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Gloucester Gate Playground, Regent's Park

Ecological Appraisal

Prepared by LUC
July 2018

Planning & EIA
Design
Landscape Planning
Landscape Management
Ecology
GIS & Visualisation

LUC LONDON
43 Chalton Street
London
NW1 1JD
T +44 (0)20 7383 5784
london@landuse.co.uk

Offices also in:
Bristol
Edinburgh
Glasgow
Lancaster
Manchester

FS 566056 EMS 566057

Land Use Consultants Ltd
Registered in England
Registered number: 2549296
Registered Office:
43 Chalton Street
London NW1 1JD
LUC uses 100% recycled paper

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1.0	06/07/18	Issue 1	Liz Seabourne	Peter Lawrence	Peter Lawrence
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1 Introduction

1.1 In June 2018, LUC was appointed by The Royal Parks (TRP) to undertake an Ecological Appraisal to inform a planning application for the redevelopment of Gloucester Gate Playground, located within Regent's Park, London (hereafter referred to as 'the Site'). Ecological issues identified by TRP staff have been considered from the outset in the development of the landscape design proposals, in particular to address impacts on hedgehog *Erinaceus europaeus* and little owl *Athene noctua*.

1.2 The Ecological Appraisal comprises a desk study and an Extended Phase 1 Habitat survey. This report presents the findings of the above surveys, including recommendations for avoidance, and mitigation of ecological impacts and opportunities to provide net gain for biodiversity.

1.3 This report has been prepared for the exclusive use of The Royal Parks. No part of this report should be considered as legal advice.

Site Description

1.4 The Site is located at Gloucester Gate Playground, Regent's Park, London (TQ 28483 83400). The Site is currently a children's playground, with a toilet block and a wooden, slate tiled sheltering area.

Policy and Legislation Considerations

1.5 The appraisal has been prepared in accordance with relevant legislation and policy. Further detail is provided in **Appendix 1**, however the primary documents are of relevance:

- The Wildlife and Countryside Act of 1981 (as amended);
- The Natural Environment and Rural Communities Act (NERC Act), 2006;
- The Conservation of Habitats and Species Regulations 2017; and
- The National Planning Policy Framework (DCLG 2012);
- London's Biodiversity Action Plan;
- London Borough of Camden (2017) Camden Local Plan.

2 Method

2.1 The methods adopted in the survey and appraisal are outlined below. They accord with the best practice guidance documents for survey and appraisal produced by the Chartered Institute of Ecology and Environmental Management[1] and the British Standards Institute[2].

Desk Study

2.2 To provide additional background to the appraisal and to highlight likely features or species groups of interest, a study of available biological records was undertaken to identify sites designated for their nature conservation value, and existing records of protected or notable species of relevance to the Site. A search of the following resources was undertaken, within a 1km radius from the Site:

- Multi-Agency Geographical Information for the Countryside (MAGIC);
- National Biodiversity Network (NBN);
- Ordnance Survey (OS) mapping; and
- Aerial photography.

2.3 TRP staff also provided species information given their extensive understanding of the ecology of the park, including the location of nesting birds and hedgehog habitat as informed by detailed surveys.

2.4 The absence of a species from biological records cannot be taken to represent actual absence. Species distribution patterns should be interpreted with caution as they may reflect survey/reporting effort rather than actual distribution.

Extended Phase 1 Habitat Survey

2.5 An Extended Phase 1 Habitat Survey was undertaken within the Site boundary in line with standard methods[3].

2.6 Phase 1 Habitat Survey provides a rapid means of classifying broad habitat types in any given terrestrial site.

2.7 The survey was 'extended' by considering the suitability of the Site to support notable or protected flora or fauna. Species considered included those identified during the desk study, or those considered appropriate by the surveyor during the survey. Detailed surveys were not completed for these species; however, based on an understanding of species ecology, consideration was given to the Site's potential to provide sheltering or foraging habitat and/or connectivity to allow dispersal between populations. Further information is provided in the 'Baseline Data' section below.

2.8 The survey was undertaken on 3rd July 2018 by Liz Seabourne BSc MSc. Weather conditions during the survey were clear, sunny and warm.

[1] Survey guidance is available at http://www.cieem.net/sources-of-survey-methods-sosm- and appraisal guidance is available at http://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea-.

[2] British Standards Institute (2013). BS42020:2013 Biodiversity – Code of Practice for Planning and Development.

[3] Joint Nature Conservation Committee (1990). Handbook for Phase 1 Habitat Survey. JNCC, Peterborough.

Bat inspection

2.9 In addition to the Extended Phase 1 Habitat Survey, a bat roost assessment of trees and buildings within the Site was undertaken. The survey was carried out with due consideration for best practice guidelines[4] was also undertaken on 3rd July 2018 by Liz Seabourne BSc MSc.

2.10 The inspection comprised a detailed search from ground level of external features with potential to support access points and roosting places suitable for bats, and to locate evidence of bat activity, such as droppings, staining, feeding remains and presence of bats (live/dead specimens).

2.11 In addition to this, the surrounding habitats were assessed for their suitability to support foraging and commuting bats, and to identify potential commuting links to surrounding habitats of value to bats.

2.12 Where bat features were recorded, they were classified in accordance with the categories described below in **Table 2.1**.

