The Ecology Consultancy

Parker House, Covent Garden/Preliminary Ecological Appraisal/**Report for EC Harris**

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Parker House, Covent Garden

Preliminary Ecological Appraisal

Report for EC Harris

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Executive Summary

A field survey was carried out over land at Parker House, Covent Garden, London on on the 27th September 2012. The survey was carried out in order to undertake a Preliminary Ecological Appraisal of the site and to provide recommendations for protecting, managing and enhancing its wildlife value. The main findings of the Preliminary Ecological Appraisal are as follows:

- The site is not subject to any statutory nature conservation designations and there are no statutory designated nature conservation sites or Local Nature Reserves within the search area. The nearest non statutory site is Lincoln's Inn Field Site of Importance for Nature Conservation (SINC) which is approximately 250 metres east of the site.
- The habitats within the development site were dominated by a building currently utilised as a hostel; associated hard-standing with non-native planted trees along the pavement, and a limited amount of introduced shrub and potted plants.
- The majority of the habitats on site were of limited extent and recent origin and comprised species likely to be both common and widespread in the local area. Overall the site is considered to be of low ecological value and is unlikely to support rare or diverse assemblages of species or large species populations.
- The building on the site, which is due to be demolished had pitched roofs with gaps under tiles with the potential to support crevice dwelling bats. Therefore, the building has low potential to support roosting bats.
- The building scheduled for demolition has low potential to support roosting bats. In order to more accurately assess the potential, it is recommended that one emergence/activity survey be carried out between May and September. In the event that roosting bats are found, a European Protected Species Mitigation licence may be required which may impose significant timing and methodological restrictions on works.
- It is recommended that any works likely to have an impact upon potential nesting habitat such as buildings should be scheduled outside the breeding bird season (March to August inclusive). This is to avoid harm or disturbance to nesting birds e.g. feral pigeon and to comply with the relevant legislation. It should be noted that birds can and do breed outside the typical season. Where such scheduling is unavoidable it will be necessary for an ecologist to make an inspection of any breeding bird

habitat prior to work on buildings. All wild birds and their nests are legally protected from killing and injury or damage and destruction.

- The policy contained in the Camden Core Strategy 2010-2025 considered relevant to the site is CS15 which relates to nature conservation and protected species.

1 Introduction

BACKGROUND

1.1 The Ecology Consultancy was commissioned by EC Harris to to carry out a Preliminary Ecological Appraisal of a site at Parker Street, Covent Garden, London Borough of Camden. The appraisal was undertaken in order to provide baseline ecological information and recommendations for further surveys, where appropriate.

SCOPE OF THE REPORT

1.2 This report is based on a desk top study, and field survey using standard Phase 1 survey methodology (JNCC, 2010). This approach is designed to identify broad habitat types at a site, to identify the potential of habitats to support protected species, and to assist in providing an overview of the ecological interest at a site. It is generally the most widely used and professionally recognised method for initial ecological site appraisal.

1.3 A Habitat Plan of the site is included in Appendix 1, together with photographs in Appendix 2. A full list of plant species identifiable at the site during this survey, along with an assessment of their abundance, appears in Appendix 3. Relevant legislation is provided in Appendix 4.

SITE CONTEXT AND STATUS

1.4 The proposed development site is approximately 0.14 hectares (ha) in extent and is situated in an inner city location. The site is Parker House located on Parker Street in Covent Garden, the area supports residential and commercial buildings and to the east Lincoln's Inn Fields, a large public square. The site is about 700 metres (m) north of the River Thames. The National Grid Reference for the centre of the site is approximately TQ 304 813.

1.5 The site is not subject to any statutory nature conservation designations.

DEVELOPMENT PROPOSALS

1.6 The development proposal is for the demolition of the existing building and the construction of a new five storey building with associated terraces and the installation of a biodiverse living roof.

2 Methodology

DESK TOP STUDY

2.1 Information regarding the present and historical ecological interest at the site and within a 1km radius radius was requested from Greenspace Information for Greater London (GiGL, 2012). A search was also completed of an on-line mapping service (http://magic.defra.gov.uk/) to ascertain the presence of any statutory designated sites.

2.2 In addition, The UK (JNCC, 2010), London (London Biodiversity Partnership, 2010: http://www.lbp.org.uk) and Camden Biodiversity Action Plan (BAP) (2011) were reviewed for those species and habitats that may, or are potentially, present at the site.

