

Arthur Stanley House

Preliminary Ecological Appraisal



Westbrook Partners / 1921 Mortimer Investments Limited

July 2017



The Ecology Consultancy

Arthur Stanley House / Preliminary Ecological Appraisal / **Report for 1921 Mortimer**



Arthur Stanley House, Camden

Preliminary Ecological Appraisal

**Report for 1921 Mortimer
 Investments Limited**

Job Number	5939			
Author	Russell Mansfield BSc (Hons) MSc			
Version	Checked by	Approved by	Date	Type
4.0	Georgina Knibbs BSc (Hons) MSc GradCIEEM	Wendy McFarlane MA MSc MCIEEM	19.07.17	Final

Contents

Summary of Key Issues	4
1 Introduction	5
2 Methodology	8
3 Results	12
4 Potential Impacts and Recommendations	17
References	20
Appendix 1: Habitat Map	22
Appendix 2: Photographs	24
Appendix 3: Plant Species List	26
Appendix 4: Legislation and Planning Policy	28

LIABILITY

The Ecology Consultancy has prepared this report for the sole use of the commissioning party in accordance with the agreement under which our services were performed. No warranty, express or implied, is made as to the advice in this report or any other service provided by us. This report may not be relied upon by any other party without the prior written permission of The Ecology Consultancy. The content of this report is, at least in part, based upon information provided by others and on the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from any third party has not been independently verified by The Ecology Consultancy, unless otherwise stated in the report.

COPYRIGHT

© This report is the copyright of The Ecology Consultancy. Any unauthorised reproduction or usage by any person is prohibited. The Ecology Consultancy, part of the Temple Group, is the trading name of Ecology Consultancy Ltd.

Summary of key issues

The Ecology Consultancy was commissioned by 1921 Mortimer Investments Limited to carry out an updated Preliminary Ecological Appraisal (PEA) to assess any potential changes to the site since 2014 (The Ecology Consultancy, 2014).

The main findings of the PEA are as follows:

- The site was dominated by a building and hard-standing. These habitats were considered to be of value within the immediate vicinity of the site only.
- The site is not subject to any statutory or non-statutory nature conservation designations. The nearest statutory designated site is Hampstead Heath Woods Site of Special Scientific Interest located 5.55km north-west. The nearest non-statutory designated site is Gordon Square Site of Importance for Nature Conservation located 0.60km north-east. The proposed development is not anticipated to have any impact on these sites or the features for which they are designated.
- The site has low potential to support breeding birds and negligible potential to support roosting bats.
- The development proposals involve the renovation and extension of the existing main building known as Arthur Stanley House.
- It is recommended that the partial demolition is conducted during September to February inclusive, to avoid the main bird breeding season.
- Should the presence of a protected species be confirmed or suspected during works, these must cease immediately and the advice of a suitably qualified and experienced ecologist must be sought; and
- Recommendations are made in Section 4 of this report to enhance the biodiversity value of the site.

1 Introduction

BACKGROUND TO COMMISSION

- 1.1 The Ecology Consultancy was commissioned by 1921 Mortimer Investments Limited on 30th May 2017, to undertake a Preliminary Ecological Appraisal (PEA) of Arthur Stanley House in Fitzrovia, London. The appraisal was carried out in order to update the previous PEA three years ago (The Ecology Consultancy, 2014), to reassess the site for any potential changes to the habitat present. This appraisal considers land within the planning application site boundary (hereon referred to as ‘the site’) as indicated on the plan provided by the client.

SCOPE OF THE REPORT

- 1.2 This aim of this appraisal is to provide baseline ecological information about the site. This will be used to identify any potential ecological constraints associated with the proposed development and/or to identify the need for additional survey work to further evaluate any impact that may be risk contravention of legislation or policy relating to protected species and nature conservation. Where necessary, avoidance, mitigation/compensation and/or enhancement measures have been recommended to ensure compliance.
- 1.3 This appraisal is based on the following information sources:
- a desk study of the site and land within a 1km surrounding radius;
 - a Phase 1 habitat survey (JNCC, 2010) of the site to identify and map the habitats present;
 - a protected species assessment of the site to identify features with potential to support legally protected species; and
 - an evaluation of the site’s importance for nature conservation.
- 1.4 This appraisal has been prepared with reference to best practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2013) and as detailed in British Standard 42020:2013 *Biodiversity - Code of Practice for Biodiversity and Development* (BSI, 2013).