Table 2.1 Bat Roost Potential (BRP) Categories

BRP Category	Roosting Habitat Features	Commuting and Foraging Habitat Features	Survey Requirement
Negligible	Negligible habitat features likely to support roosting, commuting or foraging bats		No surveys required
Low	Structures in this category offer one or more potential roost sites for individual, opportunistically roosting bats. These sites do not offer the space, shelter or appropriate conditions to support large numbers of bats or maternity roosts. Tree in this category include those of sufficient size and age to support suitable roosting features, but none are visible from the ground	Habitat on and around the site could be used by a small number of commuting bats. This category includes densely urbanised landscapes or linear vegetation features poorly connected to the wider landscape (e.g. gappy hedges in an agricultural context).	1 dusk or dawn survey required for structures. No surveys required for trees.
Moderate	Structures and trees in this category offer one or more roost site that, due to their space, shelter or conditions, offer roosting potential for a range of species. Roosts may be more permanent, rather than opportunistic. Small maternity roosts of common species may form in one of these roost sites.	Habitat on and around the site is well-connected to wider continuous habitat and offers commuting and foraging habitat to a larger number of bats across a number of species. (e.g. tree lines or linked gardens in the urban context, or continuous hedge/ tree lines and watercourses in an agricultural setting)	1 dusk and 1 dawn survey required for both structures and trees. Tree-climbing may be an appropriate alternative to dusk and dawn surveys.
High	Structures and trees in this category have one or more potential roost sites that are suitable for large number of bats. Roosts are likely to be	Habitat on and around the site is diverse, continuous and linked to extensive suitable habitat. This category includes well-	3 surveys, including both dusk and dawn elements.

[4] Hundt L (2016) Bat Surveys – Good Practice Guidelines (3rd Edition), Bat Conservation Trust and JNCC (2004) Bat Workers' Manual – 3rd Edition, JNCC, Peterborough.

	permanent and include maternity roosts. Potential roost sites exist for a wide range of species or species of particular conservation interest.	vegetated rivers, streams, hedgerows and woodland edge. Habitat is sufficiently diverse to offer opportunities to a wide range of species or those of particular conservation interest.	Tree-climbing may be an appropriate alternative to dusk and dawn surveys.

Limitations and Constraints

2.13 It is important to note that ecological surveys provide information regarding the ecological baseline of a site for only a 'snapshot' of time. Therefore, if significant time lapses between the surveys and the further development or implementation of proposals updated ecological surveys may be required to identify any change in the baseline, such as natural succession of habitats, or local extinction or colonisation of species. Ecological surveys can generally be considered as up to date for 1 to 3 years dependent on the nature of the site, ecological baseline and proposals and likely impact. Therefore if a year lapses between the progressions of development proposals, it is recommended that ecological advice is sought regarding the applicability of the survey findings.

3 Results

Desk Study

3.1 The Site is located within Regent's Park, which is a non-statutory designated Site of Importance for Nature Conservation (SINC at the Metropolitan level), designated for the extensive area of a range of wildlife habitats including grassland, scrub and planting and mature trees.

3.2 In terms of species, a key sensitivity of the site is the presence of hedgehog. Regent's Park is the only central London park with a known population of breeding hedgehog. Five years of hedgehog monitoring in the park has confirmed that the hedgehog population is very small, very vulnerable and appears to be reliant on certain hotspots within the park. For the past three years, the main area of hedgehog activity has been in the north east of the Park, around Cumberland Green, Gloucester Green and the London Zoo car park. Maps provided in **Appendix 5** show the hedgehog distribution in the park, clearly demonstrating the importance of the north eastern section.

3.3 Hedgehogs have been regularly found around the Gloucester Gate playground site. A hedgehog nestbox monitoring scheme has been run since 2015. One nestbox is positioned in the hedgerow to the east end of the playground (laurel) with nesting hedgehog confirmed in 2017, confirming the importance of this site for hedgehogs.

3.4 The park is also known to support a diverse woodland, garden and wetland bird assemblage given the presence of a diverse range of habitats in the park. In particular, little owl are known to nest in close vicinity to the Site.

3.5 Other notable species known to use Regent's Park are bats species such as common pipistrelle *Pipistrellus pipistrellus* and noctule *Nyctalus noctula*.

Extended Phase 1 Habitat Survey

3.6 Habitat descriptions are set out below. While considering this information, reference should be made to the Phase 1 Habitat Maps presented in **Appendix 2** and Target Notes (TNs) presented in **Appendix 3**.

Buildings and Hardstanding

3.7 Buildings and hardstanding comprised approximately one third of the Site.

3.8 The following buildings were identified within the Site:

- Shelter area (TN2) – this was a gazebo style shelter, with wooden supports and wooden panels on the underside of a slate tiled roof.
- Toilet block (TN3) – this had a flat roof with bitumen felt and white wooden fascia boards. The external walls were white concrete with exposed brick in each corner, with the front of the building (west) having wooden panels. The building was used as a toilet facility.

3.9 Hardstanding (TN1) was within the children's playground and comprised of safety surface, wood chippings and sand, with paved brick and asphalt pedestrian footpaths.

Amenity Grassland

3.10 Amenity grassland was the dominant habitat within the site and was located within the children's playground between the hardstanding and the hedgerow, and outside of the children's playground to the site boundary. All areas were very dry and mown short.

3.11 The amenity grassland with the children's playground (TN4) was dominated by perennial rye grass *Lolium perenne*, occasional white clover *Trifolium repens* and dandelion *Taraxacum agg.*, frequent ribwort plantain *Plantago lanceolata* and rare wall barley *Hordeum murinum* and red dead nettle *Lamium purpureum*.

3.12 The amenity grassland outside the children's playground boundary (TN5) was dominated by perennial rye grass, occasional ribwort plantain and greater plantain *Plantago major*, rare spear thistle *Cirsium vulgare*, cranesbill sp. *Geranium* sp. and common orache *Atriplex patula*.

Scattered Trees

3.13 Scattered trees were present through the Site over amenity grassland habitats. These were dominated by horse chestnut *Aesculus hippocastanum* and red horse chestnut *Aesculus* × *carnea* mostly located to the south and the west of the Site.

3.14 The tree species located within the children's playground included, red horse chestnut, cherry sp. *Prunus* sp., and hornbeam *Carpinus betulus*. Trees around the boundary of the children's playground included whitebeam *Sorbus aria*, sycamore *Acer pseudoplatanus*, hawthorn *Crataegus monogyna*, norway maple *Acer platanoides* and a pedunculate oak *Quercus robur*.

