MKA
ECOLOGY

Preliminary Ecological Appraisal and Preliminary Roost Assessment

194 Goldhurst Terrace, London, NW6 3HN

Site	*194 Goldhurst Terrace, London, NW6 3HN*
Project number	*147323*
Client name / Address	*194 Goldhurst Terrace (Cowell) Limited, London, NW6 3HN*

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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.

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1. EXECUTIVE SUMMARY

In September 2023, MKA Ecology Ltd undertook a Preliminary Ecological Appraisal and Preliminary Roost Assessment at 194 Goldhurst Terrace, London. The appraisal included a habitat survey, protected species scoping survey and desktop study of protected and notable sites and species in the area. A Site visit was undertaken on 26 September 2023.

The Site is dominated by two buildings (buildings B1 and B2) with associated areas of modified grassland, a line of trees and planted borders of introduced shrubs. The development proposals are for the demolition of the single-storey side extensions on building B1 and their replacement with the development of a three-storey side extension and basement excavation. The resulting building will contain eight flats. The proposals also include the relocation of the garage space contained in building B2, whilst adding extensions to the rear and side of the building, along with a basement excavation. The resulting building will be a single detached residential property.

The following ecological constraints were identified at the site with recommendations made as follows;

- **Onsite habitats:** There is a line of trees along the southern border of the Site which is of elevated biodiversity and landscape value in the context of the site. It is recommended that this tree line is retained however, if it is to be removed, it should be replaced within the site boundary with a native tree species;
- **Invasive species:** Butterfly-bush *Buddleia davidii*, green alkanet *Pentaglottis sempervirens* and cherry laurel *Prunus laurocerasus* are present onsite. These are listed as a species of concern under the London Invasive Species Initiative (LISI). During development, all instances of these species should be removed from the site and disposed of as controlled waste to prevent further spread in the local area;
- **Breeding birds:** The trees and thick ivy *Hedera helix* provide suitable habitat for nesting birds. All vegetation clearance work should take place between the months of September to February (inclusive) to avoid the nesting bird season. If this is not feasible, clearance should only take place following a nesting bird check by a suitably qualified ornithologist;
- **Roosting bats (Buildings):** Both buildings B1 and B2 are categorised as having low bat roost potential, due to the presence of potential roost features in the form of missing tiles and lifted flashing. This categorisation requires one nocturnal roost survey to be carried out on the buildings to ascertain whether it currently supports bat roosts and to identify the need for further surveys. Nocturnal bat surveys can be undertaken between May and August, and sub-optimal surveys can be undertaken in September;
- **Roosting bats (Trees):** Four trees and a group of shrubs are to be removed at the Site. Two of these (T19 and T20) were unable to be completely surveyed. As such, these trees should be soft-

felled under the supervision of an Ecological Clerk of Works (ECoW). This should also be preceded by a pre-works check; and

- **Foraging and commuting bats:** The gardens and trees provide good foraging habitat for bats. A sensitive lighting scheme should be produced to minimise impacts of light spill on foraging and roosting bats in this surrounding area.

The proposed development has the potential to deliver improvements to local biodiversity. A number of biodiversity enhancements have been recommended, including the incorporation of native species into the final planting scheme; and the installation of bird boxes and bat boxes targeted at local Priority Species.

It is recommended that a Biodiversity Net Gain (BNG) assessment is undertaken so as to ensure that the development delivers sufficient biodiversity gains. However, this is a recommendation and won't become mandatory to deliver at the Site until April 2024. A Landscape and Ecology Management Plan (LEMP) should be produced 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 and Biodiversity Action Plans, as well as the National Planning Policy Framework. They 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 September 2023 MKA Ecology Ltd was commissioned to undertake a Preliminary Ecological Appraisal and Preliminary Roost Assessment at 194 Goldhurst Terrace, London, NW6 3HN, in order to support a planning application for the development of buildings B1 and B2 at 194 Goldhurst Terrace into eight flats and a single detached house.

The aims of the Preliminary Ecological Appraisal were to:

- Undertake a desktop study to identify the extent of protected and notable species and habitats within 1km of 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 1km 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.

This report has been updated since its initial submission to include finalised tree and shrub removal plans within the development proposals. Below, recommendations have been provided to address these changes. These changes are considered to be minor and do not affect the overall conclusions of the report.

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 194 Goldhurst Terrace, London. The Site is located in a heavily residential area of South Hampstead

(central grid reference: TQ 25771 84089) and falls under the local authority of the London Borough of Camden. The Site comprises a three-storey building with single-story extensions (building B1, Figure 1) along with a small area of hardstanding, introduced shrubs, grassland and a line of trees. On the eastern edge of the Site is a detached garage (building B2, Figure 1), which is included within the development proposals. The surrounding area comprises urban residential buildings and urban gardens.

2.3. Proposed development

The development proposals are for the demolition of the single-storey side extensions on building B1 and their replacement with the development of a three-storey side extension and basement excavation. The resulting building will contain eight flats. The proposals also include the relocation of the garage space contained in building B2, whilst adding extensions to the rear and side of the building, along with a basement excavation. The resulting building will be a single detached residential property. Four trees and a group of shrubs, including two semi-mature lime *Tilia* sp. trees will be removed as part of the development proposals.

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 in September 2023 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 also been given. The London Plan contains a number of policies relating to biodiversity, a brief summary of which are 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.

Camden Council has produced an adopted Local Plan which contains a single policy relating to biodiversity and habitat conservation (Policy A3).

Camden Council have produced a Biodiversity Action Plan, which identifies regional priority habitats and species (Camden Council, 2017). There is also a Biodiversity Action Plan for Greater London (London Biodiversity Partnership, 2022).

