Ecological Impact Assessment for Brockwell Park

July 2020 Update

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Identification of Ecologically Sensitive Areas of Brockwell Park, London Borough of Lambeth

1.0 Background

1.1 A number of public events involving large numbers of people are planned for selected parks and open spaces in Lambeth over the summer period including Brockwell Park. In order to safeguard the ecology of these areas, the London Borough of Lambeth commissioned Salix Ecology to establish which areas of the Park are likely to be particularly ecologically sensitivity and thus adversely impacted on by such public activities.

1.2 A walkover ecological survey of Brockwell Park was undertaken by Salix Ecology on 16th May 2018. The surveyors were Paul Losse MCIEEM and Denis Vickers MCIEEM, both highly experienced ecologists. The purpose of the survey was to identify areas / features of the park which might be particularly susceptible to public use and where a corresponding reduction in ecological value might be anticipated. Decisions regarding which areas might be particularly sensitive and the degree of impact expected, was arbitrary and heavily dependent on the experience of the surveyors.

1.3 The survey was repeated by Denis Vickers on 15th July 2020 to establish if there had been any gross changes to previously identified sensitive areas. All photographs have been updated to reflect the condition of the site in 2020.

2.0 Method

2.1 Ecologically sensitive areas of the park were identified using a combination of a Greenspace Information for Greater London data search, aerial photography and field study. These sensitive areas generally had attributes which support / probably support breeding birds, have potential to harbour bat roost and / or are particularly susceptible to disturbance. In the light of this particular features and habitat types were sifted into the following categories:

- Low ecological sensitivity: little significant impact would be expected on these areas regarding the occasional large-scale public event.

- Moderate ecological sensitivity: casual park uses would have a limited impact on current biodiversity value. However large crowds should be discouraged from the area (particularly during the bird breeding season - March to April inclusive).

- High ecological sensitivity: Public are prohibited from these areas, they should only be entered by council operatives outside the bird breeding season or if there are health and safety issues. Additionally, although these areas are behind low fencing, large public crowds should not be encouraged around the periphery particularly during the bird breeding season.

2.2 Other land use categories depicted in Figure 14 are buildings, hardstanding and other areas of no ecological value, and areas not surveyed. The latter category includes children's' playgrounds, land adjacent to Brockwell House and an ornamental garden.

2.3 Areas identified as being of moderate or high ecological sensitivity were re-visited in 2020. The 2020 survey focussed on those more sensitive habitats which were most likely to have been impacted by increased visitor pressure, particularly grassland habitats. Although increased disturbance in woodland areas may have had an impact on associated species, any impacts would not be measurable in the absence of detailed faunal surveys. Additionally, the 2018 survey was carried out in May an optimum time for woodland survey whereas the 2020 survey took place on the 15th July. This is a suitable time for surveying grasslands, it is sub-optimal for woodlands as much of the ground flora is no longer evident.

3.0 Results

3.1 Data search

Statutory Sites and Local Nature Reserves

3.1.1 There are no statutory designated sites within the area of search.

Non- statutory designations

3.1.2 There are 14 Sites of Importance for Nature Conservation (SINCS) within the search area.

3.1.3 Brockwell Park itself is a site of Borough Importance for Nature Conservation. The main habitats of note listed in the citation for the site are the series of ponds along the Western boundary and two mature oaks within the park.

Protected species and Species of Principle Importance for the Conservation of Biodiversity

The Greenspace Information for London data search confirmed a number of records of rare species, protected species and Species of Principal Importance within 1km of the site. See appendix 1 for species status'.

Reptiles and amphibia

3.1.4 There are no records of reptiles within 1km of the site.

3.1.5 There are records of palmate newt *Lissotriton helveticus* and common frog *Rana temporaria* and common toad *Bufo bufo* within the area of search. These species are protected from selling and trade under the Wildlife and Countryside 1981(as amended). The common toad is also species of Principle Importance. The system of ponds along the western boundary of the has the potential to support these species.

Birds

3.1.6 There are numerous bird records within the area of search. Note that all species of wild birds are protected under the Wildlife and Countryside act 1981(as amended). Rare, London Biodiversity Action Plan species and Species of Principal Importance are listed in table 2 below. Several bird species are likely breed within scrub, woodland and mature trees at the site.