Hedgerow

3.15 A hedgerow (TN6) surrounded the children's playground, and at the centre was a metal fence. It was largely dominated by hornbeam rare occurrences of laurel *Laurus nobilis* present in the north and north east sections. The hedgerow was relatively dense.

Bats

Habitat Assessment

3.16 Regent's Park provides numerous opportunities for roosting, foraging and commuting bats. The Site was dominant in hardstanding and amenity grassland, with scattered trees throughout. The linear habitats of the trees and hedgerow provide some foraging and commuting opportunities for bats.

Bat Inspection

Buildings

3.17 Buildings within the Site were assessed for their potential to support bats. The findings are detailed below:

- Shelter area (TN2) – this was a gazebo style shelter, with wooden supports and wooden panels on the underside of a slate tiled roof. Multiple slate tiles were lifted on all eight sections of the roof. The shelter area was open sided and therefore the roof would likely be subject to temperature fluctuations.

  Due to suitable features present for bats to roost, this building was considered to have **low** bat roost potential.

- Toilet block (TN3) – this was a flat roofed building with bitumen felt and white wooden fascia boards. There were no cavities observed on the exterior of the building.

  Due to no suitable roosting features being present, this building was considered to have **negligible** bat roost potential.

Trees

3.18 The Site supported a range of semi-mature to mature trees that were considered to have **negligible, low and moderate** bat roost potential due to cavities and fissures being present.

3.19 Twenty one trees were assessed for roosting potential, whereby two were assessed as moderate, ten were assessed as low, with the remaining nine deemed negligible. See Appendix 2 and Appendix 4 for the detailed findings.

Birds

3.20 The hedgerow surrounding the children's playground and the scattered trees located around the Site, both have the potential to support common and widespread nesting bird species. There was evidence found of a potential feeding perch for little owl on the toilet block building (TN3), within the east corner of the structure. There were faecal splashing on the guttering and pellets located beneath this within the amenity grassland. However, during the time of surveying no birds were observed.

Hedgehogs

3.21 Hedgehog records were identified within 1km of the Site. The hedgerow surrounding the children's playground provides hedgehogs with a potential movement corridor, as well as foraging and sheltering habitat.

4 Discussion

Designated Sites

4.1 The Site is located within Regent's Park, which is a SINC of Metropolitan value within the London Borough of Camden. However, given the nature of the Site and proposals, it is likely that the proposals will improve the value of the SINC given the creation of a greater diversity of habitats designed to specifically provide improved opportunities for wildlife. These include the following as illustrated in **Appendix 6, LUC Drawing 10335-LD-PLN-420**:

- wildflower meadow creation,
- Replanting a section of hedgerow with a greater range of native spcies
- Areas of dense native scrub planting
- Areas of lower level planting including native scrub and ornamental scrub and herbaceous species of known benefit for wildlife
- Replacement tree planting.

4.2 In addition the proposals will provide improved access to nature for children and users of the park, providing opportunities to experience and learn about nature. This is a key value of London's SINCs, contributing to quality of life for people and with knock on benefits for nature conservation.

Habitats

4.3 The Site was largely comprised of short amenity grassland, which has limited ecological value, with habitats of hardstanding and buildings having no ecological value.

4.4 The current proposals involve the removal of the hedgerow and the loss of just two trees, a hawthorn and sycamore (Appendix 4 - T6 & T7).

4.5 As above, the proposals are likely to enhance the Site for wildlife.

Mitigation

4.6 It is recommended that retained trees are protected in accordance with best practice methods and guidance: BS5837: Trees in relation to design, demolition and construction. Replacement tree planting will replace those that are lost.

Hedgehogs

4.7 Legislation afforded to hedgehogs is detailed in **Appendix 1**. The hedgehog is a familiar and widespread insectivorous mammal, but there is strong evidence that it is in serious decline in Britain, especially in London and the South East. Hedgehogs are a UK Priority Species for conservation and partially protected under the Wildlife and Countryside Act (1981 as amended). In the early 1970s hedgehogs were reported to be present in all London's central Royal Parks. They have since disappeared from all central London sites except The Regent's Park.

4.8 The reasons for the decline and local extinctions in central London's hedgehog populations are unknown, but habitat fragmentation and the isolation of sites within the urban matrix, as well as issues to do with habitat management, are likely to be significant factors.

4.9 The current proposals will result in the removal of much of the existing hedgerow, which is known to provide foraging, sheltering and nesting habitat for hedgehog. This therefore poses a risk of harm to any hedgehogs present.

4.10 However, in the long term the proposals will result in an enhancement of the Site for hedgehog with the inclusion of specific features for this species, as outlined below and indicated in **Appendix 6, LUC Drawing 10335-LD-PLN-420**:

- The southern section of the boundary hedgerow will be retained within the scheme, continuing to provide established habitat for hedgehog.
- Replanting a section of the hedgerow around the N/NE boundary with an increased diversity of native species to be flanked on both sides of native/ornamental scrub and herbaceous planting.
- Blocks of dense native scrub planting and lower native/ornamental scrub and herbaceous planting extending from the above native hedgerow around the north and west boundaries of the playground, as well as within the playground itself.
- A new area of dense native scrub planting on a proposed mound to the south west of the playground.
- Extensive creation of meadow grassland habitat around the west of the playground.
- Creation of log piles within areas of dense planting (existing and proposed) within inaccessible locations for site users to provide replacement sheltering and potential nesting sites for hedgehog. These are currently identified as log piles but could comprise specific hedgehog nest boxes to be agreed with TRP staff.

4.11 The accumulated effect of the above features will be to provide a greater area of vegetated habitats than compared to the existing playground and surrounds (which is dominated by hard standing and amenity grassland), with planting specifically designed to provide enhanced foraging and sheltering habitat for hedgehog (as well as other wildlife).

