



# **LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE 15-17 Tavistock Place, WC1**

**Updated Extended Phase I Habitat Survey  
*October 2017***



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## Executive Summary

London Wildlife Trust was commissioned by London school of Hygiene and Tropical medicine (LSH&TM) to provide an updated Extended Phase I Habitat Survey report to a previously compiled report by London Conservation Services Limited in June 2013. The aims of this update report are:

- to reassess the ecological conditions of 15-17 Tavistock Square site since the 2013 report by means of a walkover assessment and in relation to modified development plans;
- to provide an updated series of recommendations so as to ensure the proposed development complies with relevant wildlife legislation and updates to regional and local planning policies; and

The development proposal is to demolish the existing buildings and build a new building facilitating high quality dry laboratory and writing space.

A desktop study was undertaken of the previous reports along with the revised development plans and policy changes, to determine if it was likely that other relevant protected species may be present on site since 2013.

A walkover survey was undertaken on 29<sup>th</sup> September 2017 in largely overcast with sunny spells but bright conditions with no precipitation and a light wind. The survey lasted around one hour.

No protected species were identified during the survey. The habitats on site, including the buildings, have a low potential to support protected and notable species of bats and breeding birds. Other than these taxa it is considered unlikely that the site supports any other protected species.

The walkover survey identified a total of five discreet habitats present within the survey area; planted shrubbery, ruderal, vegetated wall, scattered trees and bare artificial habitat. Bare artificial habitat was the most dominant habitat comprising 93.75% of the survey area.

The area surveyed comprised of largely habitats that are common even in such an urban context. All species the site is known to support are predominantly common and widespread. 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.

# 1. Introduction

## Background

- 1.1 London Wildlife Trust was commissioned by LSH&TM to provide an updated report to a previously compiled report by London Conservation Services Limited (a former subsidiary of London Wildlife Trust) in June 2013. This previous report was an Extended Phase I Habitat Survey and BREEAM Assessment providing the baseline ecological information under the BREEAM (New Construction 2011) methodology in light of a proposed development that had not at the time produced final plans. This report updates the findings of this earlier report in light of a new revised development proposal and several regional and local policy changes including the adoption of the updates to the London Plan (Mayor of London, 2015) and the introduction of the Camden Local Plan 2017 (Camden Council, 2017) to replace the previous Core Strategy and Camden Development policies documents as the basis for planning decisions and future development.

## Aims of this report

- 1.2 The aims of this update report are:
- to reassess the ecological conditions of 15-17 Tavistock Square site since the 2013 report by means of a walkover assessment and in relation to modified development plans;
  - to provide an updated series of recommendations so as to ensure the proposed development complies with relevant wildlife legislation and updates to regional and local planning policies; and

**Please note that this report should be read in conjunction with the initial 2013 report. (Chipchase, 2013)**

- 1.3 The walkover assessment consists of:
- a desktop study of the previous report and its findings including a review of the 2013 Greenspace Information for Greater London (GiGL) data search and a review of recent policy changes;
  - a walkover survey of the site to identify current habitats and their ecological value in relation to the 2013 report;
  - an incidental faunal survey; and
  - an evaluation of the site's importance for nature conservation.
- 1.5 The walkover assessment 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 0.16 hectares (ha) in size and is centred on grid reference TQ 30074 82427. The site has no designations and is owned by University College London (UCL) School of Hygiene and Tropical Medicine. The site is located in Bloomsbury located on the north side of Tavistock Place between Marchmont Street and Tavistock Square. A location map of the site can be found in Appendix 1.

## **Development proposals**

- 1.7 The development proposal is to demolish the existing buildings and build a new building facilitating high quality dry laboratory and writing space.

## **Relevant legislation and policy**

- 1.8 The following legislation is 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 5.

- 1.9 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.
- 1.10 The London Plan (GLA, 2016) 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.
- 1.11 The Camden Local Plan, specifically Policy A3 *Biodiversity*, is also relevant.
- 1.12 The UK Biodiversity Strategy, London Biodiversity Action Plan and Camden Biodiversity Action are also relevant.