Table 1: Relevant bird records within 1km of the site

Species	Status/protection
Common redpoll *Ancanthis flammea*	BAP Priority London
Lesser spotted woodpecker *Dedrocopos major*	Bird – red BAP Priority London
Brambling *Fringilla montifringilla*	Wildlife and Countryside Act Schedule 1
Yellow wagtail *Moacilla flava*	Bird – red BAP Priority London
Spotted flycatcher *Muscicapa striata*	Bird – red BAP Priority London Species of Principal Importance
House sparrow *Passer domesticus*	Bird – red BAP Priority London Species of Principal Importance
Bull finch *Pyrrhula pyrrhula*	BAP Priority London
Starling *Sturnus vulgaris*	Bird – red BAP Priority London
Redwing *Turdus iliacus*	Wildlife and Countryside Act Schedule 1 Bird – red
Fieldfare *Turdus pilaris*	Wildlife and Countryside Act Schedule 1 Bird – red
Ring Ouzel *Turdus torquatus*	Bird – red Species of Principal Importance
Linnet *Linaria cannabina*	Bird– Red BAP Priority London
Reed Bunting *Emberiza schoeniclus*	Bird – Amber Species of Principal Importance BAP Priority London
Dunnock *Prunella modularis*	Bird – Amber BAP Priority London
Song thrush *Turdus philomelos*	Bird – Red BAP Priority London

Mammals

3.1.7 Common pipistrelle *Pipistrellus pipistrellus*, Nathusius's pipistrelle *Pipistrellus nathusii,* soprano pipistrelle *Piistrellus pygmaeus,* Daubenton's bat *Myotis daubentonii* and lesser nocule *Nyctalus leisleri* have been recorded in the area of search. All species of bat have a high level of protection under the Habitat regulations (2010) as well as the Wildlife and Countryside Act 1981 (as amended). There are some bat roosting opportunities, particularly within mature trees at the site.

3.1.8 Hedgehog *Erinaceus europaeus* has also been recorded within the area of search. The species is a London BAP species and a Species of Principle Importance. There is potential for hedgehogs to use the less intensively managed areas of the site, especially within woodland and woodland edge areas. They may also forage within the amenity grassland areas.

Invertebrates

3.1.9 Rare invertebrates and invertebrates of Principal Importance include *Volucella zonaria* (a true fly) (Nationally notable) and the Stag Beetle *Lucanus cervus* (Nationally Notable B and Species of Principal Importance). Stag beetle habitat includes logs and dead wood within, and at the edge, of woodland habitat.

Plants

3.1.10 Records of plant records which could be found at Brockwell Park include mistletoe (London BAP priority) and large-leaved lime (Nationally Scarce). Neither of the species will be affected by any events at Brockwell Park.

3.2 Field survey

3.2.1 A description of each habitat is given below in one of three categories: High, Medium and low ecological sensitivity. Notes are provided for the 2018 survey as well as the 2020 survey. An ecological sensitivity map is shown in Figure 14 below.

Moderate ecological sensitivity:

W1: Mixed deciduous woodland with a well-developed shrub layer and ground flora

3.2.2 **2018 Survey:** Canopy trees included mature pedunculate oak, turkey oak, ash, horse chestnut, common lime, London plane, silver maple and sycamore. Shrub layer species chiefly comprise bramble, holly, elder, English elm, Japanese spindle, garden privet, rose, hawthorn, cherry laurel, cotoneaster, berberis, young Norway maple and sycamore. Of note in the ground flora were ivy, red campion, hedge bedstraw, stinging nettle and herb Robert. Wren, blackbird and blue tit were heard / seen in the wood and are possibly nesting.

3.2.3 **2020 survey:** The ground flora of this area was far less evident and in places absent altogether (see Figure 1 below). This is probably due to the later time of survey and greater use of parks (i.e. trampling) by the public during the Coronavirus lockdown.

Figure 1: Woodland W1

W2: A copse of mature trees including several large pedunculate oaks

3.2.4 **2018 Survey:** This area comprised a mix of tree species but most notable were four large pedunculate oak trees some of which may have some invertebrate, bird and bat interest. A shrub layer and woodland ground flora are absent.