Mitigation

4.12 To address the risk posed to hedgehog during construction works, the following measures are proposed:

General arrangements (prior to and during works):

- Ecologists will be trained in handling hedgehogs by ZSL/TRP experts.
- Tool box talks will be provided to site staff.
- Appropriate hedgehog signage and warning signs will be located at key areas of the site.
- Where possible, construction of the works to be programmed during the winter months.

Exclusion Arrangements (prior to works):

- Trained ecologists will conduct a check of the hedgerow prior to works commencing. If any hedgehogs are encountered they will be dealt with as per 'Unexpected Discoveries' section below.
- As an added precaution, the hedgerow will be cut to a foot above ground level at least a week prior to its complete removal to allow for the dispersal of any sheltering hedgehogs. Care must be taken to not to disturb the base of the hedgerow and ground underneath, and before complete removal a trained ecologist will again inspect the base of the hedgerow for the presence of hedgehogs.
- Once hedgehogs are confirmed absent, timber hoarding will be installed around the works site.
- The hoarding (including the access gate to the playground site) will be flush with the ground, and daily checks will be made to ensure that there are no opportunities for hedgehogs to access the site.

- Any excavations are to be covered overnight to prevent hedgehogs entering them, or if this is not possible fitted with mammal ramps to allow safe exit. Any excavations should be checked for animals the following morning before proceeding with works.
- During construction of the playground, if artificial lighting is required this will comprise LED lighting. This will be downward facing and screened to avoid light spill out of the site.

Unexpected Discoveries

- In the event that a hedgehog is discovered during works, the hedgehog will be removed by a trained ecologist and placed in a nest box, filled with dry leaves and placed within appropriate dense vegetation nearby. A handful of Spike's dry hedgehog food will be added to the nest box entrance. The presence of the hedgehog needs to be logged and if a tag is on its spines this will be recorded.

Bats

4.13 Legal protection afforded to bats and their roosts is summarised in **Appendix 1**. In summary all bats and their roosts are subject to the highest level of protection afforded to species in the UK as European Protected Species (EPS).

4.14 Within the proposals two trees are to be removed: a single hawthorn (T6) which had low BRP and a single sycamore (T7) which had negligible BRP, with the existing hedgerow also to be removed. At the time of surveying the crevice features within the hawthorn were heavily cobwebbed indicating no current use by bats.

4.15 Within the proposals the shelter area (TN1) which had a low BRP, is to remain, however if it is subject to works this could affect any roosting bats.

4.16 As detailed above for hedgehog, the landscape proposals will also significantly enhance the site for bats, providing additional foraging habitat.

4.17 It is understood that no additional lighting is proposed as part of the scheme.

Mitigation

4.18 Felling of the single hawthorn tree (T6) identified as having Low BRP will be undertaken in accordance with a precautionary approach to ensure no impacts on bats.

4.19 This will require a suitably qualified ecologist to inspect the tree prior to felling, and the tree will be soft felled with any sections with bat roost potential carefully lowered to the ground and left for 24 hours with cavities facing sideways to allow bats to leave before disposal of the cut section. If any bats are found during felling, all works must cease, and a suitably qualified ecologist consulted on how to proceed.

4.20 As above, protection of retained trees and replacement tree planting would maintain surrounding habitats as suitable for foraging and roosting bats.

4.21 If works are to take place on the shelter area (TN1), this will be subject to further considerations with the possibility of a single dusk/dawn survey required subject to the nature of any proposals.

Birds

4.22 Legislation afforded to birds and their nests is detailed in **Appendix 1**.

4.23 The removal of the two trees and hedgerow, could result in an impact on nesting birds if present, through disturbance or harm/damage to birds, nests, eggs and young.

4.24 The proposals were specifically located to avoid the area used by nesting little owl following early consultation with TRP staff.

4.25 The landscape proposals as previously described will also enhance the site for birds, providing additional foraging and nesting habitat.

Mitigation

4.26 To address the risk of impacts on nesting birds, the following approach will be followed:

- If possible the clearance of suitable nesting habitat will be undertaken between September-February (inclusive) to avoid the nesting season (coinciding with the best time to minimise risk to hedgehog).
- If this cannot be achieved, inspections for the presence of bird nests should be undertaken by a suitably qualified and experienced ecologist prior to works commencing. If bird nests are present and likely to be affected by works, a suitable protection zone would be required until such time that the young have fledged and the nest is no longer active. This would likely result in delays to the programme and would need to be informed by an ecologist. This would only be applicable to small and simple areas of habitat.

Enhancements

Wildflower meadow, native shrubs and tree planting

4.27 The provision of wildlife friendly planting has the potential to increase biodiversity within the Site and provide additional opportunities for invertebrates to shelter and forage. The proposals include for extensive habitat creation including wildflower meadow grassland, native shrub planting and new tree planting. The will result in an enhancement compared to the existing baseline, creating more diverse habitats providing opportunities for shelter and foraging for a range of species.

4.28 The provision of bat/bird nesting opportunities would enhance the Site for these species. This could include boxes mounted to trees and/or buildings.

Appendix 1
Policy and Legislation

Statutory nature conservation sites and protected species are a 'material consideration' in the UK planning process (DCLG 2012). Where planning permission is not required, for example on proposals for external repair to structures, consideration of protected species remains necessary given their protection under UK and EU law.

Natural England Standing Advice aims to support Local Planning Authorities decision making in respect of protected species (Natural England 2012). Standing advice is a material consideration in determining the outcome of applications, in the same way as any individual response received from Natural England following consultation.

The Conservation of Habitats and Species Regulations 2017 transpose the requirements of the European Habitats Directive (Council Directive 92/43/EEC) and Birds Directive (Council Directive 79/409/EEC) into UK law, enabling the designation of protected sites and species at a European level.

