> September 2017 in overcast cloud conditions with no precipitation and a light wind.

This survey identified a total of ten habitats present within the survey area; mixed broadleaved woodland, semi-improved neutral grassland, planted shrubbery, tall herb, ruderal, native hedgerow, reedbed, wet marginal habitat, standing water and bare artificial habitat.

Mixed broad-leaved woodland is the most dominant habitat comprising of approximately 0.37ha (42.5%) of the survey area. Standing water (pond) and associated wetlands (0.11ha) and semi-improved neutral grassland (0.10ha) are the other significant proportion of habitats on site.

The site was also assessed for legally protected species using relevant desk-study records and field observations from the extended Phase I habitat survey. The likeliness of habitat being suitable for protected species occurrence was ranked from Negligible to Present.

No protected species were identified during the survey. The potential for the site to support protected species is assessed as follows:

- bats are considered present
- breeding birds are considered **present**
- amphibians are considered present
- stag beetle is considered **negligible**

Any populations of any species on site are highly unlikely to exceed local value due to the size of the site and its very urban context.

The likely impacts on the site are as follows:

Impact	Level of impact
Loss of 430m <sup>2</sup> of semi-improved neutral grassland recently sown (July	minimal negative
2017) at the north end of the reserve	impact
Removal of seven semi-mature trees (two large white willows and five	moderate negative
dead or dying alders)	impact
Loss of 85m <sup>2</sup> of bare soil with some ruderal plants	negligible negative
	impact
Loss of 30m <sup>2</sup> of raised beds with ornamental planted shrubs and	minimal negative
perennials	impact
Loss of 600m <sup>2</sup> of woodchip paths and other infrastructure	negligible impact
Known bat usage on site	moderate negative
	impact*

Breeding birds (without appropriate mitigation)	moderate negative impact**
Breeding birds outside of the breeding months	no impact
Amphibians (without appropriate mitigation)	minimal negative impact
Amphibians (through improvements to the pond)	minimal positive impact
Populations of saproxylic beetles (without appropriate mitigation)	minimal negative impact

\* However, should a bat survey identify roosting sites on site the potential impacts could be of a **high negative impact** 

\*\* Careful design and timing of works can help to reduce these impacts

Overall, the appraisal suggests, from the current detail of the development proposals to have a **minimal negative impact**, which should be mitigated through proposed landscape enhancements, a demolition & construction plan, and recommendations adopted from additional surveys.

The following survey requirements are recommended:

- **breeding bird survey** (only if building demolition or tree and ornamental shrubbery clearance works are due to take place during the months of March-August). To be undertaken no more than 48hours prior to demolition;
- **bat surveys** including dawn and dusk and roost surveys prior to works. To be undertaken no more than 48hours prior to demolition.

Several mitigation procedures have been identified to ensure that impacts on amphibians, breeding birds and bats are minimised and current legislation and guidance are adhered too.

In addition a number of biodiversity enhancements have been identified including:

- **270m<sup>2</sup> of interactive woodland and dead wood** space (Bug City) to be recreated from existing dead wood and additional plantings of native trees, shrubs and woodland plants to be located in northwest of site on current area of recently sown semi-improved neutral grassland;
- inclusion of several habitat features built within new Learning Centre;
- enhancement works of canal bankside (to include approximately 150m<sup>2</sup> of new reedbed and wetland habitat);
- restoration of 170m<sup>2</sup> of semi-improved grassland meadow to species-rich neutral grassland;
- creation of 70m<sup>2</sup> of species-rich neutral grassland meadow (adjoining restored meadow);
- realignment of silt within north pond to enhance western bank of north pond and plant additional 80m<sup>2</sup> of bankside wetland habitat and reedbed;
- **conversion of south pond into a 250m<sup>2</sup> reedbed** suitable for specialised reedbed birds and insects including reed warbler, reed bunting and Cetti's warbler and dragonflies.

# 1. Introduction

### Background

1.1 London Wildlife Trust undertook an Ecological Appraisal of Camley Street Natural Park as part of its application submission for the proposed development at the nature reserve in September 2017.

### Aims of the appraisal

- 1.2 The aim of the appraisal is to provide the known current ecological condition of the site. It will be used to determine the potential constraints on the proposed development, identify any need for further survey work and to briefly evaluate any impacts on protected or notable species or habitats.
- 1.3 This report consists of an Extended Phase I habitat survey undertaken in September with additional species and habitat information obtained from numerous records collected over the last ten years. This report identifies the recognised potential impacts on protected species and habitat in chapter 4 and provides further information on what will be undertaken to ensure impacts on protected species are avoided or at least minimised.
- 1.4 The Extended Phase I habitat survey consists of:
  - a desktop study of the site and land within a 1 kilometre (km) radius including past habitat and species records;
  - an extended Phase I survey of the site to identify plant species and habitats and incidental fauna present;
  - an evaluation of the site's importance for nature conservation.
- 1.5 The survey was undertaken by Tony Wileman BSc MCIEEM, an ecologist with 25 years of conservation, land management and ecological experience. It is written to best practice guidance published by the Chartered Institute for Ecology & Environmental Management (CIEEM, 2013).

### Site context

1.6 The surveyed site is approximately 0.9 hectares (ha) in size and in centred on grid reference TQ 29976 83452. The site is a designated Local Nature Reserve owned by Camden Council and managed by London Wildlife Trust by a lease agreement, most recently updated in 2017. The site is located in King's Cross located between Camley Street and The Regent's Canal.

### Development proposals

- 1.7 The development proposal is to erect a new Learning Centre upon the footprint of the existing visitor centre and improve and enhance access and the current ecological features. The development proposal includes:
  - demolition of the existing visitor centre, volunteer room and associated infrastructure;
  - removal of the bio-digester to another location;
  - re-alignment of the existing tool shed to accommodate a more inviting entrance;
  - construction of s new Learning Centre with associated café and picnicking area;

- construction of a 650m<sup>2</sup> resin bonded entrance and welcome area;
- construction of self-binding gravel access paths;
- construction of internal fencing and access gate;
- removal of seven trees plus some management works on other trees and shrubs;
- removal of approximately 900m<sup>2</sup> of garden, raised ornamental beds and grasslands;
- de-silting and re-alignment of silt of existing pond to create more bankside vegetation including larger area of reedbed;
- enhancement of canal-side vegetation through introduction of more vegetated coir rolls and floating platforms;
- enhancement and expansion of meadow
- 1.8 A plan of the proposed development can be found in Appendix 2.

#### Relevant legislation and policy

- 1.9 The following main pieces of legislation are relevant to this appraisal:
  - Wildlife and Countryside Act 1981 (as amended)
  - The Conservation of Habitats and Species Regulations 2010 (as amended)
  - Natural Environment and Rural Communities Act 2006

Relevant details on this legislation can be found in Appendix 6.

- 1.10 The National Planning Policy Framework (DoCLG, 2012) requires local authorities when taking planning decisions to avoid and minimise impacts on biodiversity and where possible, to encourage net gains for biodiversity.
- 1.11 The London Plan (GLA, 2015) is the spatial development strategy for London and includes planning policies for biodiversity (e.g. Policy 7.19 *Biodiversity and access to nature*), green infrastructure and climate change adaptation. These policies set out the protection, enhancement and creation of biodiversity in Greater London.
- 1.12 The Camden Local Plan and specifically Policy A3 *Biodiversity* is also relevant.
- 1.13 The UK Biodiversity Strategy, London Biodiversity Action Plan and Camden Biodiversity Action are also relevant.

# 2. Methodology

### Desktop Study

- 2.1 A data search with a 1km search buffer search area was undertaken using information obtained through London Wildlife Trust's Service Level Agreement (SLA) with Greenspace information for Greater London CIC (GiGL) and MAGIC, the government's interactive Geographical Information Map. These were used to provide information of the following data sources:
  - Statutory and non-statutory designated sites;
  - Legally protected and notable species;
  - Invasive species;
  - Priority and notable habitats;
  - Areas of deficiency
- 2.2 In addition to the above London Wildlife Trust records were consulted on other known protected, notable and invasive species and habitats that may not have been collated by GiGL. These include more recent records that have so far not been submitted to GiGL.

#### Extended Phase I survey

- 2.3 An Extended Phase I survey was undertaken on 29<sup>th</sup> September 2017 in overcast cloud conditions with no precipitation and a light wind. The surveyor was on site for three hours.
- 2.4 The habitats were described as per the standard Phase I survey methodology (JNCC, 1990), as modified for Greater London by the former London Ecology Unit (LEU, 1994) and later adopted by the Greater London Authority.
- 2.5 The habitats have been mapped using Ordnance Survey Vectormap Local Raster 10k tiles (licensed usage) and MapInfo Professional 12.5.2 Geographical Information System (GIS). The habitat map can be found in Appendix 2.
- 2.6 Records of vascular plant species present on site were recorded in each defined compartment<sup>1</sup> and recorded a relative abundance value using the DAFOR<sup>2</sup> scale. Non-vascular plant species (e.g. mosses, algae) in London are usually not a determinant factor in habitat identification and were not recorded. A full list of the vascular plant species identified can be found in Appendix 4. Additional known species not recorded due to the timing of the survey but known to be present within the last five years have also been included.
- 2.7 Complex taxa, such as *Taraxacum* (dandelions) and *Rubus* (brambles) are treated as aggregates as there is little value in distinguishing these for determining habitat types, especially in London.
- 2.8 Casual recording of fauna was undertaken throughout the duration of the habitat survey.

