

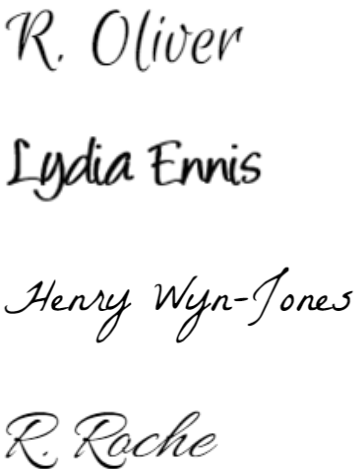
**MKA**  
ECOLOGY

# **Preliminary Ecological Appraisal & Preliminary Roost Assessment**

Tooting Bec Lido

<b>Site</b>	<i>Tooting Bec Lido, Tooting Bec Rd, London SW16 1RU</i>
<b>Project number</b>	<i>137923</i>
<b>Client name</b>	<i>WR-AP Architects</i>

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#### Declaration of compliance

This Preliminary Ecological Appraisal and Preliminary Roost Assessment has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”. The information which we have provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.



MKA Ecology Ltd is a CIEEM Registered Practice. This means that MKA Ecology Ltd are formally recognised for high professional standards, working at the forefront of our profession.

#### Validity of data

Unless stated otherwise the information provided within this report is valid for a maximum period of 24 months from the date of survey. If works at the site have not progressed by this time an updated site visit may be required in order to determine any changes in site composition and ecological constraints.

# CONTENTS

<b>1.</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>4</b>
<b>2.</b>	<b>INTRODUCTION .....</b>	<b>6</b>
2.1.	Aims and scope of Preliminary Ecological Appraisal and Preliminary Roost Assessment.....	6
2.2.	Site description and context.....	6
2.3.	Proposed development.....	7
2.4.	Legislation and planning policy.....	7
<b>3.</b>	<b>METHODOLOGIES .....</b>	<b>9</b>
3.1.	Desktop study.....	9
3.2.	UK Habitat Classification .....	9
3.3.	Protected and notable species scoping survey.....	10
3.4.	Preliminary Roost Assessment.....	11
3.5.	Equipment.....	15
3.6.	Surveyor, author and reviewer.....	15
3.7.	Date, time and weather conditions.....	15
3.8.	Constraints.....	16
<b>4.</b>	<b>RESULTS .....</b>	<b>17</b>
4.1.	Desktop study.....	17
4.2.	UK Habitat Classification .....	21
4.3.	Protected species scoping survey .....	25
4.4.	Preliminary Roost Assessment.....	27
<b>5.</b>	<b>ECOLOGICAL CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS.....</b>	<b>30</b>
5.1.	Ecological constraints.....	30
5.2.	Opportunities for biodiversity enhancement.....	34
<b>6.</b>	<b>CONCLUSIONS .....</b>	<b>41</b>
<b>7.</b>	<b>REFERENCES .....</b>	<b>42</b>
<b>8.</b>	<b>APPENDICES .....</b>	<b>44</b>
8.1.	Appendix 1: Relevant wildlife legislation and planning policy .....	44
8.2.	Appendix 2: UK Habitat Classification Species List .....	57
8.3.	Appendix 3: Bird species recorded at the Site .....	59

8.4.	Appendix 4: Site photographs.....	61
8.5.	Appendix 5: Bird and bat box recommendations .....	67
8.6.	Appendix 6: Habitat creation recommendations .....	73
8.7.	Appendix 7: Green infrastructure recommendations.....	78

# 1. EXECUTIVE SUMMARY

In February 2023, MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal and Preliminary Roost Assessment of Toothing Bec Lido. The appraisal included a habitat survey, protected species scoping survey and desktop study of protected and notable sites and species in the area. Site visits were undertaken on 14 March 2023 and 24 March 2023.

The Site comprises hardstanding and buildings in association with the lido, modified grassland, deciduous woodland, mixed scrub, bramble scrub, scattered trees and a line of trees. The proposals for the Site involve the refurbishment and renovation of the Site, including the reconfiguration of the café/kiosk building.

The following ecological constraints were identified at the Site with recommendations made as follows:

- **Designated sites:** The Site lies within Toothing Common Metropolitan Grade Site of Importance for Nature Conservation (SINC). A Construction Environmental Management Plan (CEMP) should be produced to protect the integrity of this designated site;
- **Onsite habitats:** The scattered mature oak trees and the deciduous woodland habitat are classified as Habitats of Principal Importance (HPI) under the NERC Act (2006), and should be retained and protected under the design proposals;
- **Invertebrates:** A number of deadwood features are present throughout the Site. These features have the potential to support protected and notable invertebrates, such as stag beetle, and should be retained where possible. Any deadwood removal deemed necessary should be undertaken under ecological supervision;
- **Reptiles:** The scrub habitats at the Site have the potential to support reptiles. Vegetation clearance of reptile-suitable habitats should adopt habitat manipulation methodology in order to safeguard any reptiles that may be present. A full methodology should be detailed within a CEMP;
- **Amphibians:** The scrub habitats also have to potential to support terrestrial-phase amphibians. The sensitive vegetation clearance methodology discussed with regards to reptiles will ensure that any amphibians that may be present are similarly safeguarded;
- **Breeding birds:** There is a high risk of breeding birds in the trees, scrub and woodland habitats onsite. Any required vegetation clearance works should be undertaken outside of the bird breeding season (September – February inclusive). Should these timings not be possible, a nesting bird check by a suitably qualified ecologist should take place prior to any clearance;
- **Roosting bats:** Trees T3, T5 & T6 have been assessed as having high bat roost potential. It is recommended that these trees are retained and protected under the development proposals. Where removal is deemed necessary, they should be subject to an aerial tree inspection to fully ascertain their potential to support roosting bats;

- **Foraging and commuting bats:** There has been assessed to be a high likelihood that the Site supports foraging and commuting bats. A sensitive lighting scheme should be designed in order to maintain the suitability of the Site and adjacent areas for foraging and commuting bats;
- **Badger:** The scrub and woodland habitats offer some potential for badger, although no setts or evidence of badger was recorded on Site during the survey. Should these habitats need to be removed under the design proposals, a badger check should be undertaken immediately prior to the commencement of clearance works; and
- **Hedgehog:** The scrub and woodland habitats have the potential to support hedgehog. The sensitive vegetation clearance methodology discussed with regards to reptiles and amphibians will ensure that any hedgehogs that may be present are safeguarded.

Ecological enhancements have been recommended for the proposed development, including a contribution to acid grassland restoration efforts in the wider Tooting Bec Common. Within the Site, the following enhancements are recommended: the creation of local priority habitats, the creation of biodiversity-focused green infrastructure, the installation of bird and bat boxes targeted to Local Priority Species, the creation of a bee lawn, and the creation of new deadwood features.

It is recommended that a Biodiversity Net Gain (BNG) assessment is undertaken to ensure that the proposed development is able to demonstrate a 10% increase in biodiversity at the Site, in line with the Environment Act (2021). It is also recommended that an Urban Greening Factor (UGF) assessment is undertaken in order to ensure that there is adequate green infrastructure provision at the Site. A Landscape and Ecology Management Plan (LEMP) should be produced so as to ensure the successful establishment and long-term management of newly created habitats.

The inclusion of ecological enhancement features is in line with local and regional planning policy, as well as the National Planning Policy Framework. Enhancements will contribute towards a net positive change in biodiversity onsite and ensure a sustainable development that helps to achieve both local and national biodiversity targets.

## 2. INTRODUCTION

### 2.1. Aims and scope of Preliminary Ecological Appraisal and Preliminary Roost Assessment

In February 2023, MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal and Preliminary Roost Assessment at Tooting Bec Lido by WR-AP Architects in order to support a planning application for the refurbishment and redevelopment of the Site.

The aims of the Preliminary Ecological Appraisal were to:

- Undertake a desktop study to identify the extent of protected and notable species and habitats in proximity to the Site;
- Prepare a habitat map for the Site;
- Identify evidence of protected species/species of conservation concern at the Site;
- Assess the potential impacts of the proposed development, using existing plans;
- Detail recommendations for further survey effort where required; and
- Detail recommendations for biodiversity enhancements.

The aims of the Preliminary Roost Assessment were to:

- Undertake a desktop study to identify the locations of known bat roosts and activity records within 2km of the Site;
- Assess the suitability of the buildings and trees at the Site for roosting bats, and record any evidence of bat presence;
- Identify likely ecological impacts relating to the proposed development;
- Assess the need for further survey effort, a European Protected Species Licence or mitigation, if required; and
- Propose any suitable habitat enhancements for bat species, if required.

### 2.2. Site description and context

The survey area is shown on the map in Figure 1. Within this report this area is referred to as the Site or Tooting Bec Lido. The Site is located within Tooting Common, South London (centred on National Grid Reference TQ 29442 72031), and falls under the authority of Wandsworth London Borough Council. The Site comprises hardstanding and buildings in association with the lido, modified grassland, deciduous woodland, mixed scrub, bramble scrub, scattered trees and a line of trees.

### 2.3. Proposed development

The proposed development involves the refurbishment and renovation of Tooting Bec Lido, including the reconfiguration of the café/kiosk building (Building B1, Figure 1; Photograph 1, Appendix 4).

### 2.4. Legislation and planning policy

This Preliminary Ecological Appraisal and Preliminary Roost Assessment has been undertaken with reference to relevant wildlife legislation and planning policy.

Relevant legislation considered within the scope of this document includes the following:

- The Environment Act 2021;
- The Wildlife and Countryside Act 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- Natural Environment and Rural Communities (NERC) Act 2006;
- The Countryside and Rights of Way (CRoW) Act 2000;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

Further information is provided in Appendix 1, including levels of protection granted to the species considered in Section 3.3.

In addition to obligations under wildlife legislation, the revised National Planning Policy Framework (NPPF) updated on 20 July 2021 requires planning decisions to contribute to conserving and enhancing the local environment. Further details are provided in Appendix 1.

Given that the Site is located within London, consideration of the London Plan (2021) has been given. The London Plan contains a number of policies relating to biodiversity, a brief summary of which is set out below:

- Policy G1 Green infrastructure;
- Policy G5 Urban greening;
- Policy G6 Biodiversity and access to nature;
- Policy G7 Trees and woodlands; and
- Policy G8 Food growing.

Wandsworth London Borough Council has produced an adopted Core Strategy (2016). This document contains a single policy relating to biodiversity and habitat conservation: Policy PL4 – Open Space and the Natural Environment.



A new Local Plan is currently in development, which will supersede the existing Core Strategy. Within the new Local Plan the following policies relate to biodiversity and habitat conservation:

- LP55 Protection and Enhancement of Green and Blue Infrastructure
- LP57 Biodiversity
- LP58 Tree Management and Landscaping
- LP59 Urban Greening Factor.

Wandsworth have produced a Biodiversity Strategy (Wandsworth London Borough Council, 2020b), which identifies a number of local priority habitats and species that should be subject to particular consideration with regards to protection and enhancement measures within the planning process. There is also a Biodiversity Action Plan for Greater London (London Biodiversity Partnership, 2022), which identifies regional priority habitats and species.

Further details of these policies are provided in Appendix 1. Where relevant these are discussed in further detail in Section 5.

## 3. METHODOLOGIES

This Preliminary Ecological Appraisal and Preliminary Roost Assessment has been undertaken in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal, 2<sup>nd</sup> edition (CIEEM, 2017).

### 3.1. Desktop study

A data search was conducted for the Site and the surrounding 10km for internationally designated sites, and the surrounding area within 2km for nationally designated sites and species records. Data was retrieved from the sources listed in Table 1.

**Table 1: Sources of data for desktop study**

Organisation	Data collected	Date collected
Multi-agency Geographic Information for the Countryside (MAGIC) <a href="http://www.magic.gov.uk">www.magic.gov.uk</a>	Information on local, national and international statutory protected areas.	13/04/2023
Greenspace Information for Greater London (GiGL)	Information on protected and notable sites and species within 2km of the Site (TQ 29442 72031).	01/03/2023
Ordnance Survey maps and aerial photography	Information on habitats and connectivity between the Site and the surrounding landscape.	13/04/2023
Plantlife Important Plant Areas (IPAs)	Information on important plant areas within 2km of the Site.	13/04/2023
Buglife Important Invertebrate Areas (IIAs)	Information on important invertebrate areas within 2km of the Site.	13/04/2023

Wandsworth London Borough Council planning portal was also referred to in order to understand the scope of further development surrounding the Site.

### 3.2. UK Habitat Classification

Habitats were surveyed using the standardised UK Habitat classification and mapping methodology (UK Habs) (Butcher et al, 2020). Data were recorded onto a Samsung Tablet in a Geographic Information System (GIS), in this instance QField, following a modified UK Habs Colour Mapping Pallet. Dominant plant species were observed and recorded within each habitat type. The plant species nomenclature follows that of Stace (2019).

The DAFOR scale is used to describe the relative abundance of species. The scale is shown in Table 2. It is important to note that where a species is described as rare this description refers to its relative abundance within the Site and is not a description of its abundance within the wider landscape. Therefore, a species with a rare relative abundance within the Site may be common within the wider landscape.

**Table 2: DAFOR scale**

DAFOR code	Relative abundance
D	Dominant
A	Abundant
F	Frequent
O	Occasional
R	Rare

### 3.3. Protected and notable species scoping survey

As part of the Preliminary Ecological Appraisal and Preliminary Roost Assessment, an assessment of the potential for the habitats on site to support protected or notable species was made. This assessment was based on the quality, extent and interconnectivity of suitable habitats, along with the results of the desktop study detailed in Section 3.1. This includes Species of Principal Importance (SPI) as listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006), and Red and Amber listed Birds of Conservation Concern (BoCC) as per Stanbury *et al.*, 2021 (see Appendix 1).