- 1.5 The survey, assessment and report were conducted and written by Wendy McFarlane MA MSc MCIEEM, a Principal Ecologist with over nine years' of experience who is competent in carrying out Phase 1 habitat surveys and protected species assessments.

SITE CONTEXT AND STATUS

- 1.6 The proposed development site is 0.11 hectares (ha) in size and is centred on Ordnance Survey National Grid reference TQ 29328 81759. The site is situated off Tottenham Street in Fitzrovia, London W1. It comprises the main building Arthur Stanley House surrounded by areas of hard-standing. The site is situated in a dense urban area in the centre of London and is surrounded by various commercial buildings. The nearest larger area of open greenspace is Regent's Park located approximately 0.70 kilometre (km) north-west. The River Thames is located approximately 1.78km south-east.

DEVELOPMENT PROPOSALS

- 1.7 The previous development proposal for the site, involved the renovation and extension of the existing main building Arthur Stanley House. Since the switch of clients to 1921 Mortimer Investments Limited the development strategy has remained similar. This development will provide commercial offices and residential housing. There is space available for soft landscaping including courtyard areas and roof terraces. It is proposed to install PV and solar thermal panels at roof level.

RELEVANT LEGISLATION AND PLANNING POLICY

- 1.8 The following key pieces of nature conservation legislation are relevant to this appraisal. A more detailed description of legislation is provided in Appendix 4:
- The Conservation of Habitats and Species Regulations 2010 (as amended) (commonly referred to as the Habitats Regulations);
 - Wildlife and Countryside Act 1981 (as amended).
- 1.9 The National Planning Policy Framework (Department of Communities and Local Government, 2012) requires local authorities to avoid and minimise impacts on biodiversity and, where possible, to provide net gains in biodiversity when taking planning decisions.
- 1.10 Other planning policies at the local level which are of relevance to this development include the Camden Local Plan, which was recently adopted in July 2017 (Camden Borough Council, 2017). Further information is provided in Appendix 4.

Methodology

DESK STUDY

2.1 The following data sources were reviewed to provide information on the location of statutory designated sites¹, non-statutory designated sites², legally protected species³, Species and Habitats of Principal Importance⁴ and other notable species⁵ and notable habitats⁶ that have been recorded within a 1km radius of the site:

- A biological data search was requested in June, 2017 from Greenspace Information for Greater London (GiGL), the local Biological Records Centre, principally for species records and information on non-statutory sites;
- MAGIC (<http://www.magic.gov.uk/>) - the Government's on-line mapping service; and
- Ordnance Survey mapping and publically available aerial photography.

HABITAT SURVEY

2.2 A habitat survey of the site was carried out on the 30 May 2017 in warm, clear, dry conditions. It covered the entire site including boundary features. Habitats were described and mapped following standard Phase 1 habitat survey methodology (JNCC, 2010). Habitats were marked on a paper base map and subsequently digitised using ESRI ArcGIS software. Habitats were also assessed against descriptions of Habitat of Principal Importance as set-out by the JNCC (BRIG, 2008)⁷.

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

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

³ **Legally protected species** include those listed in Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981; Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended); or in the Protection of Badgers Act 1992 (as amended).

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

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

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

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

- 2.3 Records for dominant and notable plants are provided, as are incidental records of birds and other fauna noted during the course of the habitat survey.
- 2.4 Common names are used where widely accepted – for amphibians, birds, fish, mammals, reptiles and vascular plants. Scientific names are provided for other groups but at first mention only if there is also an accepted common name.
- 2.5 The site was also surveyed for the presence of invasive plant species as defined by Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, detailed mapping of such species is beyond the scope of this commission and the location on habitat plan are indicative only.
- 2.6 Target notes are used to provide information on specific features of ecological interest (e.g. a badger sett) or habitat features that were too small to be mapped.

