

Land adjacent to  
Appletree Cottage,  
Winchester Road,  
Boorley Green,  
Southampton, SO32 2DH

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Ecological Appraisal Report

October 2025

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**Ecological Appraisal Report**  
**Land adjacent to Appletree Cottage, Winchester Road, Boorley Green, Southampton, SO32**  
**2DH**  
**for**  
**Mr Bendy**

| <b>Reference: Preliminary Ecological Appraisal</b> |                    |
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This report represents sound industry practice; reports and recommends correctly, truthfully and objectively; is appropriate given the local site conditions; scope of works proposed and resources allocated to us by the client; and avoids invalid, biased, and exaggerated statements.

The author disclaims any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and the author accepts no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

# Contents

|          |                                                                                   |           |
|----------|-----------------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>EXECUTIVE SUMMARY.....</b>                                                     | <b>5</b>  |
| <b>2</b> | <b>INTRODUCTION.....</b>                                                          | <b>9</b>  |
| 2.1      | PURPOSE OF THIS REPORT.....                                                       | 9         |
| 2.2      | SITE DESCRIPTION.....                                                             | 9         |
| 2.3      | PROPOSED ACTIVITIES.....                                                          | 9         |
| 2.4      | CURRENT PLANNING STATUS.....                                                      | 9         |
| 2.5      | STRUCTURE OF THIS REPORT.....                                                     | 10        |
| <b>3</b> | <b>METHODS.....</b>                                                               | <b>11</b> |
| 3.1      | DESK STUDY.....                                                                   | 11        |
| 3.2      | FIELD SURVEY.....                                                                 | 11        |
| 3.2.1    | <i>General</i> .....                                                              | 11        |
| 3.2.2    | <i>Date, time and weather</i> .....                                               | 11        |
| 3.2.3    | <i>Personnel</i> .....                                                            | 12        |
| 3.2.4    | <i>Botanical surveys</i> .....                                                    | 12        |
|          | UK Habitat Classification (UKHab).....                                            | 12        |
| 3.2.5    | <i>Animal surveys</i> .....                                                       | 12        |
|          | General.....                                                                      | 12        |
|          | Bats.....                                                                         | 13        |
|          | Dormice.....                                                                      | 14        |
|          | Great crested newt.....                                                           | 14        |
|          | Badger.....                                                                       | 15        |
|          | Birds.....                                                                        | 15        |
|          | Widespread species of reptile.....                                                | 15        |
| <b>4</b> | <b>RESULTS.....</b>                                                               | <b>17</b> |
| 4.1      | DESK STUDY.....                                                                   | 17        |
| 4.1.1    | <i>Designated sites</i> .....                                                     | 17        |
| 4.1.2    | <i>European Protected Species</i> .....                                           | 17        |
| 4.2      | HABITATS AND PLANT SPECIES.....                                                   | 18        |
| 4.2.1    | <i>Habitats</i> .....                                                             | 18        |
| 4.2.2    | <i>Plant species</i> .....                                                        | 19        |
| 4.3      | PROTECTED VERTEBRATES.....                                                        | 19        |
| 4.3.1    | <i>Bats</i> .....                                                                 | 19        |
|          | Bat roost suitability of trees.....                                               | 19        |
|          | Commuting and foraging habitat.....                                               | 19        |
| 4.3.2    | <i>Dormice</i> .....                                                              | 19        |
| 4.3.3    | <i>Great crested newt</i> .....                                                   | 19        |
| 4.3.4    | <i>Badger</i> .....                                                               | 20        |
| 4.3.5    | <i>Birds</i> .....                                                                | 20        |
| 4.3.6    | <i>Widespread species of reptile</i> .....                                        | 20        |
| <b>5</b> | <b>INTERPRETATION AND EVALUATION.....</b>                                         | <b>21</b> |
| 5.1      | CONSTRAINTS ON THE SURVEY.....                                                    | 21        |
| 5.1.1    | <i>Constraints on survey data</i> .....                                           | 21        |
| 5.1.2    | <i>Constraints on the mitigation, compensation and enhancement measures</i> ..... | 21        |
| 5.2      | SURVEY REPORT EXPIRY.....                                                         | 21        |
| 5.3      | LEGAL CONTEXT.....                                                                | 21        |
| 5.4      | POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT.....                                | 21        |

|           |                                                          |           |
|-----------|----------------------------------------------------------|-----------|
| 5.4.1     | <i>Desk study</i> .....                                  | 21        |
| 5.4.2     | <i>Habitats and plants</i> .....                         | 22        |
| 5.4.3     | <i>Bats</i> .....                                        | 23        |
|           | Bat roost suitability of trees .....                     | 23        |
|           | Foraging and commuting habitat.....                      | 23        |
| 5.4.4     | <i>Dormice</i> .....                                     | 23        |
| 5.4.5     | <i>Great crested newt</i> .....                          | 23        |
| 5.4.6     | <i>Badger</i> .....                                      | 23        |
| 5.4.7     | <i>Birds</i> .....                                       | 24        |
| 5.4.8     | <i>Widespread species of reptile</i> .....               | 24        |
| 5.5       | FURTHER SURVEY .....                                     | 24        |
| 5.6       | ENHANCEMENT MEASURES.....                                | 24        |
| 5.6.1     | <i>General</i> .....                                     | 24        |
| 5.6.2     | <i>Bats</i> .....                                        | 25        |
| 5.6.3     | <i>Lighting</i> .....                                    | 26        |
| 5.6.4     | <i>Birds</i> .....                                       | 26        |
| 5.6.5     | <i>Amphibians, reptiles and hedgehogs</i> .....          | 27        |
| 5.7       | REQUIREMENT FOR NATURAL ENGLAND LICENCES .....           | 27        |
| 5.7.1     | <i>European Protected Species (EPS) licences</i> .....   | 27        |
| 5.7.2     | <i>Protection of Badgers Act (1992) licences</i> .....   | 27        |
| <b>6</b>  | <b>FIGURES</b> .....                                     | <b>28</b> |
| <b>7</b>  | <b>PHOTOGRAPHS</b> .....                                 | <b>34</b> |
| <b>8</b>  | <b>REFERENCES</b> .....                                  | <b>35</b> |
| <b>9</b>  | <b>APPENDIX A: PROTECTED SPECIES LEGISLATION</b> .....   | <b>37</b> |
| 9.1       | GENERAL .....                                            | 37        |
| 9.2       | BATS.....                                                | 37        |
| 9.3       | DORMICE .....                                            | 37        |
| 9.4       | GREAT CRESTED NEWT .....                                 | 38        |
| 9.5       | WATER VOLE .....                                         | 38        |
| 9.6       | BADGER.....                                              | 39        |
| 9.7       | BIRDS.....                                               | 39        |
| 9.7.1     | <i>Birds - general protection</i> .....                  | 39        |
| 9.7.2     | <i>Birds - specially protected species</i> .....         | 39        |
| 9.8       | WIDESPREAD SPECIES OF REPTILE .....                      | 39        |
| 9.9       | EUROPEAN PROTECTED SPECIES LICENCES .....                | 40        |
| 9.10      | NATIONAL PLANNING CONTEXT .....                          | 40        |
| 9.10.1    | <i>General</i> .....                                     | 40        |
| 9.10.2    | <i>Biodiversity Net Gain (BNG)</i> .....                 | 40        |
| <b>10</b> | <b>APPENDIX B: OTHER ENHANCEMENTS FOR WILDLIFE</b> ..... | <b>43</b> |
| 10.1      | LAWN SEED MIX COMPOSITION .....                          | 43        |
| 10.2      | ORNAMENTAL PLANTING TO ATTRACT WILDLIFE.....             | 44        |
| 10.3      | BIRD BOXES .....                                         | 47        |
| 10.4      | INSECTS .....                                            | 50        |

1. This report provides information from an ecological appraisal and reptile surveys carried out by Hampshire Ecological Services Ltd for Mr Bendy in connection with a proposal to construct a new apartment building within the boundary of a plot of land adjacent to Appletree Cottage (approximate Ordnance Survey Grid Reference SU505147). The site location is shown in *Figures 1 and 2*; and a site plan is given in *Figure 3* in *Section 6*.
2. An ecological appraisal was carried out during the daytime on the 14<sup>th</sup> of August 2025 by ecologist Adam Rye BSc (Hons).
3. The site consists of a small area of grassland immediately adjacent to Appletree Cottage with trees and fences on the boundaries. The area is dominated by overgrown grassland with some areas of bare ground and concrete. There is also a gravel parking area on the east side of the site. A plan showing the various habitats on site is given in *Figure 4* in *Section 6*.
4. The habitats and plant species observed on site are widespread and common and as such have no conservation importance from a botanical point of view. The exception is the mature oak tree on the east boundary that would take many decades to replace. This is of high ecological value and should be retained and protected. Heras fencing or similar should be used to protect the roots of the mature trees during construction. The guidance provided in BS 5837 *Trees in relation to Construction* provides further advice on minimising the impact to retained trees on a development site.
5. No plant species listed on *Schedules 8 or 9* of the *Wildlife and Countryside Act 1981* (as amended) were recorded on the site.
6. The trees on site were identified as having negligible bat roost suitability.
7. The mature trees and shrubs in the retained hedgerow provide good foraging habitat for bats, as do the trees adjacent to the southern boundary. They link to a network of hedges, tree-lines and strips of woodland providing links into and from the wider landscape in all directions. These in turn connect the site to areas of high-quality foraging habitat in the wider landscape such as woodland and water sources. Therefore, the site is classed as having moderate suitability to be used by commuting and foraging bats. Woodland and water sources provide high-quality foraging habitat for a number of different species of bat. These areas will be unaffected by the development and all links will be maintained. The connectivity around the edges of the site (the trees) will be retained and as such no impact to commuting and foraging bats (and hence bat populations in the local area) is anticipated.
8. Changes in lighting can affect foraging and commuting bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto the integrated bat box entrance/ exit points (see *Section 5.6.2*) and retained or

planted vegetation (particularly the trees). Any lighting installed should avoid spillage of greater than 0.1 lux (typical moonlight/ cloudy sky) near to or directly onto the bat box entrance/ exit points and vegetation so that light disturbance is not a problem. This is because lighting can impact bat populations directly by disturbing roosts and reducing their foraging area, or indirectly by severing commuting routes from roosts. Any new lighting should not increase the level currently experienced and, if at all possible, should reduce any light spill due to the type of lighting used and the use of protection such as hoods and cowls. The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

9. Although there is suitable habitat for dormice on (a hedge) and adjacent to the site (the tree-line adjacent to the southern boundary), no suitable habitat will be affected as the hedge will be retained and the tree-line is outside the boundary. Therefore, no impacts are anticipated on dormice in the area and no further surveys are proposed.
10. According to aerial photographs (GoogleEarth™) and online Ordnance Survey 1:25,000 maps there are four ponds within 500m of the site. The locations of these ponds are shown in *Figure 5* in *Section 6*.
11. The grassland had until recently been mown short as part of the garden of the adjacent property, which is unsuitable for great crested newts due to the lack of cover and risk of predation. However, at the time of survey it had grown into a longer sward, which is suitable terrestrial habitat for great crested newts.
12. All the ponds within 500m of the site are over 250m from the site and separated by barrier to movement such as busy roads, new housing estates under construction and railway lines. Therefore, despite the site becoming more suitable terrestrial habitat, it is not anticipated that great crested newts are present on site and no further surveys are currently proposed.
13. As no badger setts were found on site, development works are free to proceed without further regard to this species, although if a badger sett is subsequently discovered within 30m of the proposed works then it may require a licence from Natural England to proceed. Guidance to what may be classed as disturbance to a badger (when occupying a sett) can be found at: <https://www.gov.uk/guidance/badgers-protection-surveys-and-licences>
14. The trees and shrubs in the hedge provide suitable habitat for nesting birds. The destruction of active bird nests is prohibited under the *Wildlife and Countryside Act 1981* (as amended). The hedge will be retained and as such no impacts to nesting birds are anticipated. If any trees and shrubs in the hedges are subsequently to be affected e.g. for pruning or crown-lifting, this should be undertaken outside the bird breeding season (which is late February to August inclusive). If this is not possible, and it has to be carried out during the nesting season, then it should be inspected (by an ecologist) for nests immediately prior to the work. If any active nests are found prior to or during works, a 5m buffer zone should be established around them and be temporarily

fenced off to prevent plant or personnel disturbing the nest until the end of the breeding bird season (or until the nest is no longer in use).

