



519 Basingstoke Road, Reading, Berkshire

Phase 2 Bat Survey Report

Phase 2 bat survey to inform a planning application for proposed extension and remodelling works to an existing dwelling house.

Final Report

August 2016

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Executive Summary

This report has been prepared by Lynsey Robinson Ecology on behalf of Kris Navaratnam, in relation to a planning application for the redevelopment of an existing residential dwelling house known as 519 Basingstoke Road which is located in Reading, Berkshire. Proposals for the site include the demolition of the existing outbuilding and the extension of the existing dwelling house to create a rear extension and associated loft conversion.

The site was considered to have low bat roost potential following a Phase 1 daytime bat survey and building inspection undertaken at the site by Dr Lynsey Robinson of Lynsey Robinson Ecology in June 2016. Targeted Phase 2 bat surveys were subsequently commissioned to fully assess the presence or absence of roosting bats and bat activity within the site boundary and are the subject of this report. A Phase 2 survey session was undertaken in July 2016 and found no evidence of use by roosting bats and low levels of foraging and commuting activity by common bat species around the site. No trees within the site boundary have potential to support roosting bats.

The hedgerow habitats present on site have been found to support low numbers of foraging and commuting bats of common species. The hedgerow and buildings on site may also support common breeding garden birds. In order to avoid potential impacts on these protected species, a mitigation strategy has been prepared.

1. Introduction

Background and Purpose

- 1.1 Lynsey Robinson Ecology was commissioned by Kris Navaratnam in May 2016, to undertake a Phase 1 Bat Survey at 519 Basingstoke Road, Reading (hereafter referred to as 'the Site') (**Figure 1**). The Phase 1 Bat Survey was subsequently carried out on 24th May 2016 by Dr Lynsey Robinson, an experienced ecologist and Natural England bat survey licence holder (CL18 Level 2, registration number 2016-14811-CLS-CLS). The results of this survey are detailed in '519 Basingstoke Road, Reading - Phase 1 Bat Survey' – a report to Kris Navaratnam by Lynsey Robinson Ecology dated 26th June 2016, which should be read in conjunction with this Phase 2 Bat Survey Report (**Appendix 1**).
- 1.2 Based on the potential bat habitats recorded during the Phase 1 survey visit, a further Phase 2 bat survey visit was subsequently instructed and carried out in July 2016 to further investigate use of the site by bats. The Phase 2 Bat Survey findings and subsequent ecological recommendations are the subject of this report.

Development Proposals

- 1.3 The proposals for 519 Basingstoke Road involve demolition of the existing rear conservatory and single storey outbuilding at the rear of the property, in order to create a two-storey rear extension and loft conversion. The front driveway area and boundary vegetation will be retained.
- 1.4 The indicative layout for the proposed scheme is provided in **Appendix 2**.

Site Context

- 1.5 The existing Site is centred on OS Grid Reference SU 71733 69924 (see **Figure 1** for site location). It is situated along Basingstoke Road on the southern approach into east/central Reading from the M4 corridor in Berkshire (see **Figure 1**), in a mixed residential and commercial area and comprises a two-storey residential house and associated outbuilding, along with areas of hardstanding (used for car parking) and amenity grassland. It is bordered on the east by an extensive area of allotments, on the west by the main road and an adjacent area of amenity grassland and to the north and south by residential properties within the suburb of Whitley.

Relevant Legislation and Policy

Legislation

- 1.6 The key legislative provisions of relevance to the development proposals at 519 Basingstoke Road are detailed in **Appendix 3** but in summary are as follows:
 - *The Conservation of Habitats and Species Regulations 2010* (as amended);

- *The Wildlife and Countryside Act 1981 (as amended);*
- *The Countryside and Rights of Way (CROW) Act 2000;*
- *The Natural Environment and Rural Communities (NERC) Act 2006.*

Planning Policy

1.7 The key policies or relevance to the development proposals at 519 Basingstoke Road are also detailed in **Appendix 3** but in summary are as follows:

- *National Planning Policy Framework;*
- *Government Circular 06/05: Biodiversity and Geological Conservation;*
- *Reading Borough Local Development Framework Core Strategy.*

Biodiversity Planning and Strategies

1.8 There have been many changes to the way that biodiversity planning is organised in the UK since 2010, as set out in detail in **Appendix 3**. Within England, Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 lists species and habitats of principal importance for the conservation of biodiversity. At the local level the following documents remain of relevance for this report:

- Natural Environment in Berkshire Biodiversity Strategy 2014-2020 (BLNP, 2014), which identifies a network of Biodiversity Opportunity Areas and a range of priority habitats which support bats, as well as listing a number of priority bat species including Western Barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum*, Lesser Horseshoe Bat *Rhinolophus hipposideros*.

2. Bat Survey Methodology

Introduction

- 2.1 Bat survey methodologies were carried out in line with the best practice guidelines published by the Bat Conservation Trust (BCT, 2016). Methodology for the evaluation of the Site and assessment of the potential impacts of the proposals on bats has been based on the approach set out in *'Guidelines for Ecological Impact Assessment in the UK and Ireland'* published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2016). Due regard has been paid to relevant planning policy, legislation and nature conservation priorities as set out in **Appendix 3**.

Establishing the Zone of Influence

- 2.2 In order to define the spatial scope of the Phase 1 and 2 Bat Surveys, it was necessary to predict the likely zone of influence of the development proposals at the Site. The zone of influence of a proposed development is defined by CIEEM's EclA guidelines as *'...the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities'*.
- 2.3 The types of activities that might occur as a result of the proposed redevelopment and the likely biophysical changes (in the absence of mitigation) include:
- a. Demolition of the existing conservatory and adjoining outbuilding (currently used as an office), with the potential to disturb roosting bats and nesting birds as well as destroy nest and roost sites (if present);
 - b. Clearance of some of the existing hardstanding and vegetation (comprised of amenity grassland) to facilitate the construction of the new two-storey extension and surrounding landscaping; this may have an impact on the potential of the site to support bats; and
 - c. Increase in noise, dust and lighting during the construction and operation phases of the development, with the potential to disturb roosting bats and nesting birds (if present).
- 2.4 The proposed redevelopment is located within an existing settlement area and includes the redevelopment of a single residential dwelling (**Appendix 2**). There are no trees within the site boundary and all existing hedgerows will be retained. It is therefore considered unlikely that the zone of influence in respect of bats will extend beyond the boundary of the Site.

Desktop Study

- 2.6 A desktop study was undertaken to obtain information regarding bats within the zone of influence. This involved searching the National Biodiversity Network website, assessing the known distribution of bats in Britain (Richardson, 2001), as well as interrogating

Natural England's "Nature on the Map" (MAGIC) to establish protected sites and habitats within the zone of influence of the proposals.. A desk study was carried out in order to gather and refer to existing biodiversity and contextual information with respect to the zone of influence and the wider area. This involved assessing the known distribution of bats in Britain (Richardson, 2001) as well as interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), Natural England's Nature on the Map, aerial photos, current Ordnance Survey maps and Old Maps. Reference was also made to the UK BAP, and the Local Biodiversity Strategy (BLNP, 2014). A record request was also commissioned from the Berkshire and South Buckinghamshire Bat Group for records of bats within 2km of the site boundary (**Appendix 4**).

Phase 2 Bat Survey Methodology

Phase 2 activity surveys

- 2.7 The habitats present within the Site were assessed as having low potential to support bats during the Phase 1 Bat Survey visit (**Appendix 1**). A single Phase 2 bat survey was therefore undertaken in line with current best practice guidance (Collins, 2016), in order to fully assess the presence or likely absence of roosting bats within the building and surrounding habitat.
- 2.8 Two surveyors were positioned either side of the main house at 519 Basingstoke Road, at locations identified as allowing good sight lines and ensuring that all potential bat access/egress points were visible between the surveyors. Survey locations are shown on **Figure 2**. Each surveyor was equipped with Petterson D240x and an ediol recorder to record unidentified calls for subsequent computer analysis. Each surveyor was supplied with a plan of the site on which to mark bat activity.
- 2.9 The following information was recorded for any bats seen or heard:
- Species;
 - Time;
 - Behaviour (whether it was feeding, commuting, social calling or swarming);
 - If seen, direction of flight; and
 - If it emerged or re-entered the building.
- 2.14 Behaviour was identified by flight patterns and call characteristics as heard on the bat detector. Weather conditions (temperature, wind speed/direction, cloud cover, rainfall) were also recorded at the start and end of each survey.

Timing

- 2.15 One dusk emergence survey was undertaken on 22nd July 2016, during the period of time considered to be the active bat season and during suitable weather conditions to record

active bats. Details of the dates, timings and weather conditions for the Phase 2 survey session are provided in **Table 2.1**.

Table 2.1: *Phase 2 survey dates, timings and weather conditions.*

Date	Survey Type	Survey Timing	Sunrise / Sunset	Duration	Surveyors & Equipment	Weather Conditions
22/07/2016	Dusk emergence	20:50-22:36	21:06	1hr 46 mins	Lynsey Robinson, Matthew Clarke using 2x Pettersson D240x time expansion bat detectors, 2x Edirol recorders	21.8°C (start), 19.2°C (end), Cloud <5%, Rain 0, Wind Beaufort Force 1

Survey Constraints

- 2.16 Bats will often roost in places that are inaccessible to the surveyor, such as under tiles and within soffit boxes. During the Phase 1 building inspection due regard was therefore paid to the noting of external features with the potential to support crevice dwelling species and these were investigated further during the subsequent Phase 2 survey. Investigating the internal and external inspection of the building with Phase 2 dusk emergence and dawn re-entry surveys in line with best practice should provide a sufficient level of information to allow a more accurate evaluation of whether bats are present or absent within these potential sites.
- 2.17 Bats are nomadic and invariably move between roost sites. Therefore any bat survey will only provide a snapshot of how bats are using a particular site at that time. However, undertaking Phase 2 surveys across the active bat season in line with best practice should allow an accurate evaluation to be made regarding whether and how bats make use of a site.

3. Bat Survey Results and Evaluation

Designated Sites and Other Areas of Interest for Bats

- 3.1 Pearman's Copse is an area of ancient woodland located 1.6km south-east of the site which is also designated as a Local Nature Reserve (**Figure 1**). There are also two small copses of ancient woodland within 2km of the site at Whitley Wood, as well as more extensive areas of parkland, woodland, marshland/open water and mixed woodland outside the M4 corridor on the outskirts of Reading, around the villages of Shinfield, Three Mile Cross and Spencers Wood. The Kennet and Avon Canal is also located just over 1 km to the north and west of the site.
- 3.2 Therefore, whilst the site itself is in a relatively built up area of east Reading, suitable habitat is present within the local area for foraging and roosting bats, connected via linear features in the landscape such as waterways, hedgerows and treelines.

Existing Records

- 3.5 The 'Distribution atlas of bats in Britain and Ireland 1980 – 1999' (Richardson, 2001) shows that sixteen species of bat are known to occur within the SU Grid Square (greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *R. Hipposideros*, whiskered *Myotis mystacinus*, Brandt's *Myotis brandtii*, Natterer's *M. nattereri*, Bechstein's *M. bechsteinii*, Daubenton's *M. daubentonii*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Nathusius pipistrelle *Pipistrellus nathusii* brown long-eared *Plecotus auritus*, grey long-eared *P. austriacus*, serotine *Eptesicus serotinus*, noctule *Nyctalus noctula*, Leisler's *N. leisleri* and barbastelle *Barbastella barbastellus*). Of these species, only two of the Pipistrelle species (common and soprano) and brown long-eared bats can be considered as being common. The conservation status of the other species ranges from local to rare.
- 3.6 The NBN Gateway holds records in the OS Grid square SU77 for species of bat including barbastelle, Daubenton's, noctule, serotine, common and soprano pipistrelle (www.data.nbn.org.uk – search date 4th August 2016).
- 3.7 Berkshire and South Buckinghamshire Bat Group also holds 58 records of bats within 2km of the site (BSBBG, 1st August 2016) including brown long-eared, serotine, noctule, Daubenton's common, soprano and Nathusius' pipistrelle. All records within 1km of the Site are of single bats, droppings or single bat passes recorded on bat detectors during aural surveys. There are no records relating to confirmed or potential maternity sites within the search area. One Nathusius pipistrelle pass was recorded during an aural survey 1.9km to the south-east in Shinfield.

Phase 2 Bat Survey Results

- 3.15 The results of the dusk bat activity survey are summarised in **Figure 2**.
- 3.16 The dusk survey undertaken on 22nd July 2016 recorded no bat emergence. Early commuting common pipistrelle bats (<5 individuals) were recorded moving across the front and back of the property. This was followed by occasional low level foraging activity by 1-2 common pipistrelle bats during the hour following emergence, mainly over the back garden area and along the hedgerow bordering the south side of the property. Single passes by soprano pipistrelle and long-eared (likely to be brown long-eared) bats were also recorded very briefly during the survey but none of these events were considered to be from emerging bats as sightlines and light levels around the property remained satisfactory at the time they were heard.

Interpretation and Evaluation of Bat Survey Results

- 3.17 The daytime survey and building inspection at 519 Basingstoke Road assessed the buildings on site as having low potential to support roosting bats. Although no evidence of bats was found, there was low potential for bats to be roosting within features on the outside of the building which could not be fully assessed during the daytime survey. As these potential features would be affected by the proposed redevelopment, further bat activity (Phase 2) surveys were required, in order to ascertain and investigate the likely presence of roosting bats within the buildings on site.
- 3.18 A subsequent dusk emergence survey carried out in suitable weather conditions in July 2016, the peak activity period for bats, recorded no bat emergence from either of the structures on site.
- 3.19 The mature ash tree growing against the southern aspect of the house (but not within the curtilage of the Site) appears to have a screening and linking function for commuting bats from a nearby roost somewhere to the south. This tree connects to the mature hedgerow along the southern boundary which is used by low numbers of common pipistrelle bats from other roosts commuting from and to the areas south and north of the Site.
- 3.20 Based on the results of the Phase 2 emergence survey, with no emerging bats recorded during the July 2016 survey, it has considered very unlikely that 519 Basingstoke Road currently supports roosting bats. It is also considered unlikely that the building is used by hibernating bats, due to a lack of features suitable for hibernation. The habitats elsewhere in the Site support low numbers of foraging and commuting bats, including the mature hedgerow surrounding the rear of the property which creates a sheltered foraging area and appears to provide a linking function for commuting bats in the surrounding area.
- 3.21 With reference to CIEEM Guidelines (CIEEM, 2016) and other available resources (BCT 2014, Richardson 2001), the presence of low numbers of foraging long-eared (likely to be

brown long-eared), common and soprano pipistrelle bats within the Site is considered to be of **local value** in terms of conservation interest. In the absence of the current proposals and given the presence of abundant similar foraging habitat present within the surrounding suburban landscape, the current status of these foraging bats is considered to be favourable and stable (BCT, 2014).

Other (Protected) Species

- 3.22 The hedgerows bordering the Site are likely to provide suitable bird nesting opportunities for common garden bird species. The house has potential to support nesting birds and evidence of previous nesting activity was recorded inside the loft space and under the eaves during the Phase 1 survey (**Appendix 1**).

4. Potential Impacts on Bats in the Absence of Mitigation

Introduction

- 4.1 This section details the potential impacts of the proposal on bats in the absence of mitigation. The potential activities are identified with reference to the scheme, as identified in **Section 1**. Recommended mitigation to ensure that the favourable conservation status of bats (and breeding birds) is maintained, in compliance with relevant legislation and planning policy, is detailed in **Section 5**.

Impacts on Bats

- 4.2 All species of bat and their roosts are protected under both the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended) (**Appendix 1**) and, in order to prevent an offence being committed, it is necessary to ensure that no bats are harmed or disturbed, and that roosts and hibernation sites are not damaged or destroyed during the proposed works. The dusk surveys did not record any bats emerging from the building and the site is consequently considered to be of negligible value to roosting bats. There are no features on the building which are considered to be suitable for use by hibernating bats over winter. However, it is rarely possible to fully access all areas of a structure that can be used by roosting bats and activity surveys represent only a snapshot in time because bats are highly mobile and can move roost sites frequently even during the same breeding season. A mitigation strategy is therefore required to reduce the possible risk of damaging or disturbing bats as far as possible during the demolition, construction and operation period.
- 4.3 The mature hedgerow surrounding the garden at the rear of the property appears to support low numbers of foraging and commuting bats of common species and is therefore considered to be of local value. All of the boundary habitats will be retained within the proposals. However, in the absence of mitigation, increased lighting during the construction and operational phases may shine onto this boundary vegetation and have an adverse impacts on bats using these features. In the absence of mitigation, a temporary and permanent adverse effect is therefore possible at the local level. Due to the linking function performed by this habitat feature for bats from the wider area, including for pipistrelle and long-eared bats moving across the site to and from areas to the north and south, this could affect the conservation status of the local populations of common bat species bats in the short and long-term and is therefore considered to be significant at the local level. Mitigation is therefore required.

Impacts on Other Protected Species

- 4.6 The building has potential to support nesting birds. Therefore redevelopment works have the potential to disturb nesting birds and to destroy any nests that are present at the time, which would result in an offence under the Wildlife and Countryside Act 1981.

Mitigation is therefore required. The hedgerows surrounding the site are also likely to support nesting birds and will be retained as part of the Scheme.

Summary of Potential Impacts in the Absence of Mitigation

- 4.4 Potential impacts of the proposed scheme on bats and common nesting birds are summarised in Table 4.1, along with associated mitigation requirements.

Table 4.1: *Summary of Potential Impacts and Mitigation Requirements*

Species Group	Potential Impact & Timescale	Likelihood & Magnitude of Impact)	Mitigation Requirements
Bats	Destruction of bat roosts and/or hibernation sites and harm to individual bats during demolition	Very unlikely	Mitigation required to ensure legal compliance
	Removal of or damage to bat commuting and foraging habitat during site clearance and construction	Very unlikely	All hedgerows and other boundary features will be maintained as part of the Scheme.
	Disturbance to roosting bats in the buildings during demolition and construction	Unlikely	Mitigation required to ensure legal compliance
	Lighting and Noise disturbance to commuting and foraging bats during construction and operation	Possible significant adverse impact at the local level, in short and long term	Mitigation strategy required to avoid negative effect on conservation status at local level
Breeding Birds	Disturbance to and destruction of active nests of common nesting garden birds during demolition and construction	Possible	All hedgerows and other boundary features will be maintained as part of the Scheme. Mitigation required to ensure legal compliance

5.0 Proposed Mitigation

Introduction

- 5.1 In order for the proposals to comply with applicable legislation and planning policy, it is necessary to mitigate or compensate for the ecological impacts as identified in **Section 4**. The NPPF also places an onus on developments to provide ecological enhancements and to meet local biodiversity objectives wherever possible. Within this section, mitigation measures are recommended to ensure that the identified ecological features (bats and breeding birds) are considered during the construction and operation phases of the development, in compliance with applicable legislation and planning policy.

Mitigation

Bats

- 5.2 The Phase 1 and 2 bat surveys undertaken at 519 Basingstoke Road have found no evidence that the house supports roosting bats, although the boundary features and garden areas do provide foraging and commuting habitat for low numbers of common bat species.
- 5.3 The proposals for the site will involve the demolition of the existing outbuilding and extension and remodelling of the existing dwelling. It is therefore recommended that the proposals for the site are undertaken in such a way to minimise any possible potential impacts to individual roosting bats.
- 5.4 Although no bats were recorded during the Phase 1 or 2 surveys, it is rarely possible to fully access all areas of a structure that can be used by roosting bats and activity surveys represent only a snapshot in time because bats are highly mobile and can move roost sites frequently even during the same breeding season. The building continues to have low potential to support roosting bats which could start to use the building at any time. All species of bat and their roosts are protected under both the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended) (**Appendix 1**) and, in order to prevent an offence being committed, it is necessary to ensure that no bats are harmed or disturbed, and that roosts sites are not damaged or destroyed during the proposed works. Therefore, to minimise as far as reasonably possible the chance of harming or disturbing roosting bats, at the start of the demolition work to the outbuilding, potential roosting opportunities should be removed or made unsuitable for use by bats. To achieve this, the wooden cladding and fascia boards should be carefully removed by hand to expose the cavity between the exterior and interior walls. On the main building, the window frames & fascia boards on the east side of the property should be removed by hand and the top of the wall should also be exposed by removing the eaves level tiles. Once exposed, the wall cavities should be left open to the elements for at least 24 hours, to allow any bats to escape before continuing demolition work.

- 5.5 In the unlikely event that bats are found during the demolition or construction works, work on the building should immediately stop, Natural England should be informed and advice should be sought from the advising ecologist.
- 5.6 All boundary hedges will be retained and will continue to provide commuting and foraging habitat for bats around the boundary of the Site in the medium to long term. .
- 5.7 A sensitive lighting strategy will be in place during the demolition and construction works, to avoid light spill onto boundary habitats. Any construction lighting should be turned off between dusk and dawn. Any external lighting on the new building will be designed and installed to shine inwards towards the Site and will be of a low lux level, to avoid impacts on bats (and other species) that may use the boundary trees and hedgerows for commuting and foraging.

Breeding Birds

- 5.8 There is evidence that common garden bird species have used the loft space of the house for nesting in the past. All species of bird are protected at the nest. Any redevelopment that could affect nesting birds should ideally take place outside of the nesting bird season, usually considered March-August (though this is dictated by regional variations in weather and temperature conditions). Any works that need to be undertaken to the buildings on site within the nesting bird season should be undertaken immediately following an early morning bird survey by an ecologist, to assess whether the work area is being used by nesting birds at the time of the works. If bird are nesting in the area to be affected then the nest will be monitored and works in that area will be delayed until such time as nesting has been completed and the young have fledged and are no longer dependent on the nest.
- 5.9 All hedgerow habitats will be retained as part of the scheme.

Biodiversity Enhancements

- 5.10 Due to the size of the site and small-scale, residential nature of the proposals, no biodiversity enhancements are proposed as part of this Scheme.

Residual Impacts

- 5.15 Provided the mitigation strategy recommended above is implemented in full, there should be no residual impacts to bats as a result of the proposed works at 519 Basingstoke Road. By retaining the more valuable bat habitats within the site boundary, the favourable nature conservation status of the local bat population will be retained.

6.0 Conclusions and Recommendations

Conclusions

- 6.1 A Phase 2 bat survey was undertaken at 519 Basingstoke Road, Reading following a daytime bat survey and building inspection which found low potential for bats to be present on site.
- 6.2 A desktop study and record search found records of brown long-eared, serotine, noctule, Daubenton's common, soprano and Nathusius' pipistrelle bats in the local area, including a number of small roosts or records of individual bats within 2km of the Site but no records relating to confirmed or potential maternity sites within the search area.
- 6.3 No evidence was found to indicate that the buildings present within the Site support roosting bats, although bats are extremely mobile during the breeding season and the building retains low potential to support individual roosting bats at any time. The mature hedgerow around the boundary of the Site is used by commuting and foraging bats from the local area.
- 6.4 A mitigation strategy has been designed, to avoid and reduce the predicted potential impacts of the scheme, in order to maintain the conservation status of the local bat population.

Summary of Recommendations

- 6.5 The mitigation measures that have been recommended are set out below, along with information on timings and timescales.

During Demolition

- Soft strip of potential roosting features on the outbuilding and the eastern aspect of the house;
- Measures to avoid the disturbance of nesting birds during the breeding season, including: i) an early morning bird survey immediately prior to works commencing on the site, if works are to be undertaken during the nesting bird season; and ii) appropriate working methods to protect any nesting birds that are found during the works;
- A sensitive working method designed to avoid light egress onto boundary features.

During Construction and Operation

- A sensitive lighting strategy during construction and on/around the new building, to avoid light egress onto boundary features;
- 6.7 Provided the recommended mitigation strategy is implemented in full, there should be no residual impacts to bats as a result of the proposed works at 519 Basingstoke Road. The measures recommended will ensure that the works will be undertaken in line with current wildlife legislation in respect of bats and breeding birds.

7.0 References

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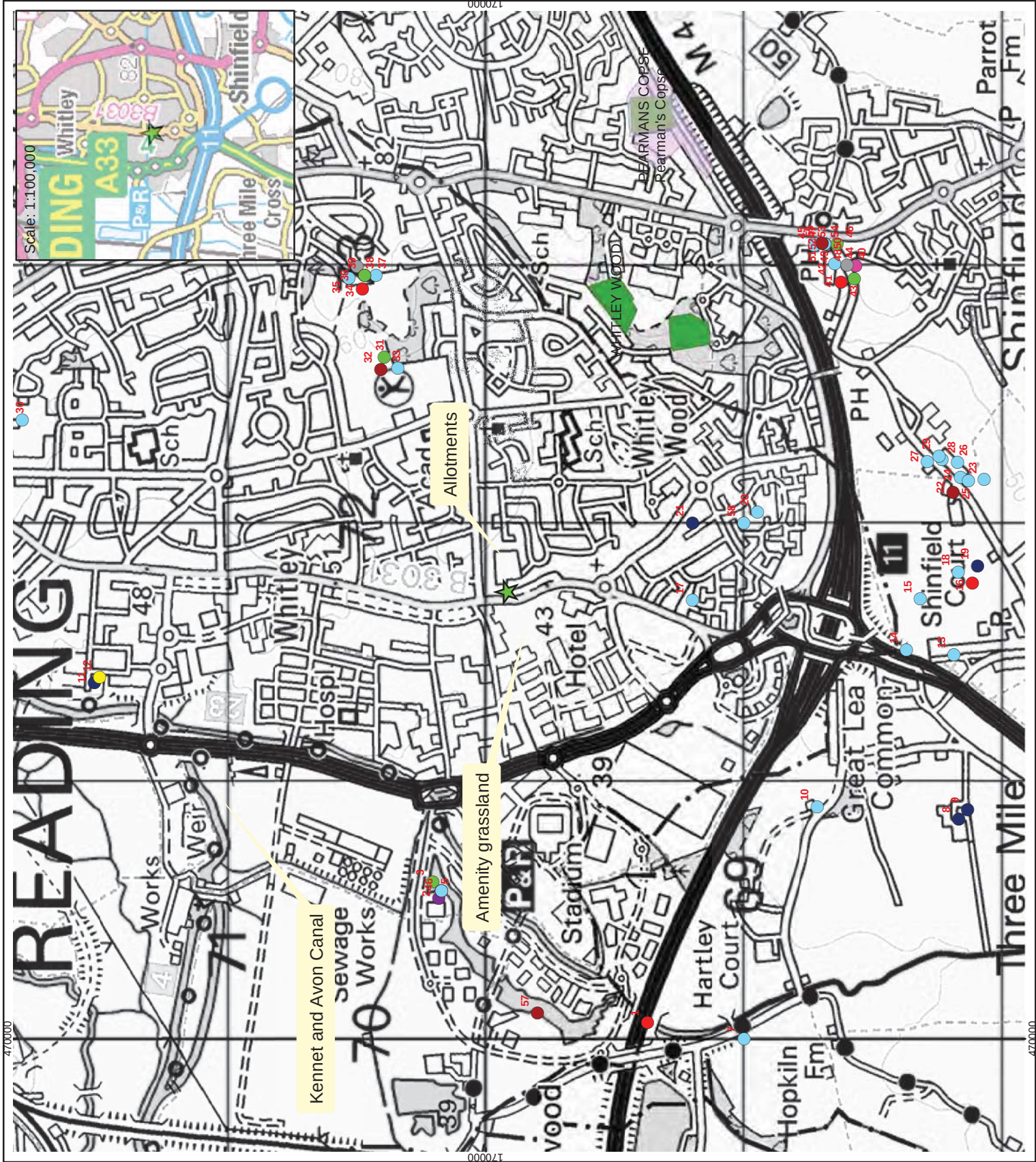
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- Key**
- Site Boundary (Indicative)
 - Amenity Grassland
 - Building
 - Hardstanding
 - Hedge
 - Tree
 - surveyor locations
 - Common pipistrelle
 - Pipistrelle species
 - Bats heard not seen:
 - Common pipistrelle
 - Soprano pipistrelle
 - Long-eared

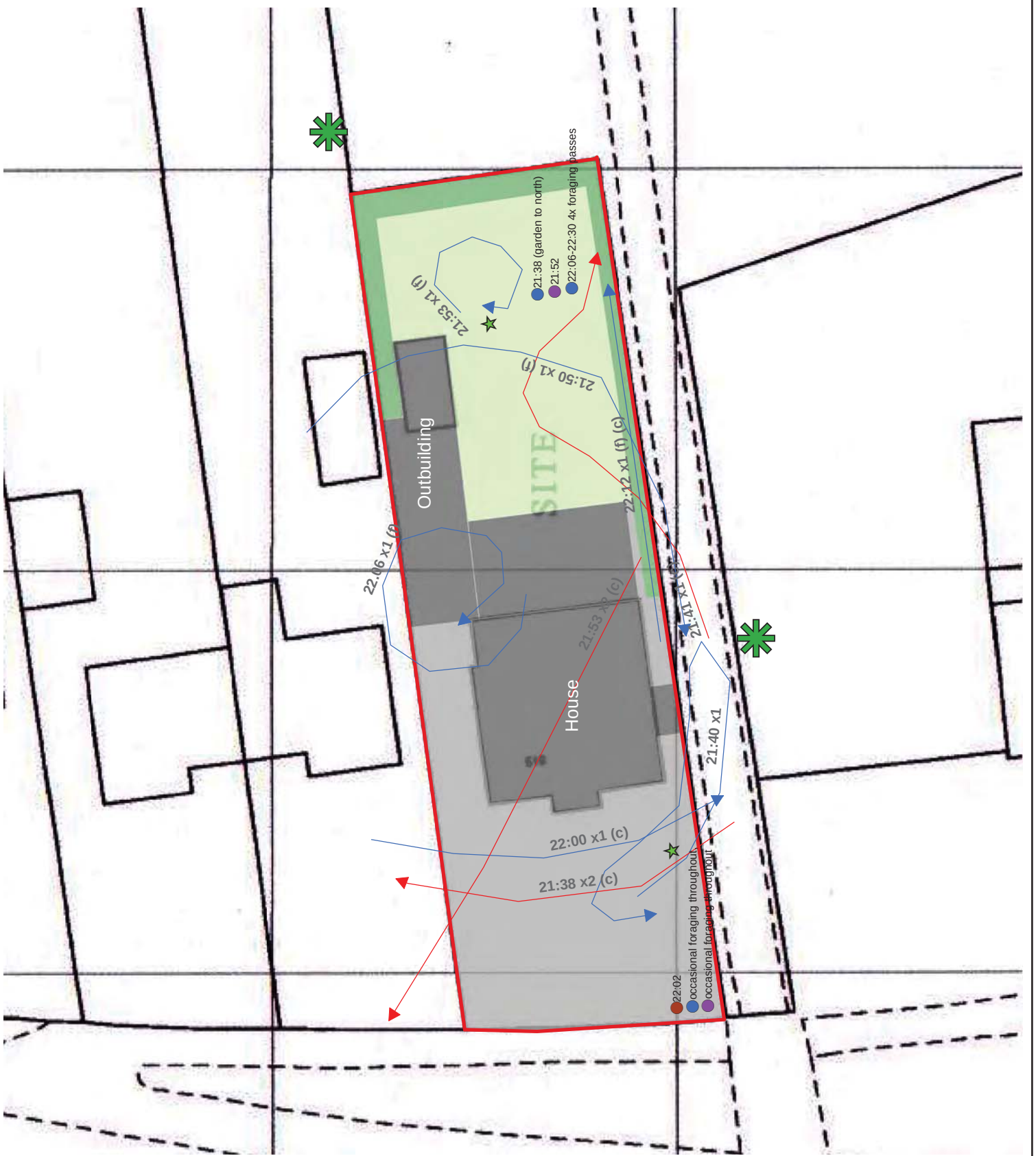
NOT TO SCALE

Ref: 519 Basingstoke Road Fig002

Date: 05/08/2016

Figure 2:
Phase 2 Bat Survey
Approach and Results

519 Basingstoke Road
Reading





Key

- Site Boundary (Indicative)
- Amenity Grassland
- Building
- Hardstanding
- Hedge
- Tree



NOT TO SCALE

Ref: 519 Basingstoke Road Fig003
Date: 16/08/2016

Figure 3:
Mitigation Proposals

519 Basingstoke Road
Reading

All hedgerows to be retained

Outbuilding

House

SITE

Sensitive lighting strategy during construction and operation
to avoid light spill onto hedge

Appendix 1 Phase 1 Bat Survey Report



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By email only

26th June 2016

Dear Kris,

Re: 519 Basingstoke Road, Reading - Phase 1 Bat Survey

Thank you for commissioning Lynsey Robinson Ecology to undertake a Phase 1 bat survey to identify any issues that may arise from building works proposed at the above site.

The existing site comprises a residential house and associated outbuilding, along with areas of hardstanding (used for car parking) and amenity grassland centred on OS Grid Reference SU 71733 69924 (see **Figure 1** for site location). I understand that the proposals are to demolish the rear conservatory and single storey outbuilding at the rear of the property in order to create a two-storey rear extension and loft conversion (**Appendix 1**). As discussed, a full planning application is currently being considered by Reading Borough Council, whose ecologist highlighted that the site may have potential for use by bats, a European protected species and as such a material planning consideration. They therefore recommended that a Phase 1 bat survey be carried out at the site to inform the proposals.

The Phase 1 bat survey was subsequently carried out on 24th May 2016 by Dr Lynsey Robinson, an experienced ecologist and Natural England bat survey licence holder (CL18 Level 2, registration number 2016-14811-CLS-CLS). Survey methodologies are summarised in **Appendix 2**. This letter summarises the findings of this visit and provides recommendations for further survey work, giving due consideration to relevant nature conservation legislation, national and local planning policy and other nature conservation priorities (**Appendix 3**). Site photographs are provided in **Appendix 4** and referred to throughout the report.

Zone of Influence

In order to highlight the potential issues related to redevelopment of the site I have predicted the likely zone of influence (ZOI) of the proposals, in line with guidelines set out in guidance in the

Guidelines for Ecological Impact Assessment in the United Kingdom produced by the Institute of Ecology and Environmental Management (IEEM, 2006).

Development of the Site will include:

- demolition of the existing conservatory and adjoining outbuilding (currently used as an office);
- clearance of some of the existing hardstanding and vegetation (comprised of amenity grassland) to make way for the construction of the new two-storey extension;
- likely additional noise, light and dust associated with the construction phase;
- a new lighting scheme associated with operation of the remodelled residential property.

There are no trees within the site boundary and all existing hedgerows will be retained. Considering the small scale and nature of the proposals, the ZOI in respect of bats is not likely to extend beyond the boundaries of the site.

Desktop Study

Prior to the site visit, a basic desktop study was undertaken to determine the location of any nearby designated sites and also to find out whether bat species have been recorded in or within close proximity to the site. This was achieved by examining aerial maps and online data sources (MAGIC, Google Earth and the NBN Gateway).

Designated Sites and Other Features of Interest

Pearman's Copse is an area of ancient woodland located 1.6km south-east of the site which is also designated as a Local Nature Reserve. There are also two small copses of ancient woodland within 2km of the site at Whitley Wood, as well as more extensive areas of parkland, woodland, marshland/open water and mixed woodland outside the M4 corridor on the outskirts of Reading, around the villages of Shinfield, Three Mile Cross and Spencers Wood. The Kennet and Avon Canal is also located just over 1 km to the north and west of the site.

Therefore, whilst the site itself is in a relatively built up area of east Reading, suitable habitat is present within the local area for foraging and roosting bats, connected via linear features in the landscape such as waterways, hedgerows and treelines.

Bat Records

The NBN Gateway holds records for serotine, Daubenton's, natterers, common pipistrelle and brown long-eared bat within the SU76 grid square (www.data.nbn.org.uk, search date 23rd May 2016).

In addition, a number of European Protected Species Licences have been granted by Natural England in the local area, in respect of developments affecting roosting bats. Species for which licences have been granted include common pipistrelle, soprano pipistrelle and brown long-eared bat (www.magic.defra.gov.uk, search date 23rd May 2016).

Potential Habitats and Landscape Features for Bats

During the Phase 1 bat survey the habitats and features present on site were assessed for their potential to support bats. The buildings on site were inspected for their potential to support bats, in line with guidance set out in the Bat Conservation Trust's Bat Surveys for Professional Ecologists Good Practice Guidelines (2016), including a detailed external assessment and an internal inspection where possible. Details of the nature conservation legislation and/or planning policy relating to bats are provided in **Appendix 3**.

The Site is situated along Basingstoke Road on the southern approach into east/central Reading from the M4 corridor in Berkshire (see **Figure 1**) in a mixed residential and commercial area. It is bordered on the east by an extensive area of allotments, on the west by the main road and an adjacent area of amenity grassland and to the north and south by residential properties. The site itself contains a two-storey residential dwelling plus an associated outbuilding, rear garden and hardstanding to the front of the property which is used for car parking.

The potential bat habitats recorded on site are shown in **Figure 2** and target notes are provided in **Appendix 5**. In the rear (east) of the site the garden is laid to amenity grassland which is regularly mown and is bordered on three sides by a 3 m tall box hedge and on the fourth (west) side by the house and adjoining conservatory. There were no trees within the site boundary although just beyond the hedge to the east is a large mature weeping willow tree located at the edge of a large allotment area. The land to the front (west) of the dwelling is laid to hard standing and just beyond the southern boundary is a large mature ash tree in the neighbouring garden which shades and shelters the southern aspect of 519 Basingstoke Road.

Potential bat features are shown in **Figure 3** and a detailed description of the buildings are given in **Appendix 5**. In summary, both the residential dwelling and outbuilding are considered to have low potential to support roosting bats.

The position of the site within a built-up suburban area means that connections between potential roosting features within the buildings and surrounding bat foraging habitat are likely to be limited and subject to some light pollution, potentially deterring use by bats. However, the rear (east) of the site is likely to be more sheltered and darker and the mature willow tree just beyond eastern boundary connects to the extensive allotment area to the east which is likely to be dark and support a good assemblage of insects for foraging bats. There are also scattered mature trees around the perimeter of the amenity grassland across the main road to the west of the site which may be an attractive feature for foraging bats. The habitat surrounding the site is considered to have low to moderate potential to support foraging and/or commuting bats.

Recommendations:

Retain the mature hedgerow along the northern, southern and eastern boundaries, to retain connectivity for commuting and foraging bats between the site and the wider landscape, including the mature willow tree and the large allotment area to the east of the site.