PROTECTED AND NOTABLE SPECIES ASSESSMENT

- 2.7 The suitability of the site for legally protected species was assessed on the basis of relevant desk study records⁸ combined with field observations from the habitat survey. The likely value of habitat for protected species occurrence was ranked on a scale from 'negligible' to 'present' as described in Table 2.1.
- 2.8 The assessment of habitat suitability for protected or notable species was based on professional judgement drawing on experience of carrying out surveys of a large number of urban and rural sites and best practice survey guidance on identifying field signs which includes that for the following species: badger (e.g. Roper, 2010); bats (Collins (ed.), 2016); hazel dormouse (English Nature, 2006); great crested newt (Langton *et al.* 2001); otter (Chanin, 2003); reptiles (Gent and Gibson, 2003); and water vole (Strachan *et al.* 2011).

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

Table 2.1: Protected species assessment categories

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

- 2.9 The findings of this assessment establish the need for protected species surveys that are required to achieve compliance with relevant legislation. Surveys are commonly required for widespread species such as bats, great crested newt, reptiles and badger; but may be necessary for other species if suitable habitat is present.
- 2.10 Surveys may be required where a site is judged to be of low suitability for a particular species/species group. However, in some cases there may be opportunities to comply with legislation, without further survey, through precautionary measures prior to and during construction.

SITE EVALUATION

- 2.11 The site's ecological value has been evaluated broadly following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2016) which ranks the nature conservation value of a site according to a geographic scale of reference: international, national, regional, county/metropolitan, district/borough, local/parish or of value at the site scale. In evaluating the nature conservation value of the site the following factors were considered: nature conservation designations; species/habitat rarity; naturalness; fragility and connectivity to other habitats;

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

DATA VALIDITY AND LIMITATIONS

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

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

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

2 Results

DESIGNATED SITES

Statutory designated nature conservation sites

2.2 The proposed development site is not subject to any statutory nature conservation designations. There are no European or national statutory sites within a 1km radius of the site.

Non-statutory designated nature conservation sites

2.3 Six non-statutory sites designated as Sites of Importance for Nature Conservation (SINCs) are present within 1km of the site (see Table 3.1).

Table 3.1: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Habitats/Species of Interest
Sites of Metropolitan Importance		
Regents Park	0.83km North-west	Habitats: Amenity grassland, pond/lake, scattered trees, scrub and secondary woodland. Species: Migrant and breeding birds including one of London's largest heronries and a nationally significant population of pochard <i>Aythya ferina</i> . Invertebrates including various butterflies.
Sites of Borough Grade II Importance		
Park Square Gardens	0.70km North-west	Habitats: Amenity grassland, flower beds, planted shrubbery, mature scattered trees and secondary woodland. Species: Breeding birds including garden warbler <i>Sylvia borin</i> and dunnock <i>Prunella modularis</i> .
Sites of Local Importance		
Gordon Square	0.60km North-east	Habitats: Amenity grassland, planted shrubbery and scattered trees. Species: Breeding birds including mistle thrush <i>Turdus viscivorus</i> .
Russell Square	0.69km East	Habitats: Amenity grassland, hedge, planted shrubbery and mature scattered trees.
Phoenix Garden	0.80km South-east	Habitats: Amenity grassland, flower beds, planted shrubbery, pond/lake, scattered trees and tall herbs. Species: Plants and birds including tits and finches.

Table 3.1: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Habitats/Species of Interest
St James's Garden	0.91km North	Habitats: Amenity grassland, planted shrubbery, scattered trees and tall herbs. Species: Plants including common stork's-bill <i>Erodium cicutarium</i> which is rare in inner London.

PHASE 1 HABITAT SURVEY

Overview

- 3.4 The site comprised Arthur Stanley House surrounded by areas of hard-standing. A Habitat Map of the site is presented in Appendix 1, with photographs in Appendix 2.
- 3.5 Phase 1 habitats types are mapped in Figure 1, areas are given in Table 3.2. A description of dominant and notable species and the composition of each habitat is provided below.

Table 3.2: Phase 1 Habitat Areas

Phase 1 Habitat	Extent
Building	Dominant
Hardstanding	Common

Habitat description

Building and hardstanding

- 3.6 Arthur Stanley House (Building 1) was approximately 26m tall and brick-built, comprised of a basement, lower ground, ground and seven upper storeys (Photograph 1 – front view. Photograph 2 – rear view). It featured metal and timber-framed glass windows, some of which were open. It had a flat roof, some parts of which were clad with bituminous roofing felt. Although the building had deteriorated internally, externally it was overall in general good condition and was fairly well-sealed from the elements.