Protected and notable species considered within the protected species scoping survey for Tooting Bec Lido include the following:

- Plants and fungi: Bluebell *Hyacinthoides non-scripta*, chamomile *Chamaemelum nobile* and corn spurrey *Spergula arvensis*.
- Invertebrates: Stag beetle *Lucanus cervus*, small heath *Coenonympha pamphilus* and brown hairstreak *Thecla betulae*.
- Fish: European eel *Anguilla anguilla*, river lamprey *Lampetra fluviatilis*, brown trout *Salmo trutta subsp. fario*.
- Amphibians: Natterjack toad *Epidalea calamita*, great crested newt *Triturus cristatus* and common toad *Bufo bufo*.
- Reptiles: Adder *Vipera berus*, common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica helvetica*.
- Birds: With special reference to species listed under Schedule 1 of The Wildlife and Countryside Act 1981 (as amended) and SPI.

- Mammals: Badger *Meles meles*, bats (all species), water vole *Arvicola amphibius*, otter *Lutra lutra*, hazel dormouse *Muscardinus avellanarius*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, harvest mouse *Micromys minutus*, polecat *Mustela putorius* and European beaver *Castor fiber*.

In each case the likelihood of presence of these protected species at the Site was classified as being either confirmed, high, moderate, low or negligible.

- **Confirmed:** The species is confirmed on the site during the Preliminary Ecological Appraisal, previous survey effort or recent records.
- **High:** Habitats are available onsite which are highly suitable for this species and there are records within the desktop study. The surrounding areas also provide widespread opportunities for the species which are well connected to the Site.
- **Moderate:** Some suitable habitat available on site for the species although not of optimum quality. Species is present with the desktop study.
- **Low:** Some suitable habitat available on site for the species but this is low value and possibly of small scale or with poor connectivity. No, or very few, records returned in the desktop study.
- **Negligible:** No suitable habitat available for the species, or very little poor-quality habitat.

This protected species scoping survey is designed to assess the *potential* for presence or absence of a particular species or species group, and does not constitute a full survey for these species.

### 3.4. Preliminary Roost Assessment

An internal and external inspection of buildings within the Site was undertaken following guidance set out in *Bat Surveys for Professional Ecologists – Good Practice Guidelines (3<sup>rd</sup> edition)* (Collins, 2016). All buildings within the Site were inspected and the locations of these are shown in Figure 1.

The following features were recorded for buildings:

- Location;
- Type;
- Dimensions;
- Age;
- Construction materials; and
- Current use.

Descriptions of potential and actual access points and roosting places were recorded (including height above ground level and aspect), as well as descriptions of evidence of bats found. The following types of evidence of use by bats were recorded:

- Location and number of any live bats;
- Location and number of any bat corpses or skeletons;
- Locations and number of bat droppings;
- Notes on relative freshness, shape and size of bat droppings;
- Location and quantity of any bat feeding remains;
- Location of clean, cobweb-free timbers, crevices and holes;
- Location of characteristic staining from urine and/or grease marks;
- Location and quantity of bat-fly (Nycteribiidae) pupal cases;
- Location of known and potential access points to the roost; and
- Location of the characteristic smell of bats.

The following features were recorded for trees:

- Species; and
- Diameter at breast height.

Descriptions of suitable and actual roost features were recorded (including height above ground level and aspect), as well as descriptions of evidence of bats found.

Potential roost features recorded were:

- Woodpecker holes;
- Rot holes;
- Hazard beams;
- Other vertical or horizontal cracks and splits (such as frost-cracks) in stems or branches;
- Partially detached plately bark;
- Knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar;
- Man-made holes (e.g. cavities that have development from flush cuts) or cavities created by branches tearing out from parent stems;
- Cankers (caused by localised bark death) in which cavities have developed;
- Other hollows or cavities, including butt-rots;
- Double-leaders forming compression forks with included bark and potential cavities;
- Gaps between overlapping stems or branches;
- Partially detached ivy with stem diameters in excess of 50mm; and
- Bat, bird or dormouse boxes.

The following types of evidence of use by bats were recorded for trees:

- Presence of bats;
- Bat droppings in, around or below a potential roost feature;
- Odour emanating from a potential roost feature;
- Audible squeaking at dusk or in warm weather; and
- Staining below the potential roost feature.

Buildings were assessed for their bat roost suitability according to the scheme presented in Collins (2016). These categories are shown in Table 3.

**Table 3: Categories to assess roost suitability in buildings and trees (adapted from Collins, 2016)**

Roost suitability	Description
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions* and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).  A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potential for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

\*For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

The guidelines for categorisation of bats in England by distribution and rarity (adapted from Wray *et al.*, 2010) are shown in the tables below.

**Table 4: Rarity of bat species within England**

Rarity within range (England)	Species
Rarest (population under 10,000)	Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> Bechstein's bat <i>Myotis bechsteinii</i>

Rarity within range (England)	Species
	Alcathoe's bat <i>Myotis alcathoe</i> Greater mouse-eared bat <i>Myotis myotis</i> Barbastelle <i>Barbastella barbastellus</i> Grey long-eared bat <i>Plecotus austriacus</i>
Rarer (population 10,000 to 100,000)	Lesser horseshoe bat <i>Rhinolophus hipposideros</i> Whiskered bat <i>Myotis mystacinus</i> Brandt's bat <i>Myotis brandtii</i> Daubenton's bat <i>Myotis daubentonii</i> Natterer's bat <i>Myotis nattereri</i> Leisler's bat <i>Nyctalus leisleri</i> Noctule <i>Nyctalus noctula</i> Serotine <i>Eptesicus serotinus</i> Nathusius's pipistrelle <i>Pipistrellus nathusii</i>
Common (population over 100,000)	Common pipistrelle <i>Pipistrellus pipistrellus</i> Soprano pipistrelle <i>Pipistrellus pygmaeus</i> Brown long-eared bat <i>Plecotus auritus</i>

**Table 5: Level of importance of roost type**

Geographic frame of reference	Roost type
District, Local or Parish	Feeding perches (common species) Individual bats (common species) Small numbers of non-breeding bats (common species) Mating sites (common species)
County	Maternity sites (common species) Small numbers of hibernating bats (common and rarer species) Feeding perches (rarer/rarest species) Individual bats (rarer/rarest species) Small numbers of non-breeding bats (rarer/rarest species)
Regional	Mating sites (rarer/rarest species) including well-used swarming sites Maternity sites (rarer species) Hibernation sites (rarest species) Significant hibernation sites for rarer/rarest species or all species assemblages
National/UK	Maternity sites (rarest species) Sites meeting SSSI guidelines*

Geographic frame of reference	Roost type
International	SAC sites

\*Sites meeting SSSI (Sites of Special Scientific Interest) selection guidelines include Barbastelle maternity roosts and mixed species hibernacula assemblages

### 3.5. Equipment

The inspection of buildings was conducted using a variety of equipment including ladders, digital video endoscope, inspection mirrors, binoculars, high-powered torch and a digital camera.

### 3.6. Surveyor, author and reviewer

The Preliminary Ecological Appraisal survey was undertaken by Lydia Ennis ACIEEM, Consultant Ecologist, and Henry Wyn-Jones Qualifying CIEEM, Graduate Ecologist, both at MKA Ecology Limited. Lydia has six years' experience as an ecologist and holds a Level 4 botanical Field Identification Skills Certificate. Henry is within his first year in the industry. The Preliminary Roost Assessment survey was undertaken by Rory Roche ACIEEM, Senior Ecologist at MKA Ecology Limited. Rory has seven years' experience within the industry conducting Preliminary Roost Assessments, and holds a Natural England Class 1 bat licence. The report has been written by Ross Oliver Qualifying CIEEM, Graduate Ecologist at MKA Ecology Limited. Ross has one years' experience in the industry undertaking and drafting Preliminary Ecological Appraisals and Preliminary Roost Assessments. The report has been reviewed by Lydia and authorised by Rory.

### 3.7. Date, time and weather conditions

See Table 6 below for details of the date, time and prevailing weather conditions recorded during the site visits for the Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA).

**Table 6: Date, time and weather conditions of survey visit**

Survey	Date	Time of survey	Weather conditions*
PEA	14 March 2023	10:00	Wind: BF1 Cloud: 3/8 Temp: 6°C Rain: None
PRA	24 March 2023	10:00	Wind: BF1 Cloud: 5/8 Temp: 7°C Rain: None

\*Wind as per Beaufort Scale / Cloud cover given in Oktas.



### **3.8. Constraints**

A single visit cannot always ascertain the presence or absence of a protected species. However, an assessment is made of the likelihood for protected species to occur based on habitat characteristics and the ecology of each species. Where there is potential for protected species, additional survey work may be required to ascertain their presence or absence.

Data on species records obtained from local biological records centres are sometimes only available at low spatial resolutions and are constrained by the voluntary nature of the contributions and what has been chosen to be submitted as records. While these records provide a useful indication of species recorded in the local area, in particular protected or notable species, the data is not necessarily an accurate reflection of species assemblages or abundance in the vicinity.

The assessment was undertaken outside the optimum period for Preliminary Ecological Appraisals, which runs from April to the end of September. In particular, the survey took place at a sub-optimal time of year for observing botanical characteristics of grassland habitats. Grassland surveys are best undertaken in June, when most grassland and forb indicator species are in flower or clearly visible. The timing of this survey therefore places a constraint on accurate assessment of the grassland parcels on the Site. This constraint and implications for recommendations is discussed further in Section 4 and Section 5. For other habitats and ecological features, it was possible to identify key habitats present and assess their likelihood of supporting a greater range of species.

## 4. RESULTS

### 4.1. Desktop study

An ecological desktop study was completed for the Site and the surrounding 10km for internationally designated sites, and the surrounding 2km for nationally designated sites and species records. Data provided by Greenspace Information for Greater London (GiGL) identified a number of UK and European protected species, SPI and Habitats of Principal Importance (HPI) (as listed under Section 41 of the NERC Act 2006), and species of conservation concern within 2km of the Site. It should be noted that this is not a comprehensive list of the distribution or extent of the local flora and fauna of conservation importance. These species records are discussed in greater detail in the protected species scoping survey section (Section 4.3 below).

Details of internationally designated sites identified within this search are displayed in Table 7 below. These consist of two Special Areas of Conservation (SACs).

**Table 7: International designated sites within 10km of Tooting Bec Lido**

Site name	Area (ha)	Distance and direction	Reasons for selection
Wimbledon Common SAC	351.4	6.1km W	Wimbledon Common has a large number of old trees and much fallen decaying timber. It is at the heart of the south London centre of distribution for stag beetle. The site supports a number of other scarce invertebrate species associated with decaying timber. Annex I habitats, including European dry heaths and Northern Atlantic wet heaths with heather <i>Erica tetralix</i> , are also present at Wimbledon Common.
Richmond Park SAC	846.4	8.0km W	Richmond Park has a large number of ancient trees with decaying timber. It is at the heart of the South London centre of distribution for stag beetle, and is a site of national importance for the conservation of the fauna of invertebrates associated with the decaying timber of ancient trees.

Details of statutorily designated sites identified as part of the desktop study are displayed in Table 8 below. These consist of three Local Nature Reserves (LNRs).

**Table 8: Statutorily designated sites within 2km of Tooting Bec Lido**

Site name	Area (ha)	Distance and direction	Reasons for selection
Streatham Common LNR	13.77	1.5km SE	Streatham Common is a large open space at the southern tip of Lambeth. It contains a variety of habitats including woodland, grassland, wild flower meadows and a picnic area.
Unigate Wood LNR	1.24	1.5km E	A well-structured and diverse area of deciduous oak <i>Quercus robur</i> , ash <i>Fraxinus excelsior</i> and poplar <i>Populus sp.</i> woodland. It supports diverse populations of birds including greater spotted woodpecker <i>Dendrocopos major</i> , green woodpecker <i>Picus viridis</i> , tawny owl <i>Strix aluco</i> and treecreeper <i>Certhia familiaris</i> . It is also actively used by common and soprano pipistrelle bats.
Eardley Road Sidings LNR	1.47	1.7km S	The disused railway sidings support the largest area of deciduous birch <i>Betula sp.</i> woodland in Lambeth and Merton, and supports a diverse assemblage of birds including greater spotted woodpecker.

Details of non-statutorily designated sites identified as part of the desktop study are displayed in Table 9 below. These consist of 19 Sites of Importance for Nature Conservation (SINCs).

**Table 9: Non-statutorily designated sites within 2km of Tooting Bec Lido**

Site name	Area (ha)	Distance and direction	Reasons for selection
Tooting Common SINC (Grade Metropolitan)	82.78	The Site lies within Tooting Common SINC	A large open space which includes three extensive areas of woodland and areas of relict acid grassland. A recent Heritage Lottery project restored significant areas of acid grassland. An increase in butterfly monitoring in recent years has yielded 27 species which use the Common. This includes a regionally important population of white-letter hairstreak <i>Satyrrium w-album</i> , increasing occurrence of marbled white <i>Melanargia galathea</i> and brown argus <i>Aricia agestis</i> associated with the acid grassland, and a first record of brown hairstreak, the closest

Site name	Area (ha)	Distance and direction	Reasons for selection
			record for this species to London in Surrey vice-county.
Railway Linesides – Tooting Bec to Eardley Road SINC (Grade Borough I)	3.69	0.3km S	An impressive range of vegetation along the side of rail tracks in the south of Lambeth borough. Habitats present include scattered trees, tall herbs and roughland.
Streatham Junction to Wimbledon Railsides SINC (Grade Borough II)	13.16	0.3km S	A narrow strip of natural vegetation within the railway corridor, accompanied by the River Graveney for part of the way.
Churchyard of St Leonard's, Streatham SINC (Grade Local)	0.51	0.6km SE	The churchyard of Streatham's parish church and the best preserved of Lambeth's original village churchyards.
Railsides around Streatham Junction SINC (Grade Borough II)	3.00	1.0km S	Wandsworth's network of railways adds up to substantial area of wildlife habitat and provides important wildlife corridors. Habitats present include bracken, scattered trees and woodland.
Balham Railway Embankments SINC (Grade Borough II)	3.73	1.0km N	Wandsworth's network of railways adds up to substantial area of wildlife habitat and provides important wildlife corridors. Habitats present include roughland, scrub and woodland.
Railway Linesides – Streatham Hill SINC (Grade Borough I)	2.79	1.1km N	An important area of wildlife habitat running between Tulse Hill and Streatham, and Streatham Hill and West Norwood. Habitats present include reed beds, scrub and woodland.
Sunnyhill Road Open Space SINC (Grade Local)	0.12	1.1km SE	A small site over the top of a railway tunnel which was formally allotments but has now been reclaimed by nature.
Railway Linesides - Streatham Cuttings SINC (Grade Borough I)	2.97	1.2km E	An important area of wildlife habitat running between Tulse Hill and Streatham, and Streatham Hill and West Norwood. Habitats present include reed beds, scrub and woodland.
Streatham Common and The Rookery SINC (Grade Borough I)	27.67	1.3km SE	One of Lambeth's most important sites for nature conservation, Streatham Common includes the largest area of native woodland in the Borough and a small but interesting area of acid grassland.