2.3 The following information regarding the present and historical ecological interest of the site and land within a 1km radius was sourced from Magic and GiGL:

- Statutory sites of nature conservation importance;
- Non-statutory sites designated as SINCs at county level as being of local conservation importance and often recognised in Local Authority development plans;
- Protected, rare and other notable species and;
- Priority species and habitats in the UK and London BAPs, which may be relevant to the site.

HABITAT SURVEY

2.4 The site description provided in Section 3 of this report is based on a walkover survey carried out on the 27th September 2012. Any features of ecological interest were described and mapped based on the standard Phase 1 Habitat Survey methodology (JNCC 2010) as adapted by the Greater London Authority (GLA 2002). This approach is designed to identify broad habitat types and to assist in providing an overview of the ecological interest at a site. It is generally the most widely used and professionally recognised method for initial ecological site appraisal.

2.5 A habitat plan of the site is provided in Appendix 1. Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (2010) for vascular plant species.

PROTECTED SPECIES ASSESSMENT

2.6 The potential of the site to provide habitat for legally protected species was assessed from field observations carried out at the same time as the habitat survey combined with the results of the desk top study. An assessment of the suitability of on-site and adjoining habitat for the species included, and information on the wider distribution of these species in the UK and locally. The site was inspected for field signs indicative of the presence of protected species as follows:

- habitat likely to be of value for roosting, foraging and commuting bats;
- habitat likely to be of value for breeding birds.

2.7 The likelihood of occurrence is ranked as follows and relies on the findings of the current survey and an evaluation of existing data:

- Negligible – while presence cannot be absolutely discounted, the site includes very limited or poor quality habitat for a particular species or species group. Surrounding habitat considered unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known national range for a species.
- Low – on-site habitat of poor to moderate quality for a given species/species group. Presence cannot be discounted on the basis of national distribution, nature of surrounding habitats, habitat fragmentation, recent on-site disturbance etc.
- Medium – on-site habitat of moderate quality, providing all of the known key requirements of a given species/species group. Within national distribution, suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, habitat severance, and disturbance.
- High – on-site habitat of high quality for a given species/species group. The site is within/peripheral to a national or regional stronghold. Good quality surrounding habitat and good connectivity.
- Present – presence confirmed from the current survey.

2.8 The purpose of this assessment is to identify whether more comprehensive Phase 2 surveys for protected species should be recommended.

SITE EVALUATION

2.9 The site has been evaluated broadly following guidance issued by the Institute of Ecology and Environmental Management (IEEM, 2006), according to a geographic scale (significance at the international level down to the site level) and using a range of criteria for assigning ecological value, as follows:

- Presence of sites or features designated for their nature conservation interest. Examples include internationally or nationally designated sites such as Special Areas of Conservation (SACs) and SSSIs, locally designated sites such as LNRs and SINCs;
- Biodiversity value, for example, habitats or species which are rare or uncommon, species rich assemblages, species which are endemic or on the edge of their range, large populations or concentrations of uncommon or threatened species, and/or plant communities that are typical of valued natural/semi-natural vegetation types;
- Potential value, as addressed by targets to increase the biodiversity value for example of SSSIs, international sites and some BAP species and habitats. If detailed plans exist to enhance the value of such areas then it may be appropriate to value them as if the intended resource already existed;
- Secondary and supporting value, for example, habitats or features which provide a buffer to valued features or which serve to link otherwise isolated features;
- Presence of UK and/or London and Camden BAP habitats and species.

LIMITATIONS

2.10 It should be noted that, whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment.

2.11 This Preliminary Ecological Appraisal and protected species assessment does not constitute a full botanical survey, or a Phase 2 pre-construction survey that would include accurate GIS mapping for invasive or protected plant species.

2.12 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site, based on the suitability of the habitat, known distribution of the species in the local area provided in response to our enquiries, and any direct evidence on the site. It should not be taken as providing a full and definitive survey of any protected species group. It is only valid at the time the survey was

carried out. Additional surveys may be recommended if, on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that other protected species may be present.

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

3 Results

DESK TOP STUDY

3.1 It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

Nature conservation designations

3.2 The site is not subject to statutory nature conservation designations, such as Special Protection Areas (SPA), SSSIs, SACs or LNRs. No statutory designated sites lie within 1km of the site; the nearest non-statutory site is Lincoln's Inn Field Site of Importance for Nature Conservation (SINC) which lies 250m to the east of the site. A further eight non-statutory sites, all comprising SINCs, lie within 1km of the site. These sites are described in Table 1 below.

Table 1: Non-Statutory sites within a 1 km radius of the site boundary.