Camden Council have also produced a Camden Planning Guidance document on Biodiversity (Camden Council, 2018). This key document sets out the guidance that developments within the Borough of Camden must adhere to with respect to biodiversity.

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

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, 2nd 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) www.magic.gov.uk	Information on local, national and international statutory protected areas.	27/09/2023
Greenspace Information for Greater London CIC	Information on protected and notable sites and species within 1km of the site (TQ 25771 84089).	27/09/2023
Ordnance Survey maps and aerial photography	Information on habitats and connectivity between the Site and the surrounding landscape	27/09/2023
Plantlife Important Plant Areas (IPAs)	Information on important plant areas within 2km of the Site.	27/09/2023
Buglife Important Invertebrate Areas (IIAs)	Information on important invertebrate areas within 2km of the Site.	27/09/2023

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, 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 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 194 Goldhurst Terrace, London include the following:

- Plants and fungi: Bluebell *Hyacinthoides non-scripta* and spreading bellflower *Campanula patula.*
- Invertebrates: Stag beetle *Lucanus cervus and* white-letter hairstreak *Satyrium w-album.*
- Fish: European eel *Anguilla anguilla*, river lamprey *Lampetra fluviatilis*, and brown trout *Salmo trutta subsp. fario*.
- Amphibians: 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 Species of Principal Importance.
- 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

Surveys were undertaken following guidance set out in *Bat Surveys for Professional Ecologists – Good Practice Guidelines (4th edition)* (Collins, 2023) and the *Bat Workers' Manual (3rd edition)* (Mitchell-Jones and McLeish, 2004).

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.

Buildings and trees were assessed for their bat roost suitability according to the scheme presented in Collins (2023). These categories are shown in Table 3.

Table 3: Categories to assess roost suitability in buildings and trees (adapted from Collins, 2023)

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.

A ground-based assessment of the trees to be removed as part of the scheme was undertaken on 05 Feb June 2024, following the guidance set out in *Bat Surveys for Professional Ecologists – Good Practice Guidelines (4th edition)* (Collins, 2023) and *Bat Workers' Manual* (Mitchell-Jones & McLeish, 2004). The survey was undertaken using a variety of equipment including binoculars, a high-powered torch and a digital camera. For any trees considered to provide roosting potential, the tree species and 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 plates of 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.

Trees were assessed for their bat roost suitability according to the scheme presented in Collins (2023). These categories are shown in Table 4 and Table 5 below.

Table 4: Categories to assess roost suitability in trees (adapted from Collins, 2023)

Roost suitability	Description
None	Either no potential roost features in the tree or highly unlikely to be any.
FAR	Further assessment required (FAR) to establish if potential roost features (PRFs) are present in the tree.
PRF	A tree with at least one PRF present.

Where PRFs were identified in trees, these were further categorised as follows.

Table 5: Guidelines for categorising the potential suitability of PRFs in trees (adapted from Collins, 2023)

Roost suitability	Description
PRF-I	PRF is only suitable for individual bats or very small number of bats either due to size or lack of suitable surrounding habitat.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

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 6: Rarity of bat species within England

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

Table 7: 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)

Geographic frame of reference	Roost type
	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*
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 the two buildings were conducted using a variety of equipment including binoculars, high-powered torch and a digital camera.

3.6. Surveyor, author and reviewer

The survey was undertaken by Henry Wyn-Jones, Graduate Ecologist at MKA Ecology Ltd and Megan Stigling, Ecologist at MKA Ecology Ltd. Henry has one years' experience in undertaking Preliminary Ecological Appraisals and Preliminary Roost Assessments. Megan holds a Natural England Level 1 bat licence and has over three years conducting ecological surveys. The report was written by Henry. The report has been reviewed and authorised by Rory Roche ACIEEM, Senior Ecologist at MKA Ecology Ltd. Rory has seven years' experience within the industry conducting Preliminary Ecological Appraisals and Preliminary Roost Assessments, and holds a Natural England Class 1 bat licence.

3.7. Date, time and weather conditions

See Table 8 below for details of the date, time and prevailing weather conditions recorded during the Site visit for the Preliminary Ecological Appraisal and Preliminary Roost Assessment.

Table 8: Date, time and weather conditions of survey visit

Date	Time of survey	Weather conditions*
26/09/23	10:30	Wind: BF1 Cloud: 6/8 Temp: 17°C Rain: None
05/06/2024	21:00	Wind: BF2 Cloud: 4/8 Temp: 15°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.

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 1km for nationally designated sites and species records. Data provided by Greenspace Information for Greater London (GiGL) identified some UK and European protected species, Species and Habitats of Principal Importance (as listed under Section 41 of the NERC Act 2006), and species of conservation concern within 1km 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 9 below. These consist of one Special Protection Area (SPA) and Ramsar site.

Table 9: International designated sites within 10km of 194 Goldhurst Terrace, London

Site name	Area (ha)	Distance and direction	Reasons for selection
Lee Valley Ramsar and SPA	451.3	7.9km NE	Designated for internationally important numbers of breeding and wintering wildfowl, especially gadwall *Anas strepera* and shoveler *Anas clypeata*, and for wintering bittern *Botaurus stellaris*.

Details of nationally designated sites identified within this search are displayed in Table 10 below. These consist of three Local Nature Reserves (LNR).

Table 10: Nationally designated sites within 1km of 194 Goldhurst Terrace, London

Site name	Area (ha)	Distance and direction	Reasons for selection
St John's Wood Church Grounds LNR	1.99	1.6km SE	Supports hedges, wildflower glades, thistle meadow and an area of mixed woodland. Habitat piles have been created across the site in the form of compost and log piles.
Westbere Copse LNR	0.69	1.7km NW	Supports areas of meadow, woodland path, pond with dipping platform, and stag beetle loggeries, Over 25 species of birds and 150 species of plants have been recorded here, along with frogs, toads and newts .