Site name	Area (ha)	Distance and direction	Reasons for selection
Unigate Wood SINC (Grade Borough I)	1.20	1.5km E	A well-structured and diverse area of deciduous oak, ash, and poplar woodland. It supports diverse populations of birds including greater spotted woodpecker, green woodpecker, tawny owl and treecreeper. It is also actively used by common and soprano pipistrelle bats.
Bishop Thomas Grant School Rough SINC (Grade Borough I)	1.65	1.5km SE	Formerly open pasture with hedges at the boundaries, this wild patch of habitat in the grounds of the Bishop Thomas Grant School includes scrub, young woodland and a band of old grassland.
Eardley Road Sidings SINC (Grade Borough I)	1.47	1.7km S	The disused railway sidings supports the largest area of deciduous birch woodland in Lambeth and Merton, and supports a diverse assemblage of birds including greater spotted woodpecker.
Palace Road Nature Garden SINC (Grade Borough I)	0.67	1.7km NE	A purpose-made area of woodland, scrub and grassland. The pond here contains perhaps the best aquatic and marginal flora in the Borough of Lambeth.
St Nicholas's Churchyard, Tooting SINC (Grade Borough II)	1.05	1.7km SW	This small churchyard has a diverse lichen flora on its tombstones. This is probably the best lichen site in the Borough of Wandsworth, although it has not been surveyed in detail.
Railway Linesides - Streatham Common to Norbury SINC (Grade Borough I)	3.66	1.8km S	An impressive range of vegetation along the side of rail tracks in the south of Lambeth borough. Habitats present include scattered trees, tall herbs and roughland.
Julians Primary School Grounds SINC (Grade Local)	0.75	1.8km E	School grounds with a mosaic of good wildlife habitats. Habitats present include a pond, scattered trees and secondary woodland.
Railway Linesides - Leigham Vale and Tulse Hill Junctions SINC (Grade Borough I)	8.65	1.9km E	An important area of wildlife habitat running between Tulse Hill and Streatham, and Streatham Hill and West Norwood. Habitats present include reed beds, woodland and neutral grassland.

Site name	Area (ha)	Distance and direction	Reasons for selection
Brixton Hill Green Corridor SINC (Grade Local)	3.97	1.9km NE	A near continuous linear park which gives a green background for almost the whole eastern side of Brixton Hill.

The Site lies within Tooting Common SINC, a large open space which includes three extensive areas of woodland and areas of relict acid grassland, the latter of which have undergone recent restoration. A railway line borders the eastern Site boundary which connects to Railway Linesides - Tooting Bec to Eardley Road SINC, Streatham Junction to Wimbledon Railsides SINC and Balham Railway Embankments SINC. Beyond Tooting Common lies extensive residential development including residential gardens. The Site has a high level of ecological connectivity with these surrounding SINC.

A search of MAGIC indicated that a large number of deciduous woodland pockets, which is listed as a HPI on the NERC Act (2006), are present within 2km of the Site, and that this habitat is present within the Site boundary. Areas of good quality semi-improved grassland (non-priority habitat) are also present within the Site boundary. No lowland dry acid grassland is identified by MAGIC within the Site boundary or within 2km.

The Site lies within a Natural England Site of Special Scientific Interest (SSSI) Impact Risk Zone (IRZ) (Natural England, 2019), further details of which are provided in Section 5.

The Site does not lie within any Important Plant Areas (IPA) or Important Invertebrate Areas (IPA).

#### 4.2. UK Habitat Classification

The Site comprises hardstanding, buildings and standing water associated with the lido, along with deciduous woodland, mixed scrub, bramble scrub, modified grassland, scattered trees and a line of trees. Descriptions of the habitat types present along with dominant species compositions are provided below. More detailed species lists, along with their relative abundance, can be found in Appendix 2. The UK habitat classification survey map is provided in Figure 1, at the end of this section.

##### *Modified grassland – g4 (11 Scattered trees, 300 Natural and semi-natural open space)*

A number of areas of modified grassland are present at the Site. The majority of the grassland is located within a compartment to the north of the lido which is currently closed for public access along with the rest of the Lido site. At the time of survey the sward height in this compartment was 5-10cm. A strip of grassland within the field to the west of the lido is also included within the Site boundary. Sward height is shorter in this area – up to 5cm – and is open to public access, adjacent to a footpath. All areas of grassland are dominated by perennial rye-grass *Lolium perenne*, along with instances of annual meadow-grass *Poa annua* and red fescue *Festuca rubra*. Herbaceous flora present includes daisy *Bellis*

*perennis*, creeping buttercup *Ranunculus repens*, cow parsley *Anthriscus sylvestris*, dandelion *Taraxacum officinale* agg., wood dock *Rumex sanguineus* and hairy garlic *Allium subhirsutum*.

A number of scattered trees are present throughout the grassland, including a large number of mature pedunculate oak *Quercus robur*, along with occasional holly *Ilex aquifolium* and goat willow *Salix caprea*. The mature oak trees are classified as HPIs under the NERC Act (2006).

#### *Other lowland mixed deciduous woodland – w1f7*

A pocket of deciduous woodland, listed as a HPI on the NERC Act (2006), is present at the Site on a bund along the west boundary. The canopy layer is predominantly closed and the woodland appears to not be under regular management. It is dominated by semi-mature ash specimens of approximately 10m in height, a number of which have extensive ivy *Hedera helix* cover. Goat willow also occurs rarely within the woodland. The ground flora includes Oregon-grape *Mahonia aquifolium*, cow parsley and herb-robert *Geranium robertianum*.

#### *Mixed scrub – h3h*

A patch of scrub forms a boundary along the fenceline dividing the lido site from the wider Common. The scrub contains instances of bramble *Rubus fruticosus* agg., blackthorn *Prunus spinosa*, and hawthorn *Crataegus monogyna*. The ground flora includes cleavers *Galium aparine*, common nettle *Urtica dioica*, ribwort plantain *Plantago lanceolata* and cock's-foot *Dactylis glomerata*. Fallen deadwood is also present within the ground flora (Target Note 1, Figure 1; Photograph 4, Appendix 4).

#### *Bramble scrub – h3d*

A small patch of bramble scrub is present within the westernmost area of modified grassland. This habitat is dominated by bramble, with fallen deadwood adjacent (Target Note 2, Figure 1).

#### *Line of trees – w1g6*

A line of immature ash *Fraxinus excelsior* trees borders the lido facilities to the east, along the boundary with the railway. The trees are approximately 10m in height, and function as a screening feature from the railway line beyond.

#### *Buildings – u1b5 (91 Development site)*

A series of buildings associated with the lido facilities are present within the Site boundary, labelled B1 to B7 in Figure 1 below. These include a café, a reception, toilet blocks, a sauna, and changing facilities. Detailed descriptions of each building are provided in Section 4.4 below.

#### *Developed land; sealed surface – u1b (91 Development site)*

Large areas of hardstanding associated with the lido facilities are present at the Site. These areas include access paths, poolsides, and amenity spaces. Ephemeral plant growth is present between the paving slabs in the amenity spaces; species present include groundsel *Senecio vulgaris* and spear

thistle *Cirsium vulgare*. Clearance works have started on some areas of hardstanding at the Site, such that a number of piles of rubble were present at the time of survey.

*Standing open water and canals – r1 (500 outdoor sports facilities)*

Two swimming pools are present within the Site boundary. Both pools have been drained, however the small learner pool in the northern section of the Site has since partially filled with stagnant rainwater. Extensive algae growth was present in the water at the time of survey.



Figure 1: UK Habitat Classification map of Tooting Bec Lido



**Target Notes:** TN1: Fallen deadwood within mixed scrub, TN2: Fallen deadwood adjacent to bramble scrub.

### 4.3. Protected species scoping survey

#### *Plants and fungi*

The data search returned a number of records for protected or notable plant species within 2km of the Site. These included SPIs listed under Section 41 of the NERC Act (2006), species listed under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended), and nationally scarce and red listed species. Species of note include bluebell, chamomile and corn spurrey. No protected or notable species were recorded at the Site during the survey, nor were any species indicative of acid grassland.

#### *Invertebrates*

The data search returned a number of records for protected or notable invertebrate species within 2km of the Site. Species of note include stag beetle, which is listed on the Wildlife and Countryside Act (1981) and is a SPI on the NERC Act (2006), small heath and brown hairstreak. The nearest stag beetle record is from 0.1km south of the Site; the most recent stag beetle record is dated from 2022.

A number of deadwood features are present at the Site (Target Notes 1 and 2, Figure 1; Photograph 4, Appendix 4). Deadwood provides important habitat for invertebrates, particularly stag beetle; stag beetle larvae live in deadwood for up to seven years and use it as their primary food source. The likelihood that the Site supports stag beetle has been assessed to be **moderate**.

An increase in butterfly monitoring on Tooting Bec Common in recent years has yielded 27 species which use the Common. This includes a regionally important population of white-letter hairstreak (associated with elm *Ulmus sp.* trees), increasing occurrence of marbled white and brown argus associated with acid grassland, and a first record of brown hairstreak, the closest record for this species to London in Surrey vice-county, associated with blackthorn stands.

No elm trees were identified within the Site boundary. Likewise, no indicators of acid grassland were identified within parcels of grassland habitat within the Site boundary. Blackthorn was recorded within areas of mixed scrub at low occurrences, and not abundant enough to be significant for any populations of brown hairstreak present at the Site. Overall, the Site's potential to support notable butterfly populations is considered to be **negligible**, given the absence of ecologically important habitats for relevant species recorded on Tooting Bec Common.

#### *Amphibians*

The data search returned a number of records for protected amphibians from within 2km of the Site, including those for common toad. A search of Defra's MAGIC website returned a single European Protected Species Licence granted for great crested newt within 2km of the Site (licence period July 2012 – June 2016), located 0.3km south-east of the Site.

No natural or semi-natural water bodies with the potential to support amphibians are present at the Site itself. A number of water bodies are present in the wider Tooting Common SINIC, however. The Site is well-connected to the aquatic habitats in the wider area, and terrestrial phase amphibians may utilise the scrub and grassland habitats within the Site boundary. The likelihood that the Site supports protected or notable amphibians has been assessed to be **low**.

### *Reptiles*

The data search returned historic records for slow-worm and common lizard. No records were returned for reptiles dated within the last ten years, however. All native reptiles are protected under Schedule 5 of the Wildlife and Countryside Act 1981.

The areas of scrub offer suitable sheltering habitat for reptiles; the grassland offers suitable basking habitat. The railway sidings to the east of the Site are largely undisturbed and are connected to a larger network of railway sidings designated as SINICs, which also provide reptile-suitable habitats. Given that no records for reptiles were returned dated within the last ten years, however, the likelihood that the Site supports reptiles has been assessed to be **low**.

### *Birds*

The data search returned numerous records for protected and notable bird species within 2km of the Site, including species listed on Annex 1 of the Birds Directive, Schedule 1 of the Wildlife and Countryside Act 1981, Section 41 of the NERC Act (2006) and birds listed as Amber or Red under the Birds of Conservation Concern (Eaton et al., 2015). All wild birds, their active nests and eggs are protected under The Wildlife and Countryside Act 1981 (as amended), which makes it an offence deliberately, or recklessly, to kill or injure any wild bird or damage or destroy any active birds' nest or eggs. Schedule 1 species returned by the data search include lesser spotted woodpecker *Dryobates minor comminutus*, kingfisher *Alcedo atthis*, firecrest *Regulus ignicapilla*; local priority species returned include house sparrow *Passer domesticus*, song thrush *Turdus philomelos* and mistle thrush *Turdus viscivorus*.

Thirty-four bird species were recorded during the Site visit. These species are shown in Appendix 3, together with their conservation status. It is important to note that this is not a full inventory of species for the Site, and includes species that may use the Site but were recorded as fly overs on the survey visit.

The scattered trees, line of trees, and scrub at the Site provide suitable habitat to support common nesting bird species, and will also provide foraging opportunities. Several species during the survey visit were observed to be on territory, carrying nesting material and visiting a nesting location. Overall, the Site is considered to have **high/confirmed** potential to support common nesting bird species. The small size of the Site and the characteristics of the habitats present have **negligible** potential to support protected bird species or important assemblages of birds.

### *Badgers*

A single confidential record for badger was returned by the data search. No evidence of badger presence was recorded during the survey. The scrub and woodland habitats in particular offer some suitability for sett building. The likelihood that the Site supports badger has been assessed to be **low**.

