



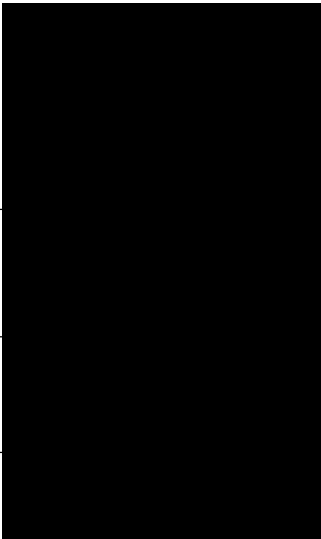
MKA
ECOLOGY

Preliminary Ecological Appraisal

Radcliffe House, The Priory, Hitchin

Site	<i>Radcliffe House, The Priory, Hitchin</i>
Project number	<i>262012</i>
Client name / Address	<i>Metric and Maker, The McCay Partnership, 24 Capital Business Centre, 22 Carlton Road, South Croydon, Surrey, England, CR2 0BS</i>

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Declaration of compliance

This Preliminary Ecological Appraisal 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 18 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 March 2026, MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal of Radcliffe House, The Priory, Hitchin. 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 9th March 2026.

The Site comprises of trees, grassland, introduced shrub, hedgerow and a building (Radcliffe House). The proposed development involves onsite landscaping enhancements and external alterations to Radcliffe House.

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

- **Habitats:** The Site is comprised of trees, grassland, hedgerow, shrub and a building. It is recommended that the trees are retained and protected throughout the development where feasible.
- **Roosting bats:** The buildings onsite have potential bat roosting features. It is recommended that a Preliminary Roost Assessment is undertaken on Radcliffe House, encompassing the roof spaces and any basement areas of the building, to fully ascertain the likelihood of roosting bats being present. Two trees (TB1 and TB2) will be pruned as part of the development and therefore require a Ground-Level Tree Assessment to assess their potential to support roosting bats. A sensitive lighting scheme should be designed to ensure light pollution does not increase as a result of the development. Light spill must avoid the adjacent woodland to the south of Site. The outcomes of these surveys will determine whether a Construction Ecological Management Plan (CEcMP) is required to protect key habitat features.
- **Badger:** Badger are known to be present in the local area with multiple recent records returned in the data search. The woodland onsite and to the north and east of the Site provide a limited amount of suitable sett-building habitat for this species. No field signs of Badger were found during the survey. It is recommended that badger-sensitive construction practices as outlined in this report are implemented during construction.
- **Hedgehogs:** The development has suitable habitat for foraging and commuting Hedgehogs. Hedgehog access should be implemented as a biodiversity enhancement.
- **Nesting Birds:** The hedgerow and trees provide suitable nesting habitat for birds. All wild birds, their active nests and eggs are protected under The Wildlife and Countryside Act 1981. It is recommended that all vegetation clearance is undertaken outside of the breeding bird season, which runs from March to August inclusive. If these timings are not feasible, any vegetation clearance should be immediately preceded by a nesting bird check by an experienced ecologist.

To comply with the Environment Act 2021, National Planning Policy Framework, and local planning policy a full Biodiversity Net Gain Assessment is recommended to ensure that provisions are made to enhance the Site for biodiversity post-development. This should include retention of existing higher value habitats (such as trees) and native planting and creation of new habitats, such as species-rich grassland and native shrub planting. To ensure the retained and created habitats are managed appropriately, a Habitat Management and Monitoring Plan (HMMP) should be created. Both the built environment and the trees should be utilised for nest box provision. A bird and bat box plan should also be created to show locations of proposed bird and bat boxes.

2. INTRODUCTION

2.1. Aims and scope of Preliminary Ecological Appraisal

In March 2026 MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal at Radcliffe House, The Priory, Hitchin by Metric and Maker in order to support a planning application for onsite landscaping enhancements and external alterations to Radcliffe 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 close proximity of the Site;
- Prepare a habitat map;
- Identify evidence of protected species/species of conservation concern at the Site;
- Assess the potential impacts of the proposed development, using existing plans;
- Outline recommendations for further survey effort where required; and
- Outline recommendations for biodiversity enhancements.

2.2. Site description and context

The survey area is shown on the map in Figure 1: UK Habitat Classification map of Radcliffe House, The Priory, Hitchin. Within this report this area is referred to as the Site or Radcliffe House, The Priory, Hitchin. The 0.71 ha Site (centred around grid reference TL 18238 28814) is located in south Hitchin and it falls under the jurisdiction of North Hertfordshire District Council. Habitats include modified grassland, introduced shrub, , individual trees, non-native hedgerows and hard standing. The River Hiz runs to the south-east boundary, and the A602 Park Way is located to the south-west of Radcliffe House, The Priory, Hitchin.

2.3. Proposed development

The proposed development involves onsite landscaping enhancements and external alterations to Radcliffe House. It will involve impacts on the roof structure, requiring either modifications or a roof replacement.

Due to the likely scale and type of project the anticipated zone of influence will be the Site itself and the immediately adjacent woodland to the southeast of the Site.

2.4. Legislation and planning policy

This Preliminary Ecological Appraisal 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 12 December 2024 requires planning decisions to contribute to conserving and enhancing the local environment. Further details are provided in Appendix 1. North Herts Council has produced an adopted Local Plan which covers a number of policies relating to biodiversity and habitat conservation, including:

- Policy SP1: Sustainable development in North Hertfordshire - Grant planning permission for proposals that, individually or cumulatively: (iv) protect key elements of North Hertfordshire's environment including biodiversity, important landscapes, heritage assets and green infrastructure (including the water environment); and (v) secure any necessary mitigation measures that reduce the impact of development, including on climate change.
- Policy SP9: Design and Sustainability – (C) Require Strategic Masterplans and planning applications for Strategic Housing Sites and significant development to (as applicable): (vi) create and accessible multi-functional green infrastructure network that provides: a high-quality integrated network to support ecological connectivity, biodiversity net gain, climate adaptation and mitigation linking into the wider Ecological Network.
- Policy SP12: Green infrastructure, landscape and biodiversity – States that it will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhance and will:
 - Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure;

- Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty;
- Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features:
 - Internationally designated sites
 - Nationally designated sites
 - Locally designated sites
 - Non-designated sites that include important habitats and species;
- Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity;
- Protect other open spaces and support provision of new and improved open space.

