

# Phase 1

## Preliminary Ecological Appraisal

### Long Eves Farm



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NE class license: Bats: survey (level 2)

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## CONTENTS

|                                                               |    |
|---------------------------------------------------------------|----|
| Summary                                                       | 3  |
| 1.0. Introduction                                             | 4  |
| 1.1. Background                                               | 4  |
| 1.2. Site Location                                            | 4  |
| 1.3. Site Description                                         | 5  |
| 1.4. Brief Description of Project                             | 6  |
| 1.5. Purpose of the Preliminary Ecological Appraisal          | 6  |
| 2. Methodology                                                | 7  |
| 2.1 Desk Study Methodology                                    | 7  |
| 2.2. Survey Methodology                                       | 7  |
| 2.3. Site Location and Access                                 | 10 |
| 2.4. Date and Time of Survey                                  | 10 |
| 2.5. Weather Conditions                                       | 10 |
| 2.6. Survey Constraints                                       | 10 |
| 2.7 Evaluation of Ecological Features                         | 10 |
| 3. Results                                                    | 12 |
| 3.1. Desk Study Results                                       | 12 |
| 3.1a Statutory Nature Conservation Sites                      | 12 |
| 3.1b. Protected Species Records                               | 13 |
| 3.1c Interpretation of Biological Data from Desk Study        | 14 |
| 3.2 Survey Results                                            | 15 |
| 3.2.1. Habitat Types Present & Baseline Ecological Conditions | 15 |
| 3.2.2. Protected and Notable Species on Site                  | 16 |
| 4.0. Discussion                                               | 24 |
| 4.1. Ecological Constraints                                   | 24 |
| 4.2. Additional Ecological Surveys Recommended                | 25 |
| 4.3. Minimising Ecological Impact                             | 25 |
| 4.3a. Protecting the Ecological Value of the Site             | 25 |
| 4.3b. Precautionary Measures during Development               | 25 |
| 4.4 Opportunities for Biodiversity Gain                       | 28 |
| 5. Conclusion                                                 | 29 |
| 6. References                                                 | 30 |

## APPENDICES:

Appendix 1a: Aerial photographs

Appendix 1b: Surrounding Area & Landscape Context

Appendix 1d: Phase 1 Habitat Maps

Appendix 2: Photographs

Appendix 4: Plant Specifications for Achieving Biodiversity Gain

Appendix 5: Bat Box Specifications for Achieving Biodiversity Gain

Appendix 6: Insect House Specifications for Achieving Biodiversity Gain

Appendix 7: Bird Box Specifications for Achieving Biodiversity Gain

Appendix 8: Hedgehog Box Specifications for Achieving Biodiversity Gain

## SUMMARY

The Phase 1 preliminary ecological appraisal is undertaken in order to identify key ecological constraints to the proposed development; inform planning to allow significant ecological effects to be avoided or minimized; identify any further ecological surveys needed to inform an ecological impact assessment and to support the development of mitigation of compensation measures.

### Methodology

The survey was conducted by carrying out a systematic walkover of the site by Dr. Stefan Bodnar to record habitats, species, and any notable features of interest with regard to flora & Fauna. This is in accordance with standard Phase 1 survey techniques (JNCC, 2016) <sup>1</sup>and is a methodology recommended by CIEEM (2018<sup>1,2</sup>).

### Key Issues and Conclusions

This Phase 1 Ecology Report confirms that the Construction Zone is of 'low to negligible ecological value' consisting primarily of existing building, surrounded by hardstanding though with slightly higher value early mature trees that are to be retained and protected which are of higher value. On site grassland is categorized as g4 modified grassland dominated by Perennial ryegrass. No further surveys are recommended, however the precautions described in section 4, in relation to Great crested newts, reptiles and badgers should be followed. The building and all trees are categorized as having negligible bat roost potential.

It is recommended that as many trees as possible be retained, and a tree protection area and root protection zone be established to avoid damage during the construction phase. All retained trees should be protected in accordance British Standard BS5837 (2012) Trees in Relation to Design, Demolition and Construction – Recommendations, to ensure require adequate root protection fencing. If any trees are to be lost within the scheme, these should be mitigated for by suitable 1:1 enhancement planting with native, nectar rich, berry bearing species.

Bats react adversely to intense lighting, to maintain the suitability of the site for roosting and foraging bats, external lighting provision within the development should be as minimal as possible. External lighting should be via directional downlighters, of low lux and where possible, on timers to ensure as little light spill as possible from the development.

Any woody vegetation clearance should take place outside of the peak bird breeding season. Peak bird breeding season is between mid March and mid July, although certain species can breed outside these months and if breeding birds are found then work should cease and the advice of an ecologist sought. If clearance is undertaken within the bird breeding season then all site features must be checked immediately prior to clearance by a suitably qualified ecologist. There are no Statutory or Non-Statutory Designated Nature Conservation Sites within or adjacent to the site. There are no sites at further distances that will be impacted by this development.

## 1. INTRODUCTION

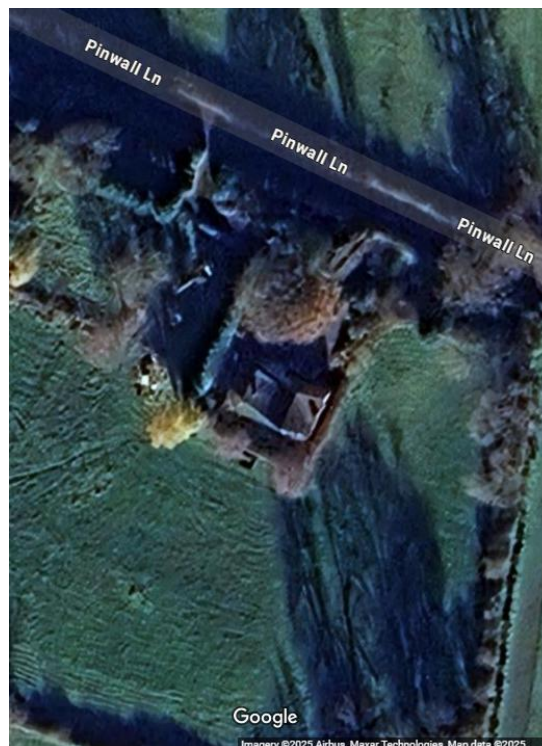
### 1.1. Background

At the request of the client, a Phase 1 Preliminary Ecological Appraisal was carried out at an area of land at Long Eaves farm, Pinwall Lane, Pinwall, CV9 3ND, to evaluate the habitats, describe any further surveys required and indicate the level of required mitigation/ compensation/ enhancement in relation to the proposed development of the site. All site assessments were undertaken by Dr. Stefan Bodnar MCIEEM, a self employed ecologist and arboricultural consultant, the report was written by Dr. Louise Sutherland MIALE, also a self employed ecologist and arboricultural consultant and the report then checked and verified by Dr. Stefan Bodnar MCIEEM. This follows a PEA in January 2023 undertaken by the same ecologist.

### 1.2. Site Location

The site is an area of land at Long Eaves farm, Pinwall Lane, Pinwall, CV9 3ND. The site location is described on the topographical survey below. A satellite image and Phase One diagram (see Appendices) also show the areas concerned.

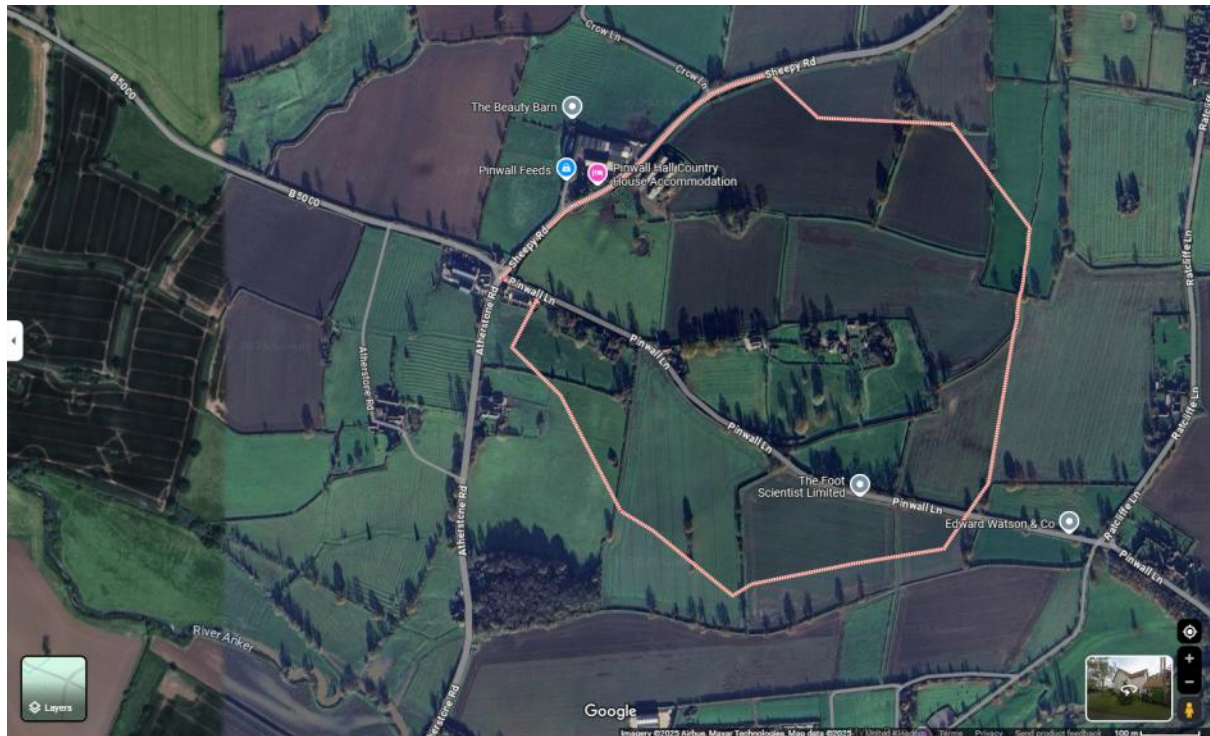
**Figure 1. Showing site location**



*Map data 2025© Google.<sup>15</sup>*

### 1.3. Site Description

The development comprises a 1970s two storey detached house, with landscape trees around. The building has a linked clay tile pitched roof and replaced UPVC windows and doors. Small retained roofspace. To the rear is an improved grass agricultural field. The site is located in Pinwall, near Atherstone. It is surrounded in all directions by arable land. (See Appendix 1b).