Site name	Area (ha)	Distance and direction	Reasons for selection
Adelaide LNR	0.28	1.7km E	Supports areas of meadow, pond, areas of scrub and small woodland.

A number of non-statutorily designated sites were identified as part of the desktop study, comprising over 25 Sites of Importance for Nature Conservation (SINCs). However, due to the extent and nature of the proposed works, it is considered appropriate to only consider those immediately adjacent to or within the Site. Accordingly, only non-statutorily designated sites within 1km of the Site are set out in Table 11 below.

Table 11: Non-statutorily designated sites within 1km of 194 Goldhurst Terrace, London

Site name	Area (ha)	Distance and direction	Reasons for selection
Broadhurst Gardens Meadow SINC (Borough Grade II)	0.73	0.4km N	Communal garden with semi-improved neutral grassland that included a range of grass species such as creeping bent *Agrostis stolonifera*, timothy *Phleum sp.,* and meadow foxtail *Alopecurus pratensis. V*arious wildflowers are also present including meadow vetchling *Lathyrus pratensis*, yarrow *Achillea millefolium*, and cat's-ear *Hypochaeris radicata.* Along with this grassland the scrub and trees provide habitat for a variety of invertebrates.
Green Triangle SINC (Borough Grade II)	0.29	0.5km E	Community gardens comprised of modified grassland, introduced shrubs and scattered trees. Species include hemp-agrimony *Eupatorium cannabinum*, sessile oak *Quercus petraea* and elder *Sambucus nigra.*
Greville Place Nature Reserve SINC (Local Grade)	0.12	0.7km S	A small nature reserve comprised of grassland, scrub and small pond. These habitats support a wide variety of bird, plant and invertebrate species. The pond supports fat duckweed *Lemna gibba*, and greater spearwort *Ranunculus lingua*, both uncommon species in the Greater London area.

Site name	Area (ha)	Distance and direction	Reasons for selection
Kilburn Grange Park SINC (Local Grade)	3.06	0.8km NW	A park containing modified grassland with scrub and scattered trees such as silver birch *Betula pendula*, London Plane *Platanus x hispanica*, hornbeam *Carpinus betulus.* These provide habitat for common breeding birds.
Frognal Court Wood SINC (Borough Grade II)	0.20	0.9km NE	A small woodland comprised of species such as sycamore *Acer pseudoplatanus*, ash Fraxinus excelsior, hybrid black poplars *Populus x canadensis*, wild cherry *Prunus avium* and common lime *Tilia x europaea.*
West Hampstead Railsides, Medley Orchard and Westbere Copse Local Nature Reserve SINC (Borough Grade I)	7.58	0.9km NW	Wooded rail side sections that comprise of two nature reserves and an old orchard. These contain a range of habitats but is dominated by secondary woodland and scrub. Species present in these areas include sycamore *Acer pseudoplatanus*, grey poplar *Populus x canescens*, wild cherry *Prunus avium*, and horse chestnut *Aesculus hippocastanum*. Scrub species include elder, dogwood *Cornus sanguinea*, hawthorn *Crataegus monogyna*, and English elm *Ulmus procera.*

The Site is immediately surrounded by residential development. Within 2km, there is large green space to the south east of Primrose Hill and Regent's Park, and to the north at Hampstead Heath.

The Site also lies within a Natural England Site of Special Scientific Interest (SSSI) Impact Risk Zone (IRZ; Natural England, 2019) 194 Goldhurst Terrace, London does not lie within any Important Plant Areas (IPA) or Important Invertebrate Areas (IIA) although it is close to the Thames Basin Lowlands Important Invertebrate Area (IIA). IPAs and IIAs are nationally or internationally significant places for the conservation of plants and invertebrates, respectively, and the habitats upon which they rely. The Site lies on the border of a B-Line running north between Regent's Park and Hampstead Heath. B-Lines are 'insect pathways' identified by BugLife linking existing habitats to improve pollinator connectivity in the broader landscape and can be used to strategically identify sites for the creation and restoration of flower-rich habitats.

4.2. UK Habitat Classification

The Site comprises a large residential building (building B1, Figure 1) with detached garage (building B2, Figure 1) along with small area of hardstanding, introduced shrubs, grassland and a line of trees. 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. Descriptions of the habitat types present along with dominant species compositions are provided below.

Buildings - u1b5

A large residential building dominates the majority of the Site (building B1, Figure 1; Photograph 1, Appendix 3) with a detached garage present to the south-east (building B2, Figure 1; Photograph 2, Appendix 3). The buildings comprise of brickwork with large tile lined, pitched roofs. Areas of dense ivy *Hedera helix* cover a number of the aspects.

Developed land; sealed surface - u1b

One area of hardstanding is present to the south of building B2, which acts as an area of parking. A small area of decking is also present to the north of building B2.

Suburban mosaic of developed and nature surface -– u1d (847 - Introduced shrub)

Planted introduced shrub beds are located to the immediate south of building B1.

Modified Grassland - g4

An area of regularly mown grassland is present within the garden areas associated with building B1. This grassland is dominated by perennial rye-grass *Lolium perenne* and is managed to a short sward via mowing.

Line of trees - w1g6

A line of young to semi-mature trees border the southern edges of the Site. This tree line was recorded to comprise entirely of lime.

Figure 1: UK Habitat Classification map of 194 Goldhurst Terrace, London

Target Notes

TN1: Missing tiles (Photograph 5, Appendix 3)

TN2: Lifted flashing and missing tiles (Photograph 6, Appendix 3)

TN3: Missing tiles (Photograph 7, Appendix 3)

Invasive Non-Native Species

INNS1: Butterfly-bush (Photograph 8, Appendix 3)

INNS2: Green alkanet

INNS3: Cherry laurel

4.3. Protected species scoping survey

Plants and fungi

A number of protected and notable plant species were returned in the data search, including bluebell and spreading bellflower. The habitats found on Site are not suitable for supporting protected and/or notable plant species and therefore the likelihood of their presence is considered to be **negligible**.