Where relevant these are discussed in further detail in Section 5.

3. METHODOLOGIES

This Preliminary Ecological Appraisal 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 area within 2km. The search was extended to 10km for internationally designated sites. 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.	12/03/2026
Herts Environmental Record Centre	Information on protected and notable sites and species within 2km of the Site (TL18220 28772).	12/03/2026
Ordnance Survey maps and aerial photography	Information on habitats and connectivity between the Site and the surrounding landscape	12/03/2026
Plantlife Important Plant Areas Buglife Important Invertebrate Areas	Information on hotspots of diversity for plants and invertebrates and populations of internationally threatened species.	12/03/2026
Natural England	Information on GCN Risk Areas for Hertfordshire	12/03/2026

3.2. UK Habitat Classification

Habitats were surveyed using the standardised UK Habitat classification and mapping methodology (UKHab Ltd, 2023). Data were recorded onto a Samsung Tablet in a Geographic Information System (GIS), in this instance QField, following a modified UK Habs colour mapping palette. 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

In order to assess grassland habitats a series of 1m-by-1m quadrats are used to understand species composition. Within each quadrat the percentage cover of each species is recorded. The number of quadrats used varies depending on grassland complexity. Low complexity grasslands, such as amenity grasslands, have fewer quadrats. Neutral, acidic and calcareous grasslands have at least five quadrats to ensure the habitat types are correctly assigned.

3.3. Protected and notable species scoping survey

As part of the Preliminary Ecological Appraisal, an assessment of the potential for the habitats onsite, or within the zone of influence of the proposed development, 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 Radcliffe House, The Priory, Hitchin include the following:

- Plants and fungi: Bluebell *Hyacinthoides non-scripta* and Orange-fruited Elm-lichen *Caloplaca luteoalba*, Cornflower *Centaurea cyanus* and Small-flowered Buttercup *Ranunculus parviflorus*;
- Invertebrates: Marsh Fritillary *Euphydryas aurinia*, Jersey Tiger *Euplagia quadripunctaria*, Stag Beetle *Lucanus cervus*.
- Fish: Bullhead *Cottus gobio*, Nine-spined Stickleback *Pungitius pungitius*;

- 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, Species of Principal Importance and BoCC species.
- 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 in the zone of influence of the proposed development was classified as being either confirmed, high, moderate, low or negligible.

- **Confirmed:** The species is confirmed during the Preliminary Ecological Appraisal, previous survey effort or recent records.
- **High:** Habitats are available 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 for the species although not of optimum quality. Species is present with the desktop study.
- **Low:** Some suitable habitat available 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. Surveyor, author and reviewer

The survey was undertaken by Robin Pickett, Ecologist at MKA Ecology Ltd and Noel Ellis, Graduate Ecologist MKA Ecology Ltd. Robin has one experience undertaking PEAs. Noel is in his first year of undertaking PEAs. The report was written by Robin and updated to Version 2.0 by Hazel Dudley, Ecologist at MKA Ecology. Hazel has three years' experience in undertaking PEAs. The report has been reviewed by Marielle James MCIEEM, Principal Ecologist at MKA Ecology Ltd. Marielle has over 10 years' experience as a Principal ecologist. This report was authorised by Marcus Kohler. Marcus is the Director and Founder of MKA Ecology Ltd, with over 30 years of experience as an ecologist.

3.5. Date, time and weather conditions

See Table 3 below for details of the date, time and prevailing weather conditions recorded during the site visit for the Preliminary Ecological Appraisal.

Table 3: Date, time and weather conditions of survey visit

Date	Time of survey	Weather conditions*
10/03/2026	10:00	Wind: 1 Cloud: 3 Temp: 14°C Rain: 0

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

3.6. Constraints

The fieldwork for this survey was combined with Pease House due to their immediate proximity and an original single red-line boundary, and records of some taxonomic groups are combined for both sites. This has no bearing on the results given the small footprint of each development but is mentioned only for clarity in assessing both reports.

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 of April to the end of September. However, within the scope of the study it was possible to identify key habitats present and assess their likelihood of supporting a greater range of species.

The central grid references used to conduct the desktop study (TL 18220 28772) varies slightly from central grid reference of the red line boundary for Radcliffe House, The Priory, Hitchin (TL 18238 28814). This is due to changes to the red line boundary during the progress of this appraisal. However, the difference is very minor and given the limited works and habitat present, is of no consequence.

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 Herts Environmental Records Centre (HERC) 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 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 statutorily designated sites identified as part of the desktop study are displayed in Table 4 below. These consist of one Site of Special Scientific Interest (SSSI) within 2km of the site and two Local Nature Reserves (LNR) within 2km of the site. The SSSI is designated for its geological interest.

Table 4: Statutorily designated sites within 2km of Radcliffe House, The Priory, Hitchin

Site name	Area (ha)	Distance and direction	Reasons for selection
Oughtonhead Lane (SSSI)	0.98ha	2.39km NW	Oughtonhead Lane is a geological Site of Special Scientific Interest in Hitchin dating back 420,000 to 300,000 years ago.
Purwell Meadows (LNR)	8.59ha	1.89km NE	Old pastures along the River Purwell and its associated streams, mostly of unimproved calcareous grassland with areas of marshy ground and associated springs, some scrub, a former cress bed and secondary neutral grassland. The site supports a diversity of lower and higher plant species including a number of species uncommon or rare in Hertfordshire.

Site name	Area (ha)	Distance and direction	Reasons for selection
Oughtonhead Common (LNR)	17.35ha	2.26km NW	The common supports marshy grassland with fen but with drier areas of neutral grassland, scrub and woodland. An unusual geology has resulted in a very diverse flora. Mixed wet woodland forms a belt of varying width along the north bank of the River Oughton which has its source at the western end. The site is one of the larger fen woodlands in Hertfordshire and has a long history of being managed as a fen.