### *Hedgehog*

A number of records for hedgehog were returned by the data search. The nearest record for hedgehog is located 0.2km west of the Site; the most recent record dates from 2021. Hedgehog are protected under Schedule 6 of the Wildlife and Countryside and are also listed as a SPI on Section 41 of the NERC Act (2006). The various areas of grassland present at the Site provide suitable foraging habitat for hedgehog; the scrub and woodland areas provide suitable refuge habitat. The likelihood that the Site supports hedgehog has been assessed to be **moderate**.

### *Other mammals*

The data search returned records of water vole and otter, however no aquatic or wetland habitat present is suitable to support these species. No records of other notable mammals, such as brown hare or harvest mouse, were returned from the data search and no suitable habitat to support these species is present on Site. Overall, the likelihood of protected or notable terrestrial or aquatic mammal species being present onsite is **negligible**.

## 4.4. Preliminary Roost Assessment

The data search returned a moderate number of records for bats within 2km of the Site. Six species were returned in total: Daubenton's bat *Myotis daubentonii*, Leisler's bat *Nyctalus leisleri*, noctule *Nyctalus noctula*, Nathusius' pipistrelle *Pipistrellus nathusii*, common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus*. The data search also returned records for a number of unidentified bats (*Chiroptera*, *Pipistrellus*, *Vespertilionidae*). This is considered to be a high diversity for an urban location and likely reflects the quality of Tooting Common SINC as a foraging habitat, owed to the diversity of habitats present as well as its unlit nature. A search of Defra's MAGIC website returned no European Protected Species Licences granted for bats within 2km of the Site.

The lines of trees, woodland, scattered trees and scrub habitats present at the Site and in the wider area are likely to hold considerable foraging and commuting value for local bat populations. These features are likely to support high invertebrate diversities, upon which bats feed. The likelihood that the Site supports foraging and commuting bats has been assessed to be **high**.

No direct evidence of roosting bats was observed during the survey work undertaken, and no features of bat roost potential were recorded on any of the buildings present at the Site. A small number of trees were assessed to hold potential for roosting bats. Full detailed information regarding the results of the Preliminary Roost Assessment is set out below in Table 10 and Table 11.

**Table 10: Building inspection results**

Building	Roost suitability	Description	Bat roost evidence and potential
B1	Negligible	A single-storey, brick-built and concrete rendered structure with a flat capped roof. In good condition and is in use as a café. External lighting is present. (Photograph 6, Appendix 4)	No direct evidence of roosting bats was identified during the inspection of building B1; no features of bat roost potential were identified on building B1.
B2	Negligible	A single storey structure of concrete construct with a metal roof. In use as a reception. (Photograph 7, Appendix 4)	No direct evidence of roosting bats was identified during the inspection of building B2; no features of bat roost potential were identified on building B2.
B3	Negligible	B3 and B4 are single-storey structures of concrete construct with metal roofs. These buildings are in use as changing facilities and toilets. (Photograph 8, Appendix 4)	No direct evidence of roosting bats was identified during the inspection of buildings B3 and B4; no features of bat roost potential were identified on buildings B3 and B4.
B4	Negligible		
B5	Negligible	A single-storey wooden-clad structure with a pitched tiled roof. In use as a sauna. (Photograph 9, Appendix 4)	No direct evidence of roosting bats was identified during the inspection of building B5; no features of bat roost potential were identified on building B5.
B6	Negligible	Single-storey linear blocks of concrete construct with pitched tiled roofs. These units are subdivided within and form changing facilities. (Photograph 10, Appendix 4)	No direct evidence of roosting bats was identified during the inspection of buildings B6 and B7; no features of bat roost potential were identified on buildings B6 and B7.
B7	Negligible		

**Table 11: Tree inspection results**

Tree	Species	Roost suitability	Descriptions of potential/actual roost features
T3	Oak	High	A number of woodpecker holes and rot holes (Photograph 11, Appendix 4) are present on trees T3, T5 and T6. These features provide roosting opportunities for bats.
T5			
T6			



Figure 2: Preliminary Roost Assessment results



## 5. ECOLOGICAL CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS

This section outlines key ecological issues for consideration, recommendations for further work and ecological enhancements where appropriate.

### 5.1. Ecological constraints

#### *Off-site habitats*

The Site lies within a Natural England SSSI IRZ (Natural England, 2019). Developments that fall into the below categories require Local Planning Authority (LPA) consultation with Natural England:

- Airports, helipads and other aviation proposals;
- Livestock & poultry units with floorspace > 500m<sup>2</sup>, slurry lagoons & digestate stores > 4000m<sup>2</sup>; and
- General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

The proposed development does not fall into any of the above categories. LPA consultation with regards to SSSIs is not required.

The Site lies within Tooting Common Metropolitan Grade SINC. The construction phase of the development has the potential to indirectly impact this designated site through pollutants and dust released during demolition and construction works. It is recommended that a Construction Environmental Management Plan (CEMP) be produced, detailing mitigatory measures to be implemented in order to minimise disturbance to the Tooting Common SINC during the proposed works. In particular, the CEMP should include:

- Measures to minimise soil compaction, particularly on access routes passing through areas of grassland;
- Measures to minimise dust arising, when necessary, including the use of dust control machinery and wet machinery;
- Measures to prevent pollution / contamination events through surface run-off; and
- Measures to minimise other pollution events such as noise, vibration and wind-blown litter.

### Recommendation 1

Produce a CEMP for the construction phase of the development. This document should detail mitigatory measures to be implemented so as to minimise disturbance to the Tooting Common SINC during the works.

#### *On-site habitats*

The mature oak trees and lowland mixed deciduous woodland both qualify as HPI under the NERC Act (2006). These habitats should be retained and protected under the development proposals.

### Recommendation 2

Retain and protect the trees and woodland under the development proposals.

Tooting Bec Common SINC supports areas of lowland acid grassland, which is a HPI under the NERC Act (2006). The survey was carried out at a sub-optimum time of year for accurate assessment of grassland habitats (see Section 3.8). However, it was possible to complete vegetative identification of the grass species present. This yielded a grassland community typical of modified grassland habitats, with no indicators of acidic grassland present.

#### *Invertebrates*

No notable invertebrate species were recorded during the Site visit. A number of stag beetle records were returned by the data search, however.

A number of deadwood features are present across the Site (Target Notes 1 and 2, Figure 1; Photograph 4, Appendix 4). These features have the potential to support stag beetle, for which there are recent records in close proximity to the Site. It is recommended that all deadwood features remain in situ where possible. Where their removal is deemed necessary to facilitate the development, this should be undertaken under ecological supervision so as to safeguard any stag beetle that may be present.

### Recommendation 3

Leave deadwood features in situ where possible. If required, removal should be undertaken under ecological supervision in order to safeguard any stag beetle that may be present.

#### *Reptiles*

The scrub habitats at the Site provide suitability for reptiles, although there are no local records returned for reptiles within the last ten years. All UK reptile species are protected under Schedule 5 of the Wildlife & Countryside Act (1981), and are listed as SPI under the NERC Act (2006). It is an offence to intentionally kill or injure individuals of these species (see Appendix 1 for more information). Should it be the case that reptiles are present at the Site, the clearance or management of the scrub could lead to the injury or death of individual reptiles.



Whilst the proposed development does not involve the clearance of any of the scrub patches at the Site, it may be the case that minor clearance works are necessary to facilitate the development. It is recommended that a proportionate approach to vegetation clearance is adopted to manage the residual risk of this species group being present. This is achieved through the employment of habitat manipulation, where vegetation is cleared in a staged and directional manner towards retained contiguous habitats, thereby encouraging reptiles to relocate to retained peripheral habitats. A detailed methodology for vegetation clearance should be included within a CEMP.

#### **Recommendation 4**

Adopt habitat manipulation methodology when clearing grassland margins and scrub habitats in order to safeguard any reptiles that may be present. A detailed methodology should be included within a CEMP.

#### *Amphibians*

Given the presence of amphibian-suitable water bodies in the wider Tooting Common site, there is the potential for terrestrial phase amphibians to utilise the scrub habitats at the Site. The sensitive vegetation methodology set out above with regards to reptiles, and to be included within the CEMP, will also serve to ensure that no amphibians are impacted by the works.

#### *Birds*

The mature trees, lines of trees, woodland and scrub at the Site are considered suitable habitat to support breeding birds.

All wild birds, their active nests and eggs are protected under The Wildlife and Countryside Act 1981 (as amended), which makes it an offence deliberately, or recklessly, to kill or injure any wild bird or damage or destroy any active birds' nest or eggs. Scheduling vegetation removal works between the months of September and February inclusive (i.e. outside of the bird season) would avoid impacts on breeding birds.

Where vegetation clearance works are required during the breeding bird season (between the months of March and August inclusive), such works can only proceed following the completion of a nesting bird check undertaken by an experienced ornithologist. Any active birds' nest identified during this check must be protected from harm until the nesting attempt is complete. This will require a buffer to be left around the nest, the size of which will depend upon the species involved (as a general rule, this will be 10m in all directions around the nest). Any buffers established as a result of the initial nesting bird check must be subjected to a second check after the original nesting attempt is completed, before such areas can be removed during the breeding bird season.

#### Recommendation 5

Schedule vegetation clearance works between the months of September and February inclusive to avoid impacts on breeding birds. Where this timing is not feasible works should be preceded by a nesting bird check.

**It is strongly recommended that any potential nesting bird habitat is cleared outside the breeding bird season in order to avoid potentially lengthy delays if nests are found during nesting bird checks.**

#### *Bats*

Three trees (Trees T3, T5, T6) were identified to support features of pat roost potential in the form of woodpecker and rot holes (Photograph 11, Appendix 4). All bat species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). Bats are also SPI listed on Section 41 of the NERC Act (2006). It is an offence to deliberately disturb a bat, damage or destroy a bat roost, intentionally or recklessly disturb a bat at a roost, or obstruct access to a roost.

It is recommended that these trees be retained and protected under the development proposals. Should removal or pruning works be required to facilitate the development, the trees should be subject to an aerial tree inspection to confirm their potential to support roosting bats and determine the need for further survey work.

#### Recommendation 6

Retain and protect trees T3, T5 and T6 under the development proposals. Where removal or pruning works are deemed necessary, the trees must be subject to aerial tree inspections so as to ascertain their potential to support roosting bats and to determine the need for further survey work..

Bat roosting behaviour, commuting and foraging activity can additionally be dramatically affected by artificial lighting (BCT, 2018). It is strongly recommended that any proposed exterior lighting associated with the development proposals is designed and managed appropriately to ensure that the area remains suitable for foraging bats. A sensitive lighting scheme should be developed to allow suitable roosting and foraging areas for bats. The scattered trees, woodland and line of trees are of particular foraging and commuting value and should remain unlit where possible.

#### Recommendation 7

Light pollution from any lighting should be minimised both during and after the construction phase. A sensitive lighting scheme should be developed and secured through a planning condition to allow for suitable roosting and foraging areas for bats within the site with maximum use of appropriate luminaries and directed lighting. The scattered trees, woodland and line of trees are of particular value and should remain unlit where possible.

### *Badgers*

The scrub and woodland habitats at the Site offer some potential for badger sett-building. It is recommended that these habitats be retained under the development proposals. Should their removal be deemed necessary, it is recommended that a check for badger setts is undertaken immediately prior to the commencement of works.

#### **Recommendation 8**

Undertake a badger check immediately prior to the clearance of any scrub or woodland, should removal be necessary.

### *Hedgehog*

The woodland and scrub habitats present at the Site offer suitable habitat for hedgehog. The sensitive vegetation clearance discussed above with regards to reptiles and amphibians, and to be included within the CEMP, will serve to safeguard any hedgehog present.

### *General safeguards*

During construction any excavations will not be left open overnight. Where this is not possible, they will be securely covered or a means of escape for any animals that may become trapped will be provided, such as a wooden board acting as a ramp. All excavations will be checked for the presence of animals each morning and immediately prior to backfilling. These measures will be included within the CEMP.

#### **Recommendation 9**

During construction any excavations created should either be covered in order to prevent animals becoming entrapped, or if not feasible, measures should be implemented to allow entrapped animals to escape. These measures will be included within the CEMP.

## **5.2. Opportunities for biodiversity enhancement**

Following the issue of the National Planning Policy Framework (NPPF; see Appendix 1), all planning decisions should aim to maintain and enhance, restore or add to biodiversity and geological conservation interests. Ecological enhancements should aim to deliver biodiversity gains for the proposed development. The Environment Act (2021) states that from Autumn 2023, almost all developments will have to deliver a demonstrable increase in biodiversity value of at least 10%. In order to address the above legislation, it is recommended that a number of ecologically valuable habitats and features are incorporated into the Site design.

#### **Recommendation 10**

In line with the NPPF and Environment Act, a number of ecologically valuable habitats and features should be incorporated into the Site design so as to deliver biodiversity gains at the Site.

As set out within the Environment Act (2021), biodiversity gains at the Site must demonstrably achieve 10% or more. A Biodiversity Net Gain (BNG) assessment should be undertaken for the proposed development following the methodology set out by Panks et al. (2021).

**Recommendation 11**

Undertake a Biodiversity Net Gain (BNG) assessment for the proposed development.

The London Plan also sets out targets for green infrastructure value in new urban developments. Predominantly commercial developments must achieve an Urban Greening Factor (UGF) score of at least 0.3; residential developments must achieve a score of 0.4. It is recommended that a UGF assessment is undertaken for the proposed development so as to satisfy those requirements set out by the London Plan.

**Recommendation 12**

Undertake an Urban Greening Factor (UGF) assessment for the proposed development.