Map data 2025 © Google.<sup>15</sup>

Figure 2. Satellite image of local area around proposed development site.

### 1.4. Brief Description of Project

Refer to planning application for full details and see below plans for a replacement dwelling (existing building to be demolished):



### 1.5. Purpose of the Preliminary Ecological Appraisal

The phase 1 preliminary ecological appraisal report identifies key ecological constraints to the proposed development; informs planning to allow significant ecological effects to be avoided or minimized; identifies any further ecological surveys needed to inform an ecological impact assessment and supports the development of mitigation of compensation measures.

It is composed of two parts. A site visit, during which a preliminary ecological appraisal of the site is carried out to identify the major habitat types, plant, bird, reptile, mammal and other species using the site. Also a desk study, which gathers ecological data on the site and its surrounding area, to identify protected species and statutory protected sites in the vicinity of the proposed development site, in order to produce recommendations on the key ecological constraints to the proposed development.

## 2. METHODOLOGY

### 2.1 Desk Study Methodology

Information was gathered from a number of web-based data sources, published ecological reports and where appropriate, the authors own records. The ecological data search covers the following areas:

- ☐ Species of particular note
- ☐ Local Nature Reserves
- ☐ Protected species (e.g. badger, grass snake, great crested newts, otter, water vole and bats).

Plant names (common and scientific) within this report follow 'New Flora of the British Isles' (Stace, 2019)<sup>8</sup>.

### 2.2. Survey Methodology

The survey was conducted by carrying out a systematic walkover of the site by Dr. Stefan Bodnar to record habitats, species, and any notable features of interest with regard to flora & Fauna. This is in accordance with standard Phase 1 survey techniques (JNCC (2106)<sup>1</sup> and is a methodology recommended by CIEEM (2018)<sup>2,3</sup>.

During the survey, emphasis was placed on searching for evidence of and potential of habitats and features supporting protected or notable species, especially those listed under the Conservation of Habitats and Species Regulations, revised 2017<sup>4</sup>, and the Wildlife & Countryside Act 1981 (as amended)<sup>5</sup>.

The range of methods used were as follows:

#### **Bats**

The assessment was carried out using the guidance provided within the publication: Bat Surveys for Professional Ecologists (4th Edition), BCT (2023)<sup>6</sup>, the relevant section is reproduced below:

Bat Conservation Trust

**Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.**

| Potential suitability                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Roosting habitats in structures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Potential flight-paths and foraging habitats                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).                                                                                                                                                                                                                                                                                                                                        | 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 <sup>a</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.                                                                                                                                                                                                                                                                                                                              | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions <sup>b</sup> and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats <sup>c</sup> ). | Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. 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 situation) or a patch of scrub.                                                                                                       |
| Moderate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions <sup>a</sup> and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).                                                                 | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions <sup>b</sup> and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.                                                                                                       | 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. |
| <p><sup>a</sup> Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).</p> <p><sup>b</sup> For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.</p> <p><sup>c</sup> Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten <i>et al.</i>, 2016 and Jansen <i>et al.</i>, 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

The trees within the site were appraised for their potential suitability to support breeding, resting and hibernating bats in accordance with survey methods documented in the Bat Surveys: Good Practice Guidelines (Bat Conservation Trust 2023)<sup>6</sup>. Features of medium and high potential for bats were searched for signs of use by bats, such as droppings, urine staining and scratches around entrance holes etc.

A visual inspection of the trees from ground level with the aid of binoculars was undertaken to search for evidence of actual bats as well as signs of bats (droppings, feeding remains, urine staining, scratch marks, noise and the remains of dead bats etc.). In addition, the trees were

assessed for the presence of features likely to be attractive to roosting bats, such as cavities or rot holes in the trunk or branches, splits in the timber, delaminating bark, deep bark crevices, dead branches and dense ivy cover etc.

- The site was also assessed for potential bat foraging areas and commuting routes.
- Features of medium and high potential for bats were searched for signs of use by bats, such as droppings, urine staining and scratches around entrance holes etc. The site was also assessed for actual and potential bat foraging areas and commuting routes.
- Buildings within the site were assessed in accordance with the methodology outlined in the Bat Conservation Trust's Bat Surveys: Good Practice Guidelines (2023)<sup>6</sup>

#### □ **Reptiles**

The site was assessed for its suitability to support reptiles based upon the abundance of suitable habitats such as structurally diverse habitats, hedgerows, scrub, rough grassland, wood piles, rubble, banks and compost heaps etc. The site was assessed with respect to its potential for use for hibernation and spring/summer use based on guidance provided in the Herpetofauna Workers' Manual (Joint Nature Conservation Committee 2003)<sup>9</sup>, Common Standards Monitoring Guidance for Reptiles and Amphibians, 2004, JNCC<sup>10</sup> and the Reptile Management Handbook (Edgar, Foster & Baker 2010)<sup>11</sup>. Great Crested Newts were assessed using techniques described in the Great Crested Newt Conservation Handbook by Tom Langton, Catherine Beckett and Jim Foster<sup>14</sup>

#### **Badgers**

The whole site was searched systematically, with particular attention being paid to features likely to support badger setts (e.g. earth embankments, wooded copses etc.). The location of all badger signs such as runs, dung pits, prints, hair, foraging snuffle holes found during the survey were mapped and all setts characterised as either main, annex, subsidiary or outliers in accordance with guidance given in Surveying Badgers (Harris, Cresswell & Jefferies, 1988)<sup>12</sup>. Account was also taken of more recent guidance Scottish badgers: surveying for badgers, 2018)<sup>13</sup>

#### **Birds**

All birds observed during the field survey were recorded, in addition to features capable of supporting nesting birds (e.g. trees, hedgerows, buildings, bramble beds, ruderal vegetation and rough grassland etc). The site was also assessed for its actual and potential suitability to support

Schedule 1 (Wildlife & Countryside Act 1981 (as amended)<sup>5</sup> and Biodiversity Action Plan priority species (now included within Section 41 of the NERC Act)<sup>7</sup>.

### **Other Species**

The site was also assessed for its actual and potential suitability to support other protected or notable fauna including species listed as Invasive species under Schedule 9 of the Wildlife and Countryside Act, 1981, (as amended)<sup>5</sup> in accordance with the Guidelines for Preliminary Ecological Appraisal (Chartered Institute of Ecology and Environmental Management, 2018<sup>2,3</sup>).

### **2.3. Site Location and Access**

Long Eaves farm, Pinwall Lane, Pinwall, CV9 3ND. All areas of the site were available for access.

### **2.4. Date and Time of Survey**

The site assessment was conducted on 22nd May 2025.

### **2.5. Weather Conditions**

The weather conditions during the survey were dry and warm.

### **2.6. Survey Constraints**

Owing to the time of year the initial survey took place it can be considered to provide a reasonable, though not exhaustive plant list. This survey noted the habitat types on the site, and the dominant vegetation at the time of the survey, which is likely to be constant and a fair reflection of the habitat quality present, and the survey was undertaken within the optimal season for grassland surveys, (April to September of any year) .

### **2.7 Evaluation of Ecological Features**

The potential of the Site to support legally protected or notable species was determined through a review of field observations and desk study information.

The likelihood of the occurrence of any protected and/or invasive species is ranked as follows and relies on habitat suitability for the species at the Site as well as an evaluation, in parallel, of desk study data and published guidance/literature which is referenced accordingly:

- Negligible – while presence cannot be absolutely discounted, the Site supports very limited or poor-quality habitat for a species or species group. There may be no local records of the species/species group from the data search, and the surrounding habitats are considered unlikely to support wider populations of a species/species group. The Site may also be outside or peripheral to the known natural range of a species/species group;
- Low – habitats within the Site are of poor to moderate quality for a given species/species group. There are few or no returns from the data search, but presence cannot be discounted based on the national distribution of the species/species group, the nature of surrounding habitats, habitat fragmentation or recent on-site disturbance, etc.
- Medium – habitats within the Site are of moderate quality providing some opportunities for a given species/species group. The desk study reveals historic local occurrence of the species/species group and the Site is within the national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, habitat isolation, and/or disturbance
- High – habitats within the Site are of high quality for a given species/species group. The desk study provides evidence of local occurrence. The Site may be within/peripheral to a national or regional stronghold and/or has good quality surrounding habitat and good connectivity
- Confirmed Presence - presence confirmed from the most recent site survey or by recent, confirmed records

The CIEEM EcIA guidelines (CIEEM, 2018) state that “the importance of an ecological feature should be considered within a defined geographical context. It is recommended that the following frame of reference be used, or adapted to suit local circumstances:

- International and European;
- National
- Regional
- Metropolitan, County, vice-county or local authority-wide area
- Local

### 3. RESULTS

#### 3.1 Desk Study Results

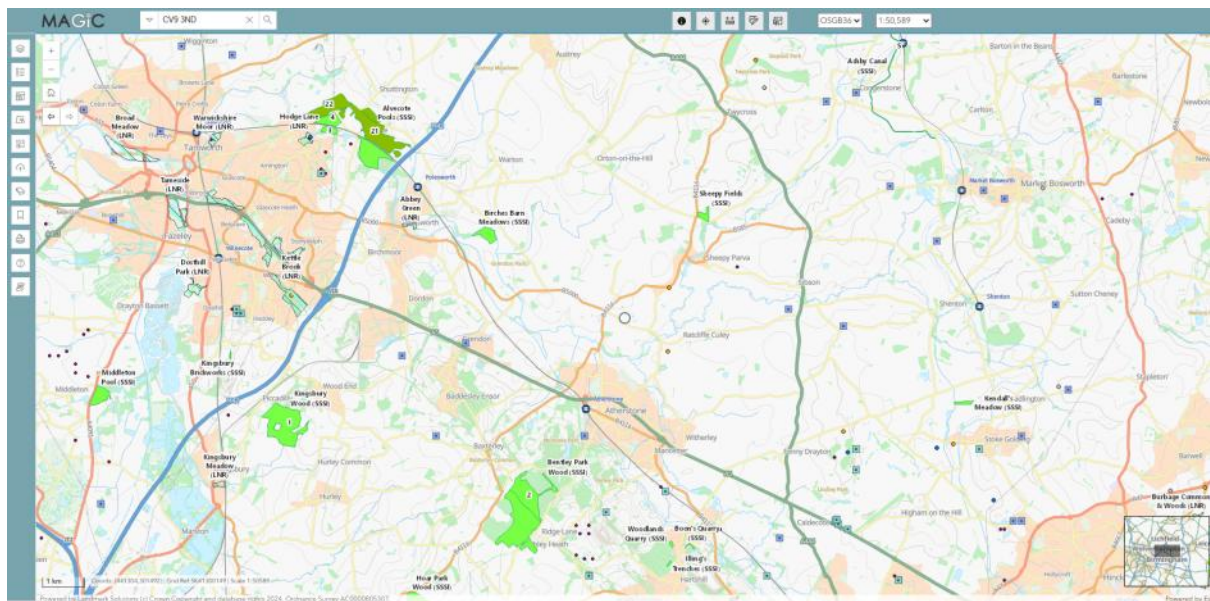
The data search was obtained from the Natural England 'MAGIC' website<sup>16</sup> accessed on 26<sup>th</sup> May 2025, appropriate sections reproduced and referenced below.