## 2. Methodology

### Desktop Study

- 2.1 In addition to the studying of recent policy changes and the 2013 Extended Phase I Habitat Survey Report of the site, the previous Greenspace information for Greater London CIC (GiGL) data search dated 30<sup>th</sup> May 2013 Report Reference 13/286 was reviewed (GiGL, 2013) to determine if it was likely that other relevant protected species may be present on site since that data search was undertaken or whether there has been any significant changes to the proximity of statutory and non-statutory designated sites since 2013. MAGIC, the government's Interactive Geographic Information Map, was also sourced for statutory and non-statutory designation data and information on habitats and species of importance at a national level.<sup>1</sup>

### Walkover survey

- 2.3 A walkover survey was undertaken on 29<sup>th</sup> September 2017 in largely overcast with sunny spells but bright conditions with no precipitation and a light wind. The survey lasted around one hour.
- 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 and updated by the Greater London Authority, most recently in 2004 (Mayor of London, 2004).
- 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 Details of vascular plant species were not fully compiled except where they seemed relevant. Upon arriving it was deemed unnecessary (based on a quick visual assessment of the site) to spend a lot of time focussing on what species were present rather than the broader habitats present and the potential to support protected or species of conservation concern. 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 3.
- 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 Photographs of relevant habitats and features on site were taken during the walkover survey. These can be found in Appendix 4.

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<sup>1</sup> See: <http://www.natureonthemap.naturalengland.org.uk/>

## 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 walkover survey. The likeliness of habitat being suitable for protected species occurrence was ranked from negligible to present as described in Table A.

Table A: *Protected species assessment categories*

| 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.   |

- 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 of the report.
- 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 may change subject to the findings of any subsequent surveys;
  - The walkover 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. A full detailed list of plant species was not deemed necessary upon the site visit and is not thought to have had a significant effect on the assessment of its vegetative quality given the site's greenspace being largely composed of plants of ornamental origin.
  - 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. **Invertebrates were not searched for.**
  - The lateness of the survey was considered out of season for recording breeding birds;
  - 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).

## 3. Results

### Desktop study - Designated sites

- 3.1 The 2013 data search identified two statutory Local Nature Reserves (LNRs) within 2km of the surveyed site: Barnsbury Wood, and Camley Street Natural Park. Both of these sites still remain and no other site has been statutory designated since the last report was produced.
- 3.2 There were 36 non-statutory Sites of Importance for Nature Conservation (SINCs) and 1 potentially important Geological Site identified within the 2013 data search. The SINCs were broken down as follows: Four Metropolitan Grade, Three Borough Grade I, eight Borough Grade II and 21 Local grade. An addition of five Local Grade and one Borough Grade I SINCs are now known within the 2km search area. These were added in 2016.
- 3.3 Not identified within the 2013 report but identified as Historic non-statutory sites on MAGIC (MAGIC, 2017), 14 Registered Parks and Gardens<sup>2</sup> were also identified within the 2km area.

### Desktop study; protected and important species

- 3.4 A host of protected and important species were previously identified to have been recorded within the 2km search area. Of these only bats and three species of birds; dunnock *Prunella modularis*, common starling *Sturnus vulgaris* and house sparrow *Passer domesticus* were considered to be likely to be present on site in any given context in 2013. Given the recently identified habitats and their condition, Bats and breeding birds are likely the only protected species expected to be present or use the site in any capacity. The three important bird species mentioned above are expected to potentially use the site as is herring gull *Larus argentatus*. Black redstart *Phoenicurus ochurus* is a species known to occupy older building areas in London and as a Schedule 1 nationally protected species under the Wildlife and Countryside Act 1981 (as amended) and as a result its potential of being on site should not be ruled out even though it is unlikely.

### Desktop study; non-native invasive species

- 3.5 Nine species recognised on the London Invasive Species Initiative (LISI) were previously recorded to have been recorded within 500 metres of the site with only Butterfly-bush *Buddleja davidii* being present on site.