Site Name	Reason for designation	Area (ha)	Distance from site (m)
Sites of Metropolitan Importance for Nature Conservation			
River Thames and tidal tributaries	The Thames supports many fish and birds, creating a wildlife corridor.	2304.54	782 S
Sites of Borough Grade II Importance for Nature Conservation			
Temple Gardens	One of the largest open spaces in the City with a good range of birds.	2.19	840 SE
Middle Temple Garden	A garden with mature trees, flower beds and birds.	0.07	815 SE
Sites of Local Importance for Nature Conservation			
Phoenix Garden	A community garden with a meadow and pond. .	0.12	770 W
Russell Square	One of the largest London squares with a good number of mature trees.	2.49	626 N
Lincoln's Inn Fields	The largest of the London squares with mature London plane *Platanus x hispanica* trees	2.92	250 E
Coram's Fields	A park with mature plane trees and a hedge of beech around the perimeter	2.69	870 N
Victoria Embankment Gardens	A riverside park with a range of common birds.	1.87	850 S

Protected and notable species

3.3 Protected and BAP species have been recorded within a 1km radius of the site. Species that may potentially utilise the site are discussed below:

3.4 **Bats:** The data search returned the following records for bats: five records of common pipistrelle *Pipistrellus pipistrellus*, the most recent was 954 m in 2010 and one record of pipistrelle *Pipistrellus* sp., 337m east in 1993.

3.5 **Birds:** The data search returned several records for birds including the following UK and London BAP bird species that may utilise the site: song thrush *Turdus philomelos*, starling *Sturnus vulgaris* and house sparrow *Passer domesticus*, within 1km of the site.

EXTENDED PHASE 1 HABITAT SURVEY

Overview

3.6 Please refer to the habitat map in Appendix 1 and photographs in Appendix 2.

3.7 The proposed development site was dominated by a building and hard-standing with a limited amount of introduced shrub and potted plants in the courtyard and non-native planted trees along the pavement running along the front of the building.

BUILDINGS AND HARD-STANDING

3.8 Parker House was a five storey brick structure. It had timber framed windows and a flat roof with a number of small pitched and tiled roof out-buildings (for location see TN1 on the Habitats Map).

3.9 The flat roof had a small amount of Canadian fleabane *Conyza canadensis* growing along the edge of brick walls. The hard-standing at ground level was in a good condition with no colonisation by short ephemeral and opportunistic species typical of urban sites.

TREES

3.10 There were three non-native trees, maple *Acer* sp., along the pavement at the front of the building. These trees were not within the site boundary and will be retained.

INTRODUCED SHRUB

3.11 In the courtyard there were three introduced shrub species both in planted beds and pots. Species comprised Spanish dagger *Yucca gloriosa*, geranium *Pelargonium* sp., and rose *Rosa* sp. (for location see TN2 and TN3 on the Habitats Map).

TARGET NOTES

3.12 Please refer to the Habitat map in Appendix 1 for the locations of the features of ecological interest labelled as target notes and described below:

- Target note 1 (TN1): Out-buildings with pitched and tiled roofs with low potential to support roosting bats.
- Target note 2 (TN2): Numerous plants in pots which have low potential to support breeding birds.
- Target note 3 (TN3) Climbing plants with low potential to support breeding birds.

PRELIMINARY PROTECTED SPECIES ASSESSMENT

3.13 The following protected species were included in the assessment, and the likelihood of their occurrence is summarised overleaf:

Table 2: Protected Species Assessment

Species	Main legislation and policy (see Appendix 4)	Reasons for Consideration	Likelihood of occurrence
Bats	Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). Wildlife and Countryside Act 1981 (as amended). Schedule 5.	Buildings can provide roosting potential for bats.	**LOW (roosting)**: The building had 4 small out-buildings on top of the flat roof. The out-buildings had pitched roofs with gaps between tiles providing suitable roost sites for crevice dwelling bats such as pipistrelles.
Breeding birds	Wildlife and Countryside Act 1981 (as amended).	Buildings, trees and introduced shrub provide potential nesting habitat for a number of common bird species.	**LOW**: Brickwork was in good repair making the building unlikely to be used for nesting by birds such as house sparrow. However, during the survey feral pigeons *Columba livia* were observed perched on ledges of the building. Ledges provide shelter and therefore have a limited potential for nesting pigeons. There was limited vegetation suitable for nesting birds, including trees, introduced shrubs and climbing plants. Therefore the site was assessed to have low potential to support nesting birds.

4 Evaluation

4.1 Habitats and species on the site were evaluated following standard guidance on ecological impact assessment published by the Institute of Ecology and Environmental Management (IEEM, 2006) using the recommended geographic frame of reference.