Hard-standing

- 3.7 The 2014 survey recorded areas of hard-standing surrounded the building and bryophytes were noted as beginning to colonise the areas with a layer of looser, more gravelly substrate to the north-east of Arthur Stanley House. It can be assumed, given

the highly urban nature of the site, this area would be of a similar character to that of the 2014 survey.

Scattered scrub

- 3.8 A single plant of butterfly-bush was present on the brick wall along the southern boundary.

PROTECTED AND INVASIVE SPECIES ASSESSMENT

- 3.9 The potential for the site to support protected species has been assessed using criteria provided in Table 3.3, based on the results of the desk study and observations made during the site survey of habitats at the site. Other legally protected species are not referred to as it is considered that the site does not contain habitats that would be suitable to support them. The following species/species groups are potentially present at the site:

- bats
- breeding birds

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

Table 3.3: Protected and Invasive Species Assessment

Habitat/ species	Status ^{9, 10}	Likelihood of occurrence / Reason for consideration
Bats	HR WCA S5	<p>NEGLIGIBLE – Arthur Stanley House featured very few opportunities for roosting bats. Opportunities were limited to a small number of gaps in the external brickwork of the building due to crumbling mortar. There were no other habitats on site considered to be potentially suitable. The site was in a dense urban area largely devoid of green space which may be used for foraging, and there were no habitat corridors (such as street trees) leading to or from the site which bats might use to commute. Overall, despite a very limited number of features being present, the sites urban location, isolation from foraging/commuting habitat and high level of disturbance is thought to greatly reduce the risk of bats roosting on site. The data search returned records for four species of bat including within the 1km search radius. This included records of common pipistrelle, soprano pipistrelle, nathusius' pipistrelle and common noctule.</p> <p>As the site has a negligible potential to support roosting bats this will not be further discussed in the report.</p>
Breeding birds	WCA S1-8	<p>LOW – No evidence of breeding birds was noted during the Phase 1 survey. The relatively large areas of flat roof space and the openings into the building provided suitable nesting habitat for species of bird such as feral pigeon. Whilst the building is relatively tall and derelict it was considered sub-optimal breeding habitat for rare species such as black redstart as it did not have a complex roof structure and was not a good example of its preferred habitat type (industrial infrastructure particularly along rivers and canals. Note: The River Thames is 1.78km from the site). In addition, there is no high quality foraging habitat in close proximity to the site. Suitable habitat for a limited range of breeding birds was present on site. The data search returned numerous records for bird species within 1km of the site, including rare and declining species utilising urban environments such as house sparrow and black redstart.</p> <p>As the site has a low potential to support breeding birds, recommendations will be further discussed in the report.</p>
Invasive plant species	WCA Section 14 and part II of schedule 9	<p>NEGLIGIBLE - The site was dominated by buildings and hard-standing and this provided very little opportunity for invasive species to colonise. Schedule 9 species were absent at the time of the survey and at the time of the 2017 survey.</p> <p>As the site has a negligible potential to support invasive plant species this will not be further discussed in the report.</p>

⁹ The following abbreviations have been used to signify the legislation regarding different species: HR = Conservation of Habitats and Species Regulations 2010 (as amended); WCA S1 = Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); WCA S5 = Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); WCA S9 = Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); PBA = Protection of Badgers Act, 1992.

¹⁰ The following abbreviations have been used to signify the policy of conservation assessments applying to notable species: SPI = Species of Principal Importance under the NERC Act 2006; LBAP = Local Biodiversity Action Plan species; BoCC = Birds of Conservation Concern - amber list/ red list (Eaton *et al.*, 2015); and/or RD/NN = red data book/nationally notable species (JNCC, undated).

NATURE CONSERVATION EVALUATION

- 3.11 The proposed development site is not subject to any nature conservation designations. It contains small areas of common and widespread habitats none of which are habitats of principal importance.
- 3.12 The habitats at the site and populations of the above species are likely to be of value within the immediate vicinity of the site only. It is unlikely that the site would support rare species, or diverse assemblages or large populations of any noteworthy species.

3 Potential Impacts and Recommendations

- 3.1 This section summarises the potential impacts on habitats and notable species that may be present at this site. The impact assessment is preliminary and further detailed assessment and surveys will be required to assess impacts and design suitable mitigation, where appropriate.
- 3.2 The following key ecological issues have been identified:
- habitat suitable for breeding birds is present – measures must be taken to avoid killing birds or destroying their nests;
 - opportunities for ecological enhancement of the site should be included in planning policy these are outlined in the next section.