### Desktop study; Priority and notable habitats

- 3.6 Not considered in the previous 2013 report, priority and notable habitats are those habitats that are of national importance, largely those identified in the UK Biodiversity Action Plan (UK BAP). Within the 2km search area, only two UK priority habitats - broadleaved deciduous woodland and intertidal substrate foreshore were identified to be present. The broadleaved deciduous woodland priority habitat was identified at a

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<sup>2</sup> As listed by Historic England.

number of locations. While some sites certainly contain woodland habitat most are known as parks or gardens with tree cover and are not known to support significant woodland community habitats at ground level. The Intertidal substrate foreshore priority habitat was identified in the River Thames.

- 3.7 Broadleaved, conifer and mixed mainly conifer habitats were identified as notable habitats under the National Forest Inventory (GB). The former was largely synonymous with the broadleaved deciduous woodland priority habitat while the latter two habitats did not coincide with any priority habitat designations.

### **Walkover survey habitat results**

- 3.8 The walkover survey identified a total of five habitats present within the survey area; planted shrubbery, ruderal, vegetated wall, scattered trees and bare artificial habitat.
- 3.9 Bare artificial habitat was the most dominant habitat comprising of approximately 0.15ha (93.75%) of the survey area with planted shrubbery (0.005ha) making up the other significant proportion.
- 3.6 The survey identified two recognisably distinct habitat areas and these are described separately below.

#### **A. Courtyard**

- 3.7 The courtyard is largely unchanged from the previous survey, the eastern section largely consisting of a predominantly stone pebbled surface with stone walkways of larger flat stones with raised planters of largely ornamental perennials, shrubs and trees including bamboo, several ornamental birches *Betula sp* and a maple *Acer sp.* and a loquat *Eriobotrya japonica*. These are interspersed with chairs, tables and benches. Ruderal species of wall lettuce *Mycelis muralis*, petty spurge *Euphorbia peplus*, fat-hen *Chenopodium album* and Guernsey fleabane *Conyza sumatrensis* were also present along with a few species of dandelion *Taraxacum agg.* and greater plantain *Plantago major*. The western section of the courtyard was of similar design but lacks the pebbles and is composed of concrete paving slabs instead. Two stairway towers sit at either end of the courtyard.

#### **B. Buildings and rooftops**

- 3.10 Immediately to the north of the courtyard are two smaller buildings; a small brick shed previously used for oil storage and a two storey brick building used for storage and an office. Both buildings has several ornamental climbers growing up their walls including a climbing hydrangea *Hydrangea petiolaris*. To the east of the two-storey building there is a staircase leading up to a small flat roof which has been occupied by a small area of ruderals consisting of annual meadow-grass *Poa annua*, shepherd's-purse *Capsella bursa-pastoris*, and herb-robert *Geranium robertianum*. Growing on the south facing wall along the north edge of this flat roof, there are single plants of a male fern *Dryopteris filix-mas* and hart's-tongue *Asplenium scolopendrium*. The two-storey brick building has several holes in its external walls that are of a size suitable for bats to use.
- 3.11 Forming the bulk of the northern part of the site is a brick warehouse with a concrete floor and metal roof structure. The warehouse is largely disused with several internal rooms and has a shuttered entrance that leads into the courtyard and a grilled gate

entrance at the eastern end which opens into an open courtyard for the Lord John Russell Public House on Marchmont Street. Inside the warehouse there are several locations that could support bats. Access for bats could be obtained through the grilled gate and through a hole that is immediately located above the small brick shed building that leads directly into the warehouse. A single small butterfly-bush invasive shrub grows on the roof of the warehouse.

### Protected species assessment

- 3.12 No protected species were identified during the survey.
- 3.13 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 B.