Both the residential dwelling and outbuilding within the site are classed as having potential to support roosting bats and the habitat surrounding the site also has potential to support commuting and/or foraging bats. In accordance with the Bat Conservation Trust's Bat Surveys for Professional Ecologists Good Practice Guidelines (2016) and to comply with relevant nature conservation legislation, it is recommended that targeted bat activity surveys be conducted to determine whether bats are using

the buildings on site for roosting and/or whether the site is of particular value for foraging and/or commuting bats.

Bat activity surveys (sometimes referred to as 'Phase 2' bat surveys) take the form of emergence and re-entry surveys carried out around dusk and/or dawn and aim to:

- Determine which bat species are present on site and their numbers;
- Determine the type of activity (whether roosting, foraging or commuting);
- Help establish the location of bat access points within the building; and
- Determine wider use of a site for foraging and/or commuting after emergence/before re-entry to/from roosts on or adjacent to a site, therefore helping to establish whether bats will be directly affected by the proposed redevelopment.

Based on the initial assessment of bat potential for the habitats and buildings on site, I would recommend that **one dusk or dawn bat activity survey session** is undertaken on the site during the period May to September, using a team of two surveyors. Ideally the survey session should be undertaken during June or July to ensure that activity during the peak bat maternity period is assessed.

As the online data searches only provide data to 4-figure grid reference level, I would also recommend that the Berkshire Bat Group and/or Thames Valley Environmental Records Centre (TVERC) are contacted to obtain more accurate bat records for the local area.

Breeding Birds

The buildings and hedgerows on site are likely to provide a nesting resource for common garden birds. Evidence of current and past use of the eaves and loft of the residential dwelling by nesting birds was noted during the internal inspection.

Recommendations: It is an offence under the Wildlife and Countryside Act 1981 (as amended) to disturb nesting birds. Therefore, clearance of any vegetation over 50cm in height should ideally be undertaken outside of the bird nesting season (considered to be March to September, inclusive). If vegetation clearance or building demolition works must be carried out within the bird nesting season then a nesting bird check will need to be completed by a suitably qualified ecologist no longer than 24 hours before the start of the works. If any nesting birds are found, a buffer zone (minimum of 3m) should be set up around the active nest. Disturbing works will be restricted within the buffer zone until all young birds have fledged.

Summary and Enhancement Opportunities

The buildings and habitats within the site have potential to support roosting and foraging bats and nesting birds. These issues do pose a potential constraint to the proposals. However, subject to implementation of appropriate mitigation measures (such as that outlined above for nesting birds), such constraints are unlikely to pose a serious issue to redevelopment of the site. It is therefore likely that the proposed redevelopment will be able to proceed in accordance with relevant nature conservation legislation and policy criteria.

Below I have summarised the potential issues on site and what action needs to be taken (**Table 1**). The timing constraints are also included for each action.

Table 1: *Features of interest, recommended actions and timings*

Feature	Action	Timing
Mature hedgerow	Retain within layout. Compensatory planting where necessary	During scheme design
Bats – roosting	Targeted activity and emergence/re-entry surveys (Phase 2 Bat Survey)	May to September (inclusive)
Nesting birds	<i>Outside bird nesting season:</i> No action necessary (assuming no birds nesting)	Work must be carried out between September to February inclusive
	<i>Within bird nesting season:</i> An ecologist must carry out a nesting bird survey to check the vegetation and buildings on site	24 hours prior to commencement of works

In addition, there are opportunities to maintain and enhance the biodiversity of the site in line with Government policy. These include the use of nesting/roosting boxes for bats and birds and inclusion of native plant species of local provenance and/or fruit bearing species within any soft landscaping plans. I have also attached two guidance notes produced by the Bat Conservation Trust and Natural England which provide some useful advice on encouraging bats and birds into garden areas (**Appendices 6 and 7**).

I trust that the above provides you with the information that you require at this stage. However, please do not hesitate to contact me if you have any queries or wish to discuss anything further.

Yours sincerely,



Dr Lynsey J Robinson MCIEEM CEnv

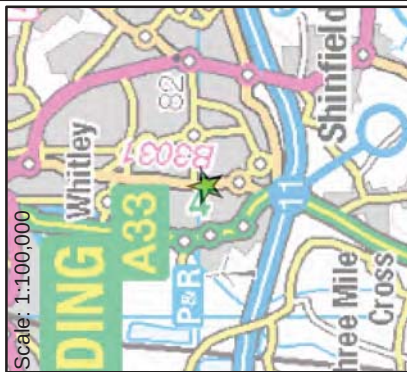
Figure 1	Site Location and Nature Conservation Designations
Figure 2	Bat Habitats
Figure 3	Potential Bat Features/Access
Appendix 1	Development Proposals
Appendix 2	Survey Methodology
Appendix 3	Legislation and Planning Policy Relating to Wildlife & Development in England
Appendix 4	Site Photographs
Appendix 5	Target Notes and Building Descriptions
Appendix 6 and living'	Bat Conservation Trust leaflet, 'Encouraging Bats: a guide for bat friendly gardening
Appendix 7	Natural England leaflet, 'Birds and your Garden'



Site Location

Local Nature Reserve

Ancient Woodland



1:20,000 Scale @ A3

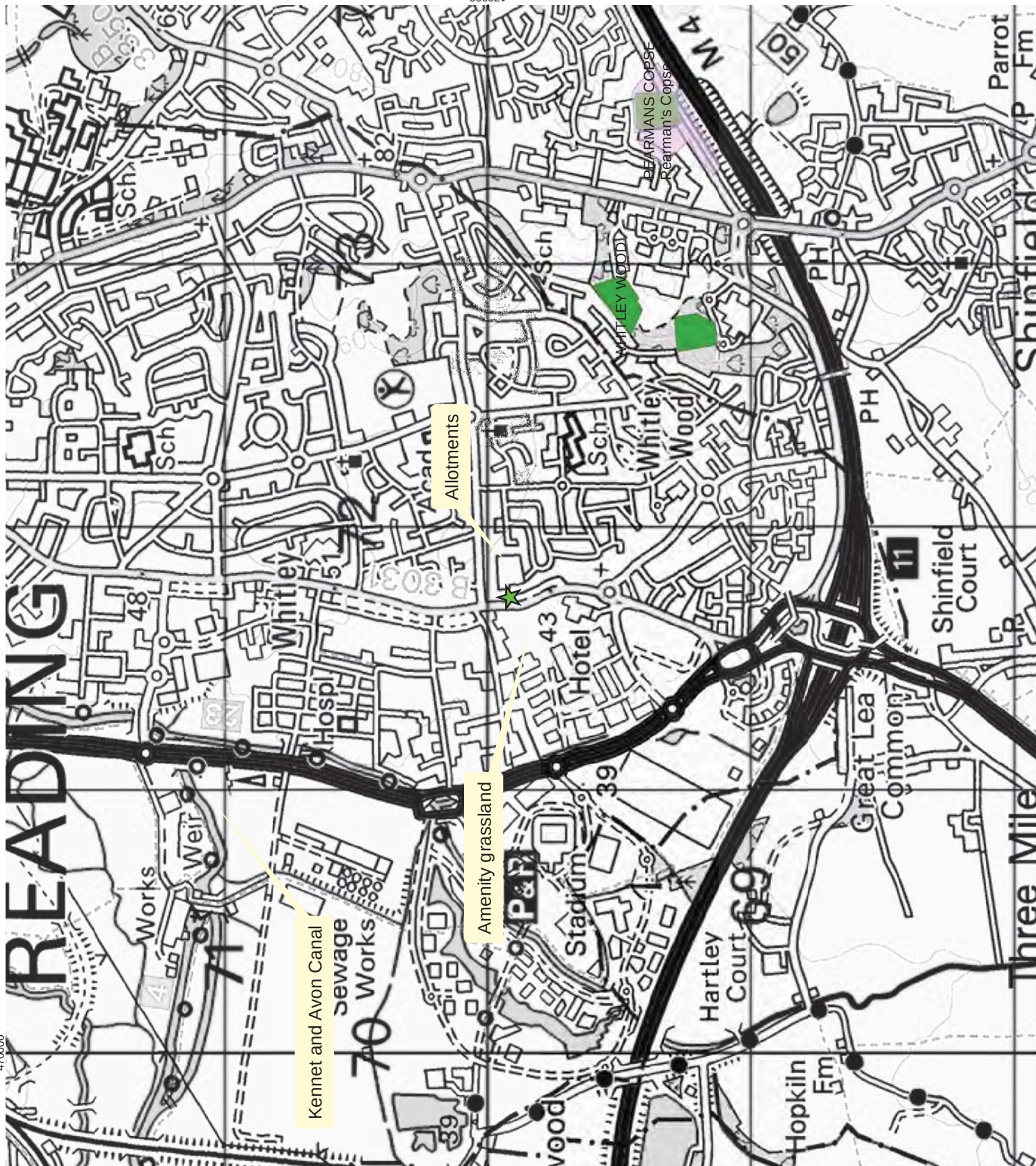
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Ref: 519 Basingstoke Road_Fig001

Date: 23/06/2016

Figure 1:

**519 Basingstoke Road
Reading**





Key

- Site Boundary (Indicative)
- Amenity Grassland
- Building
- Hardstanding
- Hedge
- Tree
- target notes



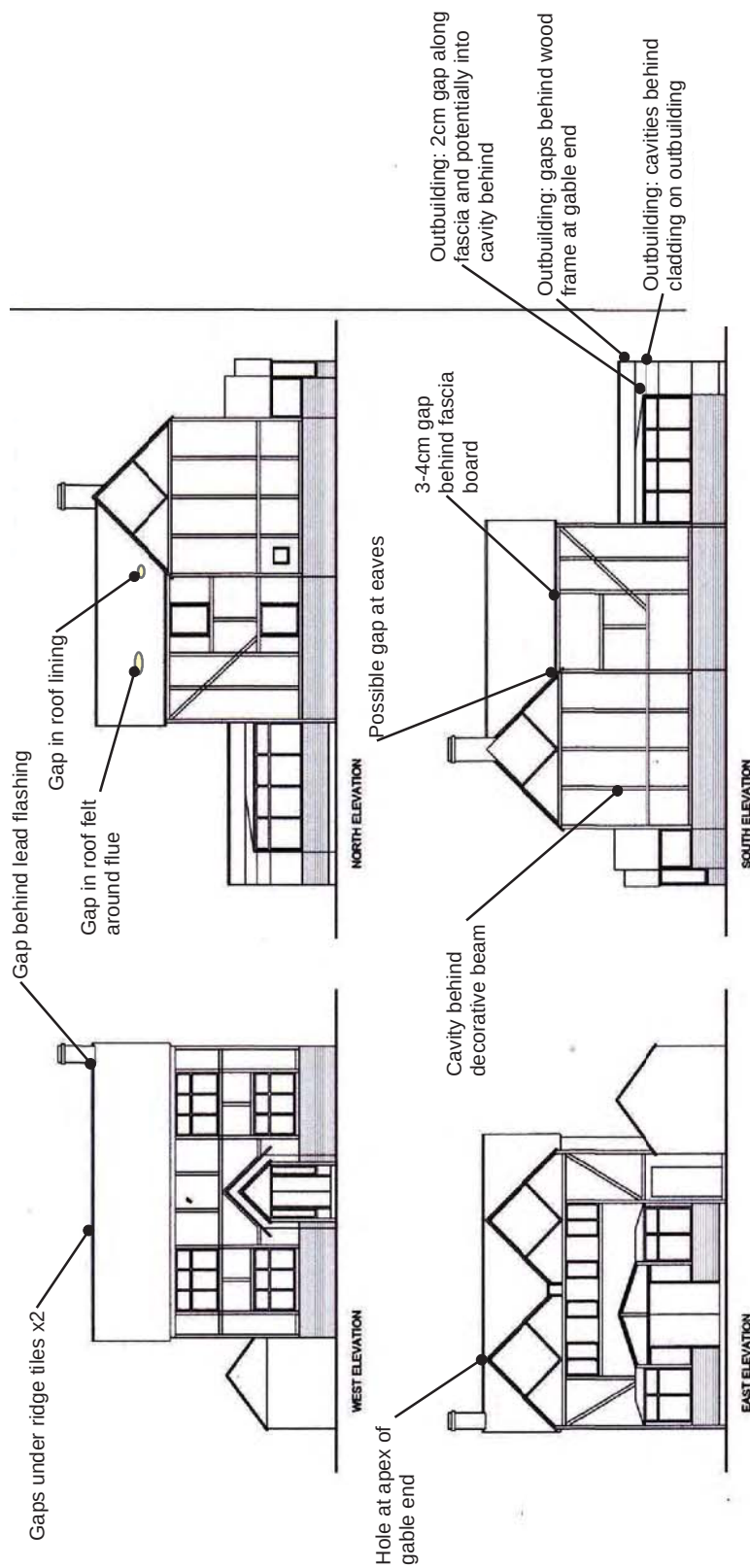
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Date: 26/06/2016

Figure 2:
Bat Habitats

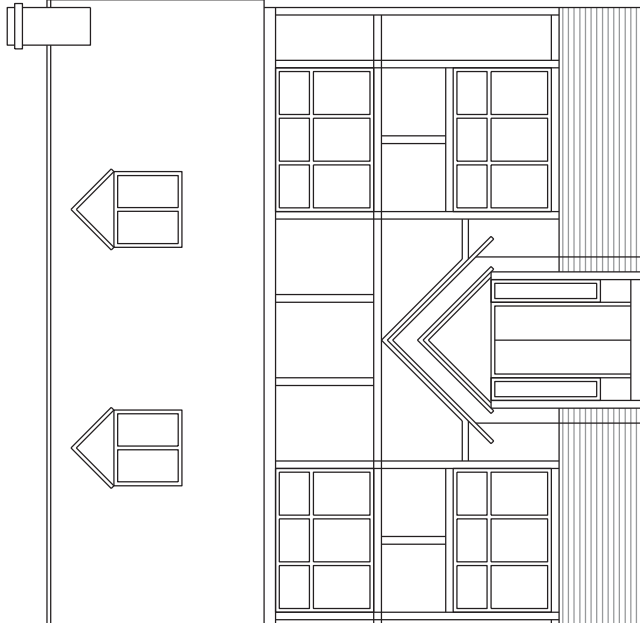
519 Basingstoke Road
Reading



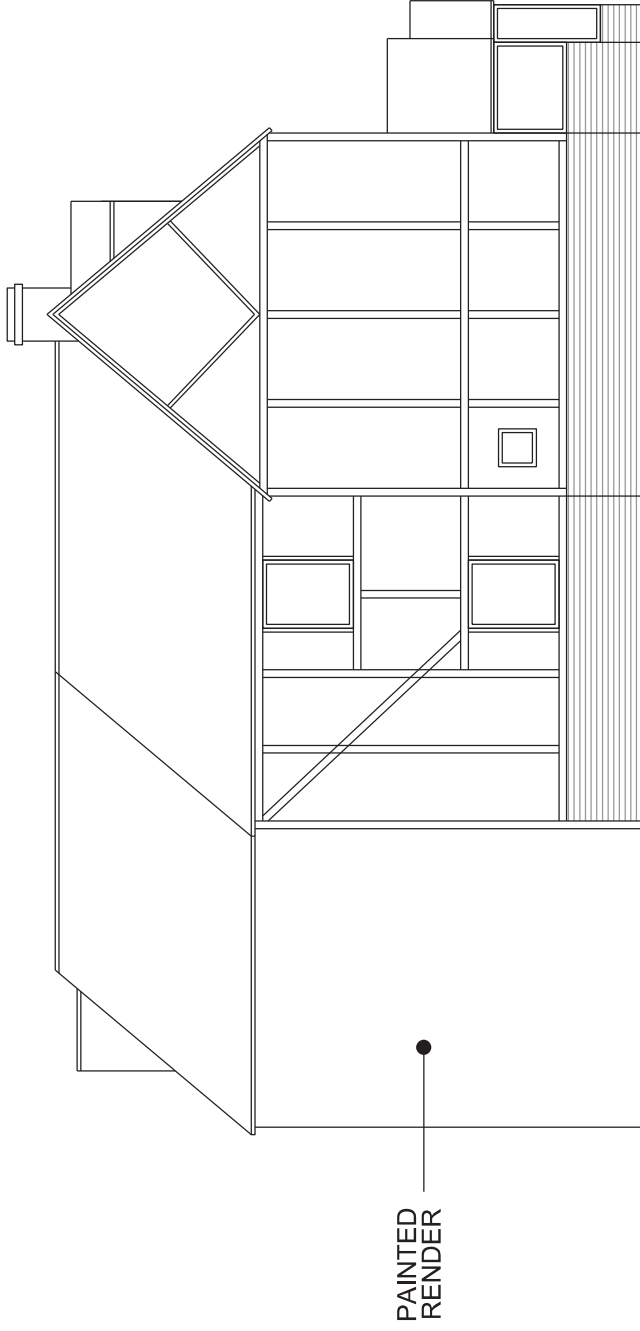


Appendix 1

Development Proposals

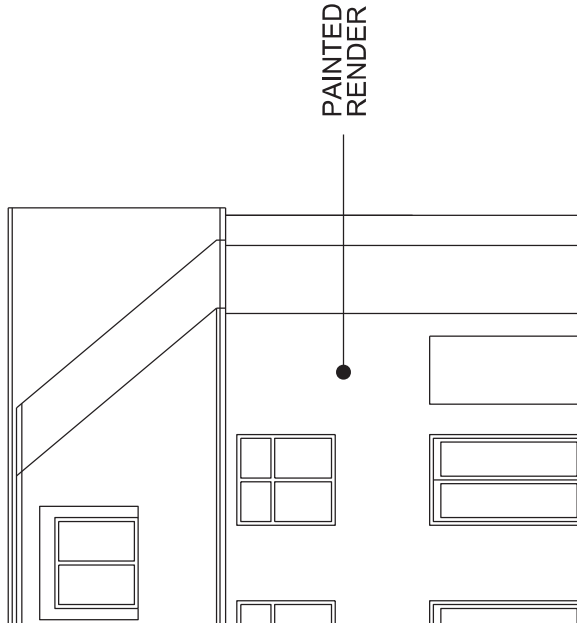


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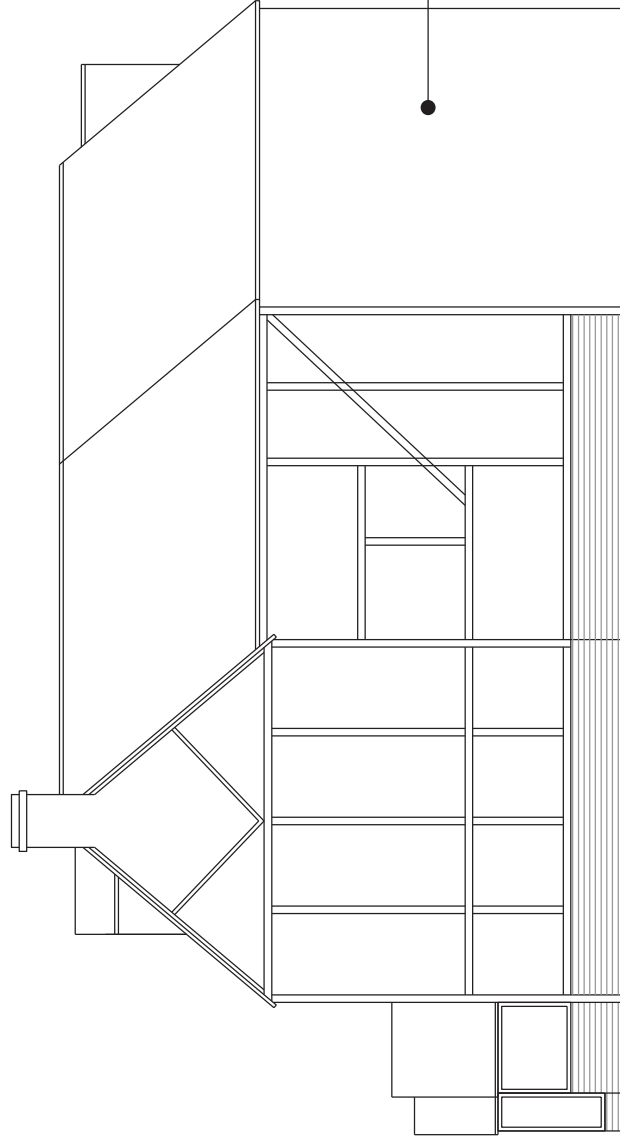


NORTH ELEVATION

PAINTED
RENDER



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Appendix 2

Survey Methodology

The Phase 1 Survey has been completed following guidance in The Institute of Ecology and Environmental Management (IEEM) Guidelines for the Ecological Impact Assessment in the United Kingdom (26 June 2006).

DESK STUDY METHODOLOGY

A basic desk study was carried out in order to gather and refer to existing biodiversity and contextual information with respect to the zone of influence and the wider area. This involved interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), Natural England's Nature on the Map, aerial photos, current Ordnance Survey maps and Old Maps. Reference was also made to the UK BAP, and local biodiversity priorities.

PHASE 1 BAT SURVEY FIELDWORK METHODOLOGY

Bats use buildings and trees for roosting and breeding and, where present, a preliminary assessment of the potential for these features to support bats was undertaken during the survey, using high powered binoculars and torches, an endoscope and mirrors where necessary/appropriate. Potential may include gaps beneath roof or hanging tiles, in soffits, or beneath the end of ridge tiles, but also under the edge of felt on flat roofs. In trees potential roosting features include woodpecker holes, splits in branches and peeling bark.

Preliminary evidence was obtained through noting any staining around potential roost entrances, and looking for bat droppings, for example on window sills or below fascia and barge boards.

A preliminary evaluation was also undertaken of potential bat foraging habitat within the site and in the local area, including woodland, pasture, hedges and watercourses.

Appendix 3

Legislation and Planning Policy Relating to Wildlife and Development in England

KEY LEGISLATION

Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010¹ (known as the “Habitats Regulations”) transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the European “Habitats Directive”) into UK legislation. These regulations consolidate all the various amendments made to the preceding “Conservation Regulations” 1994 for England and Wales.

The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) Regulations 2012.²

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which form part of the Natura 2000 network of protected areas across Europe. The Regulations also prohibit the deliberate capture, killing or disturbance of European Protected Species (EPS), which include *inter alia* Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, Otter *Lutra lutra* and all native species of bat, and make it an offence to destroy or damage either the nesting or breeding sites of these species. The above actions can be made lawful through the granting of licenses after Natural England (the licensing authority in England) is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the EPS.

Further information on SPAs, SACs and European Protected Species (Licensing and Protected Species) is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981³ is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National

¹ The Conservation of Habitats and Species Regulations 2010. Available from: <http://www.legislation.gov.uk/uksi/2010/490/contents/made>

² The Conservation of Habitats and Species (Amendment) Regulations 2012. Available from: <http://www.legislation.gov.uk/uksi/2012/1927/contents/made>

³ The Wildlife and Countryside Act 1981. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Table A1.1: Key Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000⁴ have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006⁵ was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England⁶. Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on species and habitats of Principal Importance is provided in the relevant sub-section of this Appendix.

⁴ The Countryside and Rights of Way (CRoW) Act 2000. Available from: <http://www.legislation.gov.uk/ukpga/2000/37/contents>

⁵ The Natural Environment and Rural Communities Act 2006. Available from: www.legislation.gov.uk/ukpga/2006/16/contents

⁶ The S40 list replaces the previously prepared list of habitats and species of Principal Importance for the conservation of biological diversity in England that was published under Section 74 (2) of the Countryside and Rights of Way Act 2000.

PLANNING POLICY & GUIDANCE

Listed below is the main planning policy and government guidance that relates to the conservation of nature and development at all levels of government.

National Level

National Planning Policy Framework (NPPF)

The National Planning Policy Framework⁷ sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 14), with a requirement to consider its economic, social and environmental dimensions. This does not apply where development requiring Appropriate Assessment under the Habitats Directive is being considered, planned or determined (paragraph 119).

Section 11 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system and replaces the preceding *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation*. It specifies that when determining planning applications, local planning authorities should aim to **conserve and enhance** biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland;
- development proposals where the primary objective is to conserve and enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged.

In the case of SSSIs and irreplaceable habitats, exceptions *may* be made if it can be clearly demonstrated that the benefits of the development, at this particular site, outweigh the costs in terms of loss or adverse impacts.

Section 11 also specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or

⁷ DCLG (2012). *National Planning Policy Framework*. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05⁸ to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence or otherwise of protected species, and the extent to which they may be affected by the proposed development, must be established before permission is granted;
- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

Good Practice & Standards

Various forms of guidance are available to manage biodiversity through the development process. Of particular note is *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*⁹. This document was principally designed to help local planning authorities deliver the national policies in the former PPS9 (now replaced by the NPPF) and comply with legislation. It is also useful to developers and their agents as it outlines the expectations of the local authority for the conservation of nature in the development control process.

Regional Level

The South East Plan Regional Spatial Strategy has now been revoked, with the exception of Policy NRM6, which relates to the Thames Basin Heaths Special Protection Area.

⁸ ODPM (2005). *Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System*. Available from:

<http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity>

⁹ British Standards Institution (2006). *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*. Publicly available at:

<http://www3.hants.gov.uk/pas-2010.pdf>

Local Level

The Reading Borough Local Development Framework Core Strategy was adopted in January 2008 and altered in January 2015, and until adoption of a new local plan currently in preparation, will guide development in the Borough to 2020. It contains the following policies of potential relevance:

CS36 – Biodiversity and Geology

a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes. On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that:

- i. The need for development clearly outweighs the need to protect the value of the site; and
- ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.

b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.

c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

CS38 – Trees, Hedges and Woodlands

Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal, and the Borough's vegetation cover will be extended.

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets” (paragraph 117). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level. An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The UK Biodiversity Action Plan 2007 (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framework*¹⁰ and individual national biodiversity strategies. The UK framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010. The Framework's overall vision is that "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*¹¹ is the national biodiversity strategy, which has the stated mission "(...)to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people." In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets objectives relating to terrestrial and marine habitats and ecosystems, species and people. These include:

- Establishing coherent and resilient ecological networks, described as "a network of high quality sites, protected by buffer zones, and connected by wildlife corridors and smaller, but still wildlife-rich, 'stepping-stone' sites";
- Taking targeted action for the recovery of priority species whose conservation is not delivered through wider habitat-based and ecosystem measures ;
- Establishing Nature Improvement Areas and Marine Protected Areas;
- Bringing more SSSIs into favourable condition;
- Reducing environmental pressures by working with sectors such as agriculture, forestry, planning and development.

A network of 48 Local Nature Partnerships have been set up across England to help deliver these objectives.

Note that as these changes are still relatively new, some local plans and government guidance documents/circulars still refer to the UK BAP and 'UK BAP priority habitats and species'. These habitats and species are listed under Section 41 of the NERC Act, and **remain a material consideration in the planning process**. They are now described as 'Species/Habitats of Principal Importance', though they are also commonly referred to as 'Section 41 Species/Habitats' or simply 'Priority Species/Habitats'. Further guidance is given in the relevant sections below.

Local level

The Berkshire Local Nature Partnership has produced the Natural Environment in Berkshire Biodiversity Strategy 2014-2020 which builds on, and replaces the previous Berkshire Biodiversity

¹⁰ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). *The UK Post-2010 Biodiversity Framework*. Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

¹¹ DEFRA (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Available from: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

Action Plan (BAP). In addition to identifying a network of Biodiversity Opportunity Areas across the county and a range of priority habitats which support bats, it also lists a number of priority species recorded in Berkshire including:

- Western Barbastelle *Barbastella barbastellus*
- Bechstein's Bat *Myotis bechsteinii*
- Noctule Bat *Nyctalus noctula*
- Soprano Pipistrelle *Pipistrellus pygmaeus*
- Brown Long-eared Bat *Plecotus auritus*
- Greater Horseshoe Bat *Rhinolophus ferrumequinum*
- Lesser Horseshoe Bat *Rhinolophus hipposideros*

Delivering Biodiversity Opportunities

Where practicable, opportunities should also be sought to achieve a **net gain** (i.e. enhancement) of biodiversity. Support for biodiversity enhancement is provided in the Public Authority 'Biodiversity Duty' under the NERC Act 2006 and in the key principles of the NPPF, as described above.

Enhancement projects may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable urban drainage schemes (SUDS) and green roofs. Planning conditions and obligations are increasingly being used to mandate biodiversity enhancement on or off a development site, either through design or through financial support.

Many ideas for incorporating ecological enhancement into planning and development can be found in the biodiversity action plans and/or strategies relevant to the policy or development area, or through initiatives led by the Local Nature Partnership. At the national level, twelve Nature Improvement Areas were set up in 2012 in order to deliver landscape-scale conservation objectives, and many regions and counties have also identified and mapped 'Biodiversity Opportunity Areas', 'Nature Maps' or 'Strategic Nature Areas' where conservation action such as habitat creation and restoration will deliver the greatest benefits for biodiversity.

Other sources of ideas and opportunities include schemes led by conservation NGOs, such as the Wildlife Trusts' 'Living Landscapes' and the RSPB's 'Futurescapes', which are working in partnership with landowners and local communities across the country to restore ecosystems and ecological networks.

SPECIES SPECIFIC PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England and are of relevance to this report. It is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by proposed development. This can best be achieved by undertaking surveys early in the planning process. Mitigation measures are required to minimise

disturbance to protected species and may necessitate a licence. Natural England offers further detailed advice which can be applied to planning applications that affect protected species¹².

Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Bats are protected further by law in England.

There are 18 species of bat in the UK, 7 of which are UK BAP priority species and Species of Principal Importance in England under S41 of the NERC Act 2006. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitat Regulations 2010. It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, deliberately or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts); or
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species licence from Natural England.

Birds

48 species of bird on the UK BAP exist in England. These species, plus the Hen Harrier, are also listed as Species of Principal Importance in England under S41 of the NERC Act 2006. All birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 affords extra protection for a number of species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependant young, constitutes an offence.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set down in the law, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

¹² Natural England. 2011. *Standing Advice for Protected Species*. Available from: <http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/default.aspx>

European Protected Species Licences

A European Protected Species Licence is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitat Regulations 2010; including inter alia all species of bats, Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus* and Otter *Lutra lutra*. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

- 1) The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- 2) There is no satisfactory alternative; and
- 3) The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance in England for the conservation of biodiversity under Section 41 (S41) of the NERC Act 2006¹³. This list of species includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier¹⁴). While these species may not be legally protected, there is a clear responsibility on planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species and habitats and to enhance them where possible. Additional guidance to developers is typically provided in level planning policies.

¹³ The S41 List of Species & Habitats of Principal Importance in England is available from:
<http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

¹⁴ The Hen Harrier has also been included on the List because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

Appendix 4

Site Photographs



Photo 1: West (front) aspect of main house observed from parking area/road.



Photo 4: Outbuilding (south aspect).



Photo 2: East aspect of main house showing rear conservatory and mature box hedge.

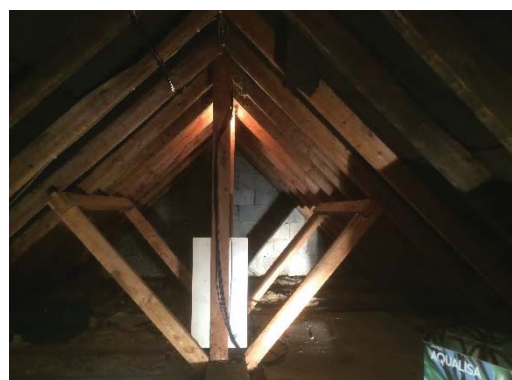


Photo 5: Interior view of roof void above main house.



Photo 3: North aspect of main house showing driveway and west aspect of outbuilding.



Photo 6: West aspect showing roof of front porch.

Appendix 5

Target Notes and Building Descriptions

Target Notes

Target Note Number (See Figure 2)	Description
1	Managed mature box hedge, 3m H x 1m W, encloses south, east and north sides of the rear garden.
2	Mature ash in adjacent garden partially screening south aspect. Recently cut back on northern side.
3	Mature weeping willow tree with large canopy.
4	Extensive, well-established allotment area bordered by residential housing on all sides.
5	Amenity grassland area used for recreation purposes.

Building Descriptions [Refer also to Figure 3.]

House

Two-storey mock Tudor 1940's residential dwelling with solid brick and blockwork cavity walls rendered with cementitious material between decorative (non-structural) timbers externally and a concrete tiled pitched roof (**Photo 1**). Wooden barge boards at each of four gable ends, wooden fascias. Chimney breasts on south and north gable ends, the latter no longer in use. PVC-casement windows and conservatory with plastic roof backing onto rear garden on east elevation (**Photo 2**). Lean-to front porch on west elevation with clay tiled roof (**Photo 6**).

Gaps under ridge tiles roof tiles, behind lead flashing, at eaves and behind decorative timbers provide potential access to cavities for roosting bats (**Figure x**). The loft void is wooden framed and uncluttered with some cross trussing on the western section, lined with bitumen felt, part-boarded and insulated with fibreglass (**Photo 5**). Internal temperature at time of survey 21.9°C. Approximate dimensions 8.5m W x 8m L x 1.75m H. Gaps at eaves and in roof lining provide potential access for bats but there were cobwebs throughout and no evidence of use by bats was observed internally.

Initial assessment = Low bat roost potential

Outbuilding/Office

Single-storey outbuilding currently used as an office which has a pitched roof section covered with tightly fitting felt shingles at the west end and a flat roofed section covered with well-sealed roofing felt at the east end (**Photos 3 and 4**). Some gaps in external wood cladding providing potential access to cavities behind for roosting bats.

Initial assessment = Low bat roost potential

Appendix 6

Bat Conservation Trust Leaflet, 'Encouraging Bats: a guide for bat friendly gardening and living'

Bat Conservation Trust

Living with bats

A guide for roost owners



Brown long-eared bats © Hugh Clark

Guidance and advice on sharing your
home with bats, identifying species
and caring for grounded bats.

Frequently asked questions

How can I tell if I have bats?

Often with difficulty! Some householders have had bats for years without being aware of them.

Look for bat droppings on windows, walls or sills. In the roof void droppings may be below the gable ends or in a line under the ridge.

Bats may be visible on ridge beams inside the roof void but could be tucked away from sight.

Please take care when entering the roof void, particularly during July and August and in the winter months when bats are most vulnerable to disturbance, and do not shine lights up at the ridge. Stop immediately if you suspect any bats are there so as not to disturb them.

During the summer months you can watch to see where the bats emerge from when they come out to feed around dusk time.

Another clue is the chattering sound that bats may make at dusk just before they fly out to feed. Maternity colonies can be more vocal around dawn in July and August when hungry babies call to mothers as they return from their night's insect hunting.

However you may see no sign of bats at all!



Soprano pipistrelle - life size

© Gemma Russell

How can I recognise their droppings?

Do the crumble test! Roll a dropping in a piece of tissue between your finger and thumb – if it feels hard then you probably have mice, not bats. A bat dropping is small and dark and will crumble to dust quite easily because it consists of indigestible insect parts. Bat droppings present no known health hazard in the UK, and can be swept up in the autumn to use as an excellent fertiliser for the garden.



©Amanda Adebisi

Will the bats cause any damage?

Bats are not rodents, and do not nibble or gnaw wood, wires or insulation. They do not build nests, nor do they bring bedding material or insect prey into their roost. Bats are clean and sociable animals and spend many hours grooming themselves. Cover stored items with dust sheets (not plastic sheets) to collect droppings, and make sure that your water tank is covered to prevent any bats from drowning.

Why do bats use buildings? I thought they lived in caves or trees!

Tree and cave roosts have become increasingly scarce causing some bat species to adapt to live in our buildings. Buildings often make better roosting spaces as they are more thermally stable, which is particularly important in the summer months when female bats need warm spaces to rear their young.

Will we get overwhelmed with bats?

No. A bat mother normally has only a single baby in a year, and not always every year. Bats are most often found in houses in summer, as the females need somewhere warm to have their babies. Like all mammals, they give birth to live young, which they suckle on milk for several weeks until the babies can fly and feed themselves, when they will all move away. If bats find a place for a maternity roost that really suits them, they will often return year after year.

Looking after your lodgers

All British bats eat insects, which they catch using a sophisticated system called echolocation, listening to the returning echoes of their high-pitched calls to build up a 'sound picture'. They feed on a diet of midges, mosquitoes, moths and beetles, though different species have their own tastes. By growing plants that are attractive to a range of insects, we can make our gardens important feeding stations for bats, birds and other wildlife. Visit www.bats.org.uk for tips on wildlife-friendly gardening, bat boxes, and how to identify the species you might see in your garden.

A problem often faced by bats in gardens is cats. If you own a cat, you can help to save lives by bringing your cat in for the night half an hour before sunset so that bats can emerge from their roost undisturbed. This is especially important from mid-June to the end of August, which is when bats are rearing their young. This also allows the bats to return at dawn undisturbed by cats. If you find a bat that has been caught by a cat, whether or not it appears injured, please call the Bat Helpline 0845 1300 228 for urgent care advice.

What happens to bats in winter?

Because insect prey becomes scarce in winter, bats go into hibernation. They find a cool place, free from disturbance, and tuck themselves away, often in a crack or crevice, sometimes in sheds or garages. If you find a hibernating bat take care not to disturb it, as unnecessary waking burns up valuable fat stores. Don't be surprised if you see a bat flying during the winter as they do wake occasionally, to move to a new site or to look for food or water.

Is there help for my concerns?

Occasionally roost owners may encounter some issues associated with their bat roost, but the majority of problems can easily be resolved. If you have any concerns please seek advice from your Statutory Nature Conservation Organisation (SNCO) or contact the Bat Helpline 0845 1300 228.

On occasion bats mistakenly enter living areas. See later on for what to do if you find a bat. If this happens regularly your SNCO can advise.

Bats and their roosts are protected by law, which means that it is illegal to disturb, kill or injure them or to damage, destroy or obstruct access to a bat roost, whether intentionally or

recklessly. As bats tend to return to the same roosts every year, the roosts are protected whether bats are present or not. Therefore it is always best to seek advice from your SNCO before doing anything that may put the roost at risk.

Will I be able to have work done in my loft or to my roof?

Having bats does not mean that building work, roof repairs or timber treatment cannot take place. It is advisable that you plan ahead and consult your local SNCO well before work starts and follow their advice on how to proceed lawfully. In many cases they will send a trained roost visitor to inspect your roost, identify bat species and

provide advice, free of charge. Alternatively, they will be able to advise you on the best course of action. Never put any fly papers or adhesive rodent traps in your loft if bats roost there. Seek advice from your SNCO if you have a rodent or insect problem at your bat roost.