15. The grassland had until recently been mown short as part of the garden of the adjacent property, which is unsuitable for great crested newts due to the lack of cover and risk of predation. However, at the time of survey it had grown into a longer sward, which is suitable habitat for widespread species of reptiles due to the cover provided and low risk of predation. In addition, there is a patch of low-growing bramble scrub in the north-west corner of the site that is suitable foraging and hibernation habitat for reptiles (see *Photos 1, 2 & 4* in *Section 7*). Therefore, reptile surveys were carried out.
16. No reptiles (or amphibians such as great crested newts) were found during the reptile survey. However, as they were carried out late in the season, condensed and without a settling period, as a precaution it is recommended that the top soil strip is carried out under ecological supervision. Alternatively, the grassland could be mown and kept as a short-sward until site clearance commences. In addition, no materials or brush (e.g. from the felled fruit trees) should be kept on site, and the site should not be used for bonfires. In the unlikely event that a reptile is found during site clearance then it should be moved (by an ecologist to ensure safe handling) to a place of safety outside the area of works, such as the adjacent grassland.
17. National Planning Policy Framework (NPPF 2021) states "*opportunities to incorporate biodiversity in and around developments should be encouraged*" as part of the consideration for "*presumption in favour of sustainable development*". Therefore, the following outline enhancements are proposed:
  - The new buildings will be enhanced for bats using at least two integrated bat box (e.g. a PRO UK Build-in WoodStone Bat Box, Habibat™ Bat Box, an Ibstock Enclosed Bat Box, a Schwegler Bat Tube, or similar), which provides a cavity that is incorporated into the external build structure to offer roosting space for bats. This bat box will be placed as high as possible (ideally 2.5m or above, facing south or south-east) with a clear exit path.
  - Two swift boxes will be built into the walls of the new buildings to provide new nest sites. Swift boxes can be supplied and installed by Hampshire Swifts <https://www.hampshireswifts.co.uk> and a new soffit design is also available (this box is also suitable for sparrows which are also an IUCN Red List Bird of Conservation Concern and listed on *Section 41* of the *Natural Environment & Rural Communities Act 2006*).
18. The proposed bird boxes are summarised in *Table 5.6.4.1* and the proposed enhancement measures are shown in *Figure 7* in *Section 6*.
19. Other enhancements for wildlife that the owners may choose to employ are given in *Appendix B*. However, these are not proposed as enhancements for the purposes of the planning application, but only for information purposes.

20. This survey data is valid for a maximum of 12 months. If more than 12 months elapse after completion of all surveys, it may be advisable to conduct further survey work to obtain up-to-date information prior to commencement of construction to ensure protected species compliance.
21. According to the *Multi-Agency Geographic Information for the Countryside* website ([www.magic.gov.uk](http://www.magic.gov.uk)), the site is neither designated nor immediately adjacent to any designated areas of nature conservation. However, there are designated sites nearby (see *Table 4.1.1.1* in *Section 4.1.1*) None of these will be directly affected by this small-scale development and all links will be maintained.
22. The site is within 5km of Solent Maritime SAC, Solent & Southampton Water SPA and the River Itchen SAC. As a result of its proximity to these designated sites, the impacts of this small-scale development on the SACs and SPA must be considered. As the works will cause an increase to the number of buildings on the site there may be an increase in the recreational pressure, or pollution, on the internationally designated sites. Therefore, the local council may ask for compensation on the basis that the development could increase in the recreational pressure, or pollution, on the internationally designated sites under the Solent Disturbance and Mitigation Project (SCC, 2021).
23. According to the *Multi-Agency Geographic Information for the Countryside* website ([www.magic.gov.uk](http://www.magic.gov.uk)), there have been three bat (and one dormouse) European Protected Species (EPS) licences granted 2km of the site. It is unlikely that the current proposals will impact the two sites further away. However, due to its location, it is likely that any bats using the site for commuting and/ or foraging are part of the same meta-population as the closest site. Due to the retention of the hedgerow and the presence of trees just outside the site boundary it is not anticipated that the current proposals will impact these populations.

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## **INTRODUCTION**

### **2.1 Purpose of this report**

This report provides information from an ecological appraisal and reptile surveys carried out by Hampshire Ecological Services Ltd for Mr Bendy in connection with a proposal to construct a building on an area of land immediately adjacent to Appletree Cottage, Winchester Road, Boorley Green, Southampton, SO32 2DH (approximate Ordnance Survey Grid Reference SU505147). The location of the site is shown in *Figures 1 and 2 in Section 6*.

### **2.2 Site description**

The site consists of a small area of grassland immediately adjacent to Appletree Cottage with trees and fences on the boundaries. The area is dominated by overgrown grassland with some areas of bare ground and concrete. There is also a gravel parking area on the east side of the site. A plan showing the various habitats on site is given in *Figure 4 in Section 6*.

The site is on the western side of Winchester Road, in Boorley Green. The immediate surroundings consist of residential gardens to the north and south; the Macdonald Botley Park Hotel & Spa and its grounds to the east; and grassland to the west. Beyond this there are large urban areas consisting mainly of residential housing, including some new housing estates.

agricultural land (arable and grassland) as well as some groups of mature trees. Additionally, just beyond the agricultural land to the east, there is a cluster of residential buildings which make up the village of Boorley Green. Beyond the urban area of Boorley Green the land use is mostly agricultural land (arable and grassland) to the north, south and east as well as the urban area of Botley (to the south-east) and patches of woodland of various sizes. To the west and south-west are the urban areas of Hedge End and Southampton (c.6,500m west).

### **2.3 Proposed activities**

This survey was carried out in connection with a proposal to construct a new building.

### **2.4 Current planning status**

Planning permission is being applied for.

## 2.5 *Structure of this report*

This report is structured as follows:

- *Section 1* contains the executive summary;
- *Section 2* contains an introduction;
- *Section 3* describes the survey methods;
- *Section 4* describes the results;
- *Section 5* evaluates the findings;
- *Section 6* contains the figures including:
  - *Figure 1* gives aerial photographs showing the site location;
  - *Figure 2* gives an Ordnance Survey map showing the location of the site;
  - *Figure 3* gives a site plan;
  - *Figure 4* gives a plan of the habitats on the site;
  - *Figure 5* gives the locations of ponds within 500m of the site boundary;
  - *Figure 6* shows the locations of artificial refugia for the reptile surveys; and
  - *Figure 7* gives plans of the proposed enhancement measures for the site.
- *Section 7* gives photographs of the site;
- *Section 8* lists the references;
- *Appendix A* lists key legislation and regulations; and
- *Appendix B* lists other enhancements for wildlife (for information, not part of the planning application).

## **METHODS**

### **3.1 Desk study**

The *Multi-Agency Geographic Information for the Countryside* website ([www.magic.gov.uk](http://www.magic.gov.uk)) was used to search for designated sites on or adjacent to the site including Local Nature Reserves (LNRs), National Nature Reserves (NNRs), Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. The search area was 5km for SAC and SPA sites and 2km for LNRs, NNRs, Ramsar sites and SSSIs, as specified in Hampshire's *Biodiversity Checklist*. The search area is also 500m for Sites of Importance to Nature Conservation (SINCs) and ancient semi-natural and ancient replanted woodlands.

In addition, the *Multi-Agency Geographic Information for the Countryside* website ([www.magic.gov.uk](http://www.magic.gov.uk)) was used to search for granted European Protected Species (EPS) licences within 2km of the site.

A data search from the Hampshire Biodiversity Information Centre (HBIC) has not been commissioned in relation to this site.

### **3.2 Field survey**

#### **3.2.1 General**

An ecological appraisal was carried out on this site. This type of survey is not designed to prove presence or absence of significant or protected species; it is used to highlight habitat that is suitable and to identify where further work to show presence or absence is required. However, in some circumstance's species can be ruled out because there is unsuitable habitat or barriers to inward migration.

Significant species were defined as follows:

- European Protected Species (listed on *Schedules 2 and 5 of the Conservation of Habitats & Species Regulations 2017*);
- nationally protected species under *Schedules 1, 5 and 8 of the Wildlife & Countryside Act 1981*, the *Protection of Badgers Act 1992* (as amended) and the *Deer Act 1991*;
- non-native pest species listed on *Schedule 9 of the Wildlife & Countryside Act 1981* (as amended);
- species listed as Critically Endangered, Endangered or Vulnerable on the *IUCN Red List*;
- all species listed on the *RSPB Birds of Conservation Concern 2015* as Red or Amber; and
- Nationally Rare or Nationally Scarce species.

#### **3.2.2 Date, time and weather**

An ecological appraisal was carried out during the daytime on the 14<sup>th</sup> August 2025. The weather was 23°C and dry with 90% cloud cover and a slight air (Beaufort scale 1).

The ecological appraisal identified suitable habitat for widespread species of reptile on site. Subsequently artificial refugia were placed around the development site on the 25<sup>th</sup> September 2025 in suitable reptile habitat. Seven visits were then carried out between the 26<sup>th</sup> September & 6<sup>th</sup> October to assess the presence or likely absence of reptiles. The weather conditions for each visit are given in *Table 4.3.6.1* in *Section 4*.

### 3.2.3 *Personnel*

The ecological appraisal was carried out by Adam Rye BSc (Hons) who is experienced in carrying out ecological appraisals and surveys for protected species, including undertaking bat roost surveys and is accredited under Bat Class Licence Registration number 2015-11159-CLS-CLS.

The reptile surveys were carried out by Adam Rye BSc (Hons) and Finn Parker MSci (Hons) who are experienced in carrying out reptile surveys and collecting biometric data from captured reptiles.

This report was reviewed by John Poland CEnv MCIEEM CBiol MSB, who is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM), a Chartered Environmentalist (CEnv), a Chartered Biologist (CBiol) and multi-species licence holder with 23 years of experience in ecological consultancy and Victoria Russell MCIEEM who is also a full member of the CIEEM and multi-species licence holder with over 25 years of experience in ecological consultancy.

All staff adhere to the Chartered Institute of Ecology and Environmental Management's (CIEEM) *Code of Professional Conduct*.

### 3.2.4 *Botanical surveys*

#### *UK Habitat Classification (UKHab)*

The botanical survey in this report is based on the UK Habitat Classification (UKHab) survey methodology (UKHab, 2023) and involves the following elements: habitat mapping using a set of standard codes to indicate habitat types on a UKHab survey map; and descriptions of habitats and features of ecological or nature conservation interest relating to locations on the UKHab survey map.

### 3.2.5 *Animal surveys*

#### *General*

The habitat was assessed to determine whether or not it is suitable for those protected vertebrates that occur in the region. Initial surveys do not usually confirm species presence or absence, but obvious signs and incidental sightings of protected species would have been noted had they been encountered.

An assessment was made of the likelihood of protected vertebrates using the site. Taking into consideration the geographical region and habitat type, species and groups that might be encountered are:

- bats;
- dormice;
- great crested newts;
- badger;
- nesting birds; and
- reptiles.

There are no rivers on or adjacent to the site, therefore otter and water vole are not considered further.

Details of initial survey methods for each of the relevant species that might have been encountered are given below and an overview of the legal protection of the species and groups is provided in *Appendix A*.

### *Bats*

#### Tree assessment

Detailed surveys of individual trees were not carried out. However, features such as holes and crevices that could be used by roosting bats were noted and their overall bat roost suitability was assessed. If any mature trees are subsequently to be removed or if tree surgery (*e.g.* crown-lifting) is required, then a bat survey at an appropriate time of year may be required.

Following the visual inspections, the trees are assigned a level of suitability for being used by roosting bats, depending on the presence of potential roost features (PRFs). This is based on the criteria in *Table 3.2.5.1* (Collins, 2023).

*Table 3.2.5.1. Suitability of trees to be used by roosting bats.*

| Suitability                   | Description                                                                                                                                                                      |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| None                          | Either no PRFs in the tree or highly unlikely to be any                                                                                                                          |
| FAR                           | Further assessment required to establish if PRFs are present in the tree                                                                                                         |
| PRF1                          | A tree with at least one PRF present where the PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitat |
| PRP2                          | A tree with at least one PRF present where the PRF is suitable for multiple bats and may therefore be used by a maternity colony.                                                |
| PRF = potential roost feature |                                                                                                                                                                                  |

#### Assessment of commuting and foraging habitat

Bats use a variety of habitats for foraging, in particular hedgerows, woods and water bodies, and roost in a range of structures including buildings, trees, bridges and caves. Areas that could be used for foraging were noted.