Table B: *Protected species assessment*

| Habitat /species | Status <sup>3</sup>  | Occurrence likelihood   |
|------------------|--|---|
| bats             | H&SD-Anx4<br>ConsRegs S2<br>W&CA Sch5<br>NERC 41<br>BAP National<br>BAP London | Bats have been recorded 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.<br><br>Bats have a <b>low likelihood</b> on being on site. |
| breeding birds   | BD1<br>W&CA Sch5<br>NERC 41<br>BAP-National<br>BAP-London<br>Bird-Red          | Habitats on site are suitable for breeding bird species like blackbird, blue tit, great tit, dunnock, house sparrow, common starling and potentially the nationally protected black redstart.<br><br>Breeding birds have a <b>low likelihood</b> of being on site.              |

### Non-native invasive species assessment

- 3.14 A single non-native species of an invasive nature; butterfly bush (listed on the LISI invasive species list) was found to be present during the survey.

### Incidental fauna sightings

- 3.15 As indicated above the weather conditions during the survey were sub-optimal for those generally more active and visible invertebrates and they were not specifically searched for.
- 3.16 Bird species identified to be using the site and immediate environs were woodpigeon *Columba palumbus* and blackbird *Turdus merula*. No other faunal species were identified.

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<sup>3</sup> The following designations have been used to represent different species

## **Evaluation**

- 3.17 The site has no designations and does not support habitat or species that warrant any conservation designations.
- 3.18 The current courtyard space supports the vast majority of the wildlife beneficial habitat present. The habitats on site including the buildings have a low potential to support protected and notable species of bats and breeding birds, Other than these species groups it is considered unlikely that the site supports any other protected species.
- 3.19 The area surveyed comprised of largely habitats that are common even in such an urban context. All species the site is known to support are predominantly common and widespread.
- 3.20 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. Potential Impacts and Recommendations

### Impacts, constraints and mitigation

- 4.1 The proposed development as set out in the drawing in Appendix 3 will incur the following ecological impacts and constraints:
- It will remove all the existing habitat located on site.
  - It will remove significant proportion of buildings which may support bats and/or breeding bird opportunities.
- 4.2 All breeding birds and their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended).
- 4.3 Where proposed works will require the demolition of buildings or the clearance of trees, climbers and ornamental shrub 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.
- 4.4 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.
- 4.5 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.

### Further survey requirements

- 4.6 The following survey requirements are recommended in relation to the impacts and constraints set out above:
- 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 48 hours prior to demolition or vegetation removal.
  - Bat surveys including dawn and dusk and roost surveys prior to works. To be undertaken no more than 48 hours prior to demolition.

These would need to be undertaken by a suitably qualified and licensed ecologist.

### Ecological enhancements

- 4.7 Planning policies encourage ecological enhancements works in development proposals as both mitigation for losses that occur and to enhance beyond the

previously existing conservation value. The following ecological enhancements are currently proposed to be implemented as part of the development works and within the first year post development:

- a single tree of unknown type and some soft landscaping works within the remaining courtyard;
- a series of climbers and/or vines on the external façade elevations;
- a green roof of undetermined size and type although suggested to be sedum type roof.

4.8 More detailed information on ecological enhancements and mitigation is expected to be provided.

### **Further recommendations**

4.9 The following recommendations are proposed to ensure the development better meets Policy A3 set out within the Camden Local Plan:

- the remaining courtyard area is planted with a mix of native species to ensure it remains as attractive to wildlife, as its reduced size will have an increased likelihood of ensuring it is unsuitable for breeding birds due to disturbance and food availability.
- climbers and/or vines are of species suitable for attracting biodiversity: native ivy *Hedera helix*, hops *Humulus lupulus* or honeysuckle *Lonicera periclymenum*. Although never used in building designs hedge bindweed *Calystegia sepium* or traveller's-joy *Clematis alba* could be used in appropriate locations.
- the green roof is a biodiverse green roof rather than a sedum green roof.
- flat roof areas are utilised with planters or green/brown roofs to maximise greenspace provision. Planters should be of species that have known biodiversity benefit.
- bird and bat boxes are incorporated into the building design.