Details of non-statutorily designated sites identified as part of the desktop study are displayed in Table 5. These consist of 10 Local Wildlife Sites (LWS).

Table 5: Non-statutorily designated sites within 2km of Radcliffe House, The Priory, Hitchin

Site name	Area (ha)	Distance and direction	Reasons for selection
Windmill Hill (LWS)	2.81	0.63 km NE	A steep roadside bank which supports an interesting grassland flora including Wild Clary <i>Salvia verbenaca</i> , a species rare in Hertfordshire.
Priory Park Icehouse (LWS)	<0.01	0.64 km S	Building and environs important for protected species.
Charlton Mill Pool (LWS)	1.04	0.89 km SW	Old mill pool formed by the widening of the river channel with fluctuating water level. South of the lake the river flows in several shallow muddy channels through swamp and wet Willow <i>Salix spp.</i> /Alder <i>Alnus glutinosa</i> woodland on the spring source. When the water level is high the river probably floods most of the wood. Some planted hybrid Black Poplar <i>Populus x canadensis</i> is present.
Hitchin Railway Cutting (LWS)	<0.01	0.97 km E	Chalk cutting with calcareous grassland, scrub and bare rocky ground. Site with Great Crested Newt, Smooth Newt, Common Toad and Frog.
River Purwell, Walsworth Common (LWS)	0.33	1.07 km NE	River Purwell and banks with some botanical interest and records of Water Vole.

Site name	Area (ha)	Distance and direction	Reasons for selection
Maydencroft Manor Farm, Gosmore	<0.01	1.11 km S	Building and environs important for protected species. Wildlife Site criteria: Species.
The Willows (Hitchin) (LWS)	3.74	1.12km SW	Alder <i>Alnus glutinosa</i> /Willow <i>Salix</i> spp. fen woodland with areas of marshy grassland and scrub. Ash <i>Fraxinus excelsior</i> with Hazel <i>Corylus avellana</i> coppice below becomes dominant to the western end. Lesser Pond-sedge <i>Carex acutiformis</i> is frequent in the wetter parts. Contains small streams and springs, a source of the River Hiz.
Oughton Head	25.26	1.37 km NW	Oughton Head consists of the main area of common in the south-east and the wet woodland band to the north of the river. The common supports marshy grassland with fen but with drier areas of neutral grassland, scrub and woodland. An unusual geology has resulted in a very diverse flora. Mixed wet woodland forms a belt of varying width along the north bank of the River Oughton which has its source at the western end. The site is one of the larger fen woodlands in Hertfordshire and has a long history of being managed as a fen. The western sections are dominated by mature Alder (<i>Alnus glutinosa</i>) carr (an unusual habitat in Hertfordshire). The river itself supports aquatic plants of note, the remnant fen components are notable within the county and the area is important for a range of invertebrates, amphibians, reptiles, birds and mammals, with Grass Snake (<i>Natrix natrix</i>), Harvest Mouse (<i>Micromys minutus</i>), European Hare (<i>Lepus europaeus</i>) and Water Voles (<i>Arvicola amphibius</i>) recorded. Wildlife Site criteria: Grassland indicators; fen & swamp indicators.
Folly Alder Swamp (LWS)	5.69	1.39 km SE	It is of interest due to its ancient Alder woodland.

Site name	Area (ha)	Distance and direction	Reasons for selection
Purwell Railway (LWS)	2.60	1.73 km SE	Railway embankment supporting species-rich neutral/calcareous grassland and scrub on the south-west facing side. A variety of grasses and herbs have been recorded including species such as Agrimony <i>Agrimonia eupatoria</i> , Common Knapweed <i>Centaurea nigra</i> , Greater Knapweed <i>Centaurea scabiosa</i> , Oxeye Daisy <i>Leucanthemum vulgare</i> , Wild Marjoram <i>Origanum vulgare</i> , Meadowsweet <i>Filipendula ulmaria</i> , Field Scabious <i>Knautia arvensis</i> , Meadow Vetchling <i>Lathyrus pratensis</i> , Knapweed Broomrape <i>Orobancha elatior</i> , Burnet Saxifrage <i>Pimpinella saxifraga</i> and Salad Burnet <i>Sanguisorba minor</i> . A diversity of butterfly species has also been recorded.

The Site is located on the southern border of the town of Hitchin and consists of hardstanding, one building, grassland, hedgerow, trees and introduced shrub. The habitats immediately to the north are largely of the built form. There is good habitat connectivity to the south and east where there a belt of woodland and the River Hiz. A local park, Priory Park, is located 107m east with amenity grassland and some broadleaved trees.

The Site does not lie in any important areas for plant or invertebrate life. The nearest Local Wildlife Site is Windmill Hill LWS, located 0.63km north-east and covering an area of 2.81ha. This is considered to be outside of the zone of influence of the development. It does lie within Natural England SSSI Impact Risk Zones of Oughtonhead Lane which lies 1.39km to the west. However, the proposed development does not meet the criteria necessary to require consultation.

4.2. UK Habitat Classification

The Site was found to comprise of buildings, hardstanding, trees, grassland, non-native hedgerow and introduced shrub. 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.

Developed land – sealed surface (u1b, 804)

Areas of paved ground around the buildings including the carpark (Photograph 1, Appendix 3).

Buildings (u1b5)

One building is present, Radcliffe House (Photograph 2, Appendix 3). An additional built feature is a shelter in the forecourt of Radcliffe House (Photograph 3, Appendix 3).

Suburban mosaic of developed and natural surface (u1d, 847 introduced shrub)

There are multiple parcels of introduced shrub present onsite consisting of non-native species including Mexican Orange *Choisya ternata*, Cabbage Palm *Cordyline australis* and Mahonia *Mahonia sp.* (Photograph 4, Appendix 3).