The vegetation within the site is assigned a level of suitability for being used by commuting and foraging bats. This is based on the criteria in *Table 3.2.5.2* (Collins, 2023).

Table 3.2.5.2. Bat commuting and foraging habitat.

| Suitability                                                                                        | Description of commuting and foraging habitats                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| None                                                                                               | No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines or generate/shelter insect populations available to foraging bats).                                                                                                                                                                                                                  |
| Negligible*                                                                                        | No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.                                                                                                                                                                                                                                                                                    |
| Low                                                                                                | Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, <i>i.e.</i> not very well connected to the surrounding landscape by other habitat.<br>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland) or a patch of scrub.                                                                                                               |
| Moderate                                                                                           | Continuous habitat connected to the wider landscape that could be used by bats for flight-paths, such as lines of trees and scrub or linked back gardens.<br>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.                                                                                                                                                                                   |
| High                                                                                               | Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge.<br>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.<br>Site is close to and connected to known roosts. |
| *Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### *Dormice*

The site was assessed for habitat with the potential to support dormice. Habitats typically suitable for dormice include:

- deciduous woodland, with a dense understory, species-rich shrub-layer and thick ground cover;
- continuous, thick, wide hedgerows over 4m high with connections to nearby suitable woodland;
- hazel or sweet chestnut coppice; or
- thick continuous areas of scrub, particularly bramble, close to hedgerows or woodlands.

### *Great crested newt*

All water bodies on the site or within 500m that could be used as breeding locations for this species were identified, and the suitability of terrestrial habitat for this species was considered. Great crested newts can travel up to 500m from pond to pond, and between ponds and terrestrial habitat. The suitability of terrestrial habitat was assessed with this in mind.

### *Badger*

An initial assessment was carried out to identify areas that might be used by badger for commuting, foraging and sett-building within at least 30m of all areas potentially affected by the works (where access was possible). Evidence of badgers including setts, latrines, feeding signs and paths were searched for.

### *Birds*

Habitat that might be used by nesting birds was identified. Different bird species use buildings, trees and shrubs, undergrowth or even open fields to nest. The suitability of the site for use by a range of bird species was assessed, giving consideration to factors such as cover, food, disturbance and other habitat requirements.

### *Widespread species of reptile*

#### Habitat suitability

The site was assessed for widespread species of reptile, with particular attention paid to those features that could be used as basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of hardcore) and opportunities for foraging (rough grassland and scrub). The site was assessed for its suitability for each of the four widespread reptile species which have broadly similar habitat requirements. However, more specific requirements include the following (Beebee & Griffiths 2000):

- common lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to walls and pastures, although one of their favoured habitats is rough grassland;
- slow-worms (*Anguis fragilis*) use similar habitats to common lizards, and are often found in rank grassland, gardens and derelict land;
- grass snakes (*Natrix natrix*) have broadly similar requirements to common lizards with a greater reliance on ponds and wetlands, where they prey on common frogs; and
- adders (*Vipera berus*) use a range of fairly open habitats with some cover, but are most often found in dry heath.

Reptile activity is highly seasonal; they hibernate over the winter (October to March) and are active over the summer months. They become increasingly active as temperatures increase in spring, and in most years they are fully active by mid-April. Reproduction varies between species, but generally peaks in mid-summer when reptiles are at their most active. In late September/ October, activity begins to decrease as reptiles seek frost-free refuges for hibernation.

#### Artificial refugia survey

Standard methods were used, which involved placing 100 x 50cm sheets of heavy-duty roofing felt (artificial refugia) in areas where they were most likely to be used by reptiles (e.g. at the edges of bramble scrub/ hedges and in tussocky grassland etc) so that all suitable habitat present was represented. So far as possible, they were placed on slightly uneven ground so as not to lie completely flat (creating a varied microclimate). It is common practice to lay out artificial refugia some days or

weeks prior to the commencement of a survey or translocation so that reptiles become habituated to their presence.

A total of 18 pieces of heavy-duty roofing felt were placed around the development site and checked on seven suitable days. The locations of the refugia are shown in *Figure 6* in *Section 6*.

Days with heavy rain are generally accepted as unsuitable, though sunny periods after rain may be ideal because reptiles may emerge from cover to bask. Slow-worms are less sensitive than the other species, and are known to use artificial refugia in a wider range of weather conditions.

**RESULTS****4.1 Desk study****4.1.1 Designated sites**

According to the *Multi-Agency Geographic Information for the Countryside* website ([www.magic.gov.uk](http://www.magic.gov.uk)), the site is neither designated nor immediately adjacent to any designated areas of nature conservation. However, there are other designated sites nearby. These are listed in *Table 4.1.1.1*.

*Table 4.1.1.1. Statutory designated sites; non-statutory designated sites and ancient semi-natural and ancient replanted woodlands within the designated search areas of the site.*

| Level of designation | Designation      | Name                       | Distance & direction from site |
|----------------------|------------------|----------------------------|--------------------------------|
| International        | SPA              | Solent & Southampton Water | c. 3460m south-east            |
|                      | Ramsar           | -                          | -                              |
|                      | SAC              | River Itchen               | c.4750m north-west             |
|                      |                  | Solent Maritime            | c.3460m south-east             |
| National             | SSSI             | Moorgreen Meadows          | c.1925m west                   |
|                      |                  | -                          | -                              |
|                      | NNR              | -                          | -                              |
| County               | LNR              | Wildern                    | c.1938m south-west             |
| Local                | SINC             | -                          | -                              |
|                      | Ancient woodland | -                          | -                              |

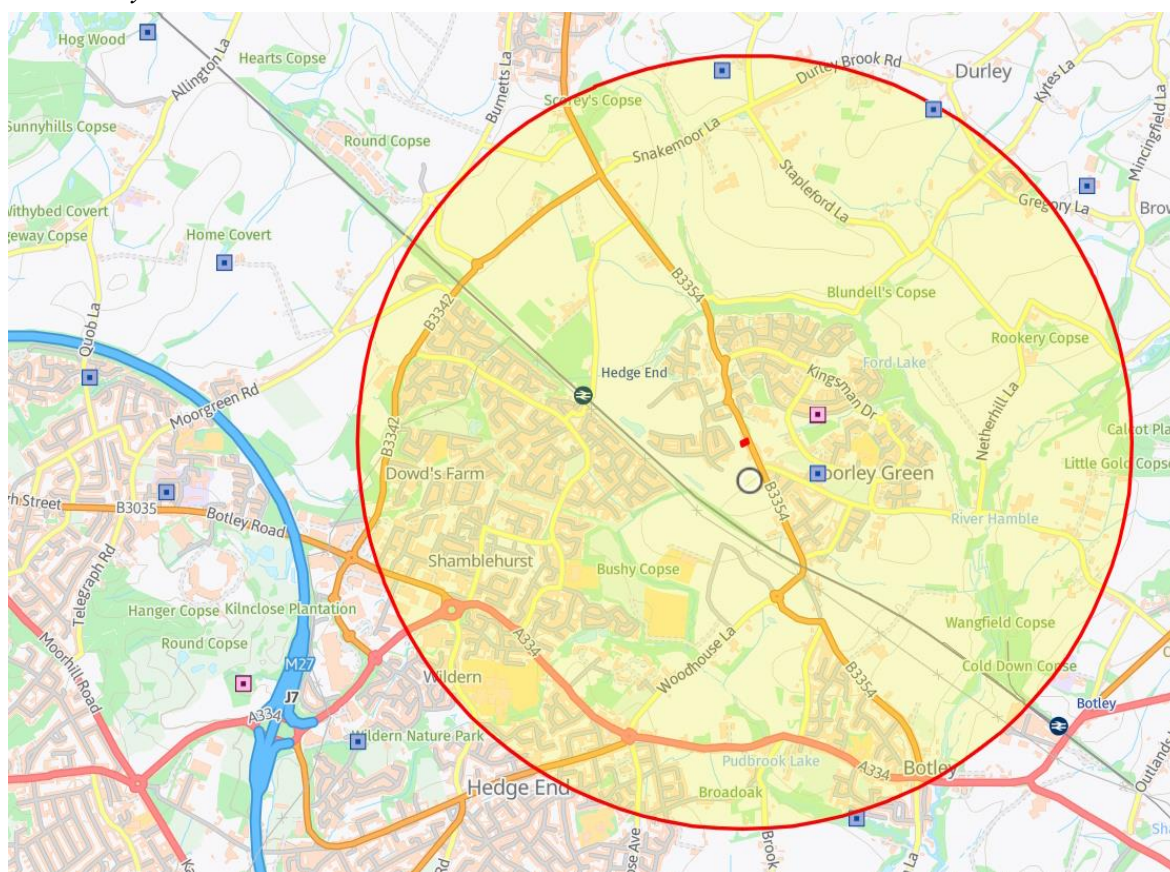
**4.1.2 European Protected Species**

According to the *Multi-Agency Geographic Information for the Countryside* website ([www.magic.gov.uk](http://www.magic.gov.uk)), there have been four granted European Protected Species (EPS) licences within 2km of the site. Of these, three are for bats. The licences are listed in *Table 4.1.2.1*. and their locations are shown in *Figure 4.1.2.1*.

Table 4.1.2.1. Granted European Protected Species (EPS) licences within 2km of the site.

| Species subject of licence                                    | Type of habitat affected | Date licence was granted | Distance & direction from site |
|---------------------------------------------------------------|--------------------------|--------------------------|--------------------------------|
| Common pipistrelle, brown long-eared bat, serotine            | Resting place            | 19/08/2013               | c.1887m north                  |
| Hazel or common dormouse                                      | Resting place            | 03/03/2016               | c.459m east                    |
| Brown long-eared bat, common pipistrelle, soprano pipistrelle | Resting place            | 27/04/2015               | c.1963m north-east             |
| Brown long-eared bat, common pipistrelle                      | Resting place            | 25/10/2020               | c.412m south-east              |

Figure 4.1.2.1. Location of sites with granted EPS licences within 2km of the site. The site location is shown by a red dot.



ground and concrete. There is also a gravel parking area on the east side of the site. A plan showing the various habitats on site is given in *Figure 4* in *Section 6*.

#### 4.2.2 *Plant species*

No plant species listed on *Schedules 8* or *9* of the *Wildlife and Countryside Act 1981* (as amended) were recorded on the site.

### 4.3 *Protected vertebrates*

#### 4.3.1 *Bats*

##### *Bat roost suitability of trees*

No trees on site were suitable for roosting bats.

##### *Commuting and foraging habitat*

The mature trees and shrubs in the retained hedgerow provide good foraging habitat for bats, as do the trees adjacent to the southern boundary. They link to a network of hedges, tree-lines and strips of woodland providing links into and from the wider landscape in all directions. These in turn connect the site to areas of high-quality foraging habitat in the wider landscape such as woodland and water sources. Therefore, the site is classed as having moderate suitability to be used by commuting and foraging bats, following the criteria in *Table 3.2.5.2*.

Bats follow linear landscape features such as lines of trees, hedges, buildings and waterways in order to commute from their roost sites to their feeding grounds. Likewise they use these features to navigate between feeding areas and alternative roosts.

#### 4.3.2 *Dormice*

The hedge on the boundary with Winchester Road is suitable habitat for dormouse as is the line of trees adjacent to the southern boundary.

#### 4.3.3 *Great crested newt*

According to aerial photographs (GoogleEarth™) and online Ordnance Survey 1:25,000 maps there are four ponds within 500m of the site. These are as follows:

- Pond 1 is c.276m east of the site,
- Pond 2 is c.301m north-east of the site,
- Pond 3 is c.466m north-west of the site; and
- Pond 4 is c.333m south-west of the site

The locations of these ponds are shown in *Figure 5* in *Section 6*.

The grassland had until recently been mown short as part of the garden of the adjacent property, which is unsuitable for great crested newts due to the lack of cover and risk of predation. However,

at the time of survey it had grown into a longer sward, which is suitable terrestrial habitat for great crested newts.