## 5. References

- Bat Conservation Trust, 2008. *Bats and lighting in the UK – Bats and the built environment series*. Accessed via [www.bats.org.uk/publications\\_download.php/243/BATSANDLIGHTINGINTHEUKJan08.pdf](http://www.bats.org.uk/publications_download.php/243/BATSANDLIGHTINGINTHEUKJan08.pdf) 10/10/2017.
- Bat Conservation Trust, 2012. *Landscaping for bat and biodiversity*. A leaflet produced by Bat Conservation Trust, London.
- British Standards Institution, 2013. *Biodiversity. Code of practice for planning and development: 42020*. BSI, London.
- Biodiversity Reporting and Information Group, 2008. *UK Biodiversity Action Plan Priority Habitat Descriptions*. JNCC. Peterborough.
- Burton R., 1983, *Flora of the London Area*. London Natural History Society, London.
- CIEEM, 2016. *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester
- Collins, J. (ed.), 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd edition*. The Bat Conservation Trust, London.
- Department of Communities and Local Government, 2012. *National Planning Policy Framework*. DCLG. London.
- Eaton, M.A., Aebischer, N.J., Brown, A.F., Hearn, R.D., Lock, L., Musgrove, A.J., Noble, D.G., Stroud, D.A. and Gregory, R.D., 2015. *Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man*. British Birds 108, 708–746. Accessed via [www.britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf](http://www.britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf) 10/10/2017.
- JNCC, 2010. *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council. Reprinted by Joint Nature Conservation Committee, Peterborough.
- London Ecology Unit, 1994. *Habitat Survey for Greater London*. London Ecology Unit, London.
- London Borough of Camden, 2013. *Camden Biodiversity Action Plan 2013-18*, London Borough of Camden, London.
- London Borough of Camden, 2017. *Camden Local Plan*. London Borough of Camden Council. London.
- London Wildlife Trust 1984. *Wildlife in Camden*, London Wildlife Trust and London Borough of Camden, London.
- MAGIC, 2016. Multi-Agency Geographic Information for the Countryside. Accessed via [www.magic.gov.uk](http://www.magic.gov.uk) 10/10/2017.



Mayor of London, 2004. *Open space and habitat survey for Greater London*, Greater London Authority. Accessed via [http://downloads.gigl.org.uk/website/OpenSpaceHabitatSurveyGreaterLondon\\_Revisedspecification.pdf](http://downloads.gigl.org.uk/website/OpenSpaceHabitatSurveyGreaterLondon_Revisedspecification.pdf) 10/10/17.

Mayor of London, 2016. *The London Plan: The Spatial Strategy for London (consolidated with alterations since 2011)*. Greater London Authority, London. Accessed via [www.london.gov.uk/what-wedo/planning/london-plan/current-london-plan](http://www.london.gov.uk/what-wedo/planning/london-plan/current-london-plan) 10/10/2017.

Preston, C. D., Pearman, D. A. & Dines, T. D., 2002. *New Atlas of the British & Irish Flora*. Oxford University Press. Oxford.

Rose, F. 2006. *The Wildflower Key; How to identify wildflowers, trees and shrubs in Britain and Ireland*. Penguin Group. London.

Stace C.A., 2010. *New flora of the British Isles (3rd ed.)*, Cambridge University Press, Cambridge.

Svensson, Lars. 2009 (2nd ed). *Collins Bird Guide; The Most Complete Guide to the Birds of Britain and Europe*. HarperCollins Publishers Ltd, London.

UK Government, 1994. *Biodiversity: the UK Action Plan*. CM2428, HMSO, London. 28, HMSO, London.