Brown long-eared bats hibernating © Daniel Hargreaves

Who's living in my house?

There are 18 species of bat in the UK, but only a few are likely to roost in houses. Here we list the species that you are most likely to find, although there are always exceptions to the rule...

Different species of bat prefer different places to roost (or shelter). The most abundant of the British bats are the **pipistrelles**, of which there are three species in the UK. The soprano pipistrelle and the common pipistrelle (below) often roost in houses and are almost identical to the untrained eye. The Nathusius' pipistrelle is quite rare and found less often in houses.

Pipistrelles often choose modern houses and prefer confined spaces around the outside of buildings, usually roosting behind soffits, barge boards and hanging tiles, between roofing felt and tiles, within cavity walls and sometimes behind window frames. They do not usually enter roof spaces, although well established large colonies in older buildings may do so. Their droppings are more likely to be found externally and you may see this species emerge at dusk so keep an eye out for their amazing aerial acrobatics at that time!



Common pipistrelle, Hugh Clark

These tiny bats generally measure between 3.3cm and 4.8cm (head and body length), with a wingspan of 18cm to 25cm. Their preferred diet consists of midges and mosquitoes – a single pipistrelle may eat up to 3,000 insects in one night, one-third of its body weight!



Brown long-eared bat, Hugh Clark

The **brown long-eared bat** (above) is one of the most endearing bats. Its long ears make it instantly recognisable, even in flight. At rest, however, the ears may not always be obvious, being curled back or tucked away completely under the bat's wings.

Brown long-eared bats prefer large uncluttered roof voids; a feature of barns and older buildings. In houses they usually roost singly or in small groups inside the roof void among apex roof timbers, around ridge ends and chimneys, and in ridge tile crevices. Their droppings are often seen in a line under the ridge.

These medium-sized bats spend more time inside the roof space than many other bats, and are generally very quiet inside the roost, not leaving until after dark.

The brown long-eared bat, along with the very rare grey long-eared bat, flies slowly amongst foliage to pick insects off leaves and bark. They are also known as 'whispering bats' because their echolocation sounds are very quiet. The size of their ears means that their hearing is particularly sensitive.

Other species of bat may be found roosting in houses, depending on the style and location of the house. These include:

Serotine, one of the largest bat species in the UK, is almost exclusively found roosting in houses across southern England and Wales. Rarer than pipistrelles and brown long-eared bats, serotines usually roost in crevices around chimneys and in cavity walls. Their favoured prey is large beetles, which they find over farmland and grassland.



©Hugh Clark

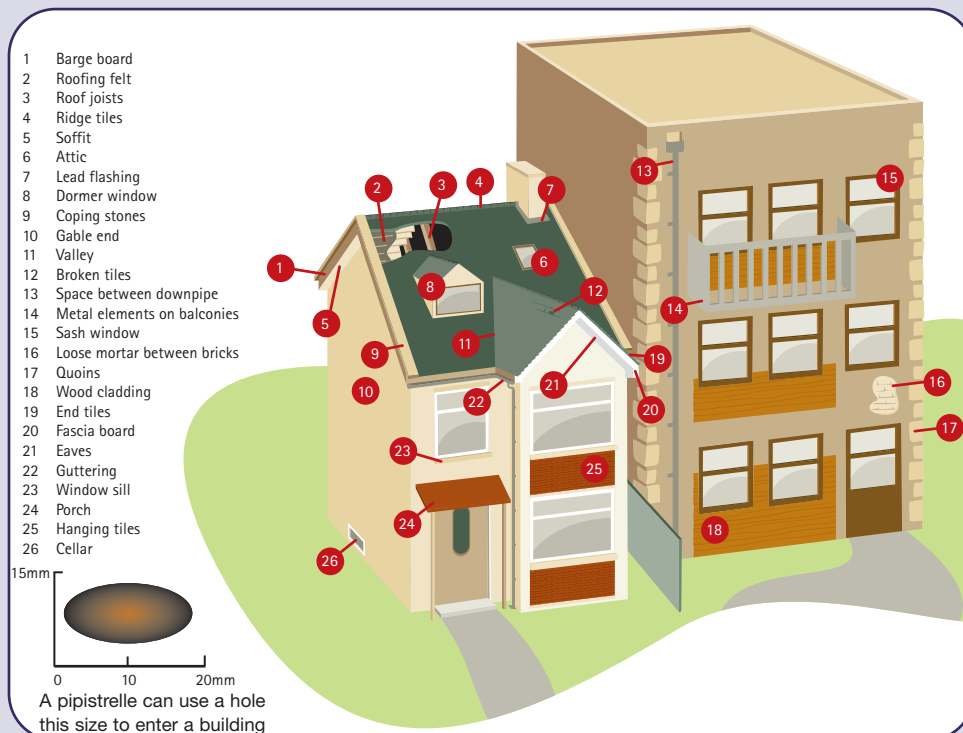
Horseshoe bats, probably the most unusual-looking of the UK's bats, are sometimes found roosting in houses in south-western England and Wales. Greater and lesser horseshoe bats hang free in the roost from their feet.



©Garreth Jones

Where will bats be roosting?

Any structure is a potential bat roost, providing there is sufficient access – bats need only a 20mm gap! Here's a guide to where they might be roosting or coming in and out of your house.



What if I find a bat on the ground, or

If you find a bat on the ground during daylight hours or flying inside a building, it is likely to need some help. Roost owners may occasionally find bats, particularly juveniles, on the ground in their garden.

Bats should normally be handled only by licensed bat workers, but unlicensed people are allowed to handle them for the purpose of rehabilitation and release. If you find a grounded bat please contact the **Bat Helpline 0845 1300 228** for advice – we're here to help.

Bats flying indoors

A bat flying in a room has most likely taken a wrong turn and is looking for a way out! If it is after dusk (and good weather), close the door, open the windows as widely as possible, draw back the curtains and remove anything that obstructs the window opening. Dim the lights and give the bat the chance to find its own way out. Bats navigate by sending out high-pitched sounds and listening for the echoes, so the bat should find its way out of the room.

NEVER try to catch a flying bat – you are likely to injure it severely and it may even bite in self-defence. Sometimes young bats which are inexperienced flyers will become exhausted before finding the way out. They may try to land on a wall or curtains, or they may crash land on furniture or the floor. In this case, you should contain the bat as described opposite (with access to water), and try to release it in the evening (see opposite page). This also applies when bats are flying indoors during daylight or bad weather.

Grounded or injured bats

Sometimes, a grounded bat may just be exhausted and need a bit of time to recover with a little help. It may be injured or in danger from passing predators (such as cats), so it is

better to take it into captivity temporarily and get advice from the **Bat Helpline 0845 1300 228** or your local bat group. Bats are gentle creatures and seldom show any aggression, but they are wild animals and may be frightened or in pain. **You must wear protective gloves and handle the bat as little as possible.**

Containing and caring for the bat

To contain a grounded bat, place a small box (such as a shoe box or ice cream tub) over the bat and use a piece of flat cardboard to gently and carefully slide the bat into the box. Put a loosely crumpled piece of cloth, such as an old tea towel, in one corner – the bat will feel safer



if it has something to crawl into and hide in. Put a few small air holes into the secure fitting lid and put a few drops of water into a very shallow container (such as a plastic milk bottle top) in one corner for the bat to drink from. Place the box somewhere quiet and dark at room temperature and check every couple of hours to replenish water if necessary. Once the bat is contained, contact the **Bat Helpline 0845 1300 228** for advice.

Baby bats

All British bats are small, and you may be surprised at how tiny they are. Baby bats are sometimes found on the ground in June, July or early August. At all other times of the year, they will be fully-grown and independent. Baby bats have little or no fur and are no bigger than a 50p coin. If you suspect the bat is a baby, you

flying in my house?

Bat Helpline: 0845 1300 228

must seek help immediately via the **Bat Helpline 0845 1300 228**. It may be possible for a bat expert to reunite the baby with its mother.



Releasing a bat

Only bats that have been seen flying strongly inside should be released. Once it is dark outside (and the weather is good), place the box on its side on a wall or shed, at least five feet off the ground – don't forget to take the lid off! The bat can then crawl out of the box and fly away when it is ready. If the bat does not fly away within fifteen minutes, take it back inside and contact the **Bat Helpline 0845 1300 228** for more advice.



Bats and rabies

Some bats in Europe can carry a rabies type virus called European Bat Lyssavirus (EBLV). This is very rare in the UK – only ten bats have tested positive for the live virus since 1987 (as of August 2013), all of one species – the Daubenton's bat. Ongoing research continues to show that this virus is present at a very low level in our UK populations.

Rabies is passed on via a bite or scratch from an infected animal, or from its saliva coming in contact with your mucous membranes (for example your eyes, mouth or nose). It has never been found in bat droppings or urine in the UK.

You do not need to worry about bats and rabies if you don't handle bats. If you need to handle a grounded or injured bat, see the opposite page for advice on how to pick it up and contain it. Wearing gloves is safest for both you and the bat, but if you are bitten or scratched by a bat or if a bite/scratch is suspected, you should do the following as a precaution:

- Wash the wound immediately with soap and running water for at least five minutes. Cleanse the wound with an alcohol base or other disinfectant.
- Seek prompt advice from your doctor about post-exposure rabies treatment.
- If possible, keep the bat in a suitable box and get expert help for it – call the **Bat Helpline 0845 1300 228** for details of your nearest bat worker.

Making your bats count

The Bat Conservation Trust (BCT) is working towards a future where everyone, everywhere can enjoy seeing and hearing bats as a natural part of their environment.

Many of our bat species have declined dramatically over the last century. The Bat Conservation Trust organises a number of national, annual surveys to monitor the status of many bat species across a range of habitats. The surveys are carried out by a network of volunteers and form the National Bat Monitoring Programme (NBMP).

If you would like to help us with this important work to track changes in populations, you can do so by counting your bats as they emerge from their roost on two separate evenings during the summer. For more information and a survey form, please visit www.bats.org.uk/nbmp.

With your help, we can make sure bats are around for future generations to enjoy. Become a member of the Bat Conservation Trust today and help to protect these amazing mammals. You can join online at www.bats.org.uk or contact us on the details below. The Bat Conservation Trust can also provide details of your nearest local bat group.

Useful contacts

Bat Conservation Trust (BCT)

5th Floor, Quadrant House, 250 Kennington Lane, London SE11 5RD
Bat Helpline 0845 1300 228
www.bats.org.uk
enquiries@bats.org.uk

Contact us for more information on living with and looking after bats, taking part in the National Bat Monitoring Programme scheme, and for details of your local bat group or bat carers.

Statutory Nature Conservation Organisations (SNCOs)

Natural England
Telephone 0845 600 3078
www.naturalengland.org.uk

Natural Resources Wales
Telephone 0300 065 3000
www.naturalresourceswales.gov.uk

Scottish Natural Heritage
www.snh.gov.uk

Northern Ireland Environment Agency
Telephone 0845 302 0008
www.doeni.gov.uk/niea

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Appendix 7

Natural England leaflet, 'Birds and your Garden'



Natural England works for people, places and nature to conserve and enhance biodiversity, landscapes and wildlife in rural, urban, coastal and marine areas. We conserve and enhance the natural environment for its intrinsic value, the wellbeing and enjoyment of people, and the economic prosperity it brings.

www.naturalengland.org.uk

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Written by Steve Berry. Designed by RR Donnelley

Front cover image: Robin on blackthorn blossom.
Dave and Brian Bevan

Birds and your garden

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Birds and your garden

You probably enjoy watching the birds that visit your garden. You may already be making efforts to entice them there. The money spent on food for garden birds has increased by 500 per cent in the last 15 years while recent sales of bird nest boxes and bird tables have soared. But have you ever thought seriously about what brings birds to gardens or tried to look at your garden through their eyes? This leaflet is not a field guide but will help you see your garden from a bird's perspective. We hope it will inspire you to do what you can to make your garden, whatever its size, even more attractive to birdlife.



Blue tits on window feeders can be watched at close quarters. Chris Gomersall

Birds come to gardens to feed, breed, nest and rest. If water is provided, they will also visit to drink, bathe and preen their feathers. For a relatively small number of birds, gardens may supply most of their requirements for most of the year. More commonly, however, gardens offer a stopping-off point – somewhere to spend part of the day or night, or part of the year. Having a greater appreciation of what birds need from gardens (and when) will enable you to provide for them to a greater degree.

Test the suggestions in this leaflet and let us know what success you have!

Make a note of all the bird species that come to your garden and a separate list of those that nest.

Put as many of the recommendations here as you can into practice and repeat the survey at yearly intervals.

Let us know what seems to have worked and what has made no difference. See page 37 for contact details.

Food

Although garden birds can be grouped artificially into broad categories such as insect-eaters and seed-eaters, the reality is less simple. Insectivores such

as tits and woodpeckers also include vegetable food in their diet and blackcaps are also very partial to winter fruits and berries.

Correspondingly, in the first week or so of their lives, the nestlings of most seed-eating birds need the protein provided by insects and other



Like many birds, chaffinches switch from eating mainly seeds to a diet of insects in the spring and summer. Chris Gomersall

invertebrates, such as spiders.

The ideal garden for birds should therefore be able to supply both animal and vegetable food matter throughout the year. This has a number of practical implications.

The use of pesticides should be kept to a minimum or, better still, stopped altogether. Almost all invertebrates provide food for some bird or other and very few constitute much of a threat to garden plants. Some of those that can cause damage, such as aphids, are actually among the most valuable food sources for young birds. If you stop spraying blackfly, greenfly and other pest species, you will find that, eventually, natural predators will keep their numbers in check. Cutting out pesticides saves you time and money and you have the added bonus of being able to enjoy the sight of lacewings and ladybirds, as well as house sparrows and blue tits, feasting on aphids.

The following is a list of other tried and tested ways of ensuring a plentiful supply of invertebrate food for your birds:

- Maintain one or more compost heaps.
- Keep dead wood, perhaps in a log pile.
- Allow leaves to rot down naturally rather than bagging and removing them in the autumn.
- Plant a wide variety of trees and shrubs, especially native species such as willow, oak and birch which support many caterpillars.
- Choose annual and perennial plants attractive to nectar-feeding insects.
- Don't be obsessive about tidying

away dead and dying perennials in the winter – these can shelter many useful hibernating creatures and can be left until the weather warms up again.

- Try developing at least part of your lawn as a wildflower meadow – these areas will be attractive to many small insects.

Most birds eat some vegetable matter and much is known about the preferred foods of individual species.

Goldfinches love the seeds of teasel, lavender and sunflower. Alder and silver birch trees may attract common redpolls if they are in the vicinity.

Starlings are fond of rowan berries and cherries, but will also eat the small black berries of Virginia creeper when really hungry. Bullfinches like the buds of forsythia and the seeds of forget-me-not.

Mistle thrushes don't just go for the berries of mistletoe from which they take their name: they will try and take possession of any fruiting holly or rowan tree and defend it fiercely from competitors.

Robins eat the attractive dual-coloured berries of the spindle tree, while ivy berries are a vital food source for blackcaps, blackbirds and wood pigeons, especially late in the year when there may be little else available. Every gardener should try and make room for some apple trees: members of the thrush family, including winter

visitors like redwing and fieldfare, will make short work of any windfalls, and blackcaps like them too. If you are lucky enough to have a garden suitable for large trees, then many birds may be drawn in by species such as oaks (jays, nuthatches, woodpeckers and woodpigeons) Scots pine (coal tits and



Members of the thrush family enjoy apples, especially in harsh weather. Top: blackbird.

Mike Lane/Natural Image

Above: Fieldfare. Robert Dickson/Natural Image

goldcrests) and beech (chaffinches). If you live near a beech wood you may even see bramblings visiting your garden.

Smaller gardens can still be made appealing to birds by planting shrubs, for example exotics like cotoneasters



Top: Redwings are among the many birds that eat hawthorn berries. Chris Gomersall
Centre: Woodpigeons go to great lengths to get at ivy berries! Chris Gomersall

Above: Up to two million bramblings may overwinter in Britain. In gardens, they go for premium seed and peanut granules. Paul Keene/Avico Ltd

(but not cotoneaster *Conspicuax conspicus 'Decorus'* – birds ignore the berries for some reason), pyracantha and berberis, or natives like wild privet, guelder rose and dogwood. The berries of some ornamental plants like amelanchier and leycesteria are so attractive to thrushes that they may be stripped as soon as they are ripe.

Lawns, whether traditionally close-mown and weedfree or those in which clovers, dandelions and other 'weeds' are more tolerated, are ideal hunting grounds for blackbirds, robins and starlings. You might also see song thrushes in search of earthworms and leatherjackets; pied wagtails looking for small flies and, in more rural areas, green woodpeckers seeking ants (their favourite food).



Lawns are perfect hunting areas for blackbirds.
Mike Lane/Natural Image

Song thrushes are great garden allies as they eat large numbers of snails, first smashing their shells to get at the animal inside. To help them, make sure your garden has a suitable 'anvil' in a place where thrushes have a reasonable chance of seeing an approaching cat. A paving slab or rock placed in the centre of a lawn is ideal.



A flat stone on a lawn makes an ideal anvil for a song thrush. Mike Lane/Natural Image

Cats

Many gardens are visited by cats and it is important to help guard your birds against their unwelcome attention. Position bird feeders and tables away from the low cover in which cats may hide and also provide perches nearby – vantage points from where birds can detect an approaching cat. Anecdotal evidence suggests that the more birds that visit a garden, the lower the chances of a cat being able to catch any one individual – probably because there are more pairs of eyes looking out for potential threats. Sonic cat deterrents can work well but should be moved around the garden on a regular basis so that the cats don't learn how to avoid the triggers. If you are a cat owner, consider attaching a bell or sonic bleeper to your cat to warn the local wildlife of its approach.



Cats look innocent but kill around 50 million garden birds each year. Those with bells or sonic devices kill 40% fewer birds than those without. Dave and Brian Bevan

How many species?

Even very small gardens may be visited by 10 to 20 different species of bird during a year. In an ordinary suburban garden, 40 or 50 species would not be uncommon and even this number can include a few surprises, especially in hard weather when birds like kingfishers may turn up in search of unfrozen water, or perhaps woodcock or snipe looking for soft ground for foraging. For gardens near a coast or a prime bird habitat or those on a migration route, sightings of 80 species or more are possible, although many of these will simply be passing over and you

would have to be fairly knowledgeable to identify them all. The exciting thing is that almost any species may turn up in a garden sometime, somewhere. The red kite has been reintroduced in some parts of the country and is now regularly seen in gardens along the M4 corridor and the Thames Valley; here some birds have been known to steal clothes from washing lines to decorate their nests! In January 2006, one was seen in a garden in inner London, a sight certain to become more common if the expansion of the red kite population continues.



Food supplements

However you manage your garden and whatever its size, there will be times when the naturally available food it normally provides is scarce or absent. Under these circumstances, birds will move on to feed elsewhere if they can. Small birds, especially, need to spend most of their waking lives either in search of food or actually feeding (90 per cent of the time in the case of the coal tit and effectively 100 per cent in the case of goldcrest). Weakness caused by hunger comes upon small birds very rapidly and prolonged food shortages, particularly those in hard weather, can often prove fatal.

You can increase the survival chances of birds by feeding them. If you choose to do this, try to ensure that you provide food regularly and reliably. 'Your' birds may come to depend on your generosity and may suffer if this is only intermittent. It is also important to provide appropriate food. Some leftovers can be very nutritious, including cooked potatoes (other than chips), pastry, suet and even brown bread.

From top: Red kites are now seen over some gardens in the Chilterns and elsewhere and are steadily extending their range. Chris Gomersall

Redstarts may visit some gardens on migration. Mike Lane/Natural Image

Coots can turn up in gardens if there is water nearby. Paul Lacey/Natural England

The Chiffchaff makes its presence known in the spring by its persistent and repetitive song. Paul Keene/Avico Ltd

Other household foods like dried fruits, cheese (preferably grated) porridge, apples, half coconuts and crushed unsalted nuts will also be welcomed.



Top: Chaffinches, greenfinches and coal tits are among the species that will come readily to bird tables. Dave and Brian Bevan
Above: Goldfinches love nyjer seeds. Chris Gomersall



Top: Great tits are fond of coconuts. Dave and Brian Bevan
Above: Long-tailed tits have now started coming to peanut feeders. Chris Gomersall

A huge range of bird seed mixtures is commercially available these days, all of which have some value. However, many consist largely of grains of barley or wheat and are not very suitable for small birds like finches or tits.

Generally speaking, the more expensive foods are the best. Many companies will deliver bulk supplies by mail order and buying this way can help keep down the cost. If you have goldfinches in your area, then a special seed feeder filled with nyjer seed (tiny, but rich in oil) will bring them to your garden eventually, although they may



sometimes take a while to find this treat. Sunflower hearts and black sunflower seeds are favoured by many seed-eating birds and can be fed to them year-round.

Keep it clean!

Bird tables need to be cleaned regularly. Uneaten food should not be left to go mouldy or rot. One of the best ways to avoid this happening is to provide no more than the birds will eat in one day, brushing your bird table down each evening and putting out new food the next morning. Special leaflets on feeding garden birds and hygiene and disease are available free from the British Trust for Ornithology (BTO), see Contacts, page 37.



Left top: If you live near woodland, nuthatches are much more likely to visit your garden. Paul Keene/Avico
Left: Bird tables can be turned into attractive features by imaginative planting. Dave and Brian Bevan
Above: Remove uneaten food from bird tables each evening and keep them clean. Dave and Brian Bevan

Food and feeding preferences of 50 of the species most commonly seen in gardens

Species	Food	Feeding method
Blackbird	Berries, apples, raisins, mealworms, peanut granules, breadcrumbs, grated cheese, etc. Earthworms; other invertebrates.	Ground feeder
Blackcap	Apples, bread, cheese. Invertebrates, berries.	Ground feeder
Black-headed gull	Scraps. Invertebrates, plant material.	Ground feeder
Bullfinch	Sunflower hearts, black sunflower seed, seed blends. Ash, elm and other tree seeds; flower buds of fruit trees; seeds of nettle, dock, dog's mercury, fleshy fruits; insects.	Hanging feeder
Blue tit	Peanuts, fatty treats, blue tit seed mix, sunflower hearts, black sunflower seed. Caterpillars, aphids.	Hanging feeder
Brambling	Peanut granules, seed mixes. Tree seeds, esp. beech mast and conifer seed; fruit.	Ground/hanging feeder
Chaffinch	Seed blends, sunflower hearts, peanut granules. Caterpillars, flies, a wide variety of seeds.	Bird table/ground feeder
Carriion crow	Scraps. Grain, carrion, eggs and young birds, invertebrates.	Ground feeder
Chiffchaff	Mainly insects, some fruit.	Trees, ground feeder
Coal tit	Peanuts, fatty treats, seed blends, sunflower hearts, black sunflower seed. Tree seeds, caterpillars.	Hanging feeder
Collared dove	Seeds, bread, fruit. Cereal grain, insects.	Bird table/ground feeder

Species	Food	Feeding method
Duncock	Nyjer seeds, peanut granules and seed blends, grated cheese. Invertebrates, small seeds.	Ground feeder
Feral pigeon	Omnivorous; grains.	Ground feeder/bird table
Fieldfare	Apples, berries, earthworms, insects.	Tree and ground feeder
Goldfinch	Nyjer seeds, sunflower hearts, peanuts. Small seeds, eg those of alder, birch, dandelion, ragwort, groundsel.	Hanging feeder
Goldcrest	Cheese, bread, peanut cake. Tree seeds, invertebrates.	Bird tables
Great spotted woodpecker	Peanuts, meaty scraps. Moth larvae and other invertebrates, seeds, eggs and young birds.	Hanging feeder, trees
Great tit	Peanuts, fatty treats, seed blends, sunflower hearts. Caterpillars, acorns, beech mast.	Hanging feeder
Green woodpecker	Mealworms, fruit, ants.	Ground feeder
Greenfinch	Sunflower hearts, black sunflower seed. Large seeds, eg those of rosehips, elm. Also, seeds of dog's mercury and those of crucifers, daisy family.	Hanging feeder
House martin	Small flying insects including aphids.	Aerial feeder
House sparrow	Sunflower hearts, mealworms. Seeds, invertebrates.	Bird table
Jackdaw	Scraps, fruit. Moth larvae, flies, carrion, seeds.	Bird table/ground
Jay	Peanuts, scraps, bread. Invertebrates, acorns and other seeds, nestlings and eggs.	Bird table/ground/hanging feeder

Species	Food	Feeding method
Kingfisher	Scraps (when desperate!). Small fish, amphibians, aquatic invertebrates.	Bird tables; normally feeds in shallow water
Long-tailed tit	Peanuts and peanut cake, grated cheese, fat balls. Spiders and other small invertebrates.	Hanging feeder/bird table
Magpie	Scraps. Invertebrates, young birds and eggs, small mammals, fruit, seeds, berries, carrion.	Ground feeder
Marsh tit	Nuts. Insects, spiders, seeds, berries and fruit.	Hanging feeder/bird table
Mistle thrush	Berries, eg those of holly, mistletoe, cotoneaster etc. Insects.	Tree and ground feeder
Nuthatch	Peanuts. Insects, spiders, acorns, beech mast, hazel nuts.	Hanging feeder/trees
Pheasant	Seed mixes with cereals. Berries, seeds, insects.	Ground feeder/bird table
Pied wagtail	Fat, seeds, bread, nyjer seed. Midges and other flying insects.	Bird tables/ground feeder/aerial feeder
Redwing	Apples, fresh or dried fruit, berries, insects.	Tree and ground feeder
Reed bunting	Seeds, insects.	Ground feeder
Ring-necked parakeet	Seeds, peanuts. Fruit and other plant material.	Bird table/hanging feeder
Robin	Mealworms, peanut granules, sunflower hearts, grated cheese, breadcrumbs, fat balls. Earthworms, larvae, other invertebrates.	Ground feeder/bird table
Rook	Scraps. Earthworms, larvae, beetles, grain.	Ground feeder
Siskin	Peanuts. Seeds of alder, birch, evergreen conifers.	Hanging feeder

Species	Food	Feeding method
Song thrush	Fruit, raisins, mealworms. Caterpillars, earthworms, snails, slugs.	Ground feeder
Sparrowhawk	Birds up to the size of wood pigeons.	Bird table (!), ground
Spotted flycatcher	Insects, woodlice, snails, fruit.	Aerial feeder, trees
Starling	Seed blends, fatty treats, peanut cake. Earthworms, leatherjackets, seeds.	Bird table/ground feeder/hanging feeder
Swallow	Flying insects.	Aerial feeder
Swift	Flying insects, airborne spiders.	Aerial feeder
Tawny owl	Small mammals, earthworms, frogs, beetles.	Ground feeder
Treecreeper	Fat balls, suet. Insects, spiders, tree seeds.	Trees; bird tables
Tree sparrow	Millet seed, fat, peanuts. Wide variety of seeds, insects.	Ground feeder/bird table/hanging feeder
Whitethroat	Insects, fruits.	Shrubs and trees
Willow tit	Invertebrates, seeds.	Hanging feeder/bird table
Woodpigeon	Bread, seed mixes with cereal grains. Wide range of plant material including seeds and berries.	Ground feeder
Yellowhammer	Seeds of grasses and cereals.	Ground feeder
Wren	Grated cheese, mealworms, peanut granules, fatty treats. Small beetles, spiders, moth larvae and other invertebrates.	Ground feeder



Bird feeders may attract sparrowhawks as well as song birds. Dave and Brian Bevan

Breeding and nesting

Not all the birds visiting your garden during the year will view it as a possible nesting place. Many species may nest in gardens, however, and in the case of some birds, gardens now support a significant percentage of their total population.

Some species are far more fussy about where they nest than others. Blue tits and great tits are the most likely to use nest boxes. The increasingly scarce spotted flycatcher may also adopt an open-fronted nest box as home, as may robins and pied wagtails. There are now specialist boxes available for species like tawny owls but don't

spend money on them if such species are unlikely to come to your garden. Be especially wary of nest boxes advertised as being suitable for treecreepers as current designs seem ineffective. Avoid nest boxes attached to bird feeders. These are normally useless as birds will not nest anywhere subject to constant disturbance. The safest course of action is to buy only those nest boxes approved by a bird conservation organisation like the BTO or the RSPB (see Contacts, page 37). Boxes should not face strong sunlight and should also be positioned away from the prevailing wind. North-facing entrances may be best.

Nest boxes need to be cleaned. Do this only between 1 August and 31 January to keep strictly within the law. Cleaning old nests out of nest boxes encourages birds to use them again the following year. As well as removing old nesting material it will also be helpful to douse the inside of boxes with boiling water to kill bird parasites and their eggs. Virtually all British house martins now



Home-made nest boxes are perfectly fine if they are well designed. Top left: Box for nuthatch with mud entrance. Dave and Brian Bevan
Top right: Open-fronted box for robins and spotted flycatchers. Dave and Brian Bevan
Above: Boxes for hole-nesting species like tits. Dave and Brian Bevan

nest on houses, the only exceptions being a few colonies on cliffs and under some bridges. Artificial nests may attract them but a local source of mud, their essential nesting material, may be more important. Like house martins and swallows,



House martins need mud to make their own nests (top) but may sometimes be attracted by a prefabricated version (above).
Bob Gibbons/Natural Image

swifts eat only flying insects and have come to depend on humans for nest sites. Whereas house martins build their cup-shaped structures of dried mud under the eaves of houses, swifts need access to roof spaces for their very basic nests. The design of many modern houses, however, often excludes swifts and the numbers of these astonishing and most aerial of all birds are falling in many areas. It's been estimated that UK population of swifts has fallen by a third in the last 12 years! You can help reverse this process by erecting special swift nest boxes or, if you have an older house,



Swallows also appreciate our help with nest construction. Dave and Brian Bevan

making sure that in the course of modernising it, you don't deprive swifts of access. For information about swift nest boxes contact 'Concern for Swifts' or 'London's Swifts' (see Contacts, page 37).

Many species appreciate dense cover for nesting since this provides shelter and some protection from predators.



Ivy provides nest sites as well as late-season food for birds and insects. Dave and Brian Bevan

Among native shrubs not previously mentioned, hawthorn, blackthorn, gorse and juniper offer both. Thick ivy is especially favoured by wrens for their small, domed nests and is also suitable for treecreepers.

From time to time, some birds will choose to nest in apparently very unsuitable places which are subject to continuous, if accidental, harassment by humans. Despite this, a few will occasionally succeed in rearing at least some of their brood. However, far more frequently, a lack of disturbance is the critical factor in nesting success. If you can manage your garden with at least one quiet corner, perhaps overgrown with elder or nettles, then you may be rewarded by a nesting dunnoek, chaffinch or even one of the warblers such as a blackcap, whitethroat or chiffchaff.

If you have no room for trees or bushy shrubs, but have a garden wall or a fence, then try combining this with a trellis to provide nesting opportunities. Erect a trellis – supported by thick stakes on either side – about 20 cm (8 inches) away from the wall. Plant fast-growing, vigorous climbers like honeysuckle, clematis or wild rose and these will soon form a structure thick enough to support nests of species like goldfinch or blackbird. Cut them back



Spotted flycatcher. Howard Lacey/Avico Ltd and wren (below) Dave Bevan/Avico. Both are species that may nest in dense ivy. Wrens can also choose very unconventional nesting sites!



Top: Wren's nest in garlic.
Howard Lacey/Avico Ltd
Above: Wren's nest in coat pocket.
Howard Lacey/Avico Ltd

hard each year to encourage renewed sturdy growth. The addition of ivy *Hedera helix* will benefit a whole range of invertebrates and provide extra cover and shelter for birds.

To form an even denser garden boundary, with still better nesting potential, plant a hedge. Hawthorn should be the main species but mix this with other berry-bearing shrubs and climbers. Very young plants – whips – can be cheaply obtained and will establish themselves quickly.

Ideally, plant them out in the autumn allowing at least half a metre between each shrub. Plan for the hedge to be at least one metre thick although if you have the space, a wider hedge will be even more valuable. The following spring, cut them back severely to encourage growth near the base. It may be hard to bring yourself to do this, but when you see the results you will be glad you had the courage! In two to three years, your originally spindly plants will be bushing out nicely. In five years you will have a thick hedge and in six or seven you may need an electric trimmer to keep its growth



Gardens can offer a huge range of feeding and nesting opportunities for birds.

Paul Keene/Avico Ltd

within reasonable bounds! Cut the hedge back each year in early February before birds have started to nest.

Much maligned evergreen species, including the notorious leylandii, make excellent roosting places and may also be used as nest sites for greenfinches, robins, dunlocks, wrens

and goldfinches. Examine your garden with a critical eye and use reference books (see Further information, page 38) to decide which species may be most likely to nest in your garden – then try to create conditions suitable for them. It's best to be very realistic. Only the birds that you commonly see in your garden, or neighbouring ones, are likely to nest.

Have you ever wondered what goes on in your nest boxes? It's now possible to find out, with boxes fitted with cameras. Although relatively expensive (basic black and white camera kits start at around £90) they can give you a fascinating insight into the comings and goings of parent birds and the growth of their chicks, all relayed into your front room.

Rest and shelter

Although advice traditionally concentrates on the provision of nesting sites for birds, good roosting sites are just as important for a bird's survival. Few birds actually build themselves a structure for the night but nest boxes are often used as nocturnal shelters. Boxes will give life-saving protection from the weather to small birds like wrens and great tits but cannot accommodate larger species. In really cold weather, many small birds may squeeze into nest boxes together



Small birds may use nest boxes like this for shelter in cold weather. Dave and Brian Bevan to keep warm. One box is recorded as having held no fewer than 61 wrens!

Climbing plants growing on garden walls or houses are very useful roosting and nesting sites. Walls often offer protection from prevailing winds and may retain heat from the sun. If you have an established hedge, why not encourage wild hops to scramble over it? When the hop leaves die back in winter, the bare stems will form a

Dunnocks feed on the ground but sing from a prominent perch. Mike Lane/Natural Image



mesh around the hedge, providing a safe retreat for house sparrows when they are threatened by the local sparrowhawk.

Many birds roost communally, including sparrows, pied wagtails, starlings, blackbirds and even pigeons, crows and, in a few parts of southern England, ring-necked parakeets. Long-tailed tits (normally part of an extended family) actually huddle together closely on one perch.

While other species don't generally do this, mere close proximity in a bush or hedge may help to reduce heat loss, especially for those at the centre of the roost. Roosts may also act as centres for information exchange in ways that we do not fully understand.

Trees are important as observation and song posts, too, so try and provide at least one somewhere in the garden.

Drinking and bathing

All birds need to drink. They also need water to help keep their feathers in good condition.

Relatively few gardens offer birds safe drinking and bathing facilities so whatever you can do will help. If you can, dig a pond. Even very small water bodies can be excellent for wildlife but the pond should have shallow edges so that birds can get to the water easily. For details, consult the Natural England booklet *Garden ponds and boggy areas: havens for wildlife* (see Further information, page 38).

Bird baths are the next best thing. They can be small or large, but a shallow dish shape is what's

required – with a thin layer of gravel at the bottom if the material is liable to be slippery. The water needs to be at least 2.5 cm (1 inch) deep but ideally the container should be large enough to offer a range of depths up to 10 cm (4 inches) to meet the needs of differently sized birds. Place the bath in the open, away from cover where a cat might hide. Clean the bath regularly to remove any algae or bird droppings. Keep it unfrozen in cold weather. There are various ways of doing this including solar-powered water heaters (see the RSPB website www.rspb.org.uk for suggestions) but never use salt or anti-freeze.



Top: Ponds are a magnet for birds and even a sparrowhawk may turn up for a dip. Chris Gomersall
Middle: Juvenile greenfinch drinking.
Dave and Brian Bevan
Even a simple elevated bird bath (above left) can bring in visitors like this jay and also add interest to a garden.
Dave and Brian Bevan

Predators and prey

The number of young produced by songbirds takes account of the fact that most will not last long. A pair of blue tits, for example, might rear as many as 10 chicks in a season. If all these were to survive and breed the next year and if all their offspring did the same, the original two birds would be the great-grandparents of more than 1,000!



These eggs could in theory give rise to 1,000 blue tits in a few seasons! Dave and Brian Bevan



Blackbirds can lose eggs or whole broods to predation from birds such as magpies but their overall numbers are unaffected. Dave and Brian Bevan

Clearly, this does not happen. The harsh reality is that most young birds will die within their first year, falling victim either to hunger, cold or to a predator, whether cat or bird. Surprisingly, none of this predation seems to have an effect on overall bird populations despite the fact that cats take an estimated 50 million birds a year in British gardens.



Structures like this can help to protect bird tables from cats. Bob Gibbons/Natural Image

Baby birds

If you find young birds anywhere in your garden calling for food, the best advice is to leave them alone. Their parents are likely to be close by and will take care of them far better than you can.

Ten ways to help birds in your garden

- Grow more trees and shrubs to provide food, nesting areas and shelter; develop a meadow area in the lawn.
- Provide water – ideally a pond – and ensure there is mud for nesting material in spring.
- Put up nest boxes – but of the right kind and in the right places. These may also be used for shelter in hard weather.
- Keep a corner of your garden undisturbed if possible.
- Consider the needs of nesting birds like swifts, starlings and house sparrows before installing uPVC bargeboards and soffits.
- Fit your cat with a bell or sonic collar.
- Allow plants to go to seed to provide food for finches and sparrows.
- Install a variety of hanging bird feeders and a bird table, safe from cats and squirrels; ensure they are regularly filled and cleaned.

- Don't forget the needs of ground-feeding birds like dunnocks, robins and wrens.
- Put up trellises next to walls and fences, or plant a hedge for shelter and food.



Young birds like this juvenile great tit should be left alone if found in your garden. Paul Keene/Avico Ltd

Six of the best

Six species frequently seen in gardens are blue tit, collared dove, house sparrow, robin, starling and blackbird.

Blue tit

The acrobatic blue tit is a favourite with many people. There are around 3.3 million pairs in Britain. Like many other garden species, its original home was woodland and that is where most blue tits still live. They need holes to nest in and in the absence of natural cavities will use whatever artificial ones they can find, in walls, pipes, old flowerpots or even letter boxes. The

nest is lined with hair, down or moss. Up to 16 eggs can be laid, although blue tit pairs in gardens rarely produce clutches of more than eight. The peak feeding activity is in May when these birds have to search almost ceaselessly for insect food for their young. Caterpillars are preferred but spiders, aphids and other invertebrates will also be taken, including butterflies.