#### 4.3.4 *Badger*

No setts or evidence of badger was found during the survey.

#### 4.3.5 *Birds*

All of the trees and shrubs in the hedge have the potential to support nesting birds during the breeding season.

#### 4.3.6 *Widespread species of reptile*

The grassland had until recently been mown short as part of the garden of the adjacent property, which is unsuitable for great crested newts due to the lack of cover and risk of predation. However, at the time of survey it had grown into a longer sward, which is suitable habitat for widespread species of reptiles due to the cover provided and low risk of predation. In addition, there is a patch of low-growing bramble scrub in the north-west corner of the site that is suitable foraging and hibernation habitat for reptiles (see *Photos 1, 2 & 4* in *Section 7*). Therefore, reptile surveys were carried out. The results are given in *Table 4.3.6.1*.

*Table 4.3.6.1. Results of the reptile surveys.*

| <b>Date</b> | <b>Time</b> | <b>Temp<br/>(°C)</b> | <b>Results</b>       | <b>Weather</b>                                                      |
|-------------|-------------|----------------------|----------------------|---------------------------------------------------------------------|
| 26/09/25    | 14:00       | 16.0                 | No reptiles recorded | Warm, still (Beaufort scale 0) and sunny                            |
| 29/09/25    | 12:00       | 18.0                 | No reptiles recorded | Warm, still (Beaufort scale 0) and sunny                            |
| 30/09/25    | 14:00       | 19.0                 | No reptiles recorded | Warm, still (Beaufort scale 0) and sunny                            |
| 01/10/25    | 13:45       | 17.0                 | No reptiles recorded | Warm, still (Beaufort scale 0) and overcast with spells of sunshine |
| 02/10/25    | 14:00       | 18.0                 | No reptiles recorded | Warm and overcast with a gentle breeze (Beaufort scale 1)           |
| 03/10/25    | 13:30       | 16.0                 | No reptiles recorded | Warm, overcast and still (Beaufort scale 0)                         |
| 06/10/25    | 14:45       | 19.0                 | No reptiles recorded | Warm, still (Beaufort scale 0), clear and sunny                     |

## 5 ***INTERPRETATION AND EVALUATION***

### 5.1 ***Constraints on the survey***

#### 5.1.1 *Constraints on survey data*

Due to the late commission of the reptile surveys, the surveys were carried out late in the season without a settling period for the refugia. In addition, the surveys were condensed in order to carry them all out in suitable weather and before reptiles went into hibernation. This was possible due to the warm dry (and often sunny) weather at the end of September and beginning of October.

#### 5.1.2 *Constraints on the mitigation, compensation and enhancement measures*

There is a limit to the amount of enhancement measures that are possible (and reasonable) on a small site.

### 5.2 ***Survey report expiry***

This survey data is valid for a maximum of 12 months, if more than 12 months elapse it may be advisable to conduct further survey work to obtain up-to-date information to advise work, thereby ensuring protected species compliance.

Given the mobility of wildlife, it is recommended that a walkover of the site to update the survey information is undertaken prior to the development commencing, if this does not occur before the end of October 2026.

### 5.3 ***Legal context***

Habitat has been identified on site that is suitable for protected species. Different species are afforded different levels of protection; as detailed in *Appendix A*.

The site is not designated for its wildlife interest at an international, national or local scale.

### 5.4 ***Potential impacts of the proposed development***

#### 5.4.1 *Desk study*

According to the *Multi-Agency Geographic Information for the Countryside* website ([www.magic.gov.uk](http://www.magic.gov.uk)), the site is neither designated nor immediately adjacent to any designated areas of nature conservation. However, there are designated sites nearby (see *Table 4.1.1.1* in *Section 4.1.1*). None of these will be directly affected by this small-scale development and all links will be maintained.

The site is within 5km Solent Maritime SAC (c.3460m south-east) and the Solent & Southampton Water SPA (c.3460m south-east). The SAC is designated for its marine and estuarine habitats

(including sandbanks, estuaries, mudflats, coastal lagoons, drift lines, stoney banks, Salicornia and other annuals colonising mud, Spartina swards, Atlantic salt meadows, dunes and Desmoulin's whorl snail) while the SPA is designated for its waterbird assemblage as well as specific bird species (black-tailed godwit, common tern, little tern, mediterranean gull, ringed plover, roseate tern, sandwich tern, teal) and in particular for its populations of dark-bellied Brent goose, which are 10-13% of the world's population.

In addition, the River Itchen SAC is within 5km of the site. The SAC is designated because it is a watercourse with *Ranunculus fluitantis* as well as the presence otter and of several protected invertebrates, fish including southern damselfly, freshwater crayfish, brook lamprey, Atlantic salmon and bullhead.

As a result of its proximity, the impacts of this small-scale development on the SACs and SPA must be considered.

As the works will cause an increase to the number of buildings on the site there may be an increase in the recreational pressure, or pollution, on the internationally designated sites. Therefore, the local council may ask for compensation on the basis that the development could increase in the recreational pressure, or pollution, on the internationally designated sites under the Solent Disturbance and Mitigation Project (SCC, 2021).

According to the *Multi-Agency Geographic Information for the Countryside* website ([www.magic.gov.uk](http://www.magic.gov.uk)), there have been three bat (and one dormouse) European Protected Species (EPS) licences granted 2km of the site. It is unlikely that the current proposals will impact the two sites further away. However, due to its location, it is likely that any bats using the site for commuting and/ or foraging are part of the same meta-population as the closest site. Due to the retention of the hedgerow and the presence of trees just outside the site boundary it is not anticipated that the current proposals will impact these populations.

#### 5.4.2 Habitats and plants

The habitats and plant species observed on site are widespread and common and as such have no conservation importance from a botanical point of view. The exception is the mature oak tree on the east boundary that would take many decades to replace. This is of high ecological value and should be retained and protected.

Heras fencing or similar should be used to protect the roots of the mature trees during construction. The guidance provided in BS 5837 *Trees in relation to Construction* provides further advice on minimising the impact to retained trees on a development site.

No plant species listed on *Schedules 8 or 9 of the Wildlife and Countryside Act 1981* (as amended) were recorded on the site.

### 5.4.3 *Bats*

#### *Bat roost suitability of trees*

The trees on site were identified as having negligible bat roost suitability.

#### *Foraging and commuting habitat*

The mature trees and shrubs in the retained hedgerow provide good foraging habitat for bats, as do the trees adjacent to the southern boundary. They link to a network of hedges, tree-lines and strips of woodland providing links into and from the wider landscape in all directions. These in turn connect the site to areas of high-quality foraging habitat in the wider landscape such as woodland and water sources. Therefore, the site is classed as having moderate suitability to be used by commuting and foraging bats. Woodland and water sources provide high-quality foraging habitat for a number of different species of bat. These areas will be unaffected by the development and all links will be maintained. The connectivity around the edges of the site (the trees) will be retained and as such no impact to commuting and foraging bats (and hence bat populations in the local area) is anticipated.

Changes in lighting can affect foraging and commuting bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto retained vegetation (particularly the trees) and security lights should operate on a timer, to avoid any negative impact on bats.

Any lighting installed should avoid spillage of greater than 0.1 lux (typical moonlight/ cloudy sky) onto retained vegetation. This is because wildlife is very sensitive to light.

The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

### 5.4.4 *Dormice*

Although there is suitable habitat for dormice on (a hedge) and adjacent to the site (the tree-line adjacent to the southern boundary), no suitable habitat will be affected as the hedge will be retained and the tree-line is outside the boundary. Therefore, no impacts are anticipated on dormice in the area and no further surveys are proposed.

### 5.4.5 *Great crested newt*

All the ponds within 500m of the site are over 250m from the site and separated by barrier to movement such as busy roads, new housing estates under construction and railway lines. Therefore, despite the site becoming more suitable terrestrial habitat, it is not anticipated that great crested newts are present on site and no further surveys are currently proposed.

### 5.4.6 *Badger*

As no badger setts were found on site, development works are free to proceed without further regard to this species, although if a badger sett is subsequently discovered within 30m of the proposed works

then it may require a licence from Natural England to proceed. Guidance to what may be classed as disturbance to a badger (when occupying a sett) can be found at:

<https://www.gov.uk/guidance/badgers-protection-surveys-and-licences>.

#### 5.4.7 *Birds*

The trees and shrubs in the hedge provide suitable habitat for nesting birds. The destruction of active bird nests is prohibited under the *Wildlife and Countryside Act 1981* (as amended). The hedge will be retained and as such no impacts to nesting birds are anticipated. If any trees and shrubs in the hedges are subsequently to be affected *e.g.* for pruning or crown-lifting, this should be undertaken outside the bird breeding season (which is late February to August inclusive). If this is not possible, and it has to be carried out during the nesting season, then it should be inspected (by an ecologist) for nests immediately prior to the work.

If any active nests are found prior to or during works, a 5m buffer zone should be established around them and be temporarily fenced off to prevent plant or personnel disturbing the nest until the end of the breeding bird season (or until the nest is no longer in use).

#### 5.4.8 *Widespread species of reptile*

Although there is suitable foraging and hibernating habitat for widespread reptile species (*e.g.* slow-worms) on site, no reptiles (or amphibians such as great crested newts) were found during the reptile survey. However, as they were carried out late in the season, condensed and without a settling period, as a precaution it is recommended that the top soil strip is carried out under ecological supervision. Alternatively, the grassland could be mown and kept as a short-sward until site clearance commences. In addition, no materials or brush (*e.g.* from the felled fruit trees) should be kept on site, and the site should not be used for bonfires. In the unlikely event that a reptile is found during site clearance then it should be moved (by an ecologist to ensure safe handling) to a place of safety outside the area of works, such as the adjacent grassland.

### 5.5 *Further survey*

No further surveys are proposed.

### 5.6 *Enhancement measures*

#### 5.6.1 *General*

Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) have to deliver at least 10% biodiversity net gain (BNG) (required since January 2024 and since April 2024 for small sites). BNG will be measured using Defra's biodiversity metric and habitats will need to be secured for at least 30 years. This sits alongside:

- a strengthened legal duty for public bodies to conserve and enhance biodiversity,
- new biodiversity reporting requirements for local authorities, and mandatory spatial strategies for nature: Local Nature Recovery Strategies or 'LNRS'.

From July 2021, the Government published the revised National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2021). The document sets out the government's planning policies for England and how these are expected to be applied. This replaces a previous version which was published in 2019. It states: "*at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).*"

It also states "*opportunities to incorporate biodiversity in and around developments should be encouraged*" as part of the consideration for "*presumption in favour of sustainable development*".

The updated National Planning Policy Framework (NPPF) also states (paragraph 170) that: "*Planning Policies and decisions should contribute to and enhance the natural and local environment by... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.*"

The updated Planning Policy Guidance (PPG) for the Natural Environment, updated in July 2019 states (paragraph 020) that:

*"Net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand."*

The updated PPG provides examples of how biodiversity net gain can be achieved. Measures suggested include "creating new habitats" and "enhancing existing habitats".

It is proposed that the enhancements to provide biodiversity net gain will also be in the form of the following:

- new bat roost provision;
- lighting restrictions (for both bats and other wildlife),
- new bird nesting provision; and
- gaps under fences for amphibians, reptiles and hedgehogs.

These enhancements are detailed in the following sections.

Other enhancements for wildlife that the owners may choose to employ are given in *Appendix B*. However, these are not proposed as enhancements for the purposes of the planning application, but only for information purposes.

All proposed enhancement measures are subject to supplied plans.

### 5.6.2 Bats

The new buildings will be enhanced for bats using at least two integrated bat box (*e.g.* a PRO UK Build-in WoodStone Bat Box, Habibat™ Bat Box, an Ibstock Enclosed Bat Box, a Schwegler Bat Tube, or similar), which provides a cavity that is incorporated into the external build structure to offer roosting space for bats. This bat box will be placed as high as possible (ideally 2.5m or above, facing south or south-east) with a clear exit path.