##### 3.1a Statutory & Non Statutory Nature Conservation Sites

The maps below show all Statutory and Non Statutory Nature Conservation Sites (this includes Sites of Special Scientific Interest, Local Wildlife Sites, Local Nature Reserves, Special Areas of Concern) within 5km of the proposed development.

##### Statutory Protected Sites:

The closest Statutory Nature conservation sites are 3 SSSIs which are located at around 5 km (Birches Barn Meadows, Bentley park wood and Sheepy Fields).



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### 3.1b. Protected & Notable Species Records

| Species (Latin Name)       | Common Name        | Approximate distance of nearest record from the survey site (km) |
|----------------------------|--------------------|------------------------------------------------------------------|
| <i>Erinaceus europaeus</i> | Hedgehog           | Within 2 km                                                      |
| <i>Triturus cristatus</i>  | Great Crested Newt | Within 3.5 km                                                    |
| <i>Meles meles</i>         | Badger             | Within 3 km                                                      |
| <i>Tyto alba</i>           | Barn owl           | Within 3 km                                                      |

In relation to protected and notable species, the following were recorded from a variety of online web based resources, in this case magic.gov.uk<sup>16</sup>, accessed on the 18<sup>th</sup> May 2025.

### Protected & Notable Species Occurrence Tables, source MAGIC<sup>16</sup>

#### Protected Bat Species Occurrence Table

| Species (Latin Name)             | Common Name        | Approximate distance of nearest record from the survey site (km) |
|----------------------------------|--------------------|------------------------------------------------------------------|
| <i>Pipistrellus pipistrellus</i> | Common Pipistrelle | Within 5 km                                                      |
| <i>Pipistrellus pygmaeus</i>     | Soprano pipstrelle | Within 5 km                                                      |
| <i>Myotis nattereri</i>          | Natterer's bat     | Within 2 km                                                      |

Data on European Protected Species Licenses in the local area, reveals that 3 species of bat are known to roost within 5 km of the site, with Great Crested Newts within 3.5 km of the site, Barn Owl is present within 3 km.



## 3.2 Survey Results

### 3.2.1. Habitat Types Present & Baseline Ecological Conditions

#### 3.2.1. Habitat Types Present & Baseline Ecological Conditions

##### 1. Hard standing

A large hardstanding driveway, providing vehicular and pedestrian access to on-site buildings.

##### 2. Buildings

1970s 2 storey detached house, Brick, with linked concrete tiles. Large dormer (flat roofed) to rear, mineral felt roof. Windows, door and soffits replaced or clad UPVC, the dormer is clad UPVC. Filled cavity wall. Roof has plastic end caps sealing the mortar ends. Roof and all brickwork intact. UPVC cladding tightly fitting.

Loft space (storage) with some insulation and boarding, to 1.7m. Lining Bitumen felt. Rat and mouse droppings apparent.

3. **Garden area: improved grass** (dominated by Perennial ryegrass and Creeping buttercup (UKHabs g4, condition status poor (unmanaged)), and landscape trees, habitats shown below. Beech and hawthorn hedge to Eastern boundary, Early mature coppiced oak on frontage, landscape trees include silver birch, pollarded ash, coppiced hazel, Leyland Cypress hedge to Western house garden boundary. Group of silver birch and an EM Weeping willow near to the proposed access driveway.

Aerial photographs, appendix 1a & b, shows the area in context and Photographs (Appendix 2). A full species list of vascular plants is included at the end of this report (Appendix 3). Appendix 1e shows the Phase 1 habitat map.

**Non-Native Invasive Species:** There is no sign of Japanese knotweed *Reynoutria japonica* on the site, or other invasive plant species

See Phase 1 Habitat plan (appendix 1d) and images, Appendix 2.

### 3.2.2. Protected and Notable Species on Site

#### Bats:

There are 18 species of bat found in the UK, 17 of which are known to breed in the UK. All are small, nocturnal, flying, insectivorous mammals that are under considerable conservation threat and many having undergone severe population declines over the last century. Some species, such as pipistrelle bats (*Pipistrellus* sp) still remain relatively common and widespread in the UK, while others, such as greater horseshoe bats (*Rhinolophus ferrumequinum*), have an extremely restricted distribution. All species of bats and their roosting sites are afforded full protection under both UK and European legislation and are designated as 'European protected species'.

#### Site Assessment: Foraging;

The site has moderate suitability for bat foraging and commuting, being small, unlit, and partially vegetated with partial hedge-line, and it is adjacent to open countryside. Any development of this site should minimize lighting on this site to avoid making this site and the adjacent landscape unsuitable for bat foraging and commuting.

#### Bat Assessment of Trees

All on site and peripheral trees have negligible bat roost potential.

The site has low to moderate suitability for bat commuting and foraging, being mainly an existing building and is surrounded by intensive agricultural land with low to moderate suitability for bat foraging.

The trees do not have potential for bat roosting as they are not of sufficient age to have developed features which bats could utilise.

#### Bat Assessment of Buildings:

For the building, it is structurally intact. There are no signs of bats, no droppings, no scratching or staining. There are signs of use by other mammals, particularly rats and mice. .

Categorized as Negligible in respect of bat roost potential.

## Bat Assessment of Trees:

The trees do not have potential for bat roosting as they are not of sufficient age to have developed features which bats could utilise.

## Badgers

Badgers (*Meles meles*) are protected in England and Wales under the Protection of Badgers Act 1992. Protection applies both to the animal itself and to its nesting burrows (setts), and current interpretation of the Act also confers some protection to key foraging areas. Badgers remain comparatively widespread and common throughout the UK.

There is no suitable habitat on site for badger and there are no signs of badger activity (snuffle holes, latrines or trackways) on the survey site. It can be confirmed that at the time of survey there are no setts either within the proposed development sites or within 30m of these site boundaries. Badgers are present within 2 km of the site and the surrounding habitat is of low to moderate suitability for the species. No further surveys are recommended for this species. However, the presence of foraging Badgers or other foraging mammals, cannot be ruled out, so deep excavations should be covered nightly or wooden planks used to provide escape routes, and checked prior to the days' work.

It is possible that during development work, badgers and other mammals such as hedgehogs and foxes, will enter the working areas at night.

No further surveys are recommended on site, however to protect any other mammals, such as fox or hedgehog, which could enter the working areas at night, the following additional precautionary measures are recommended:

- All excavations to be covered over or ramped so that any mammals could get out of an excavated structure. Further measures are detailed below:
- Any ground-works that are to be left open overnight will be provided with a means of escape should a badger enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water.

- Any trenches/pits will be inspected each morning to ensure that no badgers have become trapped overnight. Should a badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, by forming a temporary sett.

**Other mammals**

The presence of other specially protected mammals, such as otter, dormouse and water vole, is assessed as extremely unlikely, due to the lack of suitable habitats on this site. Hedgehogs are recorded within 1km and could be present on the site.

## Birds

The Wildlife and Countryside Act 1981 (as amended)<sup>5</sup> makes it an offence (with certain limited exceptions) to intentionally kill, injure or take any wild bird, or to damage, take or destroy the nest of any wild bird whilst that nest is being built or in use, or to take or destroy its eggs. Furthermore, the Act affords additional protection to specific species of birds listed in Schedule 1 of the Act. In respect of these species, it is unlawful to intentionally or recklessly disturb such a bird whilst it is nest-building or is in, on or near a nest containing eggs or young; or to disturb their dependent young. Following recent revisions, fifty-nine species are listed on the UKBAP.

The following species were recorded on-site during the visit:

| <b>Bird Species:</b> | <b>Latin name:</b>         |
|----------------------|----------------------------|
| Blackbird            | <i>Turdus merula</i>       |
| Goldfinch            | <i>Carduelis carduelis</i> |
| Jackdaw              | <i>Corvus monedula</i>     |
| Woodpigeon           | <i>Columba palumbus</i>    |
| House Sparrow        | <i>Passer domesticus</i>   |

The birds listed above were actually recorded on the site itself. The vegetation and trees on the edges of the survey site could also provide suitable for nesting habitat for a number of other common woodland bird species. It is recommended that any site clearance (if required) is undertaken outside of the peak bird breeding season (mid March to mid August). If site clearance is undertaken during these months, a suitably qualified and experienced ecologist should be employed to ascertain the presence of any breeding birds within the site.

## Great Crested Newt

The Great Crested Newt (*Triturus cristatus*) is one of the two rarest amphibian species in Britain. It is primarily a terrestrial animal, spending much of its life on land, but returning to the water to breed. Great crested newts (GCNs) will often return to breed in the same waterbody where they were spawned. In addition, they are highly opportunistic and will also colonise suitable new waterbodies rapidly. Great Crested Newt is a 'European protected species' afforded full protection under both UK and European legislation. This protection extends to the habitats

which support it. The habitats within 500m of a breeding pond are generally considered to be protected by the legislation.

A HSI evaluation of ponds within 500m was undertaken as part of the previous application for this site (2024) and should be referred to for further details of ponds within this zone. Note that at the time of survey the pond immediately to the SE (the only pond within 100m) was dry at time of survey, see image below:



It is unlikely that Great Crested Newts are on site, therefore further surveys are not justified, instead a series of precautions, designed to protect all amphibians are recommended. The following non-licensed avoidance measures are recommended to ensure against committing an offence with respect to individual Great Crested Newts. It should be noted that failure to follow these procedures may significantly increase the likelihood of causing an offence. It should also be taken into account that if newts are discovered in the working area at any stage during the works, works may have to be halted and a Natural England mitigation licence obtained. This may incur considerable delays and costs.