Young blue tits eat vast numbers of caterpillars.
Dave and Brian Bevan



Collared dove

The now very familiar collared dove is primarily a seed-eater and comes readily to bird tables. Like many other members of the pigeon family, it makes only a very flimsy nest, consisting of a platform of sticks, sometimes grass-lined. Nests are made in trees or buildings, usually four metres or more above the ground.

Originating in India, collared doves have been extending their range for centuries. They were no further west than Hungary in the 1930s and unseen in Britain before 1952. The very first pair to nest here did so in a Norfolk garden in 1955. Now, there are about 250,000 pairs in Britain. Breeding has been recorded in almost every month of the year but is most common in spring.

The collared dove has gone from rare vagrant to familiar garden bird in 50 years.
Bob Gibbons/Natural Image



A house sparrow living up to its name. Chris Gomersall

House sparrow

No single factor is likely to be responsible for the dramatic decline in house sparrow numbers but the stark facts are undeniable. In 30 years, the breeding population has plummeted from 12 million to around half of that number, and the bird is now altogether absent from some of its former urban strongholds, even including parts of London. Happily, house sparrows are still familiar garden birds in many parts of the country but we can't assume they will be so for ever. Although they are natural seed-eaters, house sparrows will take all sorts of food including kitchen scraps. Insects are vital food for young sparrows. Unlike many small birds which are quite promiscuous, established sparrow pairs may remain together for life – although it has to be said that the life of any bird this size tends to be rather short! All sorts of dense vegetation

including hedges and climbers may be used as communal roosting sites.

Robin

The robin is consistently voted Britain's most popular bird, perhaps because we enjoy its oddly endearing habit of nesting in strange places like discarded cans or abandoned cars. There is even a record of a robin starting a nest in an unmade bed, while its recent occupant was having breakfast! More conventionally, nests are made in banks or depressions, from ground-level up to three metres high. Robins lay clutches of around five eggs but may rear three broods during the course of a long breeding season that can stretch from March to July or later still. They are fiercely territorial birds and will even attack other species they see as competitors, including dunnocks. Very occasionally a fight between robins will result in



Above: Robins may nest in very odd places.
Howard Lacey/Avico Ltd
Right: Although young birds lack the red breast of the adults, they are still somehow recognisable as robins.
Jill Pakenham/Avico

the death of one of the combatants. Robins love mealworms and will eat them from your hand if you are sufficiently patient.

Starling

Like house sparrows, starlings are faring rather badly, with numbers having fallen by 75 per cent since the late 1960s. Those who can still watch large parties descend on their lawn or bird table and clean up all the available food in seconds may find this surprising, but the collapse in the population is now causing concern among conservation bodies. In complete contrast to the solitary and aggressive robin, starlings are very sociable birds throughout the year, nesting in colonies and sometimes roosting in huge concentrations. They

nest in holes in trees or in gaps and spaces in manmade structures.

Blackbird

Like robins, blackbirds can be fearless close to people and may take dried fruit from your hand. If you can feed them at the same time each day, they



The male starling in breeding plumage is a very handsome bird. Mike Hammett/Natural England

will come to expect – and even demand! – their ration. Blackbirds can be very intolerant of the presence of other species in gardens when they are feeding, sometimes being so intent on depriving others of the chance to eat that they miss out themselves. Gardens are hugely important for blackbirds, with perhaps one quarter of the population living close to human settlements. The cup-shaped nest can be made in a bush, in ivy against a wall, on buildings or in trees. Its grass lining normally distinguishes it from the mud-lined nest of a song thrush.



Female blackbird with cherries.
Mike Lane/Natural Image

Ups and downs

The population and distribution of birds is changing constantly, with some species flourishing and others showing steep declines. While some of these fluctuations are perfectly natural, many can be linked, in one way or another, to environmental changes caused by human activity.

Going up...

Greatspotted woodpecker

This handsome starling-sized bird is one of those currently enjoying a big expansion in range and numbers across Britain. It now breeds even in the heart of London. It is fond of seeds and peanuts and has begun to visit bird tables far more frequently than before. Its taste for the eggs and chicks of smaller species, like blue tit, is perhaps less well-known but all birds have to eat! More usually, young woodpeckers are fed on moth larvae and other invertebrates.

Blackcap

Easily-recognised, the blackcap is another recent arrival in many gardens where it searches out winter berries,



Great spotted woodpeckers are flourishing in Britain at the moment. Chris Gomersall

especially the red ones of firethorn, cotoneaster and berberis. Like other warblers, blackcaps migrate here in the spring from Africa, returning from September onwards. At the same time, however, ringing studies have shown that other blackcaps from central Europe are arriving in Britain to take advantage of our milder winters – as well as the generous hand-outs of householders. When the berry supply has gone, blackcaps show a fondness for cheese and other fatty foods. They

will also feed on apples left on trees, especially those damaged by insects, and on windfalls.

Magpie

If magpies were rare, we would probably prize them for their great beauty. As it is, they are unpopular with many householders because of their nest-robbing habits. Magpies have adapted very successfully to urban environments and, following a reduction in persecution, have in the

Blackcaps may nest in mature gardens with enough cover. Peter Wilson/Natural Image



Magpies are another current garden success story. Dave Bevan/Avico Ltd

last 50 years colonised even the centres of large cities. They will eat almost anything including invertebrates, grain, fruits and carrion – as well as small mammals and the eggs and chicks of songbirds. However, there is no evidence that they have contributed to the declines in the numbers of other species. Together with species such as coal tit, nuthatch and jay, magpies share the habit of hoarding food, in their case burying items in the ground in a hole excavated for the purpose.

In the balance...

Sparrowhawk

Sparrowhawks were almost extinct in

southern and eastern England before scientists discovered that pesticides such as DDT were responsible for their decline. Persistent toxic chemicals caused adult birds to die and also resulted in breeding failure through eggshell thinning. These poisons were then banned and the subsequent recovery of sparrowhawk numbers is one of the great success stories for post-war nature conservation. In recent years, however, numbers have begun to decline again – a worrying trend. Sparrowhawks predate on many small birds but their absence from gardens for 20 or so years did not lead to an increase in songbirds; in fact in some cases they actually declined markedly over this period. The current

population of sparrowhawks cannot, therefore, be affecting songbird numbers. Female sparrowhawks are twice the size of males and can take birds as large as wood pigeons.



Male sparrowhawk on the roof of a bird table.
Vic Parsons/Avico Ltd

Going down...

Song thrush

Although song thrushes are still found in many gardens, their numbers have dropped by nearly 60 per cent in some



The decline of the song thrush may be linked with the use of slug pellets. Chris Gomersall

30 years. The reason for their decline on farmland is fairly clear: a reduced food supply linked to the intensification of agriculture. There has been a similar decline in gardens but it is not clear whether this may be indirectly linked to the use of slug pellets and lawn treatments which reduce the supply of molluscs and worms available for young birds.

Bullfinch



More bullfinches are now coming to gardens. The male is shown top. Jill Pakenham/Avico Ltd

Bullfinches once had a price on their heads, with a penny awarded for every one killed, because of the damage they were alleged to cause to fruit crops. Now, however, they have become scarce in some parts of the country, probably because of the huge loss of hedgerows. However, numbers coming to gardens seem to be increasing and they are showing a newly-developed taste for sunflower seeds.

Tree sparrow

The number of tree sparrows has been unstable for a very long time. It's not yet clear whether the current crash in the population – down 87 per cent in the 24 years to 1996 – is part of a normal cycle or, as is thought more likely, an anomaly that should be a cause of great concern. Tree sparrows, close relatives of the more familiar house sparrow, still come to some rural gardens and may nest in roof cavities or other holes, but in many parts of the country they have become great rarities.



Tree sparrows are now a rarity in many areas. Tommy Holden/BTO



Everyone hopes to get a waxwing in their garden one day! Paul Keene/Avico Ltd

Waxwing – a regular exotic visitor to look out for

Every few years, there is a huge autumn or winter influx of these beautiful birds from the conifer forests of northern Europe. When this happens, waxwings are as likely to turn up in gardens as anywhere else in their search for berries. In the south of England at least, they sometimes prefer those of the guelder rose but rowan are also favoured. Early in 2005, waxwings arrived in thousands on the north and northwest coasts and filtered south. This was unusual as they normally reach the east coast first and then move west. Birds were still present as late as May in some areas.

Watching and recording garden birds

Britain's birds are as well studied as those of anywhere in the world but new discoveries are being made regularly. Birds are extremely adaptable creatures and their behaviour changes to meet new challenges or take advantage of new opportunities. All this means there is always something to look out for. Blue tits learned how to drill holes in milk bottles to reach the cream in the 1950s. Siskins had never been recorded feeding in gardens until 1963, but 40 years later were visiting one garden in every 10, favouring peanuts in orange-coloured string bags.



Blue tits (left) were the first species to be seen feeding from milk bottles but the habit was later acquired by the great tit (above).
Dave and Brian Bevan



Right: This male siskin may be about to ward off competitors! Dave and Brian Bevan





Ring-necked parakeets may become a threat to native hole-nesting species. Mike Lane/Natural Image

Observations of garden birds by tens of thousands of people give organisations like the British Trust for Ornithology (BTO) invaluable information on trends in bird populations. Only with this knowledge can we work out plans to conserve our birds for the future. If you can recognise the common garden birds you can help too.

Start recording birds and help with their conservation

The BTO/CJ Garden BirdWatch. This year-round survey (sponsored by CJ WildBird Foods) involves more than 16,000 garden birdwatchers, all collecting simple information on birds and how they use gardens on a weekly basis. This information has allowed researchers at the BTO to find out how birds use gardens and how this use changes over time. Garden BirdWatch results have already

highlighted the increasing use made of gardens by some species and have helped researchers to understand the reasons behind the declines of others. A free enquiry pack is available by writing to GBW (NE), BTO, The Nunnery, Thetford, Norfolk, IP24 2PU, or by visiting www.bto.org/gbw.

The RSPB Big Garden BirdWatch. The Big Garden BirdWatch takes place once a year during late winter. It involves many thousands of observers recording the birds seen in their gardens over the course of one hour. Although it does not give the same level of detail as the BTO/CJ Garden BirdWatch, it provides a very useful snapshot of the regional variation in garden bird populations. For details go to www.rspb.org.uk/birdwatch, or contact the RSPB (see Contacts, page 37).

Let us know whether you have found this leaflet useful or how we can improve it. If you have adopted any of the suggestions here, have more birds

come to your garden as a result? We'd like to know what you think. Call 01273 407956 or e-mail steve.berry@naturalengland.org.uk



Top: Green woodpeckers often visit garden lawns in search of ants. Paul Keene/Avico Ltd
Above: The nest of the long-tailed tit is an amazingly elaborate structure and may contain 2,000 feathers! Dave and Brian Bevan
Right: There are few finer sights in the garden than a goldfinch in flight. Dave and Brian Bevan



Contacts

Natural England

1 East Parade
Sheffield, S1 2ET
Enquiry Service: 0845 600 3078
enquiries@naturalengland.org.uk
www.naturalengland.org.uk

British Trust for Ornithology (BTO)

The Nunnery
Thetford
Norfolk, IP24 2PU
Tel: 01842 750050
www.bto.org

Royal Society for the Protection of Birds

The Lodge
Sandy, SG19 2DL
Tel: 01767 680551
www.rspb.org.uk

Concern for Swifts

5 Bury Lane
Haddenham
Ely
Cams, CB6 3PR
www.concernforswifts.com

London's Swifts

www.londons-swifts.org.uk

The Wildlife Trusts

The Kiln
Waterside
Mather Road
Newark, NG24 1WT
Tel: 01636 677711
www.wildlifetrusts.org

Bird food, nest boxes and other bird products

There are now dozens of suppliers. The companies on this list also supply catalogues with helpful information about feeding birds.

C J WildBird Foods Ltd

The Rea
Upton Magna
Shrewsbury, SY4 4UR
Tel: 0800 731 2820
www.birdfood.co.uk

Jacobi Jayne & Co
Living with Birds
Freepost 1155
Herne Bay, CT6 7BR
Tel: 0800 0720130
www.livingwithbirds.com

Ernest Charles
Freepost
Copplestone
Devon, EX17 2YZ
Tel: 0800 7316 770
www.ernest-charles.com

Jamie Wood Products
1 Green Street Old Town
Eastbourne, BN21 1QN
Tel: 01323 727291
www.birdtables.com

Herons are always grateful for an easy meal. Dave and Brian Bevan



Further information

This is one of a range of wildlife gardening booklets published by Natural England. For more details, contact the Natural England Enquiry Service on 0845 600 3078 or e-mail enquiries@naturalengland.org.uk

Natural England also produces *Gardening with wildlife in mind*, an illustrated wildlife reference. Originally on CD but now also available online, *Gardening with wildlife in mind* has detailed information on 800 plants and animal species often found in our gardens, and shows how they are ecologically linked. See www.plantpress.com

Other titles

There is a huge selection of literature on the subject of garden birds. The following list is therefore extremely selective:

Baines, C. *How to make a wildlife garden*. Frances Lincoln Ltd. 2000.

Couzens, D., & Partington, P. *The secret lives of garden birds*. Christopher Helm. 2004.

Du Feu, C. *The BTO nestbox guide*. British Trust for Ornithology. 2003.

Golley, M., Moss, S., & Daly, D. *The complete garden bird book*. New Holland Publishers (UK) Ltd. 1996.

Jackman, L. *The wild bird garden*. Souvenir Press. 1992.

Johnson, H., & P. *The birdwatcher's garden*. Guild of Master Craftsmen Publications Ltd. 1999.

Dave and Brian Bevan, Loomes, B. *Bird gardening*. Dalesman Publishing Company Ltd. 1993.

Mackenzie, D. *Bird boxes and feeders for the garden*. Guild of Master Craftsmen Publications Ltd. 1997.

Matthews, N. *Garden for birds*. School Grounds Company Books. 1992.

Moss, S., & Cottridge, D. *Attracting birds to your garden*. New Holland Publishers (UK) Ltd. 1998.

Moss, S. *The bird-friendly garden*. Harper Collins. 2004.

Oddie, B. *Bill Oddie's introduction to birdwatching*. New Holland. 2001.

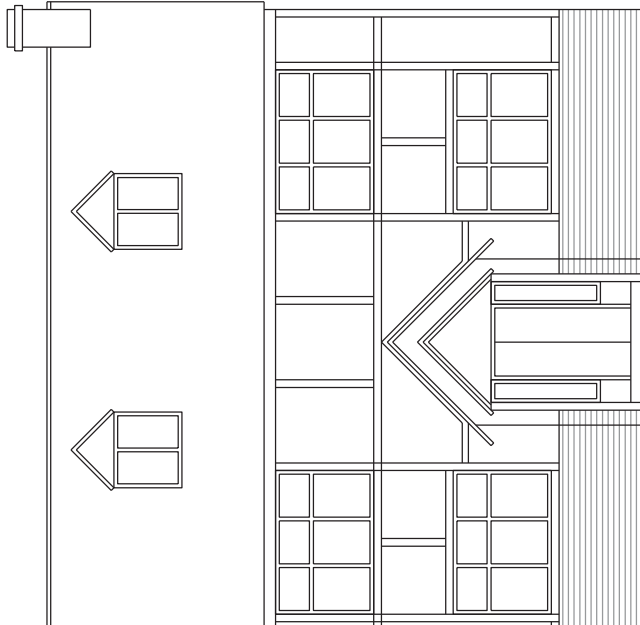
Soper, T. *The bird table book*. David & Charles. 2006.

Spedding, S., & G. *The natural history of a garden*. Timber Press. 2003.

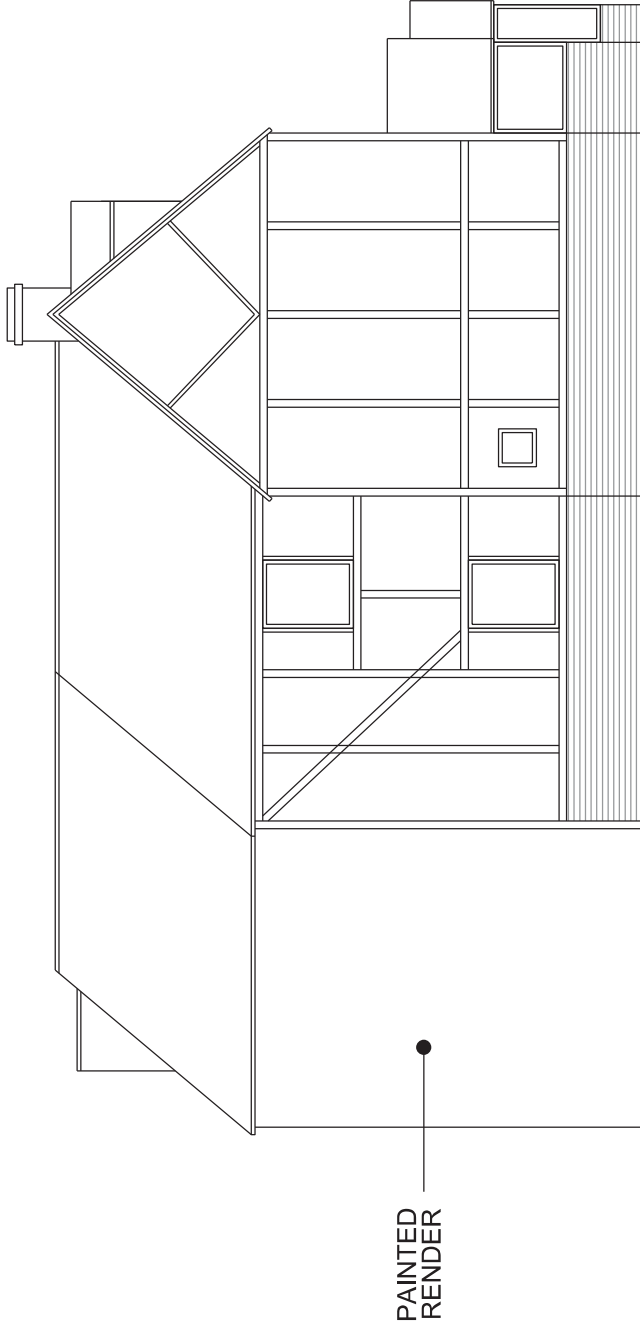
Stocker, L. *The complete garden bird*. Leopard Books. 1995.

Toms, M. *The BTO/CJ Garden BirdWatch book*. Thetford: British Trust for Ornithology. 2003.

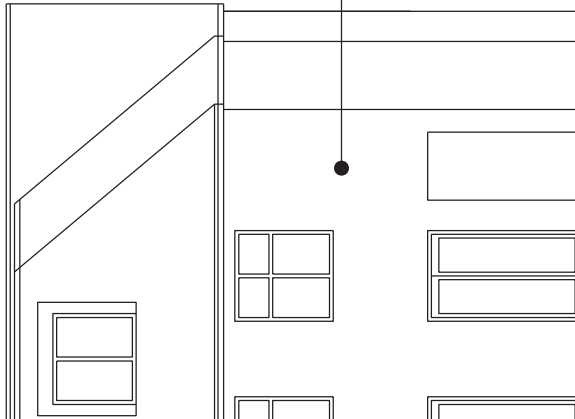
Appendix 2 Development Proposals



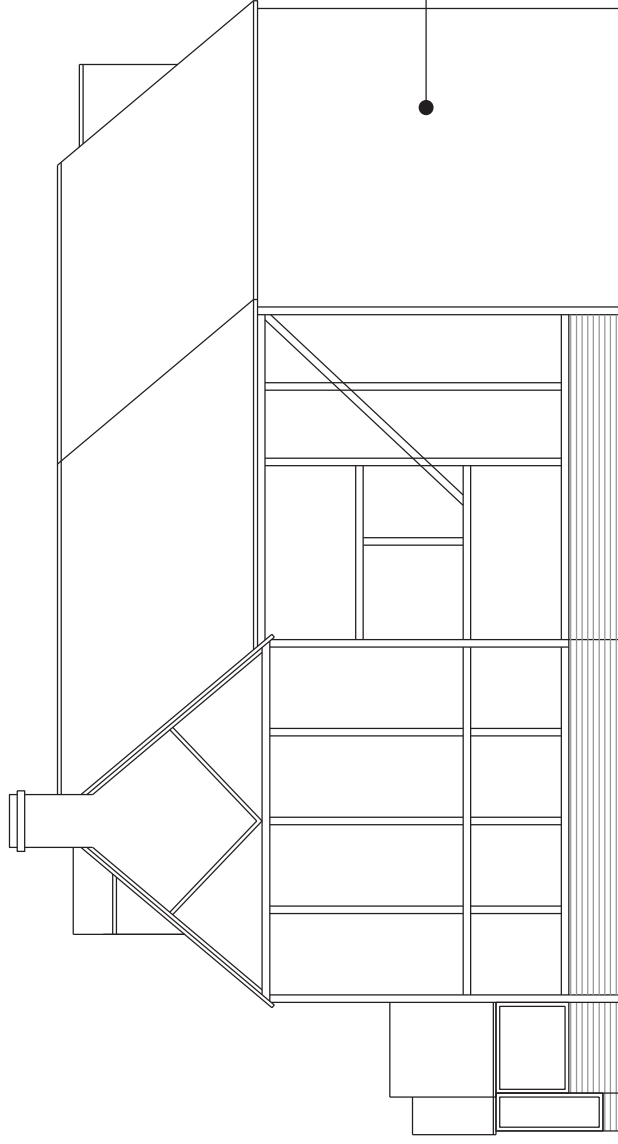
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NORTH ELEVATION



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Appendix 3 Relevant Nature Conservation Legislation and Planning Policy

KEY LEGISLATION

Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010¹ (known as the “Habitats Regulations”) transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the European “Habitats Directive”) into UK legislation. These regulations consolidate all the various amendments made to the preceding “Conservation Regulations” 1994 for England and Wales.

The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) Regulations 2012.²

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which form part of the Natura 2000 network of protected areas across Europe. The Regulations also prohibit the deliberate capture, killing or disturbance of European Protected Species (EPS), which include *inter alia* Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, Otter *Lutra lutra* and all native species of bat, and make it an offence to destroy or damage either the nesting or breeding sites of these species. The above actions can be made lawful through the granting of licenses after Natural England (the licensing authority in England) is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the EPS.

Further information on SPAs, SACs and European Protected Species (Licensing and Protected Species) is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981³ is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

¹ The Conservation of Habitats and Species Regulations 2010. Available from: <http://www.legislation.gov.uk/uksi/2010/490/contents/made>

² The Conservation of Habitats and Species (Amendment) Regulations 2012. Available from: <http://www.legislation.gov.uk/uksi/2012/1927/contents/made>

³ The Wildlife and Countryside Act 1981. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

Table A1.1: Key Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000⁴ have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

⁴ The Countryside and Rights of Way (CRoW) Act 2000. Available from: <http://www.legislation.gov.uk/ukpga/2000/37/contents>

The Natural Environment and Rural Communities (NERC) Act 2006⁵ was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England⁶. Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on species and habitats of Principal Importance is provided in the relevant sub-section of this Appendix.

PLANNING POLICY & GUIDANCE

Listed below is the main planning policy and government guidance that relates to the conservation of nature and development at all levels of government.

National Level

National Planning Policy Framework (NPPF)

The National Planning Policy Framework⁷ sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 14), with a requirement to consider its economic, social and environmental dimensions. This does not apply where development requiring Appropriate Assessment under the Habitats Directive is being considered, planned or determined (paragraph 119).

Section 11 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system and replaces the preceding *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation*. It specifies that when determining planning applications, local planning authorities should aim to **conserve and enhance** biodiversity by applying the following principles:

⁵ The Natural Environment and Rural Communities Act 2006. Available from: www.legislation.gov.uk/ukpga/2006/16/contents

⁶ The S40 list replaces the previously prepared list of habitats and species of Principal Importance for the conservation of biological diversity in England that was published under Section 74 (2) of the Countryside and Rights of Way Act 2000.

⁷ DCLG (2012). *National Planning Policy Framework*. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland;
- development proposals where the primary objective is to conserve and enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged.

In the case of SSSIs and irreplaceable habitats, exceptions *may* be made if it can be clearly demonstrated that the benefits of the development, at this particular site, outweigh the costs in terms of loss or adverse impacts.

Section 11 also specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05⁸ to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence or otherwise of protected species, and the extent to which they may be affected by the proposed development, must be established before permission is granted;

⁸ ODPM (2005). *Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System*. Available from: <http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity>

- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

Good Practice & Standards

Various forms of guidance are available to manage biodiversity through the development process. Of particular note is *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*⁹. This document was principally designed to help local planning authorities deliver the national policies in the former PPS9 (now replaced by the NPPF) and comply with legislation. It is also useful to developers and their agents as it outlines the expectations of the local authority for the conservation of nature in the development control process.

Regional Level

The South East Plan Regional Spatial Strategy has now been revoked, with the exception of Policy NRM6, which relates to the Thames Basin Heaths Special Protection Area.

Local Level

The Reading Borough Local Development Framework Core Strategy was adopted in January 2008 and altered in January 2015, and until adoption of a new local plan currently in preparation, will guide development in the Borough to 2020. It contains the following policies of potential relevance:

CS36 – Biodiversity and Geology

a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes. On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that:

- i. The need for development clearly outweighs the need to protect the value of the site; and
- ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.

b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.

⁹British Standards Institution (2006). *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*. Publically available at: <http://www3.hants.gov.uk/pas-2010.pdf>

c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

CS38 – Trees, Hedges and Woodlands

Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal, and the Borough's vegetation cover will be extended.

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets” (paragraph 117). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level. An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The UK Biodiversity Action Plan 2007 (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framework*¹⁰ and individual national biodiversity strategies. The UK framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010. The Framework's overall vision is that “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*¹¹ is the national biodiversity strategy, which has the stated mission “(...)to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.” In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets objectives relating to terrestrial and marine habitats and ecosystems, species and people. These include:

- Establishing coherent and resilient ecological networks, described as “a network of high quality sites, protected by buffer zones, and connected by wildlife corridors and smaller, but still wildlife-rich, ‘stepping-stone’ sites”;
- Taking targeted action for the recovery of priority species whose conservation is not delivered through wider habitat-based and ecosystem measures ;

¹⁰ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). *The UK Post-2010 Biodiversity Framework*. Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

¹¹ DEFRA (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Available from: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

- Establishing Nature Improvement Areas and Marine Protected Areas;
- Bringing more SSSIs into favourable condition;
- Reducing environmental pressures by working with sectors such as agriculture, forestry, planning and development.

A network of 48 Local Nature Partnerships have been set up across England to help deliver these objectives.

Note that as these changes are still relatively new, some local plans and government guidance documents/circulars still refer to the UK BAP and 'UK BAP priority habitats and species'. These habitats and species are listed under Section 41 of the NERC Act, and **remain a material consideration in the planning process**. They are now described as 'Species/Habitats of Principal Importance', though they are also commonly referred to as 'Section 41 Species/Habitats' or simply 'Priority Species/Habitats'. Further guidance is given in the relevant sections below.

Local level

The Berkshire Local Nature Partnership has produced the Natural Environment in Berkshire Biodiversity Strategy 2014-2020 which builds on, and replaces the previous Berkshire Biodiversity Action Plan (BAP). In addition to identifying a network of Biodiversity Opportunity Areas across the county and a range of priority habitats which support bats, it also lists a number of priority species recorded in Berkshire including:

- Western Barbastelle *Barbastella barbastellus*
- Bechstein's Bat *Myotis bechsteinii*
- Noctule Bat *Nyctalus noctula*
- Soprano Pipistrelle *Pipistrellus pygmaeus*
- Brown Long-eared Bat *Plecotus auritus*
- Greater Horseshoe Bat *Rhinolophus ferrumequinum*
- Lesser Horseshoe Bat *Rhinolophus hipposideros*

Delivering Biodiversity Opportunities

Where practicable, opportunities should also be sought to achieve a **net gain** (i.e. enhancement) of biodiversity. Support for biodiversity enhancement is provided in the Public Authority 'Biodiversity Duty' under the NERC Act 2006 and in the key principles of the NPPF, as described above.

Enhancement projects may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable urban drainage schemes (SUDS) and green roofs. Planning conditions and obligations are increasingly being used to mandate biodiversity enhancement on or off a development site, either through design or through financial support.

Many ideas for incorporating ecological enhancement into planning and development can be found in the biodiversity action plans and/or strategies relevant to the policy or development

area, or through initiatives led by the Local Nature Partnership. At the national level, twelve Nature Improvement Areas were set up in 2012 in order to deliver landscape-scale conservation objectives, and many regions and counties have also identified and mapped 'Biodiversity Opportunity Areas', 'Nature Maps' or 'Strategic Nature Areas' where conservation action such as habitat creation and restoration will deliver the greatest benefits for biodiversity.

Other sources of ideas and opportunities include schemes led by conservation NGOs, such as the Wildlife Trusts' 'Living Landscapes' and the RSPB's 'Futurescapes', which are working in partnership with landowners and local communities across the country to restore ecosystems and ecological networks.

SPECIES SPECIFIC PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England and are of relevance to this report. It is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by proposed development. This can best be achieved by undertaking surveys early in the planning process. Mitigation measures are required to minimise disturbance to protected species and may necessitate a licence. Natural England offers further detailed advice which can be applied to planning applications that affect protected species¹².

Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Bats are protected further by law in England.

There are 18 species of bat in the UK, 7 of which are UK BAP priority species and Species of Principal Importance in England under S41 of the NERC Act 2006. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitat Regulations 2010. It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, deliberately or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts); or
- Possess, sell or transport a bat, or anything derived from it.

¹² Natural England. 2011. *Standing Advice for Protected Species*. Available from: <http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/default.aspx>

Development proposals affecting bats or their roosts require a European Protected Species licence from Natural England.

Birds

48 species of bird on the UK BAP exist in England. These species, plus the Hen Harrier, are also listed as Species of Principal Importance in England under S41 of the NERC Act 2006. All birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 affords extra protection for a number of species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependant young, constitutes an offence.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set down in the law, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

European Protected Species Licences

A European Protected Species Licence is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitat Regulations 2010; including inter alia all species of bats, Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus* and Otter *Lutra lutra*. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

- 1) The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- 2) There is no satisfactory alternative; and
- 3) The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance in England for the conservation of biodiversity under Section 41 (S41) of the NERC Act 2006¹³. This list of species includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier¹⁴). While these species may not be legally

¹³ The S41 List of Species & Habitats of Principal Importance in England is available from: <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportantance.aspx>

¹⁴ The Hen Harrier has also been included on the List because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

protected, there is a clear responsibility on planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species and habitats and to enhance them where possible. Additional guidance to developers is typically provided in level planning policies.

**Appendix 4 Berkshire and South Buckinghamshire Bat Group
Record Search Results**



Client for whom search carried out: Lynsey Robinson Ecology
 Client Purchase Order Number: N/A - email confirmation
 Client Reference: 519 Basingstoke Road

Person requesting search: Lynsey Robinson
 Date of search: 01/08/2016

Search of Group Bat Records 2km radius centred on SU 71733 69924 (BSBBG Reference 577LRE)

I have found the following records within your requested search area:

Grid reference	Species	Location	Date / Year	Additional information	Numbers if known
SU7006369374	Pipistrellus pygmaeus	Foundary Brook Culvert, Under M4	Jul 2014	Maternity Roost - Ecologist Planning survey	
SU7057470174	Myotis sp.	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	
SU7057470174	Nyctalus noctula	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	
SU7057470174	Myotis daubentonii	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	
SU7057470174	Pipistrellus pygmaeus	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	
SU7057470174	Pipistrellus pipistrellus	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	3
SU7069	Pipistrellus pipistrellus	*TVERC	13 Nov 2010	Field record	1
SU7085068167	Pipistrellus sp.	Great Lea Farm Great Lea Three Mile Cross	Mar 2012	3 old droppings found in loft space - Ecologist Planning survey	

SU7088768133	Pipistrellus sp.	Great Lea Farm Great Lea Three Mile Cross	Mar 2012	4 old droppings found in loft space - Ecologist Planning survey	
SU7089968716	Pipistrellus pipistrellus	Hartley Court Lodge, Hartley Court Road, Three Mile Cross	Jun 2015	Emergence of 1-2 bats observed; 15+ droppings in loft void	1
SU714715	Pipistrellus sp.	47 Boulton Rd Reading	Jun 2010		
SU714715	Eptesicus serotinus	47 Boulton Rd Reading	Jun 2010		
SU7148968185	Pipistrellus pipistrellus	Darbrook, Basingstoke Road, Three Mile Cross	Aug 2008	2 emergences observed - Ecologist Planning survey	2
SU7150868370	Pipistrellus pipistrellus	Tree TG3116, Land North of Church Lane, Three Mile Cross	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7170568316	Pipistrellus pipistrellus	Tree 3249, Land North of Church Lane, Three Mile Cross	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7176668114	Pipistrellus pygmaeus	Tree 3247, Land North of Church Lane, Three Mile Cross	Jun 2011	Emergence observed - Ecologist Planning survey	
SU717692	Pipistrellus pipistrellus	Unknown	11 Jun 2006	Adult male - Rescued	1
SU7180968168	Pipistrellus pipistrellus	Tree TG3113, Land North of Church Lane, Three Mile Cross	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7183268094	Pipistrellus sp.	Tree 3246, Land North of Church Lane, Three Mile Cross	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7204168947	Pipistrellus pipistrellus	Cresswell Close, Reading RG2 8UF	02 Sep 2015	Injured Bat Record	1
SU720692	Pipistrellus sp.	RG2 8UJ, Reading	27 Jul 2015	NE Roost visit - By droppings	
SU7211868189	Plecotus auritus	Shinfield Lodge, Church Lane, Three Mile Cross	Feb 2015	Small pile of droppings in roof void - Ecologist Planning survey	
SU7216768068	Pipistrellus pipistrellus	Tree 3274, Ridge SANG Area, Three Mile Cross	Aug 2008	2 emergences observed - Ecologist Planning survey	2
SU7217668160	Pipistrellus pipistrellus	2 Church Lane, Shinfield	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7218668172	Pipistrellus pipistrellus	4 Church Lane, Shinfield	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7219768176	Pipistrellus pipistrellus	5 Church Lane Three Mile Cross	Jul 2008	Maternity roost 7 bats present; reconfirmed in 2010, 12 bats recorded - Ecologist Planning survey	7
SU7222368270	Pipistrellus pipistrellus	The Grove, Church Lane, Shinfield	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7224568230	Pipistrellus pipistrellus	13 Church Lane, Shinfield	Aug 2008	2 emergences observed - Ecologist Planning survey	2
SU7225968243	Pipistrellus pipistrellus	16 Church Lane, Shinfield	Aug 2008	Emergence observed - Ecologist Planning survey	

SU724718	Pipistrellus pipistrellus	Cintra Park	Jul 2009	Aural bat detector - feeding	3	
SU726704	Nyctalus noctula	The Cowsey	30 Jun 2011	Bat group walk for scouts - Aural bat detector	3	
SU726704	Plecotus auritus	The Cowsey	30 Jun 2011	Bat group walk for cubs - Aural bat detector	1	
SU726704	Pipistrellus pipistrellus	The Cowsey	30 Jun 2011	Bat group walk for cubs - Aural bat detector	1	
SU7296070471	Pipistrellus pygmaeus	Ridgeway Primary School	04 Sep 2015	Aural bat detector		
SU7296070471	Pipistrellus pipistrellus	Ridgeway Primary School	04 Sep 2015	Aural bat detector		
SU7296070471	Plecotus sp.	Ridgeway Primary School	03 Sep 2015	Aural bat detector		
SU7296070471	Pipistrellus pipistrellus	Ridgeway Primary School	03 Sep 2015	Aural bat detector		
SU7296070471	Pipistrellus pygmaeus	Ridgeway Primary School	03 Sep 2015	Aural bat detector		
SU7296070471	Nyctalus noctula	Ridgeway Primary School	03 Sep 2015	Aural bat detector		
SU730686	Pipistrellus nathusii	Shinfield Road, Shinfield	12 Sep 2013	Aural bat detector	1	
SU730686	Pipistrellus pygmaeus	Shinfield Road, Shinfield	21 Aug 2013	Aural bat detector	1	
SU730686	Pipistrellus pipistrellus	Shinfield Road, Shinfield	21 Aug 2013	Aural bat detector	1	
SU730686	Nyctalus noctula	Shinfield Road, Shinfield	21 Aug 2013	Aural bat detector	1	
SU730686	Plecotus sp.	Shinfield Road, Shinfield	15 Jul 2013	Non-breeding roost, 200-300 droppings	1	
				Emergence observed during survey of Lane		
SU7307868727	Pipistrellus pipistrellus	Coach House Cottage, Shinfield Road, Shinfield	Aug 2014	End House for development - Ecologist Planning survey		
SU7308168686	Nyctalus noctula	Lane End House, Shinfield Road, Shinfield	01 Sep 2015	Aural bat detector		
SU7308168686	Pipistrellus pipistrellus	Lane End House, Shinfield Road, Shinfield	01 Sep 2015	Aural bat detector		
SU7308168686	Pipistrellus pygmaeus	Lane End House, Shinfield Road, Shinfield	01 Sep 2015	Aural bat detector		
SU7308168686	Nyctalus noctula	Lane End House, Shinfield Road, Shinfield	26 Aug 2015	Aural bat detector		
SU7308168686	Pipistrellus pygmaeus	Lane End House, Shinfield Road, Shinfield	26 Aug 2015	Aural bat detector		
SU7308168686	Myotis sp.	Lane End House, Shinfield Road, Shinfield	26 Aug 2015	Aural bat detector		
SU7308168686	Pipistrellus pipistrellus	Lane End House, Shinfield Road, Shinfield	26 Aug 2015	Aural bat detector		
				One bat observed emerging off site from the bungalow to the north of the house - Aural bat detector		
SU7308168686	Pipistrellus pipistrellus	Lane End House, Shinfield Road, Shinfield	13 Aug 2014	250+ droppings in roof void including a minority of Pip; emergence of Pip observed		
SU7308468697	Pipistrellus pipistrellus	Lane End House, Shinfield Road, Shinfield	Jul 2013	250+ droppings in roof void of mainly BLE - Ecologist Planning survey		
SU7308468697	Plecotus auritus	Lane End House, Shinfield Road, Shinfield	Jul 2013	Bat droppings recorded in loft space. Small scattering beneath ridge beam		
SU7330870770	Plecotus sp.	188 Shinfield Road, Reading RG2 7DT	30 Apr 2014	Breeding roost	2	
SU701698	Plecotus auritus	The Clock House, Pingewood, Reading	1997			
SU7269	Pipistrellus pipistrellus	*TVERC	20 Jun 1986		1	

BSBBG has agreed an exchange of data with TVERC which enables us to provide records belonging to them with the grid reference given to 1 km precision. Such records are indicated by *TVERC under location. Enquirers are recommended to contact TVERC direct to obtain full locations details. Please note that TVERC provides BSBBG with an annual update of their records, so they may hold records for your search area that BSBBG does not yet have access to. Requests for information may be submitted via the TVERC website www.tverc.org.uk

However I must, as usual, point out that our records should not be considered a complete record of bats in the area since we only record sites where we, as a Bat Group, have been called to assist members of the public or Natural England (what was English Nature) to deal with 'bat problems', recorded bats whilst undertaking bat group events and walks or taken part in National Monitoring of bats for the Bat Conservation Trust. Records from the general public and bat group members submitted to the records officer are also kept in the database. To be certain what bats may or may not be present it would be necessary to undertake a detailed bat survey at various times throughout the year.