The Wildlife and Countryside Act 1981 (as amended) forms the key piece of UK legislation relating to the protection of habitats and species.

The Wild Mammals Protection Act 1996 sets out the welfare framework in respect to wild mammals, prohibiting a range of activities that may cause unnecessary suffering.

Species and Habitats of Principal Importance for Conservation in England and Wales and priority habitats and species listed in the **London's Biodiversity Action Plan (BAP)** are species which are targeted for conservation. The government has a duty to ensure that involved parties take reasonable practice steps to further the conservation of such species under **Section 41 of the Natural Environment and Rural Communities Bill 2006**. In addition, the Act places a **biodiversity duty on public authorities** who 'must, in exercising their functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity' (Section 40 [1]). Criteria for selection of national priority habitats and species in the UK include international threat and marked national decline.

The National Planning Policy Framework (DCLG 2012) states (Section 11), that the planning system should minimise impacts on biodiversity, providing net gains in biodiversity where possible. It also states that local planning authorities and planning policies should:

- Plan positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.
- Take account of the need to plan for biodiversity at a landscape-scale across local authority boundaries.
- Identify and map components of the local ecological networks, including: international, national and local sites of importance for biodiversity, and areas identified by local partnerships for habitat restoration or creation.
- Promote the preservation, restoration and re-creation of priority habitats, ecological networks and the recovery of priority species populations, linked to national and local targets and identify suitable indicators for monitoring biodiversity in the plan.

London Borough of Camden (2017) Camden Local Plan *Policy A3 Biodiversity* is intended to support the London Biodiversity Strategy and the Camden Biodiversity Action Plan (BAP) by ensuring Camden's growth is accompanied by a significant enhancement in the borough's biodiversity. The Council aims to maximise opportunities for biodiversity in and around developments in order to deliver a net gain in biodiversity and a range of wider environmental benefits.

Bats

All British species of bat are listed on the Wildlife and Countryside Act 1981 (as amended) Schedule 5. It is an offence to deliberately kill, damage, take (Section 9(1)) a bat; to intentionally or recklessly disturb a bat whilst it occupies a place of shelter or protection (Section 9(4)(b)); or to deliberately or recklessly damage, destroy or obstruct access to a bat roost (Section 9(4)(c)). Given the strict nature of these offences, there is an obligation on the developer and owner of a site to consider the presence of bats.

All British bats are listed on the Conservation of Habitats and Species Regulations 2010, Schedule 2. Regulation 41 strengthens the protection of bats under the 1981 Act against deliberate capture or killing (Regulation 41(1) (a)), deliberate disturbance (Regulation 41(1) (b))[5] and damage or destruction of a resting place (Regulation 41(1) (d)).

A bat roost is defined as any structure or place which is used for shelter or protection, irrespective of whether or not bats are resident. Buildings and trees may be used by bats for a number of different purposes throughout the year including resting, sleeping, breeding, raising young and hibernating. Use depends on bat age, sex, condition and species as well as the external factors of season and weather conditions. A roost used during one season is therefore protected throughout the year and any proposed works that may result in disturbance to bats, and loss, obstruction of or damage to a roost are licensable.

Application for a Natural England EPS Licence

Development works that may cause killing or injury of bats or that would result in the damage, loss or disturbance of a bat roost would require a Natural England (NE) Bat Mitigation Licence.

For a Mitigation licence to be granted three tests must be met. Evidence is needed to determine these three tests: whether there is a need for the development which justifies the impact on the European Protected Species (EPS); whether there is an alternative which would avoid the impact and need for an EPS licence; and whether mitigation proposed is sufficient to maintain the conservation status of the EPS in question.

A Mitigation Licence application will generally only be considered by NE on receipt of planning consent, and once any pre-commencement conditions of relevance to ecology have been discharged.

There are two licensing routes now available for bats, which comprise:

Full NE England EPS Mitigation Licence:

- NE aim to determine the application within six weeks (although this can take longer).
- The application comprises three components including an application form (broad details of the applicant, site and proposals); a detailed Method Statement providing the survey methods and findings, impact assessment and mitigation measures (including detailed maps and schedule of works); and a Reasoned Statement outlining the „need“ for the development and consideration of alternatives.

NE Low Impact Class Licence

- This new route provides an alternative, quicker route (with a much reduced application form, and a target of 10 days to determine an application).
- This Low Impact Class Licence is only available to Registered Consultants identified by NE.
- This is available for sites which support up to three low status roosts (day roosts, night roosts, feeding roosts and transitional roosts) of a maximum of three common species. The common species which can be covered by this licence include common pipistrelle, soprano pipistrelle, brown longeared, whiskered, Brandts, Daubenton“s and Natterer“s bat.
- All licensed works require evidence that there is a need for the development and that appropriate mitigation, including seasonal constraints and provision of alternative habitat and/or roosting structures is considered.
- Before Natural England can confirm the site is registered and licensable works can commence, an assessment of the three tests must be undertaken by the Registered Consultant. Although

[5] Relates specifically to deliberate disturbance in such a way as to be likely to significantly affect i) the ability of any significant group of animals of that species to survive, breed or rear or nurture their young or ii) the local distribution of that species.

this does not need to be submitted to NE, NE may subsequently undertake a review of the project and request to see all evidence as collected by the Consultant. This can only be undertaken following a survey and impact assessment which must be carried out in accordance with licence conditions and BCT survey guidelines.

- This licence cannot be used in relation to trees.

Several species of bat, including brown long-eared and soprano pipistrelle are listed as species of principal importance under the NERC Act (2006). Section 41 of the Act is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Nesting Birds

Birds and their nests are protected by the **Wildlife and Countryside Act 1981 (as amended)**. This Act gives protection to all species of bird with regard to killing and injury, and to their nests and eggs with regard to taking, damaging and destruction. Certain species listed on Schedule 1 of the Act, are afforded additional protection against protection.