1. Ensure all workers whose operations may affect Great Crested Newts are familiar with the legislation as detailed at the start of this section. At site induction talks all workers must agree to work in accordance with and fully follow these Reasonable Avoidance Measures. It is recommended that the owner / developer or their agent keep a record of the details of workers who have been inducted onto the site.
2. All workers should be informed that newts spend much of the year out of ponds in areas that provide shelter such as tall vegetation, piles of rubble and wood etc., cracks and cavities in the ground and under paving slabs. Newts may also bury into soft earth. Not only are the newts themselves protected by legislation, but their terrestrial resting places and aquatic breeding habitats are protected as well.
3. Information on what to look for and identifying newts should be made available to all site staff.
4. All workers must be made aware that if GCN are found, works should be halted and there is a correct procedure in place to follow, and failure to halt works may result in committing an offence under the Habitats Regulations 2010, revised 2017.
5. At no point should any worker handle a Great Crested Newt or suspected Great Crested Newt. Unlicensed handling is illegal and untrained handling may cause the newt unnecessary stress and injury.
6. In the unlikely event that newts are found at any time during works at the site, if possible replace the covering without damaging the newt and halt ground-level works immediately. A suitably experienced ecologist should then be contacted for advice. A Natural England development license may be required before works can continue. This may entail considerable delays and costs.
7. If site operatives can confidently identify that the newt found is not a Great Crested Newt, the newt can be carefully moved out of the area of works and placed in nearby habitat similar to that in which it was found. A newt found on land should not be placed into a pond or other water body.
8. Ideally, the remainder of the site clearance and ground works which include (but are not limited to), digging and constructing footings, excavation of service conduits, drainage works etc. should be restricted to the winter period (October – through January) to avoid impact on terrestrial newts. Ideally, keep the period of groundworks as short as possible.

9. Backfill any trenches or other excavations the same day before nightfall and only carry out ground works during daylight hours.

10. Keep all new construction materials raised off the floor on pallets etc. to prevent their use as a refuge.

### **General Advice Regarding Amphibians and reptiles**

□ Site staff should be made aware that all snakes, slow worms and other common reptiles species are protected from deliberate killing under the Wildlife and Countryside Act 1981 (as amended).

□ If any amphibians (other than Great Crested Newt) or reptiles are found within the working area they should be removed to an area outside of the working zone (preferably in dense vegetation, a rubble pile, or under lying wood).

□ Amphibians should be picked up by placing the fingers under the body and lifting, not by grasping any part of them. They can be held still by placing a thumb gently on top of them, if necessary.

□ Handling should be kept to a minimum and latex gloves should be avoided. Vinyl, Nitrile and other non-latex gloves are ok and should be used where possible.

□ If the amphibians/reptiles found are hibernating then they should be collected up and placed in a covered box or bucket while a suitable shelter / hibernaculum is prepared for them. Advice on which should be sought from an ecologist.

□ Avoid burning or machine removal of any potential hibernacula (wood piles, debris etc.) without a thorough hand search for amphibians, reptiles and hedgehogs.

### **Reptiles**

There are four widespread species of British reptile comprising grass snake (*Natrix natrix*), slow-worm (*Anguis fragilis*), adder (*Vipera berus*) and common lizard (*Zootoca vivipara*). These animals are protected under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. They are given so called 'partial protection', which prohibits the deliberate killing or injury of individuals. The habitats of common reptiles are not specifically protected.

The site is of low suitability for reptiles and the surrounding habitat is of poor suitability for reptiles, being intensive agricultural land. There are no local records of reptiles, therefore it is considered unlikely that reptile species are present and there are no requirements for further surveys. However, to ensure no reptiles are harmed as a result of the proposed development it is recommended appropriate precautions should be taken during development, including where possible undertaking ground-works along field boundaries when reptiles are active (March to October) and ensuring storage of piles of materials and excavated earth on the site should be kept to a minimum and away from the field boundaries to deter reptiles from using them for temporary cover.

## 4.0. DISCUSSION

**It is important that this proposed development should demonstrate Net Biodiversity Gain, in accordance with National Planning Policy Framework 2024<sup>17</sup>.** There is also a duty to ensure no net loss of biodiversity placed on Local Authorities in the Natural Environment and Rural Communities Act 2006, Section 40<sup>7</sup>. There are requirements noted for this under The National Planning Policy Framework (2024)<sup>17</sup> which refers to compensation/ mitigation. It is confirmed that the enhancement, mitigation and compensation within this section will comply with all the relevant UK and EU legislation relating to protection and enhancement of ecology. It is likely that the development will require a Statutory Biodiversity Net Gain assessment (BNG).

### 4.1. Ecological Constraints

The value of the habitats on site, in terms of ecological value to wildlife is low to negligible, however the hedge, in terms of ecological value to wildlife is low, therefore should be protected and retained within the scheme as far as possible and if not retained should be compensated for.

If any trees or hedges are lost to development, they should be replaced at a minimum of 1:1 ratio, preferably 1:2 in anticipation of the high failure rate of young trees.

The on-site lighting should be carefully chosen to ensure it is low lux, cowled (directed downwards to prevent light splay), and used on timers or motion sensors to minimize the impact on local bat populations. This should conform the BCT lighting guidance, 2018<sup>19</sup>. This guidance was revised in 2023.

If any trees are lost to development, they should be replaced at a minimum of 1:2 ratio, in anticipation of the high failure rate of young trees and reflection of their lower ecological value.

The habitats present within the area consists of the following elements (see Phase 1 Habitat Map in Appendix 1d and refer to JNCC habitat Survey codes, 2016).

- Planted landscape trees (native/non native)
- Amenity (improved) grassland JNCC Code J1, UKHABS g4 Condition status Poor
- Building

- Hardstanding
- Native hedgerow (beech)

## 4.2. Additional Ecological Surveys Recommended

None required

## 4.3. Minimising Ecological Impact

This section states how the negative impacts of the development can be addressed.

### *4.3a. Protecting the Ecological Value of the Site*

Creation of wildlife habitat in gardens, using measures such as native hedgerow and tree planting, flowering lawn mixes, flowering mixes in roadsides verges, ensuring hedgehog passes between any fencing on site and the addition of at least one bat and bird box on each new building, will help to mitigate for losses of habitat on this site. At least one nest box suitable for common bird species is recommended for each new building. Schwegler 1B nest boxes with 32mm entrance holes are recommended. These should be erected in accordance with the manufacturers recommendations. Generally, this will entail mounting the box between 3 – 4 m above the ground, with a north / northwest aspect. Care should be made to make the nest box inaccessible to predators, and generally, nest boxes should not be sited too close to each other.

It is recommended that any fencing installed on the site should contain at least 1 gap per run at its base measuring 13cm by 13cm. The gaps should be arranged to allow free movement to hedgehogs throughout the site. At least one hedgehog hibernation box (see appendix 8) should also be installed on the site, located towards the rear of the garden, where it will border hedgerow and be minimally disturbed.

The on-site lighting should be carefully chosen to ensure it is low lux, cowled (directed downwards to prevent light splay), and used on timers or motion sensors to minimize the impact on local bat populations.

### *4.3b. Precautionary Measures during Development*

.

The trees and hedges on site are all suitable for breeding birds. Peak bird breeding season is between mid March and mid August, although certain species can breed outside these months

and if breeding birds are found then work should cease and the advice of an ecologist sought. Site clearance should be carried out outside of the bird breeding season.

The off site trees should be treated in accordance British Standard BS5837 (2012) Trees in Relation to Design, Demolition and Construction – Recommendations, to ensure require adequate root protection fencing.

To protect any reptiles or amphibians which might be using the site, it is recommended appropriate precautions should be taken during development. These include;

- If great crested newts are discovered at any time during processes involved with the development, work should cease immediately and the advice of a licensed ecologist sought.
- All site staff involved with site clearance and construction works are to be made aware of the potential for encountering great crested newts and reptiles through a tool kit talk and the appropriate measures to be taken if great crested newts are encountered.
- Keep duration of groundworks as short as possible.
- Undertake during the day works that might only affect newts above ground.
- Backfill trenches and other excavations before nightfall, or leave a ramp to allow newts to easily exit.
- Raise stored materials (that might act as temporary resting places) off the ground, e.g. on pallets.
- Ensuring storage of piles of materials and excavated earth on the site should be kept to a minimum.
- Storing piles of materials and excavated earth away from the field boundaries to deter reptiles from using them for temporary cover.

Appropriate precautionary measures are recommended, in case badgers enter the working areas at night:

- Ensure that all those in work are aware of the potential for setts or badgers to be encountered, and the actions to be taken if these are discovered at anytime.
- All excavations to be covered over or ramped so that any badgers could get out of an excavated structure. Further measures are detailed below:

- Any ground-works that are to be left open overnight will be provided with a means of escape should a badger enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water.
- Any trenches/pits will be inspected each morning to ensure that no badgers have become trapped overnight. Should a badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, by forming a temporary sett. Should a trapped badger be encountered the Ecologist should be contacted immediately for further advice who, if necessary, will contact Natural England in respect of legislative and licensing issues.
- The storage of topsoil or other 'soft' building materials on site will be given careful consideration. Badgers will readily adopt such mounds as setts; so as to avoid the adoption of any mounds, these will be kept to a minimum and any essential mounds subject to daily inspections (or nightly patrols if 24 hour security is present on site), with consideration given to temporarily fencing any such mounds to exclude badgers.

#### 4.4 Opportunities for Biodiversity Gain and Off-setting Requirements

**It is important that this proposed development should demonstrate Net Biodiversity Gain, in accordance with National Planning Policy Framework 2024.**

Following the built development there will be opportunities for enhancement of the site's ecological value by on site landscaping measures designed to encourage wildlife into the site, including native planting, bird and bat boxes on built structures. Species should be selected, that are both native and wildlife friendly, focusing on measures to encourage birds and foraging bats, wherever possible. See appendices 4 - 8 for detailed information.

The opportunities for enhancement lie in the following main areas:

- Retention and enhancement of value of existing trees/native hedge.
- Supplementary planting with native species.
- Sowing of flowering lawn mix seed where grassland is disturbed around the construction areas and within new garden area.
- Introduction of bat and bird friendly native planting schemes, hibernacula, and wildflower hedgerow edge mix seeding.
- Bird and bat boxes incorporated within or on the buildings or other built fabric, in particular should be included. Details can be found in Appendix 5.
- Selection of wildlife-friendly shrub/planting species as part of the terrestrial landscaping scheme within the development. The specification should include elements of landscaping details selected from a palette of species beneficial to wildlife (further information can be found in Appendix 4):
- Planting of native deciduous specimen tree species.
- Wildflower seeding areas, use of flowering lawn seed mixes.