Features of International Value

4.2 Features of international value are principally sites covered by international legislation or conventions such as those sites designated under the Habitats Regulations implements the Natural Habitats and Wild Fauna and Flora (92/43/EC) (Habitats Directive). Sites designated at this level include SACs and SPAs as well as Ramsar sites which may be designated for wetland habitats or important populations of certain species. This legislation also extends protection to some species such as bats regardless of location or population size.

4.3 There are no sites of international importance for nature conservation within 1 km of the site and it does not meet any of the criteria for designation at this scale.

Features of National Value

4.4 Features of national value include statutory sites such as SSSIs which are notified under the Wildlife and Countryside Act 1981 (as amended) or important populations of species with a notable conservation status. The site does not support any features that would justify designation at this level.

4.5 National legislation also provides protection to certain species in addition to those covered by international legislation, including bats and birds. While such species may be present at the site the population would not be of national importance in terms of diversity, size or rarity, as those habitats present are limited in area.

Features of County (i.e. Greater London) Value

4.6 The site is not designated as a Site of Metropolitan Importance for nature conservation (SMI) and does not support habitats of value at this level, nor is it likely to support assemblages of species of value at this level.

Features of Borough (i.e. Camden) Value

4.7 The site is not designated as a SINC and does not contain habitats that could be of value at this level.

Features of Local (i.e. parish or ward) Value

4.8 The site is not designated as a SLINC and does not contain habitats that could be of value at this level.

Features of value within the immediate vicinity of the site

4.9 The buildings have potential to suport roosting bats and the introduced shrub, has low potential to support protected and UK BAP bird species. Any populations of bats or birds found are unlikely to be of biodiversity value of greater than within the immediate vicinity.

POTENTIAL LOCAL PLANNING POLICY IMPLICATIONS

4.10 On the basis of the surveys completed it is considered that the following policies contained in Camden Council Core Strategy and Development Policies (2010) (as saved from the 2007 UDP) are relevant to site, as follows in Table 3 below. The full text of the relevant policies from this document and those of the Mayor of London's Plan are contained in Appendix 4.

4.11 The habitats present at the site were limited to buildings, hard-standing and introduced shrub and small street trees. This habitat is common and widespread within urban environments and is unlikely to contain any notable or species rich assemblages.

Table 3 : Camden Council Core Strategy polices relevant to the site

Policy	Relevance to the site
CS15 Protecting and improving our parks and open spaces and encouraging biodiversity Policy seeks to ensure that development: Provides new or enhanced habitat, where possible, including through biodiverse green or brown roofs and green walls.	The development will increase the biodiversity of the site by the installation of a biodiverse living roof.

5 Conclusion & Recommendations

5.1 The site does not form part of any statutory or non-statutory designated nature conservation sites. No statutory designated sites lie within 1km of the site. The closest non-statutory nature conservation designation is Lincoln's Inn Fields SINC which lies 250m east of the site, but which lacks habitat connectivity to the site. On the basis of the Preliminary Ecological Appraisal, the building and habitats on the site are of value within the immediate vicinity of the site only. However, a few of the features within the site have potential to support the following legally protected species:

- Bats: Out-house buildings on the roof top have low potential to support roosting bats.
- Birds: The building, scattered trees and introduced shrub have low potential to support breeding birds.

5.2 Recommendations for mitigating likely impacts on these species, further surveys and for habitat enhancements are provided below. There is negligible potential for any other protected, BAP or otherwise notable species to be present.

RECOMMENDATIONS

5.3 The following mitigation measures are recommended to avoid a legal offence and to ensure compliance under The Mayor's Biodiversity Strategy Proposal 3 (See Appendix 4).

Further Surveys

5.4 Bats: There is low potential for roosting bats to be present in the building which is scheduled to be demolished. Therefore, it is recommended that one further bat survey be carried out to establish whether or not bats are present. This should comprise, one dusk emergence or pre-dawn re-entry survey which should be carried out in the period May – September. If a roost is found a licence is likely to be required to destroy it which may impose restrictions on the timing or method of demolition.

Mitigation

5.5 Birds: Feral pigeon were observed on the window ledges of the building. If pigeon nests are discovered their removal may only be undertaken by a licenced pest controller where they present a danger to public health and safety, and all non-lethal methods have proved unsuccessful. In the extremely unlikely event of discovering nesting bird species other than feral pigeon all work must be halted in the vicinity of

the nest and advice sought from an ecologist. All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).