The Wandsworth Biodiversity Strategy (2020b) has identified acid grassland, neutral wildflower grassland, woodland and scrub as Priority Habitats in the borough. It is recommended that Priority Habitats are incorporated into the design scheme where possible. In particular, Tooting Bec Common SINC supports areas of lowland acid grassland, which is a HPI under the NERC Act (2006). MAGIC identifies Tooting Common as supporting good quality semi-improved grassland, with potential for restoration. It is recommended that enhancements completed as part of the development include a contribution to ongoing restoration and management of areas of acid grassland within Tooting Bec Common. Of most relevance to this proposed development would be measures to manage visitor access and associated impacts on areas of restored grassland.

**Recommendation 13**

Enhancements completed as part of the development should include a contribution to ongoing restoration and management of areas of acid grassland within Tooting Bec Common, in line with local and national conservation priorities. Of most relevance to this proposed development would be measures to manage visitor access and associated impacts on areas of restored grassland.

The planting of native species or those with a known attraction or benefit to local wildlife is recommended in landscape proposals. This will help to increase native plant species diversity, provide more ecologically valuable habitats, and result in a greater diversity of other dependent taxonomic groups.

**Recommendation 14**

It is recommended that native species are incorporated into the planting scheme for the final landscaping design in order to enhance the overall value of the Site for native biodiversity.

Green infrastructure should be incorporated into the design scheme. Green infrastructure including green roofs and green walls has become a fundamental part of urban site and building design, creating floral and faunal opportunities in otherwise ecologically featureless areas of hardstanding. It is strongly recommended that all green infrastructure to be created is designed with maximum biodiversity value in mind. Such green infrastructure features have been identified as an opportunity to maximise biodiversity within urban and sub-urban areas within Policies G1 and G5 within the London Plan, as set out in Appendix 1, and so the inclusion of such features would directly address local planning policy targets.

Green roofs can be installed on any flat, or slightly sloping, roof surface and can be beneficial for a wide variety of species. The principle behind a green roof is that it is intentionally planted to some extent. Design specifications should focus upon creating a structurally diverse open mosaic habitat with a variety of substrate types and pollinator-friendly plant species. The provision of a green roof would be an attractive option for both increasing biodiversity and providing an attractive feature within the development. Further details on green roof provision within the Site is provided at Appendix 7 below.

Green walls are essentially walls with living plants growing on them, enhancing otherwise featureless areas. The process of allowing and encouraging plants to grow on and up walls allows the natural environment to be extended into urban areas. Green walls that comprise climbers and light weight support structures such as wires and trellis are relatively cheap to develop and maintain. Creating green walls by allowing climbing species to attach themselves to the actual structure of existing walls or fences is also a viable option. Fruit trees such as apples and pears can also be used to form a green wall by training them as espaliers. Further information relating to the green wall provision is provided within Appendix 6 below.

#### **Recommendation 15**

Include green infrastructure provision within the development designs in order to ensure biodiversity gains for local priority species and biodiversity in general. The provision of green roofs and green walls will address both national and local policy.

In addition to recommended measures to support acid grassland restoration within Tooting Bec Common, bee lawns could be incorporated into the landscaping design within the Site. These areas can act as an important resource for bumblebees and other insect pollinators, which in turn provides benefits for other species further up the food chain, including reptiles and bats which may be encouraged onto the site. A bee lawn can be created by seeding an area of grassland with suitable low-growing plants such as selfheal *Prunella vulgaris* or bird's-foot-trefoil *Lotus corniculatus* and by increasing the mowing height and reducing the frequency. Bee lawns can persist and offer value for biodiversity, and be managed to be suitable for areas experiencing high footfall.

The addition of further deadwood features at the Site will be particularly valuable for invertebrates as a foraging resource, which in turn benefits a range of other species such as amphibians, hedgehogs and

reptiles. This could include rotting roots or tree stumps spread around various locations. The drilling of holes or cutting of notches can add even more value for invertebrates.

**Recommendation 16**

Incorporate simple biodiversity enhancement measures at the site, including the creation of a bee lawn and provision of additional deadwood features.

Enhanced opportunities for breeding birds should be incorporated into the design scheme. Bird boxes should be mounted on trees, fences and built structures at the site. It is recommended that there is focus common breeding bird species with the implementation of generalist bird boxes that cater to a variety of species. Examples of suitable boxes are shown in Appendix 5 together with information concerning the correct siting of these enhancement features.

**Recommendation 17**

A minimum of four generalist bird boxes should be installed at the site, including one open fronted robin/flycatcher box.

The wider landscape has high potential for use by foraging bats. With this in mind, enhanced opportunities for roosting bats should also be provided at the site through installation of bat boxes, to add to those features already identified on mature trees within the Site boundary.

**Recommendation 18**

Provisions should be made for roosting bats post-development, to include a minimum of four wall or tree mounted bat boxes at the Site.

The Environment Act (2021) states that all Biodiversity Net Gain assessments must be accompanied by an appropriate management plan that covers the next 30 years of Site management. This serves to ensure that all proposed habitats achieve the desired ecological value used in net gain calculations. It is recommended that a Landscape and Ecology Management Plan (LEMP) is produced in order to ensure legislative compliance.

**Recommendation 19**

Produce a Landscape and Ecology Management Plan (LEMP) covering the next 30 years to accompany the Biodiversity Net Gain Plan.

Summary of recommendations

Table 12 below summarises the recommendations made within this report, and specifies the stage of the development at which action is required. Colour coding of cells within the table is as follows:

Key:

	No action required for this species group at this stage
	Action required (see notes for details)
	Level of action required will be determined following the further survey work

**Table 12: Summary of recommendations at Tooting Bec Lido**

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Offsite habitats	Produce a CEMP.	No	Follow measures within the CEMP.	Contribute to acid grassland restoration.
Onsite habitats	Retain mature trees and woodland.	Protect retained trees and woodland.	Protect retained trees and woodland (within CEMP).	Native planting and habitat creation.
Invertebrates	Incorporate high value habitats into the landscaping scheme. Retain deadwood features within the design where possible.	No	Undertake deadwood removal under ecological supervision where required (within CEMP).	Deadwood feature creation.

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Bats	Develop sensitive lighting scheme where required.  Retain trees of bat roost potential.  Incorporate bat boxes.	No	Implement sensitive lighting scheme during construction.  Retain trees of bat roost potential.	Bat boxes and native planting
Reptiles	No	No	Adopt habitat manipulation methodology when clearing scrub and woodland (within CEMP).	No
Amphibians	No	No	Adopt habitat manipulation methodology when clearing scrub and woodland (within CEMP).	No
Birds	Incorporate bird boxes.	No	Timing of works for vegetation removal OR further survey work Incorporate integrated bird boxes into new buildings	Bird boxes and native planting
Badgers	No	Badger check prior to woodland and scrub clearance, if required.	No	No



Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Hedgehog	No	No	Adopt habitat manipulation methodology when clearing scrub and woodland (within CEMP).	No

## 6. CONCLUSIONS

In March 2023, MKA Ecology Ltd undertook a Preliminary Ecological Appraisal and Preliminary Roost Assessment at Tooting Bec Lido on behalf of WR-AP Architects, in order to support a planning application for the refurbishment and renovation of Tooting Bec Lido, including the reconfiguration of the café/kiosk building.

The Site comprises hardstanding and buildings in association with the lido, modified grassland, deciduous woodland, mixed scrub, bramble scrub, scattered trees and a line of trees. The mature trees and deciduous woodland are classified as HPI under the NERC Act (2006), and should be retained and protected under the development proposals. No acid grassland was identified within the Site boundary, although there are seasonal constraints associated with this assessment.

The potential protected species constraints that were identified in the assessment of the Site relate to invertebrates, reptiles, amphibians, nesting birds, badgers, hedgehog, foraging and commuting bats and roosting bats. Any new lighting should be designed sensitively so as to maintain the Site's suitability for foraging and commuting bats. All trees of bat roost potential should be retained and protected during the works. All other constraints should be addressed at the construction stage of the development, with measures for each species group included within the CEMP.

A number of biodiversity enhancements have been recommended for the Site in order to address local and national planning policy targets. Enhancements include a contribution to acid grassland restoration and management within the wider Tooting Bec Common, with a focus on managing visitor pressure. Within the Site boundary, recommended enhancements include the planting of native species, the provision of biodiversity-focused green infrastructure, the installation of bird and bat boxes, the creation of a bee lawn, and the creation of deadwood features.

The Environment Act (2021) mandates a demonstrable net gain in biodiversity of at least 10% for all planning permissions granted in England from November 2023. The London Plan requires that predominantly residential developments achieve an Urban Greening Factor score of 0.4. It is recommended that BNG and UGF assessments are undertaken so as to ensure that the development delivers sufficient biodiversity gains and green infrastructure.

A LEMP should be produced alongside the BNG assessment so as to ensure the successful creation and management of all habitats to be created at the Site.

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## 8. APPENDICES

### 8.1. Appendix 1: Relevant wildlife legislation and planning policy

Please note that the following is not an exhaustive list, and is solely intended to cover the most relevant legislation pertaining to species commonly associated with development sites.

Subject	Legislation (England)	Relevant prohibited actions
<i>Amphibians</i>		
Great crested newt <i>Triturus cristatus</i>  Natterjack toad <i>Epidalea calamita</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)  Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	<ul style="list-style-type: none"> <li>• Deliberately capture or kill, or intentionally injure;</li> <li>• Deliberately disturb or recklessly disturb them in a place used for shelter or protection;</li> <li>• Damage or destroy a breeding site or resting place;</li> <li>• Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and</li> <li>• Possess an individual, or any part of it, unless acquired lawfully.</li> </ul>
<i>Reptiles</i>		
Common lizard <i>Zootoca vivipara</i>  Adder <i>Vipera berus</i>  Slow-worm <i>Anguis fragilis</i>  Grass snake <i>Natrix helvetica helvetica</i>	Part of Sub-section 9(1) of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	<ul style="list-style-type: none"> <li>• Intentionally kill or injure individuals of these species (Section 9(1)).</li> </ul>

Subject	Legislation (England)	Relevant prohibited actions
<p>Sand lizard <i>Lacerta agilis</i></p> <p>Smooth snake <i>Coronella austriaca</i></p>	<p>Full protection under Section 9 of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)</p>	<ul style="list-style-type: none"> <li>• Deliberately or intentionally kill, capture (take) or intentionally injure;</li> <li>• Deliberately disturb;</li> <li>• Deliberately take or destroy eggs;</li> <li>• Damage or destroy a breeding site or resting place or intentionally damage a place used for shelter; or</li> <li>• Intentionally obstruct access to a place used for shelter.</li> </ul>
<i>Birds</i>		
<p>All wild birds</p>	<p>Wildlife and Countryside Act 1981 (as amended)</p>	<ul style="list-style-type: none"> <li>• Intentionally kill, injure, or take any wild bird or their eggs or nests.</li> </ul>
<p>'Schedule 1' birds</p>	<p>Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)</p>	<ul style="list-style-type: none"> <li>• Disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young; or</li> <li>• Disturb the dependent young of any wild bird listed on Schedule 1.</li> </ul>
<i>Mammals</i>		
<p>Bats (all UK species)</p>	<p>Schedule 2 of Conservation of Habitats and Species Regulations (2017)</p>	<ul style="list-style-type: none"> <li>• Deliberately capture, injure or kill a bat;</li> <li>• Deliberately disturb a bat (disturbance is defined as an action which is likely to: (i) Impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) Impair their ability to hibernate or migrate; or (iii) Affect significantly the local</li> </ul>

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	<p>distribution or abundance of the species);</p> <ul style="list-style-type: none"> <li>• Damage or destroy a bat roost;</li> <li>• Intentionally or recklessly disturb a bat at a roost; or</li> <li>• Intentionally or recklessly obstruct access to a roost.</li> </ul> <p>In this interpretation, a bat roost is "<i>any structure or place which any wild [bat]...uses for shelter or protection</i>". Legal opinion is that the roost is protected whether or not the bats are present at the time.</p>
Badger <i>Meles meles</i>	Protection of Badgers Act 1992	<p>Under Section 3 of the Act:</p> <ul style="list-style-type: none"> <li>• Damage a sett or any part of it;</li> <li>• Destroy a sett;</li> <li>• Obstruct access to, or any entrance of, a sett; or</li> <li>• Disturb a badger when it is occupying a sett.</li> </ul> <p>A sett is defined legally as any structure or place which displays signs indicating current use by a badger (Natural England 2007).</p>
Hazel dormouse <i>Muscardinus avellanarius</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	<ul style="list-style-type: none"> <li>• Intentionally or deliberately capture or kill, or intentionally injure;</li> </ul>

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	<ul style="list-style-type: none"> <li>• Deliberately disturb or intentionally or recklessly disturb them in a place used for shelter or protection;</li> <li>• Damage or destroy a breeding site or resting place;</li> <li>• Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and</li> <li>• Possess an individual, or any part of it, unless acquired lawfully.</li> </ul>
Otter <i>Lutra lutra</i>	<p>Schedule 2 of Conservation of Habitats and Species Regulations (2017)</p> <hr/> <p>Section 9(4)(b) and (c) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)</p>	<ul style="list-style-type: none"> <li>• Deliberately capture, injure or kill an otter;</li> <li>• Deliberately disturb an otter in such a way as to be likely to significantly affect the local distribution or abundance of otters or the ability of any significant group of otters to survive, breed, rear or nurture their young;</li> <li>• Intentionally or recklessly disturb any otter whilst it is occupying a holt;</li> <li>• Damage or destroy or intentionally or recklessly obstruct access to an otter holt.</li> </ul>
Water vole <i>Arvicola amphibius</i>	Section 9 of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	<ul style="list-style-type: none"> <li>• Intentionally kill, injure or take water voles;</li> <li>• Possess or control live or dead water voles or derivatives;</li> <li>• Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection; or</li> <li>• Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.</li> </ul>



Subject	Legislation (England)	Relevant prohibited actions
<i>Crustaceans</i>		
White-clawed crayfish <i>Austropotamobius pallipes</i>	Section 9(1) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	<ul style="list-style-type: none"> <li>Intentionally kill, injure or take white-clawed crayfish by any method.</li> </ul>

### The Environment Act 2021

The Environment Act 2021, sets out key legislation after the UK's exit from the European Union. With the largest changes to green regulations in decades, the Act includes the establishment of an Office for Environmental Protection, targets on air pollution, water quality and biodiversity, and the enshrinement of the 25 Year Environment Plan in law. The Act also makes provisions for a mandatory 10% net gain in biodiversity for all developments covered by the Town and Country Planning Act and it also introduces a statutory requirement for Local Nature Recovery Strategies.