<sup>&</sup>lt;sup>1</sup>Compartments were identified on site by being defined as broad largely contiguous habitat

<sup>&</sup>lt;sup>2</sup> A standard format for recording relative abundance (Dominant, Abundant, Frequent, Occasional, Rare).

#### Protected and notable species assessment

2.9 The site was assessed for presence of legally protected species using relevant desk study records and field observations from the extended Phase I habitat survey. The likeliness of habitat being suitable for protected species occurrence was ranked from negligible to present as described in Table A.

Category	Description
Present	Presence confirmed from current survey, or recent confirmed records
High	Habitat present holds all the suitable ecological requirements for a given species or species group. Local records of the species or species group have been provided by desk study and the site is known to be within or close to a known stronghold for that particular species or species group.
Moderate	Habitat present holds all the suitable ecological requirements for a given species or species group. Records of the species or species group have been provided by desk study within the region or the site is within the national distribution of the species or species group. The site may have some limiting factors such as small habitat area, barriers to movement and/or known disturbance issues.
Low	Habitat present is of a poor quality given the species or species group's ecological requirements but is within its ecological parameters. Few or no desk study records. Presence cannot be discounted on the grounds that it is within national distribution or the nature of surrounding habitat
Negligible	Habitats is either absent or of a very poor condition for the species or species group. There are no desk study records. Surrounding habitat is unsuitable and site has factors that may limit such a species from occurring. i.e. disturbance, habitat fragmentation. The site is outside the species or species group known range.

Table A: Protected species assessment categories	Table A:	Protected speci	es assessmen	t categories
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- 2.10 The finding of this assessment are used to determine the need for protected species surveys as required to comply with relevant legislation.
- 2.11 Surveys may still be required when a site is judged of low suitability for a particular species or species group, especially if it is located within a connected ecological network. In some cases though there may be opportunities to comply with legislation, without further surveys, through precautionary measures.

#### Nomenclature

- 2.12 The *New Flora of the British Isles (third edition)* (Stace, 2010), the standard text, was consulted for plant nomenclature. English names have been used in preference to scientific names (only quoted in the first instance) in order to facilitate readability.
- 2.13 Common English names have been used for all fauna where these are known with scientific names quoted afterwards in the first instance. Where a given species has no known common name the scientific name is used instead.

#### Survey limitations and data validity

- 2.14 The author of this report has made every effort to comprehensibly describe the site, however, the following limitations have been recognised:
  - The protected species assessment provides a preliminary view of the likelihood of protected species occurring on site. It should not be taken as a definitive

survey of protected species or species group. Additional surveys may be recommended to assess in more detail the likelihood of protected species being present on site;

- The ecological evaluation is may change subject to the findings of any subsequent surveys;
- The Extended Phase I habitat survey is not a full botanical survey providing a complete picture of all vegetative species present;
- Ecological data of this report is generally considered to be valid for two years unless otherwise stated;
- The timing of the survey visit was considered very late in the season to fully characterise the plant species present. Some plant species would have been overlooked, especially spring and early summer flowering plants. This is not thought to have had a significant effect on the assessment of its vegetative quality due to the site being very well known by the author (multiple visits since 2003 including full surveys undertaken for the Camden SINC review in 2014<sup>3</sup>);
- Weather conditions and the lateness of the season are considered sub-optimal for identifying various invertebrate groups. The invertebrate fauna of the site is not thought to be particularly unusual and no known protected invertebrate species are known from the site;
- The lateness of the survey was considered out of season for recording breeding birds. Information on known breeding birds is regularly documented and regular suitable breeding bird habitat is known within the site;
- Most species found on site were identifiable to species although some were identifiable to Genus only. Several ornamental shrubs which have been clumped together as ornamentals for purposes of the species lists were not fully identified.
- 2.15 Despite these limitations, this report is considered to accurately reflect the habitats present on site, their biodiversity value and their potential to support protected and notable species.

### Site evaluation

- 2.16 Characteristic, rare and interesting plant species and assemblages were evaluated for conservation designations and assessed as to whether they were notable for the Greater London area. Notable is defined as species which were recorded from 15% or fewer of the 400 two-kilometre recording squares (tetrads) in Greater London in the *Flora of the London Area* (Burton 1983) and the authors experience of changes to London' plant species populations and distribution since 1983.
- 2.17 For national rarity of plants *The New Atlas of the British & Irish Flora* (Preston, Pearman & Dines, 2002) was referred to (where a taxon appearing in 150 or less 10x 10km squares was considered rare).
- 2.18 Fauna rarity is defined using the IUCN red lists and the Birds of Conservation Concern 4 (Eaton, M. *et al*, 2016).

<sup>&</sup>lt;sup>3</sup> Commissioned by LB Camden on 4<sup>th</sup> April 2014

# 3. Results and evaluation

#### **Desktop study - Designated sites**

- 3.1 The data search identified Camley Street Natural Park as the only statutory designated site within the 1km buffer area. It was designated in 1993 as a Local Nature Reserve (LNR) by Camden Council.
- 3.2 There are thirteen non-statutory Sites of Importance for Nature Conservation (SINCs) within the same area. These are:
  - Camley Street Natural Park (Metropolitan SINC; M095)
  - London Canals (Metropolitan SINC; M006)
  - Copenhagen Junction (Borough Grade I SINC; IsBI12)
  - North London Line (Borough Grade II SINC; CaBII06)
  - St Pancras Gardens (Borough Grade II SINC; CaBII07)
  - Bingfield Park (Local SINC; IsL06)
  - Thornhill Square (Local SINC;IsL17)
  - Winton Primary School Garden (Local SINC; IsL28)
  - Barnard Park (Local SINC; IsL30)
  - Bemerton Estate Garden (Local SINC; IsL32)
  - Calthorpe Community Garden (Local SINC; CaL05)
  - St George's Gardens (Local SINC; CaL09)
  - St James's Garden (Local SINC; CaL10)<sup>4</sup>
- 3.3 St Pancras Gardens and St George's Gardens are Registered Parks and Gardens.<sup>5</sup>

#### Desktop study; protected and important species

3.4 Table B below lists the protected and species of conservation concern that have been recorded in the last 10 years and are relevant to the site and the proposed development.<sup>6</sup> Species not considered relevant (based on the knowledge of the author) are omitted from the table as are those that have previously occurred but not since 2007.<sup>7</sup>

Species	Notes*	Species	Notes*
Verrucaria ochrostoma	<i>Lichen</i> Nr	willow warbler Phylloscopus trochilus	Bird LSCC
Lecania inundata	Lichen Ns	dunnock Prunella modularis	Bird BAP London LSCC
Caloplaca crenulatella	Lichen Ns	kingfisher Alcedo atthis	Bird BD1 W&CA Sch1 LSCC

Table B: List of relevant protected species recorded within 1km of the survey area since 2007

<sup>&</sup>lt;sup>4</sup> London SINCs are all given a unique code linked to their level of importance (Metropolitan, Borough, Local) and for non-Metropolitan SINCs their borough (in this case Ca – Camden, Is – Islington). Numbers within each level of importance do not reflect any further hierarchy.

<sup>&</sup>lt;sup>5</sup> As listed by Historic England.

<sup>&</sup>lt;sup>6</sup> Relevant species are those that could occur within the site due to their ecological needs or may be impacted upon by the proposed development.

<sup>&</sup>lt;sup>7</sup> A full list could be provided on request.

Species	Notes*	Species	Notes*
wild cabbage Brassica oleracea	Higher plant LSCC	grey wagtail Motacilla cinerea	Bird LSCC
London-rocket Sisymbrium irio	Higher plant LSCC	lesser spotted woodpecker Dendrocopus minor	Bird LSCC
maiden pink Dianthus deltoides	Higher plant	kestrel Falco tinnunculus	Bird LSCC
good-King-Henry Chenopodium bonus-henricus	<i>Higher plant</i> Vulnerable	peregrine Falco pereginus	Bird BD1 W&CA Sch1 BAP London LSCC
meadow crane's-bill <i>Geranium</i> pratense	Higher plant LSCC	common tern Sterna hirundo	Bird BD1 LSCC
imperforate St John's-wort Hypericum maculatum ssp. obtusiusculum	Higher plant LSCC	herring gull Largus argentatus	Bird BAP London LSCC Bird-Red
burnet rose Rosa spinosissima	Higher plant LSCC	lesser black-backed gull Larus fuscus	Bird LSCC
small-flowered sweet-briar Rosa micrantha	Higher Plant LSCC	house sparrow Passer domesticus	Bird NERC 41 BAP National BAP London LSCC Bird-Red
common valerian Valeriana officinalis	Higher plant LSCC	firecrest Regulus ignicapilla	Bird W&CA Sch1 LSCC
wild clary Salvia verbenaca	Higher plant LSCC	goldcrest Regulus regulus	Bird LSCC
galingale Cyperus longus	Higher Plant Ns	starling Sturnus vulgaris	Bird BAP London LSCC Bird-red
greater pond-sedge <i>Carex</i> riparia	Higher plant LSCC	black redstart Phoenicurus ochruros	Bird BD1 W&CA Sch1 BAP National BAP London Bird-Red
divided sedge Carex divisa	Higher plant LSCC	redwing Turdus iliacus	<i>Bird</i> Bird-Red
ruddy darter Sympetrum sanguineum	Insect LSCC	song thrush Turdus philomelos	Bird BAP London LSCC Bird-Red
long-winged cone-head conocephalus fuscus	Insect LSCC	mistle thrush Turdus viscivorus	Bird LSCC
Crudosilis ruficollis	Insect Nb	brambling Fringilla montifringilla	Bird W&CA Sch1
stag beetle Lucanus cervus	Insect H&SD-Anx2 NERC 41 BAP National BAP London LSCC Nb	redpoll Acanthis flammea	Bird NERC 41 BAP national Bird-Red
red-shanked carder-bee Bombus ruderarius	Insect NERC 41 BAP National	reed bunting <i>Emberiza</i> schoeniclus	Bird NERC 41 BAP national BAP London LSCC