Habitat Enhancement

5.6 The following suggestions have been put forward in respect of enhancing the biodiversity value of the site.

5.7 Provision of bird nesting and opportunities: The inclusion of a minimum of two bird nesting boxes to be erected in close proximity to the green roof. Woodcrete bird boxes (Schwegler, 2010) are recommended as they include a broad range of designs, are long lasting compared to wooden boxes and insulate occupants from extremes of temperature and condensation. Bird boxes should be placed apart from one another, ideally on different building facades. The following models are most appropriate: 1SP, 1B hole-fronted, 26mm entrance hole and 32mm entrance hole, and 2H open-fronted 120mm opening. Nesting boxes will require cleaning out over winter months as part of maintenance requirements.

5.8 Provision of a biodiverse living roof: A biodiverse living roof should be installed on the proposed new development. Such roofs incorporate a variety of substrate types, are sown with a suitable wildflower seed mix with a high proportion of native species, have a varied and contoured substrate depth[1] and use commercially available brick-based substrates that are a recycled by-product of the building industry. The design should include a detailed specification by a company with extensive experience in designing biodiverse roofs. The installation of biodiverse green roofs would contribute to the Built Environment Habitat Action Plan (HAP) of the London BAP.

5.9 Provision of insect habitat: Habitat for invertebrates should be incorporated onto the green roof this could be achieved by the addition of insect hotels/bee logs, log piles, shingle paths, habitat walls and/or patches of bare ground.

5.10 Wildlife garden planting[2]: Wildlife garden planting should be incorporated into the landscape design to provide foraging, cover and nesting for birds and invertebrates. Where possible, trees should be under-planted with shrubs and herbaceous

[1] Please note that the UK's Green Roof Code of Best Practice (GRO, 2011) advocates a minimum depth of 80mm for extensive green roofs.
[2] Wildlife garden planting requires the use of native species and ornamental species that have a known attraction or benefit to local flora.

perennials to create a denser, more complete structure within the planting scheme to benefit a variety of wildlife. A list of recommended species is provided in Appendix 4.

5.11 Ground cover and climbing plants: Landscaping should include the use of climbing plants to create green walls and provide vertical nesting habitat and foraging resources for birds and/or invertebrates. These should comprise native species or non-native species of known wildlife value and either deciduous or evergreen species depending on the specification. A list of recommended species is provided in Appendix 4.

5.12 Good horticultural practice: Good horticultural practice should be utilised in any landscaping scheme and should include the following simple methods to minimise off-site ecological impacts:

- the use of peat-free composts and soil conditioners to reduce the loss of important peat bogs;
- feeding of plants using organic based fertilisers and improving the soil structure by incorporating organic material, preferably composted waste;
- the use of mulches to lock moisture into the soil as 'water-wise gardening' helps reduce consumption of water which is especially important during drought periods; and
- the use of pesticides (herbicides, insecticides, fungicides and slug pellets, etc.) should be discouraged to prevent cumulative fatal effects to animals via the food chain, particularly invertebrates, birds and/or mammals. Ideally any pesticides used should be non-residual.

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Appendix 1: Habitat Plan

Figure 1: Habitat Plan

Appendix 2: Photographs

Photograph 1:
The front of Parker House and adjacent street trees.

Photograph 2:
A small amount of introduced shrub in the courtyard.

Photograph 3:
A pitched and tiled roof with low potential to support bats due to the urban location of the site.

Appendix 3: Plant Species List

Plant Species List for the Parker House, Covent Garden, compiled from the scoping survey carried out on the 27th September 2012.

Scientific nomenclature follows Stace (2010) for vascular plant species. Vascular plant common names follow the Botanical Society of the British Isles 2003 list, published on its web site, www.bsbi.org.uk. Please note that this plant species list was generated as part of a Phase 1 Habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated Phase 1 Report.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare

c=clump, e=edge, p=planted, t=tree, y=young tree, h=hedge, w=wall

Latin	English	Abundance	Qualifier
Acer sp	Maple	r	
Conyza canadensis	Canadian fleabane	r	p
Pelargonium sp	Geranium	r	p
Rosa sp	Rose	r	p
Yucca gloriosa	Spanish dagger	r	p

Appendix 4: Legislation and Planning Policy

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

A NATIONAL LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive[3] is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 (as amended) (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

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

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

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

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

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

Species and species groups that are protected or otherwise regulated under the aforementioned domestic and European legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds, dormouse, invasive plant species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2010 (as amended) (which includes smooth snake, sand lizard, great crested newt and natterjack toad), all bat species, otter, dormouse and some plant species) are given below. **These should be read in conjunction with the relevant species sections that follow.**

- In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.
- The Conservation of Habitats and Species Regulations 2010 does not define the act of 'migration' and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.
- In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests': i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or taking (capture) of Schedule 2 species (e.g. bats);
- Deliberate disturbance of bat species as:
    - a) to impair their ability:
        - (i) to survive, breed, or reproduce, or to rear or nurture young;
        - (ii) to hibernate or migrate;
    - b) to affect significantly the local distribution or abundance of the species;

- Damage or destruction of a breeding site or resting place.