Full legislation text available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

### The Conservation of Habitats and Species Regulations 2017 (as amended)

Full legislation text available at: [The Conservation of Habitats and Species Regulations 2017 \(as amended\) \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2017/16/contents/enacted)

### The Wildlife and Countryside Act 1981 (as amended)

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/1981/69/contents](https://www.legislation.gov.uk/ukpga/1981/69/contents).

### Countryside and Rights of Way Act 2000

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/2000/37/contents](https://www.legislation.gov.uk/ukpga/2000/37/contents)

### Protection of Badgers Act 1992

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/1992/51/contents](https://www.legislation.gov.uk/ukpga/1992/51/contents)

### Section 41 of Natural Environments and Rural Communities (NERC) Act 2006

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/2006/16/section/41](https://www.legislation.gov.uk/ukpga/2006/16/section/41)

Many of the species above, along with a host of others not afforded additional protection, are listed on Section 41 of the NERC Act 2006.

Section 41 (S41) of the Natural Environment and Rural Communities (NERC Act 2006) requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) has been drawn up in consultation with Natural England and draws upon the UK Biodiversity Action Plan (BAP) List of Priority Species and Habitats.

The S41 list should be used to guide decision-makers such as local and regional authorities to have regard to the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006. The duty applies to all local authorities and extends beyond just conserving what is already there, to carrying out, supporting and requiring actions that may also restore or enhance biodiversity.

### **Schedule 9 of Wildlife and Countryside Act 1981 (as amended)**

In addition to affording protection to some species, The Wildlife and Countryside Act 1981 (as amended) also names species which are considered invasive and require control. Section 14 of the Act prohibits the introduction into the wild of any animal of a kind which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, or any species of animal or plant listed in Schedule 9 to the Act. In the main, Schedule 9 lists non-native species that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that further releases should be regulated.

### **Wild Mammals (Protection) Act 1996**

Full legislation text is available at: <http://www.legislation.gov.uk/ukpga/1996/3/contents>

Under this legislation it is an offence to cause unnecessary suffering to wild mammals, including by crushing and asphyxiation. It largely deals with issues of animal welfare, and covers all non-domestic mammals including commonly encountered mammals on development sites such as rabbits, foxes and field voles.

### **Birds of Conservation Concern (BoCC)**

This is a quantitative assessment of the status of populations of bird species which regularly occur in the UK, undertaken by the UK's leading bird conservation organisations. It assesses a total of 245 species against a set of objective criteria to place each on one of three lists – Green, Amber and Red – indicating an increasing level of conservation concern. There are currently 70 species on the Red list, 103 on the Amber list and 72 on the Green list. The classifications described have no statutory implications, and are used merely as a tool for assessing scarcity and conservation value of a given species.

### **National Planning Policy Framework (NPPF)**

Full text is available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

The revised NPPF was updated on 20 July 2021 setting out the Government's planning policies for England and the process by which these should be applied. The policies within the NPPF are a material consideration in the planning process. The key principle of the NPPF is a presumption in favour of

sustainable development, with sustainable development defined as a balance between economic, social and environmental needs.

Policies 174 to 188 of the NPPF address conserving and enhancing the natural environment, stating that the planning system should:

- Contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes;
- Recognise the wider benefits of ecosystem services; and
- Minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity.

Furthermore, there is a focus on re-use of existing brownfield sites or sites of low environmental value as a priority, and discouraging development in National Parks, Sites of Specific Scientific Interest, the Broads or Areas of Outstanding Natural Beauty other than in exceptional circumstances.

Where possible, planning policies should also

“Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity”.

### Local Planning Policy

Given that the Site is located within London, consideration of the policies relating to biodiversity within the London Plan 2021 has also been given. These include policies G1 and G5 to G8, as detailed below:

- Policy G1 Green infrastructure
  - a) *London’s network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits.*
  - b) *Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way.*
  - c) *Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:*
    1. *identify key green infrastructure assets, their function and their potential function*
    2. *identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.*
  - d) *Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London’s wider green infrastructure network.*

- Policy G5 Urban greening
  - a) *Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.*
  - b) *Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in within the London Plan, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses).*
  - c) *Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in the London Plan*
  
- Policy G6 Biodiversity and access to nature
  - a) *Sites of Importance for Nature Conservation (SINCs) should be protected.*
  - b) *Boroughs, in developing Development Plans, should:*
    1. *use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks*
    2. *identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them*
    3. *support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans*
    4. *seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context*
    5. *ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.*
  - c) *Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:*
    1. *avoid damaging the significant ecological features of the site*
    2. *minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site*
    3. *deliver off-site compensation of better biodiversity value.*

- d) *Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.*
- e) *Proposals which reduce deficiencies in access to nature should be considered positively.*
  
- **Policy G7 Trees and woodlands**
  - a) *London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London's urban forest – the area of London under the canopy of trees.*
  - b) *In their Development Plans, boroughs should:*
    - 1. *protect 'veteran' trees and ancient woodland where these are not already part of a protected site*
    - 2. *identify opportunities for tree planting in strategic locations.*
  - c) *Development proposals should ensure that, wherever possible, existing trees of value are retained. If planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT or another appropriate valuation system. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.*
  
- **Policy G8 Food growing**
  - a) *In Development Plans, boroughs should:*
    - 1. *protect existing allotments and encourage provision of space for urban agriculture, including community gardening, and food growing within new developments and as a meanwhile use on vacant or under-utilised sites*
    - 2. *identify potential sites that could be used for food production.*

Wandsworth Council has produced an adopted Local Plan, within which policy PL4 Open space and the natural environment relates to biodiversity and habitat conservation.

- **PL4 Open space and the natural environment**
  - a) *The Council will protect and improve public and private open space and Green Infrastructure in the borough, including Metropolitan Open Land, such as the major commons, parks, allotments, trees and playing fields as well as the smaller spaces, including play spaces, as identified in the Open Space Study and Play Strategy.*
  - b) *Playing fields will be protected and opportunities for participation in sport, recreation and children's play will be promoted. Where there is no future demand for playing fields or other outdoor sports use, other open space uses will be sought.*

- c) *The Council will require the provision of open space and/or secure public access to private facilities, in appropriate developments, and as a priority in areas identified as deficient in open space, play space or sport and recreation facilities and/or to meet priorities identified in the Council's Play Strategy, Active Wandsworth Strategy, Parks Management Strategy and All London Green Grid (ALGG) Area Frameworks. The requirements for open space provision are set out in the Planning Obligations SPD.*
- d) *The borough's green chains and the open spaces along them will be protected and enhanced taking into account opportunities identified in the ALGG Area Frameworks.*
- e) *The biodiversity value of the borough will be protected and enhanced including that of the River Thames, River Wandle and Beverley Brook and species and habitats identified in the London Biodiversity Action Plan and through Local Nature Partnerships.*
- f) *New development should avoid causing ecological damage and propose full mitigation and compensation measures for ecological impacts which do occur. Where appropriate new development should include new or enhanced habitat or design and landscaping which promotes biodiversity, and provision for management, particularly in areas identified as deficient in nature conservation.*
- g) *The Council will work with partners to develop and implement proposals for the Wandle Valley Regional Park.*

A new Local Plan is currently in development, which will supersede the existing Local Plan. Within this document the following policies relate to biodiversity and habitat conservation:

- **LP55 Protection and Enhancement of Green and Blue Infrastructure**
  - A. *The Council will protect the natural environment, enhance its quality and extend access to it. In considering proposals for development the Council aims to create a comprehensive network of green and blue corridors and places, appropriate to the specific context. In doing so, it seeks to connect and enrich biodiversity through habitat improvement and protection at all scales, including priority habitats and extend access to, and maximise the recreation opportunities of, our urban open spaces.*
  - B. *The Council will protect and extend access to existing public and private green and blue infrastructure in the borough and where appropriate secure its enhancement, including Metropolitan Open Land, major commons, wetlands, rivers, ponds, parks, allotments, trees and playing fields as well as smaller spaces, including play spaces.*
  - C. *Areas of open space, including those identified on the Policies Map, and smaller areas not identified on the Policies Map will be protected, enhanced and made more accessible. Green chains and open spaces along them will be protected, made more accessible, and, where appropriate, enhanced in accordance with opportunities identified in the relevant All London Green Grid Area Framework.*
  - D. *New development on or affecting public and private green and blue infrastructure will only be permitted where it does not harm the character, appearance or function of the green or*

blue infrastructure. In assessing proposals, any impacts of the cumulative effect of development will be taken into account.

E. Any development which results in a reduction of green or blue infrastructure assets including protected open space as set out in (B) and (C) above will not be supported unless adequate replacement is provided for. In determining the amount, form and accessibility of open space provided for within a new development scheme account will not be taken of the proximity and adequacy of existing open space

- LP57 Biodiversity

A. The Council will protect and, where appropriate, secure the enhancement of the borough's priority species, priority habitats and protected sites as well as the connectivity between such sites. This includes but is not limited to Special Areas of Conservation, Sites of Special Scientific Interest, Local Nature Reserves, Local Wildlife Sites.

B. Development proposals will be required to protect and enhance biodiversity, through:

1. ensuring that it would not have an adverse effect on the borough's designated sites of habitat and species of importance (including buffer zones), as well as other existing species, habitats and features of biodiversity value;
2. The incorporation and creation of new habitats or biodiversity features on development sites including through the design of buildings and use of Sustainable Drainage Systems where appropriate. Major developments will be required to deliver a net gain in biodiversity, through the incorporation of ecological enhancements;
3. ensuring that new biodiversity features or habitats connect to the existing ecological and green and blue infrastructure networks and complement surrounding habitats;
4. enhancing wildlife corridors for the movement of species, including river, road and rail corridors, where opportunities arise; and
5. maximising the provision of ecologically functional habitats within soft landscaping.

C. Development which would have an adverse impact on priority species or priority habitat(s) will only be permitted where:

1. it has been demonstrated that there is no alternative site layout or site that would have a less harmful impacts;
2. the benefits of the development would outweigh the harm; and
3. the impact has been adequately mitigated either through on or off-site site measures.

- LP58 Tree Management and Landscaping

A. The Council will require the retention and protection of existing trees and landscape features, including veteran trees.



- B. *Where appropriate, planning applications must be supported by sufficient evidence to demonstrate that provision has been made for the incorporation of new trees, shrubs and other vegetation of landscape significance that complement existing, or create new, high quality green areas, which deliver amenity, environmental, and biodiversity benefits.*
- C. *To ensure development protects, respects, contributes to and enhances trees and landscapes, the Council, when assessing development proposals, will:*
1. *resist the loss of trees, including veteran trees and trees considered to be of townscape or amenity value, unless the tree is dead, dying or dangerous; or the tree is causing significant damage to adjacent structures; or the tree has little or no amenity value and it is not possible to retain the tree as part of the development; or felling is for reasons of good arboricultural practice;*
  2. *resist development proposals that would result in the loss or deterioration of irreplaceable habitat such as ancient woodland;*
  3. *require the design and layout of the proposal to ensure that a harmonious relationship between trees and their surroundings will be provided and will resist development which would result in pressure to significantly prune or remove trees;*
  4. *consent for works to protected trees (TPOs and trees in Conservation Areas) will only be granted where;*
    - a. *proposed works of pruning are in accordance with good arboricultural practice, or*
    - b. *proposals for felling are properly justified through a detailed arboricultural and/or structural engineer's report; and*
    - c. *adequate replacement planting is proposed.*
  5. *require, where practicable, an appropriate replacement on-site for any tree that is felled; a financial contribution to the provision for an off-site tree in line with the monetary value of the existing tree to be felled will be required in line with the 'Capital Asset Value for Amenity Trees' (CAVAT);*
  6. *resist development that would result in the loss or deterioration of irreplaceable habitat such as ancient woodland;*
  7. *resist development which results in the damage or loss of trees that are considered to be of townscape or amenity value; the Council will require that site design or layout ensures a harmonious relationship between trees and their surroundings and will resist development which will be likely to result in pressure to significantly prune or remove trees;*
  8. *require new trees to be of a suitable species for the location in terms of height and root spread, taking account of space required for trees to mature; the use of native species will be encouraged where appropriate; and*
  9. *require that trees are adequately protected throughout the course of development, in accordance with British Standard 5837 (Trees in relation to design, demolition and construction).*



- D. The Council will serve a Tree Preservation Order or attach planning conditions which protect any trees considered to be of value to the townscape and amenity in order to secure their retention.*
- LP59 Urban Greening Factor
    - A. All development proposals should contribute to the greening of Wandsworth borough by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.*
    - B. Development proposals will be required to:*
      - 1. follow the guidance on the Urban Greening Factor in the emerging London Plan for calculating the minimum amount of urban greening required as well as for the thresholds different types of development will be required to meet; and*
      - 2. incorporate as much soft landscaping and permeable surfaces as possible;*
      - 3. take into consideration the vulnerability and importance of local ecological resources (such as water quality and biodiversity) when applying the principles of the Urban Greening Factor.*
    - C. If it can be clearly demonstrated that meeting the thresholds would not be feasible, in exceptional circumstances a financial contribution may be acceptable to provide for the improvement of biodiversity and green and blue infrastructure assets within the locality.*

### **Local Priority Habitats and Species**

The London Biodiversity Action Plan, led by the London Biodiversity Partnership, identified a total of 214 priority species that are under particular threat in London. The full text is available here: <https://www.gigl.org.uk/london-bap-priority-species/>

## 8.2. Appendix 2: UK Habitat Classification Species List

Please note that these lists are intended to be incidental records and do not constitute a full botanical survey of the site. Relative abundance is given using the DAFOR scale. Please see Table for details.