Species	Notes*	Species	Notes*
horse-chestnut moth Pachycnemia hippocastanaria	Insect LSCC	Daubenton's bat <i>Myotis</i> daubentonii	Mammal H&SD-Anx4 ConsRegs S2 W&CA Sch5 BAP London LSCC
privet hawk-moth <i>Sphinx</i> <i>ligustri</i>	Insect LSCC	noctule Nyctalus noctula	Mammal H&SD-Anx4 ConsRegs S2 W&CA Sch5 NERC 41 BAP National BAP London LSCC
common frog <i>Rana temporaria</i>	Amphibian LSCC	pipistrelle species <i>Pipistrellus sp</i> .	Mammal ConsRegs S2 W&CA Sch5 BAP London
common toad Bufo bufo	Amphibian NERC 41 BAP National BAP London LSCC	Nathusius's pipistrelle Pipistrellus nathusii	Mammal H&SD-Anx4 ConsRegs S2 W&CA Sch5 BAP London LSCC
mute swan Cygnus alor	Bird LSCC	common pipistrelle Pipistrellus pipistrellus	Mammal ConsRegs S2 W&CA Sch5 BAP London
grey heron <i>Ardea cinerea</i>	Bird LSCC	soprano pipistrelle <i>Pipistrellus pygmaeus</i>	Mammal H&SD-Anx4 ConsRegs S2 W&CA Sch5 NERC 41 BAP National BAP London LSCC
snipe Gallinago gallinago	Bird LSCC	unidentified bat species Vespertilionidae	Mammal ConsRegs S2 W&CA Sch5 BAP London
swift A <i>pus apus</i>	Bird LSCC		

\*Designation abbreviations are as follows

Abbreviation	Full designation	Abbreviation	Full designation	Abbreviat ion	Full designation
H&SD-Anx2	Habitat and Species directive Annex 2	BAP National	UK Biodiversity Action Plan	Nr	Nationally rare
H&SD-Anx4	Habitat and Species directive Annex 4	BAP London	London Biodiversity Action Plan	Ns	Nationally scarce
ConsRegs S2	Conservation Regulations 2010 Schedule 2	RL-vulnerable	IUCN Red data listed as vulnerable	LSCC	Local Species of Conservation concern
W&CA Sch5	Wildlife and Countryside Act 1981 Schedule 5	Bird-Red	Birds of Conservation concern - Red listed		
NERC 41	Natural Environment and Rural Communities Act 2006 Section 41 Species	Nb	Notably scarce		

#### Desktop study; non-native invasive species

3.5 Table C below lists those species recognised on the London Invasive Species Initiative (LISI) that have an invasive nature and that have been recorded in the last ten years and are relevant<sup>8</sup> to the site survey and the proposed development. These are all of a non-native origin, reflecting the focus of LISI. Species not considered relevant (based on the knowledge of the author) which includes species known not to be present within the surveyed area are omitted from the table as are those that have previously occurred but not in the last ten years.

Species	Notes*	Species	Notes*
three-cornered garlic Allium	Higher plant	butterfly-bush	Higher plant
triquetrum	LISI cat 4	Buddleja davidii	LISI cat 3
Japanese knotweed Fallopia	Higher plant	least duckweed	Higher plant
japonica	LISI cat 3	Lemna minuta	LISI cat 4
orange balsam Impatiens	Higher plant	Nuttall's pondweed	Higher plant
capensis	LISI cat 2	Elodea nuttalii	LISI cat 4
goat's-rue Galega officinalis	Higher plant	North American signal crayfish	Invertebrate
	LISI cat 4	Pacifastacus lenusculus	LISI cat 4
hybrid bluebell Hyacinthoides x	Higher plant	red-eared slider terrapin	Reptile
mas <i>s</i> artiana	LISI cat 4	Trachemys scripta subsp.	LISI cat 3
		elegans	
green alkanet <i>Pentaglottis</i>	Higher plant		
sempervirens	LISI cat 6		

Table C: List of relevant invasive species recorded within 1km of the survey area since 2007

#### \*LISI category meanings

LISI category	Explanation
LISI 1	Species not currently present in London but present nearby or of concern because of the high risk of negative impacts should they arrive. Should any species listed in this category appear in London, this should be reported to GIGL or LISI to ensure that action is taken rapidly
LISI 2	Species of high impact or concern present at specific sites that require attention (control, management, eradication etc.). Such species are priority species for action in London and LISI encourages this wherever possible.
LISI 3	Species of high impact or concern which are widespread in London and require concerted, coordinated and extensive action to control/eradicate. These species are species currently causing large scale impacts across London and LISI supports area or catchment wide partnership working to ensure this.
LISI 4	Species which are widespread for which eradication is not feasible but where avoiding spread to other sites may be required. Appropriate biosecurity is required for sites where these species are found.
LISI 5	Species for which insufficient data or evidence was available from those present to be able to prioritise.
LISI 6	Species that are not currently considered to pose a threat or have the potential to cause problems in London.

#### Desktop study; Priority and notable habitats

- 3.6 Within the 1km buffer search area, only one UK priority habitat broadleaved deciduous woodland was identified to be present at Camley Street Natural Park and at the eastern end of the Copenhagen Junction railsides. It was also, according to MAGIC, identified at the following locations although all these are known as parks or gardens with tree cover and are not known to support significant woodland community habitats at ground level:
  - St Pancras Gardens
  - Oakley Square Gardens

<sup>&</sup>lt;sup>8</sup> Relevant species are those that could occur within the surveyed site due to their ecological needs. Species known to not occur but have been recorded within 1km have been omitted.

- St James's Gardens
- Euston Square Gardens
- Tavistock Square Gardens
- St George's Gardens
- Camden Square Gardens
- 3.7 No other UK priority habitat was recognised to be present within the 1km buffer search area.

#### Extended Phase I habitat survey results

- 3.8 The Extended Phase I habitat survey identified a total of ten habitats present within the survey area; mixed broad-leaved woodland, semi-improved neutral grassland, planted shrubbery, tall herb, ruderal, native hedgerow, reedbed, wet marginal habitat, standing water and bare artificial habitat.
- 3.9 Mixed broad-leaved woodland was the most dominant habitat comprising of approximately 0.37ha (42.5%) of the survey area with standing water (pond) and associated wetlands (0.11ha) also semi-improved neutral grassland (0.10ha) up the other significant proportions respectively.
- 3.6 The survey identified eight recognisably distinct habitat areas and each of these is described separately below.

#### A. Mixed broad-leaved woodland

- 3.7 The mixed broad leaved woodland area is formed of mostly the western and southern sections of the survey area and incorporates the vast majority of the woodland habitat on site. The canopy is mostly composed of mature shrubs and younger trees of field maple *Acer campestre*, sycamore *A. pseudoplatanus*, Norway maple *A. platanoides*, alder *Alnus glutinosa*, silver birch *Betula pendula*, hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, wild cherry *Prunus avium* and pedunculate oak *Quercus robur*. Other taller shrubs included dogwood *Cornus sanguinea*, cherry plum *Prunus cerisifera*, blackthorn *P. spinosa*, elder *Sambucus nigra*, holly *Ilex aquifolium*, and spindle *Euonymus europaeus*.
- 3.8 The ground layer under the trees and shrubs is largely comprised of bare ground or ivy *Hedera helix*, bramble *Rubus fruticosus* agg., cow parsley *Anthriscus sylvestris* and common nettle *Urtica dioica*. Other occasionally scattered species include garlic mustard *Alliaria petiolata*, lesser burdock *Arctium minus*, false brome *Brachypodium sylvatica*, pendulous sedge *Carex pendula*, cleavers, *Galium aparine*, and wood avens *Geum urbanum*.
- 3.9 There is a small woodland pond located within the woodland edged with dead wood and with a single pendulous sedge and blanketed in least and common duckweed *Lemna minuta* and *L. minor*. Several dead wood piles are also present within this area.

#### B. Meadow grassland

3.10 The meadow grassland is formed of the small area of grassland immediately south of the visitor centre. It is a semi-improved grassland of mixed grasses of predominantly common bent *Agrostis capillaris*, creeping bent *A. stolonifera*, meadow foxtail *Alopecurus pratensis*, false oat-grass *Arrhenatherum elatius* cock's-foot *Dactylis glomerata*, red fescue *Festuca rubra*, Yorkshire-fog *Holcus* lanatus, perennial rye-

grass *Lolium perenne* and smooth meadow-grass *Poa pratensis*. Several broadleaved herbs are present including yarrow *Achillea millefolium*, ground-elder *Aegopodium podagraria*, meadow crane's-bill *Geranium sylvatica*, ribwort plantain *Plantago lanceolata*, creeping buttercup *Ranunculus repens*, tansy *Tanacetum vulgare*, red and white clover *Trifolium pratense* and *T. repens* and common vetch *Vicia sativa*.