Hedgehogs

Hedgehogs are protected by the **Wildlife and Countryside Act 1981 (as amended) Schedule 6,** which makes it illegal to kill or capture wild hedgehogs. They are listed under the **Wild Mammals Protection Act (1996)**, which prohibits cruel treatment of hedgehogs.

Appendix 2
Extended Phase 1 Habitat Map

Regent's Park, Gloucester Gate Playground – Ecology

Figure 1: Phase 1 Habitat with Bat Roost Potential

Survey boundary

Target note

Phase 1 Habitat

- Amenity Grassland
- Building
- Hardstanding
- Species-poor intact hedge

Bat Roost Potential - Trees

- Low
- Moderate
- Negligible

T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T13 T14 T15 T16 T17 T18 T19 T20 T21 T22 T23

01 02 03 04 05 06

N

0 20 40 m

Map Scale @A3: 1:550

LUC

CB:XX EB:Goosen_V LUC 10394_FIG1_r0_Phase1_BRP 04/07/2018

Source: LUC

Appendix 3
Extended Phase 1 Habitat Survey – Target Notes

Target note	Description	Photos
1	Hardstanding - was within the children's playground and comprised of safety surface, wood chippings and sand, with paved brick and asphalt pedestrian footpaths.	 
2	Shelter area - this was a gazebo style shelter, with wooden supports and wooden panels on the underside of a slate tiled roof. A wooden bench was also present beneath this. This was recorded as having low bat roost potential, due multiple slate tiles being lifted on all eight sections of the roof.	 

Target note	Description	Photos
3	Toilet block - this had a flat roof with bitumen felt and white wooden fascia boards. The external walls were white concrete with exposed brick in each corner, with the front of the building (west) having wooden panels. The building was used as a toilet facility. This was recorded as having negligible bat roost potential. Little Owl *Athene noctua* - evidence found of a potential feeding perch for Little Owl on the toilet block building, within the east corner of the structure. There were faecal splashing on the guttering and pellets located beneath this within the amenity grassland.	 
4	Amenity Grassland – within children's playground. This bordered the hedgerow that surrounded the children's playground, it was mown short and very dry. Species present were dominate perennial rye grass *Lolium perenne*, occasional white clover *Trifolium repens* and dandelion *Taraxacum agg.*, frequent ribwort plantain *Plantago lanceolata* and rare wall barley *Hordeum murinum* and red dead nettle *Lamium purpureum*.	

Target note	Description	Photos
5	Amenity Grassland – outside children's playground. This habitat comprised the rest of the site with scattered trees throughout, just like TN4 it was mown short and very dry. Species present were dominate perennial rye grass, occasional ribwort plantain and greater plantain *Plantago major*, rare spear thistle *Cirsium vulgare*, cranesbill sp. *Geranium* sp. and common orache *Atriplex patula*.	
6	Hedgerow - surrounded the children's playground, and at the centre was a metal fence. It was largely dominate in hornbeam *Carpinus betulus* with the rare occurrences of laurel *Laurus nobilis* present in the north and northeast sections. The appearance was dense and sporadic in its recent growth.	

Appendix 4
Bat Roost Potential - Trees

Tree Code	Bat Roost Potential	Description	Photos
T1	Negligible	Mature Hornbeam *Carpinus betulus*. No potential roosting features present.	
T2	Low	Mature Whitebeam *Sorbus aria*. On the south face of the tree there was a small cavity approximately 4m up the left hand branch, this was slightly cobwebbed. On the south face there appears to be a small gap down into the main trunk between the split of the two main branches.	
T3	Moderate	Mature Whitebeam. Two large cavities on the south face, one was facing east and the other west, both were approximately 2m up. Both cavities had cobwebs covering the entrance. The west main branch had one cavity approximately 3m up.	

Tree Code	Bat Roost Potential	Description	Photos
T4	Low	Mature Noway Maple *Acer platanoides*. Small cavity on the north side of the main trunk, approximately 2m up, with cobwebs present. On the east side a small cavity was present approximately 5m up.	 
T5	Negligible	Semi mature Hawthorn *Crataegus monogyna*. No potential roosting features present.	
T6	Low	Mature Hawthorn. This tree is in the plans to be removed. The main trunk was twisted allowing for fissures in the main trunk, the main opening was on the east face approximately 1m up, this was heavily cobwebbed. On the west face the same can be seen a little higher up, with the twisting branches and fissures in between, this again was heavily cobwebbed.	 
T7	Negligible	Semi mature Sycamore *Acer pseudoplatanus*. This tree is in the plans to be removed. No potential roosting features present.	

Tree Code	Bat Roost Potential	Description	Photos
T8	Negligible	Semi mature Sycamore. No potential roosting features present.	
T9	Negligible	Semi mature Sycamore. No potential roosting features present.	
T10	Negligible	Semi mature Horse Chestnut *Aesculus hippocastanum*. Narrow opening in the bark at the base of the tree, however was very shallow. Therefore no potential roosting features present.	
T13	Low	Semi mature Horse Chestnut. Three cavities present at just under 2m up, equally spaced surrounding the main trunk of the tree, all had cobwebs covering the entrances.	 

Tree Code	Bat Roost Potential	Description	Photos
T14	Low	Semi mature Horse Chestnut. Three cavities on the north side and five on the south side. All cavities are between 2-3m up, with one located on the main trunk and the rest on branches coming out from the main trunk.	
T15	Negligible	Semi mature Horse Chestnut. No potential roosting features present.	
T16	Low	Semi mature Horse Chestnut. The cavity is located on the southern branch, the hole is west facing and was cobwebbed at the entrance. Another cavity is present on the other side but this was very shallow and also cobwebbed at the entrance.	
T17	Negligible	Mature Pedunculate Oak *Quercus robur*. No potential roosting features present.	