3.2.5 **2020 Survey:** No obvious changes in the extent or structure of this woodland area were noted during the 2020 survey.

Figure 2: Copse W2

W3: Mixed deciduous woodland with a well-developed shrub layer and ground flora

3.2.6 **2018 survey:** This area contained some large pedunculate oaks. Other canopy species included holm oak, hornbeam, Swedish whitebeam, ash and manna ash. There was a varied shrub layer of mostly non-native species e.g. Japanese spindle, mock orange, box, cherry laurel, cherry plum, spotted laurel, garden privet, snowberry, tree mallow, wych elm, bramble and elder. The ground flora included stinging nettle, garlic mustard, comfrey and red campion.

3.2.7 **2020 Survey:** No obvious changes in the extent or structure of this woodland area were noted during the 2020 survey.

Figure 3: Woodland W3

W4: Area planted with young trees

3.2.8 **Survey 2018:** This area was planted with native whips which appear to be <5 years old. Species include field maple, hawthorn and hazel.

3.2.9 **Survey 2020:** Tree and shrubs have grown since 2018 as would be expected with relatively few losses noted. No other differences are obvious.

Figure 4: Area planted with whips W4

V1: Veteran pedunculate oak tree

3.2.10 **2018 survey:** This is possibly the largest and oldest oak tree in the park. Its girth was estimated to be 5-6m at chest height. This means it could be more than 300 years old.

3.2.11 **2020 survey:** No obvious change noted.

Figure 5: Veteran oak V1

G1: Less frequently cut grassland

3.2.12 **2018 survey:** This grassland was dominated by meadow foxtail. Other common grasses and forbs included perennial rye-grass, annual meadow-grass, creeping buttercup and white clover.

3.2.13 **2020 survey:** the grassland was of similar extent to 2018 survey but had possibly increased very slightly in biodiversity. Yorkshire fog and common cat's-ear were frequent, and several small patches of meadow barley were noticeable to the south of the area. A few specimens of goat's-beard and common knapweed had appeared within the sward.

Figure 6: Area of less frequently cut grassland G1

G2: Less frequently cut grassland

3.2.14 **2018 survey:** An area of species-poor improved grassland with scattered trees of some value to invertebrates and birds.

3.2.15 **2020 survey:** Most of the southern part of this area has been sown with wildflower seed mixtures and is now described below under the heading of 'high ecological value'. The rest of the area remains as described in 2018.

Figure 7: Area of less frequently cut grassland G2

L1b Upper Lake, open water

3.2.16 **2018 survey:** This part of the lake is important for foraging (and occasional nesting) waterfowl. The public are protected from accidental entry into the water by a low fence.

3.2.17 **2020 survey:** No apparent change from previous survey.

Figure 8: Upper lake open water L1b

High ecological sensitivity:

L1a: Upper Lake-side, an area of reedbed, marginal vegetation, roughland and scattered trees

3.2.18 **2018 survey:** This area mostly occurs at the western edge of the largest of the parks four wetland areas and is fenced from the public on the landward side. Adjacent to the lake itself (L1b) is a reedbed and areas of wet marginal vegetation. Species included common reed, grey club-rush, lesser bulrush, soft rush, reed canary-grass, pendulous sedge, great willowherb and common fleabane. At the western edges of this area the marginal vegetation merged with a zone of crack and grey willow. This in turn was superseded by a zone of scattered trees and roughland which included Lombardy poplar, cherry laurel, Turkey oak, ash, elder and pine. There was a mute swan nesting at the edge of the reedbed.

3.2.19 **2020 survey:** No apparent change from previous survey

Figure 9: Upper lake showing marginal vegetation L1a

L2 Middle lake (water enters from L1b)

3.2.20 **2018 survey (flora):** This area was closed-off from park users via a low fence and included a mix of native and non-native trees, shrubs, tall herbs and marginal species e.g. ash, crack willow, holm oak, rhododendron, broad-leaved bamboo, grey willow, goat willow, bramble, ivy, common nettle, common ragwort, green alkanet, pendulous sedge, great willowherb, common fleabane and grey club-rush.