All payment details will be contained within the invoice.

We are always striving to improve the quality and quantity of our records and therefore we welcome any records that you may obtain during any planned surveys in our area. Please submit records to records@berksbats.org.uk.



519 Basingstoke Road, Reading, Berkshire

Phase 2 Bat Survey Report

Phase 2 bat survey to inform a planning application for proposed extension and remodelling works to an existing dwelling house.

Final Report

August 2016

Client:	Kris Navaratnam
Author:	Dr Lynsey J Robinson CEnv MCIEEM
Surveyors:	Matthew Clarke BSc (Hons)

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APPENDICES

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Executive Summary

This report has been prepared by Lynsey Robinson Ecology on behalf of Kris Navaratnam, in relation to a planning application for the redevelopment of an existing residential dwelling house known as 519 Basingstoke Road which is located in Reading, Berkshire. Proposals for the site include the demolition of the existing outbuilding and the extension of the existing dwelling house to create a rear extension and associated loft conversion.

The site was considered to have low bat roost potential following a Phase 1 daytime bat survey and building inspection undertaken at the site by Dr Lynsey Robinson of Lynsey Robinson Ecology in June 2016. Targeted Phase 2 bat surveys were subsequently commissioned to fully assess the presence or absence of roosting bats and bat activity within the site boundary and are the subject of this report. A Phase 2 survey session was undertaken in July 2016 and found no evidence of use by roosting bats and low levels of foraging and commuting activity by common bat species around the site. No trees within the site boundary have potential to support roosting bats.

The hedgerow habitats present on site have been found to support low numbers of foraging and commuting bats of common species. The hedgerow and buildings on site may also support common breeding garden birds. In order to avoid potential impacts on these protected species, a mitigation strategy has been prepared.

1. Introduction

Background and Purpose

- 1.1 Lynsey Robinson Ecology was commissioned by Kris Navaratnam in May 2016, to undertake a Phase 1 Bat Survey at 519 Basingstoke Road, Reading (hereafter referred to as 'the Site') (**Figure 1**). The Phase 1 Bat Survey was subsequently carried out on 24th May 2016 by Dr Lynsey Robinson, an experienced ecologist and Natural England bat survey licence holder (CL18 Level 2, registration number 2016-14811-CLS-CLS). The results of this survey are detailed in '519 Basingstoke Road, Reading - Phase 1 Bat Survey' – a report to Kris Navaratnam by Lynsey Robinson Ecology dated 26th June 2016, which should be read in conjunction with this Phase 2 Bat Survey Report (**Appendix 1**).
- 1.2 Based on the potential bat habitats recorded during the Phase 1 survey visit, a further Phase 2 bat survey visit was subsequently instructed and carried out in July 2016 to further investigate use of the site by bats. The Phase 2 Bat Survey findings and subsequent ecological recommendations are the subject of this report.

Development Proposals

- 1.3 The proposals for 519 Basingstoke Road involve demolition of the existing rear conservatory and single storey outbuilding at the rear of the property, in order to create a two-storey rear extension and loft conversion. The front driveway area and boundary vegetation will be retained.
- 1.4 The indicative layout for the proposed scheme is provided in **Appendix 2**.

Site Context

- 1.5 The existing Site is centred on OS Grid Reference SU 71733 69924 (see **Figure 1** for site location). It is situated along Basingstoke Road on the southern approach into east/central Reading from the M4 corridor in Berkshire (see **Figure 1**), in a mixed residential and commercial area and comprises a two-storey residential house and associated outbuilding, along with areas of hardstanding (used for car parking) and amenity grassland. It is bordered on the east by an extensive area of allotments, on the west by the main road and an adjacent area of amenity grassland and to the north and south by residential properties within the suburb of Whitley.

Relevant Legislation and Policy

Legislation

- 1.6 The key legislative provisions of relevance to the development proposals at 519 Basingstoke Road are detailed in **Appendix 3** but in summary are as follows:
- *The Conservation of Habitats and Species Regulations 2010* (as amended);

- *The Wildlife and Countryside Act 1981 (as amended);*
- *The Countryside and Rights of Way (CROW) Act 2000;*
- *The Natural Environment and Rural Communities (NERC) Act 2006.*

Planning Policy

1.7 The key policies or relevance to the development proposals at 519 Basingstoke Road are also detailed in **Appendix 3** but in summary are as follows:

- *National Planning Policy Framework;*
- *Government Circular 06/05: Biodiversity and Geological Conservation;*
- *Reading Borough Local Development Framework Core Strategy.*

Biodiversity Planning and Strategies

1.8 There have been many changes to the way that biodiversity planning is organised in the UK since 2010, as set out in detail in **Appendix 3**. Within England, Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 lists species and habitats of principal importance for the conservation of biodiversity. At the local level the following documents remain of relevance for this report:

- Natural Environment in Berkshire Biodiversity Strategy 2014-2020 (BLNP, 2014), which identifies a network of Biodiversity Opportunity Areas and a range of priority habitats which support bats, as well as listing a number of priority bat species including Western Barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum*, Lesser Horseshoe Bat *Rhinolophus hipposideros*.

2. Bat Survey Methodology

Introduction

- 2.1 Bat survey methodologies were carried out in line with the best practice guidelines published by the Bat Conservation Trust (BCT, 2016). Methodology for the evaluation of the Site and assessment of the potential impacts of the proposals on bats has been based on the approach set out in *'Guidelines for Ecological Impact Assessment in the UK and Ireland'* published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2016). Due regard has been paid to relevant planning policy, legislation and nature conservation priorities as set out in **Appendix 3**.

Establishing the Zone of Influence

- 2.2 In order to define the spatial scope of the Phase 1 and 2 Bat Surveys, it was necessary to predict the likely zone of influence of the development proposals at the Site. The zone of influence of a proposed development is defined by CIEEM's EclA guidelines as *'...the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities'*.
- 2.3 The types of activities that might occur as a result of the proposed redevelopment and the likely biophysical changes (in the absence of mitigation) include:
- a. Demolition of the existing conservatory and adjoining outbuilding (currently used as an office), with the potential to disturb roosting bats and nesting birds as well as destroy nest and roost sites (if present);
 - b. Clearance of the some of the existing hardstanding and vegetation (comprised of amenity grassland) to facilitate the construction of the new two-storey extension and surrounding landscaping; this may have an impact on the potential of the site to support bats; and
 - c. Increase in noise, dust and lighting during the construction and operation phases of the development, with the potential to disturb roosting bats and nesting birds (if present).
- 2.4 The proposed redevelopment is located within an existing settlement area and includes the redevelopment of a single residential dwelling (**Appendix 2**). There are no trees within the site boundary and all existing hedgerows will be retained. It is therefore considered unlikely that the zone of influence in respect of bats will extend beyond the boundary of the Site.

Desktop Study

- 2.6 A desktop study was undertaken to obtain information regarding bats within the zone of influence. This involved searching the National Biodiversity Network website, assessing the known distribution of bats in Britain (Richardson, 2001), as well as interrogating

Natural England's "Nature on the Map" (MAGIC) to establish protected sites and habitats within the zone of influence of the proposals.. A desk study was carried out in order to gather and refer to existing biodiversity and contextual information with respect to the zone of influence and the wider area. This involved assessing the known distribution of bats in Britain (Richardson, 2001) as well as interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), Natural England's Nature on the Map, aerial photos, current Ordnance Survey maps and Old Maps. Reference was also made to the UK BAP, and the Local Biodiversity Strategy (BLNP, 2014). A record request was also commissioned from the Berkshire and South Buckinghamshire Bat Group for records of bats within 2km of the site boundary (**Appendix 4**).

Phase 2 Bat Survey Methodology

Phase 2 activity surveys

- 2.7 The habitats present within the Site were assessed as having low potential to support bats during the Phase 1 Bat Survey visit (**Appendix 1**). A single Phase 2 bat survey was therefore undertaken in line with current best practice guidance (Collins, 2016), in order to fully assess the presence or likely absence of roosting bats within the building and surrounding habitat.
- 2.8 Two surveyors were positioned either side of the main house at 519 Basingstoke Road, at locations identified as allowing good sight lines and ensuring that all potential bat access/egress points were visible between the surveyors. Survey locations are shown on **Figure 2**. Each surveyor was equipped with Petterson D240x and an ediol recorder to record unidentified calls for subsequent computer analysis. Each surveyor was supplied with a plan of the site on which to mark bat activity.
- 2.9 The following information was recorded for any bats seen or heard:
- Species;
 - Time;
 - Behaviour (whether it was feeding, commuting, social calling or swarming);
 - If seen, direction of flight; and
 - If it emerged or re-entered the building.
- 2.14 Behaviour was identified by flight patterns and call characteristics as heard on the bat detector. Weather conditions (temperature, wind speed/direction, cloud cover, rainfall) were also recorded at the start and end of each survey.

Timing

- 2.15 One dusk emergence survey was undertaken on 22nd July 2016, during the period of time considered to be the active bat season and during suitable weather conditions to record

active bats. Details of the dates, timings and weather conditions for the Phase 2 survey session are provided in **Table 2.1**.

Table 2.1: *Phase 2 survey dates, timings and weather conditions.*

Date	Survey Type	Survey Timing	Sunrise / Sunset	Duration	Surveyors & Equipment	Weather Conditions
22/07/2016	Dusk emergence	20:50-22:36	21:06	1hr 46 mins	Lynsey Robinson, Matthew Clarke using 2x Pettersson D240x time expansion bat detectors, 2x Edirol recorders	21.8°C (start), 19.2°C (end), Cloud <5%, Rain 0, Wind Beaufort Force 1

Survey Constraints

- 2.16 Bats will often roost in places that are inaccessible to the surveyor, such as under tiles and within soffit boxes. During the Phase 1 building inspection due regard was therefore paid to the noting of external features with the potential to support crevice dwelling species and these were investigated further during the subsequent Phase 2 survey. Investigating the internal and external inspection of the building with Phase 2 dusk emergence and dawn re-entry surveys in line with best practice should provide a sufficient level of information to allow a more accurate evaluation of whether bats are present or absent within these potential sites.
- 2.17 Bats are nomadic and invariably move between roost sites. Therefore any bat survey will only provide a snapshot of how bats are using a particular site at that time. However, undertaking Phase 2 surveys across the active bat season in line with best practice should allow an accurate evaluation to be made regarding whether and how bats make use of a site.

3. Bat Survey Results and Evaluation

Designated Sites and Other Areas of Interest for Bats

- 3.1 Pearman's Copse is an area of ancient woodland located 1.6km south-east of the site which is also designated as a Local Nature Reserve (**Figure 1**). There are also two small copses of ancient woodland within 2km of the site at Whitley Wood, as well as more extensive areas of parkland, woodland, marshland/open water and mixed woodland outside the M4 corridor on the outskirts of Reading, around the villages of Shinfield, Three Mile Cross and Spencers Wood. The Kennet and Avon Canal is also located just over 1 km to the north and west of the site.
- 3.2 Therefore, whilst the site itself is in a relatively built up area of east Reading, suitable habitat is present within the local area for foraging and roosting bats, connected via linear features in the landscape such as waterways, hedgerows and treelines.

Existing Records

- 3.5 The 'Distribution atlas of bats in Britain and Ireland 1980 – 1999' (Richardson, 2001) shows that sixteen species of bat are known to occur within the SU Grid Square (greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *R. Hipposideros*, whiskered *Myotis mystacinus*, Brandt's *Myotis brandtii*, Natterer's *M. nattereri*, Bechstein's *M. bechsteinii*, Daubenton's *M. daubentonii*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Nathusius pipistrelle *Pipistrellus nathusii* brown long-eared *Plecotus auritus*, grey long-eared *P. austriacus*, serotine *Eptesicus serotinus*, noctule *Nyctalus noctula*, Leisler's *N. leisleri* and barbastelle *Barbastella barbastellus*). Of these species, only two of the Pipistrelle species (common and soprano) and brown long-eared bats can be considered as being common. The conservation status of the other species ranges from local to rare.
- 3.6 The NBN Gateway holds records in the OS Grid square SU77 for species of bat including barbastelle, Daubenton's, noctule, serotine, common and soprano pipistrelle (www.data.nbn.org.uk – search date 4th August 2016).
- 3.7 Berkshire and South Buckinghamshire Bat Group also holds 58 records of bats within 2km of the site (BSBBG, 1st August 2016) including brown long-eared, serotine, noctule, Daubenton's common, soprano and Nathusius' pipistrelle. All records within 1km of the Site are of single bats, droppings or single bat passes recorded on bat detectors during aural surveys. There are no records relating to confirmed or potential maternity sites within the search area. One Nathusius pipistrelle pass was recorded during an aural survey 1.9km to the south-east in Shinfield.

Phase 2 Bat Survey Results

- 3.15 The results of the dusk bat activity survey are summarised in **Figure 2**.
- 3.16 The dusk survey undertaken on 22nd July 2016 recorded no bat emergence. Early commuting common pipistrelle bats (<5 individuals) were recorded moving across the front and back of the property. This was followed by occasional low level foraging activity by 1-2 common pipistrelle bats during the hour following emergence, mainly over the back garden area and along the hedgerow bordering the south side of the property. Single passes by soprano pipistrelle and long-eared (likely to be brown long-eared) bats were also recorded very briefly during the survey but none of these events were considered to be from emerging bats as sightlines and light levels around the property remained satisfactory at the time they were heard.

Interpretation and Evaluation of Bat Survey Results

- 3.17 The daytime survey and building inspection at 519 Basingstoke Road assessed the buildings on site as having low potential to support roosting bats. Although no evidence of bats was found, there was low potential for bats to be roosting within features on the outside of the building which could not be fully assessed during the daytime survey. As these potential features would be affected by the proposed redevelopment, further bat activity (Phase 2) surveys were required, in order to ascertain and investigate the likely presence of roosting bats within the buildings on site.
- 3.18 A subsequent dusk emergence survey carried out in suitable weather conditions in July 2016, the peak activity period for bats, recorded no bat emergence from either of the structures on site.
- 3.19 The mature ash tree growing against the southern aspect of the house (but not within the curtilage of the Site) appears to have a screening and linking function for commuting bats from a nearby roost somewhere to the south. This tree connects to the mature hedgerow along the southern boundary which is used by low numbers of common pipistrelle bats from other roosts commuting from and to the areas south and north of the Site.
- 3.20 Based on the results of the Phase 2 emergence survey, with no emerging bats recorded during the July 2016 survey, it has considered very unlikely that 519 Basingstoke Road currently supports roosting bats. It is also considered unlikely that the building is used by hibernating bats, due to a lack of features suitable for hibernation. The habitats elsewhere in the Site support low numbers of foraging and commuting bats, including the mature hedgerow surrounding the rear of the property which creates a sheltered foraging area and appears to provide a linking function for commuting bats in the surrounding area.
- 3.21 With reference to CIEEM Guidelines (CIEEM, 2016) and other available resources (BCT 2014, Richardson 2001), the presence of low numbers of foraging long-eared (likely to be

brown long-eared), common and soprano pipistrelle bats within the Site is considered to be of **local value** in terms of conservation interest. In the absence of the current proposals and given the presence of abundant similar foraging habitat present within the surrounding suburban landscape, the current status of these foraging bats is considered to be favourable and stable (BCT, 2014).

Other (Protected) Species

- 3.22 The hedgerows bordering the Site are likely to provide suitable bird nesting opportunities for common garden bird species. The house has potential to support nesting birds and evidence of previous nesting activity was recorded inside the loft space and under the eaves during the Phase 1 survey (**Appendix 1**).

4. Potential Impacts on Bats in the Absence of Mitigation

Introduction

- 4.1 This section details the potential impacts of the proposal on bats in the absence of mitigation. The potential activities are identified with reference to the scheme, as identified in **Section 1**. Recommended mitigation to ensure that the favourable conservation status of bats (and breeding birds) is maintained, in compliance with relevant legislation and planning policy, is detailed in **Section 5**.

Impacts on Bats

- 4.2 All species of bat and their roosts are protected under both the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended) (**Appendix 1**) and, in order to prevent an offence being committed, it is necessary to ensure that no bats are harmed or disturbed, and that roosts and hibernation sites are not damaged or destroyed during the proposed works. The dusk surveys did not record any bats emerging from the building and the site is consequently considered to be of negligible value to roosting bats. There are no features on the building which are considered to be suitable for use by hibernating bats over winter. However, it is rarely possible to fully access all areas of a structure that can be used by roosting bats and activity surveys represent only a snapshot in time because bats are highly mobile and can move roost sites frequently even during the same breeding season. A mitigation strategy is therefore required to reduce the possible risk of damaging or disturbing bats as far as possible during the demolition, construction and operation period.
- 4.3 The mature hedgerow surrounding the garden at the rear of the property appears to support low numbers of foraging and commuting bats of common species and is therefore considered to be of local value. All of the boundary habitats will be retained within the proposals. However, in the absence of mitigation, increased lighting during the construction and operational phases may shine onto this boundary vegetation and have an adverse impacts on bats using these features. In the absence of mitigation, a temporary and permanent adverse effect is therefore possible at the local level. Due to the linking function performed by this habitat feature for bats from the wider area, including for pipistrelle and long-eared bats moving across the site to and from areas to the north and south, this could affect the conservation status of the local populations of common bat species bats in the short and long-term and is therefore considered to be significant at the local level. Mitigation is therefore required.

Impacts on Other Protected Species

- 4.6 The building has potential to support nesting birds. Therefore redevelopment works have the potential to disturb nesting birds and to destroy any nests that are present at the time, which would result in an offence under the Wildlife and Countryside Act 1981.

Mitigation is therefore required. The hedgerows surrounding the site are also likely to support nesting birds and will be retained as part of the Scheme.

Summary of Potential Impacts in the Absence of Mitigation

- 4.4 Potential impacts of the proposed scheme on bats and common nesting birds are summarised in Table 4.1, along with associated mitigation requirements.

Table 4.1: *Summary of Potential Impacts and Mitigation Requirements*

Species Group	Potential Impact & Timescale	Likelihood & Magnitude of Impact)	Mitigation Requirements
Bats	Destruction of bat roosts and/or hibernation sites and harm to individual bats during demolition	Very unlikely	Mitigation required to ensure legal compliance
	Removal of or damage to bat commuting and foraging habitat during site clearance and construction	Very unlikely	All hedgerows and other boundary features will be maintained as part of the Scheme.
	Disturbance to roosting bats in the buildings during demolition and construction	Unlikely	Mitigation required to ensure legal compliance
	Lighting and Noise disturbance to commuting and foraging bats during construction and operation	Possible significant adverse impact at the local level, in short and long term	Mitigation strategy required to avoid negative effect on conservation status at local level
Breeding Birds	Disturbance to and destruction of active nests of common nesting garden birds during demolition and construction	Possible	All hedgerows and other boundary features will be maintained as part of the Scheme. Mitigation required to ensure legal compliance

5.0 Proposed Mitigation

Introduction

- 5.1 In order for the proposals to comply with applicable legislation and planning policy, it is necessary to mitigate or compensate for the ecological impacts as identified in **Section 4**. The NPPF also places an onus on developments to provide ecological enhancements and to meet local biodiversity objectives wherever possible. Within this section, mitigation measures are recommended to ensure that the identified ecological features (bats and breeding birds) are considered during the construction and operation phases of the development, in compliance with applicable legislation and planning policy.

Mitigation

Bats

- 5.2 The Phase 1 and 2 bat surveys undertaken at 519 Basingstoke Road have found no evidence that the house supports roosting bats, although the boundary features and garden areas do provide foraging and commuting habitat for low numbers of common bat species.
- 5.3 The proposals for the site will involve the demolition of the existing outbuilding and extension and remodelling of the existing dwelling. It is therefore recommended that the proposals for the site are undertaken in such a way to minimise any possible potential impacts to individual roosting bats.
- 5.4 Although no bats were recorded during the Phase 1 or 2 surveys, it is rarely possible to fully access all areas of a structure that can be used by roosting bats and activity surveys represent only a snapshot in time because bats are highly mobile and can move roost sites frequently even during the same breeding season. The building continues to have low potential to support roosting bats which could start to use the building at any time. All species of bat and their roosts are protected under both the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended) (**Appendix 1**) and, in order to prevent an offence being committed, it is necessary to ensure that no bats are harmed or disturbed, and that roosts sites are not damaged or destroyed during the proposed works. Therefore, to minimise as far as reasonably possible the chance of harming or disturbing roosting bats, at the start of the demolition work to the outbuilding, potential roosting opportunities should be removed or made unsuitable for use by bats. To achieve this, the wooden cladding and fascia boards should be carefully removed by hand to expose the cavity between the exterior and interior walls. On the main building, the window frames & fascia boards on the east side of the property should be removed by hand and the top of the wall should also be exposed by removing the eaves level tiles. Once exposed, the wall cavities should be left open to the elements for at least 24 hours, to allow any bats to escape before continuing demolition work.

- 5.5 In the unlikely event that bats are found during the demolition or construction works, work on the building should immediately stop, Natural England should be informed and advice should be sought from the advising ecologist.
- 5.6 All boundary hedges will be retained and will continue to provide commuting and foraging habitat for bats around the boundary of the Site in the medium to long term. .
- 5.7 A sensitive lighting strategy will be in place during the demolition and construction works, to avoid light spill onto boundary habitats. Any construction lighting should be turned off between dusk and dawn. Any external lighting on the new building will be designed and installed to shine inwards towards the Site and will be of a low lux level, to avoid impacts on bats (and other species) that may use the boundary trees and hedgerows for commuting and foraging.

Breeding Birds

- 5.8 There is evidence that common garden bird species have used the loft space of the house for nesting in the past. All species of bird are protected at the nest. Any redevelopment that could affect nesting birds should ideally take place outside of the nesting bird season, usually considered March-August (though this is dictated by regional variations in weather and temperature conditions). Any works that need to be undertaken to the buildings on site within the nesting bird season should be undertaken immediately following an early morning bird survey by an ecologist, to assess whether the work area is being used by nesting birds at the time of the works. If bird are nesting in the area to be affected then the nest will be monitored and works in that area will be delayed until such time as nesting has been completed and the young have fledged and are no longer dependent on the nest.
- 5.9 All hedgerow habitats will be retained as part of the scheme.

Biodiversity Enhancements

- 5.10 Due to the size of the site and small-scale, residential nature of the proposals, no biodiversity enhancements are proposed as part of this Scheme.

Residual Impacts

- 5.15 Provided the mitigation strategy recommended above is implemented in full, there should be no residual impacts to bats as a result of the proposed works at 519 Basingstoke Road. By retaining the more valuable bat habitats within the site boundary, the favourable nature conservation status of the local bat population will be retained.

6.0 Conclusions and Recommendations

Conclusions

- 6.1 A Phase 2 bat survey was undertaken at 519 Basingstoke Road, Reading following a daytime bat survey and building inspection which found low potential for bats to be present on site.
- 6.2 A desktop study and record search found records of brown long-eared, serotine, noctule, Daubenton's common, soprano and Nathusius' pipistrelle bats in the local area, including a number of small roosts or records of individual bats within 2km of the Site but no records relating to confirmed or potential maternity sites within the search area.
- 6.3 No evidence was found to indicate that the buildings present within the Site support roosting bats, although bats are extremely mobile during the breeding season and the building retains low potential to support individual roosting bats at any time. The mature hedgerow around the boundary of the Site is used by commuting and foraging bats from the local area.
- 6.4 A mitigation strategy has been designed, to avoid and reduce the predicted potential impacts of the scheme, in order to maintain the conservation status of the local bat population.

Summary of Recommendations

- 6.5 The mitigation measures that have been recommended are set out below, along with information on timings and timescales.

During Demolition

- Soft strip of potential roosting features on the outbuilding and the eastern aspect of the house;
- Measures to avoid the disturbance of nesting birds during the breeding season, including: i) an early morning bird survey immediately prior to works commencing on the site, if works are to be undertaken during the nesting bird season; and ii) appropriate working methods to protect any nesting birds that are found during the works;
- A sensitive working method designed to avoid light egress onto boundary features.

During Construction and Operation

- A sensitive lighting strategy during construction and on/around the new building, to avoid light egress onto boundary features;
- 6.7 Provided the recommended mitigation strategy is implemented in full, there should be no residual impacts to bats as a result of the proposed works at 519 Basingstoke Road. The measures recommended will ensure that the works will be undertaken in line with current wildlife legislation in respect of bats and breeding birds.

7.0 References

Bat Conservation Trust. 2014. *National Bat Monitoring Program Annual Report 2013*. BCT, London.

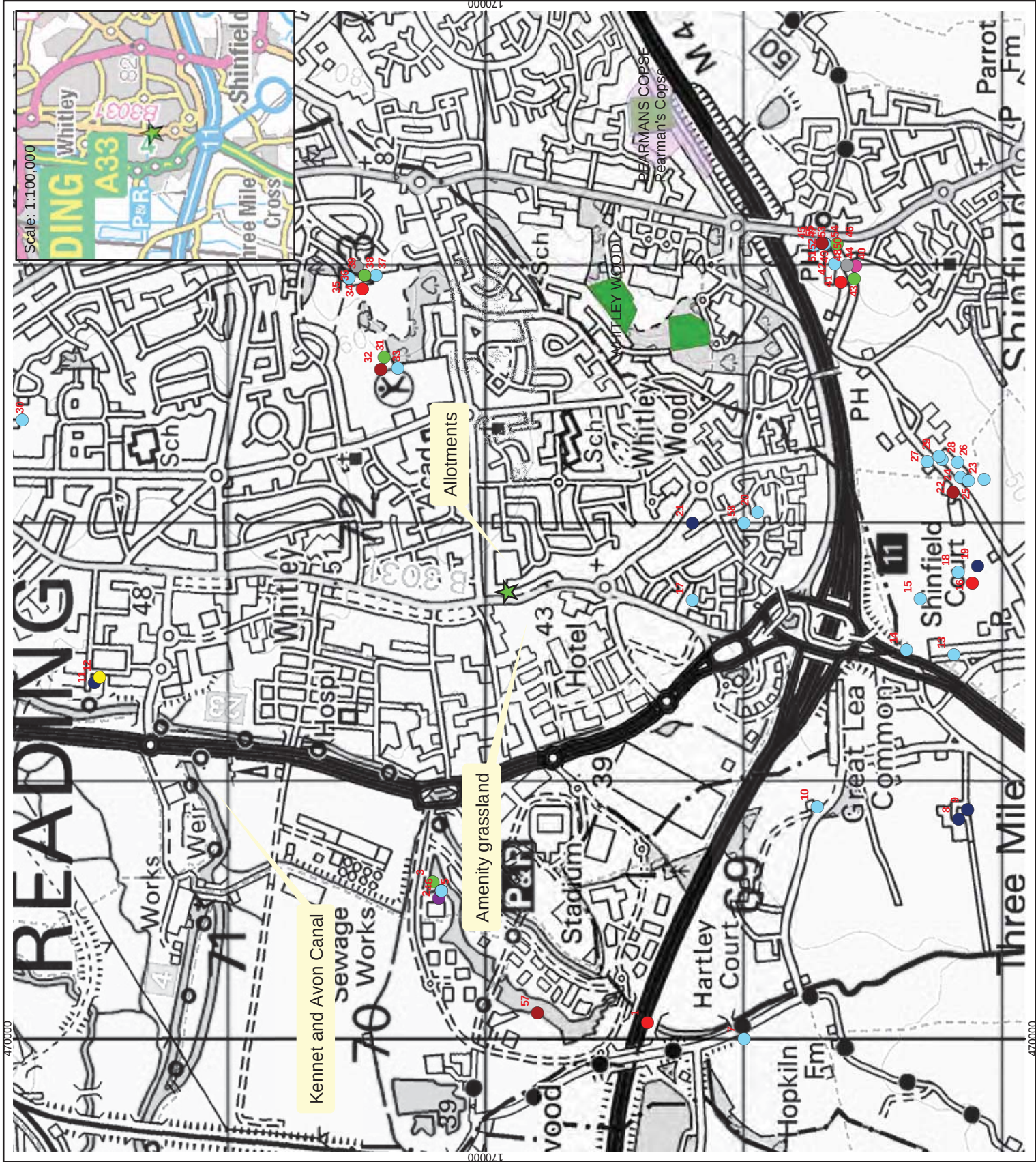
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470000

470000



- Key
- Site Boundary (Indicative)
 - Amenity Grassland
 - Building
 - Hardstanding
 - Hedge
 - Tree
 - surveyor locations
 - Common pipistrelle
 - Pipistrelle species
 - Bats heard not seen:
 - Common pipistrelle
 - Soprano pipistrelle
 - Long-eared



NOT TO SCALE

Ref: 519 Basingstoke Road Fig002
Date: 05/08/2016

Figure 2:
Phase 2 Bat Survey
Approach and Results
**519 Basingstoke Road
Reading**





Key

Site Boundary (Indicative)

Amenity Grassland

Building

Hardstanding

Hedge

Tree



NOT TO SCALE

Ref: 519 Basingstoke Road Fig003

Date: 16/08/2016

Figure 3:
Mitigation Proposals

519 Basingstoke Road
Reading

All hedgerows to be retained

Outbuilding

House

SITE

Sensitive lighting strategy during construction and operation
to avoid light spill onto hedge

Appendix 1 Phase 1 Bat Survey Report



Dr Lynsey J Robinson CEnv MCIEEM

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Kris Navaratnam
519 Basingstoke Road
Reading
Berkshire
RG2 0SH

By email only

26th June 2016

Dear Kris,

Re: 519 Basingstoke Road, Reading - Phase 1 Bat Survey

Thank you for commissioning Lynsey Robinson Ecology to undertake a Phase 1 bat survey to identify any issues that may arise from building works proposed at the above site.

The existing site comprises a residential house and associated outbuilding, along with areas of hardstanding (used for car parking) and amenity grassland centred on OS Grid Reference SU 71733 69924 (see **Figure 1** for site location). I understand that the proposals are to demolish the rear conservatory and single storey outbuilding at the rear of the property in order to create a two-storey rear extension and loft conversion (**Appendix 1**). As discussed, a full planning application is currently being considered by Reading Borough Council, whose ecologist highlighted that the site may have potential for use by bats, a European protected species and as such a material planning consideration. They therefore recommended that a Phase 1 bat survey be carried out at the site to inform the proposals.

The Phase 1 bat survey was subsequently carried out on 24th May 2016 by Dr Lynsey Robinson, an experienced ecologist and Natural England bat survey licence holder (CL18 Level 2, registration number 2016-14811-CLS-CLS). Survey methodologies are summarised in **Appendix 2**. This letter summarises the findings of this visit and provides recommendations for further survey work, giving due consideration to relevant nature conservation legislation, national and local planning policy and other nature conservation priorities (**Appendix 3**). Site photographs are provided in **Appendix 4** and referred to throughout the report.

Zone of Influence

In order to highlight the potential issues related to redevelopment of the site I have predicted the likely zone of influence (ZOI) of the proposals, in line with guidelines set out in guidance in the

Guidelines for Ecological Impact Assessment in the United Kingdom produced by the Institute of Ecology and Environmental Management (IEEM, 2006).

Development of the Site will include:

- demolition of the existing conservatory and adjoining outbuilding (currently used as an office);
- clearance of some of the existing hardstanding and vegetation (comprised of amenity grassland) to make way for the construction of the new two-storey extension;
- likely additional noise, light and dust associated with the construction phase;
- a new lighting scheme associated with operation of the remodelled residential property.

There are no trees within the site boundary and all existing hedgerows will be retained. Considering the small scale and nature of the proposals, the ZOI in respect of bats is not likely to extend beyond the boundaries of the site.

Desktop Study

Prior to the site visit, a basic desktop study was undertaken to determine the location of any nearby designated sites and also to find out whether bat species have been recorded in or within close proximity to the site. This was achieved by examining aerial maps and online data sources (MAGIC, Google Earth and the NBN Gateway).

Designated Sites and Other Features of Interest

Pearman's Copse is an area of ancient woodland located 1.6km south-east of the site which is also designated as a Local Nature Reserve. There are also two small copses of ancient woodland within 2km of the site at Whitley Wood, as well as more extensive areas of parkland, woodland, marshland/open water and mixed woodland outside the M4 corridor on the outskirts of Reading, around the villages of Shinfield, Three Mile Cross and Spencers Wood. The Kennet and Avon Canal is also located just over 1 km to the north and west of the site.

Therefore, whilst the site itself is in a relatively built up area of east Reading, suitable habitat is present within the local area for foraging and roosting bats, connected via linear features in the landscape such as waterways, hedgerows and treelines.

Bat Records

The NBN Gateway holds records for serotine, Daubenton's, natterers, common pipistrelle and brown long-eared bat within the SU76 grid square (www.data.nbn.org.uk, search date 23rd May 2016).

In addition, a number of European Protected Species Licences have been granted by Natural England in the local area, in respect of developments affecting roosting bats. Species for which licences have been granted include common pipistrelle, soprano pipistrelle and brown long-eared bat (www.magic.defra.gov.uk, search date 23rd May 2016).

Potential Habitats and Landscape Features for Bats

During the Phase 1 bat survey the habitats and features present on site were assessed for their potential to support bats. The buildings on site were inspected for their potential to support bats, in line with guidance set out in the Bat Conservation Trust's Bat Surveys for Professional Ecologists Good Practice Guidelines (2016), including a detailed external assessment and an internal inspection where possible. Details of the nature conservation legislation and/or planning policy relating to bats are provided in **Appendix 3**.

The Site is situated along Basingstoke Road on the southern approach into east/central Reading from the M4 corridor in Berkshire (see **Figure 1**) in a mixed residential and commercial area. It is bordered on the east by an extensive area of allotments, on the west by the main road and an adjacent area of amenity grassland and to the north and south by residential properties. The site itself contains a two-storey residential dwelling plus an associated outbuilding, rear garden and hardstanding to the front of the property which is used for car parking.

The potential bat habitats recorded on site are shown in **Figure 2** and target notes are provided in **Appendix 5**. In the rear (east) of the site the garden is laid to amenity grassland which is regularly mown and is bordered on three sides by a 3 m tall box hedge and on the fourth (west) side by the house and adjoining conservatory. There were no trees within the site boundary although just beyond the hedge to the east is a large mature weeping willow tree located at the edge of a large allotment area. The land to the front (west) of the dwelling is laid to hard standing and just beyond the southern boundary is a large mature ash tree in the neighbouring garden which shades and shelters the southern aspect of 519 Basingstoke Road.

Potential bat features are shown in **Figure 3** and a detailed description of the buildings are given in **Appendix 5**. In summary, both the residential dwelling and outbuilding are considered to have low potential to support roosting bats.

The position of the site within a built-up suburban area means that connections between potential roosting features within the buildings and surrounding bat foraging habitat are likely to be limited and subject to some light pollution, potentially deterring use by bats. However, the rear (east) of the site is likely to be more sheltered and darker and the mature willow tree just beyond eastern boundary connects to the extensive allotment area to the east which is likely to be dark and support a good assemblage of insects for foraging bats. There are also scattered mature trees around the perimeter of the amenity grassland across the main road to the west of the site which may be an attractive feature for foraging bats. The habitat surrounding the site is considered to have low to moderate potential to support foraging and/or commuting bats.

Recommendations:

Retain the mature hedgerow along the northern, southern and eastern boundaries, to retain connectivity for commuting and foraging bats between the site and the wider landscape, including the mature willow tree and the large allotment area to the east of the site.

Both the residential dwelling and outbuilding within the site are classed as having potential to support roosting bats and the habitat surrounding the site also has potential to support commuting and/or foraging bats. In accordance with the Bat Conservation Trust's Bat Surveys for Professional Ecologists Good Practice Guidelines (2016) and to comply with relevant nature conservation legislation, it is recommended that targeted bat activity surveys be conducted to determine whether bats are using

the buildings on site for roosting and/or whether the site is of particular value for foraging and/or commuting bats.

Bat activity surveys (sometimes referred to as 'Phase 2' bat surveys) take the form of emergence and re-entry surveys carried out around dusk and/or dawn and aim to:

- Determine which bat species are present on site and their numbers;
- Determine the type of activity (whether roosting, foraging or commuting);
- Help establish the location of bat access points within the building; and
- Determine wider use of a site for foraging and/or commuting after emergence/before re-entry to/from roosts on or adjacent to a site, therefore helping to establish whether bats will be directly affected by the proposed redevelopment.

Based on the initial assessment of bat potential for the habitats and buildings on site, I would recommend that **one dusk or dawn bat activity survey session** is undertaken on the site during the period May to September, using a team of two surveyors. Ideally the survey session should be undertaken during June or July to ensure that activity during the peak bat maternity period is assessed.

As the online data searches only provide data to 4-figure grid reference level, I would also recommend that the Berkshire Bat Group and/or Thames Valley Environmental Records Centre (TVERC) are contacted to obtain more accurate bat records for the local area.

Breeding Birds

The buildings and hedgerows on site are likely to provide a nesting resource for common garden birds. Evidence of current and past use of the eaves and loft of the residential dwelling by nesting birds was noted during the internal inspection.