## 5. Conclusion

This Phase 1 Ecology Report confirms that the Construction Zone is of 'low to negligible ecological value' consisting primarily of existing building, surrounded by hardstanding though with slightly higher value early mature trees that are to be retained and protected which are of higher value. On site grassland is categorized as g4 modified grassland dominated by Perennial ryegrass. No further surveys are recommended, however the precautions described in section 4, in relation to Great crested newts, reptiles and badgers should be followed. The building and all trees are categorized as having negligible bat roost potential.

It is recommended that as many trees as possible be retained, and a tree protection area and root protection zone be established to avoid damage during the construction phase. All retained trees should be protected in accordance British Standard BS5837 (2012) Trees in Relation to Design, Demolition and Construction – Recommendations, to ensure require adequate root protection fencing. If any trees are to be lost within the scheme, these should be mitigated for by suitable 1:1 enhancement planting with native, nectar rich, berry bearing species.

Bats react adversely to intense lighting, to maintain the suitability of the site for roosting and foraging bats, external lighting provision within the development should be as minimal as possible. External lighting should be via directional downlighters, of low lux and where possible, on timers to ensure as little light spill as possible from the development.

Any woody vegetation clearance should take place outside of the peak bird breeding season. Peak bird breeding season is between mid March and mid July, although certain species can breed outside these months and if breeding birds are found then work should cease and the advice of an ecologist sought. If clearance is undertaken within the bird breeding season then all site features must be checked immediately prior to clearance by a suitably qualified ecologist. There are no Statutory or Non-Statutory Designated Nature Conservation Sites within or adjacent to the site. There are no sites at further distances that will be impacted by this development.

| Date                      | Prepared by                             | Checked and Verified by                        |
|---------------------------|-----------------------------------------|------------------------------------------------|
| 26 <sup>th</sup> May 2025 | Dr Louise Sutherland MIALE<br>Ecologist | Dr Stefan Bodnar MCIEEM<br>Principal Ecologist |

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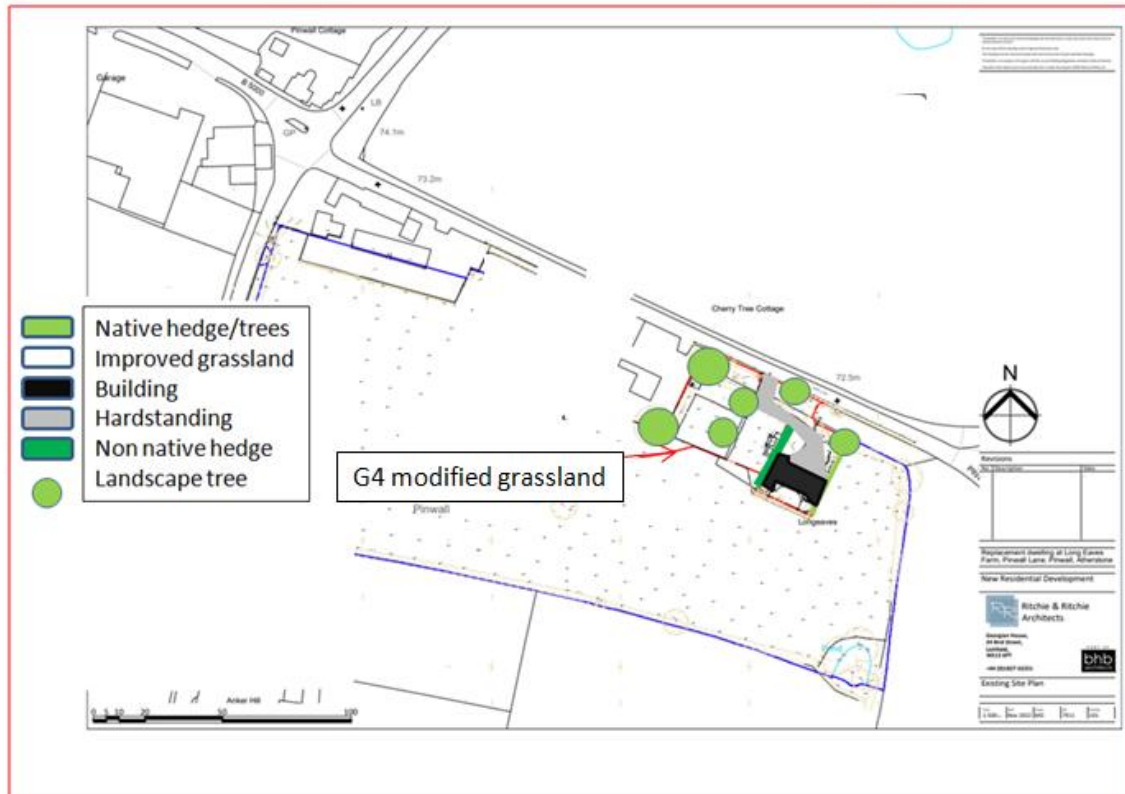
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## Appendix 1d Phase 1 Habitat Map



## Appendix 2 Photographs



House



External images of house UPVC endcaps to roof ends





Loft space images





**Garden shed and landscape trees**



House with UPVC dormer above, unmanaged garden below





**Paddock beside and intervening beech hedge**



House image (side) Russian vine on outside



**Unmanaged garden**

## Appendix 3 Species Lists

Omitted

## Appendix 4: Specifications for Biodiversity Gain

### Appendix 4a: British Native Trees to Attract Wildlife

| Species            | Average mature / ultimate height |        |      | Growth rate |        |      | Soil/ground conditions |                   |             |      |          | Tolerant of sites that are |          |         |         | Valuable for |         |
|--------------------|----------------------------------|--------|------|-------------|--------|------|------------------------|-------------------|-------------|------|----------|----------------------------|----------|---------|---------|--------------|---------|
|                    | 0.5-5m                           | 6m-15m | 16m+ | Fast        | Medium | Slow | Wet ground             | Light sandy soils | Heavy soils | acid | alkaline | Shaded                     | Polluted | Coastal | Exposed | Birds        | Insects |
| Alder              |                                  | •      |      | •           |        |      | ■                      |                   | •           |      | •        | •                          | •        |         | •       |              | •       |
| Ash                |                                  |        | •    |             | •      |      | ▲                      | •                 | •           |      | •        | •                          | •        | •       |         |              |         |
| Aspen              |                                  | •      |      | •           |        |      |                        |                   | •           | •    |          |                            | •        | •       | •       |              | •       |
| Beech              |                                  |        | •    |             |        | •    |                        | •                 |             |      | •        | •                          |          |         |         |              | •       |
| Birch, Downy       |                                  | •      |      | •           |        |      | ▲                      |                   |             | •    |          |                            | •        |         | •       |              | •       |
| Birch, Silver      |                                  | •      |      | •           |        |      |                        | •                 |             | •    |          |                            | •        |         | •       |              | •       |
| Blackthorn         | •                                |        |      | •           |        |      |                        | •                 | •           | •    | •        |                            |          | •       | •       | •            | •       |
| Broom              | •                                |        |      |             | •      |      |                        | •                 |             |      | •        | •                          | •        | •       |         |              | •       |
| Buckthorn, Alder   | •                                |        |      |             |        | •    | ▲                      |                   |             | •    |          |                            |          |         |         |              |         |
| Cherry, Wild       |                                  | •      |      |             | •      |      |                        | •                 | •           |      | •        |                            | •        |         |         |              |         |
| Cherry, Bird       |                                  | •      |      |             | •      |      |                        | •                 | •           | •    |          | •                          |          |         |         | •            | •       |
| Crabapple          |                                  | •      |      |             |        | •    |                        | •                 | •           | •    | •        | •                          |          |         |         | •            | •       |
| Elder              |                                  | •      |      | •           |        |      |                        | •                 | •           | •    | •        | •                          | •        | •       | •       |              | •       |
| Elm, Wych          |                                  | •      |      |             | •      |      |                        |                   | •           |      | •        | •                          | •        | •       | •       |              | •       |
| Gorse              | •                                |        |      |             | •      |      |                        | •                 |             | •    | •        |                            |          |         |         | •            | •       |
| Hawthorn           | •                                |        |      |             | •      |      |                        | •                 |             | •    | •        |                            | •        | •       | •       | •            | •       |
| Hazel              |                                  | •      |      | •           |        |      |                        |                   | •           | •    | •        | •                          |          | •       |         |              | •       |
| Holly              |                                  | •      |      |             |        | •    |                        | •                 | •           | •    | •        | •                          | •        | •       | •       | •            | •       |
| Lime, small-leaved |                                  |        | •    |             | •      |      |                        |                   | •           |      | •        | •                          |          |         |         |              | •       |
| Maple, Field       |                                  | •      |      |             | •      |      |                        |                   |             | •    | •        | •                          | •        |         |         |              |         |
| Oak, Pedunculate   |                                  |        | •    |             |        | •    |                        |                   | •           |      | •        |                            |          |         | •       | •            | •       |
| Oak, Sessile       |                                  |        | •    |             |        | •    | ▲                      | •                 | •           | •    |          | •                          |          |         | •       | •            | •       |
| Pine, Scots        |                                  |        | •    |             | •      |      |                        | •                 |             | •    |          |                            |          |         | •       |              | •       |
| Poplar, Black      |                                  |        | •    | •           |        |      | ▲                      | •                 | •           |      | •        |                            |          |         |         |              | •       |
| Rose, Dog          | •                                |        |      |             | •      |      |                        | •                 | •           |      | •        | •                          | •        |         | •       |              | •       |
| Rose, Guelder      | •                                |        |      |             | •      |      | ▲                      |                   | •           |      | •        | •                          |          |         |         |              | •       |
| Rowan              |                                  | •      |      | •           |        |      |                        | •                 |             | •    |          |                            | •        | •       | •       | •            |         |
| Spindle            | •                                |        |      |             | •      |      |                        |                   | •           |      | •        | •                          |          |         |         |              |         |
| Whitebeam, Common  |                                  | •      |      |             | •      |      |                        | •                 | •           |      | •        |                            |          |         |         |              | •       |
| Wild Service       | •                                |        |      |             |        | •    |                        |                   | •           |      | •        | •                          |          | •       |         | •            | •       |
| Willow, Crack      |                                  | •      |      | •           |        |      | ■                      |                   |             |      | •        |                            | •        | •       | •       | •            | •       |
| Willow, Goat       |                                  | •      |      | •           | •      |      | ■                      |                   | •           |      | •        | •                          | •        | •       | •       | •            | •       |
| Willow, White      |                                  |        | •    | •           |        |      | ■                      |                   |             |      | •        |                            | •        | •       | •       | •            | •       |
| Yew                |                                  | •      |      |             |        | •    |                        | •                 |             |      | •        | •                          | •        | •       | •       | •            | •       |

■ Only species to survive waterlogged sites with anaerobic conditions.