Butterfly-bush *Buddleia davidii* was identified in several locations onsite (Invasive Non-Native Species 1, Figure 1; Photograph 8, Appendix 3). Additionally, instances of green alkanet *Pentaglottis sempervirens* (Invasive Non-Native Species 2, Figure 1) and cherry laurel *Prunus laurocerasus* Invasive Non-Native Species 3, Figure 1) were also found onsite. Although not listed on Schedule 9 of the Wildlife and Countryside Act 1981 these species are listed as species of concern on the London Invasive Species Initiative (LISI, 2019) The presence of invasive non-native plant species on the Site is **confirmed**.

Invertebrates

A number of invertebrate records were returned in data search, including a record for stag beetle 88m from the Site in 2015. However, there is no suitable habitat onsite to support such species of invertebrates and the likelihood of protected or notable species being present at the Site is considered to be **negligible**. This species group is not considered further in this report.

Fish

The data search did not return records for protected or notable fish and there is no suitable habitat on or adjacent to the Site to support such species of fish. Therefore, the likelihood of protected or notable species being present at the Site is considered to be **negligible**. This species group is not considered further in this report.

Amphibians

Amphibian species including common toad, common frog *Rana temporaria* and great crested newt were returned on the data search, although these records are over 20 years old. A search of Defra's MAGIC website returned no European Protected Species Licences granted for great crested newt within 1km of the Site.

Reference to Ordnance survey and aerial imagery indicated the presence of no ponds within a 500m radius of the site. The Site lacks any form of aquatic habitat and the existing built form offers no suitable terrestrial habitat for amphibians. The only vegetated habitats present are limited in their extent and suitability, and lack connectivity to any amphibian-suitable habitat in the surrounding area. As such, the likelihood that the Site supports notable or protected amphibian populations has been assessed to be **negligible**.

Reptiles

No records for reptiles were returned in the data search and there is no suitable reptile habitat is present at the Site as it is dominated by the buildings and hardstanding. Therefore, the likelihood of reptile species being present at the Site is considered to be **negligible**. This species group is not considered further in this report.

Birds

Six species were recorded during the Site visit. These species are shown in Table 12 together with their conservation status. It is important to note that this is not a full inventory of species for the Site.

Table 12: Bird species recorded during Site visit

Common name	Systematic name	S1 W&CA[1]	BoCC[2] Status	S41 SPI[3]	Local PrSp[4]
Feral pigeon	*Columba livia*	-	Green	-	-
Wren	*Troglodytes troglodytes*	-	Amber	-	-
Blue tit	*Cyanistes caeruleus*	-	Green	-	-
Great tit	*Parus major*	-	Green	-	-
Robin	*Erithacus rubecula*	-	Green	-	-
Great spotted woodpecker	*Dendrocopos major*	-	Green	-	-

[1] Schedule 1 of The Wildlife and Countryside Act 1981 (see Appendix 1)
[2] Birds of Conservation Concern (see Appendix 1)
[3] Section 41 (NERC Act 2006) 'Species of Principal Importance' (see Appendix 1)
[4] Local Priority Species

The data search returned several bird species records from within 1km of the Site including species listed under Section 41 of the NERC Act (2006) and those listed as Red and Amber of the BoCC list, including swift *Apus apus*, house sparrow *Passer domesticus*, which are both London Priority Species.

Habitat for breeding birds is limited at the Site; however, the trees and introduced shrubs hold potential to support nesting birds. The likelihood of breeding birds being present at the Site is considered to be **moderate**. The habitats present at the Site are unlikely to support assemblages of protected bird species and therefore the likelihood of the Site supporting such species is considered to be **negligible**.

Badgers

No records of badger were returned on the data search and the habitats present at the Site are not suitable for badgers; therefore, the likelihood of badgers being present at the Site is considered to be **negligible**. This species is not considered further in this report.

Other mammals

The data search returned records for hedgehog; however, these records are from 1999 and no recent records have been reported. The garden may provide suitable foraging habitat. However, there is little suitable habitat onsite so the likelihood of this species being present on Site is **low**.

4.4. Preliminary Roost Assessment

Data search results

The data search records from three species of bat within 1km of the Site. Records are limited to those for common pipistrelle, soprano pipistrelle, noctule, unidentified pipistrelle *Pipistrellus* sp. and unidentified bats (*Vespertilionidae)*. The nearest bat record was of an unidentified pipistrelle species 0.7km to the south east of the Site. Several bat species recorded are associated with roosts in buildings. Pipistrelle species are commonly found roosting in crevices under roof tiles, lead flashing and behind weather boarding.

A search of Defra's MAGIC website returned six European Protected Species Licences granted for the destruction of common pipistrelle and soprano pipistrelle roosts within 1km of the Site. The nearest license was granted 0.8km to the south-east of the Site in 2015 (ref: application2015-10291-EPS-MIT).

The gardens and mature trees in the area surrounding the Site are likely to hold foraging and commuting value to local bat populations. These features are likely to support locally high invertebrate diversities upon which bats feed. On the Site, the line of trees and areas of vegetation are of some limited foraging and commuting value. Therefore, the likelihood that the Site supports foraging and commuting bats has been assessed to be **low.**

Preliminary Roost Assessment

An interior and exterior assessment was carried out on the buildings B1 and B2 within the Site to assess their potential for supporting bat roosts. The buildings were categorised as having **low** potential to support roosting bats. No evidence of bats was observed, however, the buildings contained features with potential to support roosting bats. Table 13 outlines the results of the Preliminary Roost Assessment.