3.2.21 **2020 survey (flora):** Little difference other than yellow loosestrife, purple loosestrife and bird's-foot trefoil were evident in July and possibly not in May when the first survey was conducted.

3.2.22 **2018 survey (birds):** This area was particularly bird-rich, species included mallard, coot, moorhen, grey heron, cormorant, blackcap, chaffinch, goldfinch and wren some of which were likely to be or are confirmed as breeding.

3.2.23 **2020 survey (birds):** Only blackcap and goldfinch were heard, and grey heron, moorhen and mallard observed.

Figure 10: Middle lake L2

L3 Lower Lake (water enters from L2)

3.2.24 **2018 survey:** This area was closed-off from park users via a low fence. A range of trees, shrubs, tall herbs and marginal species of plants are present such as sweet gum, Judas tree, rhododendron, butterfly-bush, bramble, ivy, common nettle, feverfew, yellow iris, great willowherb and grey club-rush. At least one outgrowth of Japanese knotweed (an invasive species listed under Schedule 9 of the Wildlife & Countryside Act 1981) was also present. Coot and goldfinch were noted here.

3.2.25 **2020 Survey:** Japanese knotweed was not recorded on this occasion; however, it is unlikely it is not present, just hidden by the rapid growth of some other species e.g. birch and willow which are colonising the area at its periphery and buddleja is becoming prominent. Other species identified on this visit (and not 2018) were purple loosestrife, yellow loosestrife, pendulous sedge, hemp agrimony and great willowherb. Two additional woody species were identified: Persian ironwood and cotoneaster (an invasive non-native species). Birds included blackcap, wren, Canada goose and moorhen.

Figure 11: Lower lake L3 with lush marginal vegetation

L4 Marsh Area (water enters from L3)

3.2.26 2018 survey: This area was situated behind a low fence. There was a marshy area at the centre covered with wet marginal / emergent vegetation. The main species were pendulous sedge, hemp agrimony and great willowherb. At the edges were a number of tall herbs, shrubs and trees e.g. stinging nettle, rhododendron, elder, broad-leaved bamboo, ashleaf maple and dawn redwood.

3.2.27 2020 survey: This area had changed little from the previous survey. Perhaps there has been some further colonisation by shrubs and young trees.

Figure 12: Marsh Area L4

WF1 Wildflower Area (was part of G1 in 2018)

3.2.28 **2018 survey:** This grassland was dominated by meadow foxtail. Other common grasses and forbs include perennial rye-grass, annual meadow-grass, creeping buttercup and white clover.

3.2.29 **2020 survey:** This area had been cleared of the vegetation noted in 2018, fenced off and sown with wildflower seeds comprising cornfield annuals and perennials. Most of the annual species are no longer prominent. However, wild carrot and Yorkshire fog were abundant; creeping thistle and ribwort plantain frequent; spear thistle, musk mallow, red campion, oxeye daisy and common knapweed occasional; and cornflower and field poppy rare.