CONSTRAINTS AND MITIGATION/COMPENSATION

Designated Nature Conservation Sites

- 3.3 No impacts are envisaged on statutory or non-statutory designated sites due to the small scale of the proposed development and distance of the site from any designated site. Therefore there are no constraints to the proposed development in this regard.

Breeding birds

- 3.4 All breeding birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended). The site has the potential to support breeding birds and therefore the following protocols must be considered.
- 3.5 Where the proposed works require the refurbishment of the main Arthur Stanley building with low potential to support breeding birds, this should be carried out September to February inclusive, to avoid any potential offences relating to breeding birds during their main bird breeding season (Newton *et al.*, 2011).
- 3.6 If site clearance during the breeding season is unavoidable then potential nesting habitat must be inspected shortly before work commences to identify active birds' nests. Should they be present, the nest and a suitable buffer of habitat around it must be retained until the young have left the nest. If any nesting birds are found at any time during clearance works, an ecologist must be consulted immediately and work must stop until advice on how to proceed is provided.

Other protected species

- 3.7 No other protected species were considered likely to occur on site and/or be affected by the proposed development. However, should the presence of a protected species be confirmed or suspected during works, these must cease immediately and the advice of a suitably qualified and experienced ecologist must be sought.

FURTHER SURVEY REQUIREMENTS

- 3.8 Due to the negligible potential for bats no further bat surveys are recommended. The advice for working outside of nesting bird season also nullify any recommended breeding bird surveys.

OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

- 3.9 Planning policy at the national and local level (Camden Borough Council, 2017) and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects. Ecological enhancements can also contribute to green infrastructure and ecosystem services such as storm water attenuation and reducing the urban heat island effect. The following measures would be suitable for integration into the site's design, but would require a more detailed design to successfully implement.

Bird Boxes

- 3.10 Recommendations to enhance the site for this species group include the installation of artificial bird boxes on site. The new on-site buildings could also include specially designed features within its structure, for example bird bricks that can be incorporated into walls, soffits or along parapets.
- 3.11 The provision of bird boxes would be appropriate to enhance this site. Many different designs are available including boxes to support colonial species such as house sparrow. Woodcrete bird boxes (Schwegler, 2011) are recommended as they are long lasting compared to wooden boxes, insulate occupants from extremes of temperature and condensation and are available in a broad range of designs.

Landscape planting strategy

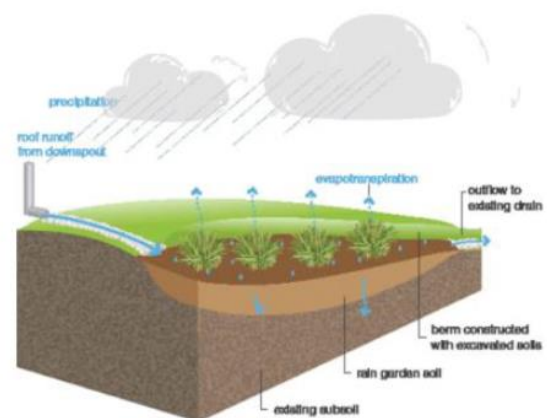
- 3.12 Where possible planting schemes should incorporate native species and any non-native planting schemes should comprise a high percentage of species of recognised wildlife value. The use of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) or typically 'aggressive' species should be avoided.

Green Roofs

- 3.13 The creation of biodiverse green roofs are recommended as they will assist in delivering objectives of regional and local planning policies and potentially support London BAP species such as house sparrow and black redstart. The London plan states (policy 5.11) that major development proposals should be designed to include roof, wall and site planting, especially green roofs and walls where feasible (Camden London Borough Council, 2010). In addition, the Fitzrovia Area Action Plan recognises that Fitzrovia is 'severely lacking in public open space and access to nature conservation interest' (Camden Borough Council, 2014).
- 3.14 Any proposals for green roofs should include a specification of proven ecological value for foraging birds and invertebrates as pioneered by the Green Infrastructure Consultancy. Such roofs are typified by substrates of varying type and depth, include dead wood habitat and open areas of vegetation, require low levels of maintenance, and are attractive to people as well as wildlife. They also provide opportunities for natural colonisation by plants and invertebrates. Such roofs are preferable to standard sedum species dominated roofs that deliver little in the way of biodiversity value and ecosystem services as they are typically less species-rich and have a shallower substrate depth.
- 3.15 There may be an opportunity to include rain gardens as part of landscape planting, including tree pits. Rain gardens should be designed to intercept water running off roofs (via drain pipes) and hard surfaces to reduce both the rate and volume of water discharging into the drainage system. These should be planted with species suitable for rain garden conditions and which provide both amenity and wildlife value.