*Modified grassland – g4 (11 Scattered trees, 300 Natural and semi-natural open space)*

Common Name	Systematic Name	Relative abundance
Perennial rye-grass	<i>Lolium perenne</i>	D
Pedunculate oak	<i>Quercus robur</i>	A
Daisy	<i>Bellis perennis</i>	F
Annual meadow-grass	<i>Poa annua</i>	F
Dandelion	<i>Taraxacum officinale</i> agg.	F
Hairy garlic	<i>Allium subhirsutum</i>	F
Moss	<i>Bryophyta</i> sp.	F
Creeping bent	<i>Agrostis stolonifera</i>	O
Wall barley	<i>Hordeum murinum</i>	O
Red fescue	<i>Festuca rubra</i>	O
Creeping buttercup	<i>Ranunculus repens</i>	O
Daffodil	<i>Narcissus</i> sp.	R
White clover	<i>Trifolium repens</i>	R
Cow parsley	<i>Anthriscus sylvestris</i>	R
Wood dock	<i>Rumex sanguineus</i>	R

*Other lowland mixed deciduous woodland – w1f7*

Common Name	Systematic Name	Relative abundance
Ash	<i>Fraxinus excelsior</i>	D
Oregon grape	<i>Mahonia aquifolium</i>	A
Herb-Robert	<i>Geranium robertianum</i>	A
Cow parsley	<i>Anthriscus sylvestris</i>	F
Goat willow	<i>Salix caprea</i>	R

Mixed scrub – h3h

Common Name	Systematic Name	Relative abundance
Hawthorn	<i>Crataegus monogyna</i>	D
Bramble	<i>Rubus fruticosus</i> agg.	A
Ivy	<i>Hedera helix</i>	A
Cleavers	<i>Galium aparine</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	O
Cock's-foot	<i>Dactylis glomerata</i>	O
Blackthorn	<i>Prunus spinosa</i>	R
Common nettle	<i>Urtica dioica</i>	R

Bramble scrub – h3d

Common Name	Systematic Name	Relative abundance
Bramble	<i>Rubus fruticosus</i> agg.	D

Line of trees – w1g6

Common Name	Systematic Name	Relative abundance
Ash	<i>Fraxinus excelsior</i>	D

Developed land; sealed surface – u1b (91 Development site)

Common Name	Systematic Name	Relative abundance
Groundsel	<i>Senecio vulgaris</i>	R
Spear thistle	<i>Cirsium vulgare</i>	R

### 8.3. Appendix 3: Bird species recorded at the Site

#### Bird species recorded during Site visit at Tooting Bec Lido

Common name	Systematic name	S1 W&CA <sup>1</sup>	BoCC <sup>2</sup> Status	S41 SPI <sup>3</sup>	Local PrSp <sup>4</sup>
Canada goose <sup>5</sup>	<i>Branta canadensis</i>	-	Green	-	-
Egyptian goose <sup>5</sup>	<i>Alopochen aegyptiaca</i>	-	Green	-	-
Feral pigeon	<i>Columba livia</i>	-	Green	-	-
Stock dove	<i>Columba oenas</i>	-	Amber	-	-
Woodpigeon	<i>Columba palumbus</i>	-	Amber	-	-
Moorhen <sup>5</sup>	<i>Gallinula chloropus</i>	-	Amber	-	-
Black-headed gull	<i>Chroicocephalus ridibundus</i>	-	Amber	-	-
Herring gull	<i>Larus argentatus</i>	-	Red	Yes	-
Common gull	<i>Larus canus</i>	-	Amber	-	-
Sparrowhawk	<i>Accipiter nisus</i>	-	Amber	-	-
Red kite <sup>5</sup>	<i>Milvus milvus</i>	Yes	Green	-	Yes
Buzzard <sup>5</sup>	<i>Buteo buteo</i>	-	Green	-	-
Great spotted woodpecker	<i>Dendrocopos major</i>	-	Green	-	-
Ring-necked parakeet	<i>Psittacula krameri</i>	-	Green	-	-
Jay	<i>Garrulus glandarius</i>	-	Green	-	-
Magpie	<i>Pica pica</i>	-	Green	-	-
Jackdaw	<i>Corvus monedula</i>	-	Green	-	-
Carrion crow	<i>Corvus corone</i>	-	Green	-	-
Blue tit	<i>Cyanistes caeruleus</i>	-	Green	-	-
Great tit	<i>Parus major</i>	-	Green	-	-
Long-tailed tit	<i>Aegithalos caudatus</i>	-	Green	-	-
Goldcrest	<i>Regulus regulus</i>	-	Green	-	-
Nuthatch	<i>Sitta europaea</i>	-	Green	-	-
Wren	<i>Troglodytes troglodytes</i>	-	Amber	-	-
Starling <sup>5</sup>	<i>Sturnus vulgaris</i>	-	Red	Yes	Yes
Mistle thrush	<i>Turdus viscivorus</i>	-	Red	-	-
Redwing	<i>Turdus iliacus</i>	Yes	Amber	-	-
Blackbird	<i>Turdus merula</i>	-	Green	-	-
Robin	<i>Erithacus rubecula</i>	-	Green	-	-

Common name	Systematic name	S1 W&CA <sup>1</sup>	BoCC <sup>2</sup> Status	S41 SPI <sup>3</sup>	Local PrSp <sup>4</sup>
Dunnock	<i>Prunella modularis</i>	-	Amber	Yes	Yes
Pied wagtail <sup>5</sup>	<i>Motacilla alba</i>		Green	-	-
Chaffinch <sup>5</sup>	<i>Fringilla coelebs</i>		Green	-	-
Greenfinch	<i>Chloris chloris</i>		Red	-	-
Goldfinch	<i>Carduelis carduelis</i>		Green	-	-

<sup>1</sup> Schedule 1 of The Wildlife and Countryside Act 1981 (see Appendix 1)

<sup>2</sup> Birds of Conservation Concern (see Appendix 1)

<sup>3</sup> Section 41 (NERC Act 2006) 'SPI' (see Appendix 1)

<sup>4</sup> Local Priority Species

<sup>5</sup> Recorded flying over site



#### 8.4. Appendix 4: Site photographs

**Photograph 1: Main pool and amenity space – u1b**



**Photograph 2: Learner pool with standing water – u1b**





**Photograph 3: Other lowland mixed deciduous woodland – w1f7**



**Photograph 4: Deadwood within mixed scrub – h3h (Target Note 1, Figure 1)**





**Photograph 5: Modified grassland – g4**



**Photograph 6: Building B1 – u1b5**





**Photograph 7: Building B2 – u1b5**



**Photograph 8: Building B3 – u1b5 (Building B4 is of identical construct)**





**Photograph 9: Building B5 – u1b5**



**Photograph 10: Building B6 – u1b5 (Building B7 is of identical construct)**



**Photograph 11: Woodpecker hole on mature oak tree**





## 8.5. Appendix 5: Bird and bat box recommendations

### **Bird box recommendations**


A large number of bird boxes are available, designed for the specific needs of individual species. These are normally either designed to be mounted onto trees, external walls or integrated into a building. In general, bird boxes should be mounted out of direct sunlight and prevailing winds, out of reach of predators, with suitable foraging habitat for the subject species close by. Bird boxes should also be left up over winter as they can provide useful roosting sites for birds in bad weather.

Nest boxes should be cleaned at the end of each bird breeding season. All nesting material and other debris should be removed from the box. It should then be scrubbed clean with boiling water to kill any parasites (avoid using any chemicals). Once the box is clean, it should be left to dry out thoroughly. Under the Wildlife and Countryside Act 1981 it is an offence to disturb breeding birds and therefore annual cleaning is best undertaken from October to January when there is no risk of disturbing breeding birds.

### Generalist boxes

Boxes to attract garden birds and woodland breeding species such as tits, nuthatch, redstart and pied flycatcher can be placed in gardens, orchards, woodlands and a wide variety of other habitats. The species of birds attracted to the box will depend upon the size of the entrance hole (see table below).


Boxes should be fixed two to five metres up a tree or wall, out of the reach of predators such as domestic cats. Unless there are trees or buildings, which give permanent shelter, it is best facing between north and east.

General		
Example	Description	Picture
Schwegler No. 1B General Purpose Nest box	<a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a> Suitable for various garden and woodland birds, created with different sized entrance holes to avoid competition between species. Other variations (e.g. 2M) can be free hanging, to deter predators.	

Entrance Hole	Species
26 mm	Blue-, Marsh-, Coal- and Crested Tit, possibly Wren. All other species are prevented from using the nest box due to this smaller entrance hole
32 mm	Great-, Blue-, Marsh-, Coal- and Crested Tit, Redstart, Nuthatch, Pied Flycatcher, Tree and House Sparrows.
Oval	Redstart; also used by species that nest in the diameter 32 mm boxes. However, because more light enters the brood chamber, it is preferred by Redstarts.

### Robin/flycatcher boxes

Nest boxes that aim to attract robins and flycatchers should be open-fronted and placed in a hidden location, such as within a climber or other vegetation. The box design can be attached to the outside of a building or mature tree, or incorporated into a building. It is best placed between 1.5m and 3m high.

Robin/flycatcher		
Example	Description	Picture
Vivara Pro Barcelona WoodStone Open Nest Box	<p><a href="http://www.nhbs.com">www.nhbs.com</a></p> <p>This nest box is made mix of concrete and FSC certified wood fibres and is suitable for wrens, robins, spotted flycatchers, pied and grey wagtails, song thrushes and blackbirds.</p> <p>The best height for this nest box is between 1.5m and 3m high and sited in undergrowth such as ivy.</p>	

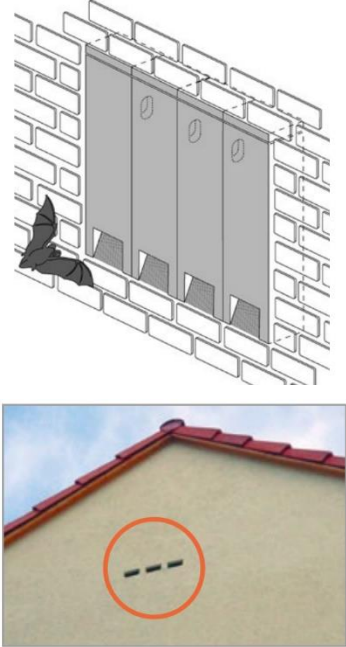

**Bat box recommendations**

A wide range of bat boxes are available to suit a variety of species and design requirements. Bat boxes can be mounted externally on buildings, built directly into the wall structure or mounted on trees (dependent on box design).


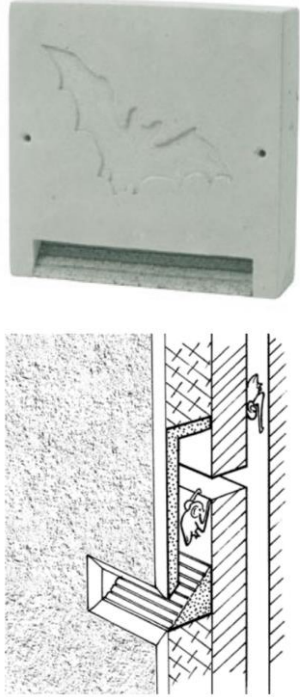
Boxes are more likely to be inhabited if they are located where bats feed and it may help to place the box close to features such as tree lines or hedgerows, which bats are known to use for navigation and can provide immediate cover for bats leaving the roost. Boxes should be placed in areas sheltered from strong winds and are exposed to the sun for part of the day. Access to any bat roosting features should not be lit and should also be at a reasonable height to avoid predation (at least 2m if possible, preferably 4-5m).

Example	Description	Picture
Schwegler General Purpose Bat Box 2F	<a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a>  Height: 33 cm Weight: approx. 3.8 kg External diameter: 16 cm Installation: Hanging  A general purpose box, suitable for all species.	
Schwegler General Purpose Bat Box 2F with Double Front Panel	<a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a>  Height 33 cm Weight: approx. 4.1 kg External diameter: 16 cm Installation: Hanging  This box is suitable for crevice dwellers, such as Nathusius' pipistrelle, Daubenton's bat and common pipistrelle.	