- 3.11 The meadow is rather shaded, and several woodland and taller herb species are also present especially cow parsley, wood avens and common nettle. Primrose *Primula vulgaris* and a small colony of snake's-head fritillaries *Fritillaria meleagris* are known from this area. The latter was not identified during the survey but is known to appear every spring (see front cover).
- 3.12 A pile of dead wood logs are located on the edge of the grassland in a hollow that was formerly a rainwater pond. It remains damp and this log pile is a known favourite location for common toad *Bufo bufo* and hibernating smooth newts *Lissotriton vulgaris*.
- 3.14 Along the eastern fringe the meadow gives way to taller herbs of common nettle, common figwort *Scrophularia nodosa*, hemp agrimony *Eupartorium cannabinum*, common nettle, and the coarser grasses false oat-grass and cock's-foot.

#### C. Marshland

3.15 The marshland area is a narrow strip of wet marginal habitat at the northern end of the pond and is largely composed of floating sweet-grass *Glyceria fluitans*, yellow flag *Iris pseudacorus* and hemlock water-dropwort *Oenanthe crocata*. Other species present include great willowherb *Epilobium hirsutum*, gypsywort *Lycopus europaeus*, water mint *Mentha aquatic*, marsh marigold *Caltha palustris*, water figwort *Scrophularia auriculata* and brooklime *Veronica beccabunga*. Common nettle is also present suggesting some drying out. Two small young alders are present close to the pond.

#### D. Pond and marginals

- 3.16 The pond is divided into two sections (north the larger of the two and south) by the traversing of a wooden pond dipping platform used as both a bridge and for pond-dipping activities.
- 3.17 The north pond's banks are predominantly vegetated along the eastern boundary and near the pond-dipping platform. Vegetation here includes common reed *Phragmites australis*, white water-lily *Nymphaea alba*, water figwort, common bulrush, common club-rush *Schoenoplectus lacustris* as well as yellow flag *Iris pseudacorus*, hemlock water-dropwort, great willowherb, gypsywort, water mint, marsh marigold, water figwort and brooklime. The pond itself is blanketed in common and least duckweed.
- 3.18 The south pond is largely divided into two with the western edge forming open water blanketed in common and least duckweed, and the eastern side forming a more distinctive reedbed dominated by common reed. This pond is rather enclosed with several young alder and crack willow *Salix fragilis* trees around its fringes.

### E. Ruderal bank

- 3.19 At the southern end of the site, there is an area of south facing bank that is predominantly composed of mixed ruderals and woodland edge herb species including hoary mustard *Hirschfeldia incana*, smooth sow-thistle *Sonchus oleraceus*, green alkanet *Pentaglottis sempervirens*, garlic mustard, herb-robert *Geranium robertianum*, common vetch, common nettle, cleavers, hedge woundwort *Stachys sylvatica*, ribwort plantain, wood avens, red clover, hedge bindweed *Calystegia sepium*, tall melilot *Melilotus latissimus* and hedge bedstraw *Galium album*.
- 3.20 A small area with several bee hives and a small shed stands in the southwest corner of the site.

#### F. Canal-side

- 3.21 The canal-side is dominated by large pollarded crack willow trees along with several other trees of white willow *Salix alba*, alder, goat willow *Salix caprea*, sycamore and a single purple willow *Salix purpurea*. This forms a narrow strip of woodland habitat along the canal edge. The ground flora under these trees is rather sparse but includes ivy, common nettle, wood avens, pendulous sedge plus some ornamental plantings including a hedge section of garden privet *Ligustrum ovalifolium*.
- 3.22 Three floating 'islands' are located in the Regent's Canal at the south of the site just north of a floating platform known as The Viewpoint. These are vegetated with species such as water mint, hard and soft rush *Juncus inflexus* and *J. effusus*, marsh marigold, and purple loosestrife *Lythrum salicaria*.
- 3.23 A similar vegetation composition to the islands, is also located along the immediate banksides of the canal and runs southwards from the canal inlet to the pond. Yellow flag iris and pendulous sedge are also present here.

#### G. New grassland and hedge

- 3.24 In the north of the site bounded by the sweep of the newly installed footbridge over the canal, a near circular area of recently sown semi-improved neutral grassland which at the time of the survey was only just producing shoots from the ground and thus was a mix of bare ground and young shoots of yarrow, ribwort plantain, selfheal and *Agrostis* and *Festuca* species of grasses. Around the northern and western perimeter adjacent to the ramparts of the bridge a young hedge has been planted of hawthorn, dog rose *Rosa canina*, hazel and under-planted with red campion *Silene dioica* and columbine *Aquilegia vulgaris*.
- 3.25 This area is currently divided off from the rest of the site with hoarding and Heras fencing for security purposes.

#### H. Buildings, paths and gardens

- 3.26 This area comprises all the bare artificial habitat scattered throughout the site including the paths and the buildings.
- 3.27 Several planted shrubberies in raised planters are located within this area and most are occupied with unidentified ornamental species. However, climbers of jasmine *Jasminum sp.*, ivy and honeysuckle *Lonicera sp.* are present as are a few young hazel saplings. Several young apple trees *Malus pumilaa* are present in pots as is a grapevine *Vitis sp.* over a pergola to the south of the visitor centre.

3.28 To the north of the visitor centre there is an area of ruderals and former grasslands that is largely heavily trampled and has significant amounts of bare ground. Other than common ruderals and common grasses of perennial rye-grass, ribwort and greater plantain and white clover there were large patches of annual mercury *Mercurialis annua*, balm *Melissa officinalis*, white campion *Silene latifolia* and some Michaelmas-daisy *Aster sp*.

#### Protected species assessment

- 3.29 No protected species were identified during the survey.
- 3.30 The potential for the site to support protected species has been assessed using the results of the habitat survey and the desktop study. The assessment findings can be found in Table D.

Habitat /species	Status <sup>9</sup>	Occurrence likelihood
bats	H&SD-Anx4 ConsRegs S2 W&CA Sch5 NERC 41 BAP National BAP London	Bats have been recorded on site and within the local vicinity, including noctule, pipistrelle species and Daubenton's bats. It is not known if there are any roosts on site; this would need to be confirmed by specific survey. Bats are <b>Present</b> on site.
breeding birds	BD1 W&CA Sch5 NERC 41 BAP-National BAP-London Bird-Red	Habitats on site are suitable for a number of breeding bird species and several species are known to breed regularly on site. In addition several species known as species of local concern or BAP species have bred in recent years on site including mute swan, song thrush and reed bunting.
		Breeding birds are <b>Present</b> on site.
amphibians	NERC 41 BAP-National BAP-London	Common frog, common toad and smooth newt are all known to be present on site using the ponds and numerous suitable terrestrial habitats on site including several log piles and garden flower pots as well as more natural environments.
		Common toad are regularly seen and common frog is infrequently seen but not in recent years.
		Amphibians are considered <b>Present on site.</b>
stag beetleH&SD-Anx2Lucanus cervusNERC 41BAP National	NERC 41 BAP National	There are several records of stag beetle that have been recorded within 1km of the site but none have been verified.
BAP London		Lesser stag beetle ( <i>Dorcus parallelipipedus</i> not subject of protected status) is known from Camley Street Natural Park and several locations nearby and is regularly recorded. It is thought that the records of stag beetle maybe in error. No stag beetle has been recorded at Camley Street Natural Park in 30 years' of management by London

<sup>&</sup>lt;sup>9</sup> The following designations have been used to represent different species

	Wildlife Trust.
	As a result this species is considered to have a <b>negligible</b> likelihood of occurring on site. It is <b>therefore no longer discussed in this report.</b>

#### Non-native invasive species assessment

- 3.31 Eight non-native species of an invasive nature (listed on the LISI invasive species list) were found to be present during the survey. These are:
  - three-cornered garlic a few plants near visitor centre;
  - orange balsam several plants in ruderal bank and along the canal-side;
  - goat's-rue several plants in meadow;
  - green alkanet several plants in woodland;
  - butterfly-bush a single shrub in woodland;
  - least duckweed extensively blanketing pond with common duckweed;
  - red-eared slider terrapin single individual in pond.
- 3.32 Japanese knotweed *Fallopia japonica* has been identified on site in recent years and has been subject to recent controls. It is identified as a controlled waste in the Environmental Protection Act 1990 and as such must be disposed of in a controlled manner at a licensed landfill site according to the Environmental Protection Act (Duty of Care) Regulations 1991.