Figure 13: Field planted with wildflowers

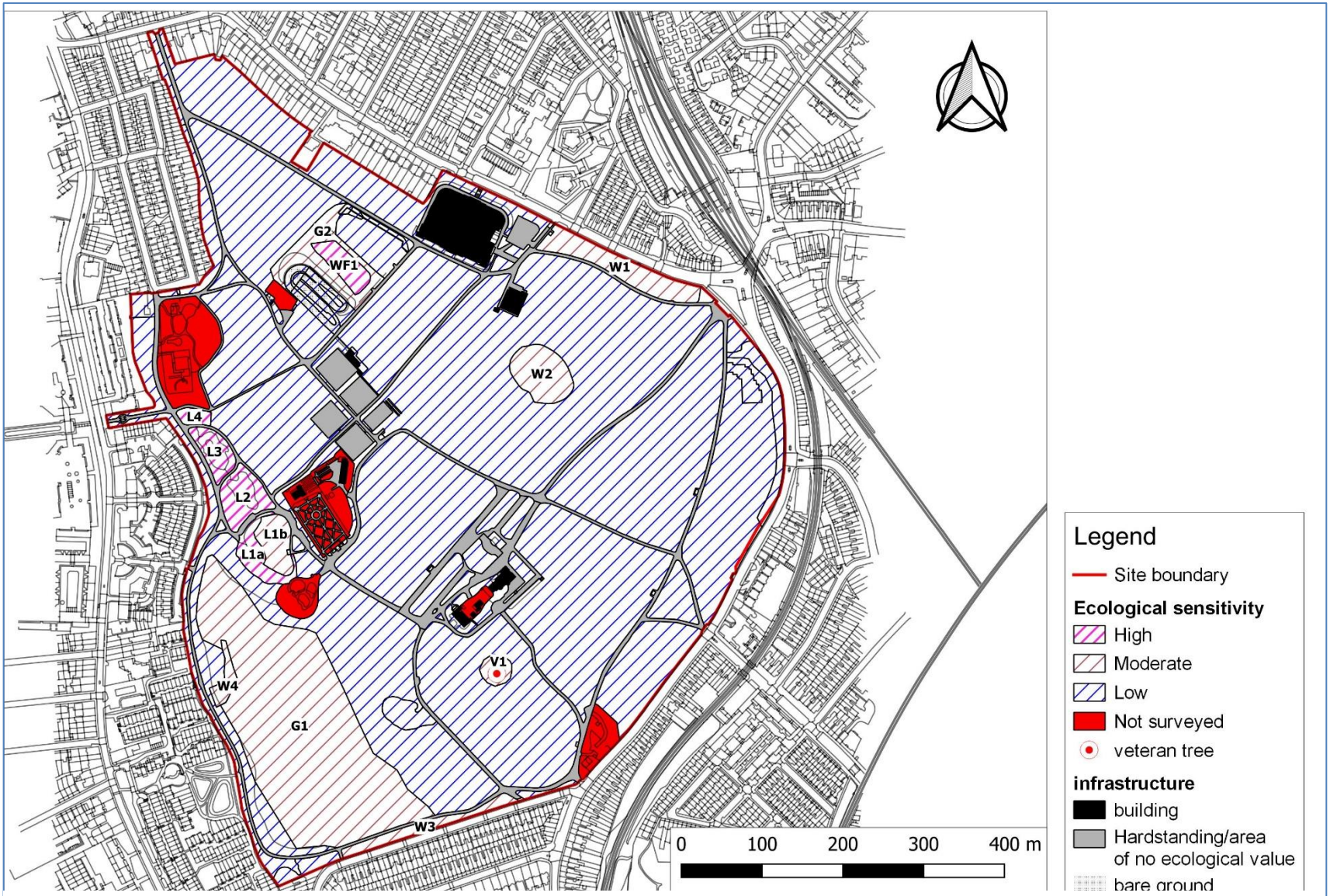

Figure 14: Ecological constraints for Brockwell Park events

4.0 Discussion

4.1 Areas of high ecological sensitivity

4.1.1 Areas L1a, L2, L3 and L4 remain highly sensitive ecological areas which should be avoided in planning large scale public events and remain closed-off to the public. However, not related to on site events, some colonisation by young trees and shrubs is evident in L3 and L4 which will eventually degrade these areas.

4.1.2 Area WF1 was part of area G1. It has been planted with wildflowers and subsequently reclassified as ecologically highly sensitive.

4.2 Areas of medium ecological sensitivity

4.2.1 Areas W1, W2, W3, W4, V1, G2 and L1b first identified in 2018, remain moderately sensitive ecological areas which should be avoided in planning large scale public events unless appropriate ecological management measures are in place and present before, during and after the event, so as to avoid and/or mitigate for any potential ecological impacts.

4.2.2 Part of area G1 has been reclassified as ecologically highly sensitive (4.1.2 above). The remainder of the area continues to be viewed as of medium ecological sensitivity.

4.3 Areas low ecological sensitivity

4.3.1 Other areas of low ecological sensitivity are likely to be robust to the occasional large-scale public event. However, tree protection measures should be in place in all areas and flood lights should be directed away from any trees, areas of shrubs or hedge lines.

4.3.2 The above measures will minimise the risk of impacts to species protected under the Wildlife and Countryside Act 1981 (as amended) as well as the Conservation of Habitats and Species Regulations (2010). Natural England protected species licences will therefore not be required subject to the implementation of this precautionary approach.