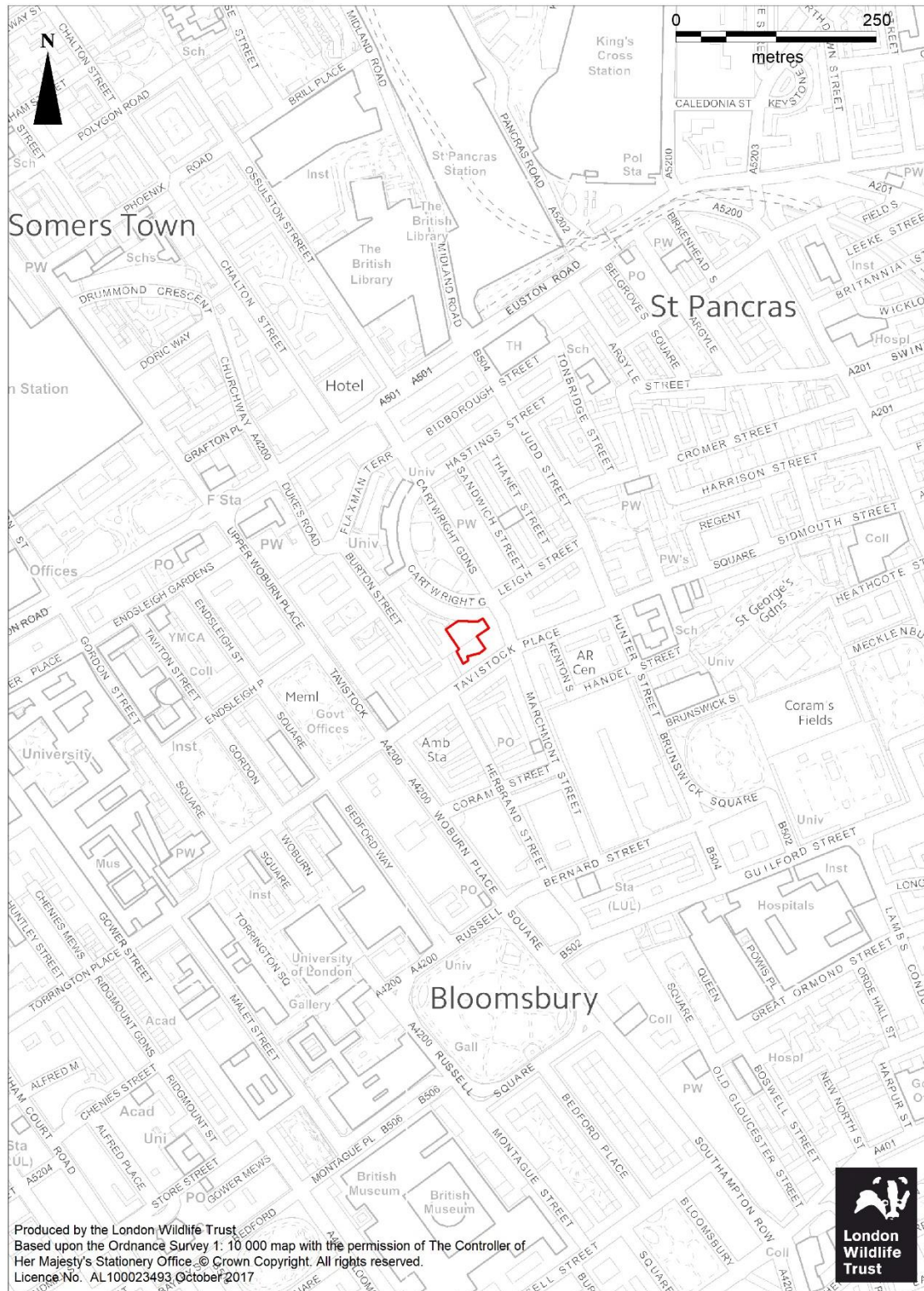
UK Wildlife Legislation. Accessed via <http://www.legislation.gov.uk/browse> 10th October 2017.

Waite, M., Keech, D., and Game, M., 1993. *Nature Conservation in Camden*, Ecology Handbook 24, London Ecology Unit, London.

Wileman, T. and Sovic Davies, P., 2014. *A review of Sites of Importance for Nature Conservation (SINC) in the London Borough of Camden, September 2014*, London Wildlife Trust and London Borough of Camden, London.