Table 13: Building roost assessment results

Building	Roost suitability	Description	Bat roost evidence and potential
B1	Low	A large three-storey brick building with a mixture of flat and pitched roofing. The pitched roofing areas are tiled and in poor condition.	Whilst no direct evidence of roosting bats was identified during the survey, a number of access points into the building were identified:

Building	Roost suitability	Description	Bat roost evidence and potential
			• Lifted flashing and missing tiles (Target Note 2, Figure 1; Photograph 6, Appendix 3); • Missing tiles (Target Note 3, Figure 2; Photograph 7, Appendix 3). There were no suitable features identified for roosting bats internally.
B2	Low	A single-story brick garage to the immediate south of building B1. The roof is tiled and in relatively poor condition due to many missing tiles.	Whilst no direct evidence of roosting bats was identified during the survey, a potential roosting feature was identified: • Missing tiles (Target Note 1, Figure 1; Photograph 5, Appendix 3);

A total of four trees and a group of shrubs were surveyed at 194 Goldhurst Terrace. No direct evidence of roosting bats was observed during the survey work undertaken, as summarised in Table 14.

Table 14: Summary of ground level tree assessment

Tree	Species	Roost Suitability	To be removed
T19	Lime	None	Yes
T20	Lime	None	Yes
G21	Apple *Malus domestica*, holly *Ilex aquifolium*, elder, ash	None	Yes
T22	Apple	None	Yes
T23	Ash	None	Yes

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

Offsite habitats

194 Goldhurst Terrace, London lies within 10km of Lee Valley SPA and Ramsar site. European protected sites (i.e. SACs and SPAs) are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). Under this law, development projects carried out on or in the vicinity of European sites may require a Habitat Regulations Assessment (HRA) to evaluate the impact of the proposed development on the designated site.

The proposed development at 194 Goldhurst Terrace, London is highly unlikely to significantly impact the Lee Valley SPA and Ramsar site. The small scale and nature of the development (demolitions on current extensions and developments of extensions to two buildings at the Site), and its distance from Lee Valley SPA, means it is unlikely to affect the site. It is highly unlikely a Habitat Regulations Assessment for the proposed development is required.

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

- Airports, helipads and other aviation proposals;
- Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction;
- Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.
- 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 is not required.

On-site habitats

The line of lime along the south of the Site is of elevated ecological value in the context of the Site. This tree line should be retained if possible; should removal be deemed necessary under the design proposals, it should be replaced with new native tree planting. Camden Local Plan policy A3 states that replacement trees are expected to be provided where there is loss and that developments are expected to incorporate additional trees and vegetation where possible.

Recommendation 1

Retain existing trees where possible. Where removal is deemed necessary, the trees should be replaced with new native planting, in line with local planning policy.

Plants

Butterfly-bush, cherry laurel and green alkanet were identified in several locations onsite. Whilst these species' are not listed on Schedule 9 of the Wildlife and Countryside Act 1981, they are listed as species of concern on the London Invasive Species Initiative (LISI, 2019). Whilst there is no legal obligation to control LISI species, it would be good practice to remove all instances of butterfly-bush, cherry laurel and green alkanet from the Site, and to dispose of the arisings as controlled waste in order to avoid their spread.

Recommendation 2

Remove all instances of invasive non-native species from the Site and dispose of the arisings as controlled waste in order to avoid their spread.

Birds

The trees and dense ivy present onsite provide potential breeding habitat for 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.

As discussed above, it is recommended that the trees on Site be retained and protected during the proposed works. Should the removal of the trees or ivy be deemed necessary, works should be scheduled outside of breeding bird season. 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 3

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

Buildings B1 and B2 have been assessed as having **low** potential for roosting bats, due to the presence of potential roosting features within the roof tiling and flashing.

All bat species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of Conservation of Habitats and Species Regulations 2017 (as amended). Bats are also Species of Principal Importance 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.

The proposed development will involve the demolition of the single-story extensions on building B1 and extensions to building B2, as such, there is a risk that individual bats may be killed, injured or disturbed in their roosts during the works, and that bat roosts will be damaged or destroyed without appropriate mitigation measures.

Further survey effort is required in order to ascertain the presence or likely absence of roosting bats. Best practice guidelines (Collins, 2016) recommend that one nocturnal survey visits be undertaken for buildings with a moderate risk of supporting roosting bats; buildings with a low risk of supporting roosting bats should be subject to a single nocturnal survey. These surveys should be conducted between May and August, with September also possible but sub-optimal. This survey should be secured through a planning condition and must be undertaken prior to works commencing.

Recommendation 4

Undertake one nocturnal bat roost survey on buildings B1 and B2 in order to ascertain the presence or likely absence of roosting bats. This survey should be secured through a planning condition and must be undertaken prior to works commencing.

As is detailed in Table 14 above, several trees are to be removed under the proposed development scheme. Whilst the survey didn't identify any potential roost features, however, the upper five meters of the trees could not be accurate surveyed due to leaf cover and height. As such a number of precautionary measures will need to be implemented.

The two large lime trees (T19 and T20) which are to be impacted by pruning or felling works should be subject to precautionary mitigation measures in order to avoid harm to any bats or impacts to roosts that maybe present at the time of the works. Such measures should be detailed within a Precautionary Working Method Statement (PWMS), and should include, but are not limited to, pre-works checks by the ecologist, soft-felling, where works are supervised by a licenced bat ecologist, and safe sectioning and gentle lowering of the tree or limbs are undertaken to avoid cutting through PRFs, where sections with deep cavities are left on the ground overnight to allow any bats to escape any potential roost features (Collins, 2023).

Recommendation 5

The two semi-mature lime trees (T19 and T20) should be soft-felled under the supervision of an Ecological Clerk of Works (ECoW). This should also be preceded by a pre-works check.