Ornamental non-native hedgerows (h2b5)

There is a length of hedgerow present around the southern car park. Some of the species within these hedgerows include Yew *Taxus bacatta* (when as a single species, hedgerow is counted under this habitat type), Willow-leaved Cotoneaster *Cotoneaster salicifolius* and Japanese laurel *Aucuba Japonica*. (Photograph 5, Appendix 3).

Individual trees

There are a total of five trees within the Site boundary of varying size, age and species, comprising one group of trees and two individual trees. The group of trees onsite (Photograph 6, Appendix 3), consists of three medium sized Hawthorn trees in moderate condition (TB1-3, Figure 1). One Common Lime *Tilia x europaea* and one Norway Maple *Acer platanoides* is also present (Photograph 7, Appendix 3).

Modified grassland (g4)

There are scattered parcels of modified grassland, used for amenity (Photograph 8, Appendix 3). The grassland has a short sward, low species diversity and is dominated by Perennial Rye-grass *Lolium perenne* and Cock's-foot *Dactylis glomerata*. Dove's-foot Crane's-bill *Geranium molle*, Common Chickweed *Stellaria media* and Yarrow *Achillea millefolium* were also identified.

Figure 1: UK Habitat Classification map of Radcliffe House, The Priory, Hitchin



4.3. Protected species scoping survey

Plants and fungi

No protected plant species were identified at the Site during the survey. The managed, modified grassland, introduced shrub and urban habitats are also unlikely to support these species. The likelihood that the Site supports protected or notable plant species or assemblages has been assessed to be **negligible**.

Invertebrates

Recent data records show the presence of a number of protected and notable invertebrate species within 2km of the Site including Marsh Fritillary *Euphydryas aurinia*, Jersey Tiger, Stag Beetle *Lucanus cervus* and Small Blue *Cupido minimus*. The modified grassland and introduced shrub provide limited suitable habitat for these species. Therefore, it is assessed that the habitats within the Site have a **negligible** likelihood of supporting important invertebrate species.

Fish

There are no habitats for fish present at the Site and therefore the likelihood of fish presence has been assessed as **negligible**.

Amphibians

The data search returned 29 records of Common Toad *Bufo bufo*. One sighting of a Great Crested Newt was recorded in a 2019 in a garden within 1km of Site. In addition, a Local Wildlife Site (LWS) Hitchin Railway Cutting, located 0.97km east of Site, is described as providing suitable habitat for amphibians. The LWS consists of a chalk cutting with calcareous grassland, scrub and bare rocky ground. Amphibians present include Great Crested Newt, Smooth Newt, Common Toad and Frog. There is a canalised section of the River Hiz to the south of the Site boundary. This is not considered a suitable waterbody for Great Crested Newt due to the flow, the lack of aquatic vegetation, impact of waterfowl and likely presence of fish. There are two ponds within 250m of the Site, one of which is 15m from the Site's southern border and the second pond is 125m to the north-east of Site and has poor habitat connectivity. However, there is no habitat suitability onsite due to dominance of managed short sward grassland, hardstanding and a large building. There is a canalised section of the River Hiz to the south of the Site boundary. This is not considered a suitable waterbody for Great Crested Newt due to the lack of aquatic vegetation, impact of waterfowl and likely presence of fish. There are, however, two ponds within 250m of the Site, one of which is 15m from the Site's southern border with good habitat connectivity to Site. The second pond is 125m to the north-east of Site and has poor habitat connectivity. The Site is located in a Green Zone (Natural England, 2024) for great crested newt risk. The likelihood of GCN being present is considered **negligible due to the absence of suitable foraging habitat and the limited construction footprint**.

Reptiles

There were 50 records returned in the data search for reptiles within 2km of the Site, namely Slow-worm, Common Lizard, Grass Snake and Adder. However, there was an absence of any recent records returned in the data search, with the majority of records prior to the year 2000. There is some very limited suitable habitat onsite in the form of a small rockery, hedgerow and shrub, however the grassland areas are heavily managed, and more suitable habitat is present in the woodland and site-adjacent habitats. The likelihood that reptiles are present onsite has been assessed as **negligible**.

Birds

Nineteen species were recorded during the site visit, these are shown in Table 6 together with their conservation status. It is important to note that this is not a full inventory of species for the Site.

Table 6: Bird species recorded during site visit at Radcliffe House, The Priory, Hitchin

Common name	Systematic name	S1 W&CA ¹	BoCC ² Status	S41 SPI ³	Local PrSp ⁴
Eurasian Blackbird	<i>Turdus merula</i>	-	Green	-	No
Eurasian Jackdaw	<i>Coloeus monedula</i>	-	Amber	-	No
European Goldfinch	<i>Carduelis carduelis</i>	-	Green	-	No
Common Chaffinch	<i>Fringilla coelebs</i>	-	Green	-	No
Ring-necked Pheasant	<i>Phasianus colchicus</i>	-	Green	-	No
Eurasian Blue Tit	<i>Cyanistes caeruleus</i>	-	Green	-	No
European Robin	<i>Erithacus rubecula</i>	-	Green	-	No
Eurasian Wren	<i>Troglodytes troglodytes</i>	-	Amber	-	No
Great Tit	<i>Parus major</i>	-	Green	-	No
Goldcrest	<i>Regulus regulus</i>	-	Green	-	No
Long-tailed Tit	<i>Aegithalos caudatus</i>	-	Green	-	No
Common Buzzard	<i>Buteo buteo</i>	-	Green	-	No
Mallard	<i>Anas platyrhynchos</i>	-	Amber	-	No
Eurasian Treecreeper	<i>Certhia familiaris</i>	-	Green	-	No
Eurasian Blackcap	<i>Sylvia atricapilla</i>	-	Green	-	No
Song Thrush	<i>Turdus philomelos</i>	-	Amber	Yes	Yes

Common name	Systematic name	S1 W&CA ¹	BoCC ² Status	S41 SPI ³	Local PrSp ⁴
Eurasian Moorhen	<i>Gallinula chloropus</i>	-	Amber	-	No
Common Wood-Pigeon	<i>Columba palumbus</i>	-	Amber	-	No
Red kite	<i>Milvus milvus</i>	Yes	Green	-	No

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

One specially protected species under Schedule 1 of Wildlife and Countryside Act 1981 was recorded, Red Kite. There is no suitable habitat within the Site boundary to support nesting Red Kite. One species of principal importance was recorded during the survey, Song Thrush. Some areas of dense shrub on Site could provide suitable habitat for nesting for this species.