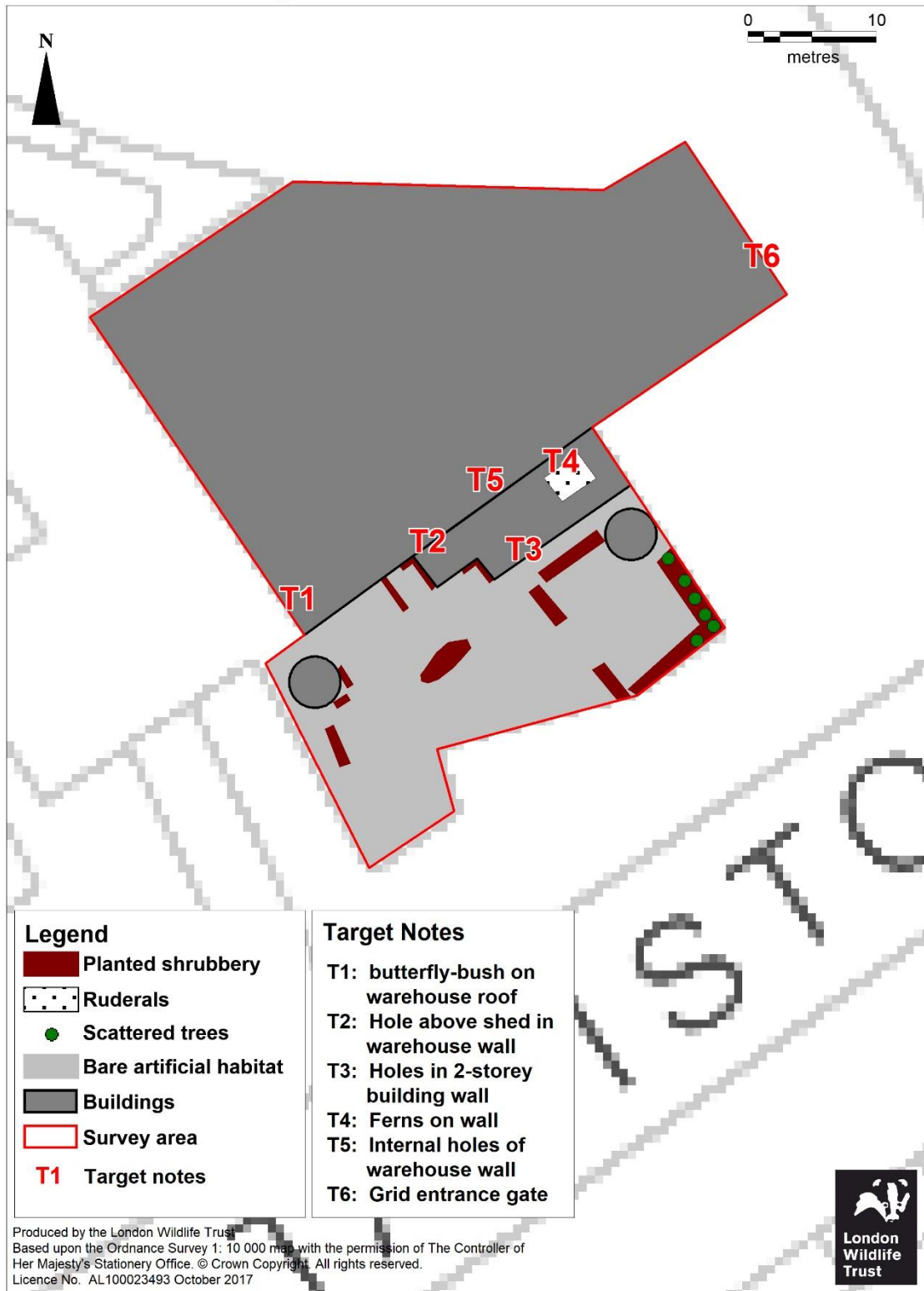
## Appendix 1: Location map

### School of Hygiene and Tropical Medicine Phase I Location Map



## Appendix 2: Current habitat map

### School of Hygiene and Tropical Medicine Phase I Habitat Map



## Appendix 3: Plant Species List

| Scientific name                  | Common name         | Species abundance in each habitat<br>(DAFOR Scale: D = Dominant;<br>A = Abundant; F = Frequent;<br>O = Occasional; R = Rare) | Notes          |
|----------------------------------|---------------------|--|----------------|
| <i>Acer sp.</i>                  | maple species       | R  |                |
| <i>Asplenium scolopendrium</i>   | hart's-tongue       | R  | London notable |
| <i>Betula sp.</i>                | Birch species       | O  |                |
| <i>Buddleja davidii</i>          | butterfly-bush      | R  | invasive       |
| <i>Capsella bursa-pastoris</i>   | shepherd's-purse    | R  |                |
| <i>Chenopodium album</i>         | fat-hen             | R  |                |
| <i>Conyza sumatrensis</i>        | Guernsey fleabane   | R  |                |
| <i>Dryopteris filix-mas</i>      | male fern           | R  |                |
| <i>Eriobotrya japonica</i>       | loquat              | R  |                |
| <i>Euphorbia peplus</i>          | petty spurge        | R  |                |
| <i>Geranium robertianum</i>      | herb-robert         | R  |                |
| <i>Hedera helix</i>              | ivy                 | R  |                |
| <i>Hydrangea petiolaris</i>      | Climbing hydrangea  |  |                |
| <i>Lamium album</i>              | white dead-nettle   | R  |                |
| <i>Lolium perenne</i>            | perennial rye-grass | R  |                |
| <i>Mycelis muralis</i>           | wall-lettuce        | O  |                |