#### Incidental fauna sightings

- 3.33 As indicated above the weather conditions during the survey were sub-optimal for those generally more active and visible invertebrates; with minimal searching only a few invertebrates were identified during the survey. These include seven-spot ladybird *Coccinella septempunctata*, common wasp *Vespula vulgaris*, garden spider *Araneus diadematus*, several woodlice species largely *Oniscus asellus*, *Porcellio scaber and Philoscia muscorum*, and a centipede *Lithobius sp.* Other invertebrates particularly small flies *Diptera sp.* were seen but not identified.
- 3.34 Bird species identified to be using the site and immediate environs (e.g. the canal) were mallard *Anas platyrhynchos*, coot *Fulica atra*, moorhen, *Gallinula chloropus*, woodpigeon *Columba palumbus*, great spotted woodpecker *Dendrocopus major*, dunnock *Prunella modularis*, robin *Erithacus rubecula*, blackbird *Turdus merula*, chiffchaff and willow warbler *Phylloscopus collybita* and P. trochilus, Cetti's warbler *Cettia cetti*, wren *Troglodytes troglodytes* and blue and great tit *Cyanistes caeruleus* and *Parus major*. The only other animal identified was grey squirrel *Sciurus carolinensis*.

#### Conservation evaluation

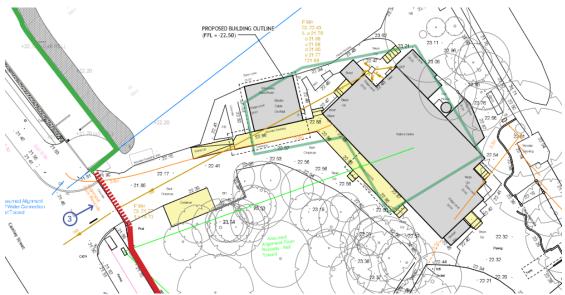
3.35 Camley Street Natural Park's designation as a Metropolitan Site of Importance for Nature Conservation applies to the entire site, the rationale for this being that it incorporates a number of important habitats, is an important site for people to engage with nature especially for children, and its creation over 1983-85 was a milestone in the nature conservation movement in London.

- 3.36 *London Plan* policy 7.19 states that sites of Metropolitan Importance for Nature Conservation should be afforded '*strong protection*.'
- 3.37 The proposed development aims to help the site become better accessible, protect and conserve its wildlife, and future-proof it as a flagship urban nature reserve so as to ensure the site retains its status as a Metropolitan Site of Importance for Nature Conservation and Local Nature Reserve.
- 3.38 The habitats on site are known to support protected and notable species including breeding birds, bats and amphibians. Other than these three species groups it is considered unlikely that the site supports any other protected species.
- 3.39 The area surveyed comprises largely of habitats that are common but in such an inner urban context are scarce or even rare. Although most species the site supports are predominantly common and widespread, the site has a history of recording unusual species for such an urban site, such as snipe *Gallinago gallinago* which has occurred more than once.
- 3.40 Any populations of any species on site are highly unlikely to exceed local value due to the size of the site and its very urban context.

# 4. Development proposals and impacts

### Development proposals

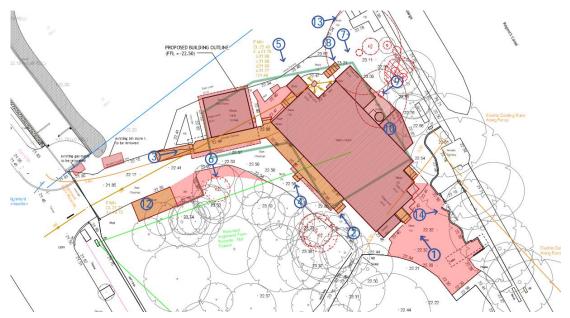
4.1 The proposed development at Camley Street Natural Park is of a new Learning Centre to the immediate east of the main entrance, with some additional enhancements in other parts of the reserve. This requires the demolition of existing buildings and infrastructure, together with the laying of new and realignment of existing paths. This is set out as indicative in the drawing below and in Appendices 4 and 5.



Outline of proposed Centre (in green) over existing building footprint © Erect Architecture

- 4.2 The development will result in the loss of some habitat directly within the site, designated as a Metropolitan Grade SINC (site M095) and Local Nature Reserve. This is mostly semi-improved grassland and some trees and shrubs.
- 4.3 It will result in the permanent loss of the following amount of habitat:
  - 430m<sup>2</sup> of semi-improved neutral grassland recently sown (July 2017) at the north end of the reserve as temporary mitigation enhancement works post development for the Camley Street footbridge over the Regent's Canal;
  - Removal of seven semi-mature trees (two large white willows and five dead or dying alders);
  - 85m<sup>2</sup> of bare soil with some ruderal plants just to the north of the current visitor centre;
  - 30m<sup>2</sup> of raised beds with ornamental planted shrubs and perennials with some native and non-native ornamental climbers around the current buildings and structures;
  - 600m<sup>2</sup> of woodchip paths, brick tiled and concrete seating area and visitor centre building with associated wooden walkway, steps and ramp entrance (predominantly of bare artificial habitat) through demolition of current visitor centre (to form main development area).

- 4.4 It will also result in some temporary works:
  - management works to some trees and shrubs, approximately ten hawthorn and hazels.
- 4.5 The proposed development is unlikely to cause direct loss of or damage to any other habitats within the site and SINC. Nevertheless, there may be some indirect impacts from the development's construction which may also need to be mitigated (see below).



Demolition plan around existing buildings © Erect Architecture

4.6 The impacts described are based on the current proposals as expressed above. Any further change to these proposals could result in this report being inaccurate. If the proposals are changed in any significant way then further assessments may be required to determine if there are any changes to the impact on the current biodiversity interest of the site.

#### Impact assessment

4.7 Habitat and species impacts are evaluated using Table E below to generate an impact value for their loss. This is based on ecological standards set out by the Chartered Institute of Ecology & Environmental Management (CIEEM).

Impact Criteria	Impact ('+' or '-')
Habitat or species of at least national importance such as UK BAP habitats or protected species will be impacted upon in a way that either causes their loss entirely in the short or long term or are provided benefits that greatly enhance their potential for expansion.	Very high
Habitats or species of national Importance are subject to some loss in the short or long term or are provided some benefits to enhance their potential for expansion <b>or</b> Habitat or species of regional or local importance such as County/Borough BAP	High

Table E. Habitat and Species Impact Criteria

habitats or priority species will be impacted up in a way that either causes their loss entirely in the short or long term or are provided	
benefits that greatly enhance their potential.	
Habitat or species of regional or local importance are subject to some loss in the short or long term or are provided some benefits to enhance their potential for expansion <b>or</b> the loss/gain of common wildlife beneficial habitat or species at a significant level (this level is based on a variety of factors including location, connectivity etc.)	Moderate
The loss/gain of common wildlife beneficial habitat or species at a non-significant level <b>or</b> insignificant levels of national/regional/local habitats or species.	Minimal
The loss/gain of insignificant levels of common generally considered non-wildlife beneficial habitat or species.	Negligible

#### Habitats

- 4.8 The current proposals will impact upon a number of habitats predominantly in and around the current visitor centre, as well as those proposed to be lost through laying out of new or amended elements of landscaping.
- 4.9 Based on the current assessed biodiversity value and in comparison of the Extended Phase I habitat assessment the following impacts will occur:
  - Loss of 430m<sup>2</sup> of semi-improved neutral grassland recently sown (July 2017) at the north end of the reserve **minimal negative impact**;
  - Removal of seven semi-mature trees (two large white willows and five dead or dying alders) **moderate negative impact**;
  - Loss of 85m<sup>2</sup> of bare soil with some ruderal plants **negligible negative impact**;
  - Loss of 30m<sup>2</sup> of raised beds with ornamental planted shrubs and perennials minimal negative impact;
  - Loss of 600m<sup>2</sup> of woodchip paths and other infrastructure **negligible impact**.

#### **Protected species**

#### Bats

- 4.10 A bat survey needs to be undertaken to identify the current use of the site by bat species, especially in terms of roosting. However, based on the Trust's knowledge that a number of bat species do make use of the site, at least for foraging, the following can be ascertained:
  - The loss of seven semi-mature trees (two large white willows and five dead or dying alders) may reduce habitat value for bats. They may potentially affect existing or potential roosting sites.
  - The demolition of the existing visitor centre and associated infrastructure, which may affect existing roosting sites.
- 4.11 Where proposed works will require the demolition of buildings or the clearance of trees with the potential to support bats a qualified ecologist is required to undertake a series of bat surveys to determine whether bats may be impacted upon. If bats are found, the qualified ecologist will provide detailed information on how to proceed. If

bats are found during demolition or clearance works, the works must stop immediately and a qualified ecologist should be consulted.

4.12 Current proposals are likely to have a **moderate negative impact** upon the bat population and are subject to current bat legislation. However, should a bat survey identify roosting sites on site the potential impacts could be of a **high negative impact**.