The desktop study returned a large number of ornithological records within 2km of the Site but given the small footprint and limited habitat, no records bear relevance to this development. The only species of principal importance recorded was song thrush which was recorded singing at the site. This species has had an historical long-term decline for a common baseline and has recently shown an increase. It is more likely to breed in close proximity to the Site than within it. The habitat is unlikely to support other species of principal importance at this time of year although the buildings could attract two other red list species: Swift *Apus apus* but also House Martin *Delichon urbicum*.

No suitable habitats are present onsite for large assemblages of overwintering birds and their likelihood of presence is determined to be **negligible** and they are not considered further within this report.

The habitats are likely to support a very limited common assemblage of bird species and the shrubs, trees and buildings onsite provide suitable habitat to be used by nesting birds. The likelihood of the Site supporting a significant assemblage of birds or protected bird species is considered to be **negligible**, the likelihood of birds nesting onsite during the breeding season is **high**.

Bats

The data search returned a large number of bat records within 2km of the Site; these consisted of eight species; Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Daubenton's bat *Myotis daubentonii*, Barbastelle *Barbastella barbastellus*, Natterer's bat *Myotis nattereri*, Serotine *Eptesicus serotinus* and Noctule *Nyctalus noctula*. This is considered to be a reasonably high diversity of bat species for an urban location. A search of Defra's MAGIC website returned no European Protected Species Licences granted for bats within 2km of the Site boundary.

There is limited foraging opportunity within the Site consisting of only the managed area of modified grassland and introduced shrub and trees. Adjacent to the south of the Site is woodland and the River Hiz which provides a higher suitability for commuting and foraging. Therefore, the likelihood of foraging and commuting bats being present onsite is **negligible**.

Radcliffe House has weep vents, which present potential roosting features. Radcliffe House also has a section of wall with gaps in brickwork which provides roosting habitat. During the survey it was noted that there was a basement present. Where external features provide access points to basements there is potential for roosting habitat, therefore the basements should be assessed in further surveys. There is also a disused shelter (Photograph 4, Appendix 3) which has gaps under the tiles and in the roof space which contains suitable features for roosting bats. No trees will be removed; however, two trees (TB1 and TB2) will be pruned to facilitate the proposed development. An assessment of the onsite trees' suitability to support roosting bats was not undertaken during the survey. Therefore, the likelihood of roosting bats being present onsite is **moderate**.

Badgers

A large number of records of Badger within 2km of the Site were returned in the data search, with the nearest record being approximately 300m from Site recorded in 2019. No signs of Badger were recorded during the site visit. There is some very limited suitable foraging habitat present in the form of grassland and hedgerows. However, more suitable habitat is located in the woodland immediately adjacent to the south of the Site. Due to the proximity of woodland to the Site boundary the likelihood of Badger on site is considered to be **low**.

Hedgehog

The data search returned 198 records of Hedgehog within 2km of the Site. The grassland provides suitable foraging habitat and the non-native hedgerow and introduced shrub provide some nesting opportunities although both areas are relatively small. Overall, the likelihood of the Site supporting Hedgehog is considered to be **low**.

Other mammals

The data search returned 15 records of other mammals within 2km of the Site, which comprised records of Brown Hare *Lepus europaeus*, Otter *Lutra lutra*, Water Vole *Arvicola amphibius*, Polecat *Mustela putorius*, Stoat *Mustela erminea*, Weasel *Mustela nivalis*, Water Shrew *Neomys fodiens*, Muntjac *Muntiacus reevesi*, Grey Squirrel *Sciurus carolinensis* and one historic record of Red Squirrel *Sciurus vulgaris*. No signs of these mammals were observed during the site survey. The River Hiz riparian zone is considered far enough from the Site for Otters and Water Vole not to be present onsite. Due to the small areas of suitable habitat and small size of the Site, the likelihood of Radcliffe House, The Priory, Hitchin supporting these other mammal species is considered to be **negligible**, this species group is not considered further in the report.

5. ECOLOGICAL CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS

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

Bats

All bat species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 2 of Conservation of Habitats and Species Regulations 2017. 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.

Radcliffe House contained features such as weep vents, lifted tiles and cracks in brick work (Photograph 11, Appendix 3) which have the potential of supporting roosting bats. The proposed development will involve impacts to the roof, requiring either modifications or a roof replacement. A Preliminary Roost Assessment, including an internal inspection of the roof and any basement spaces, should thus be undertaken to ascertain the suitability of Radcliffe House for supporting for bat roosts. The Preliminary Roost Assessment is expected to be completed prior to the commencement of any building works onsite.

Recommendation 1

A Preliminary Roost Assessment should be undertaken to identify potential for bat roosts in Radcliffe House.

The woodland adjacent to Site's southern boundary provides a suitable corridor for bats to access the wider landscape. No trees will be removed; however, two trees (TB1 and TB2) will be pruned to facilitate the proposed development. Direct impacts to trees, such as pruning, risk impacting roosting bats and therefore necessitate further survey work (Collins, 2024). TB1 and TB2 will require a Ground-Level Tree Assessment to assess their potential to support roosting bats. The Ground-Level Tree Assessment is expected to be completed prior to the commencement of any works onsite.

Recommendation 2

Undertake a Ground-Level Tree Assessment on trees TB1 and TB2 to be undertaken concurrently with the Preliminary Roost Assessment. The outcome of these surveys may necessitate the need for a Construction Environmental Management plan (CEcMP) to manage the presence of protected species during construction.