| <i>Pentaglottis sempervirens</i> | green alkanet       | R  |                |
| <i>Plantago lanceolata</i>       | ribwort plantain    | R  |                |
| <i>Plantago major</i>            | greater plantain    | R  |                |
| <i>Poa annua</i>                 | annual meadow-grass | R  |                |
| <i>Stellaria media</i>           | common chickweed    | R  |                |
| <i>Taraxacum sp.</i>             | dandelion species   | R  |                |
| Unidentified ornamental shrubs   |                     | O  |                |



## Appendix 4: Photographs



The courtyard looking east



The courtyard looking north  
towards warehouse  
building



Climbers on walls of brick  
shed and 2-storey building





Ruderals on flat roof



Target note 1: butterfly-bush on warehouse roof



Target note 2: hole in warehouse roof above brick shed – suitable for bat access to warehouse interior





Target note 3: Holes in wall of 2-storey building potentially suitable for bat access and roosting



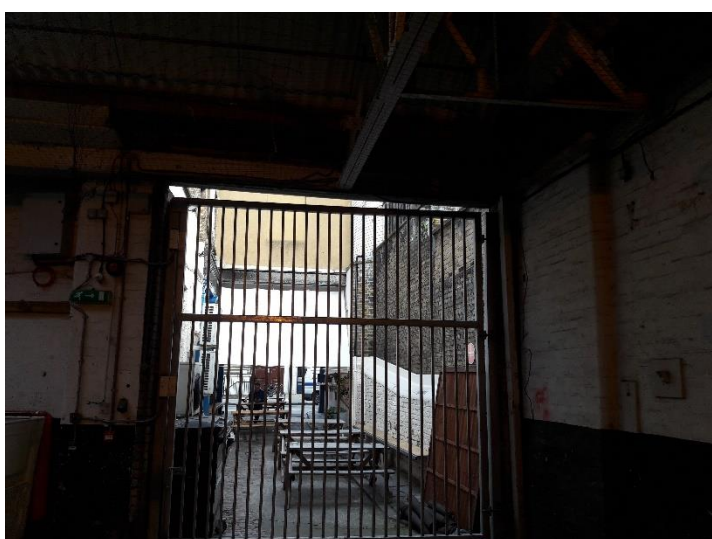
More holes in 2-storey building suitable for bat access or roosts



Target note 4: male and hart's-tongue ferns on wall above ruderal flat roof



Target note 5: Holes in brick in warehouse interior - suitable for bat roosts



Target note 6: Grid entrance gate at eastern end of warehouse – suitable for bat access to warehouse interior.



## Appendix 5: 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:
  - impair their the ability to survive, breed, or rear or nurture their young; or
  - 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 UK 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>4</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).

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<sup>4</sup> See: <http://downloads.qjgl.org.uk/website/London%20BAP%20Priority%20Species%20List%202007.pdf>