▲ Will tolerate wet ground if there is some seasonality of \*flushing (water movement) within the soil.

## Appendix 4b: Non-native plants to attract wildlife

### **Buddleja X weyeriana cultivars**

You can plant the orange-flowered B. X weyeriana hybrids with a clear conscience as they don't appear to produce viable seed, they also attract a broad spectrum of insects including both butterflies and bees, and they flower late into the season when nectar is scarce. The beautiful B. x fallowiana 'Lochin' with silver leaves is attractive to butterflies and is also said not to produce seeds. The orange ball Buddleja (B. globosa) from South America seems to attract bees rather than butterflies.

### **Bupleurum fruticosum ('Shrubby Hare's Ear')**

A shrubby evergreen umbellifer from Southern Europe, where it is often cultivated. It has leathery aromatic foliage and umbels of yellowish flowers, a bit like those of Fennel, that are very attractive to hoverflies and other small insects. Well worth growing for this reason.

### **Ceanothus X 'Gloire de Versailles'**

Ceanothus come from the Western United States. Most Ceanothus have bunches of very small flowers that don't seem very attractive to insects. 'Gloire de Versailles' however is a hybrid with loose bunches of pale blue tubular flowers that are very attractive to butterflies and bees.

### **Caryopteris X clandonensis 'Kew Blue'**

A deciduous shrub from China for a sunny position, has small tubular blue flowers attractive to insects.

### **Clethra alnifolia ('Sweet Pepper Bush')**

A deciduous shrub from the Eastern United States that likes damp, acid or woodland soil. Has spikes of small scented white flowers attractive to moths and butterflies.

### **Hebe X 'Great Orme' and H. X 'Midsummer Beauty'**

Hebes are close relatives of the herbaceous genus Veronica, and come from New Zealand. Some are much more attractive to insects than others. 'Great Orme' is a medium-sized hybrid with pale pink flowers that are attractive to butterflies. It is a distinctive cultivar and available true to name in the nursery trade.

'Midsummer Beauty' seems to be more of a generic name for a series of large shrubs with blue or grey-blue flowers in long spikes, attractive to both bees and butterflies. There are a number of other blue and white flowered Hebes that seem very popular with bumblebees.

### **Myrtus communis ('European Myrtle')**

An attractive evergreen shrub from the South of France and Spain with small evergreen aromatic leaves. It has been grown in our gardens for centuries, but is susceptible to hard frost and prefers a site against a warm sunny wall. Fluffy white flowers in early summer are bumblebees' heaven. Purplish berries follow later which are stripped by blackbirds in January.

### **Amelanchier species ('Shad Bush')**

Shrubs with white cherry-like blossoms early in the year, followed by blackish berries in late summer. Valuable for the berries as a source of food for berry-eating birds when most other berries are not yet ripe.

### **Erica terminalis ('Corsican Heath')**

A shrubby heather-like plant popular with bumblebees. The Cornish Heath, Erica vagans, from the Atlantic fringes of Europe is also a good bee plant. Erica manipuliflora, from Southern Europe, and its hybrid Erica X griffithii have fragrant flowers that attract butterflies.

### **Eupatorium ligustrinum**

A late-flowering evergreen bush that looks very like a privet, but has bunches of white fluffy flowers in September and October. These flowers seem very attractive to range of insects, especially hoverflies.

**Ribes sanguineum ( Flowering Currant)**

It is a very good early flower for bumblebees, as indeed are the flowers of the closely related blackcurrants and gooseberries.

**Appendix 4c: Plants good for moths, with species of moth they encourage beside**

| Plant                                             | Moths                                                                                                                                                                                                                                                                         |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bird's Foot Trefoil ( <i>lotus corniculatus</i> ) | <i>Burnet, Belted Beauty, Chalk Carpet, Latticed Heather</i>                                                                                                                                                                                                                  |
| Bladder Campion ( <i>silene vulgaris</i> )        | <i>Campion, Marbled Coronet, Nettle Pug, Marbled Clover, Dark Brocade, Sandy Carpet</i>                                                                                                                                                                                       |
| Borage ( <i>borago officinalis</i> )              | <i>Crimson Speckled</i>                                                                                                                                                                                                                                                       |
| Wild Clary ( <i>salvia horminoides</i> )          | <i>Twin-spot Carpet</i>                                                                                                                                                                                                                                                       |
| Biting Stonecrop ( <i>sedum acre</i> )            | <i>Yellow Ringed Carpet, Northern Rustic</i>                                                                                                                                                                                                                                  |
| Cowslip ( <i>primula veris</i> )                  | <i>Plain Clary, Northern Rustic</i>                                                                                                                                                                                                                                           |
| Dropwort ( <i>filipendula hexapetala</i> )        | <i>Satyr Pug</i>                                                                                                                                                                                                                                                              |
| Evening Primrose ( <i>oenothera biennis</i> )     | <i>Elephant Hawk</i>                                                                                                                                                                                                                                                          |
| Field Scabious ( <i>kanutia arvensis</i> )        | <i>Marsh Fritillary, Narrow Bordered Bee Hawk, Lime Speck Pug, Shaded Pug</i>                                                                                                                                                                                                 |
| Foxglove ( <i>digitalis purpurea</i> )            | <i>Lesser Yellow Underwing, Foxglove Pug</i>                                                                                                                                                                                                                                  |
| Golden Rod ( <i>solidago</i> )                    | <i>Lime Speck Pug, Bleached Pug, Golden Rod, Wormwood Pug, V Pug</i>                                                                                                                                                                                                          |
| Greater Stitchwort ( <i>stellaria holostea</i> )  | <i>Dart, Yellow Underwing, Marsh Pug, Plain Clary</i>                                                                                                                                                                                                                         |
| Hedge Bedstraw ( <i>gallium mollugo</i> )         | <i>Ruddy Carpet, Royal Mantle, Common Carpet, Wood Carpet, Water Carpet, Beech Green Carpet, Mottled Grey, Green Carpet</i>                                                                                                                                                   |
| Hedge Woundwort ( <i>stachys sylvatica</i> )      | <i>Rosy Rustic, Plain Golden Y, Sub-angled Wave</i>                                                                                                                                                                                                                           |
| Hemp Agrimony ( <i>eupatorium cannabinum</i> )    | <i>Wormwood Pug, V Pug, Lime Speck Pug, Marsh Pug, Gem, Scarce Burnished</i>                                                                                                                                                                                                  |
| Herb Bennet ( <i>geum urbanum</i> )               | <i>Riband Wave</i>                                                                                                                                                                                                                                                            |
| Herb Robert ( <i>geranium robertianum</i> )       | <i>Barred Carpet</i>                                                                                                                                                                                                                                                          |
| Hollyhock ( <i>althaea rosea</i> )                | <i>Mallow</i>                                                                                                                                                                                                                                                                 |
| Kidney Vetch ( <i>anthyllis vulneraria</i> )      | <i>6-belted Clearwing</i>                                                                                                                                                                                                                                                     |
| Lady's Bedstraw ( <i>gallium verum</i> )          | <i>Hummingbird Hawk, Small Elephant Hawk, Gallium Carpet, Plain Wave, Riband Wave, Bedstraw Hawk, Archer's Dart, Red Chestnut, Ruddy Carpet, Royal Mantle, Common Carpet, Water Carpet, Beech Green Carpet, Red Twin Spot Carpet, Wood Carpet, Mottled Grey, Green Carpet</i> |
| Lady's Mantle ( <i>alchemilla mollis</i> )        | <i>Red Carpet</i>                                                                                                                                                                                                                                                             |
| Lesser Knapweed ( <i>centaurea nigra</i> )        | <i>Silver Y, Lime Speck Pug, Satyr Pug</i>                                                                                                                                                                                                                                    |
| Lesser Meadow Rue                                 | <i>Marsh Carpet</i>                                                                                                                                                                                                                                                           |
| Maiden Pink ( <i>dianthus deltoides</i> )         | <i>Marbled Coronet</i>                                                                                                                                                                                                                                                        |
| Marjoram ( <i>majorana originaum</i> )            | <i>Sub-angled Wave, Lace Border</i>                                                                                                                                                                                                                                           |

|                                                 |                                                                                                                                        |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Marshmallow ( <i>althea officinalis</i> )       | <i>Marshmallow</i>                                                                                                                     |
| Meadow Clary ( <i>salvia pratensis</i> )        | <i>Brown Spot Pinion, Hebrew Character, Powdered Quaker, Emperor</i>                                                                   |
| Mullein                                         | <i>Mullein, Striped Lychnis</i>                                                                                                        |
| Navelwort ( <i>umbilicus rupestris</i> )        | <i>Weaver's Wave</i>                                                                                                                   |
| Pink                                            | <i>Hawk</i>                                                                                                                            |
| Primrose ( <i>primula vulgaris</i> )            | <i>Pearl Bordered Yellow Underwing, Double Square Spot, Green Arches, Triple Spotted Clary, Ingrained Clary, Silver Ground Carpet</i>  |
| Purple Loosestrife ( <i>lythrum salicaria</i> ) | <i>Emperor, Small Elephant Hawk, Powdered Quake</i>                                                                                    |
| Ragged Robin ( <i>lychnis flos cuculi</i> )     | <i>Campion, Lychnis, Twin-spot Carpet, Marbled Clover</i>                                                                              |
| Red Campion ( <i>melandrium rubrum</i> )        | <i>Rivulet, Campion, Lychnis, Twin-spot Carpet, Sandy Carpet, Marbled Clover</i>                                                       |
| Red Clover ( <i>trifolium pratense</i> )        | <i>Latticed Heath, Chalk Carpet, Belted Beauty, Mother Skipton, Shaded Broad Bar, Narrow-bordered 5-spot Burnet</i>                    |
| Red Valerian ( <i>centranthus ruber</i> )       | <i>Elephant Hawk</i>                                                                                                                   |
| Rock Rose ( <i>helianthemum mummularium</i> )   | <i>Amulet, Cistus Forester, Silky Wave, Ashworth's Rustic, Argus, Wood Tiger, Northern Brown</i>                                       |
| Rosebay Willowherb                              | <i>Twin-spot Carpet, Small Phoenix, White Banded Carpet</i>                                                                            |
| Small Scabious ( <i>scabiosa columbaria</i> )   | <i>Lime Speck Pug, Shaded Pug</i>                                                                                                      |
| Soapwort ( <i>saponaria officinalis</i> )       | <i>Marbled Clover</i>                                                                                                                  |
| St John's Wort                                  | <i>Treble Bar</i>                                                                                                                      |
| Sweet Violet ( <i>viola odorata</i> )           | <i>Broad Bordered Yellow Underwing, Lesser Broad Bordered Yellow Underwing</i>                                                         |
| Tansy ( <i>tanacetum vulgare</i> )              | <i>Essex Emerald</i>                                                                                                                   |
| Thrift ( <i>armeria maritima</i> )              | <i>Amulet, Feathered Ranunculus, Thrift Clearwing, Black Banded</i>                                                                    |
| Thyme                                           | <i>Thyme Pug, Satyr Pug, Lace Border</i>                                                                                               |
| Toadflax ( <i>linaria vulgaris</i> )            | <i>Toadflax Pug, Marbled Clover</i>                                                                                                    |
| Valerian ( <i>valeriana officinalis</i> )       | <i>Valerian Pug, Lesser Cream Wave</i>                                                                                                 |
| White Campion ( <i>silene latifolia alba</i> )  | <i>Marbled Coronet, Marbled Clover, Sandy Carpet</i>                                                                                   |
| Wild Clematis ( <i>clematis vitalnba</i> )      | <i>Lime Speck Pug, Haworth's Pug, Small Emerald, The Fern, Pretty Chalk Carpet, Least Carpet, Pug, Chalk Carpet, Small Waved Umber</i> |
| White Clover ( <i>trifolium repens</i> )        | <i>Cloudy Wing Skipper, Orange, Clouded Sulphur</i>                                                                                    |
| Wild Pansy ( <i>viola tricolor</i> )            | <i>Pluvia</i>                                                                                                                          |
| Wild Strawberry ( <i>fragaria vesca</i> )       | <i>Amulet, Yellow Shell, Beautiful Carpet, Dark Marbled Carpet</i>                                                                     |