Rain garden planter providing storm water/SuDS feature and amenity/visual value
(Image: The Green Roof Consultancy)



Cross section of typical domestic rain garden
(Image: Bray *et al.*, 2012)

References

- 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.
- Camden Borough Council (2017). Camden Local Plan – Adoption Version July 2017 [on-line] Available from http://camden.gov.uk/ccm/cms-service/stream/asset/?asset_id=3601932& [Accessed 10.07.17]
- 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.
- Connolly, S. & Charles, P. (2005) *Environmental good practice pocket book*. CIRIA, London.
- Crossley Design Associates (2014) *Residential Development Land at Pound Place, Roundstone Lane, Angmering, BN16 4AL: Site Plan*. Drawing no. 2.01. Crossley Design Associates, Chichester.
- 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. <http://britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf> [accessed 01 February 2016].
- Greater London Authority (2011) The London Plan: Spatial Development Strategy for Greater London [on-line] Available from <https://www.london.gov.uk/priorities/planning/london-plan> [Accessed 05.06.2017].
- GRO (2014) *The GRO Green Roof Code: Green Roof Code of Best Practice for the UK 2014*. Groundwork Sheffield, Sheffield.
- 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.
- Llewelyn Davies (2014) Arthur Stanley House. Drawing Number P_A4_00

London Invasive Species Initiative (2014). London Invasive Species Plan [on-line] Available from <http://londonisi.org.uk/lisp/> [Accessed 05.06.17].

MAGIC (2016) *Multi-Agency Geographic Information for the Countryside*. <http://www.magic.gov.uk/> [accessed 01 February 2016].

Natural England (2013) *GIS Digital Boundary Datasets – Priority Habitat Inventory*. http://www.gis.naturalengland.org.uk/pubs/gis/GIS_register.asp [accessed 01 February 2016].

Newton, J., Nicholson, B., Saunders, R., Willets, R. & Venables, R. (2011) *Working with wildlife: guidance for the construction industry* (2nd Ed.). CIRIA, London.

Schwegler (2011). Bird and Nature Conservation Products. No.68. <http://www.schwegler-natur.de/index.php?main=home&sub=katalog-downloaden> [accessed 01 February 2016].

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

The Ecology Consultancy. (2014). Arthur Stanley House, Preliminary Ecological Appraisal, Report for Llewelyn Davies.

Appendix 1: Habitat Map

Figure 1: Habitat Survey Map



Appendix 2: Photographs

Photograph 1

Showing the front view of Arthur Stanley House.



Photograph 2

Showing the rear view of Arthur Stanley House.



Appendix 3: Plant Species List

Plant Species List for Arthur Stanley House, Camden compiled from Phase 1 habitat survey carried in 2017.

Scientific nomenclature and common names for vascular plants follow Stace (2010) and Blockeel & Long (1998) for bryophyte species. Please note that this plant species list was generated as part of a Phase 1 habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated results section of this PEA.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally
c=clumped, e=edge only, g=garden origin, p=planted, y = young, s=seedling or sucker, t=tree, h=hedgerow, w=water

SCIENTIFIC NAME	COMMON NAME	ABUNDANCE	QUALIFIER
<i>Buddleja davidii</i>	Butterfly-bush	R	
<i>Conyza canadensis</i>	Canadian fleabane	R	

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 Directive¹¹ 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.

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,

¹¹ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

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

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 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 (as amended) 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 capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;
 - (ii) to hibernate or migrate³
 - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

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

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

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

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

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded de facto protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost¹².

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.

¹² Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. 150. The Mammal Society, Southampton.

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 breeding season which typically runs from March to August¹³. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

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

Herpetofauna (Amphibians and Reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita* and great crested newt *Triturus cristatus* receive full protection under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2. The pool frog *Pelophylax lessonae* is also afforded full protection under the same legislation. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of species listed on Schedule 2
- Deliberate disturbance of any Schedule 2 species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;

¹³ 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.