Bat roosting behaviour, commuting and foraging activity can additionally be dramatically affected by artificial lighting (ILP, 2023). It is strongly recommended that any proposed exterior lighting on the new buildings is designed and managed appropriately to ensure that the area remains suitable for foraging bats. In particular, the woodland adjacent to Site's southern boundary should remain unlit. A sensitive lighting scheme should be developed to allow suitable roosting and foraging areas for bats; this includes the trees identified onsite as having potential roosting features. The sensitive lighting strategy should be developed following the guidelines set out in the BCT Guidance Note 08/23 (ILP, 2023).

Recommendation 3

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.

Birds

The trees within the Site boundary do provide suitable nesting opportunities 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.

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 and 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 4

Schedule vegetation and building 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.

Badgers

No records of Badgers were returned within the data search. No direct evidence of Badgers was found during the Site visit; however, the grassland onsite and area of woodland immediately adjacent to Site provide suitable foraging and commuting habitat for badgers. Badgers could be foraging within the site given the close proximity of ideal habitat and attraction of modified grassland for such activity. Simple measures to ensure that Badgers are not harmed during the construction phase of the project should be implemented including:

- No trenches should be left open overnight, if this is not possible, a method of egress should be provided so that Badgers can get out;
- Any stock piles of earth created during construction should be covered if they are to be left for any length of time to ensure they are not colonised by Badgers.

Recommendation 5

badger-sensitive construction practices should be adopted during the construction phase of the project,

Hedgehog

The grassland introduced shrub and ornamental hedgerow provides suitable foraging habitat for Hedgehog. Hedgehog are listed as a Species of Principal Importance under the NERC Act 2006, and the Wild Mammals (Protection) Act 1996. Measures protect common mammal species, including Hedgehogs during the construction phase should be detailed within a CEcMP.

Any additional installation of boundary fences can impact on Hedgehogs through loss of habitat connectivity. At least one 13cm x 13cm hole should be installed at the bottom of each boundary fence in order to maintain connectivity for Hedgehogs. These could also be installed into any existing fences that represent a barrier to Hedgehogs. These 'hedgehog highways' (PTES, 2018) should have appropriate signage installed to indicate their purpose and stipulate that they should remain open.

Recommendation 6

Maintain habitat connectivity for Hedgehog through the installation of at least one 13cm x 13cm hole at the bottom of any boundary fences if planned. These should be accompanied with appropriate signage indicating their purpose and stipulating that they should remain open.

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. A Biodiversity Net Gain Assessment is recommended to ensure the development delivers a net gain in biodiversity. Where possible the net gain should be secured onsite,

however, if this is not feasible within the Site design, sufficient compensation would need to be provided offsite.

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 7

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, in line with the requirements of the NPPF.

A number of simple measures to improve biodiversity at the Site can be implemented. The amenity grassland habitat onsite provides an opportunity to create a bee lawn that can act as an important resource for bumblebees and other insect pollinators, which in turn provides benefits for other species within the ecosystem, including reptiles and bats. A bee lawn can be created by over-seeding the lawn with suitable plants such as selfheal *Prunella vulgaris* or Bird's-foot Trefoil *Lotus corniculatus* and by reducing the mowing height and frequency.

Additionally, the creation of 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 Hedgehog. 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 8

Incorporate simple biodiversity enhancement measures at the Site, including the creation of a bee lawn and provision of deadwood features for invertebrates and reptiles.

Enhanced opportunities for breeding birds should be incorporated into the design scheme. Generalist bird boxes should be mounted on suitable trees at the Site. In addition, the buildings should offer the opportunity to attract key species to the site such as swifts. Examples of suitable boxes are shown in Appendix 4: Bird and bat box recommendations together with information concerning the correct siting of these enhancement features.

Recommendation 9

A minimum of two generalist 33mm bird boxes should be installed on the associated trees and three swift boxes on each building

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. The

extent of bat box provision will be dictated by the outcomes of further survey work, but the following is regarded as a minimum.

Recommendation 10

Provisions should be made for roosting bats at the Site post-development, to include a minimum of two integrated or wall mounted bat bricks or bat boxes mounted in trees for each building. This will be defined further following the outcomes of the interior roof assessment.

The Environment Act (2021) states that from April 2024, almost all developments will have to deliver a demonstrable increase in biodiversity value of at least 10%.

The biodiversity baseline of Radcliffe House, Hitchin is outlined within this report; a full biodiversity net assessment should be undertaken when landscaping plans are available for the development.

Recommendation 11

Undertake a full Biodiversity Net Gain Assessment when landscaping plans are available.

The Environment Act (2021) states that all Biodiversity Net Gain assessments must be accompanied by an appropriate thirty-year management plan, outlining how the habitats will be created and managed over that time period. This serves to ensure that all proposed habitats achieve the desired ecological value used in net gain calculations. It is recommended that a Habitat Management and Monitoring Plan (HMMP) is produced in order to ensure legislative compliance.

Recommendation 12

Produce a Habitat Management and Monitoring Plan post- planning permission outlining the means of delivery of the net gain proposals developed within a 30-year management plan.

Summary of recommendations

Table 7 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 7: Summary of recommendations at Radcliffe House, The Priory, Hitchin

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Habitats	Native planting. Retain trees where possible	BNG	Protect trees during construction	Native planting
Bats	Further survey work	TBC	TBC	Incorporate integrated bat boxes into the new building or mount bat boxes on existing trees
Birds	Bird boxes and native planting	No	Timing of works for vegetation removal OR further survey work Incorporate integrated bird boxes into new buildings	Swift boxes on all buildings, generalist bird boxes and native planting
Badgers	No		Follow precautionary working measures as outlined in this report	No
Hedgehog	No	No		Install 'hedgehog highways' into suitable locations in boundary fences to retain connectivity.

Table 8: Summary of further surveys recommended at Radcliffe House, The Priory, Hitchin

Species/species group	Purpose of survey	Survey period (inclusive unless otherwise stated)
Bats: Preliminary Roost Assessment	Assess potential features of trees and buildings for roosting bats	Jan-Dec
Bats: Ground-Level Tree Assessment	Assess potential for roosting bats within trees TB1 and TB2.	Jan-Dec

6. CONCLUSIONS

The proposed development at Radcliffe House, The Priory, Hitchin involves onsite landscaping enhancements and external alterations to Radcliffe House.