### 5.6.3 Lighting

Changes in lighting can affect foraging and commuting bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto the integrated bat box entrance/ exit points (see *Section 5.6.2*) and retained or planted vegetation (particularly the trees). Any lighting installed should avoid spillage of greater than 0.1 lux (typical moonlight/ cloudy sky) near to or directly onto the bat box entrance/ exit points and vegetation so that light disturbance is not a problem. This is because lighting can impact bat populations directly by disturbing roosts and reducing their foraging area, or indirectly by severing commuting routes from roosts. Therefore, the following (modified from *Bats and lighting in the UK* (ILP 2023)) should be undertaken:

- **Aim of light** The light should be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. This lit area must avoid being directed at, or close to, any retained vegetation. A shield or hood can be used to control or restrict the area to be lit. Avoid illuminating at a wider angle as this will be more disturbing to foraging and commuting bats, as well as people and other wildlife.

For any security lighting, the following should also apply:

- **Power** It is rarely necessary to use a lamp of greater than 2000 lumens (150W) in security lights. The use of a higher power is not as effective for the intended function and will be more disturbing for bats.
- **Movement sensors** Many security lights are fitted with movement sensors which, if well installed and aimed, will reduce the amount of time a light is on each night. This is more easily achieved in a system where the light unit and the movement sensor are able to be separately aimed.
- **Timers** If the light is fitted with a timer this should be adjusted to the minimum to reduce the amount of 'lit time'.
- **Alternatives** The requirement for security lighting in each instance should be carefully considered and only used where absolutely necessary to deter crime.

The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

### 5.6.4 Birds

Two swift boxes will be built into the walls of the new buildings to provide new nest sites. Swift boxes can be supplied and installed by Hampshire Swifts <https://www.hampshireswifts.co.uk> and a new soffit design is also available (this box is also suitable for sparrows which are also an IUCN Red List Bird of Conservation Concern and listed on *Section 41* of the *Natural Environment & Rural Communities Act 2006*). The proposed bird boxes are summarised in *Table 5.6.4.1*.

*Table.5.6.4.1. Bird boxes to be erected within the development site with additional details on positioning to increase chances of occupancy.*

| Type (example)                                                                                                                                                                                                                                                                                                                                                                                | Typical species | No. | Height | Additional information                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Woodstone swift<br/>façade nest box</p>  <p>or</p> <p>Ibstock Eco-habitat</p>  <p>or</p> <p>Swift boxes from<br/>Hampshire Swifts</p>  | Swifts          | 2   | ≥ 5m   | <ul style="list-style-type: none"> <li>• Either incorporate into the build structure or mounted on a building.</li> <li>• Position out of direct sunlight (below eaves on the north elevation), away from windows and in a straight line.</li> <li>• Should be in an open area so that it is less accessible to predators and birds are not obstructed as they leave the nest.</li> </ul> |

### 5.6.5 Amphibians, reptiles and hedgehogs

Any fencing will have 15cm x 15cm gaps beneath to allow wildlife such as reptiles, amphibians and hedgehogs to access the landscaping. This could be achieved by removing all or part of the baseboard/ gravelboard.

## 5.7 Requirement for Natural England licences

### 5.7.1 European Protected Species (EPS) licences

A bat European Protected Species (EPS) licence or Bat Earned Recognition (BER) licence or Bat Mitigation Class Licence (if qualifying) site registration from Natural England is not necessary before work commences on the site. In the unlikely event that great crested newts are found during works, work will stop immediately and a bat licence will be applied for.

A licence from Natural England permits activities that may otherwise be offences under *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*, such as the destruction of roost sites. It cannot be applied for on a precautionary basis.

### 5.7.2 Protection of Badgers Act (1992) licences

As no setts have been identified within (or close to) the site boundary, a licence is currently not required.

A licence permits activities that may otherwise be offences under the *Protection of Badgers Act 1992*.

*Figure 1. Aerial photographs showing the location of the site.*

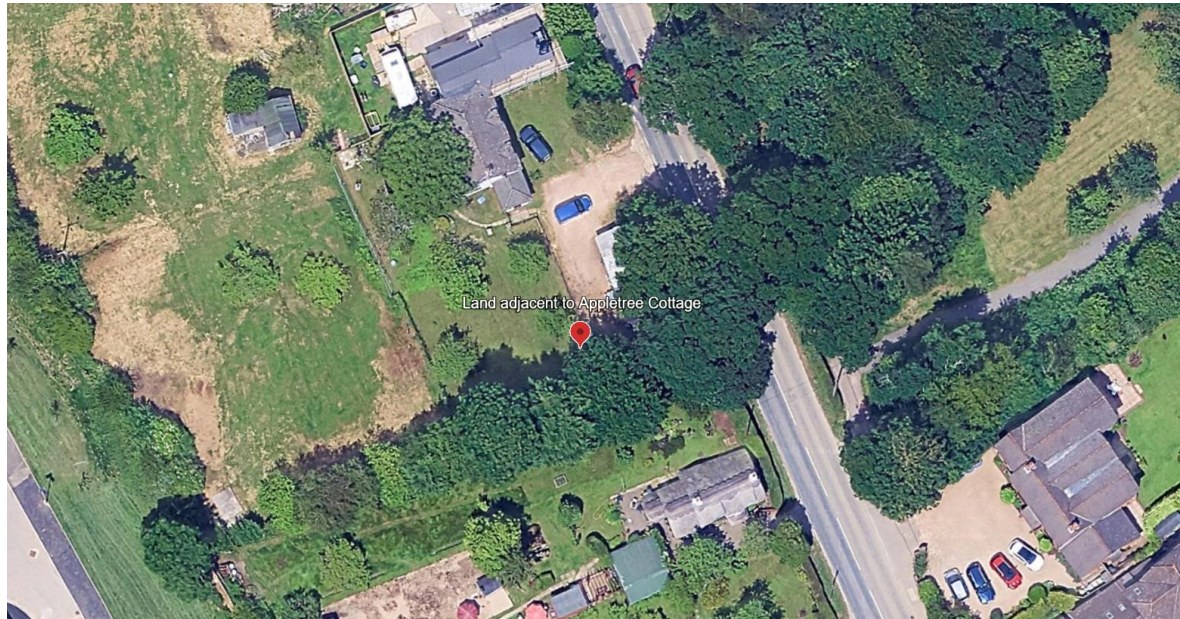
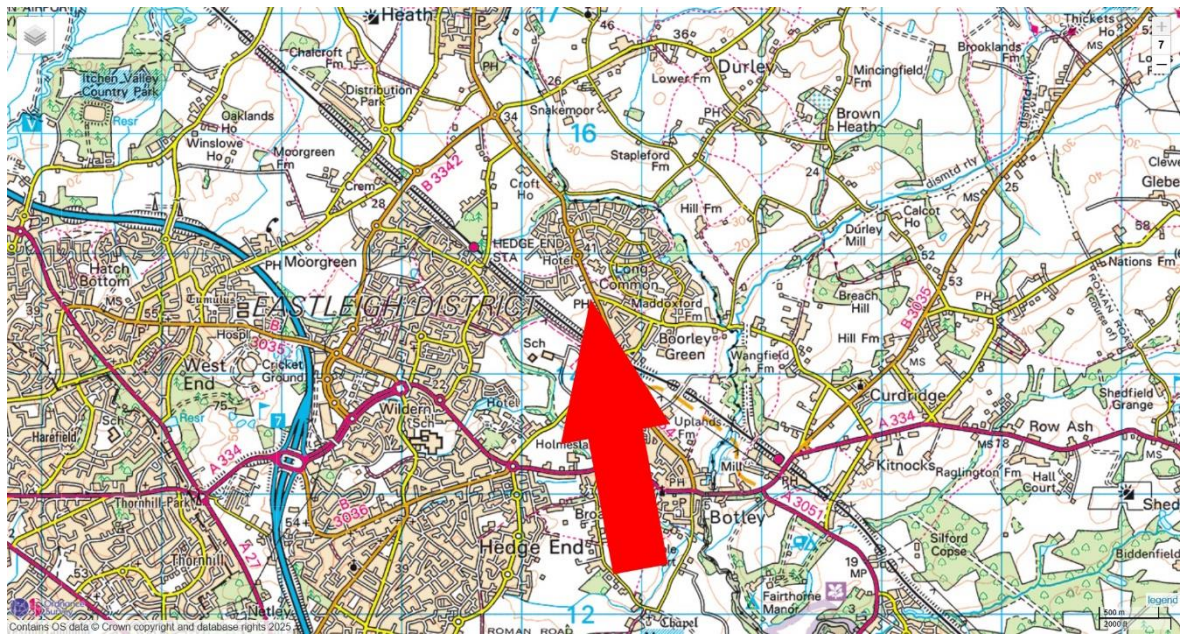


Figure 2. Ordnance Survey map showing the location of the site (as indicated by the red arrow).



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Figure 3. Plan showing the site boundary outlined in red.

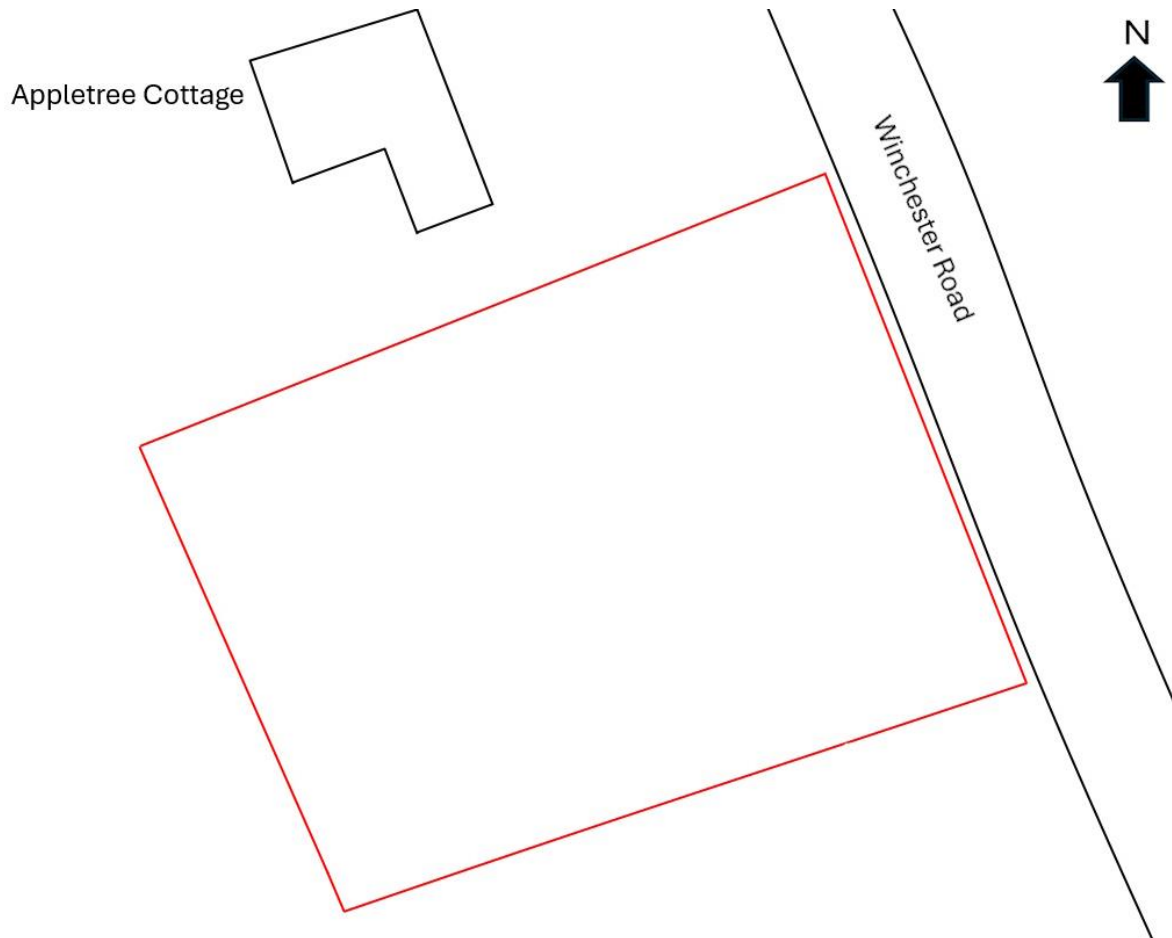


Figure 4. Phase 1 Habitat Survey map.