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 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. These measures should be secured through a planning condition.

Recommendation 6

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.

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 Site. 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 7

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.

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. The Camden Biodiversity Action Plan (2017) emphasises the value of native species and provides recommendations such as lime *Tilia cordata,* bird cherry *Prunus padus* and crab apple *Malus sylvestris* for tree planting; alder buckthorn *Alnus glutinosa,* common elder *Sambucus nigra* and ivy *Hedera helix* for shrubs and climbers; and red valerian *Centranthus ruber*, wild daffodil *Narcissus pseudonarcissus* and foxglove *Digitalis purpurea* as border plants.

Recommendation 8

It is recommended that native British species are incorporated within the planting scheme for the final landscaping design in order to enhance the overall value of the Site for biodiversity. Species should be selected from recommendations made in the Camden Biodiversity Action Plan.

Enhanced opportunities for breeding birds should be incorporated into the design scheme. Bird boxes should be mounted on trees and built structures at the Site. It is recommended that there is a focus on swift, together with the provision of generalist bird boxes. Examples of suitable boxes are shown in Appendix 4 together with information concerning the correct siting of these enhancement features.

Recommendation 9

A minimum of three swift boxes and two generalist bird boxes should be installed at the Site.

The wider landscape has the 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. Examples of suitable boxes will be provided following the nocturnal bat roost survey(s) to be undertaken at the Site, as this will give an indication of bat community structure and important foraging areas at the Site.

Recommendation 10

Provisions should be made for roosting bats at the Site post-development. Details on box specifications will be provided following the nocturnal bat roost survey.

It is recommended that a Biodiversity Net Gain (BNG) assessment is undertaken so as to ensure that the development delivers sufficient biodiversity gains. However, this is a recommendation and won't become mandatory to deliver at the Site until April 2024.

Recommendation 11

Undertake a BNG assessment for the proposed development.

The Environment Act (2021) states that all BNG 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. A LEMP should still be produced for the habitats onsite even if a BNG assessment isn't undertaken.

Recommendation 12

Produce a LEMP covering the next 30 years to accompany the BNG assessment. A LEMP should still be produced for the habitats onsite even if a BNG assessment isn't undertaken.

Summary of recommendations

Table 15 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 15: Summary of recommendations at 194 Goldhurst Terrace, London

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Onsite habitats	Retain lime trees. Incorporate high value green infrastructure habitats into the landscaping scheme.	Protect retained trees.	Protect retained trees.	Native planting and green infrastructure habitat creation.
Plants	Removal of butterfly-bush, cherry laurel and green alkanet with arisings disposed of as controlled waste.	No	No	Native planting, including fruit tree and shrub planting.
Bats	Further survey work	TBC	TBC	TBC

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
	Develop sensitive lighting scheme. Bat boxes and native planting		Precautionary tree felling work under EcOW Incorporate integrated bat boxes into new building Implement sensitive lighting scheme during construction	Bat boxes and native planting
Birds	Bird boxes and native planting	No	Timing of works for vegetation removal OR further survey work	Bird boxes and native planting

Table 16: Summary of further surveys recommended at 194 Goldhurst Terrace, London

Species/species group	Purpose of survey	Survey period (inclusive unless otherwise stated)
Bats (Nocturnal Bat Roost Survey)	Confirm presence/absence and understand species assemblage.	April-Sept

6. CONCLUSIONS

In September 2023, MKA Ecology Ltd undertook a Preliminary Ecological Appraisal and Preliminary Roost Assessment at 194 Goldhurst Terrace, London in order to support a planning application for the development of buildings B1 and B2 at 194 Goldhurst Terrace into eight flats and a single detached house.

The Site is dominated by two buildings (buildings B1 and B2) with associated areas of modified grassland, a line of trees and planted borders of introduced shrubs. The development proposals are for the demolition of single-storey side extensions on building B1 with the development of a three-storey side extension and basement excavation. The resulting building will contain eight flats. The proposals also include the relocation of the garage space contained in building B2 whilst adding extensions to the rear and side of the building and basement excavation. The resulting building will be a single detached residential property. Four trees and a group of shrubs will be removed under the current development proposals.

The potential protected species constraints that were identified in the assessment of the Site relate to invasive species, bats and breeding birds. It is strongly recommended that all vegetation clearance at the Site is timed sensitively outside of breeding bird season (i.e., cleared between September and February) in order to avoid potentially lengthy delays if nests are found during nesting bird checks. All instances of invasive plant species should be subject to sensitive removal from the Site, with all arisings disposed of as controlled waste. Buildings B1 and B2 will require a single nocturnal bat roost survey in order to ascertain the presence or likely absence of bat roosts; this should take place ideally between May and August, with April and September being suboptimal. While bat roost potential was judged to be low, should bat roosts be identified in the building, further surveys will be required. Whilst no potential roost features were identified during the GLTA of two semi mature lime trees (T19 and T20), the upper five meters of the tree could not be surveyed due to leaf cover and height. As a precaution, these two trees should be soft-felled under the supervision of an Ecological Clerk of Works (ECoW). This should also be preceded by a pre-works check. A sympathetic lighting scheme should be developed to minimise impacts on bat activity at the Site post development.

There is potential for the ecological value of the Site to be elevated through a number of biodiversity enhancements including planting of native trees and shrubs, and the integration of bird and bat boxes. These features will greatly improve the ecological value of the new development, and address local and national planning policy and legislation.

It is recommended that a BNG assessment is undertaken so as to ensure that the development delivers sufficient biodiversity gains. This however is a recommendation and won't become mandatory to deliver at the Site until April 2024.