Recommendations: It is an offence under the Wildlife and Countryside Act 1981 (as amended) to disturb nesting birds. Therefore, clearance of any vegetation over 50cm in height should ideally be undertaken outside of the bird nesting season (considered to be March to September, inclusive). If vegetation clearance or building demolition works must be carried out within the bird nesting season then a nesting bird check will need to be completed by a suitably qualified ecologist no longer than 24 hours before the start of the works. If any nesting birds are found, a buffer zone (minimum of 3m) should be set up around the active nest. Disturbing works will be restricted within the buffer zone until all young birds have fledged.

Summary and Enhancement Opportunities

The buildings and habitats within the site have potential to support roosting and foraging bats and nesting birds. These issues do pose a potential constraint to the proposals. However, subject to implementation of appropriate mitigation measures (such as that outlined above for nesting birds), such constraints are unlikely to pose a serious issue to redevelopment of the site. It is therefore likely that the proposed redevelopment will be able to proceed in accordance with relevant nature conservation legislation and policy criteria.

Below I have summarised the potential issues on site and what action needs to be taken (**Table 1**). The timing constraints are also included for each action.

Table 1: Features of interest, recommended actions and timings

Feature	Action	Timing
Mature hedgerow	Retain within layout. Compensatory planting where necessary	During scheme design
Bats – roosting	Targeted activity and emergence/re-entry surveys (Phase 2 Bat Survey)	May to September (inclusive)
Nesting birds	<i>Outside bird nesting season:</i> No action necessary (assuming no birds nesting)	Work must be carried out between September to February inclusive
	<i>Within bird nesting season:</i> An ecologist must carry out a nesting bird survey to check the vegetation and buildings on site	24 hours prior to commencement of works

In addition, there are opportunities to maintain and enhance the biodiversity of the site in line with Government policy. These include the use of nesting/roosting boxes for bats and birds and inclusion of native plant species of local provenance and/or fruit bearing species within any soft landscaping plans. I have also attached two guidance notes produced by the Bat Conservation Trust and Natural England which provide some useful advice on encouraging bats and birds into garden areas (**Appendices 6 and 7**).

I trust that the above provides you with the information that you require at this stage. However, please do not hesitate to contact me if you have any queries or wish to discuss anything further.

Yours sincerely,



Dr Lynsey J Robinson MCIEEM CEnv

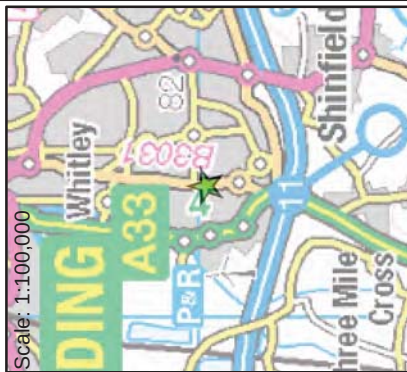
Figure 1	Site Location and Nature Conservation Designations
Figure 2	Bat Habitats
Figure 3	Potential Bat Features/Access
Appendix 1	Development Proposals
Appendix 2	Survey Methodology
Appendix 3	Legislation and Planning Policy Relating to Wildlife & Development in England
Appendix 4	Site Photographs
Appendix 5	Target Notes and Building Descriptions
Appendix 6 and living'	Bat Conservation Trust leaflet, 'Encouraging Bats: a guide for bat friendly gardening
Appendix 7	Natural England leaflet, 'Birds and your Garden'



Site Location

Local Nature Reserve

Ancient Woodland



1:20,000 Scale @ A3

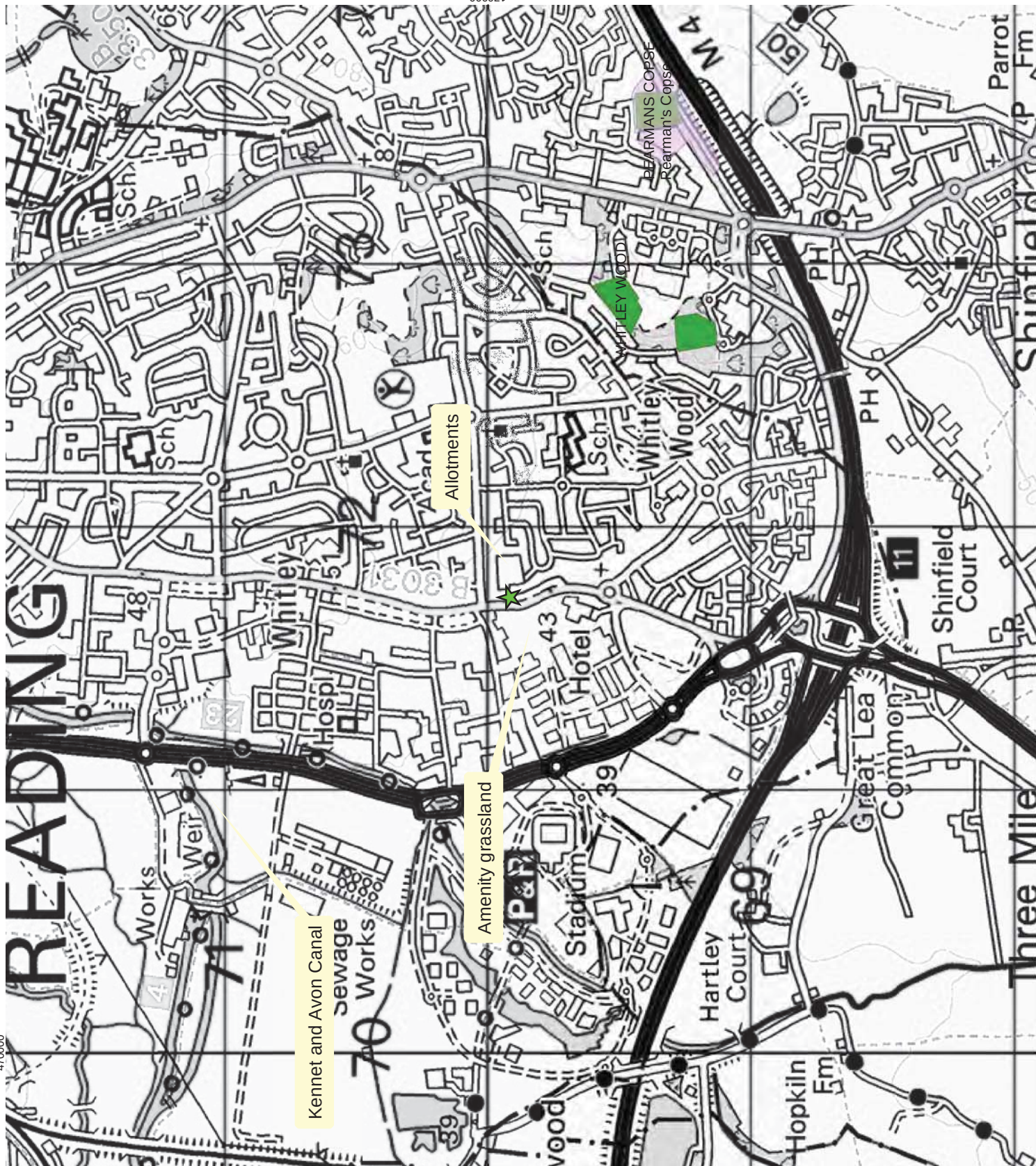
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Ref: 519 Basingstoke Road_Fig001

Date: 23/06/2016

Figure 1:

**519 Basingstoke Road
Reading**





Key

- Site Boundary (Indicative)
- Amenity Grassland
- Building
- Hardstanding
- Hedge
- Tree
- target notes



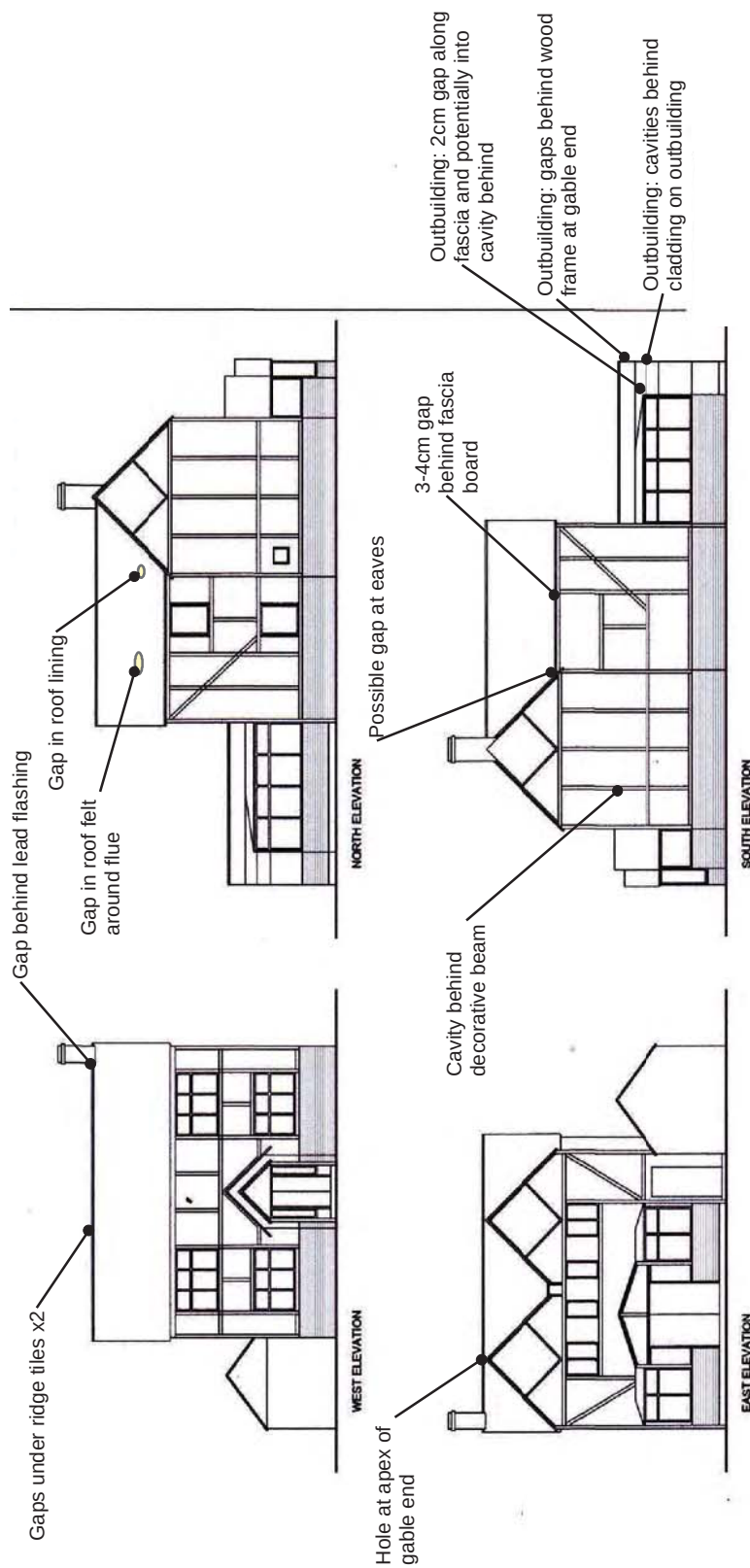
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Date: 26/06/2016

Figure 2:
Bat Habitats

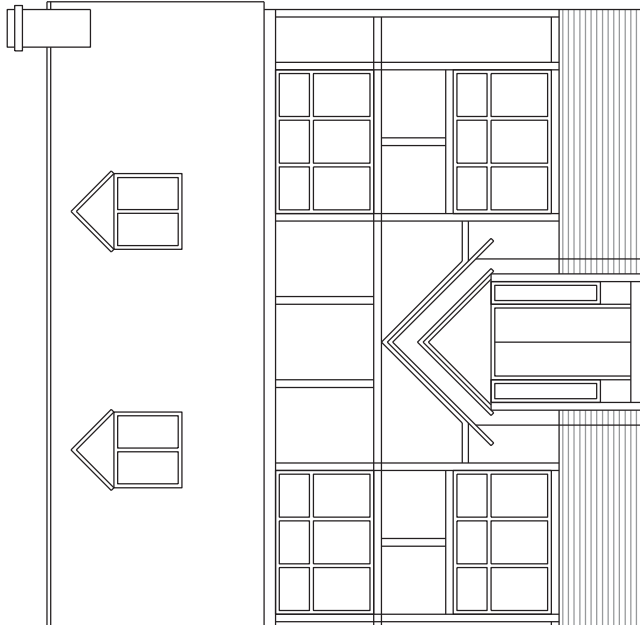
519 Basingstoke Road
Reading



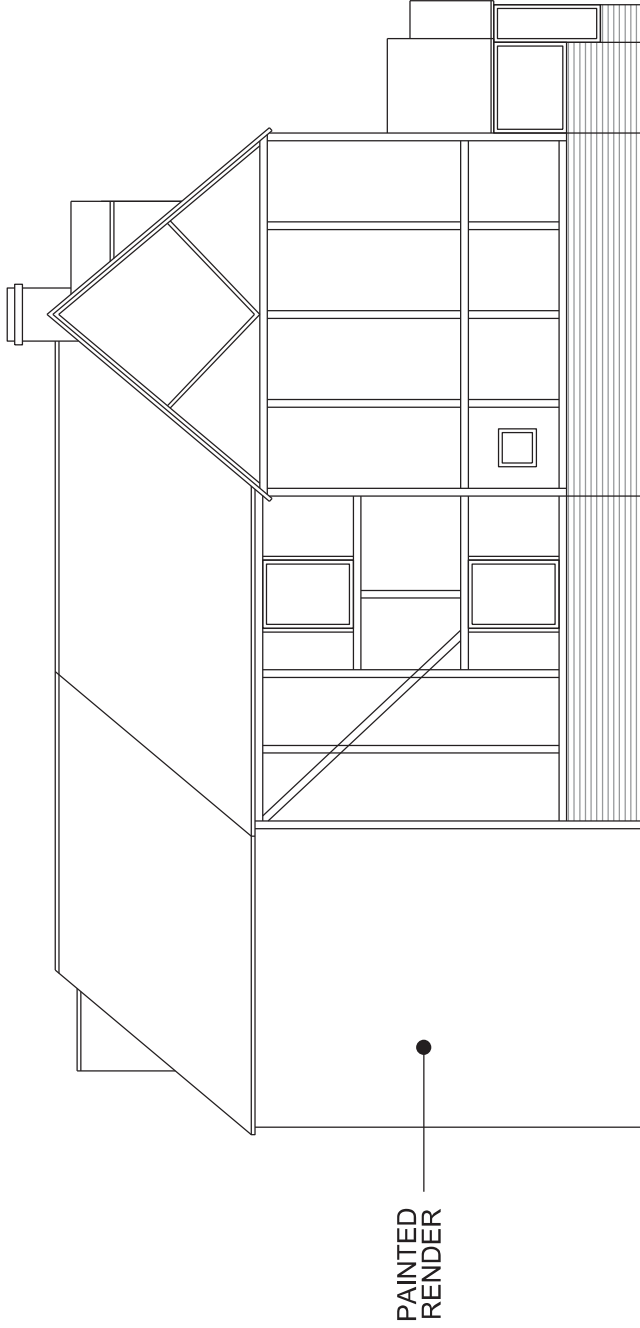


Appendix 1

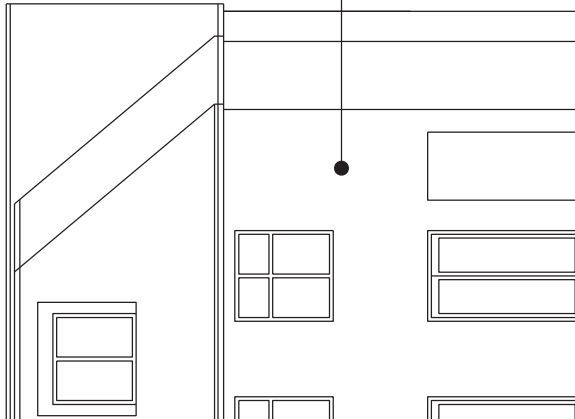
Development Proposals



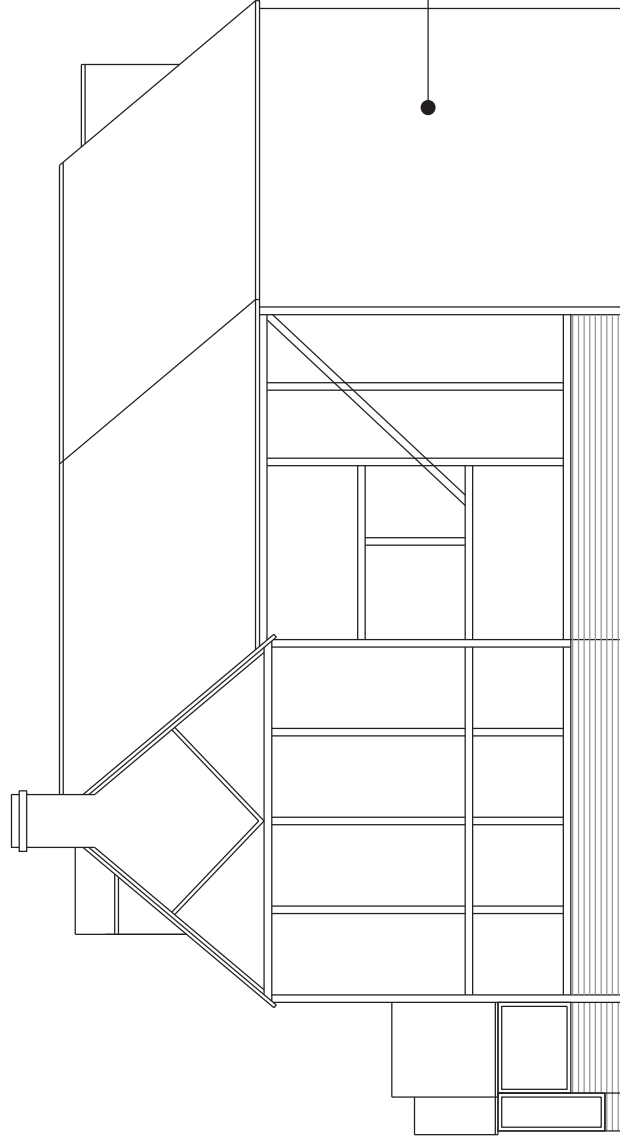
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NORTH ELEVATION



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Appendix 2

Survey Methodology

The Phase 1 Survey has been completed following guidance in The Institute of Ecology and Environmental Management (IEEM) Guidelines for the Ecological Impact Assessment in the United Kingdom (26 June 2006).

DESK STUDY METHODOLOGY

A basic desk study was carried out in order to gather and refer to existing biodiversity and contextual information with respect to the zone of influence and the wider area. This involved interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), Natural England's Nature on the Map, aerial photos, current Ordnance Survey maps and Old Maps. Reference was also made to the UK BAP, and local biodiversity priorities.

PHASE 1 BAT SURVEY FIELDWORK METHODOLOGY

Bats use buildings and trees for roosting and breeding and, where present, a preliminary assessment of the potential for these features to support bats was undertaken during the survey, using high powered binoculars and torches, an endoscope and mirrors where necessary/appropriate. Potential may include gaps beneath roof or hanging tiles, in soffits, or beneath the end of ridge tiles, but also under the edge of felt on flat roofs. In trees potential roosting features include woodpecker holes, splits in branches and peeling bark.

Preliminary evidence was obtained through noting any staining around potential roost entrances, and looking for bat droppings, for example on window sills or below fascia and barge boards.

A preliminary evaluation was also undertaken of potential bat foraging habitat within the site and in the local area, including woodland, pasture, hedges and watercourses.

Appendix 3

Legislation and Planning Policy Relating to Wildlife and Development in England

KEY LEGISLATION

Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010¹ (known as the “Habitats Regulations”) transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the European “Habitats Directive”) into UK legislation. These regulations consolidate all the various amendments made to the preceding “Conservation Regulations” 1994 for England and Wales.

The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) Regulations 2012.²

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which form part of the Natura 2000 network of protected areas across Europe. The Regulations also prohibit the deliberate capture, killing or disturbance of European Protected Species (EPS), which include *inter alia* Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, Otter *Lutra lutra* and all native species of bat, and make it an offence to destroy or damage either the nesting or breeding sites of these species. The above actions can be made lawful through the granting of licenses after Natural England (the licensing authority in England) is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the EPS.

Further information on SPAs, SACs and European Protected Species (Licensing and Protected Species) is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981³ is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National

¹ The Conservation of Habitats and Species Regulations 2010. Available from: <http://www.legislation.gov.uk/uksi/2010/490/contents/made>

² The Conservation of Habitats and Species (Amendment) Regulations 2012. Available from: <http://www.legislation.gov.uk/uksi/2012/1927/contents/made>

³ The Wildlife and Countryside Act 1981. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Table A1.1: Key Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000⁴ have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006⁵ was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England⁶. Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on species and habitats of Principal Importance is provided in the relevant sub-section of this Appendix.

⁴ The Countryside and Rights of Way (CRoW) Act 2000. Available from: <http://www.legislation.gov.uk/ukpga/2000/37/contents>

⁵ The Natural Environment and Rural Communities Act 2006. Available from: www.legislation.gov.uk/ukpga/2006/16/contents

⁶ The S40 list replaces the previously prepared list of habitats and species of Principal Importance for the conservation of biological diversity in England that was published under Section 74 (2) of the Countryside and Rights of Way Act 2000.

PLANNING POLICY & GUIDANCE

Listed below is the main planning policy and government guidance that relates to the conservation of nature and development at all levels of government.

National Level

National Planning Policy Framework (NPPF)

The National Planning Policy Framework⁷ sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 14), with a requirement to consider its economic, social and environmental dimensions. This does not apply where development requiring Appropriate Assessment under the Habitats Directive is being considered, planned or determined (paragraph 119).

Section 11 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system and replaces the preceding *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation*. It specifies that when determining planning applications, local planning authorities should aim to **conserve and enhance** biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland;
- development proposals where the primary objective is to conserve and enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged.

In the case of SSSIs and irreplaceable habitats, exceptions *may* be made if it can be clearly demonstrated that the benefits of the development, at this particular site, outweigh the costs in terms of loss or adverse impacts.

Section 11 also specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or

⁷ DCLG (2012). *National Planning Policy Framework*. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05⁸ to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence or otherwise of protected species, and the extent to which they may be affected by the proposed development, must be established before permission is granted;
- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

Good Practice & Standards

Various forms of guidance are available to manage biodiversity through the development process. Of particular note is *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*⁹. This document was principally designed to help local planning authorities deliver the national policies in the former PPS9 (now replaced by the NPPF) and comply with legislation. It is also useful to developers and their agents as it outlines the expectations of the local authority for the conservation of nature in the development control process.

Regional Level

The South East Plan Regional Spatial Strategy has now been revoked, with the exception of Policy NRM6, which relates to the Thames Basin Heaths Special Protection Area.

⁸ ODPM (2005). *Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System*. Available from:

<http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity>

⁹ British Standards Institution (2006). *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*. Publicly available at: <http://www3.hants.gov.uk/pas-2010.pdf>

Local Level

The Reading Borough Local Development Framework Core Strategy was adopted in January 2008 and altered in January 2015, and until adoption of a new local plan currently in preparation, will guide development in the Borough to 2020. It contains the following policies of potential relevance:

CS36 – Biodiversity and Geology

a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes. On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that:

- i. The need for development clearly outweighs the need to protect the value of the site; and
- ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.

b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.

c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

CS38 – Trees, Hedges and Woodlands

Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal, and the Borough's vegetation cover will be extended.

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets” (paragraph 117). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level. An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The UK Biodiversity Action Plan 2007 (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framework*¹⁰ and individual national biodiversity strategies. The UK framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010. The Framework's overall vision is that "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*¹¹ is the national biodiversity strategy, which has the stated mission "(...)to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people." In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets objectives relating to terrestrial and marine habitats and ecosystems, species and people. These include:

- Establishing coherent and resilient ecological networks, described as "a network of high quality sites, protected by buffer zones, and connected by wildlife corridors and smaller, but still wildlife-rich, 'stepping-stone' sites";
- Taking targeted action for the recovery of priority species whose conservation is not delivered through wider habitat-based and ecosystem measures ;
- Establishing Nature Improvement Areas and Marine Protected Areas;
- Bringing more SSSIs into favourable condition;
- Reducing environmental pressures by working with sectors such as agriculture, forestry, planning and development.

A network of 48 Local Nature Partnerships have been set up across England to help deliver these objectives.

Note that as these changes are still relatively new, some local plans and government guidance documents/circulars still refer to the UK BAP and 'UK BAP priority habitats and species'. These habitats and species are listed under Section 41 of the NERC Act, and **remain a material consideration in the planning process**. They are now described as 'Species/Habitats of Principal Importance', though they are also commonly referred to as 'Section 41 Species/Habitats' or simply 'Priority Species/Habitats'. Further guidance is given in the relevant sections below.

Local level

The Berkshire Local Nature Partnership has produced the Natural Environment in Berkshire Biodiversity Strategy 2014-2020 which builds on, and replaces the previous Berkshire Biodiversity

¹⁰ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). *The UK Post-2010 Biodiversity Framework*. Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

¹¹ DEFRA (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Available from: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

Action Plan (BAP). In addition to identifying a network of Biodiversity Opportunity Areas across the county and a range of priority habitats which support bats, it also lists a number of priority species recorded in Berkshire including:

- Western Barbastelle *Barbastella barbastellus*
- Bechstein's Bat *Myotis bechsteinii*
- Noctule Bat *Nyctalus noctula*
- Soprano Pipistrelle *Pipistrellus pygmaeus*
- Brown Long-eared Bat *Plecotus auritus*
- Greater Horseshoe Bat *Rhinolophus ferrumequinum*
- Lesser Horseshoe Bat *Rhinolophus hipposideros*

Delivering Biodiversity Opportunities

Where practicable, opportunities should also be sought to achieve a **net gain** (i.e. enhancement) of biodiversity. Support for biodiversity enhancement is provided in the Public Authority 'Biodiversity Duty' under the NERC Act 2006 and in the key principles of the NPPF, as described above.

Enhancement projects may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable urban drainage schemes (SUDS) and green roofs. Planning conditions and obligations are increasingly being used to mandate biodiversity enhancement on or off a development site, either through design or through financial support.

Many ideas for incorporating ecological enhancement into planning and development can be found in the biodiversity action plans and/or strategies relevant to the policy or development area, or through initiatives led by the Local Nature Partnership. At the national level, twelve Nature Improvement Areas were set up in 2012 in order to deliver landscape-scale conservation objectives, and many regions and counties have also identified and mapped 'Biodiversity Opportunity Areas', 'Nature Maps' or 'Strategic Nature Areas' where conservation action such as habitat creation and restoration will deliver the greatest benefits for biodiversity.

Other sources of ideas and opportunities include schemes led by conservation NGOs, such as the Wildlife Trusts' 'Living Landscapes' and the RSPB's 'Futurescapes', which are working in partnership with landowners and local communities across the country to restore ecosystems and ecological networks.

SPECIES SPECIFIC PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England and are of relevance to this report. It is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by proposed development. This can best be achieved by undertaking surveys early in the planning process. Mitigation measures are required to minimise

disturbance to protected species and may necessitate a licence. Natural England offers further detailed advice which can be applied to planning applications that affect protected species¹².

Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Bats are protected further by law in England.

There are 18 species of bat in the UK, 7 of which are UK BAP priority species and Species of Principal Importance in England under S41 of the NERC Act 2006. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitat Regulations 2010. It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, deliberately or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts); or
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species licence from Natural England.

Birds

48 species of bird on the UK BAP exist in England. These species, plus the Hen Harrier, are also listed as Species of Principal Importance in England under S41 of the NERC Act 2006. All birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 affords extra protection for a number of species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependant young, constitutes an offence.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set down in the law, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

¹² Natural England. 2011. *Standing Advice for Protected Species*. Available from: <http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/default.aspx>

European Protected Species Licences

A European Protected Species Licence is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitat Regulations 2010; including inter alia all species of bats, Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus* and Otter *Lutra lutra*. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

- 1) The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- 2) There is no satisfactory alternative; and
- 3) The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance in England for the conservation of biodiversity under Section 41 (S41) of the NERC Act 2006¹³. This list of species includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier¹⁴). While these species may not be legally protected, there is a clear responsibility on planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species and habitats and to enhance them where possible. Additional guidance to developers is typically provided in level planning policies.

¹³ The S41 List of Species & Habitats of Principal Importance in England is available from:
<http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

¹⁴ The Hen Harrier has also been included on the List because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

Appendix 4

Site Photographs



Photo 1: West (front) aspect of main house observed from parking area/road.



Photo 4: Outbuilding (south aspect).



Photo 2: East aspect of main house showing rear conservatory and mature box hedge.

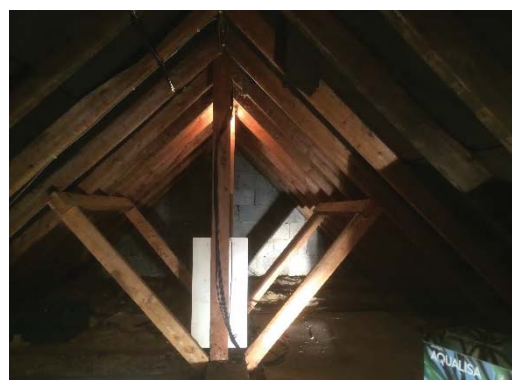


Photo 5: Interior view of roof void above main house.



Photo 3: North aspect of main house showing driveway and west aspect of outbuilding.



Photo 6: West aspect showing roof of front porch.

Appendix 5

Target Notes and Building Descriptions

Target Notes

Target Note Number (See Figure 2)	Description
1	Managed mature box hedge, 3m H x 1m W, encloses south, east and north sides of the rear garden.
2	Mature ash in adjacent garden partially screening south aspect. Recently cut back on northern side.
3	Mature weeping willow tree with large canopy.
4	Extensive, well-established allotment area bordered by residential housing on all sides.
5	Amenity grassland area used for recreation purposes.

Building Descriptions [Refer also to Figure 3.]

House

Two-storey mock Tudor 1940's residential dwelling with solid brick and blockwork cavity walls rendered with cementitious material between decorative (non-structural) timbers externally and a concrete tiled pitched roof (**Photo 1**). Wooden barge boards at each of four gable ends, wooden fascias. Chimney breasts on south and north gable ends, the latter no longer in use. PVC-casement windows and conservatory with plastic roof backing onto rear garden on east elevation (**Photo 2**). Lean-to front porch on west elevation with clay tiled roof (**Photo 6**).

Gaps under ridge tiles roof tiles, behind lead flashing, at eaves and behind decorative timbers provide potential access to cavities for roosting bats (**Figure x**). The loft void is wooden framed and uncluttered with some cross trussing on the western section, lined with bitumen felt, part-boarded and insulated with fibreglass (**Photo 5**). Internal temperature at time of survey 21.9°C. Approximate dimensions 8.5m W x 8m L x 1.75m H. Gaps at eaves and in roof lining provide potential access for bats but there were cobwebs throughout and no evidence of use by bats was observed internally.

Initial assessment = Low bat roost potential

Outbuilding/Office

Single-storey outbuilding currently used as an office which has a pitched roof section covered with tightly fitting felt shingles at the west end and a flat roofed section covered with well-sealed roofing felt at the east end (**Photos 3 and 4**). Some gaps in external wood cladding providing potential access to cavities behind for roosting bats.

Initial assessment = Low bat roost potential

Appendix 6

Bat Conservation Trust Leaflet, 'Encouraging Bats: a guide for bat friendly gardening and living'

Bat Conservation Trust

Living with bats

A guide for roost owners



Brown long-eared bats © Hugh Clark

Guidance and advice on sharing your
home with bats, identifying species
and caring for grounded bats.

Frequently asked questions

How can I tell if I have bats?

Often with difficulty! Some householders have had bats for years without being aware of them.

Look for bat droppings on windows, walls or sills. In the roof void droppings may be below the gable ends or in a line under the ridge.

Bats may be visible on ridge beams inside the roof void but could be tucked away from sight.

Please take care when entering the roof void, particularly during July and August and in the winter months when bats are most vulnerable to disturbance, and do not shine lights up at the ridge. Stop immediately if you suspect any bats are there so as not to disturb them.

During the summer months you can watch to see where the bats emerge from when they come out to feed around dusk time.

Another clue is the chattering sound that bats may make at dusk just before they fly out to feed. Maternity colonies can be more vocal around dawn in July and August when hungry babies call to mothers as they return from their night's insect hunting.

However you may see no sign of bats at all!



© Gemma Russell

How can I recognise their droppings?

Do the crumble test! Roll a dropping in a piece of tissue between your finger and thumb – if it feels hard then you probably have mice, not bats. A bat dropping is small and dark and will crumble to dust quite easily because it consists of indigestible insect parts. Bat droppings present no known health hazard in the UK, and can be swept up in the autumn to use as an excellent fertiliser for the garden.



©Aminda Adebisi

Will the bats cause any damage?

Bats are not rodents, and do not nibble or gnaw wood, wires or insulation. They do not build nests, nor do they bring bedding material or insect prey into their roost. Bats are clean and sociable animals and spend many hours grooming themselves. Cover stored items with dust sheets (not plastic sheets) to collect droppings, and make sure that your water tank is covered to prevent any bats from drowning.

Why do bats use buildings? I thought they lived in caves or trees!

Tree and cave roosts have become increasingly scarce causing some bat species to adapt to live in our buildings. Buildings often make better roosting spaces as they are more thermally stable, which is particularly important in the summer months when female bats need warm spaces to rear their young.

Will we get overwhelmed with bats?

No. A bat mother normally has only a single baby in a year, and not always every year. Bats are most often found in houses in summer, as the females need somewhere warm to have their babies. Like all mammals, they give birth to live young, which they suckle on milk for several weeks until the babies can fly and feed themselves, when they will all move away. If bats find a place for a maternity roost that really suits them, they will often return year after year.

Looking after your lodgers

All British bats eat insects, which they catch using a sophisticated system called echolocation, listening to the returning echoes of their high-pitched calls to build up a 'sound picture'. They feed on a diet of midges, mosquitoes, moths and beetles, though different species have their own tastes. By growing plants that are attractive to a range of insects, we can make our gardens important feeding stations for bats, birds and other wildlife. Visit www.bats.org.uk for tips on wildlife-friendly gardening, bat boxes, and how to identify the species you might see in your garden.

A problem often faced by bats in gardens is cats. If you own a cat, you can help to save lives by bringing your cat in for the night half an hour before sunset so that bats can emerge from their roost undisturbed. This is especially important from mid-June to the end of August, which is when bats are rearing their young. This also allows the bats to return at dawn undisturbed by cats. If you find a bat that has been caught by a cat, whether or not it appears injured, please call the Bat Helpline 0845 1300 228 for urgent care advice.

What happens to bats in winter?

Because insect prey becomes scarce in winter, bats go into hibernation. They find a cool place, free from disturbance, and tuck themselves away, often in a crack or crevice, sometimes in sheds or garages. If you find a hibernating bat take care not to disturb it, as unnecessary waking burns up valuable fat stores. Don't be surprised if you see a bat flying during the winter as they do wake occasionally, to move to a new site or to look for food or water.

Is there help for my concerns?

Occasionally roost owners may encounter some issues associated with their bat roost, but the majority of problems can easily be resolved. If you have any concerns please seek advice from your Statutory Nature Conservation Organisation (SNCO) or contact the Bat Helpline 0845 1300 228.

On occasion bats mistakenly enter living areas. See later on for what to do if you find a bat. If this happens regularly your SNCO can advise.

Bats and their roosts are protected by law, which means that it is illegal to disturb, kill or injure them or to damage, destroy or obstruct access to a bat roost, whether intentionally or

recklessly. As bats tend to return to the same roosts every year, the roosts are protected whether bats are present or not. Therefore it is always best to seek advice from your SNCO before doing anything that may put the roost at risk.

Will I be able to have work done in my loft or to my roof?

Having bats does not mean that building work, roof repairs or timber treatment cannot take place. It is advisable that you plan ahead and consult your local SNCO well before work starts and follow their advice on how to proceed lawfully. In many cases they will send a trained roost visitor to inspect your roost, identify bat species and

provide advice, free of charge. Alternatively, they will be able to advise you on the best course of action. Never put any fly papers or adhesive rodent traps in your loft if bats roost there. Seek advice from your SNCO if you have a rodent or insect problem at your bat roost.



Brown long-eared bats hibernating © Daniel Hargreaves

Who's living in my house?

There are 18 species of bat in the UK, but only a few are likely to roost in houses. Here we list the species that you are most likely to find, although there are always exceptions to the rule...

Different species of bat prefer different places to roost (or shelter). The most abundant of the British bats are the **pipistrelles**, of which there are three species in the UK. The soprano pipistrelle and the common pipistrelle (below) often roost in houses and are almost identical to the untrained eye. The Nathusius' pipistrelle is quite rare and found less often in houses.

Pipistrelles often choose modern houses and prefer confined spaces around the outside of buildings, usually roosting behind soffits, barge boards and hanging tiles, between roofing felt and tiles, within cavity walls and sometimes behind window frames. They do not usually enter roof spaces, although well established large colonies in older buildings may do so. Their droppings are more likely to be found externally and you may see this species emerge at dusk so keep an eye out for their amazing aerial acrobatics at that time!



Common pipistrelle, Hugh Clark

These tiny bats generally measure between 3.3cm and 4.8cm (head and body length), with a wingspan of 18cm to 25cm. Their preferred diet consists of midges and mosquitoes – a single pipistrelle may eat up to 3,000 insects in one night, one-third of its body weight!



Brown long-eared bat, Hugh Clark

The **brown long-eared bat** (above) is one of the most endearing bats. Its long ears make it instantly recognisable, even in flight. At rest, however, the ears may not always be obvious, being curled back or tucked away completely under the bat's wings.

Brown long-eared bats prefer large uncluttered roof voids; a feature of barns and older buildings. In houses they usually roost singly or in small groups inside the roof void among apex roof timbers, around ridge ends and chimneys, and in ridge tile crevices. Their droppings are often seen in a line under the ridge.

These medium-sized bats spend more time inside the roof space than many other bats, and are generally very quiet inside the roost, not leaving until after dark.

The brown long-eared bat, along with the very rare grey long-eared bat, flies slowly amongst foliage to pick insects off leaves and bark. They are also known as 'whispering bats' because their echolocation sounds are very quiet. The size of their ears means that their hearing is particularly sensitive.