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

- Intentional or reckless disturbance whilst occupying a place of shelter or protection; and
- Intentional or reckless obstruction of access to any place of shelter or protection.

A European Protected Species Mitigation (EPSM) licence issued by Natural England will be required for any works liable to affect a bat roost or for operations likely to result in a level of disturbance that might impair the bats ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The awarding of such a licence enables derogation (under condition) from the relevant legislation and also ensures appropriate mitigation measures are put in place and their efficacy is monitored.

The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded de facto protection, for example, where it can be proven that the continued usage of such area is crucial to maintaining the integrity and long-term viability of a bat roost.

The species protection provision of the Habitats Directive, as implemented by The Conservation of Habitats and Species Regulations 2010 (as amended), contains 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. The three tests are:

- 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 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.

NB: For development activities, a Natural England 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 Natural England.

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 'Species of Principal Importance for the purpose of conserving Biodiversity' (SPIB's). This list is based on priority species recognised by the UK Biodiversity Action Plan (BAP, see below), and in addition to Annex II species listed under The Conservation of Habitats and Species Regulations 2010 (as amended_. The S41 SPIB's list replaces the list published under Section 74 of the Countryside and Rights of Way (CRoW) Act 2000 as those species of material consideration to the planning process. With regard to bats, these are barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule bat *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus* and greater and lesser horseshoe bats *Rhinolophus ferrumequinum* and *R. hipposideros*.

Birds

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

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

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

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

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

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or

destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August[4]. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

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

Herpetofauna (Amphibians and Reptiles)

Widespread species such as the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to Section 9(1) & (5). For these species, it is prohibited to:

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

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

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

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

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

B NATIONAL AND EUROPEAN LEGISLATION AFFORDED TO HABITATS

Statutory Designations: National

Nationally important areas of special scientific interest, by reason of their flora, fauna, or geological or physiographical features, are notified by the countryside agencies as statutory Sites of Special Scientific Interest (SSSIs) under the National Sites and Access to the Countryside Act 1949 and latterly the Wildlife & Countryside Act 1981 (as amended). As well as underpinning other national designations (such as National Nature Reserves which are declared by the countryside agencies under the same legislation), the system also provides statutory protection for terrestrial and coastal sites which are important within a European context (Natura 2000 network) and globally (such as Wetlands of International Importance). See subsequent sections for details of these designations. Improved provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales).

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

Statutory Designations: International

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

mechanism for the designation and protection of SPAs in UK offshore waters (from 12-200 nm).

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

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and wise use, in particular recognizing wetlands as ecosystems that are globally important for biodiversity conservation. Wetlands can include areas of marsh, fen, peatland or water and may be natural or artificial, permanent or temporary. Wetlands may also incorporate riparian and coastal zones adjacent to the wetlands. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CRoW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. This effectively extends the level of protection to that afforded to sites which have been designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs).

Statutory Designations: Local

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

Non-Statutory Designations

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

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

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

C NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF))

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

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

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

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

D REGIONAL PLANNING POLICY

The London Plan: The Mayor's Spatial Strategy for Greater London (2011) deals with matters of strategic importance for London. Chapter 7 –London's Living Places and Spaces sets out the policy areas that impact amongst other factors the quality and function of green infrastructure and biodiversity. Policies 7.16 – Green Belt, 7.17- Metropolitan Open Land, 7.18 – Protecting local natural space and addressing local deficiency address the proposals relating to these factors.

Policy 7.16: Green Belt

Strategic- A: The Mayor strongly supports the current extent of London's Green Belt, its extension in appropriate circumstances and its protection from inappropriate development.

Planning decisions- B: The strongest protection should be given to London's Green Belt, in accordance with national guidance. Inappropriate development should be refused, except in very special circumstances. Development will be supported if it is appropriate and helps secure the objectives of improving the Green Belt as set out in national guidance.

Policy 7.17: Metropolitan Open Land

Strategic - A: The Mayor strongly supports the current extent of Metropolitan Open Land (MOL), its extension in appropriate circumstances and its protection from development having an adverse impact on the openness of MOL.

Planning decisions - B: The strongest protection should be given to London's Metropolitan Open Land and inappropriate development refused, except in very special circumstances, giving the same level of protection as in the Green Belt. Essential ancillary facilities for appropriate uses will only be acceptable where they maintain the openness of MOL.