A Preliminary Roost Assessment is required to assess the suitability of roosting features on Radcliffe House, to inform the need for further bat surveys. No trees will be removed; however, two trees (TB1 and TB2) will be pruned to facilitate the proposed development. These trees will require a Ground-Level Tree Assessment to assess their potential to support roosting bats. The adjacent woodland to the south of the Site boundary should remain unlit to avoid impact upon foraging or commuting bats in the local vicinity which needs to be formalised within a lighting strategy.

The outcomes of these surveys may define the need for a Construction Environmental Management plan (CEcMP) to manage the presence of protected species during construction

The protection of trees as well as sensitive clearance methods for Hedgehogs and Badgers should be followed as outlined in this report. Sensitive timing of vegetation removal should be included to avoid impacts upon nesting birds. If any fencing is proposed, there should be an installation of 'hedgehog highways' to allow connectivity.

There is opportunity for biodiversity enhancements to be made across the Site. Potential enhancements include the enhancement of grassland, nesting provision for swift within the built environment and other birds within the trees and the potential creation of species-rich grassland (bee lawn). Additionally, there is scope for the installation of bird bat boxes to give greater roosting opportunities which will be defined by the further surveys. A biodiversity net gain assessment will be necessary to analyse whether the enhancements to the Site are able to achieve a net gain of 10% biodiversity. To ensure the retained and created habitats are managed appropriately, a Habitat Management and Monitoring Plan (HMMP) will be required to support this.

7. REFERENCES

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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)	- 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.
<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)	Intentionally kill or injure individuals of these species (Section 9(1)).

Subject	Legislation (England)	Relevant prohibited actions
Sand lizard <i>Lacerta agilis</i> Smooth snake <i>Coronella austriaca</i>	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 "<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.
Badger <i>Meles meles</i>	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 <i>Muscardinus avellanarius</i>	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 <i>Lutra lutra</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	- 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.
	Section 9(4)(b) and (c) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	
Water vole <i>Arvicola amphibius</i>	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
<i>Crustaceans</i>		
White-clawed crayfish <i>Austropotamobius pallipes</i>	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

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

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.

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

Full legislation text available at: [The Conservation of Habitats and Species Regulations 2017 \(as amended\)](https://www.legislation.gov.uk/ukpga/2017/10/contents/enacted) (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](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 12 December 2024 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 187 to 201 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 and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs.

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 and around National Parks, Sites of Specific Scientific Interest, the Broads, and National Landscapes other than in exceptional circumstances.

Where possible, planning policies should also:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- 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.

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.

Modified Grassland

Common Name	Systematic Name	Relative abundance
Cock's-foot	<i>Dactylis glomerata</i>	D
Perennial Rye-grass	<i>Lolium perenne</i>	A
Yarrow	<i>Achillea millefolium</i>	F
Common Chickweed	<i>Stellaria media</i>	O
Red Fescue	<i>Festuca rubra</i>	O
Common Field-speedwell	<i>Veronica persica</i>	O
Clover	<i>Trifolium</i>	O
Dove's-foot Crane's-bill	<i>Geranium molle</i>	R
Ribwort Plantain	<i>Plantago lanceolata</i>	R
Slender Borage	<i>Borago pygmaea</i>	R
Sow Thistle	<i>Sonchus</i>	R

Ornamental non-native hedgerow

Common Name	Systematic Name	Relative abundance
Common ivy	<i>Hedera helix</i>	O
Yew	<i>Taxus baccata</i>	D
Spotted-laurel	<i>Aucuba japonica</i>	F
Magnolia	<i>Magnolia sp.</i>	O
Willow-leaved Cotoneaster	<i>Cotoneaster salicifolius</i>	O
Japanese laurel	<i>Aucuba Japonica</i>	O

Individual trees

Common Name	Systematic Name	Relative abundance
Common Lime	<i>Tilia × europaea</i>	N/A
Hawthorn	<i>Crataegus monogyna</i>	N/A

Common Name	Systematic Name	Relative abundance
Norway maple	<i>Acer platanoides</i>	N/A

Introduced shrub

Common Name	Systematic Name	Relative abundance
Mexican orange flower	<i>Choisya ternata</i>	A
Japanese barberry	<i>Berberis thunbergii</i>	A
Japanese laurel	<i>Aucuba japonica</i>	A
Common ivy	<i>Hedera helix</i>	O
Himalayan tree cotoneaster	<i>Cotoneaster frigidus</i>	O
Guelder rose	<i>Viburnum opulus</i>	O
Mahonia	<i>Mahonia aquifolium</i>	O
Viburnum	<i>Viburnum sp.</i>	O
Forsythia	<i>Forsythia sp.</i>	O
Laburnum	<i>Laburnum sp.</i>	O
Common privet	<i>Ligustrum vulgare</i>	O
Cabbage palm	<i>Cordyline australis</i>	R

8.3. Appendix 3: Site photographs

Photograph 1: Developed land, sealed surface (car park)