Tree Code	Bat Roost Potential	Description	Photos
T18	Low	Mature Horse Chestnut. On the east face the bark was very lifted leaving long fissures, the fissures were cobwebbed at the lower part of the trunk. The fissures ran all the way up the main trunk and onto the bigger central stem, with larger openings approximately 5m up.	
T19	Moderate	Mature Red Horse Chestnut *Aesculus* × *carnea*. On the east face there was a large cavity, approximately 2m up.	
T20	Low	Mature Red Horse Chestnut. On the east face a long heavily cobwebbed fissure within the bark was 1m up, and a cavity approximately 2m up on the south face.	
T21	Low	Mature Red Horse Chestnut. A north face cavity located on the main trunk approximately 2m up.	

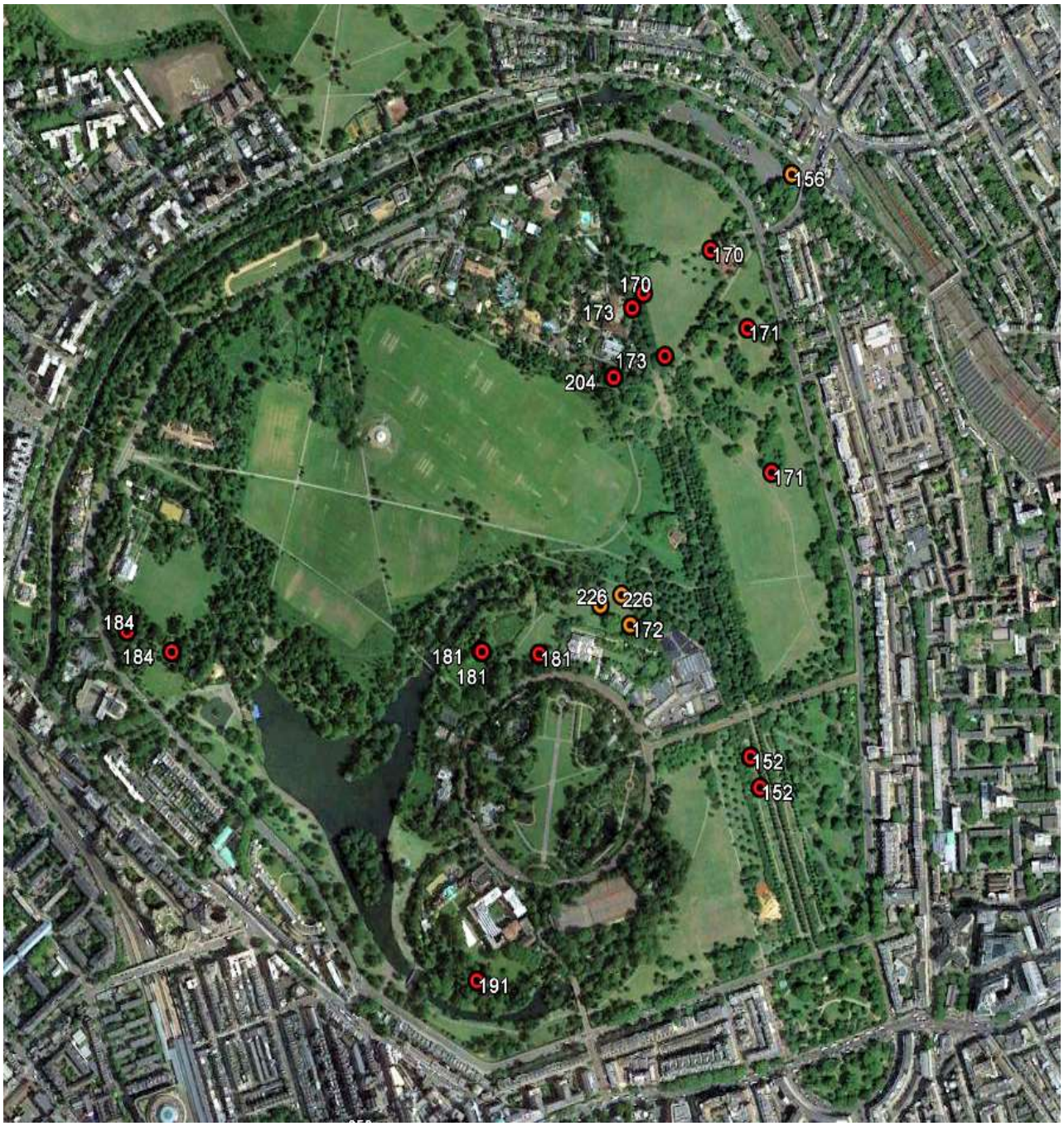
Tree Code	Bat Roost Potential	Description	Photos
T22	Low	Mature Red Horse Chestnut. Lifted bark present on north facing high branches.	
T23	Negligible	Semi mature Cherry sp. *Prunus sp.* No potential roosting features present.	

Appendix 5

Hedgehog Survey Results (data provided by TRP, July 2018)

Locations of hedgehog captures within Regent's Park in May 2016.

Red = females, Orange = males. Numbers refer to individual animals.



Locations of hedgehog captures within Regent's Park in September 2016.