A LEMP should be produced so as to ensure the successful creation and long-term 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
Amphibians		
Great crested newt *Triturus cristatus* Natterjack toad *Epidalea calamita*	Schedule 2 of Conservation of Habitats and Species Regulations (2017) Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	• Deliberately capture or kill, or intentionally injure; • Deliberately disturb or recklessly disturb them in a place used for shelter or protection; • Damage or destroy a breeding site or resting place; • Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and • Possess an individual, or any part of it, unless acquired lawfully.
Reptiles		
Common lizard *Zootoca vivipara* Adder *Vipera berus* Slow-worm *Anguis fragilis* Grass snake *Natrix helvetica helvetica*	Part of Sub-section 9(1) of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill or injure individuals of these species (Section 9(1)).

Subject	Legislation (England)	Relevant prohibited actions
Sand lizard *Lacerta agilis* Smooth snake *Coronella austriaca*	Full protection under Section 9 of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	• Deliberately or intentionally kill, capture (take) or intentionally injure; • Deliberately disturb; • Deliberately take or destroy eggs; • Damage or destroy a breeding site or resting place or intentionally damage a place used for shelter; or • Intentionally obstruct access to a place used for shelter.
Birds		
All wild birds	Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure, or take any wild bird or their eggs or nests.
'Schedule 1' birds	Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)	• 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 • Disturb the dependent young of any wild bird listed on Schedule 1.
Mammals		
Bats (all UK species)	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	• Deliberately capture, injure or kill a bat; • 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

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	distribution or abundance of the species); • Damage or destroy a bat roost; • Intentionally or recklessly disturb a bat at a roost; or • Intentionally or recklessly obstruct access to a roost. In this interpretation, a bat roost is "*any structure or place which any wild [bat]...uses for shelter or protection*". Legal opinion is that the roost is protected whether or not the bats are present at the time.
Badger *Meles meles*	Protection of Badgers Act 1992	Under Section 3 of the Act: • Damage a sett or any part of it; • Destroy a sett; • Obstruct access to, or any entrance of, a sett; or • Disturb a badger when it is occupying a sett. A sett is defined legally as any structure or place which displays signs indicating current use by a badger (Natural England 2007).
Hazel dormouse *Muscardinus avellanarius*	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	• Intentionally or deliberately capture or kill, or intentionally injure;

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Deliberately disturb or intentionally or recklessly disturb them in a place used for shelter or protection; • Damage or destroy a breeding site or resting place; • Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and • Possess an individual, or any part of it, unless acquired lawfully.
Otter *Lutra lutra*	Schedule 2 of Conservation of Habitats and Species Regulations (2017) Section 9(4)(b) and (c) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Deliberately capture, injure or kill an otter; • 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; • Intentionally or recklessly disturb any otter whilst it is occupying a holt; • Damage or destroy or intentionally or recklessly obstruct access to an otter holt.
Water vole *Arvicola amphibius*	Section 9 of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure or take water voles; • Possess or control live or dead water voles or derivatives; • Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection; or • Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.

Subject	Legislation (England)	Relevant prohibited actions
Crustaceans		
White-clawed crayfish *Austropotamobius pallipes*	Section 9(1) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure or take white-clawed crayfish by any method.

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)

The Wildlife and Countryside Act 1981 (as amended)

Full legislation text available at: http://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

Protection of Badgers Act 1992

Full legislation text available at: http://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

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 in September 2023 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.*

Camden Council has produced an adopted Local Plan, which contains one policy specifically relating to biodiversity and habitat conservation:

- Policy A3 – Biodiversity

  The Council will protect and enhance sites of nature conservation and biodiversity. We will:
  a) *designate and protect nature conservation sites and safeguard protected and priority habitats and species;*
  b) *grant permission for development unless it would directly or indirectly result in the loss or harm to a designated nature conservation site or adversely affect the status or population of priority habitats and species;*
  c) *seek the protection of other features with nature conservation value, including gardens, wherever possible;*

d) assess developments against their ability to realise benefits for biodiversity through the layout, design and materials used in the built structure and landscaping elements of a proposed development, proportionate to the scale of development proposed;

e) secure improvements to green corridors, particularly where a development scheme is adjacent to an existing corridor;

f) seek to improve opportunities to experience nature, in particular where such opportunities are lacking;

g) require the demolition and construction phase of development, including the movement of works vehicles, to be planned to avoid disturbance to habitats and species and ecologically sensitive areas, and the spread of invasive species;

h) secure management plans, where appropriate, to ensure that nature conservation objectives are met; and

i) work with The Royal Parks, The City of London Corporation, the London Wildlife Trust, friends of park groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden.

Trees and vegetation

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

j) resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation;

k) require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 'Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout;

l) expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;

m) expect developments to incorporate additional trees and vegetation wherever possible.

Additional considerations have been given to the information provided in the Camden Planning Guidance on Biodiversity (Camden Council, 2018).

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 2 for details.

Buildings- u1b5

Common Name	Systematic Name	Relative abundance
Ivy	*Hedera helix*	A
Butterfly-bush	*Buddleja davidii*	O

Developed land; sealed surface - u1b

Common Name	Systematic Name	Relative abundance
Ivy	*Hedera helix*	F
Perennial rye-grass	*Lolium perenne*	O
Wall barley	*Hordeum murinum*	O
Butterfly-bush	*Buddleja davidii*	O

Suburban mosaic of developed and nature surface -– u1d (847 - Introduced shrub)

Common Name	Systematic Name	Relative abundance
Ivy	*Hedera helix*	A
Dog rose	*Rosa canina*	F
Perennial rye-grass	*Lolium perenne*	F
Bramble	*Rubus fruticosus agg.*	F
Butterfly-bush	*Buddleja davidii*	O
Cherry laurel	*Prunus laurocerasus*	O
Holly	*Ilex aquifolium*	O
Michaelmas-daisy	*Aster sp.*	O
Red dead-nettle	*Lamium purpureum*	O
Wisteria sp.	*Wisteria sp.*	O
Sycamore	*Acer pseudoplatanus*	R