Photograph 2: Buildings: Radcliffe House



Photograph 3: Disused shelter



Photograph 4: Suburban mosaic of developed and natural surface



Photograph 5: Ornamental non-native hedgerows



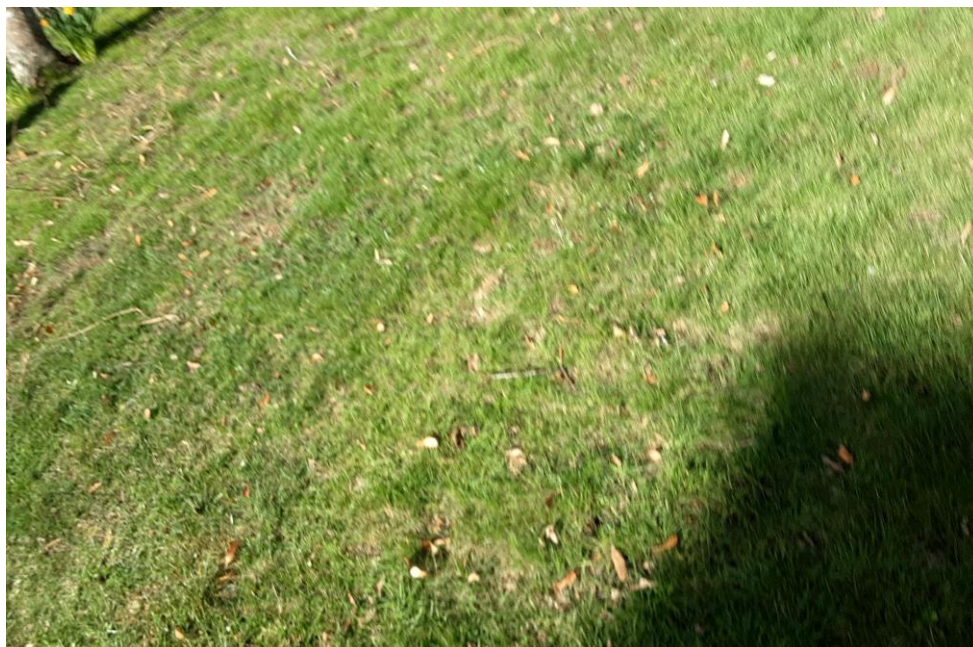
Photograph 6: Individual trees



Photograph 7: Group of trees



Photograph 8: Modified grassland



Photograph 9: Cracks in brickwork on northern aspect of Radcliffe House



Photograph 10: Pond close to Site boundary



8.4. Appendix 4: 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
Bird Brick Houses Integrated bird box	http://www.birdbrickhouses.co.uk/brick-nesting-boxes/integrated-bird-box/ Integrated into outside skin of 75mm and most 3" brickwork courses. Comes with a variety of hole sizes to suit particular bird species.	
Entrance Hole	Species	

28mm	Blue-, Marsh-, Coal- and Crested Tit, Wren.	
34mm	Great-, Blue-, Marsh-, Coal- and Crested Tit, Nuthatch, Pied Flycatcher, House Sparrow	
40mm	Redstart and Black Redstart	
50mm	Starling	
60mm	Spotted Flycatcher	
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

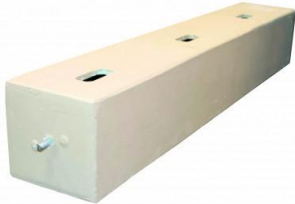
Swifts are colonial nesters and it is important to have several nest sites in one area. It is recommended that most buildings should have between 4 and 10 nest provisions. Swifts also feed almost exclusively on the aerial plankton of flying insects and airborne spiders of small to moderate size, so therefore 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
Swift S Brick	Introduction — S Brick (actionforswifts.com) Swift S bricks provide excellent nesting opportunities for swifts whilst fitting into the brickwork seamlessly without compromising the appearance of the building. The swift boxes will likely require an attraction call system for swifts. This can be set on timer and replays the tape of birds calling to attract them to the nest site, There is no set system for this, but assembly of parts can be achieved quite easily as outlined at this website: http://actionforswifts.blogspot.com/p/attraction-call-systems-for-swifts.html. The system can be purchased for about £30.	 
lbstock Swift Box	www.lbstock.com This swift brick can be built into a wall on new buildings.	

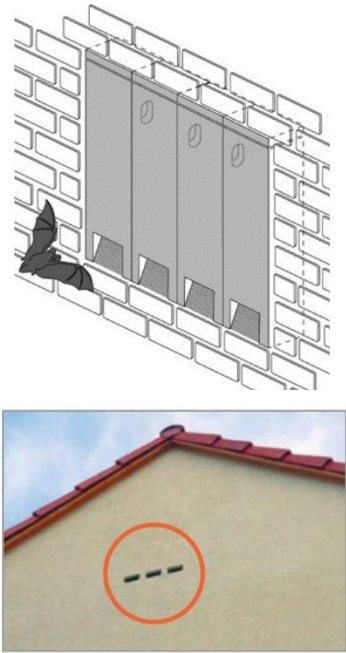
Swift		
Example	Description	Picture
Woodstone Build-in Swift Box	https://gardenature.co.uk This nest box is made from a concrete and wood fibre mix. It can be mounted on a wall, or it can be built into the fascia of a wall. The front of the Woodstone swift box can be removed for cleaning. It should be fitted at least 5 metres above the ground ensuring there is an unobstructed flight path for birds entering and leaving the box.	 A rectangular concrete and wood fibre nest box with a white front panel featuring a circular entrance hole. Several screws and a hex key are shown next to it.
Triple Genesis Swift Nest Box	https://www.wildcare.co.uk/ It can be mounted on an external wall to provide three swift nesting sites.	 A long, light-colored rectangular box with three small circular entrance holes along its top edge.
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.	 A wooden nest box with a white uPVC roof that slopes at a 30-degree angle. It is mounted on a brick wall.

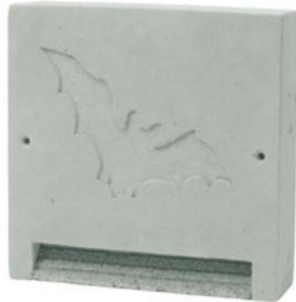
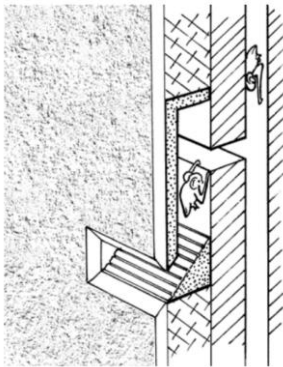
Bat box recommendations

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.

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
2FR Schwegler Bat Tube	www.schwegler-nature.com 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). 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.	
1WI Schwegler Summer and Winter Bat Box	www.schwegler-nature.com 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. This box typically attracts building-inhabiting bat species like pipistrelles or serotine bat. This box is weather-resistant and designed for both winter hibernation and larger colonies in summer, including nursery roosts.	

Example	Description	Picture
1FE Schwegler Bat Access Panel	www.schwegler-nature.com 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. 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.	 



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