#### Breeding birds

- 4.13 A full breeding bird survey has not been undertaken for this assessment, although a number of species are known to breed on site (see Table D).
- 4.14 Most of the breeding birds species are likely to mostly breeding in the woodland, pond and reedbed and canal-side habitats, predominantly from March to August inclusive. Some species may start to breed earlier, and some migrant species may breed later into September. Some of these bird breeding habitats are subject to loss or change as part of the proposed development works, or proximal to or abutting them.
- 4.15 Any extensive vegetation removal and demolition/construction works during these months that is close to bird breeding habitat may disturb birds and disrupt their breeding success.
- 4.16 Where proposed works will require the demolition of buildings or the clearance of vegetation with the potential to support breeding birds, these works should be undertaken between September and February inclusive to avoid impact to any breeding birds. Where this is not possible, a qualified ecologist is required to check for nesting birds prior (no more than 48 hours) to the demolition of the building or removal of vegetation. If nesting birds are found, the nests must be protected until such time as they are no longer in use as confirmed by the qualified ecologist. If any nesting birds are found during demolition or clearance works, the works must stop immediately and a qualified ecologist should be consulted.
- 4.17 This is highly likely to have a **moderate negative impact** upon breeding birds without mitigation and is subject to current breeding bird legislation. Careful design and timing of works can help to reduce these impacts.
- 4.18 Outside of the breeding months there will likely be **no impact** on breeding birds.Amphibians
- 4.19 Common frog, common toad and smooth newt are all known to be present on site using the ponds and numerous suitable terrestrial habitats on site including several log piles and garden flower pots (see Table D). The presence of the pond helps to sustain amphibian populations breeding on site.
- 4.20 Most amphibian species are afforded some protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), except great crested newt (which has full protection under Schedule 2).
- 4.21 Where proposed works will require the demolition of buildings or the clearance of vegetation with the potential to support amphibians a qualified ecologist is required to

ensure that amphibians are moved prior to works being undertaken. If amphibians are found during demolition or clearance works, the works must stop immediately and a qualified ecologist should be consulted to move them to a safe location.

4.22 Overall the current proposals are expected to have **minimal negative impact** on amphibians without mitigation, but potentially **minimal positive impact** through improvements to the pond.

#### Other protected species

- 4.23 Lesser stag beetles are known to be present on site; they are relatively widespread across London. Stag beetle has been recorded locally but these are actually be likely to lesser stag beetle, as the former is very rarely known from central London. Both are saproxylic<sup>10</sup> beetles and remain as larva within dead wood for many years. This dead wood is typically near or below ground level but can occasionally be inside large dead tree trunks higher up. Conservation of stag beetles is a means to generate interest in and conservation of a broader variety of saproxylic species including other beetles, flies, springtails, molluscs, isopods (woodlice), and fungi.
- 4.24 Impacts on trees within the development are minimal but without appropriate mitigation populations of saproxylic beetles could be subject to a **minimal negative impact**.
- 4.25 In the unlikely event that other protected species are found during demolition, construction or clearance works, the works must stop immediately and a qualified ecologist should be consulted.

#### Other non-protected species

- 4.26 Based on the current information the proposed development is likely to have the following impacts on other non-protected species of note:
  - Loss of vegetation and fungi species is expected to be entirely of species that are common throughout the reserve and London as a whole. No London notable or rare species are expected to be lost. Within the context of the site they are of **minimal negative impact.**
  - No invertebrate survey has been undertaken so details of invertebrate species present are unknown. However, considering the typical habitats it can be expected that invertebrate species typical of these habitats in this part of London will form the bulk if not the entirety of the invertebrate fauna. That said entomological surveys regularly reveal some nationally scarce species at many sites in London mainly because rarities have been defined from relatively few records (invertebrates, apart from butterflies, are highly under-recorded). In a few cases some rare species have become more common in recent decades. The presence of bare soil may support rarer digger wasps and mining bees. However, most of the invertebrate species found on site are likely to be present elsewhere within the reserve. Current proposals are therefore expected to have a minimal negative impact on invertebrates.

<sup>&</sup>lt;sup>10</sup> Species that feed of dead and decaying wood material

- Non-breeding birds are typically mobile species; some may lose habitat for nonbreeding activities such as cover, roost space, food resources etc., and they may be subject disturbance from demolition and construction. Current proposals are expected to have a **minimal negative impact** on non-breeding birds.
- No mammal survey has been undertaken although species known to be present on site are grey squirrel, red fox, brown rat, and house mouse, all of which are very common. None are expected to receive permanent due to the proposed works, although house mouse and brown rat populations will be temporarily affected by demolition and construction. In this respect the proposals are expected to have a minimal positive impact on mammals.

#### **Overall impacts**

4.27 This appraisal suggests from the current detail that the overall impact of the development proposals will have a **minimal negative impact**, which should be mitigated through proposed landscape enhancements, a demolition & construction plan, and recommendations adopted from additional surveys.

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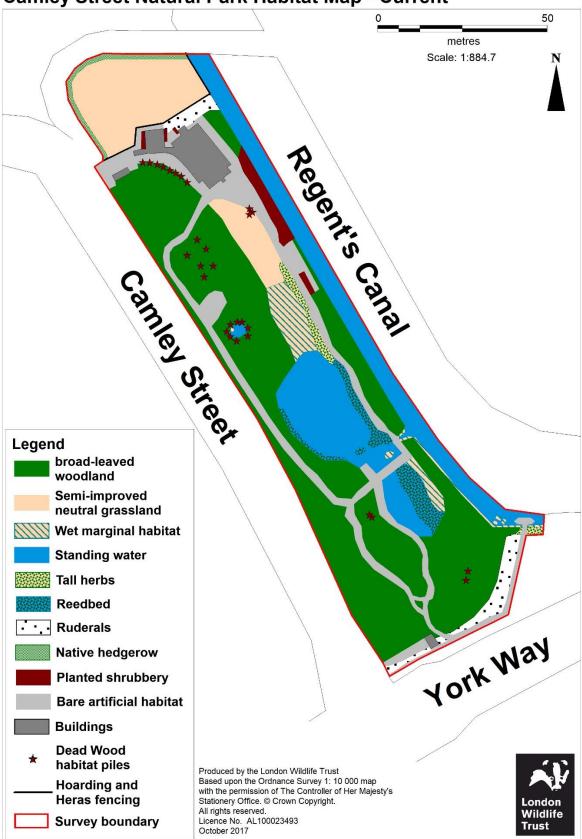
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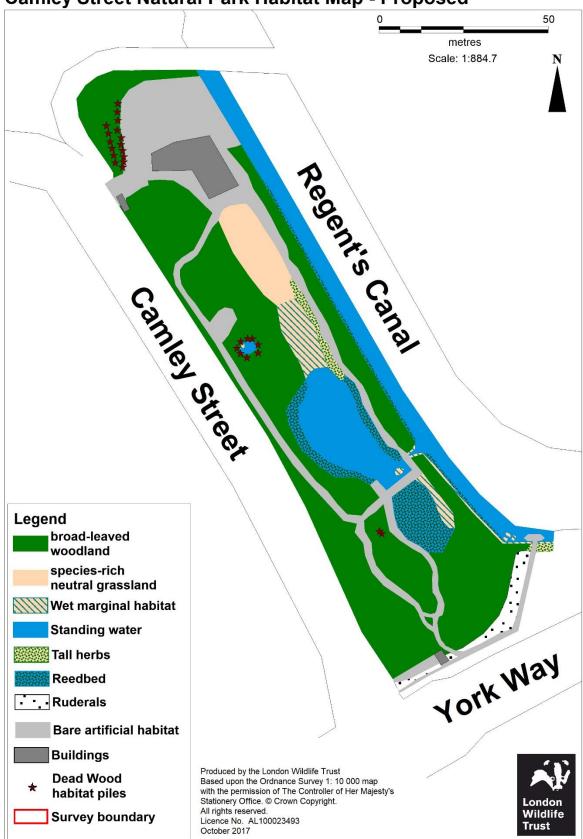
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# Appendix 1: Current habitat map



# **Camley Street Natural Park Habitat Map - Current**

# Appendix 2: Proposed habitat map (see also Appendix 4)



# **Camley Street Natural Park Habitat Map - Proposed**

Camley Street Natural Park; ecological appraisal October 2017

# **Appendix 3: Plant Species List**

Scientific name	Common name	Species a (DAFOR So		Notes						
		Broad- leaved woodland	Meadow grassland	marshland	Pond and marginals	Ruderal bank	Canalside	New grassland and hedge	Buildings, paths and gardens	
Acer campestre	field maple	0								
Acer platanoides	Norway maple	R								
Acer pseudoplatanus	sycamore	0	R				0			
Achillea millefolium	yarrow	R	F			0	R	F	0	
Aegopodium podagraria	ground-elder	R	0			0				
Aesculus hippocastanum	horse-chestnut	R								
Agrimonia eupatoria	agrimony		R			R				
Agrostis capillaris	common bent		0			R		0	R	
Agrostis stolonifera	creeping bent		0	R	R					
Alliaria petiolata	garlic mustard	0	R			0			R	
Allium triquetrum	three-cornered garlic		R						R	Invasive
Alnus glutinosa	alder	0		R	0		0			
Alopecurus pratensis	meadow foxtail		0							
Angelia sylvestris	wild angelica		R		R					
Anthriscus sylvestris	cow parsley	F	0			R				
Aquilegai vulgaris	columbine							0		
Arctium minus	lesser burdock	0	R			R				
Arrhenatherum elatius	false oat-grass	R	0	R		R			R	
Artemisia vulgaris	mugwort		R			R			R	
Arum maculatum	lords-and-ladies	R								
Asplenium adiantum- nigrum	black spleenwort	R								London notable
Asplenium scolopendrium	hart's-tongue	R								London notable
Aster sp.	Michaelmas-daisy					R			R	