Modified Grassland (g4)

Common Name	Systematic Name	Relative abundance
Perennial rye-grass	*Lolium perenne*	D
Greater plantain	*Plantago major*	A
White clover	Trifolium repens	A
Annual meadow grass	*Poa annua*	F
Chickweed	*Stellaria media*	O
Red dead-nettle	*Lamium purpureum*	O
Bamble	*Rubus fruticosus agg.*	O
Ivy	*Hedera helix*	O
Wall barley	*Hordeum murinum*	O
Wood avens	*Geum urbanum*	R
Yarrow	*Achillea millefolium*	R
Sweet violet	*Viola odorata*	R
Green alkanet	*Pentaglottis sempervirens*	R

Line of trees - w1g6

Common Name	Systematic Name	Relative abundance
Lime	*Tilia* sp	

8.3. Appendix 3: Site photographs

Photograph 1: Building B1

Photograph 2: Building B2

Photograph 3: Grassland and trees on the southern side of the Site.

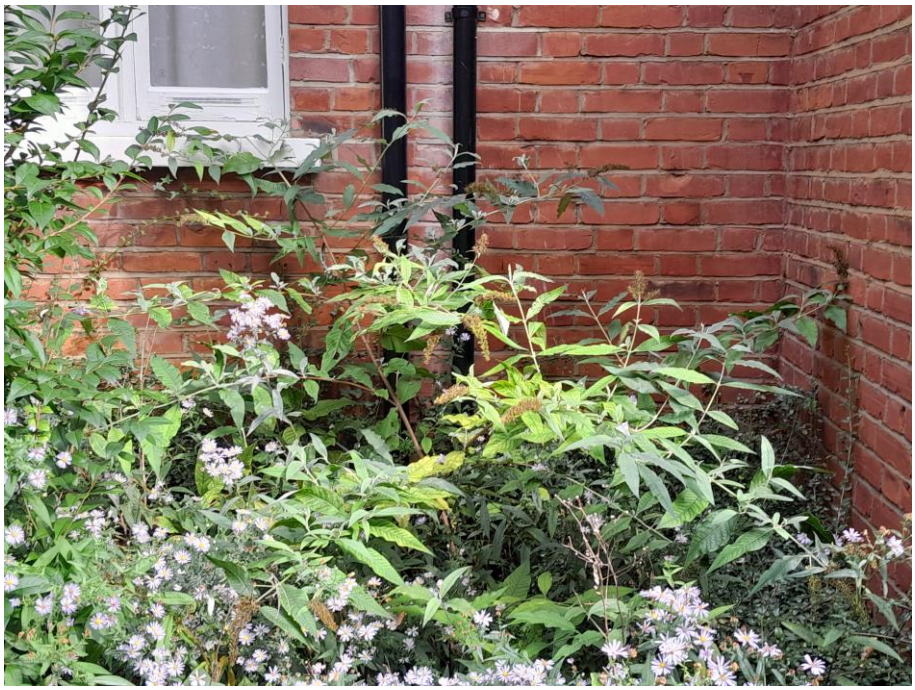
Photograph 4: Introduced shrubs

Photograph 5: Missing tiles on building B2 (Target Note 1, Figure 1)

Photograph 6: Missing tiles and gaps under flashing on building B1 (Target Note 1, Figure 1)

Photograph 7: Missing tiles and gaps under flashing of building B1 (Target Note 3, Figure 1)

Photograph 8: An instance of butterfly-bush (Invasive Non-native Species 1, Figure 1)



8.4. Appendix 4: Faunal enhancement 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	www.schwegler-nature.com 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.

Swift boxes

Swifts are colonial nesters and it is important to have several nest sites in one area. It is recommended that most buildings should have between 4 and 10 nest provisions. Swifts also feed almost exclusively on the aerial plankton of flying insects and airborne spiders of small to moderate size, so therefore require habitats which support these invertebrates.

Nest boxes designed for swifts should be installed at least 5m high, around the eaves of the building or under deeply overhanging eaves to allow swifts to drop into the air to forage. The boxes should be positioned away from climbing plants to avoid access for predators such as rodents.

Swifts typically nest in flat spaces within buildings or within a crevice or cavity. The ideal nest box should have an oval or rectangular hole around 30mm (h) x 65mm (w). The internal dimensions of the box should be approximately 400mm (w) x 200mm (d) x 150mm (h).

Swifts can be attracted to areas that they have not previously colonised using ‘swift response calls’. Audio CDs are available for this purpose and are available on the Schwegler website (www.schwegler-nature.com).

Swift		
Example	**Description**	**Picture**
Triple Genesis Swift Nest Box	https://www.wildcare.co.uk/ It can be mounted on an external wall to provide three swift nesting sites.	
Swift box model 30	http://actionforswifts.blogspot.com/p/diy-swift-box-designs.html This box is suitable for any location as it has a double thickness, waterproof roof (made of uPVC). The 30° sloping roof should deter predators.	
Schwegler Swift and Bat Box 1MF	www.schwegler-nature.com This box contains two nesting chambers for Swifts, each with its own entrance, allowing two pairs to breed. In addition, a recess in the rear panel creates a space between the wall of the building and box, making it ideal for bats that inhabit buildings, such as the Pipistrelle.	

Deadwood features

Example	Description	Picture
'Stag beetle loggery	https://ptes.org/9-top-ways-to-help-stag-beetles-in-your-garden/ 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.	 (image credit – PTES, 2021)
Artificial rot hole	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. Taylor *et al.* (2021) British Wildlife **32**(8) p547	   (image credits - Athayde Tonhasca via Scotlandsnature.blog, 2020)

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