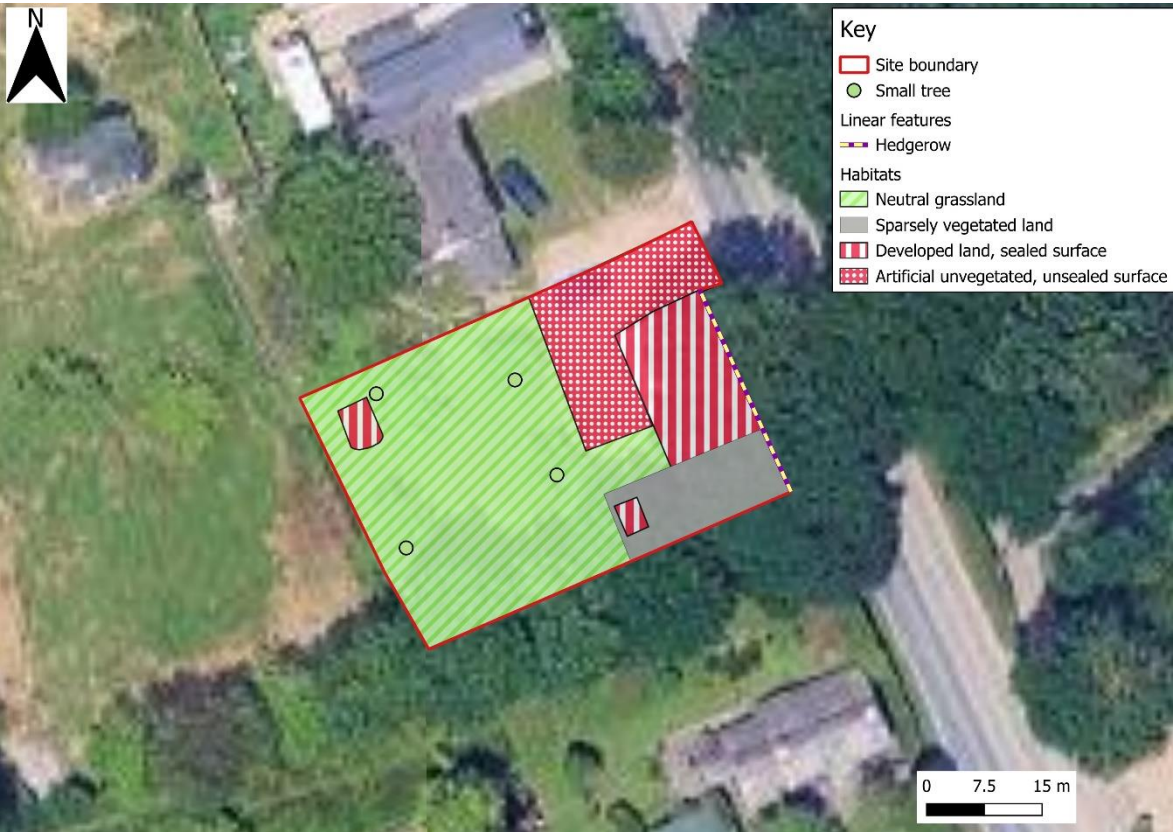


*Figure 5. Aerial photograph showing the location of ponds within 250m and 500m of the site boundary. The site is marked by a red square.*

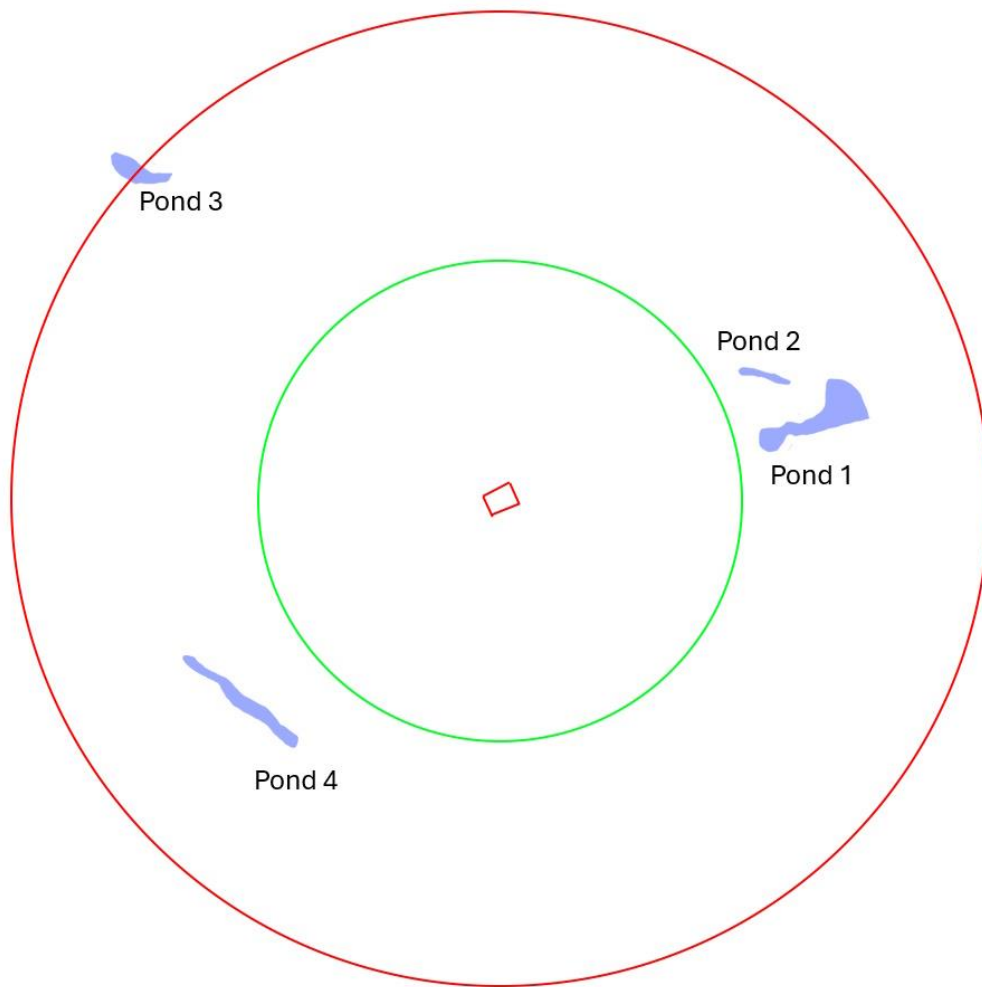


Figure 6. Location of the artificial refugia for the reptile survey.

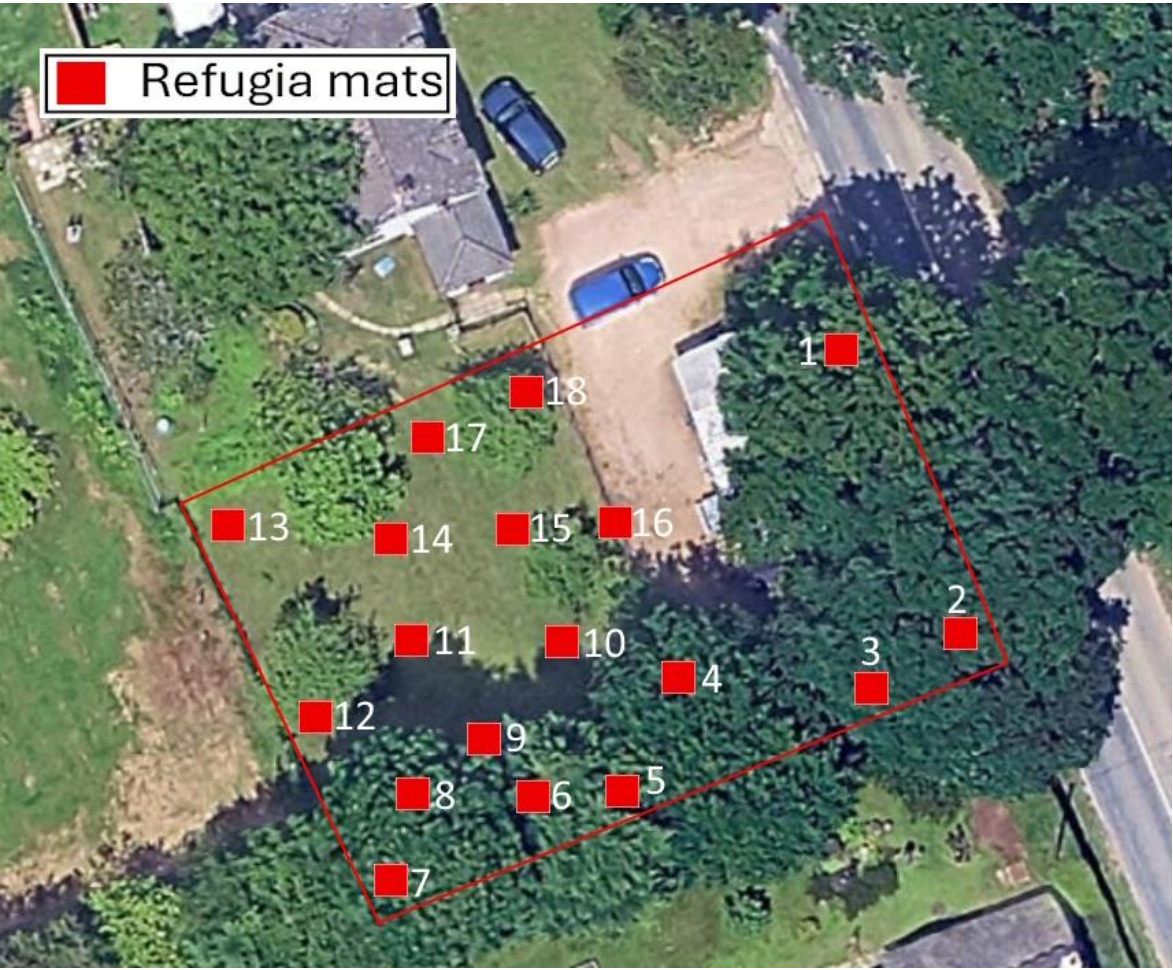


Figure 7. Plan showing the indicative locations of the proposed enhancement measures (not to scale).



## PHOTOGRAPHS

*Photo 1. Grassland that is suitable habitat for reptiles as well as a line of mature trees just beyond the south boundary that is suitable commuting and foraging habitat for bats.*



*Photo 2. Grassland that is suitable habitat for reptiles.*



*Photo 3. A mature oak tree that provides suitable nesting habitat for birds as well as suitable commuting and foraging habitat for bats.*



*Photo 4. Bramble scrub that is suitable habitat for reptiles.*



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**APPENDIX A: PROTECTED SPECIES LEGISLATION****9.1 General**

This section briefly describes the legal protection afforded to the protected species identified in this report. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation, but summarises the salient points.

**9.2 Bats**

All species of British bat are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRow Act). This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst it occupies a bat roost.

Bats are also European protected species listed on *Schedule 2* of the *Conservation of Habitats & Species Regulations 2017* which gives them full protection under *Regulation 43*. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb a bat (in such a way as to be likely to significantly affect: (i) the ability of a significant group of bats to survive, breed or rear/nurture their young; or (ii) the local distribution or abundance of the species concerned);
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present (bats tend to reuse the same roost).

Several species of bat are included as a Priority Species in the UK Biodiversity Action Plan (UKBAP - JNCC (2003)) and also as species of principal importance for the conservation of biological diversity in England under *Section 74* of the CRow Act.

All species of British bat are also protected under *Schedule 6* of the *Wildlife and Countryside Act 1981* (as amended). This protection relates specifically to trapping and direct pursuit of the species.

**9.3 Dormice**

Dormouse (*Muscardinus avellanarius*) is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receives full protection under *Section 9*. This species is also listed as a European Protected Species on *Schedule 2* of the *Conservation of Habitats & Species Regulations*

2017, which gives it full protection under *Regulation 43*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRow Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection;
- or
- sell or attempt to sell any such species.

#### 9.4 *Great crested newt*

Great crested newt (*Triturus cristatus*) is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receives full protection under *Section 9*. This species is also listed as a European Protected Species on *Schedule 2* of the *Conservation of Habitats & Species Regulations 2017*, which gives it full protection under *Regulation 43*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRow Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection;
- or
- sell or attempt to sell any such species.

The great crested newt is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under *Section 74* of the CRow Act.