Scientific name	Common name			<b>in each hat</b> minant; A = Al	<b>bitat</b> bundant; F = F	- Frequent; O =	Occasional;	R = Rare)		Notes
		Broad- leaved woodland	Meadow grassland	marshland	Pond and marginals	Ruderal bank	Canalside	New grassland and hedge	Buildings, paths and gardens	
Ballota nigra	black horehound	0	0			R			R	
Bellis perennis	daisy		R							
Betula pendula	silver birch	0								
Brachypodium sylvaticum	false brome	0								
Buddleja davidii	butterfly-bush	R								invasive
Caltha palustris	marsh-marigold			0	0		R			
Calystegia sepium	hedge bindweed	R		0		0	R			
Capsella bursa- pastoris	shepherd's-purse		R			R		R	R	
Carex pendula	pendulous sedge	0		R	0		0			
Carex sylvatica	wood sedge	R								
Centaurea nigra	common knapweed		0			R				
Cerastium fontanum	common mouse-ear		R			R			R	
Chenopodium album	fat-hen					R			R	
Cirsium arvense	creeping thistle	R	0			R		R		
Clematis vitalba	traveller's-joy	0								
Colutea arborescens	bladder-senna				R					
Conyza sumatrensis	Guernsey fleabane					R			R	
Cornus sanguinea	dogwood	0								
Corylus avellana	hazel	F						R	R	
Crataegus monogyna	hawthorn	F					R	0		
Dactylis glomerata	cock's-foot	R	0			R			R	
Dryopteris filix-mas	male fern	R								
Elodea nutallii	Nuttall's waterweed				F					invasive
Epilobium hirsutum	great willowherb		0	0	R					
Epilobium sp.	willowherb sp.					R				

Scientific name	Common name	Species a (DAFOR Se		Notes						
		Broad- leaved woodland	Meadow grassland	marshland	Pond and marginals	Ruderal bank	Canalside	New grassland and hedge	Buildings, paths and gardens	
Euonymus europaeus	spindle	R								
Eupatorium cannabinum	hemp-agrimony		0	R	R	R				
Euphorbia peplus	petty spurge					R			R	
Fallopia baldschuanica	Russian-vine								R	
Festuca rubra sp.	red fescue type species	R	0			R			R	
Fraxinus excelsior	ash	R				R				
Galega officinalis	goat's-rue		0			R				invasive
Galinsoga parviflora	gallant-soldier							0	R	
Galium album	hedge bedstraw		R			0			R	
Galium aparine	cleavers	0	R			0				
Geranium molle	dove's-foot crane's-bill		R			R		R	R	
Geranium prtense	meadow crane's-bill		F							
Geranium robertianum	herb-robert	0								
Geum urbanum	wood avens	F	0			0	F	R	R	
Glyceria fluitans	floating sweet-grass			A	R					
Hedera helix	ivy	A	R	R	R	R	F		0	
Helminthotheca echioides	bristly oxtongue		R			R				
Heracleum sphondylium	hogweed	R	R							
Hirschfeldia incana	hoary mustard					0		R	R	
Holcus lanatus	Yorkshire-fog	R	0			R			R	
Hordeum murinum	wall barley					R				
llex aquifolium	holly	R								
Impatiens capensis	orange balsam				R		R			invasive

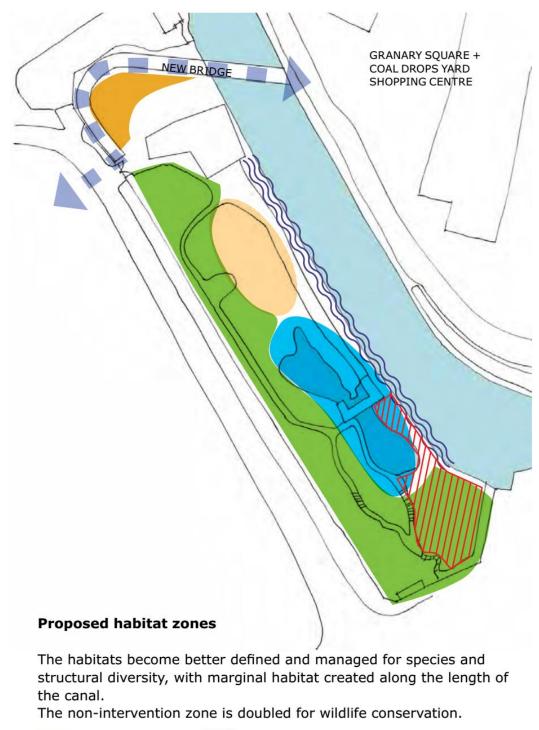
Scientific name	Common name	Species abundance in each habitat   (DAFOR Scale: D = Dominant; A = Abundant; F = Frequent; O = Occasional; R = Rare)									
		Broad- leaved woodland	Meadow grassland	marshland	Pond and marginals	Ruderal bank	Canalside	New grassland and hedge	Buildings, paths and gardens		
Iris pseudocorus	yellow-flag			0	0		0				
Jasminum sp	jasmine species								R		
Juncus effusus	soft rush				R		R				
Juncus inflexus	hard rush				R		R				
Laburnum anagyroides	laburnum	R									
Lamium album	white dead-nettle	R	R			R			R		
Lapsana communis	nipplewort	R									
Lemna minor	common duckweed	R			D						
Lemna minuta	least duckweed	R			А					invasive	
Leucanthemum vulgare	oxeye daisy		R			R			R		
Ligustrum ovalifolium	garden privet	R					R				
Ligustrum vulgare	wild privet	0									
Linaria vulgaris	common toadflax		R								
Lolium perenne	perennial rye-grass	R	F			R	R	0	F		
Lonicera sp.	honeysuckle species	0							R		
Lycopus europaeus	gypsywort			R	0		R				
Lythrum salicaria	purple-loosestrife				R		R				
Malus pumila	domestic apple								0		
Malva sylvestris	common mallow		R			R					
Medicago arabica	spotted medick		R								
Medicago lupulina	black medick		R			R			R		
Melica uniflora	wood melick	R									
Melilotus altissima	tall melilot					0					
Melissa officinalis	balm					R			0		
Mentha aquatica	water mint			R	0		R				
Mercurialis annua	annual mercury								0		

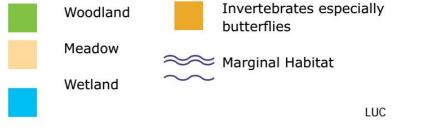
Scientific name	Common name	•		<b>in each hat</b> minant; A = Al	<b>bitat</b> bundant; F = F	Frequent; O =	Occasional;	R = Rare)		Notes
		Broad- leaved woodland	Meadow grassland	marshland	Pond and marginals	Ruderal bank	Canalside	New grassland and hedge	Buildings, paths and gardens	
Nymphaea alba	white water-lily				R					
Oenanthe crocata	hemlock water- dropwort			0	0					
Orobanche hederae	ivy broomrape	0								London notable
Pentaglottis sempervirens	green alkanet	0	R			0			R	
Phleum bertolonii	smaller cat's-tail		R					R		
Phragmies australis	common reed				А		R			
Plantago lanceolata	ribwort plantain	R	0	R	R	0		0	R	
Plantago major	greater plantain		R			R		R	RR	
Poa annua	annual meadow-grass	R	R			R		R	0	
Poa pratensis	smooth meadow-grass		0							
Polygonum aviculare	knotgrass	R	R			R			R	
Potentilla repens	creeping cinquefoil		R							
Primula vulgaris	primrose		0							
Prunella vulgaris	selfheal		0			R		0	R	
Prunus avium	wild cherry	0								
Prunus cerasifera	cherry plum	0								
Pruns spinosa	blackthorn	R								
Quercus robur	pedunculate oak	0								
Ranunculus acris	meadow buttercup		R							
Ranunculus repens	creeping buttercup	R	0	R	R	R				
Rosa canina	dog rose	R			R			0		
Rubus fruticosus agg.	bramble species	F	R	R	R	R	0			
Rumex obtusifolius	broad-leaved dock	R	R			R			R	
Rumes sanguineus	wood dock	0				R				

Scientific name	Common name	Species abundance in each habitat   (DAFOR Scale: D = Dominant; A = Abundant; F = Frequent; O = Occasional; R = Rare)									
		Broad- leaved woodland	Meadow grassland	marshland	Pond and marginals	Ruderal bank	Canalside	New grassland and hedge	Buildings, paths and gardens		
Salix alba	white willow						R				
Salix caprea	goat willow	R			R		0				
Salix cinerea	grey willow				R						
Salix fragilis	crack willow				R		А				
Salix purpurea	purple willow				R		R			London notable	
Sambucus nigra	elder	R									
Schoenoplectus Iacustris	common club-rush				0						
Scrophularia auriculata	water figwort			R	0						
Scrophularia nodosa	common figwort	R	0			R					
Senecio jacobaea	common ragwort		R			R					
Senecio vulgaris	groundsel		R			R		R			
Silene dioica	red campion		R					0			
Silene latifolia	white campion					R			0		
Solanum dulcamara	bittersweet	R		R	R	R	R				
Sonchus asper	prickly sow-thistle										
Sonchus oleraceus	smooth sow-thistle		R			0		R			
Sorbus aucuparia	rowan	R									
Stachys sylvatica	hedge woundwort	R				R					
Stellaria media	common chickweed		R			R		R			
Tanacetum vulgare	tansy		0								
Taraxacum sp.	dandelion species	R	0			R	R	R	R		
Trifolium pratense	red clover		0			0		0			
Trifolium repens	white clover		R			R		R			
Typha latifolia	common bulrush				0						
Urtica dioica	common nettle	F	0	0	R	0	R	R	R		