|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wild Wallflower                              | <i>Flame Carpet</i>                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Wormwood ( <i>artemesia absinthium</i> )     | <i>Wormwood Pug</i>                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Yarrow ( <i>achillea millefolium</i> )       | <i>Essex Emerald, Lime Speck Pug, Straw Belle, Wormwood Pug, Ruby Tiger, Yarrow Pug, V Pug, Sussex Emerald, Grey Pug, Tawny Speckled Pug, Common Pug, Mullein Wave</i>                                                                                                                                                                                                                                                                                        |
| Yellow Flag Iris ( <i>iris pseudacorus</i> ) | <i>Belted Beauty, Water Ermine</i>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Barberry                                     | <i>Scarce Tissue, Wheat</i>                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Blackthorn/Sloe                              | <i>March, Common Emerald, Little Emerald, Mottled Pug, Feathered Thorn, Orange, Scalloped Hazel, Scalloped Oak, August Thorn, Brimstone, Early Thorn, Pale Brindled Beauty, Blue Bordered Carpet, Broken Barred Carpet, November, Pale November, Winter, Sloe Pug, Green Pug, Sharp Angled Peacock, The Magpie</i>                                                                                                                                            |
| Broom                                        | <i>Grass Emerald, The Streak, Broom-tip, Lead Belle, Spanish Carpet, Frosted Yellow</i>                                                                                                                                                                                                                                                                                                                                                                       |
| Dog Rose                                     | <i>V Pug, Little Thorn, Shoulder Stripe, Barred Yellow, Streamer</i>                                                                                                                                                                                                                                                                                                                                                                                          |
| Hawthorn                                     | <i>March, Common Emerald, Little Emerald, November, Pale November, Winter, Mottled Pug, Pinion Spotted Pug, Common Pug, Grey Pug, Peppered, Brindled Beauty, Pale Brindled Beauty, Feathered Thorn, Scalloped Hazel, The Magpie, Scalloped Oak, Large Thorn, Early Thorn, Oak Tree Pug, Broken Barred Carpet</i>                                                                                                                                              |
| Hazel                                        | <i>Oak Beauty, Small White Wave, The Magpie, Clouded Border, Barred Umber, Winter, Pale November</i>                                                                                                                                                                                                                                                                                                                                                          |
| Oak                                          | <i>Brindled Pug, Oak Tree Pug, Spring Usher, Peppered, Oak Beauty, Brindled Beauty, Pale Brindled Beauty, Small Brindled Beauty, Feathered Thorn, Orange, Lunar Thorn, Purple Thorn, Scalloped Hazel, Scalloped Oak, Scorched Wing, Large Thorn, August Thorn, November, September Thorn, Pale November, Winter, March, Blotched Emerald, Common Emerald, Little Emerald, False Mocha, Maiden's Blush, Marbled ug, Red-green Carpet, Broken Barred Carpet</i> |
| Rowan                                        | <i>Orange Underwing, Welsh Wave, Mottled Pug, Red-green Carpet</i>                                                                                                                                                                                                                                                                                                                                                                                            |
| Wild Privet                                  | <i>Lilac Beauty, Barred Toothed Striped, Yellow Barred Brindle,</i>                                                                                                                                                                                                                                                                                                                                                                                           |

## **Appendix 4d: Plants and Habitats to attract Bats**

### **1. Flower Borders and Lawns**

Larvae and adults of many insects will be catered for by introducing a wide range of food, in the form of nectar, seeds and fruit as well as vegetation.

- Grow night scented flowers. These attract moths and other night flying insects of particular importance to bats.
- Plant herbs and old fashioned cottage-garden annuals attractive to insects.
- Leave part of your lawn un-mown from about mid-May to encourage insect larvae which feed on grass. Allow to seed before cutting, and rake up the hay afterwards.
- Sow wild flower seed collections in your borders.

### **2. Trees and Shrubs**

At woodland edges space and sunshine combine with the trees to give shelter and warmth, and insects will concentrate there. So even in the smallest garden try to have at least one tree or shrub. Native trees are more attractive to insects than foreign species.

If space is limited, silver birch and goat willow are quick growing and are host to many insect visitors. With a little more space, try to make a bank of vegetation to give your garden a woodland edge structure.

### **3. Shelter Belts**

Rows of bushes or trees can be created or improved, encouraging concentrations of insects and providing a feeding area for bats,

- Plant up gaps in natural hedges,
- A row of fast-growing cypress can be valuable.
- Train climbers using battens against a wall or fence, to provide possible roosting sites.
- Create a sheltered corner by using any combination of walls, fences, hedges or woodland edge at two angles.

### **Scented herbs**

Chives, Borage, Lemon balm, Marjoram, Mint - many varieties

**Night scented flowers for the border (in approximate order of flowering)****Bedding Plants**

|                        |                         |
|------------------------|-------------------------|
| Nottingham catchfly    | Silene nutans           |
| Night-scented catchfly | S. noctiflora           |
| Bladder campion        | S. vulgaris             |
| Night-scented stock    | Matthiola bicornis      |
| Sweet rocket           | Hesperis matronalis     |
| Evening primrose       | Oenothera biennis       |
| Tobacco plant          | Nicotiana glauca        |
| Cherry pie             | Heliotropium x hybridum |
| Soapwort               | Saponaria officinalis   |

**Climbers**

|                        |                      |                |
|------------------------|----------------------|----------------|
| European honeysuckle   | Lonicera caprifolium | July-November  |
| Italian honeysuckle    | L. etrusca superba   | July-August    |
| Japanese honeysuckle   | L. japonica halliana | August-October |
| Honeysuckle (native)   | L. periclymenum...   | July-August    |
| White jasmine          | Jasminium officinale |                |
| Dogrose                | Rosa canina          |                |
| Sweetbriar             | R. rubiginosa        |                |
| Fieldrose              | R. arvensis          |                |
| Ivy                    | Hedera helix         |                |
| Bramble - many species |                      |                |

**Large trees, small trees and shrubs**

|                  |                            |
|------------------|----------------------------|
| Oak              | Quercus robur & Q. petraea |
| Ash              | Fraxinus excelsior         |
| Silver birch     | Betula pendula             |
| Field maple      | Acer campestre             |
| Hawthorn         | Crataegus monogyna         |
| Alder            | Alnus glutinosa            |
| Goat willow      | Salix caprea               |
| Guelder rose     | Viburnum opulus            |
| Hazel            | Coryllus avellana          |
| Blackthorn       | Prunus spinosa             |
| Elder            | Sambucus nigra             |
| Buddleia davidii |                            |

**Rock plants for walls**

|                     |                     |
|---------------------|---------------------|
| Ivy-leaved toadflax | Cymbalaria muralis  |
| Wall pennywort      | Umbilicus rupestris |

## **Appendix 4e: Plants and Habitats to Attract Birds**

### **Plants to Feed Birds.**

Many shrubs, climbers, trees, garden and 'wild' plants provide food, directly or indirectly, through berries, seeds or the insects they attract.

Berry or fruit bearing trees and shrubs will attract members of the Thrush family, Blackbird, Fieldfare, Mistle and song Thrush, Redwing and Robin. Also Starlings and, in some winters, Waxwing and even some Warblers, e.g., Blackcaps who eat berries in the early autumn before they migrate. Unless mentioned, the berries attract all the above birds plus others as specified.

### **Shrubs with Berries.**

- Aronia arbutifolia (Red Chokeberry) : bright red fruits
- Berberis: most forms have black/purple berries, especially loved by Blackbirds.
- Callicarpa 'Profusion': bright violet coloured berries.
- Cornus (Dogwood): blue tinted white berries (not C.Mas).
- Cotoneaster : prolific red, orange or yellow berries - birds often choose red first, through orange to yellow last. (Note berries are poisonous to humans).
- Euonymous europaeus (spindleberry: large bright red fruits which open to emit orange red seeds.(Note berries are poisonous to humans).
- Ilex (Holy): red, orange or yellow berries - red berries preferred (need partner to fruit).(Note berries are poisonous to humans).
- Mahonia: decorative black berries.
- Rosa rugosa : large red hips, particularly attractive to Greenfinches which pick out the seeds.
- Sambucus (Elder): red or black berries - over 32 species reported eating them, especially Blackcap and, occasionally, Collar Doves.
- Viburnum opulus (Guelder Rose) : translucent berries
- Viscum album (Mistletoe): familiar white globular berries of this parasite that grows in trees, especially apple, are a good food source for Blackbirds.

### **Climbers with Berries.**

- Chaenomeles (Flowering Quince/Cydonia): Autumn Quinces.
- Hedera (Ivy) : shiny black berries
- Lonicera (Honeysuckle: red or black berries attract Thrushes plus Bullfinches and Marsh and Willow Tits. (Note berries are poisonous to humans).
- Pyracantha (Firethorn) :red, orange or yellow berries - choose red for the birds to eat before Christmas usually with orange or yellow to follow in a hard winter.
- Clematis vitalba (Old Man's Beard): seed heads are enjoyed by many birds.