#### 9.5 *Water vole*

Water vole (*Arvicola amphibius*) is protected under *Section 9 (4)* of *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), which affords protection to its places of shelter. This protection was extended by the CRow Act 2000. Under this legislation, it is an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place that water voles use for shelter or protection, or to intentionally or recklessly disturb water voles while they are using such a place.

The water vole is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under *Section 74* of the CRow Act.

## 9.6 ***Badger***

Badger (*Meles meles*) is protected in Britain under the *Protection of Badgers Act 1992* (as amended) and *Schedule 6 of the Wildlife and Countryside Act 1981* (as amended).

The legislation affords protection to badgers and badger setts, and makes it a criminal offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
- interfere with a sett by damaging or destroying it;
- to obstruct access to, or any entrance of, a badger sett; or
- to disturb a badger when it is occupying a sett.

Guidance to what may be classed as disturbance to a badger (when occupying a sett) can be found at: <https://www.gov.uk/guidance/badgers-protection-surveys-and-licences>

## 9.7 ***Birds***

### 9.7.1 *Birds - general protection*

All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the CRoW Act.

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

### 9.7.2 *Birds - specially protected species*

Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4)* and *1(5)* of the Act. The protection was extended by the CRoW Act. The legislation confers special penalties where the above mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or
- disturb the dependant young of such a bird.

## 9.8 ***Widespread species of reptile***

Common lizard (*Zootoca vivipara*), grass snake (*Natrix natrix*), slow-worm (*Anguis fragilis*), and adder (*Vipera berus*) are listed under *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the CRoW Act.

Under the above legislation it is an offence to:

- intentionally or deliberately kill or injure any individual of such a species; or
- sell or attempt to sell any part of the species alive or dead.

## 9.9 *European Protected Species Licences*

Where it is necessary to carry out an action that could result in an offence under the *Conservation of Habitats & Species Regulations 2017* it is possible to apply for a European Protected Species (EPS) licence from Natural England. Licences are only issued where Natural England are satisfied that three derogation tests are met. These are that the activity is for **imperative reasons of overriding public interest**, that there must be **no satisfactory alternative** and that **favourable conservation status of the species must be maintained**.

Consideration of these three derogation tests was previously left to Natural England as part of their deliberations on whether to grant a licence for the development activity after a planning consent has been issued. However, the regulations now require that **all** public bodies, *i.e.* **Local Planning Authorities** (LPAs), have regard to the requirements of the European Habitats Directive when carrying out their functions. As a result, LPAs **must** address the three derogation tests when considering a planning application that could impact upon any European Protected Species (EPS).

## 9.10 *National planning context*

### 9.10.1 *General*

Surveys should be completed in line with Natural England's *Standing Advice for Local Authorities* (<http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/default.aspx>), which states:

- Natural England will not comment on applications that are submitted without the relevant protected species surveys if there are no other issues (*i.e.* in relation to SSSIs or landscape).
- Natural England will not comment on scoping surveys that recommend further surveys where these have not been undertaken and submitted with the scoping reports.

In addition to the above, *Section 40* of the *Natural Environment and Rural Communities Act* (2006) imposes a new duty on all public authorities to have regard for biodiversity.

### 9.10.2 *Biodiversity Net Gain (BNG)*

Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) have to deliver at least 10% biodiversity net gain (BNG) (required since January 2024 and since April 2024 for small sites). BNG will be measured using Defra's biodiversity metric and habitats will need to be secured for at least 30 years. This sits alongside:

- a strengthened legal duty for public bodies to conserve and enhance biodiversity,
- new biodiversity reporting requirements for local authorities, and mandatory spatial strategies for nature: Local Nature Recovery Strategies or 'LNRS'.

From the 20<sup>th</sup> July 2021, the Government published the revised National Planning Policy Framework. The document sets out the government's planning policies for England and how these are expected to be applied. This replaces a previous version which was published in June 2019. It states: "*at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).*"

Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

- an economic objective;
- a social objective; and
- an environmental objective.

The environmental objective is to “*contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy*”.

Planning policies and decisions should contribute to and enhance the natural and local environment by “*protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*” and “*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*”.

If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted.

Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

It states that “*development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity*”.

It should be noted that the “*presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site*”.

The NPPF also encourages “*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*” and aims to “*promote the conservation, restoration and enhancement of priority habitats,*

*ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity*". This applies to non-statutory designated sites including Sites of Importance for Nature Conservation (SINCs) and equivalent county wildlife sites.

Early engagement with all necessary stakeholders, including expert bodies, is encouraged by the NPPF.

These are not proposed as enhancements for the purposes of the planning application, but only for information purposes.

### 10.1 *Lawn seed mix composition*

The seed mixes in *Table 10.1.1.* are from Emorsgate Seeds and are suitable for lawns. Emorsgate are only given as an example and a local supplier is preferable. The mixes contain slow growing grasses, some with a selection of wildflowers that respond well to regular short mowing. The EG9 grass mixture for hedges and woodland contains a selection of grasses that are tolerant of a degree of shade.

*Table 10.1.1. Emorsgate seed mix species composition.*

| <b>EL1</b>                     |                             |
|--------------------------------|-----------------------------|
| <b>Species</b>                 | <b>Common Name</b>          |
| <b>Flowering Species</b>       |                             |
| <i>Galium verum</i>            | Lady's Bedstraw             |
| <i>Leontodon hispidus</i>      | Rough Hawkbit               |
| <i>Leucanthemum vulgare</i>    | Oxeye Daisy                 |
| <i>Lotus corniculatus</i>      | Birdsfoot Trefoil           |
| <i>Primula veris</i>           | Cowslip                     |
| <i>Prunella vulgaris</i>       | Selfheal                    |
| <i>Ranunculus acris</i>        | Meadow Buttercup            |
| <i>Trifolium pratense</i>      | Wild Red Clover             |
| <b>Grasses</b>                 |                             |
| <i>Agrostis capillaris</i>     | Common Bent                 |
| <i>Cynosurus cristatus</i>     | Crested Dogtail             |
| <i>Festuca rubra</i>           | Slender-creeping Red-fescue |
| <i>Phleum bertolonii</i>       | Smaller Cat's-tail          |
| <b>EG1</b>                     |                             |
| <b>Species</b>                 | <b>Common Name</b>          |
| <i>Agrostis capillaris</i>     | Common Bent                 |
| <i>Cynosurus cristatus</i>     | Crested Dogtail             |
| <i>Festuca rubra</i>           | Slender-creeping Red-fescue |
| <i>Phleum bertolonii</i>       | Smaller Cat's-tail          |
| <i>Poa pratensis</i>           | Smooth-stalked Meadow-grass |
| <b>EG9</b>                     |                             |
| <b>Species</b>                 | <b>Common Name</b>          |
| <i>Agrostis capillaris</i>     | Common Bent                 |
| <i>Anthoxanthum odoratum</i>   | Sweet Vernal-grass          |
| <i>Brachypodium sylvaticum</i> | False Brome                 |
| <i>Cynosurus cristatus</i>     | Crested Dogtail             |

|                              |                   |
|------------------------------|-------------------|
| <i>Deschampsia cespitosa</i> | Tufted Hair-grass |
| <i>Festuca rubra</i>         | Red Fescue        |
| <i>Poa nemoralis</i>         | Wood Meadow-grass |

## 10.2 Ornamental planting to attract wildlife

Plants that attract insects are generally helpful and trees, shrubs and flowering plants can provide cover for wildlife. Therefore, to enhance the ecological value of the site, any replacement landscaping in the gardens should incorporate a mixture of native and non-native species of value to wildlife. This mixture will be planted to encourage a diversity of insects, which in turn will attract different species. Flowers that bloom throughout the year, including both annuals and herbaceous perennials, are beneficial. Night-flowering blossoms attract night-flying insects, which in turn provide prey for bats. Examples of suitable plant species that could be planted to encourage wildlife include those in *Tables 10.2.1. and 10.2.2.* Approximate flowering periods are listed in the tables.

*Table 10.2.1. Native and non-native species that could be incorporated into the landscaping.*

| Species                          | Common Name            | Approximate flowering period |
|----------------------------------|------------------------|------------------------------|
| <i>Achillea millefolium</i>      | Yarrow                 | Early summer                 |
| <i>Aubretia</i> species          | Aubretia               | Spring to early summer       |
| <i>Berberis darwinii</i>         | Darwin's Barberry      | Spring                       |
| <i>Iberis sempervirens</i>       | Candytuft              | Summer to autumn             |
| <i>Centaurea montana</i>         | Cornflower             | Spring to summer             |
| <i>Centaurea scabiosa</i>        | Knapweed               | Summer to autumn             |
| <i>Centranthus ruber</i>         | Red valerian           | Summer to autumn             |
| <i>Cornus sanguinea</i>          | Dogwood                | Summer                       |
| <i>Dianthus barbatus</i>         | Sweet William          | Summer                       |
| <i>Echinacea</i> species         | Echinacea              | Summer to autumn             |
| <i>Erysimum</i> species          | Wallflowers            | Spring to early summer       |
| <i>Glebionis segetum</i>         | Corn marigold          | Spring to summer             |
| <i>Hebe</i> species              | Hebes                  | Summer to autumn             |
| <i>Hedera helix</i>              | Ivy                    | Autumn                       |
| <i>Hesperis matronalis</i>       | Dame's-violet          | Spring to summer             |
| <i>Hyacinthoides non-scripta</i> | English Bluebell       | Spring                       |
| <i>Hylotelephium spectabile</i>  | Ice plant 'Pink lady'  | Early autumn                 |
| <i>Hypericum</i> species         | St John's wort         | Spring                       |
| <i>Ilex aquifolium</i>           | Holly                  | Spring to summer             |
| <i>Jasminum officinale</i>       | Common White Jasmine   | Summer to autumn             |
| <i>Lavandula angustifolia</i>    | Garden Lavender        | Summer                       |
| <i>Leucanthemum vulgare</i>      | Ox-eye daisy           | Summer                       |
| <i>Limnanthes douglasii</i>      | Poached egg plant      | Summer                       |
| <i>Lonicera caprifolium</i>      | Perfoliate Honeysuckle | Summer                       |
| <i>Lonicera etrusca</i>          | Italian Honeysuckle    | Summer to autumn             |
| <i>Lonicera japonica</i>         | Japanese Honeysuckle   | Spring                       |

|                              |                        |                  |
|------------------------------|------------------------|------------------|
| <i>Lonicera periclymenum</i> | Honeysuckle            | Summer to autumn |
| <i>Lunaria annua</i>         | Honesty                | Spring           |
| <i>Malus domestica</i>       | Apple                  | Spring           |
| <i>Malus sylvestris</i>      | Crab Apple             | Spring           |
| <i>Malva</i> species         | Mallow                 | Summer to autumn |
| <i>Matthiola longipetala</i> | Night-scented stock    | Summer           |
| <i>Myosotis sylvatica</i>    | Wood forget-me-not     | Spring           |
| <i>Nicotiana</i> species     | Tobacco plant          | Summer           |
| <i>Oenothera</i> species     | Evening primroses      | Summer to autumn |
| <i>Papaver rhoeas</i>        | Corn poppy             | Summer           |
| <i>Phacelia</i> species      | Phacelia               | Summer to autumn |
| <i>Primula vulgaris</i>      | Primrose               | Spring           |
| <i>Rosa</i> species          | Rose                   | Summer           |
| <i>Rubus fruticosus</i> agg. | Bramble                | Spring to summer |
| <i>Saponaria officinalis</i> | Soapwort               | Summer           |
| <i>Saxifraga fortunei</i>    | Cherry pie             | Summer to autumn |
| <i>Scabiosa</i> species      | Scabious               | Summer           |
| <i>Silene dioica</i>         | Red campion            | Spring           |
| <i>Silene noctiflora</i>     | Night-scented Catchfly | Summer to autumn |
| <i>Silene vulgaris</i>       | Bladder Campion        | Summer           |
| <i>Verbena</i> species       | Vervain                | Summer to autumn |
| <i>Viburnum lantana</i>      | Wayfaring-tree         | Spring to summer |
| <i>Viburnum opulus</i>       | Guelder-rose           | Summer           |

Table 10.2.2. Examples of suitable garden herbs that could be planted in and around the site to encourage wildlife.