Example	Description	Picture
Schwegler 1FF	<p><a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a></p> <p>Dimensions: 14(d) x 27(w) x 43(h) cm                      Weight: 9.9 kg                      Installation: Hanging</p> <p>This box is suitable for crevice dwellers, such as Nathusius’ pipistrelle, Daubenton’s bat and common pipistrelle.</p> <p>This box minimises temperature fluctuations in spring and autumn and is self-cleaning.</p>	
Schwegler 1FQ	<p><a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a></p> <p>Dimensions: 60(h) x 35(w) x 9(d) cm                      Weight: 15.8kg                      Installation: Attached to most external brick, timber or concrete walls at least 3m high. Can also be placed inside roof space</p> <p>This box is ideal for all types of bats that inhabit buildings. The box is weather-resistant and is also temperature controlled and self-cleaning. The front panel of the box can also be painted during manufacture, to match an existing colour.</p>	
Brick Box Type 27	<p><a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a></p> <p>Dimensions: 26.5(h) x 18(w) x 24(d) cm                      Weight: 9.5kg                      Installation: Can be flush with outside wall and rendered or covered so only the entrance hole is visible.</p> <p>This box is ideal for all types of bats that inhabit buildings.</p>	

Example	Description	Picture
<p>Schwegler 2FR</p>	<p><a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a></p> <p>Dimensions: 47(h) x 20(w) x 12.5(d)                      Weight: 9.8kg                      Installation: Can be installed on external walls – either flush or beneath a rendered surface in concrete and, during renovation work, under wooden panelling or in building cavities. Several tubes should be installed together (recommended three).</p> <p>This box is ideal for all types of bats that inhabit buildings. By installing boxes side by side a colony roosts can be created with any size requirement. This box has three different environmental partitions inside, attracting different species. The box is self-cleaning.</p>	
<p>Schwegler 1WI</p>	<p><a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a></p> <p>Dimensions: 55(h) x 35(w) x 9.5(d) cm                      Weight: 15kg                      Installation: Attached to most types of external brick, timber or concrete walls. It can be installed flush-mounted and rendered over or simply against the wall. It should be installed at a height of at least 3m.</p> <p>This box typically attracts building-inhabiting bat species like pipistrelles or serotine bat.</p> <p>This box is weather-resistant and designed for both winter hibernation and larger colonies in summer, including nursery roosts.</p>	



Example	Description	Picture
<p>Schwegler 1MF (Swift and Bat)</p>	<p><a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a></p> <p>Dimensions: 46(h) x 43(w) x 22.5(d) cm.                      Weight: approx. 24 kg                      Installation: The box can be hung against any types of wall of any type of building, between 6-7m above ground level.</p> <p>This box is designed for nesting swifts, however the recess in the rear panel creates a space between the wall of the building and the box, making it ideal for bats that inhabit building, such as common pipistrelle. Whilst the box may require cleaning, the back recess for bats requires no maintenance.</p>	
<p>Schwegler 1FE</p>	<p><a href="http://www.schwegler-nature.com">www.schwegler-nature.com</a></p> <p>Dimensions: 30(h) x 30(w) x 8(d) cm.                      Weight: approx. 5.1 kg.                      Installation: Installation of multiple units is recommended. The box can be integrated into insulation or masonry. It can also be attached to the underlying structure to cover existing cavities, allowing bats to still use them. Install at least 3m above the ground.</p> <p>This is a general purpose box, suitable for all species. There is a maintenance-free access panel for installing on or in the surface of exterior walls. The open rear enables bats to continue to use existing nesting sites in walls.</p>	

## 8.6. Appendix 6: Habitat creation recommendations

### **Bee lawns**


Amenity spaces are important habitats and resources for many pollinators including bees, butterflies, hoverflies and beetles, which in turn provide resources for other species such as reptiles and bats. A bee lawn would be specifically cultivated to attract insect pollinators. A bee lawn can be created by planting a seed mix containing flowering plants that are low-growing, attractive to pollinators and are also resistant to relatively frequent mowing. This would create a shorter, neater alternative to a wildflower meadow, but still contain a wide variety of pollinator friendly plants. The flowers to be planted should be a variety of shapes, colours and sizes to increase the diversity of pollinators which will be attracted including, but not limited to, bumblebees, solitary bees, flies and butterflies.





Mowing this area approximately once every three weeks and raising the mower blades to their highest level (around 8cm is optimal) will allow these flowering plants to grow and thrive for the entire summer period.




Pre-made seed mixes for bee lawns are already available from a limited number of online sellers. Most wildflower mixes sold online are made up of taller meadow species that would not be suitable for a short garden lawn.

Finally, if you have a pre-existing list of flowering plants that you would want in a bee lawn, there are websites which allow you to create your own bespoke seed mix to suit the particular area you are planting, one such website is <https://www.phoenixamenity.co.uk/>. Links to specific web pages for all three suppliers cited above are provided at the end of this document. The following table outlines some of the key flowering plants you may like to include if you were putting together your own seed mix:



### **Bee lawn species recommendations**

Species Name	Description	Picture
Birds-foot Trefoil ( <i>Lotus corniculatus</i> )	Low, creeping perennial with bright yellow flowers tinged with orange, and is nitrogen fixing. Heavily used by bumblebees and solitary bees as a source of nectar and pollen; also used by some butterfly species. It is used by a variety of lepidoptera as a larval food plant e.g. common blue butterfly ( <i>Polyommatus icarus</i> ) and Six-belted clearwing moth ( <i>Bembecia ichneumoniformis</i> ).	 <p>© RHS/Helen Bostock</p>

Species Name	Description	Picture
Clover spp. ( <i>Trifolium spp.</i> )	Clover species are much favoured by many bumblebees (in particular the long-tongued species) and are also nitrogen fixers. White clover is the most common species but Red clover and Alsike clover can also be planted. This low-growing flower has an ability to survive even close mowing.	 <p>©Jouko Lehmuskallio</p>
Wild Thyme ( <i>Thymus polytrichus</i> )	Wild thyme often grows in dense patches, its small pink/purple flowers are attractive to many different types of pollinators such as butterflies and smaller bees.	
Creeping Buttercup ( <i>Ranunculus repens</i> )	Forms a network of shoots and runners across the ground and spreads quickly. Buttercup flowers are a bright shiny yellow and as an open flower it is a source of nectar for a wide variety of pollinators. Flowering may not take place in the first year and flowering can be late with plants sometimes flowering in October.	
Common Knapweed ( <i>Centaurea nigra</i> )	Very hardy thistle-like plant with bright purple flowers; very popular plant with pollinators (bees, butterflies, beetles, flies etc.) as it produces large volumes of nectar over the summer period.	

Species Name	Description	Picture
<p>Cowslip (<i>Primula veris</i>)</p>	<p>Flowering in spring, cowslips are easily recognisable with their long tubular yellow flowers that grow in clusters on ~25cm tall stalks. Cowslips usually flower in April-March, before grasses tend to get long. These flowers would be more suited to later and less frequent mowing.</p>	 <p>©Laurie Campbell</p>
<p>Eyebright (<i>Euphrasia sp.</i>)</p>	<p>Small plant producing very small (5-10mm) white flowers. Semi-parasitic, they take nutrients from the roots of nearby plants, so do well in a meadow setting. This flower is almost exclusively pollinated by bees, with the yellow spot on the petals used to guide them in.</p>	 <p>© Trevor Dines</p>
<p>Germander Speedwell (<i>Veronica chamaedrys</i>)</p>	<p>Another low growing, creeping species; Germander Speedwell tends to grow in patches or mats among grasses and the small blue/purple flowers are particularly attractive to smaller pollinators such as small flies and solitary bees.</p>	





Species Name	Description	Picture
<p>Chammomile (<i>Chamaemelum nobile</i>)</p>	<p>Small plant with daisy-like flowers, historically used for lawns and therefore very suited to a frequently mown area. This flower is chiefly pollinated by small flies, so a useful addition to a lawn to attract alternate insect pollinators to bees and butterflies.</p>	
<p>Selfheal (<i>Prunella vulgaris</i>)</p>	<p>A violet blue flower atop a hairy stem, with the rest of the plant forming a mat among the grasses. This plant is often found among turf and is therefore resistant to mowing. These flowers are particularly attractive to <i>Lycaenidae</i> butterflies, small moths and solitary bees.</p>	<p>© First Nature</p> 

Other flowering plants to consider including would be:

- Kidney Vetch (*Anthyllis vulgaris*)
- Daisy (*Bellis perennis*)
- Oxeye Daisy (*Leucanthemum vulgare*)
- Ragged Robin (*Lychnis flos-cuculi*)
- Yarrow (*Achillea millefolium*)
- Ribwort Plantain (*Plantago lanceolata*)
- Salad Burnet (*Sanguisorba minor*)
- Wild Marjoram (*Origanum vulgare*)
- Toadflax (*Linaria vulgaris*)
- Yellow Rattle (*Rhinanthus minor*) – This plant is particularly useful if the lawn is being created on previously well fertilised, grass heavy soils, as it is very good at drawing away nutrients and suppressing grass growth. (Sourced seeds must be as fresh as possible for best chance of growth).

**Deadwood features**

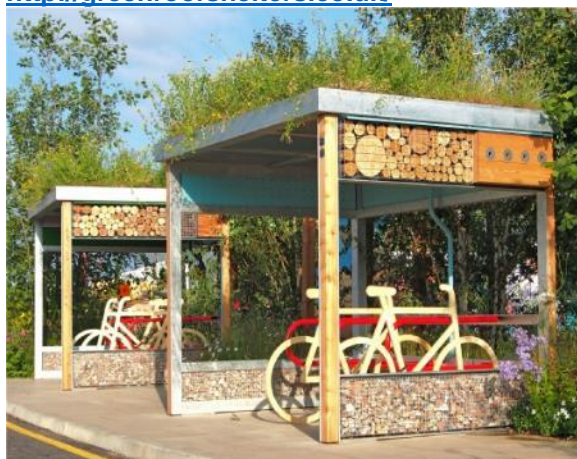
Example	Description	Picture
<p>'Stag beetle loggery</p>	<p><a href="https://ptes.org/9-top-ways-to-help-stag-beetles-in-your-garden/">https://ptes.org/9-top-ways-to-help-stag-beetles-in-your-garden/</a></p> <p>Large volume deadwood dug into the soil (a minimum of 500mm depth) to provide food for the larvae of deadwood specialists such as stag beetles.</p>	<p><b>Build a log pyramid</b>                      If you don't already have stumps or mature trees and shrubs, you can provide a home for stag beetles by building a log pyramid. Bury logs from a beechwood tree upright in the soil, with up to 50cm under the ground.</p>  <p>(image credit – PTES, 2021)</p>
<p>Artificial rot hole</p>	<p>Once felled, an artificial cavity can be carved easily with a chainsaw to create a rot hole. The ensuing pool and rotting wood provide habitat for a number of specialist invertebrates. These examples were targeted at a pinewood specialist in Caledonian forests in Scotland, but are of equal value to other species in lowland England.</p> <p>Taylor <i>et al.</i> (2021) <i>British Wildlife</i> <b>32</b>(8) p547</p>	 <p>(image credits - Athayde Tonhasca via Scotlandsnature.blog, 2020)</p>

## 8.7. Appendix 7: Green infrastructure recommendations

### Green roofs

It is recommended that any new buildings are designed to include green roofs, with such features being sown with drought tolerant specimens that would rely on rainwater topped up by incidental watering by facilities, unless an inbuilt irrigation system could be incorporated. Examples of green shelters and cycle stores are shown in Figures 1 to 2 below.

**Figure 1. Example of green roofed cycle store**  
<http://greenroofshelters.co.uk/>



**Figure 2. Example of green roofed shelter**  
<http://greenroofshelters.co.uk/>



By choosing a good mix of drought-tolerant foodplants, as well as some bare ground, green roofs can be very cheap and extremely effective in boosting biodiversity. The key is to connect their functionality with the landscaping across the rest of the site. The green roofed areas are also suitable for ground-nesting pollinators along with a suite of supplementary pollen, nectar and foliage provision that wouldn't compete with the more robust planting at ground level, comprising a mix of sedums with a mix of annual/biennial species in order to ensure a self-sustaining pattern of bare ground and seasonal cover. Such species could comprise Viper's Bugloss *Echium vulgare*, Common Centaury *Centaureum erythraea*, Yellow Rattle *Rhinanthus minor*, Mignonette *Reseda sp.* and Borage *Borago officinalis*, along with some low-growing hardy species such as Dog Violet *Viola riviniana* and Germander Speedwell *Veronica chamaedrys*.

### Green walls

It is recommended that a green wall system be installed within the Site. Green walls are walls with vegetation growing on them, enhancing otherwise featureless areas of bare wall. They may be natural, such as brick or stone-built walls which have been naturally colonized by lichens, mosses, ferns and flowering plants or they can be large scale engineered green walls. The process of allowing and

encouraging plants to grow on and up walls allows the natural environment to be extended into urban areas.

Green walls can provide a food source for invertebrates on which, in turn, other invertebrates and birds may feed. They also provide breeding and nesting habitat for invertebrates, birds (including house sparrow, a London biodiversity action plan priority species) and possibly bats and are ideal for including artificial animal breeding structures such as nest boxes or bat roosting boxes. Green walls can mimic natural rock faces of cliff and rock slopes and provide resting and feeding places for birds, invertebrates and even small mammals. Climbers provide nesting habitat for birds such as wrens, blackbirds, song thrushes and house sparrows. The combination of green walls with green roofs provides a route for wildlife between habitats at ground and roof level.

Green walls that comprise climbers and light weight support structures such as wires and trellis are relatively cheap to develop and maintain. The installation of trellises and wires on walls can aid vegetation growth and limit direct contact between the wall and plants. However, creating green walls by allowing climbing species to attach themselves to the actual structure of existing walls is also a viable option. Fruit trees such as apples and pears can also be used to form a green wall by training them as espaliers.

Careful choice of species and the orientation of these walls will increase the potential of a living wall to harbour other forms of wildlife. For north facing walls, the shade and relative cold offered in these positions, along with the potential for dry soil caused by the wall's 'rain shadow', requires careful consideration of shade tolerant species, such as ivy *Hedera Helix* and hydrangea *Hydrangea sp.* to ensure success. Creating green walls from climbing species such as ivy and hydrangea is often a cheap and simple process, as these species naturally cling to existing wall structures with small roots. Ivy is also a valuable food source for innumerable invertebrates which feed on its leaves, flowers and nectar, and it also provides valuable over-wintering and hibernation habitat.

Engineered green walls, or 'vertical gardening', provide an opportunity for impressive visual impact whilst providing a living vertical habitat with biodiversity value. They may be either designed as a large structure attached to a wall containing a variety of planted species and an irrigation system which provides the plants with water and nutrients, or as a hanging wall at the top of a building where plants are allowed to hang down from suspended planters, entailing no direct contact between the plants and the wall. Whilst providing impressive displays many engineered green walls comprise mainly non-native plants and can be expensive to maintain and as such their inclusion needs careful consideration.





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