Other species of bat may be found roosting in houses, depending on the style and location of the house. These include:

Serotine, one of the largest bat species in the UK, is almost exclusively found roosting in houses across southern England and Wales. Rarer than pipistrelles and brown long-eared bats, serotines usually roost in crevices around chimneys and in cavity walls. Their favoured prey is large beetles, which they find over farmland and grassland.



©Hugh Clark

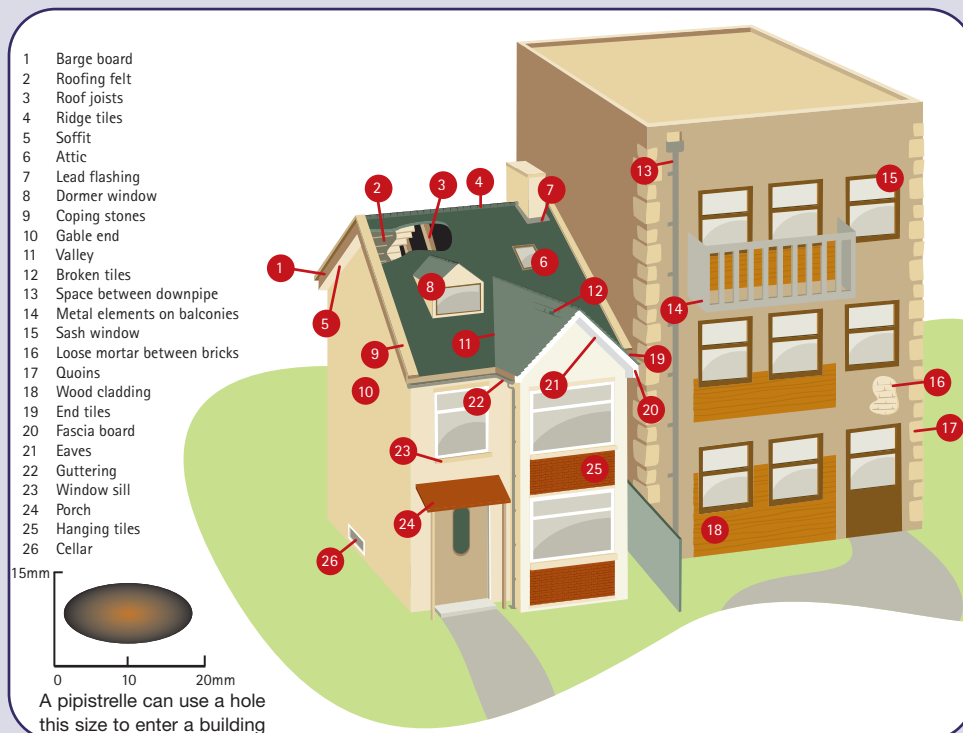
Horseshoe bats, probably the most unusual-looking of the UK's bats, are sometimes found roosting in houses in south-western England and Wales. Greater and lesser horseshoe bats hang free in the roost from their feet.



©Garreth Jones

Where will bats be roosting?

Any structure is a potential bat roost, providing there is sufficient access – bats need only a 20mm gap! Here's a guide to where they might be roosting or coming in and out of your house.



What if I find a bat on the ground, or

If you find a bat on the ground during daylight hours or flying inside a building, it is likely to need some help. Roost owners may occasionally find bats, particularly juveniles, on the ground in their garden.

Bats should normally be handled only by licensed bat workers, but unlicensed people are allowed to handle them for the purpose of rehabilitation and release. If you find a grounded bat please contact the **Bat Helpline 0845 1300 228** for advice – we're here to help.

Bats flying indoors

A bat flying in a room has most likely taken a wrong turn and is looking for a way out! If it is after dusk (and good weather), close the door, open the windows as widely as possible, draw back the curtains and remove anything that obstructs the window opening. Dim the lights and give the bat the chance to find its own way out. Bats navigate by sending out high-pitched sounds and listening for the echoes, so the bat should find its way out of the room.

NEVER try to catch a flying bat – you are likely to injure it severely and it may even bite in self-defence. Sometimes young bats which are inexperienced flyers will become exhausted before finding the way out. They may try to land on a wall or curtains, or they may crash land on furniture or the floor. In this case, you should contain the bat as described opposite (with access to water), and try to release it in the evening (see opposite page). This also applies when bats are flying indoors during daylight or bad weather.

Grounded or injured bats

Sometimes, a grounded bat may just be exhausted and need a bit of time to recover with a little help. It may be injured or in danger from passing predators (such as cats), so it is

better to take it into captivity temporarily and get advice from the **Bat Helpline 0845 1300 228** or your local bat group. Bats are gentle creatures and seldom show any aggression, but they are wild animals and may be frightened or in pain. **You must wear protective gloves and handle the bat as little as possible.**

Containing and caring for the bat

To contain a grounded bat, place a small box (such as a shoe box or ice cream tub) over the bat and use a piece of flat cardboard to gently and carefully slide the bat into the box. Put a loosely crumpled piece of cloth, such as an old tea towel, in one corner – the bat will feel safer



if it has something to crawl into and hide in. Put a few small air holes into the secure fitting lid and put a few drops of water into a very shallow container (such as a plastic milk bottle top) in one corner for the bat to drink from. Place the box somewhere quiet and dark at room temperature and check every couple of hours to replenish water if necessary. Once the bat is contained, contact the **Bat Helpline 0845 1300 228** for advice.

Baby bats

All British bats are small, and you may be surprised at how tiny they are. Baby bats are sometimes found on the ground in June, July or early August. At all other times of the year, they will be fully-grown and independent. Baby bats have little or no fur and are no bigger than a 50p coin. If you suspect the bat is a baby, you

flying in my house?

Bat Helpline: 0845 1300 228

must seek help immediately via the **Bat Helpline 0845 1300 228**. It may be possible for a bat expert to reunite the baby with its mother.



Releasing a bat

Only bats that have been seen flying strongly inside should be released. Once it is dark outside (and the weather is good), place the box on its side on a wall or shed, at least five feet off the ground – don't forget to take the lid off! The bat can then crawl out of the box and fly away when it is ready. If the bat does not fly away within fifteen minutes, take it back inside and contact the **Bat Helpline 0845 1300 228** for more advice.



Bats and rabies

Some bats in Europe can carry a rabies type virus called European Bat Lyssavirus (EBLV). This is very rare in the UK – only ten bats have tested positive for the live virus since 1987 (as of August 2013), all of one species – the Daubenton's bat. Ongoing research continues to show that this virus is present at a very low level in our UK populations.

Rabies is passed on via a bite or scratch from an infected animal, or from its saliva coming in contact with your mucous membranes (for example your eyes, mouth or nose). It has never been found in bat droppings or urine in the UK.

You do not need to worry about bats and rabies if you don't handle bats. If you need to handle a grounded or injured bat, see the opposite page for advice on how to pick it up and contain it. Wearing gloves is safest for both you and the bat, but if you are bitten or scratched by a bat or if a bite/scratch is suspected, you should do the following as a precaution:

- Wash the wound immediately with soap and running water for at least five minutes. Cleanse the wound with an alcohol base or other disinfectant.
- Seek prompt advice from your doctor about post-exposure rabies treatment.
- If possible, keep the bat in a suitable box and get expert help for it – call the **Bat Helpline 0845 1300 228** for details of your nearest bat worker.

Making your bats count

The Bat Conservation Trust (BCT) is working towards a future where everyone, everywhere can enjoy seeing and hearing bats as a natural part of their environment.

Many of our bat species have declined dramatically over the last century. The Bat Conservation Trust organises a number of national, annual surveys to monitor the status of many bat species across a range of habitats. The surveys are carried out by a network of volunteers and form the National Bat Monitoring Programme (NBMP).

If you would like to help us with this important work to track changes in populations, you can do so by counting your bats as they emerge from their roost on two separate evenings during the summer. For more information and a survey form, please visit www.bats.org.uk/nbmp.

With your help, we can make sure bats are around for future generations to enjoy. Become a member of the Bat Conservation Trust today and help to protect these amazing mammals. You can join online at www.bats.org.uk or contact us on the details below. The Bat Conservation Trust can also provide details of your nearest local bat group.

Useful contacts

Bat Conservation Trust (BCT)

5th Floor, Quadrant House, 250 Kennington Lane, London SE11 5RD
Bat Helpline 0845 1300 228
www.bats.org.uk
enquiries@bats.org.uk

Contact us for more information on living with and looking after bats, taking part in the National Bat Monitoring Programme scheme, and for details of your local bat group or bat carers.

Statutory Nature Conservation Organisations (SNCOs)

Natural England
Telephone 0845 600 3078
www.naturalengland.org.uk

Natural Resources Wales
Telephone 0300 065 3000
www.naturalresourceswales.gov.uk

Scottish Natural Heritage
www.snh.gov.uk

Northern Ireland Environment Agency
Telephone 0845 302 0008
www.doeni.gov.uk/niea

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Registered office: Quadrant House, 250 Kennington Lane, London SE11 5RD. Vat Reg No: 877158773.

Updated September 2013

Appendix 7

Natural England leaflet, 'Birds and your Garden'



Natural England works for people, places and nature to conserve and enhance biodiversity, landscapes and wildlife in rural, urban, coastal and marine areas. We conserve and enhance the natural environment for its intrinsic value, the wellbeing and enjoyment of people, and the economic prosperity it brings.

www.naturalengland.org.uk

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Front cover image: Robin on blackthorn blossom.
Dave and Brian Bevan

Birds and your garden

NATURAL
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www.naturalengland.org.uk

Birds and your garden

You probably enjoy watching the birds that visit your garden. You may already be making efforts to entice them there. The money spent on food for garden birds has increased by 500 per cent in the last 15 years while recent sales of bird nest boxes and bird tables have soared. But have you ever thought seriously about what brings birds to gardens or tried to look at your garden through their eyes? This leaflet is not a field guide but will help you see your garden from a bird's perspective. We hope it will inspire you to do what you can to make your garden, whatever its size, even more attractive to birdlife.



Blue tits on window feeders can be watched at close quarters. Chris Gomersall

Birds come to gardens to feed, breed, nest and rest. If water is provided, they will also visit to drink, bathe and preen their feathers. For a relatively small number of birds, gardens may supply most of their requirements for most of the year. More commonly, however, gardens offer a stopping-off point – somewhere to spend part of the day or night, or part of the year. Having a greater appreciation of what birds need from gardens (and when) will enable you to provide for them to a greater degree.

Test the suggestions in this leaflet and let us know what success you have!

Make a note of all the bird species that come to your garden and a separate list of those that nest.

Put as many of the recommendations here as you can into practice and repeat the survey at yearly intervals.

Let us know what seems to have worked and what has made no difference. See page 37 for contact details.

Food

Although garden birds can be grouped artificially into broad categories such as insect-eaters and seed-eaters, the reality is less simple. Insectivores such

as tits and woodpeckers also include vegetable food in their diet and blackcaps are also very partial to winter fruits and berries.

Correspondingly, in the first week or so of their lives, the nestlings of most seed-eating birds need the protein provided by insects and other



Like many birds, chaffinches switch from eating mainly seeds to a diet of insects in the spring and summer. Chris Gomersall

invertebrates, such as spiders.

The ideal garden for birds should therefore be able to supply both animal and vegetable food matter throughout the year. This has a number of practical implications.

The use of pesticides should be kept to a minimum or, better still, stopped altogether. Almost all invertebrates provide food for some bird or other and very few constitute much of a threat to garden plants. Some of those that can cause damage, such as aphids, are actually among the most valuable food sources for young birds. If you stop spraying blackfly, greenfly and other pest species, you will find that, eventually, natural predators will keep their numbers in check. Cutting out pesticides saves you time and money and you have the added bonus of being able to enjoy the sight of lacewings and ladybirds, as well as house sparrows and blue tits, feasting on aphids.

The following is a list of other tried and tested ways of ensuring a plentiful supply of invertebrate food for your birds:

- Maintain one or more compost heaps.
- Keep dead wood, perhaps in a log pile.
- Allow leaves to rot down naturally rather than bagging and removing them in the autumn.
- Plant a wide variety of trees and shrubs, especially native species such as willow, oak and birch which support many caterpillars.
- Choose annual and perennial plants attractive to nectar-feeding insects.
- Don't be obsessive about tidying

away dead and dying perennials in the winter – these can shelter many useful hibernating creatures and can be left until the weather warms up again.

- Try developing at least part of your lawn as a wildflower meadow – these areas will be attractive to many small insects.

Most birds eat some vegetable matter and much is known about the preferred foods of individual species.

Goldfinches love the seeds of teasel, lavender and sunflower. Alder and silver birch trees may attract common redpolls if they are in the vicinity.

Starlings are fond of rowan berries and cherries, but will also eat the small black berries of Virginia creeper when really hungry. Bullfinches like the buds of forsythia and the seeds of forget-me-not.

Mistle thrushes don't just go for the berries of mistletoe from which they take their name: they will try and take possession of any fruiting holly or rowan tree and defend it fiercely from competitors.

Robins eat the attractive dual-coloured berries of the spindle tree, while ivy berries are a vital food source for blackcaps, blackbirds and wood pigeons, especially late in the year when there may be little else available. Every gardener should try and make room for some apple trees: members of the thrush family, including winter

visitors like redwing and fieldfare, will make short work of any windfalls, and blackcaps like them too. If you are lucky enough to have a garden suitable for large trees, then many birds may be drawn in by species such as oaks (jays, nuthatches, woodpeckers and woodpigeons) Scots pine (coal tits and



Members of the thrush family enjoy apples, especially in harsh weather. Top: blackbird.

Mike Lane/Natural Image

Above: Fieldfare. Robert Dickinson/Natural Image

goldcrests) and beech (chaffinches). If you live near a beech wood you may even see bramblings visiting your garden.

Smaller gardens can still be made appealing to birds by planting shrubs, for example exotics like cotoneasters



Top: Redwings are among the many birds that eat hawthorn berries. Chris Gomersall
Centre: Woodpigeons go to great lengths to get at ivy berries! Chris Gomersall

Above: Up to two million bramblings may overwinter in Britain. In gardens, they go for premium seed and peanut granules. Paul Keene/Avico Ltd

(but not cotoneaster *Conspicuax conspicus 'Decorus'* – birds ignore the berries for some reason), pyracantha and berberis, or natives like wild privet, guelder rose and dogwood. The berries of some ornamental plants like amelanchier and leycesteria are so attractive to thrushes that they may be stripped as soon as they are ripe.

Lawns, whether traditionally close-mown and weedfree or those in which clovers, dandelions and other 'weeds' are more tolerated, are ideal hunting grounds for blackbirds, robins and starlings. You might also see song thrushes in search of earthworms and leatherjackets; pied wagtails looking for small flies and, in more rural areas, green woodpeckers seeking ants (their favourite food).



Lawns are perfect hunting areas for blackbirds.
Mike Lane/Natural Image

Song thrushes are great garden allies as they eat large numbers of snails, first smashing their shells to get at the animal inside. To help them, make sure your garden has a suitable 'anvil' in a place where thrushes have a reasonable chance of seeing an approaching cat. A paving slab or rock placed in the centre of a lawn is ideal.



A flat stone on a lawn makes an ideal anvil for a song thrush. Mike Lane/Natural Image

Cats

Many gardens are visited by cats and it is important to help guard your birds against their unwelcome attention. Position bird feeders and tables away from the low cover in which cats may hide and also provide perches nearby – vantage points from where birds can detect an approaching cat. Anecdotal evidence suggests that the more birds that visit a garden, the lower the chances of a cat being able to catch any one individual – probably because there are more pairs of eyes looking out for potential threats. Sonic cat deterrents can work well but should be moved around the garden on a regular basis so that the cats don't learn how to avoid the triggers. If you are a cat owner, consider attaching a bell or sonic bleeper to your cat to warn the local wildlife of its approach.



Cats look innocent but kill around 50 million garden birds each year. Those with bells or sonic devices kill 40% fewer birds than those without. Dave and Brian Bevan

How many species?

Even very small gardens may be visited by 10 to 20 different species of bird during a year. In an ordinary suburban garden, 40 or 50 species would not be uncommon and even this number can include a few surprises, especially in hard weather when birds like kingfishers may turn up in search of unfrozen water, or perhaps woodcock or snipe looking for soft ground for foraging. For gardens near a coast or a prime bird habitat or those on a migration route, sightings of 80 species or more are possible, although many of these will simply be passing over and you

would have to be fairly knowledgeable to identify them all. The exciting thing is that almost any species may turn up in a garden sometime, somewhere. The red kite has been reintroduced in some parts of the country and is now regularly seen in gardens along the M4 corridor and the Thames Valley; here some birds have been known to steal clothes from washing lines to decorate their nests! In January 2006, one was seen in a garden in inner London, a sight certain to become more common if the expansion of the red kite population continues.



Food supplements

However you manage your garden and whatever its size, there will be times when the naturally available food it normally provides is scarce or absent. Under these circumstances, birds will move on to feed elsewhere if they can. Small birds, especially, need to spend most of their waking lives either in search of food or actually feeding (90 per cent of the time in the case of the coal tit and effectively 100 per cent in the case of goldcrest). Weakness caused by hunger comes upon small birds very rapidly and prolonged food shortages, particularly those in hard weather, can often prove fatal.

You can increase the survival chances of birds by feeding them. If you choose to do this, try to ensure that you provide food regularly and reliably. 'Your' birds may come to depend on your generosity and may suffer if this is only intermittent. It is also important to provide appropriate food. Some leftovers can be very nutritious, including cooked potatoes (other than chips), pastry, suet and even brown bread.

From top: Red kites are now seen over some gardens in the Chilterns and elsewhere and are steadily extending their range. Chris Gomersall

Redstarts may visit some gardens on migration. Mike Lane/Natural Image

Coots can turn up in gardens if there is water nearby. Paul Lacey/Natural England

The Chiffchaff makes its presence known in the spring by its persistent and repetitive song. Paul Keene/Avico Ltd

Other household foods like dried fruits, cheese (preferably grated) porridge, apples, half coconuts and crushed unsalted nuts will also be welcomed.



Top: Chaffinches, greenfinches and coal tits are among the species that will come readily to bird tables. Dave and Brian Bevan
Above: Goldfinches love nyjer seeds. Chris Gomersall



Top: Great tits are fond of coconuts. Dave and Brian Bevan
Above: Long-tailed tits have now started coming to peanut feeders. Chris Gomersall

A huge range of bird seed mixtures is commercially available these days, all of which have some value. However, many consist largely of grains of barley or wheat and are not very suitable for small birds like finches or tits.

Generally speaking, the more expensive foods are the best. Many companies will deliver bulk supplies by mail order and buying this way can help keep down the cost. If you have goldfinches in your area, then a special seed feeder filled with nyjer seed (tiny, but rich in oil) will bring them to your garden eventually, although they may



sometimes take a while to find this treat. Sunflower hearts and black sunflower seeds are favoured by many seed-eating birds and can be fed to them year-round.

Keep it clean!

Bird tables need to be cleaned regularly. Uneaten food should not be left to go mouldy or rot. One of the best ways to avoid this happening is to provide no more than the birds will eat in one day, brushing your bird table down each evening and putting out new food the next morning. Special leaflets on feeding garden birds and hygiene and disease are available free from the British Trust for Ornithology (BTO), see Contacts, page 37.



Left top: If you live near woodland, nuthatches are much more likely to visit your garden.
Paul Keene/Avico
Left: Bird tables can be turned into attractive features by imaginative planting.
Dave and Brian Bevan
Above: Remove uneaten food from bird tables each evening and keep them clean.
Dave and Brian Bevan

Food and feeding preferences of 50 of the species most commonly seen in gardens

Species	Food	Feeding method
Blackbird	Berries, apples, raisins, mealworms, peanut granules, breadcrumbs, grated cheese, etc. Earthworms; other invertebrates.	Ground feeder
Blackcap	Apples, bread, cheese. Invertebrates, berries.	Ground feeder
Black-headed gull	Scraps. Invertebrates, plant material.	Ground feeder
Bullfinch	Sunflower hearts, black sunflower seed, seed blends. Ash, elm and other tree seeds; flower buds of fruit trees; seeds of nettle, dock, dog's mercury, fleshy fruits; insects.	Hanging feeder
Blue tit	Peanuts, fatty treats, blue tit seed mix, sunflower hearts, black sunflower seed. Caterpillars, aphids.	Hanging feeder
Brambling	Peanut granules, seed mixes. Tree seeds, esp. beech mast and conifer seed; fruit.	Ground/hanging feeder
Chaffinch	Seed blends, sunflower hearts, peanut granules. Caterpillars, flies, a wide variety of seeds.	Bird table/ground feeder
Carriion crow	Scraps. Grain, carrion, eggs and young birds, invertebrates.	Ground feeder
Chiffchaff	Mainly insects, some fruit.	Trees, ground feeder
Coal tit	Peanuts, fatty treats, seed blends, sunflower hearts, black sunflower seed. Tree seeds, caterpillars.	Hanging feeder
Collared dove	Seeds, bread, fruit. Cereal grain, insects.	Bird table/ground feeder

Species	Food	Feeding method
Duncock	Nyjer seeds, peanut granules and seed blends, grated cheese. Invertebrates, small seeds.	Ground feeder
Feral pigeon	Omnivorous; grains.	Ground feeder/bird table
Fieldfare	Apples, berries, earthworms, insects.	Tree and ground feeder
Goldfinch	Nyjer seeds, sunflower hearts, peanuts. Small seeds, eg those of alder, birch, dandelion, ragwort, groundsel.	Hanging feeder
Goldcrest	Cheese, bread, peanut cake. Tree seeds, invertebrates.	Bird tables
Great spotted woodpecker	Peanuts, meaty scraps. Moth larvae and other invertebrates, seeds, eggs and young birds.	Hanging feeder, trees
Great tit	Peanuts, fatty treats, seed blends, sunflower hearts. Caterpillars, acorns, beech mast.	Hanging feeder
Green woodpecker	Mealworms, fruit, ants.	Ground feeder
Greenfinch	Sunflower hearts, black sunflower seed. Large seeds, eg those of rosehips, elm. Also, seeds of dog's mercury and those of crucifers, daisy family.	Hanging feeder
House martin	Small flying insects including aphids.	Aerial feeder
House sparrow	Sunflower hearts, mealworms. Seeds, invertebrates.	Bird table
Jackdaw	Scraps, fruit. Moth larvae, flies, carrion, seeds.	Bird table/ground
Jay	Peanuts, scraps, bread. Invertebrates, acorns and other seeds, nestlings and eggs.	Bird table/ground/hanging feeder

Species	Food	Feeding method
Kingfisher	Scraps (when desperate!). Small fish, amphibians, aquatic invertebrates.	Bird tables; normally feeds in shallow water
Long-tailed tit	Peanuts and peanut cake, grated cheese, fat balls. Spiders and other small invertebrates.	Hanging feeder/bird table
Magpie	Scraps. Invertebrates, young birds and eggs, small mammals, fruit, seeds, berries, carrion.	Ground feeder
Marsh tit	Nuts. Insects, spiders, seeds, berries and fruit.	Hanging feeder/bird table
Mistle thrush	Berries, eg those of holly, mistletoe, cotoneaster etc. Insects.	Tree and ground feeder
Nuthatch	Peanuts. Insects, spiders, acorns, beech mast, hazel nuts.	Hanging feeder/trees
Pheasant	Seed mixes with cereals. Berries, seeds, insects.	Ground feeder/bird table
Pied wagtail	Fat, seeds, bread, nyjer seed. Midges and other flying insects.	Bird tables/ground feeder/aerial feeder
Redwing	Apples, fresh or dried fruit, berries, insects.	Tree and ground feeder
Reed bunting	Seeds, insects.	Ground feeder
Ring-necked parakeet	Seeds, peanuts. Fruit and other plant material.	Bird table/hanging feeder
Robin	Mealworms, peanut granules, sunflower hearts, grated cheese, breadcrumbs, fat balls. Earthworms, larvae, other invertebrates.	Ground feeder/bird table
Rook	Scraps. Earthworms, larvae, beetles, grain.	Ground feeder
Siskin	Peanuts. Seeds of alder, birch, evergreen conifers.	Hanging feeder

Species	Food	Feeding method
Song thrush	Fruit, raisins, mealworms. Caterpillars, earthworms, snails, slugs.	Ground feeder
Sparrowhawk	Birds up to the size of wood pigeons.	Bird table (!), ground
Spotted flycatcher	Insects, woodlice, snails, fruit.	Aerial feeder, trees
Starling	Seed blends, fatty treats, peanut cake. Earthworms, leatherjackets, seeds.	Bird table/ground feeder/hanging feeder
Swallow	Flying insects.	Aerial feeder
Swift	Flying insects, airborne spiders.	Aerial feeder
Tawny owl	Small mammals, earthworms, frogs, beetles.	Ground feeder
Treecreeper	Fat balls, suet. Insects, spiders, tree seeds.	Trees; bird tables
Tree sparrow	Millet seed, fat, peanuts. Wide variety of seeds, insects.	Ground feeder/bird table/hanging feeder
Whitethroat	Insects, fruits.	Shrubs and trees
Willow tit	Invertebrates, seeds.	Hanging feeder/bird table
Woodpigeon	Bread, seed mixes with cereal grains. Wide range of plant material including seeds and berries.	Ground feeder
Yellowhammer	Seeds of grasses and cereals.	Ground feeder
Wren	Grated cheese, mealworms, peanut granules, fatty treats. Small beetles, spiders, moth larvae and other invertebrates.	Ground feeder



Bird feeders may attract sparrowhawks as well as song birds. Dave and Brian Bevan

Breeding and nesting

Not all the birds visiting your garden during the year will view it as a possible nesting place. Many species may nest in gardens, however, and in the case of some birds, gardens now support a significant percentage of their total population.

Some species are far more fussy about where they nest than others. Blue tits and great tits are the most likely to use nest boxes. The increasingly scarce spotted flycatcher may also adopt an open-fronted nest box as home, as may robins and pied wagtails. There are now specialist boxes available for species like tawny owls but don't

spend money on them if such species are unlikely to come to your garden. Be especially wary of nest boxes advertised as being suitable for treecreepers as current designs seem ineffective. Avoid nest boxes attached to bird feeders. These are normally useless as birds will not nest anywhere subject to constant disturbance. The safest course of action is to buy only those nest boxes approved by a bird conservation organisation like the BTO or the RSPB (see Contacts, page 37). Boxes should not face strong sunlight and should also be positioned away from the prevailing wind. North-facing entrances may be best.

Nest boxes need to be cleaned. Do this only between 1 August and 31 January to keep strictly within the law. Cleaning old nests out of nest boxes encourages birds to use them again the following year. As well as removing old nesting material it will also be helpful to douse the inside of boxes with boiling water to kill bird parasites and their eggs. Virtually all British house martins now



Home-made nest boxes are perfectly fine if they are well designed. Top left: Box for nuthatch with mud entrance. Dave and Brian Bevan
Top right: Open-fronted box for robins and spotted flycatchers. Dave and Brian Bevan
Above: Boxes for hole-nesting species like tits. Dave and Brian Bevan

nest on houses, the only exceptions being a few colonies on cliffs and under some bridges. Artificial nests may attract them but a local source of mud, their essential nesting material, may be more important. Like house martins and swallows,



House martins need mud to make their own nests (top) but may sometimes be attracted by a prefabricated version (above). Bob Gibbons/Natural Image

swifts eat only flying insects and have come to depend on humans for nest sites. Whereas house martins build their cup-shaped structures of dried mud under the eaves of houses, swifts need access to roof spaces for their very basic nests. The design of many modern houses, however, often excludes swifts and the numbers of these astonishing and most aerial of all birds are falling in many areas. It's been estimated that UK population of swifts has fallen by a third in the last 12 years! You can help reverse this process by erecting special swift nest boxes or, if you have an older house,



Swallows also appreciate our help with nest construction. Dave and Brian Bevan

making sure that in the course of modernising it, you don't deprive swifts of access. For information about swift nest boxes contact 'Concern for Swifts' or 'London's Swifts' (see Contacts, page 37).

Many species appreciate dense cover for nesting since this provides shelter and some protection from predators.



Ivy provides nest sites as well as late-season food for birds and insects. Dave and Brian Bevan

Among native shrubs not previously mentioned, hawthorn, blackthorn, gorse and juniper offer both. Thick ivy is especially favoured by wrens for their small, domed nests and is also suitable for treecreepers.

From time to time, some birds will choose to nest in apparently very unsuitable places which are subject to continuous, if accidental, harassment by humans. Despite this, a few will occasionally succeed in rearing at least some of their brood. However, far more frequently, a lack of disturbance is the critical factor in nesting success. If you can manage your garden with at least one quiet corner, perhaps overgrown with elder or nettles, then you may be rewarded by a nesting dunnoek, chaffinch or even one of the warblers such as a blackcap, whitethroat or chiffchaff.

If you have no room for trees or bushy shrubs, but have a garden wall or a fence, then try combining this with a trellis to provide nesting opportunities. Erect a trellis – supported by thick stakes on either side – about 20 cm (8 inches) away from the wall. Plant fast-growing, vigorous climbers like honeysuckle, clematis or wild rose and these will soon form a structure thick enough to support nests of species like goldfinch or blackbird. Cut them back



Spotted flycatcher. Howard Lacey/Avico Ltd and wren (below) Dave Bevan/Avico. Both are species that may nest in dense ivy. Wrens can also choose very unconventional nesting sites!



Top: Wren's nest in garlic.
Howard Lacey/Avico Ltd
Above: Wren's nest in coat pocket.
Howard Lacey/Avico Ltd

hard each year to encourage renewed sturdy growth. The addition of ivy *Hedera helix* will benefit a whole range of invertebrates and provide extra cover and shelter for birds.

To form an even denser garden boundary, with still better nesting potential, plant a hedge. Hawthorn should be the main species but mix this with other berry-bearing shrubs and climbers. Very young plants – whips – can be cheaply obtained and will establish themselves quickly.

Ideally, plant them out in the autumn allowing at least half a metre between each shrub. Plan for the hedge to be at least one metre thick although if you have the space, a wider hedge will be even more valuable. The following spring, cut them back severely to encourage growth near the base. It may be hard to bring yourself to do this, but when you see the results you will be glad you had the courage! In two to three years, your originally spindly plants will be bushing out nicely. In five years you will have a thick hedge and in six or seven you may need an electric trimmer to keep its growth



Gardens can offer a huge range of feeding and nesting opportunities for birds.

Paul Keene/Avico Ltd

within reasonable bounds! Cut the hedge back each year in early February before birds have started to nest.

Much maligned evergreen species, including the notorious leylandii, make excellent roosting places and may also be used as nest sites for greenfinches, robins, dunlocks, wrens

and goldfinches. Examine your garden with a critical eye and use reference books (see Further information, page 38) to decide which species may be most likely to nest in your garden – then try to create conditions suitable for them. It's best to be very realistic. Only the birds that you commonly see in your garden, or neighbouring ones, are likely to nest.

Have you ever wondered what goes on in your nest boxes? It's now possible to find out, with boxes fitted with cameras. Although relatively expensive (basic black and white camera kits start at around £90) they can give you a fascinating insight into the comings and goings of parent birds and the growth of their chicks, all relayed into your front room.

Rest and shelter

Although advice traditionally concentrates on the provision of nesting sites for birds, good roosting sites are just as important for a bird's survival. Few birds actually build themselves a structure for the night but nest boxes are often used as nocturnal shelters. Boxes will give life-saving protection from the weather to small birds like wrens and great tits but cannot accommodate larger species. In really cold weather, many small birds may squeeze into nest boxes together



Small birds may use nest boxes like this for shelter in cold weather. Dave and Brian Bevan to keep warm. One box is recorded as having held no fewer than 61 wrens!

Climbing plants growing on garden walls or houses are very useful roosting and nesting sites. Walls often offer protection from prevailing winds and may retain heat from the sun. If you have an established hedge, why not encourage wild hops to scramble over it? When the hop leaves die back in winter, the bare stems will form a

Dunnocks feed on the ground but sing from a prominent perch. Mike Lane/Natural Image



mesh around the hedge, providing a safe retreat for house sparrows when they are threatened by the local sparrowhawk.

Many birds roost communally, including sparrows, pied wagtails, starlings, blackbirds and even pigeons, crows and, in a few parts of southern England, ring-necked parakeets. Long-tailed tits (normally part of an extended family) actually huddle together closely on one perch.

While other species don't generally do this, mere close proximity in a bush or hedge may help to reduce heat loss, especially for those at the centre of the roost. Roosts may also act as centres for information exchange in ways that we do not fully understand.

Trees are important as observation and song posts, too, so try and provide at least one somewhere in the garden.

Drinking and bathing

All birds need to drink. They also need water to help keep their feathers in good condition.

Relatively few gardens offer birds safe drinking and bathing facilities so whatever you can do will help. If you can, dig a pond. Even very small water bodies can be excellent for wildlife but the pond should have shallow edges so that birds can get to the water easily. For details, consult the Natural England booklet *Garden ponds and boggy areas: havens for wildlife* (see Further information, page 38).

Bird baths are the next best thing. They can be small or large, but a shallow dish shape is what's

required – with a thin layer of gravel at the bottom if the material is liable to be slippery. The water needs to be at least 2.5 cm (1 inch) deep but ideally the container should be large enough to offer a range of depths up to 10 cm (4 inches) to meet the needs of differently sized birds. Place the bath in the open, away from cover where a cat might hide. Clean the bath regularly to remove any algae or bird droppings. Keep it unfrozen in cold weather. There are various ways of doing this including solar-powered water heaters (see the RSPB website www.rspb.org.uk for suggestions) but never use salt or anti-freeze.



Top: Ponds are a magnet for birds and even a sparrowhawk may turn up for a dip. Chris Gomersall
Middle: Juvenile greenfinch drinking.
Dave and Brian Bevan
Even a simple elevated bird bath (above left) can bring in visitors like this jay and also add interest to a garden.
Dave and Brian Bevan

Predators and prey

The number of young produced by songbirds takes account of the fact that most will not last long. A pair of blue tits, for example, might rear as many as 10 chicks in a season. If all these were to survive and breed the next year and if all their offspring did the same, the original two birds would be the great-grandparents of more than 1,000!



These eggs could in theory give rise to 1,000 blue tits in a few seasons! Dave and Brian Bevan



Blackbirds can lose eggs or whole broods to predation from birds such as magpies but their overall numbers are unaffected. Dave and Brian Bevan

Clearly, this does not happen. The harsh reality is that most young birds will die within their first year, falling victim either to hunger, cold or to a predator, whether cat or bird. Surprisingly, none of this predation seems to have an effect on overall bird populations despite the fact that cats take an estimated 50 million birds a year in British gardens.



Structures like this can help to protect bird tables from cats. Bob Gibbons/Natural Image

Baby birds

If you find young birds anywhere in your garden calling for food, the best advice is to leave them alone. Their parents are likely to be close by and will take care of them far better than you can.

Ten ways to help birds in your garden

- Grow more trees and shrubs to provide food, nesting areas and shelter; develop a meadow area in the lawn.
- Provide water – ideally a pond – and ensure there is mud for nesting material in spring.
- Put up nest boxes – but of the right kind and in the right places. These may also be used for shelter in hard weather.
- Keep a corner of your garden undisturbed if possible.
- Consider the needs of nesting birds like swifts, starlings and house sparrows before installing uPVC bargeboards and soffits.
- Fit your cat with a bell or sonic collar.
- Allow plants to go to seed to provide food for finches and sparrows.
- Install a variety of hanging bird feeders and a bird table, safe from cats and squirrels; ensure they are regularly filled and cleaned.

- Don't forget the needs of ground-feeding birds like dunnocks, robins and wrens.
- Put up trellises next to walls and fences, or plant a hedge for shelter and food.



Young birds like this juvenile great tit should be left alone if found in your garden. Paul Keene/Avico Ltd

Six of the best

Six species frequently seen in gardens are blue tit, collared dove, house sparrow, robin, starling and blackbird.

Blue tit

The acrobatic blue tit is a favourite with many people. There are around 3.3 million pairs in Britain. Like many other garden species, its original home was woodland and that is where most blue tits still live. They need holes to nest in and in the absence of natural cavities will use whatever artificial ones they can find, in walls, pipes, old flowerpots or even letter boxes. The

nest is lined with hair, down or moss. Up to 16 eggs can be laid, although blue tit pairs in gardens rarely produce clutches of more than eight. The peak feeding activity is in May when these birds have to search almost ceaselessly for insect food for their young. Caterpillars are preferred but spiders, aphids and other invertebrates will also be taken, including butterflies.

Young blue tits eat vast numbers of caterpillars.
Dave and Brian Bevan



Collared dove

The now very familiar collared dove is primarily a seed-eater and comes readily to bird tables. Like many other members of the pigeon family, it makes only a very flimsy nest, consisting of a platform of sticks, sometimes grass-lined. Nests are made in trees or buildings, usually four metres or more above the ground.

Originating in India, collared doves have been extending their range for centuries. They were no further west than Hungary in the 1930s and unseen in Britain before 1952. The very first pair to nest here did so in a Norfolk garden in 1955. Now, there are about 250,000 pairs in Britain. Breeding has been recorded in almost every month of the year but is most common in spring.

The collared dove has gone from rare vagrant to familiar garden bird in 50 years.
Bob Gibbons/Natural Image



A house sparrow living up to its name. Chris Gomersall

House sparrow

No single factor is likely to be responsible for the dramatic decline in house sparrow numbers but the stark facts are undeniable. In 30 years, the breeding population has plummeted from 12 million to around half of that number, and the bird is now altogether absent from some of its former urban strongholds, even including parts of London. Happily, house sparrows are still familiar garden birds in many parts of the country but we can't assume they will be so for ever. Although they are natural seed-eaters, house sparrows will take all sorts of food including kitchen scraps. Insects are vital food for young sparrows. Unlike many small birds which are quite promiscuous, established sparrow pairs may remain together for life – although it has to be said that the life of any bird this size tends to be rather short! All sorts of dense vegetation

including hedges and climbers may be used as communal roosting sites.

Robin

The robin is consistently voted Britain's most popular bird, perhaps because we enjoy its oddly endearing habit of nesting in strange places like discarded cans or abandoned cars. There is even a record of a robin starting a nest in an unmade bed, while its recent occupant was having breakfast! More conventionally, nests are made in banks or depressions, from ground-level up to three metres high. Robins lay clutches of around five eggs but may rear three broods during the course of a long breeding season that can stretch from March to July or later still. They are fiercely territorial birds and will even attack other species they see as competitors, including dunnocks. Very occasionally a fight between robins will result in



Above: Robins may nest in very odd places.
Howard Lacey/Avico Ltd
Right: Although young birds lack the red breast of the adults, they are still somehow recognisable as robins.
Jill Pakenham/Avico

the death of one of the combatants. Robins love mealworms and will eat them from your hand if you are sufficiently patient.