**Trees with Berries or Fruits.**

- Crataegus monogyna (Hawthorn : red berries.
- Malus (Crab Apple: red fruited varieties are best for birds.
- Prunus (Cherries): fruits quickly picked off.
- Sorbus aucuparia (Mountain Ash/Rowan) :red, orange or pink flushed white berries. The darker the fruits the more attractive they are to birds. Occasionally bring Spotted Flycatchers to the garden.
- Taxus (Yew): sparse red berries attract a wide range of birds. Attractive also to Badgers.(Note berries are poisonous to humans).

**Trees with Seed Cones.**

- Alnus glutinosa (Alder), and Betula (Birch): seeds from cones enjoyed by Goldfinches, Greenfinches, Redpolls, Siskins and Tits.
- Pinus sylvestris (Scots pine) : pine cones from which Crossbills and Great Spotted Woodpeckers prise seed.

**Trees with Blossom.**

- Although not always welcome, Bullfinches strip the buds of fruit trees in late winter and early spring.

**Garden Plants.**

- Crocus: yellow and orange flowers are attractive to Sparrows because they contain yellow pigment carotene to brighten up their plumage for the breeding season.
- Echinops ritro (Globe Thistle: seed heads are eaten by Goldfinches and flower heads attract insects.
- Helianthus (Sunflower: seed heads are eaten by Greenfinches. The nectar attracts a wide range of insects.
- Lavandula (Lavender): flowers going to seed are attractive to Goldfinches.
- Primula (Polyanthus/Primrose): yellow and orange flowers are attractive to Sparrows.

**Wild Plants.**

You can provide a haven for wild plants to exist in their own right recreating a wild meadow to attract insects which, in turn, attract birds and other wildlife. We sell nursery grown 'wild' plants throughout the year so that you can go wild in a corner of your garden.

- Betony.
- Bird's Foot Trefoil.
- Common Poppy - seeds are favourite food of Finches.
- Field Scabious.
- Greater Knapweed.
- Meadow Cranesbill.
- Musk Mallow.
- Ox Eye Daisy.
- Oxlip.
- Primrose.
- Rough Hawkbit.
- Self Heal.
- Teasel - seed heads are a favourite food of Goldfinches.
- Wild Strawberry

**The Lawn.**

This is one of the principal sources of food for birds who enjoy feeding on insects including:-Ants eaten by Green Woodpeckers; Leatherjackets by Starlings; Snails by Song thrushes; Slugs by Toads and Worms by Blackbirds, Robins and Thrushes.

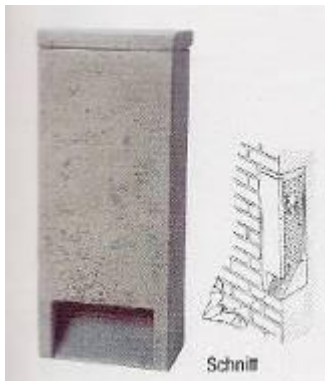
**Cover and Protection.**

By surrounding your garden by thick and often prickly hedging and dotting suitable shrubs around, you can provide safe nesting havens that are protected from marauding cats and even the unwelcome attention of unfriendly humans.

The most successful shrubs and trees for this purpose include:-

- Conifers especially chamaecyparis, Taxus (Yew) and Thuja Placata.
- Crataegus.
- Eleagnus.
- Hedera (Ivy) up a tree.
- Ligustrum (Privet) especially for Blackbirds.
- Lonicera (Honeysuckle).
- Pittosporum.
- Salix caprea (Weeping Kilmarnock Willow).

## Appendix 5: Bat Boxes and Bat Brick Specifications to Provide Bat Habitat on Buildings



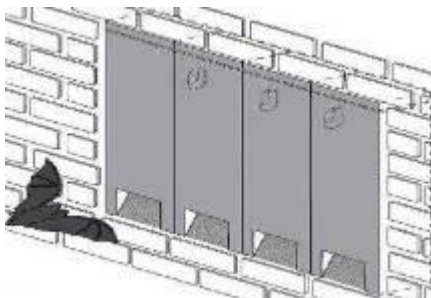
Schwegler 1FR can be installed within brick masonry just leaving the entrance and can be rendered over.



Ibstock Enclosed Bat Box B is designed specifically for the pipistrelle bat.



Schwegler W1 integral Summer & Winter Bat Box.



Schwegler 2FR Bat Tube is the same design as the 1FR but with holes in the sides. Multiple tubes to be placed next to each other to form a much larger roost.



Schwegler 27 wall can be installed within brick masonry. It can be rendered over.



Schwegler 1FQ wall-mounted bat box.



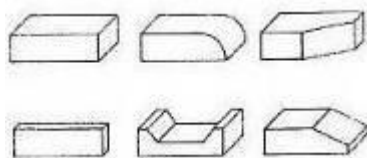
Schwegler 1FE Bat Access Panel can be surface-mounted or integrated. The open back enables bats access through exterior walls.



Ibstock Bat Box with Engraved Motif C is designed specifically for the pipistrelle bat and is available in all brick colours.



Ibstock Free Access Bat Box allows bats to access the cavity wall of the building.



Modified bricks for creating bat access points. A standard brick is shown top left. Purpose made bat bricks can also be used.



Norfolk Bat Brick allows bats to access the cavity wall of the building. The slits are the perfect size for Natterer's bat, Daubenton's bat, Brandt's bat and Brown long-eared.



Marshall's Bat Access Brick (Also available in stone) allows bats access into the cavity wall of the building.

## APPENDIX 6: Insect Box Specifications

A variety of insect boxes is recommended to encourage a diversity of insect species and encourage bats.

### Wooden Insect House

A general insect habitat for beneficial insects in summer and, later in the year, over wintering ladybirds and lacewings. Locate in a sheltered place near nectar or pollen plants or by a pond.

Durable and strong construction in acacia, oak or larch with no maintenance necessary.

Dimensions: 22 × 13.5 × 13.5cm.



### Woodcrete Insect House

An insect nest made from long-lasting, insulating, woodcrete, with holes of different sizes providing homes for a variety of beneficial insects such as bees and solitary wasps. Dimensions: 14 × 8 × 26cm; Weight: 3.65kg



### Insect House with Inspection Tubes

This nesting and hibernation box for insects has a woodcrete exterior with a wooden front panel which can be removed for observation. Through the transparent tubes you can see the usually hidden lifecycle of many solitary types of bees and hymenoptera including egg-laying, development of larvae and sealing of brood chambers. Typical inhabitants are wild bees and thread-waisted wasps. All the species attracted to this box are harmless non-aggressive pollinating insects.

Dimensions: 33 × 21 × 51 cm; Weight: 7.1kg.



## Appendix 7. Bird Box Specifications

Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.

### 2. Schwegler No 11 House Martin Nest (Code: 002097D)



It is increasingly difficult for swallows and house martins to find suitable nest-building material. The mud they do find, if any, is often poor quality. In addition, the walls of buildings are nowadays often very smooth. As a result, nests tend to fall down, sometimes with the nestlings inside. In many places, the vibration caused by heavy vehicles shakes the nests loose. This nest has been developed to enable House Martins to breed successfully on external facades without overhanging eaves and has proved highly successful.

### 3. Schwegler No 16 Swift Box (Code: 002087D)

The design of this box mimics bell tower louvres. It has a removable panel for easy inspection of the nest chamber.



### 4. 2H Robin Box (Code: 002015D)



This box is attractive to robins, pied wagtails, spotted flycatcher, wrens and black redstarts. Best sited on the walls of buildings with the entrance on one side.

## 5. Sparrow Terrace



House sparrows are gregarious and prefer to nest close to each other, so this woodcrete box provides room for three families under one roof. Made from long-lasting, breathable woodcrete. No maintenance required. Designed for fixing to walls (not suitable for fences or sheds due to the weight of the box). Available in choice of stone colour (pictured) or brown.

## 6. Schwegler 1B Bird Box

The most popular box for garden birds, the 1B appeals to a wide range of species, and is the official nest box of National Nest Box Week. The box can be nailed to the trunk of a tree, or hung from a branch. Woodcrete, 23cm high x 16cm diameter. Available in choice of four colours - brown, green, red or white. Available with 32mm entrance hole (standard) or with 26mm hole



## 7. Schwegler Built-in Multi-System Main Cavity Bird Box (Code: 002101D)



The multi-system has exchangeable front panels for kestrels, jackdaws or swifts. The system can be installed in all types of buildings, whether constructed of concrete, brick or timber. To meet the needs of various species of bird, different types of front panel are available for use with the main cavity. The main cavity is supplied without a front panel which should be ordered separately. **Positioning:** At heights of 5m or more on a sheltered external wall. **Suitable for:** Dependant on the type of front panel chosen. **Material:** Woodcrete **Height:**415mm **Width:** 445mm **Depth:**415mm **Weight:**2.8Kg

## Appendix 8: Measures specifically for hedgehogs

Hedgehog boxes or domes; a variety of types are shown below:

# Hedgehog homes



## Hedgehog Dome with insulated base

for use as summer home and hibernation in winter



[Pic. 1]: SCHWEGLER  
Hedgehog Dome with  
Hedgehog family

Hedgehogs are a protected species.

They usually construct nesting places in hollow tree stumps, piles of wood, dense vegetation and piles of leaves, all of which are becoming harder to find.

They will readily occupy our Hedgehog Dome, which provides year round accommodation, including hibernation quarters. Hedgehogs are welcome visitors to gardens because their diet consists of Snails, Caterpillars, Millipedes, etc.



[Pic. 2]: Hedgehog Dome  
(occupied)

**Material:** SCHWEGLER wood-concrete. Brown protective coating for a balanced temperature

**Siting:** Choose somewhere protected from wind and rain. Try and avoid placing the Dome where the animals have to cross a lawn because these are mainly damp at night.

**Nesting material:** Ideally fill with hay (supplied with the Dome) but alternatively use dry leaves and straw, as well as cut up newspaper and wood shavings.

### Dimensions:

Interior:  $\diamond$  44 cm Height: 28 cm Entrance: 11 x 12 cm  
Exterior: ca.  $\diamond$  50 cm

**Colour:** Classic Brown

**Weight:** ca. 17 kg

Detailed instructions are supplied.



[Pic. 3]: Hedgehog Dome

(incl. nesting material, ready to use)

**Hedgehog Dome with insulated base**

**order no.: 00 390 / 4**