Scientific name	Common name	-	bundance	R = Rare)		Notes				
		Broad- leaved woodland	Meadow grassland	marshland	Pond and marginals	Ruderal bank	Canalside	New grassland and hedge	Buildings, paths and gardens	
Veronica persica	common field speedwell					R			R	
Veronica beccabunga	brooklime			R	R		R			
Viburnum opulus	guelder-rose	R								
Vicia sativa	common vetch	R	0			0		R	R	
Vitis vinifera	grape vine								R	
Unidentified ornamental	İshrubs	R							F	

# Appendix 4: New layout, habitat areas

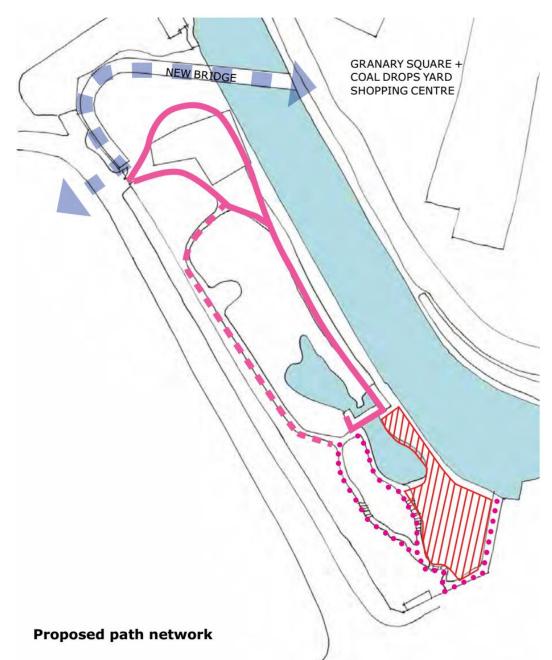




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# Appendix 5: New layout, path network



A clear primary, secondary and tertiary network defines the Natural Park and manages visitors

- Primary Footpath (accessible to all)
- Secondary Footpath (steep slope)
- ••••••• Tertiary Footpath



Non-intervention no access zone

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# **Appendix 6: Legislation and Planning Policy**

# **Bat legislation**

All bat species in the UK are fully protected under The Conservation (Natural Habitats, &c.) Regulations 2010 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- deliberate killing, injuring or taking (capture) of bats
- deliberate disturbance of bats in such a way as to:
  - $\circ$  impair their the ability to survive, breed, or rear or nurture their young; or
  - $\circ$   $\;$  affect significantly the local distribution or abundance of bat species; or
- impair their ability to hibernate or migrate
- damage or destruction of a bat breeding site or resting place i.e. roost
- keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

All bat species in the UK are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, it is an offence to:

- intentionally or recklessly disturb any bat while it is occupying a structure or place which it uses for shelter or protection;
- intentionally or recklessly obstruct the access to any place of shelter or protection used by bat(s);
- sell, offer or expose for sale, possess or transport a bat(s) for the purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will need to be applied for to allow derogation from the relevant legislation i.e. 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, hibernate, migrate). 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.

# **Bird legislation**

All birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to kill, injure or take any wild bird, or to take or destroy their eggs. It is also an offence to take, damage or destroy the nest of any wild bird while it is in use or being built. Certain species receive additional special protection under Schedule 1 of the Act.

- 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.

# Other animal legislation

Several other species in the UK are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, it is an offence to:

- intentionally or recklessly disturb a Schedule 5 species while it is occupying a structure or place which it uses for shelter or protection;
- intentionally or recklessly obstruct the access to any place of shelter or protection used

by a Schedule 5 species;

• sell, offer or expose for sale, possess or transport a schedule 5 species for the purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will need to be applied for to allow derogation from the relevant legislation i.e. for works liable to affect a schedule 5 species 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, hibernate, migrate). 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 schedule 5 species.

# **Plant legislation**

Several plants in the UK are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 8. Under this Act, it is an offence to:

- intentionally picks, uproots or destroys any wild plant included in Schedule 8; or
- not being an authorised person, intentionally uproots any wild plant not included in that Schedule,
- sell, offer or expose for sale, possess or transport a schedule 8 species for the purpose of sale.

### Invasive non-native species legislation

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to release or allow to escape into the wild any species\* that:

- is of a kind which is not ordinarily resident in and is not a visitor to Great Britain in a wild state; or
- is included in Schedule 9.

\* Note that this includes releasing species that were previously in the wild that were captured and taken into captivity (even if this was to repair and take care wounds or ailments in care) that fall under the two categories above.

Full lists of Schedule 9 species can be found here: http://naturenet.net/law/sched9.html

# **Conservation (Natural Habitats etc) Regulations 2010**

The species protection provision of the EC Habitats Directive 1992, as implemented by the Conservation of Habitats and Species Regulations 2010, comprises three "derogation tests" which must be applied by the Local Planning Authority when deciding whether to grant planning permission for a development that could harm a European Protective Species (this applies to bats only in respect to the University of Westminster grounds). The three tests are that:

- the activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
- there must be no satisfactory alternative; and
- Favourable Conservation Status (FCS) of the species must be maintained.

It is the responsibility of the applicant to submit sufficient information to address these tests when applying for planning permission. For development activities, an EPSM Licence application can only be obtained after planning permission has been granted. However, the

granting of planning permission does not guarantee that a licence will be issued by the relevant countryside agency.

### National Planning Policy Framework (2012)

The National Planning Policy Framework (NPPF) (2012) sets out the Government's national policies on different aspects of planning in England. Section 10 paragraphs 109 to 125 details planning policies on the conservation and enhancement of the natural environment. Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

#### In summary:

The planning system should contribute to and enhance the natural and local environment by: '*minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.*' (NPPF Section 10, para 109)

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- If significant harm 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 (Section 10, para 118).
- Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted (Section 10, para 118).
- Opportunities to incorporate biodiversity in and around developments should be encouraged (Section 10, para 118).
- Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss (Section 10, para 118).
- The presumption in favour of sustainable development (para 14) does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined (Section 10, para 119).
- Planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation (Section 10, para 125).

Local planning authorities must take account of the conservation of protected species when determining planning applications. The presence of protected species is a material consideration when assessing a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. This requirement has important implications for bat surveys as it means that, where there is reasonable likelihood of bats being present and being affected by the development, surveys must be carried out before planning permission is considered' (BCR 2012). In order for the Local Planning Authority to adequately assess a development proposal against National and Local Planning Policy, full comprehensive ecological surveys need to be carried out and suitable mitigation strategies compiled prior to the submission of any planning application. This information will be reviewed by the Local

Planning Authority in consultation with the relevant countryside agency and other conservation bodies.

Any developer should, in the first instance, consult the relevant Local Plans to assess the suitability of their proposal (refer to NPPF Section 10 paras 113 to 117).

### Natural Environment and Rural Communities Act 2006 (NERC)

Part 3, Section 40 of the NERC Act 2006 states that 'every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity', otherwise known as the Biodiversity Duty. Under Section 41 of the Act, the Secretary of State must publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. This list is based on those species listed in the UK Biodiversity Action Plan (BAP) as priority species. The S41 list replaces the list published under Section 74 of the Countryside and Rights of Way (CRoW) Act 2000.

# **Biodiversity Action Plans**

In 1994 the UK Government published its response to the Convention on Biological Diversity that it signed along with over 150 other nations at the Rio Earth Summit in 1992. *Biodiversity* – *the UK Action Plan* (HM Government 1994) and subsequent publications (e.g. UK Steering Group 1995) set out a programme for the national Biodiversity Action Plan (BAP), including the development of targets for biodiversity, and the techniques and actions necessary to achieve them. UK BAP priority habitats were those that were identified as being the most threatened and requiring conservation action under the *UK Biodiversity Action Plan* (UK BAP). The UP BAP priority species were those that are of conservation concern, either because they are rare in an international or national context or have undergone serious declines in their populations in recent years.

The original lists of UK BAP priority habitats and UK BAP priority species was created between 1995 and 1999, and were revised in 2007, following publication of the Species and Habitats Review Report. Following this review, the list of UK BAP priority habitats increased from 49 to 65 and the list of UK BAP priority species increased from 600 to 1150.

Biodiversity Action Plans (BAPs) set out actions for the conservation and enhancement of biological diversity at national, regional and local level. They consist of both Habitat Action Plans (HAPs) and Species Action Plans (SAPs) and species and habitats listed within these are defined as being of Principal Importance for the Conservation of Biodiversity under Section 41 of the NERC Act 2006. Local authorities must consider these species and habitats when determining planning applications.

The London BAP was published in 2000, with a number of HAPs and SAPs further revised in 2008. The list of London Priority Species was last reviewed in 2007; these are 214 species that are under particular threat in London (and/or subject to legal protection), and for which planning decisions must take into account.<sup>11</sup>

London BAP targets have been largely embedded within Local BAPs in most of the London boroughs, including that for Camden (most recently updated in 2013).

<sup>&</sup>lt;sup>11</sup> See: <u>http://downloads.gigl.org.uk/website/London%20BAP%20Priority%20Species%20List%202007.pdf</u>