(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate
b) to affect significantly the local distribution or abundance of the species

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

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

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

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

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

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

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

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

are to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

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

Invasive Plant Species

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

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

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

Wild Mammals (Protection) Act 1996

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

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

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

B NATIONAL AND EUROPEAN LEGISLATION AFFORDED TO HABITATS

Statutory Designations: National

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

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

Statutory Designations: International

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

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

Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of SACs in UK offshore waters (from 12-200 nm).

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

Statutory Designations: Local

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

Non-Statutory Designations

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

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

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

C NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF)

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

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

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

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

D LOCAL PLANNING POLICY

Camden Local Plan Adoption Verison July 2017

Policy A3 Biodiversity

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

- a. designate and protect nature conservation sites and safeguard protected and priority habitats and species;
- b. grant permission for development unless it would directly or indirectly result in the loss or harm to a designated nature conservation site or adversely affect the status or population of priority habitats and species;
- c. seek the protection of other features with nature conservation value, including gardens, wherever possible;
- d. assess developments against their ability to realise benefits for biodiversity through the layout, design and materials used in the built structure and landscaping elements of a proposed development, proportionate to the scale of development proposed;
- e. secure improvements to green corridors, particularly where a development scheme is adjacent to an existing corridor;
- f. seek to improve opportunities to experience nature, in particular where such opportunities are lacking;
- g. require the demolition and construction phase of development, including the movement of works vehicles, to be planned to avoid disturbance to habitats and species and ecologically sensitive areas, and the spread of invasive species;
- h. secure management plans, where appropriate, to ensure that nature conservation objectives are met; and
- i. work with The Royal Parks, The City of London Corporation, the London Wildlife Trust, friends of park groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden.

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

We will:

- j. resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation;
- k. require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 'Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout;
- l. expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;
- m. expect developments to incorporate additional trees and vegetation wherever possible.

The London Plan (2011 – Revised 2013)

POLICY 2.18 GREEN INFRASTRUCTURE: THE NETWORK OF OPEN AND GREEN SPACES

Strategic

A The Mayor will work with all relevant strategic partners to protect, promote, expand and manage the extent and quality of, and access to, London's network of green infrastructure. This multifunctional network will secure benefits including, but not limited to, biodiversity; natural and historic landscapes; culture; building a sense of place; the economy; sport; recreation; local food production; mitigating and adapting to climate change; water management; and the social benefits that promote individual and community health and well-being.

B The Mayor will pursue the delivery of green infrastructure by working in partnership with all relevant bodies, including across London's boundaries, as with the Green Arc Partnerships and Lee Valley Regional Park Authority. The Mayor has published supplementary guidance on the All London Green Grid to set out the strategic objectives and priorities for green infrastructure across London.

C In areas of deficiency for regional and metropolitan parks, opportunities for the creation of green infrastructure to meet this deficiency should be identified and their implementation should be supported, such as in the Wandle Valley Regional Park.

Planning decisions

D Enhancements to London's green infrastructure should be sought from development and where a proposal falls within a regional or metropolitan park deficiency area (broadly corresponding to the areas identified as "regional park opportunities" on Map 2.8), it should contribute to addressing this need.

E Development proposals should:

a incorporate appropriate elements of green infrastructure that are integrated into the wider network

b encourage the linkage of green infrastructure including the Blue Ribbon Network, to the wider public realm to improve accessibility for all and develop new links, utilising green chains, street trees, and other components of urban greening (Policy 5.10).

LDF preparation

F Boroughs should:

a follow the guidance in NPPF paragraphs 73 and 74 and undertake audits of all forms of green and open space and assessments of need. These should be both qualitative and quantitative, and have regard to the cross-borough nature and use of many of these open spaces

b produce open space strategies that cover all forms of open space and the interrelationship between these spaces. These should identify priorities for addressing deficiencies and should set out positive measures for the management of green and open space. These strategies and their action plans need to be kept under review. Delivery of local biodiversity action plans should be linked to open space strategies.

c ensure that in and through DPD policies, green infrastructure needs are planned and managed to realise the current and potential value of open space to communities and to support delivery of the widest range of linked environmental and social benefits

d In London's urban fringe support, through appropriate initiatives, the Green Arc vision of creating and protecting an extensive and valued recreational landscape of well-connected and accessible countryside around London for both people and for wildlife.