LDF preparation

C: Any alterations to the boundary of MOL should be undertaken by Boroughs through the LDF process, in consultation with the Mayor and adjoining authorities.

D: To designate land as MOL boroughs need to establish that the land meets at least one of the following criteria:

a) *it contributes to the physical structure of London by being clearly distinguishable from the built up area*
b) *it includes open-air facilities, especially for leisure, recreation, sport, the arts and cultural activities, which serve either the whole or significant parts of London*
c) *it contains features or landscapes (historic, recreational, biodiversity) of either national or metropolitan value*

d) *it forms part of a Green Chain or a link in the network of green infrastructure and meets one of the above criteria.*

Policy 7.18: Protecting local natural space and addressing local deficiency

LDF preparation

A: When assessing local open space needs LDFs should:

a) *include appropriate designations and policies for the protection of local open space*
b) *identify areas of public open space deficiency, using the open space hierarchy set out in Table 7.2 as a benchmark for all the different types of open space identified in the hierarchy*
c) *ensure that future open space needs are planned for in areas with the potential for substantial change such as Opportunity Areas, Regeneration Areas, Intensification Areas and other local areas.*

B: Use the CABE Space/Mayor of London Best Practice Guidance 'Open Space Strategies' as guidance for developing policies on the proactive creation, enhancement and management of open space.

Connecting with London's Nature: The Mayor's Biodiversity Strategy (GLA, 2002) includes a number of policies and proposals for protecting green spaces and important species that are relevant to the site.

Proposal 3: Conserving species through the planning system states that:

''The Mayor will and boroughs should resist development that would have a significant adverse impact on the population or conservation status of protected species or priority species.

Proposal 6: Greening new developments states that:

"The Mayor will and boroughs should ensure that new development capitalises on opportunities to create, manage and enhance wildlife habitat and natural landscape. Priority should be given to sites within or near to areas deficient in accessible wildlife sites, areas of regeneration, and adjacent to existing wildlife sites".

A recent technical report (GLA, 2008) on living roofs and walls has been published to support the London Plan (2009) and the new London BAP habitat – Built Structures. In outline, it includes the following key policies;

''The major will and boroughs should expect major developments to incorporate living roofs and walls where feasible and reflect this principle in LDF policies. It is expected that this will include roof and wall planting that delivers as many of these objectives as possible;

- Accessible roof space
- Adapting to and mitigating climate change
- Sustainable urban drainage
- Enhancing biodiversity
- Improved appearance

Boroughs should also encourage the use of living in smaller developments and extensions where the opportunity arises''.

E UK BAP

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. The national BAP includes lists of species 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. Species Action Plans have been prepared or are in preparation for a many of these species, whilst Habitat Action Plans are being produced for important or characteristic habitats identified in the plan.

F REGIONAL AND LOCAL BAPs

The UK plan also encourages the production of local Biodiversity Action Plans at the County or District level. The London Biodiversity Action Plan contains 14 Habitat Action Plans (HAPs) and 12 Species Action Plans (SAPs).

Specific HAPs listed in the London LBAPs which are of potential relevance to this site include:
Built Structures.

Appendix 5: Planting for Wildlife

ORNAMENTAL AND NATIVE SPECIES OF WILDLIFE VALUE

The list below gives some easily sourced plants which are of proven value to wildlife. It includes a number of ornamental species which are not native and can be used in combination with native species in more formal situations. In informal landscapes the emphasis should be on the use of native species. Different horticultural varieties of the following species are commonly available, but where possible standard stock is advised, especially for native species. Single flowering plants should be chosen over double flowering ('flore pleno') varieties. With exception of * (biennials) and ** (annuals) all species are perennial. E = Exotic, N = Native.

TREE

Cherry *P. avium* (wild cherry) N or *P. padus* (bird cherry) N,
Ash *Fraxinus excelsior* N
Apple *Malus spp.*, *M. domestica* (edible apple), *M. sylvestris* (crab apple) N
Pear *Pyrus spp.*, *P. communis* (edible pear) or *P. calleryana* (callery pear) E
Small-leaved lime *Tilia cordata* N
Silver birch *Betula pendula* N
Yew *Taxus baccata* N
Foxglove tree *Pawlonia tomentosa* E
Walnut *Juglans regia* E
Rowan/Wild Service Tree *Sorbus aucuparia/torminalis* N
Beech *Fagus sylvatica* N

NB: many of the shrub species below will form small trees when mature.