Starling

Like house sparrows, starlings are faring rather badly, with numbers having fallen by 75 per cent since the late 1960s. Those who can still watch large parties descend on their lawn or bird table and clean up all the available food in seconds may find this surprising, but the collapse in the population is now causing concern among conservation bodies. In complete contrast to the solitary and aggressive robin, starlings are very sociable birds throughout the year, nesting in colonies and sometimes roosting in huge concentrations. They

nest in holes in trees or in gaps and spaces in manmade structures.

Blackbird

Like robins, blackbirds can be fearless close to people and may take dried fruit from your hand. If you can feed them at the same time each day, they



The male starling in breeding plumage is a very handsome bird. Mike Hammett/Natural England

will come to expect – and even demand! – their ration. Blackbirds can be very intolerant of the presence of other species in gardens when they are feeding, sometimes being so intent on depriving others of the chance to eat that they miss out themselves. Gardens are hugely important for blackbirds, with perhaps one quarter of the population living close to human settlements. The cup-shaped nest can be made in a bush, in ivy against a wall, on buildings or in trees. Its grass lining normally distinguishes it from the mud-lined nest of a song thrush.



Female blackbird with cherries.
Mike Lane/Natural Image

Ups and downs

The population and distribution of birds is changing constantly, with some species flourishing and others showing steep declines. While some of these fluctuations are perfectly natural, many can be linked, in one way or another, to environmental changes caused by human activity.

Going up...

Greatspotted woodpecker

This handsome starling-sized bird is one of those currently enjoying a big expansion in range and numbers across Britain. It now breeds even in the heart of London. It is fond of seeds and peanuts and has begun to visit bird tables far more frequently than before. Its taste for the eggs and chicks of smaller species, like blue tit, is perhaps less well-known but all birds have to eat! More usually, young woodpeckers are fed on moth larvae and other invertebrates.

Blackcap

Easily-recognised, the blackcap is another recent arrival in many gardens where it searches out winter berries,



Great spotted woodpeckers are flourishing in Britain at the moment. Chris Gomersall

especially the red ones of firethorn, cotoneaster and berberis. Like other warblers, blackcaps migrate here in the spring from Africa, returning from September onwards. At the same time, however, ringing studies have shown that other blackcaps from central Europe are arriving in Britain to take advantage of our milder winters – as well as the generous hand-outs of householders. When the berry supply has gone, blackcaps show a fondness for cheese and other fatty foods. They

will also feed on apples left on trees, especially those damaged by insects, and on windfalls.

Magpie

If magpies were rare, we would probably prize them for their great beauty. As it is, they are unpopular with many householders because of their nest-robbing habits. Magpies have adapted very successfully to urban environments and, following a reduction in persecution, have in the

Blackcaps may nest in mature gardens with enough cover. Peter Wilson/Natural Image



Magpies are another current garden success story. Dave Bevan/Avico Ltd

last 50 years colonised even the centres of large cities. They will eat almost anything including invertebrates, grain, fruits and carrion – as well as small mammals and the eggs and chicks of songbirds. However, there is no evidence that they have contributed to the declines in the numbers of other species. Together with species such as coal tit, nuthatch and jay, magpies share the habit of hoarding food, in their case burying items in the ground in a hole excavated for the purpose.

In the balance...

Sparrowhawk

Sparrowhawks were almost extinct in

southern and eastern England before scientists discovered that pesticides such as DDT were responsible for their decline. Persistent toxic chemicals caused adult birds to die and also resulted in breeding failure through eggshell thinning. These poisons were then banned and the subsequent recovery of sparrowhawk numbers is one of the great success stories for post-war nature conservation. In recent years, however, numbers have begun to decline again – a worrying trend. Sparrowhawks predate on many small birds but their absence from gardens for 20 or so years did not lead to an increase in songbirds; in fact in some cases they actually declined markedly over this period. The current

population of sparrowhawks cannot, therefore, be affecting songbird numbers. Female sparrowhawks are twice the size of males and can take birds as large as wood pigeons.



Male sparrowhawk on the roof of a bird table.
Vic Parsons/Avico Ltd

Going down...

Song thrush

Although song thrushes are still found in many gardens, their numbers have dropped by nearly 60 per cent in some



The decline of the song thrush may be linked with the use of slug pellets. Chris Gomersall

30 years. The reason for their decline on farmland is fairly clear: a reduced food supply linked to the intensification of agriculture. There has been a similar decline in gardens but it is not clear whether this may be indirectly linked to the use of slug pellets and lawn treatments which reduce the supply of molluscs and worms available for young birds.

Bullfinch



More bullfinches are now coming to gardens. The male is shown top. Jill Pakenham/Avico Ltd

Bullfinches once had a price on their heads, with a penny awarded for every one killed, because of the damage they were alleged to cause to fruit crops. Now, however, they have become scarce in some parts of the country, probably because of the huge loss of hedgerows. However, numbers coming to gardens seem to be increasing and they are showing a newly-developed taste for sunflower seeds.

Tree sparrow

The number of tree sparrows has been unstable for a very long time. It's not yet clear whether the current crash in the population – down 87 per cent in the 24 years to 1996 – is part of a normal cycle or, as is thought more likely, an anomaly that should be a cause of great concern. Tree sparrows, close relatives of the more familiar house sparrow, still come to some rural gardens and may nest in roof cavities or other holes, but in many parts of the country they have become great rarities.



Tree sparrows are now a rarity in many areas. Tommy Holden/BTO



Everyone hopes to get a waxwing in their garden one day! Paul Keene/Avico Ltd

Waxwing – a regular exotic visitor to look out for

Every few years, there is a huge autumn or winter influx of these beautiful birds from the conifer forests of northern Europe. When this happens, waxwings are as likely to turn up in gardens as anywhere else in their search for berries. In the south of England at least, they sometimes prefer those of the guelder rose but rowan are also favoured. Early in 2005, waxwings arrived in thousands on the north and northwest coasts and filtered south. This was unusual as they normally reach the east coast first and then move west. Birds were still present as late as May in some areas.

Watching and recording garden birds

Britain's birds are as well studied as those of anywhere in the world but new discoveries are being made regularly. Birds are extremely adaptable creatures and their behaviour changes to meet new challenges or take advantage of new opportunities. All this means there is always something to look out for. Blue tits learned how to drill holes in milk bottles to reach the cream in the 1950s. Siskins had never been recorded feeding in gardens until 1963, but 40 years later were visiting one garden in every 10, favouring peanuts in orange-coloured string bags.



Blue tits (left) were the first species to be seen feeding from milk bottles but the habit was later acquired by the great tit (above).
Dave and Brian Bevan

Ring-necked parakeets escaped from aviaries to breed in tiny numbers in the 1970s. Now, their numbers are counted in thousands and they have become regular visitors to gardens in parts of south-east England. Chiffchaffs were once rarities in gardens but now, like blackcaps, are frequently seen there in winter. For whatever reason (the most likely is food shortages in the countryside caused by intensive farming) even more species are now being seen at feeders, including long-tailed tit and brambling, while others like willow tit and reed bunting are turning up in gardens in greater numbers or on a more regular basis.

Right: This male siskin may be about to ward off competitors! Dave and Brian Bevan





Ring-necked parakeets may become a threat to native hole-nesting species. Mike Lane/Natural Image

Observations of garden birds by tens of thousands of people give organisations like the British Trust for Ornithology (BTO) invaluable information on trends in bird populations. Only with this knowledge can we work out plans to conserve our birds for the future. If you can recognise the common garden birds you can help too.

Start recording birds and help with their conservation

The BTO/CJ Garden BirdWatch. This year-round survey (sponsored by CJ WildBird Foods) involves more than 16,000 garden birdwatchers, all collecting simple information on birds and how they use gardens on a weekly basis. This information has allowed researchers at the BTO to find out how birds use gardens and how this use changes over time. Garden BirdWatch results have already

highlighted the increasing use made of gardens by some species and have helped researchers to understand the reasons behind the declines of others. A free enquiry pack is available by writing to GBW (NE), BTO, The Nunnery, Thetford, Norfolk, IP24 2PU, or by visiting www.bto.org/gbw.

The RSPB Big Garden BirdWatch. The Big Garden BirdWatch takes place once a year during late winter. It involves many thousands of observers recording the birds seen in their gardens over the course of one hour. Although it does not give the same level of detail as the BTO/CJ Garden BirdWatch, it provides a very useful snapshot of the regional variation in garden bird populations. For details go to www.rspb.org.uk/birdwatch, or contact the RSPB (see Contacts, page 37).

Let us know whether you have found this leaflet useful or how we can improve it. If you have adopted any of the suggestions here, have more birds

come to your garden as a result? We'd like to know what you think. Call 01273 407956 or e-mail steve.berry@naturalengland.org.uk



Top: Green woodpeckers often visit garden lawns in search of ants. Paul Keene/Avico Ltd
Above: The nest of the long-tailed tit is an amazingly elaborate structure and may contain 2,000 feathers! Dave and Brian Bevan
Right: There are few finer sights in the garden than a goldfinch in flight. Dave and Brian Bevan



Contacts

Natural England

1 East Parade
Sheffield, S1 2ET
Enquiry Service: 0845 600 3078
enquiries@naturalengland.org.uk
www.naturalengland.org.uk

British Trust for Ornithology (BTO)

The Nunnery
Thetford
Norfolk, IP24 2PU
Tel: 01842 750050
www.bto.org

Royal Society for the Protection of Birds

The Lodge
Sandy, SG19 2DL
Tel: 01767 680551
www.rspb.org.uk

Concern for Swifts

5 Bury Lane
Haddenham
Ely
Cams, CB6 3PR
www.concernforswifts.com

London's Swifts

www.londons-swifts.org.uk

The Wildlife Trusts

The Kiln
Waterside
Mather Road
Newark, NG24 1WT
Tel: 01636 677711
www.wildlifetrusts.org

Bird food, nest boxes and other bird products

There are now dozens of suppliers. The companies on this list also supply catalogues with helpful information about feeding birds.

C J WildBird Foods Ltd

The Rea
Upton Magna
Shrewsbury, SY4 4UR
Tel: 0800 731 2820
www.birdfood.co.uk

Jacobi Jayne & Co
Living with Birds
Freepost 1155
Herne Bay, CT6 7BR
Tel: 0800 0720130
www.livingwithbirds.com

Ernest Charles
Freepost
Copplesstone
Devon, EX17 2YZ
Tel: 0800 7316 770
www.ernest-charles.com

Jamie Wood Products
1 Green Street Old Town
Eastbourne, BN21 1QN
Tel: 01323 727291
www.birdtables.com

Herons are always grateful for an easy meal. Dave and Brian Bevan



Further information

This is one of a range of wildlife gardening booklets published by Natural England. For more details, contact the Natural England Enquiry Service on 0845 600 3078 or e-mail enquiries@naturalengland.org.uk

Natural England also produces *Gardening with wildlife in mind*, an illustrated wildlife reference. Originally on CD but now also available online, *Gardening with wildlife in mind* has detailed information on 800 plants and animal species often found in our gardens, and shows how they are ecologically linked. See www.plantpress.com

Other titles

There is a huge selection of literature on the subject of garden birds. The following list is therefore extremely selective:

Baines, C. *How to make a wildlife garden*. Frances Lincoln Ltd. 2000.

Couzens, D., & Partington, P. *The secret lives of garden birds*. Christopher Helm. 2004.

Du Feu, C. *The BTO nestbox guide*. British Trust for Ornithology. 2003.

Golley, M., Moss, S., & Daly, D. *The complete garden bird book*. New Holland Publishers (UK) Ltd. 1996.

Jackman, L. *The wild bird garden*. Souvenir Press. 1992.

Johnson, H., & P. *The birdwatcher's garden*. Guild of Master Craftsmen Publications Ltd. 1999.

Dave and Brian Bevan, Loomes, B. *Bird gardening*. Dalesman Publishing Company Ltd. 1993.

Mackenzie, D. *Bird boxes and feeders for the garden*. Guild of Master Craftsmen Publications Ltd. 1997.

Matthews, N. *Garden for birds*. School Grounds Company Books. 1992.

Moss, S., & Cottridge, D. *Attracting birds to your garden*. New Holland Publishers (UK) Ltd. 1998.

Moss, S. *The bird-friendly garden*. Harper Collins. 2004.

Oddie, B. *Bill Oddie's introduction to birdwatching*. New Holland. 2001.

Soper, T. *The bird table book*. David & Charles. 2006.

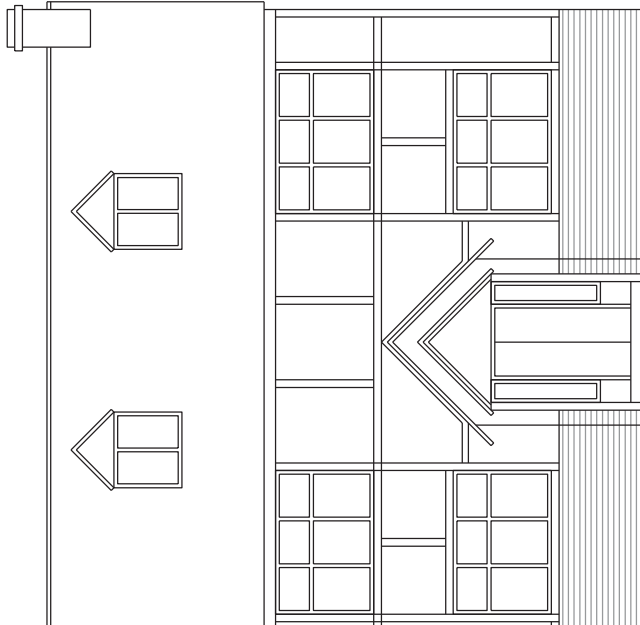
Spedding, S., & G. *The natural history of a garden*. Timber Press. 2003.

Stocker, L. *The complete garden bird*. Leopard Books. 1995.

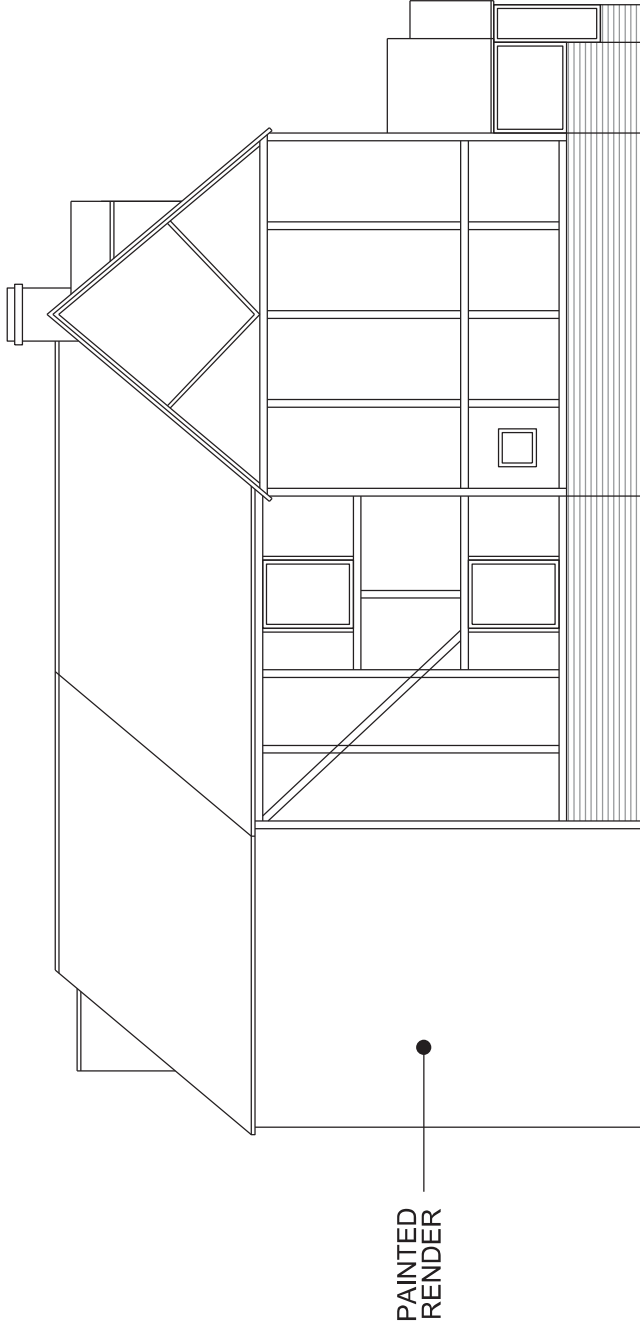
Toms, M. *The BTO/CJ Garden BirdWatch book*. Thetford: British Trust for Ornithology. 2003.

Appendix 2

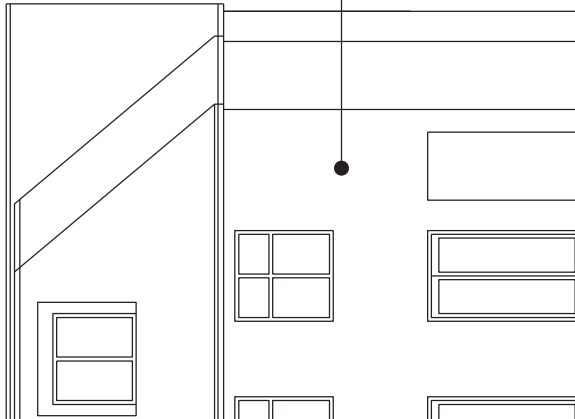
Development Proposals



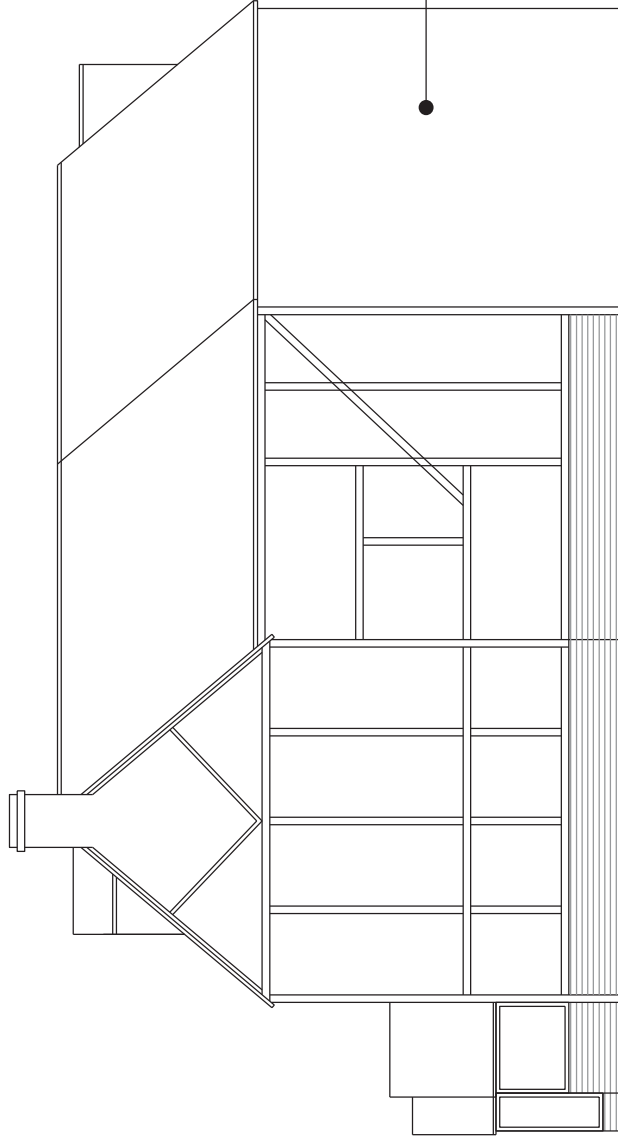
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NORTH ELEVATION



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Appendix 3 Relevant Nature Conservation Legislation and Planning Policy

KEY LEGISLATION

Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010¹ (known as the “Habitats Regulations”) transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the European “Habitats Directive”) into UK legislation. These regulations consolidate all the various amendments made to the preceding “Conservation Regulations” 1994 for England and Wales.

The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) Regulations 2012.²

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which form part of the Natura 2000 network of protected areas across Europe. The Regulations also prohibit the deliberate capture, killing or disturbance of European Protected Species (EPS), which include *inter alia* Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, Otter *Lutra lutra* and all native species of bat, and make it an offence to destroy or damage either the nesting or breeding sites of these species. The above actions can be made lawful through the granting of licenses after Natural England (the licensing authority in England) is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the EPS.

Further information on SPAs, SACs and European Protected Species (Licensing and Protected Species) is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981³ is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

¹ The Conservation of Habitats and Species Regulations 2010. Available from: <http://www.legislation.gov.uk/uksi/2010/490/contents/made>

² The Conservation of Habitats and Species (Amendment) Regulations 2012. Available from: <http://www.legislation.gov.uk/uksi/2012/1927/contents/made>

³ The Wildlife and Countryside Act 1981. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

Table A1.1: Key Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000⁴ have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

⁴ The Countryside and Rights of Way (CRoW) Act 2000. Available from: <http://www.legislation.gov.uk/ukpga/2000/37/contents>

The Natural Environment and Rural Communities (NERC) Act 2006⁵ was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England⁶. Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on species and habitats of Principal Importance is provided in the relevant sub-section of this Appendix.

PLANNING POLICY & GUIDANCE

Listed below is the main planning policy and government guidance that relates to the conservation of nature and development at all levels of government.

National Level

National Planning Policy Framework (NPPF)

The National Planning Policy Framework⁷ sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 14), with a requirement to consider its economic, social and environmental dimensions. This does not apply where development requiring Appropriate Assessment under the Habitats Directive is being considered, planned or determined (paragraph 119).

Section 11 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system and replaces the preceding *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation*. It specifies that when determining planning applications, local planning authorities should aim to **conserve and enhance** biodiversity by applying the following principles:

⁵ The Natural Environment and Rural Communities Act 2006. Available from: www.legislation.gov.uk/ukpga/2006/16/contents

⁶ The S40 list replaces the previously prepared list of habitats and species of Principal Importance for the conservation of biological diversity in England that was published under Section 74 (2) of the Countryside and Rights of Way Act 2000.

⁷ DCLG (2012). *National Planning Policy Framework*. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland;
- development proposals where the primary objective is to conserve and enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged.

In the case of SSSIs and irreplaceable habitats, exceptions *may* be made if it can be clearly demonstrated that the benefits of the development, at this particular site, outweigh the costs in terms of loss or adverse impacts.

Section 11 also specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05⁸ to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence or otherwise of protected species, and the extent to which they may be affected by the proposed development, must be established before permission is granted;

⁸ ODPM (2005). *Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System*. Available from: <http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity>

- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

Good Practice & Standards

Various forms of guidance are available to manage biodiversity through the development process. Of particular note is *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*⁹. This document was principally designed to help local planning authorities deliver the national policies in the former PPS9 (now replaced by the NPPF) and comply with legislation. It is also useful to developers and their agents as it outlines the expectations of the local authority for the conservation of nature in the development control process.

Regional Level

The South East Plan Regional Spatial Strategy has now been revoked, with the exception of Policy NRM6, which relates to the Thames Basin Heaths Special Protection Area.

Local Level

The Reading Borough Local Development Framework Core Strategy was adopted in January 2008 and altered in January 2015, and until adoption of a new local plan currently in preparation, will guide development in the Borough to 2020. It contains the following policies of potential relevance:

CS36 – Biodiversity and Geology

a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes. On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that:

- i. The need for development clearly outweighs the need to protect the value of the site; and
- ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.

b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.

⁹British Standards Institution (2006). *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*. Publically available at: <http://www3.hants.gov.uk/pas-2010.pdf>

c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

CS38 – Trees, Hedges and Woodlands

Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal, and the Borough's vegetation cover will be extended.

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets” (paragraph 117). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level. An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The UK Biodiversity Action Plan 2007 (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framework*¹⁰ and individual national biodiversity strategies. The UK framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010. The Framework's overall vision is that “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*¹¹ is the national biodiversity strategy, which has the stated mission “(...)to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.” In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets objectives relating to terrestrial and marine habitats and ecosystems, species and people. These include:

- Establishing coherent and resilient ecological networks, described as “a network of high quality sites, protected by buffer zones, and connected by wildlife corridors and smaller, but still wildlife-rich, ‘stepping-stone’ sites”;
- Taking targeted action for the recovery of priority species whose conservation is not delivered through wider habitat-based and ecosystem measures ;

¹⁰ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). *The UK Post-2010 Biodiversity Framework*. Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

¹¹ DEFRA (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Available from: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

- Establishing Nature Improvement Areas and Marine Protected Areas;
- Bringing more SSSIs into favourable condition;
- Reducing environmental pressures by working with sectors such as agriculture, forestry, planning and development.

A network of 48 Local Nature Partnerships have been set up across England to help deliver these objectives.

Note that as these changes are still relatively new, some local plans and government guidance documents/circulars still refer to the UK BAP and 'UK BAP priority habitats and species'. These habitats and species are listed under Section 41 of the NERC Act, and **remain a material consideration in the planning process**. They are now described as 'Species/Habitats of Principal Importance', though they are also commonly referred to as 'Section 41 Species/Habitats' or simply 'Priority Species/Habitats'. Further guidance is given in the relevant sections below.

Local level

The Berkshire Local Nature Partnership has produced the Natural Environment in Berkshire Biodiversity Strategy 2014-2020 which builds on, and replaces the previous Berkshire Biodiversity Action Plan (BAP). In addition to identifying a network of Biodiversity Opportunity Areas across the county and a range of priority habitats which support bats, it also lists a number of priority species recorded in Berkshire including:

- Western Barbastelle *Barbastella barbastellus*
- Bechstein's Bat *Myotis bechsteinii*
- Noctule Bat *Nyctalus noctula*
- Soprano Pipistrelle *Pipistrellus pygmaeus*
- Brown Long-eared Bat *Plecotus auritus*
- Greater Horseshoe Bat *Rhinolophus ferrumequinum*
- Lesser Horseshoe Bat *Rhinolophus hipposideros*

Delivering Biodiversity Opportunities

Where practicable, opportunities should also be sought to achieve a **net gain** (i.e. enhancement) of biodiversity. Support for biodiversity enhancement is provided in the Public Authority 'Biodiversity Duty' under the NERC Act 2006 and in the key principles of the NPPF, as described above.

Enhancement projects may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable urban drainage schemes (SUDS) and green roofs. Planning conditions and obligations are increasingly being used to mandate biodiversity enhancement on or off a development site, either through design or through financial support.

Many ideas for incorporating ecological enhancement into planning and development can be found in the biodiversity action plans and/or strategies relevant to the policy or development

area, or through initiatives led by the Local Nature Partnership. At the national level, twelve Nature Improvement Areas were set up in 2012 in order to deliver landscape-scale conservation objectives, and many regions and counties have also identified and mapped 'Biodiversity Opportunity Areas', 'Nature Maps' or 'Strategic Nature Areas' where conservation action such as habitat creation and restoration will deliver the greatest benefits for biodiversity.

Other sources of ideas and opportunities include schemes led by conservation NGOs, such as the Wildlife Trusts' 'Living Landscapes' and the RSPB's 'Futurescapes', which are working in partnership with landowners and local communities across the country to restore ecosystems and ecological networks.

SPECIES SPECIFIC PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England and are of relevance to this report. It is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by proposed development. This can best be achieved by undertaking surveys early in the planning process. Mitigation measures are required to minimise disturbance to protected species and may necessitate a licence. Natural England offers further detailed advice which can be applied to planning applications that affect protected species¹².

Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Bats are protected further by law in England.

There are 18 species of bat in the UK, 7 of which are UK BAP priority species and Species of Principal Importance in England under S41 of the NERC Act 2006. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitat Regulations 2010. It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, deliberately or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts); or
- Possess, sell or transport a bat, or anything derived from it.

¹² Natural England. 2011. *Standing Advice for Protected Species*. Available from: <http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/default.aspx>

Development proposals affecting bats or their roosts require a European Protected Species licence from Natural England.

Birds

48 species of bird on the UK BAP exist in England. These species, plus the Hen Harrier, are also listed as Species of Principal Importance in England under S41 of the NERC Act 2006. All birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 affords extra protection for a number of species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependant young, constitutes an offence.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set down in the law, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

European Protected Species Licences

A European Protected Species Licence is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitat Regulations 2010; including inter alia all species of bats, Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus* and Otter *Lutra lutra*. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

- 1) The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- 2) There is no satisfactory alternative; and
- 3) The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance in England for the conservation of biodiversity under Section 41 (S41) of the NERC Act 2006¹³. This list of species includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier¹⁴). While these species may not be legally

¹³ The S41 List of Species & Habitats of Principal Importance in England is available from: <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportantance.aspx>

¹⁴ The Hen Harrier has also been included on the List because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

protected, there is a clear responsibility on planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species and habitats and to enhance them where possible. Additional guidance to developers is typically provided in level planning policies.

**Appendix 4 Berkshire and South Buckinghamshire Bat Group
Record Search Results**



Client for whom search carried out: Lynsey Robinson Ecology
 Client Purchase Order Number: N/A - email confirmation
 Client Reference: 519 Basingstoke Road

Person requesting search: Lynsey Robinson
 Date of search: 01/08/2016

Search of Group Bat Records 2km radius centred on SU 71733 69924 (BSBBG Reference 577LRE)

I have found the following records within your requested search area:

Grid reference	Species	Location	Date / Year	Additional information	Numbers if known
SU7006369374	Pipistrellus pygmaeus	Foundary Brook Culvert, Under M4	Jul 2014	Maternity Roost - Ecologist Planning survey	
SU7057470174	Myotis sp.	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	
SU7057470174	Nyctalus noctula	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	
SU7057470174	Myotis daubentonii	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	
SU7057470174	Pipistrellus pygmaeus	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	
SU7057470174	Pipistrellus pipistrellus	Green Park, Longwater Avenue, Reading	26 Aug 2015	Bat walk conducted by a professional and recorded with time expansion detector	3
SU7069	Pipistrellus pipistrellus	*TVERC	13 Nov 2010	Field record	1
SU7085068167	Pipistrellus sp.	Great Lea Farm Great Lea Three Mile Cross	Mar 2012	3 old droppings found in loft space - Ecologist Planning survey	

SU7088768133	Pipistrellus sp.	Great Lea Farm Great Lea Three Mile Cross	Mar 2012	4 old droppings found in loft space - Ecologist Planning survey	
SU7089968716	Pipistrellus pipistrellus	Hartley Court Lodge, Hartley Court Road, Three Mile Cross	Jun 2015	Emergence of 1-2 bats observed; 15+ droppings in loft void	1
SU714715	Pipistrellus sp.	47 Boulton Rd Reading	Jun 2010		
SU714715	Eptesicus serotinus	47 Boulton Rd Reading	Jun 2010		
SU7148968185	Pipistrellus pipistrellus	Darbrook, Basingstoke Road, Three Mile Cross	Aug 2008	2 emergences observed - Ecologist Planning survey	2
SU7150868370	Pipistrellus pipistrellus	Tree TG3116, Land North of Church Lane, Three Mile Cross	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7170568316	Pipistrellus pipistrellus	Tree 3249, Land North of Church Lane, Three Mile Cross	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7176668114	Pipistrellus pygmaeus	Tree 3247, Land North of Church Lane, Three Mile Cross	Jun 2011	Emergence observed - Ecologist Planning survey	
SU717692	Pipistrellus pipistrellus	Unknown	11 Jun 2006	Adult male - Rescued	1
SU7180968168	Pipistrellus pipistrellus	Tree TG3113, Land North of Church Lane, Three Mile Cross	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7183268094	Pipistrellus sp.	Tree 3246, Land North of Church Lane, Three Mile Cross	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7204168947	Pipistrellus pipistrellus	Cresswell Close, Reading RG2 8UF	02 Sep 2015	Injured Bat Record	1
SU720692	Pipistrellus sp.	RG2 8UJ, Reading	27 Jul 2015	NE Roost visit - By droppings	
SU7211868189	Plecotus auritus	Shinfield Lodge, Church Lane, Three Mile Cross	Feb 2015	Small pile of droppings in roof void - Ecologist Planning survey	
SU7216768068	Pipistrellus pipistrellus	Tree 3274, Ridge SANG Area, Three Mile Cross	Aug 2008	2 emergences observed - Ecologist Planning survey	2
SU7217668160	Pipistrellus pipistrellus	2 Church Lane, Shinfield	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7218668172	Pipistrellus pipistrellus	4 Church Lane, Shinfield	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7219768176	Pipistrellus pipistrellus	5 Church Lane Three Mile Cross	Jul 2008	Maternity roost 7 bats present; reconfirmed in 2010, 12 bats recorded - Ecologist Planning survey	7
SU7222368270	Pipistrellus pipistrellus	The Grove, Church Lane, Shinfield	Aug 2008	Emergence observed - Ecologist Planning survey	
SU7224568230	Pipistrellus pipistrellus	13 Church Lane, Shinfield	Aug 2008	2 emergences observed - Ecologist Planning survey	2
SU7225968243	Pipistrellus pipistrellus	16 Church Lane, Shinfield	Aug 2008	Emergence observed - Ecologist Planning survey	

SU724718	Pipistrellus pipistrellus	Cintra Park	Jul 2009	Aural bat detector - feeding	3	
SU726704	Nyctalus noctula	The Cowsey	30 Jun 2011	Bat group walk for scouts - Aural bat detector	3	
SU726704	Plecotus auritus	The Cowsey	30 Jun 2011	Bat group walk for cubs - Aural bat detector	1	
SU726704	Pipistrellus pipistrellus	The Cowsey	30 Jun 2011	Bat group walk for cubs - Aural bat detector	1	
SU7296070471	Pipistrellus pygmaeus	Ridgeway Primary School	04 Sep 2015	Aural bat detector		
SU7296070471	Pipistrellus pipistrellus	Ridgeway Primary School	04 Sep 2015	Aural bat detector		
SU7296070471	Plecotus sp.	Ridgeway Primary School	03 Sep 2015	Aural bat detector		
SU7296070471	Pipistrellus pipistrellus	Ridgeway Primary School	03 Sep 2015	Aural bat detector		
SU7296070471	Pipistrellus pygmaeus	Ridgeway Primary School	03 Sep 2015	Aural bat detector		
SU7296070471	Nyctalus noctula	Ridgeway Primary School	03 Sep 2015	Aural bat detector		
SU730686	Pipistrellus nathusii	Shinfield Road, Shinfield	12 Sep 2013	Aural bat detector	1	
SU730686	Pipistrellus pygmaeus	Shinfield Road, Shinfield	21 Aug 2013	Aural bat detector	1	
SU730686	Pipistrellus pipistrellus	Shinfield Road, Shinfield	21 Aug 2013	Aural bat detector	1	
SU730686	Nyctalus noctula	Shinfield Road, Shinfield	21 Aug 2013	Aural bat detector	1	
SU730686	Plecotus sp.	Shinfield Road, Shinfield	15 Jul 2013	Non-breeding roost, 200-300 droppings	1	
				Emergence observed during survey of Lane		
SU7307868727	Pipistrellus pipistrellus	Coach House Cottage, Shinfield Road, Shinfield	Aug 2014	End House for development - Ecologist Planning survey		
SU7308168686	Nyctalus noctula	Lane End House, Shinfield Road, Shinfield	01 Sep 2015	Aural bat detector		
SU7308168686	Pipistrellus pipistrellus	Lane End House, Shinfield Road, Shinfield	01 Sep 2015	Aural bat detector		
SU7308168686	Pipistrellus pygmaeus	Lane End House, Shinfield Road, Shinfield	01 Sep 2015	Aural bat detector		
SU7308168686	Nyctalus noctula	Lane End House, Shinfield Road, Shinfield	26 Aug 2015	Aural bat detector		
SU7308168686	Pipistrellus pygmaeus	Lane End House, Shinfield Road, Shinfield	26 Aug 2015	Aural bat detector		
SU7308168686	Myotis sp.	Lane End House, Shinfield Road, Shinfield	26 Aug 2015	Aural bat detector		
SU7308168686	Pipistrellus pipistrellus	Lane End House, Shinfield Road, Shinfield	26 Aug 2015	Aural bat detector		
				One bat observed emerging off site from the bungalow to the north of the house - Aural bat detector		
SU7308168686	Pipistrellus pipistrellus	Lane End House, Shinfield Road, Shinfield	13 Aug 2014	250+ droppings in roof void including a minority of Pip; emergence of Pip observed		
SU7308468697	Pipistrellus pipistrellus	Lane End House, Shinfield Road, Shinfield	Jul 2013	250+ droppings in roof void of mainly BLE - Ecologist Planning survey		
SU7308468697	Plecotus auritus	Lane End House, Shinfield Road, Shinfield	Jul 2013	Bat droppings recorded in loft space. Small scattering beneath ridge beam		
SU7330870770	Plecotus sp.	188 Shinfield Road, Reading RG2 7DT	30 Apr 2014	Breeding roost	2	
SU701698	Plecotus auritus	The Clock House, Pingewood, Reading	1997			
SU7269	Pipistrellus pipistrellus	*TVERC	20 Jun 1986		1	

BSBBG has agreed an exchange of data with TVERC which enables us to provide records belonging to them with the grid reference given to 1 km precision. Such records are indicated by *TVERC under location. Enquirers are recommended to contact TVERC direct to obtain full locations details. Please note that TVERC provides BSBBG with an annual update of their records, so they may hold records for your search area that BSBBG does not yet have access to. Requests for information may be submitted via the TVERC website www.tverc.org.uk

However I must, as usual, point out that our records should not be considered a complete record of bats in the area since we only record sites where we, as a Bat Group, have been called to assist members of the public or Natural England (what was English Nature) to deal with 'bat problems', recorded bats whilst undertaking bat group events and walks or taken part in National Monitoring of bats for the Bat Conservation Trust. Records from the general public and bat group members submitted to the records officer are also kept in the database. To be certain what bats may or may not be present it would be necessary to undertake a detailed bat survey at various times throughout the year.

All payment details will be contained within the invoice.

We are always striving to improve the quality and quantity of our records and therefore we welcome any records that you may obtain during any planned surveys in our area. Please submit records to records@berksbats.org.uk.