POLICY 5.11 GREEN ROOFS AND DEVELOPMENT SITE ENVIRONS

Planning decisions

A Major development proposals should be designed to include roof, wall and site planting, especially green roofs and walls where feasible, to deliver as many of the following objectives as possible:

- a adaptation to climate change (ie aiding cooling)
 - b sustainable urban drainage
 - c mitigation of climate change (ie aiding energy efficiency)
 - d enhancement of biodiversity
 - e accessible roof space
 - f improvements to appearance and resilience of the building
 - g growing food.
- LDF preparation

B Within LDFs boroughs may wish to develop more detailed policies and proposals to support the development of green roofs and the greening of development sites. Boroughs should also promote the use of green roofs in smaller developments, renovations and extensions where feasible.

POLICY 5.13 SUSTAINABLE DRAINAGE

Planning decisions

A Development should utilise sustainable urban drainage systems (SUDS) unless there are practical reasons for not doing so, and should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible in line with the following drainage hierarchy:

- 1 store rainwater for later use
- 2 use infiltration techniques, such as porous surfaces in non-clay areas
- 3 attenuate rainwater in ponds or open water features for gradual release
- 4 attenuate rainwater by storing in tanks or sealed water features for gradual release
- 5 discharge rainwater direct to a watercourse
- 6 discharge rainwater to a surface water sewer/drain
- 7 discharge rainwater to the combined sewer.

Drainage should be designed and implemented in ways that deliver other policy objectives of this Plan, including water use efficiency and quality, biodiversity, amenity and recreation.

POLICY 7.19 BIODIVERSITY AND ACCESS TO NATURE

Strategic

A The Mayor will work with all relevant partners to ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity in support of the Mayor's Biodiversity Strategy. This means planning for nature from the beginning of the development process and taking opportunities for positive gains for nature through the layout, design and materials of development proposals and appropriate biodiversity action plans.

B Any proposals promoted or brought forward by the London Plan will not adversely affect the integrity of any European site of nature conservation importance (to include special areas of conservation (SACs), special protection areas (SPAs), Ramsar, proposed and candidate sites) either alone or in combination with other plans and projects. Whilst all development proposals must address this policy, it is of particular importance when considering the following policies

within the London Plan: 1.1, 2.1-2.17, 3.1, 3.3, 5.14, 5.15, 5.17, 5.20, 6.3, 7.14, 7.15, 7.25 and 7.26. Whilst all opportunity and intensification areas must address the policy in general, specific locations requiring consideration are referenced in Annex 1.

Planning decisions

C Development Proposals should:

a wherever possible, make a positive contribution to the protection, enhancement, creation and management of biodiversity

b prioritise assisting in achieving targets in biodiversity action plans (BAPs), set out in Table 7.3, and/or improving access to nature in areas deficient in accessible wildlife sites

c not adversely effect the integrity of European sites and be resisted where they have significant adverse impact on European or nationally designated sites or on the population or conservation status of a protected species or a priority species or habitat identified in a UK, London or appropriate regional BAP or borough BAP.

F REGIONAL AND LOCAL BAPS

Many local authorities in the UK have also produced a local Biodiversity Action Plan (LBAP) at the County or District level. The London BAP is delivered by the London Biodiversity Partnership for important *habitats and species within the Greater London area*. For more details on the London BAP visit <http://www.lbp.org.uk/index.htm> .



Ecology Consultancy

The Ecology Consultancy is part of the Temple Group.

Making places better for people and wildlife

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

- **Sussex** - The Old Dairy, Barcombe Mills Road, Lewes, East Sussex BN8 5FF T. 01273 813739
- **East Anglia** - Thorpe House, 79 Thorpe Road, Norwich NR1 1UA T. 01603 628408
- **Midlands** - 9 The Mews, Trent Park, Eastern Avenue, Lichfield WS13 6RN T. 01543 728971
- **North** - Trinity Walk, Unit G37b, Market Walk, Wakefield, West Yorkshire WF1 1QR T. 01924 683558
- **Scotland** - 3 Coates Place, Edinburgh Scotland EH3 7AA T. 0131 225 8610