5.0 Conclusions and recommendations

5.1 The walk-over surveys carried out in 2018 and 2020 were not specifically designed to detect changes in vegetation composition or habitat extent over time. In addition, no surveys were carried out to detect impacts of the events on fauna using the habitats present on site. Such impacts cannot, therefore, be ruled out.

5.2 No obvious impacts resulting from the holding of events or visitors were detected in any of the areas of high sensitivity.

5.3 Fencing around the newly classified ecologically sensitive area WF1 should be maintained to prevent trampling and nutrification with dog faeces which will degrade the area.

5.4 The only area of medium sensitivity which appears to have declined, at least in part due to visitor pressure (during Corvid 19 lockdown), was the ground flora in woodland W1. However, given time this is likely to recover.

5.5 It is recommended that protection of the areas highlighted as being of high and medium ecological sensitivity is continued.

5.6 Tree protection measures should be in place in all areas and floodlights should be directed away from any trees, areas of shrubs or hedge lines.

5.7 The above measures will minimise the risk of impacts to species protected under the Wildlife and Countryside Act 1981 (as amended) as well as the Conservation of Habitats and Species Regulations (2010). Natural England protected species licences will therefore not be required subject to the implementation of this precautionary approach.

Appendix 1: Relevant Legislation and species status

Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England

Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.

National legislation afforded to species and habitats

The objective of the EU Habitats Directive 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 and is commonly referred to as the Habitats Regulations.

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 Council Directive 79/409/EEC on the Conservation of Wild Birds (Wild Birds Directive) in Great Britain. Since the passing of the Act, 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) and Nature Conservation (Scotland) Act 2004.

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

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

Herpetofauna (amphibians and reptiles)

Species of herpetofauna which have the potential to occur at Brockwell are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). The common lizard and slow-worm 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.

The common toad and smooth newt are protected by law from sale and trade only.

Mammals

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended) and have the same protection as great crested newts.
Badgers are protected under the Wildlife and Countryside Act 1981 (as amended) and the Protection of Badgers Act (1992). It is an offence:

- To willfully kill, injure, take, possess or cruelly ill-treat a badger;
- To attempt to do so; or
- To intentionally or recklessly interfere with a sett.

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 (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) 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 (79/409/EEC). 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

Plants

With certain exceptions, all wild plants are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Bird status

- **Red list -** High Conservation Concern. Red list species are those that meet any of the following criteria. A) Global Conservation Status. Species listed by BirdLife International as being Globally Threatened using IUCN criteria. B) Historical Decline. A severe decline in the UK between 1800 and 1995, without substantial recent recovery. C) Breeding Population Decline. Severe decline in the UK breeding population size, of more than 50%, over 25 years or the entire period used for assessments since the first BOCC review, starting in 1969 ("longer-term"). D) Non-breeding Population Decline. Severe decline in the UK non-breeding population size, of more than 50%, over 25 years or the longer term. E) Breeding Range Decline. Severe decline in the UK range, of more than 50%, as measured by number of 10 km squares occupied by breeding birds, over 25 years or the longer-term.
- **Amber -** Medium Conservation Concern. Species meet any of the following criteria, but none of the red list criteria, are amber listed: A) European Conservation status. Categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3). B) Historical Decline – Recovery. Red listed for Historical Decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years). C) Breeding Population Decline. As for red list criteria but with moderate decline (by more than 25% but less than 50%). D) Non-breeding Population Decline. As for red list criteria but with moderate decline (by more than 25% but less than 50%). E) Breeding Range Decline. As for red list criteria but with moderate decline (by more than 25% but less than 50%). E) UK breeding population of less than 300 pairs or nonbreeding population of less than 900 individuals. F) Localisation. At least 50% of the UK breeding or non-breeding population found in 10 or fewer sites. G) International Importance. At least 20% of the European breeding or non-breeding population found in the UK.

London BAP species

London Biodiversity Action Plan species are species which have been identified as a priority for conservation action in the capital. They include:

- Species that are globally threatened
- Species that are rapidly declining in the UK
- Nationally threatened species
- Species which are known to have undergone a decline in London