LARGE SHRUBS

Shrubby veronica *Hebe spp*. E
Hawthorn *Crataegus monogyna* N
Blackthorn *Prunus spinosa* N NB: can become invasive in small landscaped areas.
Rose *Rosa canina* (dog rose) *R. arvensis* (field rose) *R. pimpinellifolia* (burnet rose) N
Elder *Sambucus nigra* N
California lilac *Ceanothus spp.*, *C. arborea* E
Wild privet *Ligustrum vulgare* N
Common holly *Ilex aquifolium* N
Barberry *Berberis spp*. *B. darwinii*, *B. thunbergii*, *B. x stenophylla* E
Daisy bush *Olearia spp.*, *O. x hastii*, *O. macrodonta* and *O. traversii* E
Firethorn *Pyracantha coccinea* E
Hazel *Corylus avellana* N
Viburnum *Viburnum spp.*, *V. lantana* (wayfaring tree) N, *V. opulus* (guelder rose) N, *V. tinus* (laurustinus) E Note: *V. lantana* can become invasive in more open habitats such as chalk grassland.

Buddleia *Buddleja spp.*, *B. davidii*, *B. alternifolia*, *B. globosa* E Note: *B. davidii* can become invasive in more open habitats and around infrastructure.

Dogwood *Cornus sanguinea* N

Broom *Cytisus scoparius* N

Portuguese laurel *Prunus lusitanica* E

Red currant *Ribes rubrum* N

Escallonia *Escallonia macrantha* E cultivar '*Langleyensis*' is a hardier version

Hardy fuchsia *Fuchsia magellanica* E

Buckthorn *Rhamnus cathartica* N

Spindle *Euonymus europaeus* N

Tutsan *Hypericum androsaemum* N

Yew *Taxus baccata* N

Note: some of these species can be trained (along with climbers) to create 'living' or 'green walls'.

HERBACEOUS PERENNIALS AND SMALL SHRUBS

Tree mallow *Lavatera spp*. *L. arborea* N, or *L. olblio*, *L. thuringiaca* E

Ice plant *Sedum spectabile* E

Lavender *Lavandula spp.*, *L. angustifolia*, *L. x intermedia* E

Globe thistle *Echinopsis ritro* E

Foxglove *Digitalis purpurea** N

Nettle-Leaved bellflower *Campanula trachelium* N

Hellebores *Helleborus spp* N/E

Teasel *Dipsacus fullonum** N

Aquilegia *Aquilegia vulgaris* N

Sunflowers *Helianthus annuus*** E

Red valerian *Centranthus rubra* E

Hemp agrimony *Eupatorium cannabinum* N

Common knapweed *Centaurea nigra* N

Black-eyed susan *Rudbeckia spp.*, *R. hirta*** or *R. fulgida* E

Rosemary *Rosmarinus officinalis* E

Sea holly *Eryngium planum* E

Fennel *Foeniculum vulgare* N

Rock rose *Cistus spp*. E

Shrubby cinquefoil *Potentilla fruticosa* N

CLIMBERS

Star jasmine *Trachelospermum jasminiodes* E

Jasmine *Jasminum spp.*, *J. officinale* (summer jasmine)

Ivy *Hedera helix* N

Climbing hydrangea *Hydrangea anomala ssp. petiolaris* E

Honeysuckle *Lonicera spp*. *L. Periclymenum (and varieties of)* N

Clematis *Clematis spp.*, *C. vitalba* N or *C. armandii*, *C. alpina*, *C. montana*, *C. tangutica* E

Hop *Humulus lupulus* N

Firethorn *Pyracantha atalantioides* E

Nasturtium *Tropaeolum majus*** E

BULBS

English bluebell *Hyacinthoides non-scripta from native grown seed.* **Note**: Spanish bluebell *Hyacinthoides hispanica* or hybrids are not recommended as they can escape from gardens and out-compete and hybridise with the UK native species.

Squill species *Scilla spp*. N/E

Snowdrop *Galanthus nivalis* N

Winter aconite *Eranthis hyemalis* E

Grape hyacinth *Muscari neglectum* N

Summer snowflake *Leucojum aestivum*

Crocus species *Crocus spp. C. nudiflorus* (autumn crocus*), C. tommasinianus* (early crocus), *C. vernus* (spring crocus) E

Wild daffodil *Narcissus pseudonarcissus* N

Onion species *Alliums spp*. *A. ursinum* (ramsons) N or *A. giganteum* (giant onion) E Note: *A. triquetrum* (three cornered leek) can become invasive.

Wood anemone *Anemone nemorosa* N

Lesser celandine *Ranunculus ficaria* N