| Species                       | Common Name                               | Approximate flowering period |
|-------------------------------|-------------------------------------------|------------------------------|
| <i>Angelica</i> species       | Angelica                                  | Summer to autumn             |
| <i>Borago officinalis</i>     | Borage                                    | Spring to early autumn       |
| <i>Calendula officinalis</i>  | English marigolds                         | Summer to autumn             |
| <i>Foeniculum vulgare</i>     | Fennel                                    | Summer to early autumn       |
| <i>Hesperis matronalis</i>    | Dame's-violet, often sold as Sweet Rocket | Spring to summer             |
| <i>Hyssopus officinalis</i>   | Hyssop                                    | Summer to early autumn       |
| <i>Matthiola bicornis</i>     | Night-scented Stock                       | Spring to autumn             |
| <i>Melissa officinalis</i>    | Lemon balm                                | Summer                       |
| <i>Monarda</i> species        | Bergamot                                  | Summer to early autumn       |
| <i>Nicotiana</i> species      | Tobacco-plant                             | Spring to autumn             |
| <i>Oenothera</i> species      | Evening-primroses                         | Summer                       |
| <i>Origanum vulgare</i>       | Marjoram                                  | Summer                       |
| <i>Rosmarinus officinalis</i> | Rosemary                                  | Spring                       |
| <i>Saponaria officinalis</i>  | Soapwort                                  | Summer to autumn             |
| <i>Silene noctiflora</i>      | Night-scented Catchfly                    | Summer to autumn             |

|                             |                 |                        |
|-----------------------------|-----------------|------------------------|
| <i>Silene vulgaris</i>      | Bladder Campion | Spring to summer       |
| <i>Tanacetum parthenium</i> | Feverfew        | Summer to early autumn |
| <i>Thymus</i> species       | Thyme           | Summer                 |

New hedges could be planted around the edges of the site. These should consist of a mixture of native species such as *Acer campestre* (Field Maple), *Carpinus betulus* (Hornbeam), *Cornus sanguinea* (Dogwood), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Fagus sylvatica* (Beech), *Fraxinus excelsior* (Ash), *Prunus spinosa* (Blackthorn), *Quercus robur* (Pedunculate Oak), *Viburnum lantana* (Wayfaring-tree) and *Viburnum opulus* (Guelder-rose). These species will provide a mixture of leaf shapes and colours through the seasons. In addition, the hedges will contain *Ilex aquifolium* (Holly) and *Taxus baccata* (Yew) to provide an evergreen component for the winter months, and to provide a contrast to the colours of the other plants during the spring, summer and autumn.

Under-sowing new hedges with Emorsgate seed mix EH1 Hedgerow mixture (or equivalent) provides cover for wildlife such as hedgehogs as well as providing an attractive feature while the new hedges become established. Seed mixes suitable for shade are given in *Table 12.2.3*.

*Table 12.2.3. Seed mixes suitable for shaded areas.*

| <b>EH1</b>                     |                               |
|--------------------------------|-------------------------------|
| <b>Species</b>                 | <b>Common Name</b>            |
| <b>Wild Flowers</b>            |                               |
| <i>Alliaria petiolate</i>      | Garlic Mustard                |
| <i>Arctium minus</i>           | Lesser Burdock                |
| <i>Centaurea nigra</i>         | Common Knapweed               |
| <i>Chaerophyllum temulum</i>   | Rough Chervil                 |
| <i>Galium album</i>            | Hedge Bedstraw                |
| <i>Geum urbanum</i>            | Wood Avens                    |
| <i>Lathyrus sylvestris</i>     | Narrow-leaved Everlasting-pea |
| <i>Leucanthemum vulgare</i>    | Oxeye Daisy                   |
| <i>Primula veris</i>           | Cowslip                       |
| <i>Prunella vulgaris</i>       | Selfheal                      |
| <i>Saponaria officinalis</i>   | Soapwort                      |
| <i>Silene dioica</i>           | Red Campion                   |
| <i>Silene latifolia</i>        | White Campion                 |
| <i>Silene vulgaris</i>         | Bladder Campion               |
| <i>Torilis japonica</i>        | Upright Hedge-parsley         |
| <b>Grasses</b>                 |                               |
| <i>Agrostis capillaris</i>     | Common Bent                   |
| <i>Anthoxanthum odoratum</i>   | Sweet Vernal-grass            |
| <i>Brachypodium sylvaticum</i> | False Brome                   |
| <i>Cynosurus cristatus</i>     | Crested Dogtail               |
| <i>Deschampsia cespitosa</i>   | Tufted Hair-grass             |

|                                  |                             |
|----------------------------------|-----------------------------|
| <i>Festuca rubra</i>             | Slender-creeping Red-fescue |
| <i>Poa nemoralis</i>             | Wood Meadow-grass           |
| <b>EW1</b>                       |                             |
| <b>Species</b>                   | <b>Common name</b>          |
| <i>Alliaria petiolata</i>        | Garlic Mustard              |
| <i>Allium ursinum</i>            | Ramsons                     |
| <i>Anthriscus sylvestris</i>     | Cow Parsley                 |
| <i>Arctium minus</i>             | Lesser Burdock              |
| <i>Arum maculatum</i>            | Lords-and-Ladies            |
| <i>Chaerophyllum temulum</i>     | Rough Chervil               |
| <i>Cruciata laevipes</i>         | Crosswort                   |
| <i>Digitalis purpurea</i>        | Foxglove                    |
| <i>Filipendula ulmaria</i>       | Meadowsweet                 |
| <i>Geum urbanum</i>              | Wood Avens                  |
| <i>Hyacinthoides non-scripta</i> | Bluebell                    |
| <i>Iris foetidissima</i>         | Gladdon                     |
| <i>Prunella vulgaris</i>         | Selfheal                    |
| <i>Silene dioica</i>             | Red Campion                 |
| <i>Teucrium scorodonia</i>       | Wood Sage                   |
| <i>Torilis japonica</i>          | Upright Hedge-parsley       |
| <b>Grasses</b>                   |                             |
| <i>Agrostis capillaris</i>       | Common Bent                 |
| <i>Anthoxanthum odoratum</i>     | Sweet Vernal-grass          |
| <i>Brachypodium sylvaticum</i>   | False Brome                 |
| <i>Cynosurus cristatus</i>       | Crested Dogstail            |
| <i>Deschampsia cespitosa</i>     | Tufted Hair-grass           |
| <i>Festuca rubra</i>             | Red Fescue                  |
| <i>Poa nemoralis</i>             | Wood Meadow-grass           |

### 10.3 Bird boxes

It is not advisable to place many boxes with identical dimensions, because individuals of the same species may not tolerate each other's presence, especially in built-up areas with limited food resources.

Table 10.3.1. Bird boxes with additional details on siting them to increase chances of occupancy.

| Type/ example                                                                                                                                                                                                                                       | Typical species       | Height           | Additional information                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Vivara Pro WoodStone House Sparrow Nest Box</p>                                                                                                                 | House sparrows        | $\geq 2\text{m}$ | <ul style="list-style-type: none"> <li>Can either be incorporated into the build structure or mounted onto a building.</li> <li>Should be fixed onto a sturdy building, not onto fences or garden sheds due to its weight.</li> <li>Position away from windows.</li> <li>Position out of direct sunlight (below eaves on the north elevation), especially if not built into the build structure.</li> </ul> |
| <p>Ibstock Eco-habitat</p>  <p>or</p> <p>Swift boxes from Hampshire Swifts</p>  | Swifts                | $\geq 5\text{m}$ | <ul style="list-style-type: none"> <li>Can either be incorporated into the build structure or mounted onto a building.</li> <li>Position out of direct sunlight (below eaves on the north elevation), away from windows and in a straight line.</li> <li>Should be in an open area so that it is less accessible to predators and birds are not obstructed as they leave the nest.</li> </ul>               |
| <p>Vivara Pro Seville 32mm Woodstone Nest Box</p>                                                                                                                | Blue tits, great tits | 2-4m             | <ul style="list-style-type: none"> <li>Position on a building or tree, angled north-east (away from prevailing winds) and tilt forward slightly.</li> <li>Chances of occupation can be increased by positioning boxes near vegetation.</li> </ul>                                                                                                                                                           |
| <p>Vivara Pro Barcelona WoodStone Open Nest Box</p>                                                                                                              | Robins, wrens         | $\leq 2\text{m}$ | <ul style="list-style-type: none"> <li>Mount on a tree or large shrub</li> <li>Conceal amongst foliage to keep well-hidden from predators.</li> </ul>                                                                                                                                                                                                                                                       |
| <p>Vivara Pro Seville 28mm Woodstone Nest Box</p>                                                                                                                | Blue tits, coal tits  | 2-4m             | <ul style="list-style-type: none"> <li>Position on a building or tree, angled north-east (away from prevailing winds) and tilt forward slightly.</li> <li>Chances of occupation can be increased by positioning boxes near vegetation.</li> </ul>                                                                                                                                                           |

|                                                                                                                                              |               |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>WoodStone Swallow Nest Bowl (Plywood board mounted)</p>  | Swallows      | $\geq 2m$ | <ul style="list-style-type: none"> <li>• Mount within a building with an open door or window</li> <li>• Leave a distance of at least 6cm between the top of the nest and the ceiling.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>Vivara Pro WoodStone House Martin Nest</p>               | House martins | $\geq 5m$ | <ul style="list-style-type: none"> <li>• Position out of direct sunlight (below eaves on the north elevation), away from windows and in a straight line.</li> <li>• Should be in an open area so that it is less accessible to predators and birds are not obstructed as they leave the nest.</li> </ul>                                                                                                                                                                                                                                                                                              |
| <p>Integrated barn owl roost/false dormer box</p>          | Barn Owl      | $\geq 3m$ | <ul style="list-style-type: none"> <li>• Integrated into the sloped roof ideally as a false dormer.</li> <li>• The base of the internal space must be flat and at least 45cm below the entrance hole.</li> <li>• There must be an easy-to-grip platform outside the hole for fledglings to stand.</li> <li>• The box must not allow owls access into the garage/ carport inside the building to prevent disturbance by human activity.</li> <li>• A closed access hatch into the box from inside the building is advised, to allow essential clearance of built up nest material or waste.</li> </ul> |
| <p>Barn Owl Trust Nest Box</p>                            | Barn Owl      | $\geq 5m$ | <ul style="list-style-type: none"> <li>• Mounted on a 'telegraph style' pole.</li> <li>• Best positioned facing open grassland for foraging opportunities and away from the prevailing weather.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                            |

## 10.4 Insects

Insect boxes (hotels or towers) and bricks should be installed in a sunny location close to vegetation. Bee-friendly and insect friendly plants should be located nearby so that the bees and insects using the boxes have food. Lavender, honeysuckle and buddleia are all pollinator-friendly plants. The boxes suggested in *Table 11.4.1* (especially the BeePot planter) have been chosen so that they form an attractive feature as part of the landscaping. Solitary bees are non-aggressive and as such are suitable for gardens with pets and children.

*Table 11.4.1. Examples of insect boxes that could be erected on site.*

| Type                                                                                | Species                                             | Height                              | Additional information                                                                                                                                                   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Solitary bees                                       | >1m from the ground                 | The Bee Brick should be positioned in a warm sunny spot, in a south-facing wall, with no vegetation in front of the holes                                                |
|   | Solitary bees                                       | >1m from the ground                 | The BeePot should be positioned in a warm sunny spot, preferably on a south-facing wall, with no vegetation in front of the holes                                        |
|  | Butterflies, solitary bees, lacewings and ladybirds | >1m from the ground                 | The different sections of the Insect Tower have been designed to provide a habitat for a variety of insect species. Suitable for mounting on buildings, trees or fences. |
|  | Solitary bees and a range of other insects          | Between 0.75m and 1.5m above ground | The selected canes and the holes are the optimum size for solitary bees but other insects may overwinter in the nester.                                                  |
|  | A wide range of insects                             | Between 0.75m and 1.5m above ground | Adding natural materials such as drilled canes, hollow stems or bark in the triangular spaces will encourage more insects to the hotel.                                  |

|                                                                                                            |                                |                               |                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <p>Bee and Bug Biome</p>  | <p>A wide range of insects</p> | <p>&gt;1m from the ground</p> | <p>Best placed near vegetation. Provides plenty of nooks and crannies for insects such as ladybirds, earwigs and lacewings.</p> |
|------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------|