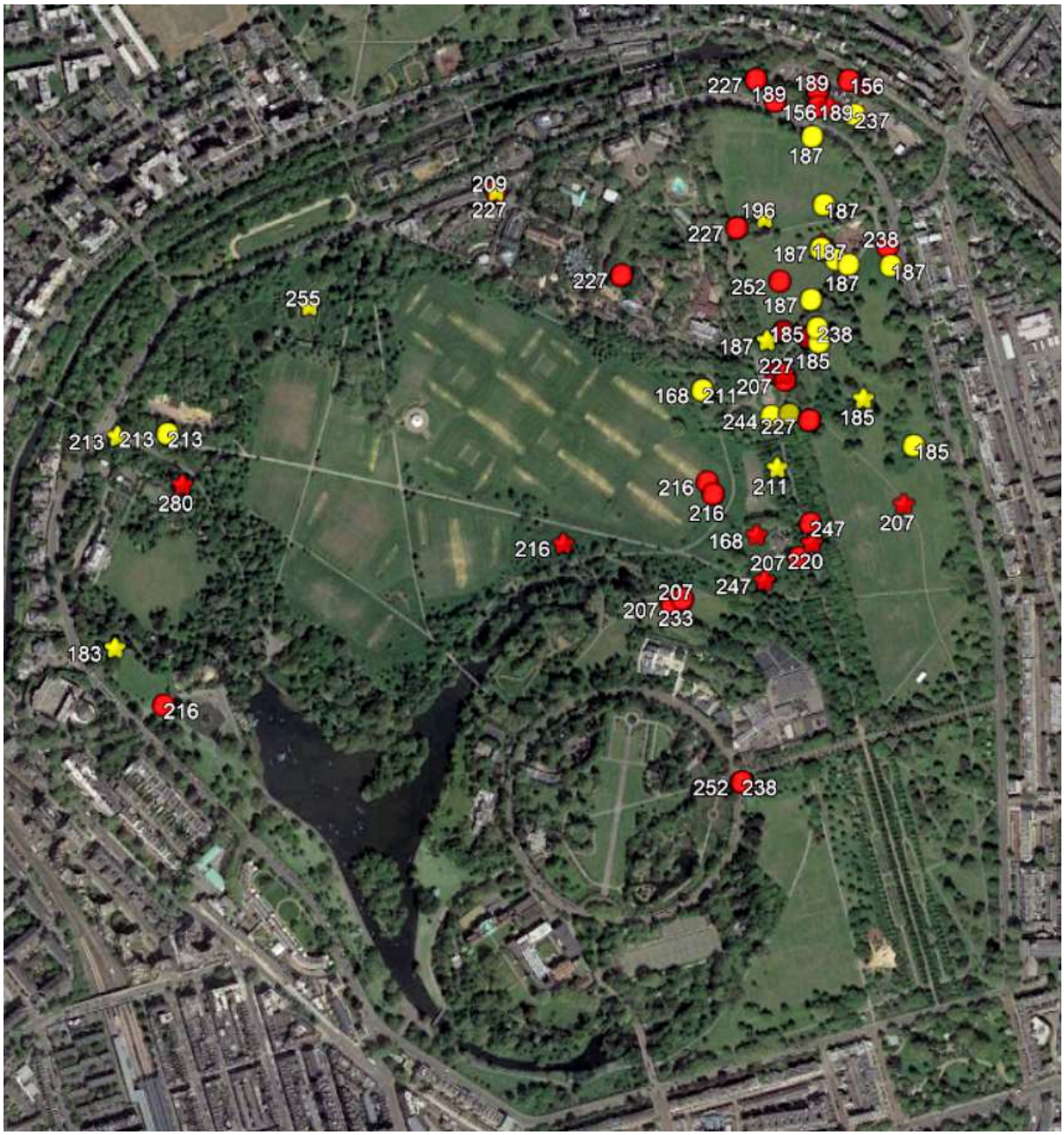
Blue = females; Cyan = males. Numbers refer to individual animals.

Total hedgehog captures in May and September 2017

red= May; yellow = September

Total hedgehog captures in May 2018

Red=male; yellow=female; star=first capture; circle=recaptures



Appendix 6
LUC Drawing 10335-LD-PLN-420: Ecological Enhancements

Large swathes of meadow grasses, suitable for hedgehog foraging and invertebrates

Proposed wildlife corridor into the wider park

Existing hedgerow and clump of shrubs retained

Areas of deadwood logs, used for seating

1no hedgehog shelter buried within a new clump of UK native hedgerow and scrub species

2no log piles for hedgehogs and invertebrates in a clump of existing species along main foraging corridor

Existing main wildlife corridor

2no log piles for hedgehogs and invertebrates in a new clump of UK native hedgerow and scrub species

Notes
Do not scale from this drawing.
All dimensions are drawn in millimetres.

Key

Ownership Boundary

Application Boundary

Existing trees
Refer to Arboricultural Report for further details.

Proposed Trees
Refer to LUC drawing no. 10335-LD-PLN-410 (Soft Landscape Plan) for further details.

Existing planting
To be retained

Proposed 'High' planting
Detail Planting plan to be prepared at RIBA Stage 4, consisting of UK native large shrubs and hedgerow species with at least 1m clear stem, and under planted with groundcover plants and small shade tolerant herbaceous species.

Proposed 'Low' planting
Detail Planting plan to be prepared at RIBA Stage 4, consisting of groundcover plants and low shrub and herbaceous species.

Proposed Hedge planting
Detail Planting plan to be prepared at RIBA Stage 4, consisting of a UK native hedgerow mix.

Proposed amenity grass seed
Cultivated and prepared. DLF seed mix PM 51 Greenscape @ 35g/m².
Cultivate in approx 4g/m2 (or to manufacturer's reccomendations) of slow release fertiliser and mix into the top 50mm of soil.

Proposed wildflower meadow seed
Cultivated and prepared. DLF Wildflower seed mix PRO FLORA 9 General Purpose Heritage mix, including a 90% grass 10% wildflower diverse mix with over 40 species.

Iss	Date	Description	Drn	Chk
A	13.07.18	First Issue	JV	-

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LUC
LUC London
43 Chalton Street, London, NW1 1JD
+44 (0)20 7383 5784
london@landuse.co.uk
www.landuse.co.uk

Project
Gloucester Gate Playground
The Regent's Park

Client
The Royal Parks

Scale @ A3
1:500

Status
PLANNING

Drawing Title
Ecological Enhancements

Job Nr
10335

Drawing Nr
10335-LD-PLN-420

Issue
A