The Old Vicarage, Fringford Road, Caversfield, Oxfordshire, OX27 8TH

Ecological Appraisal Report

August 2019

Hampshire Ecological Services Ltd

Consultant Ecologists

E: enquiries@hantsecology.co.uk

W: www.hantsecology.co.uk

T: 0771 456 8361

F: 0871 266 8127

Registered in England Company No. 7316076.

Registered office: The Cabin, 12 Ivy Lane, Westergate, Chichester, West Sussex, PO20 3RA

Ecological Appraisal Report

The Old Vicarage, Fringford Road, Caversfield, Oxfordshire, OX27 8TH

for

SC Architecture Ltd

Reference: The Old Vicarage, Caversfield	
Revision	**Issue date:**
0	**31/07/19**
1	**05/08/19**

Prepared by:	**Rev 0**	**Rev 1**
[redacted] **BEN WILLERS** Ecologist	**16/07/19**	**05/08/19**
Reviewed by:		
[redacted] **CHLOE MOCKRIDGE** Ecologist	**16/07/2019**	**-**
Reviewed by:		
[redacted] **NICOLA PYLE** Senior Ecologist	**23/07/19**	**05/08/19**
Final review & Technical QA by:		
[redacted] **VICTORIA RUSSELL** Associate Ecologist	**30/07/19**	**-**

This report represents sound industry practice; reports and recommends correctly, truthfully and objectively; is appropriate given the local site conditions; scope of works proposed and resources allocated to us by the client; and avoids invalid, biased, and exaggerated statements.

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

Contents

1 EXECUTIVE SUMMARY

1. This report provides information from a preliminary ecological appraisal carried out by Hampshire Ecological Services Ltd for SC Architecture Ltd in connection with a proposal to build new dwellings on land adjacent to The Old Vicarage, Fringford Road, Caversfield, Oxfordshire, OX27 8TH (approximate Ordnance Survey Grid Reference SP584 248). The site location is shown in *Figures 1* and *2*; and a site plan is given in *Figure 3* (see *Section 6*).

2. An ecological appraisal was carried out during the daytime on the 10th July 2019 by Nicola Pyle MCIEEM, Chloe Mockridge MSc GradCIEEM and Ben Willers BSc (Hons).

3. The majority of the site is semi-improved grassland. There are scattered trees within the grassland and small patches of ruderal vegetation around the edges. There is also a vegetable patch and some hardstanding. The site is surrounded by a fence. On the western boundary there is also a native, species rich hedge with mature trees and adjacent dry ditch. There is a second hedge with mature trees adjacent to, but outside the northern site boundary. Access to the site is currently from the driveway of the adjacent Old Vicarage, which is in the south-east corner of the site. The habitats are shown in the Phase 1 Habitat Survey map given in *Figure 4* (see *Section 6*) with species lists provided in *Appendix C.*

4. The habitats and plant species observed on site are widespread and common and as such have no conservation importance from a botanical point of view. The exception is the species-rich hedgerow with mature trees along the western boundary. This is of high ecological value and should be retained and protected where possible (see *Section 5.6*).

5. No plant species listed on *Schedules 8* or *9* of the *Wildlife and Countryside Act 1981* (as amended) were recorded on the site. However, a *Rhododendron* species (Rhododendron) and a *Cotoneaster* species (Cotoneaster) were present within the hedgerow along the northern site boundary. Some *Rhododendron* species (Rhododendron) and *Cotoneaster* species (Cotoneaster) are highly invasive. Care should be taken during works not to disturb and spread these species.

6. All the trees on site have negligible bat roost suitability.

7. The hedgerows, semi-mature and mature trees provide good foraging habitat for bats. The hedges also link to a wider network of hedges, tree-lines and strips of woodland that provide links into and from the wider landscape in all directions. In addition, there is a stream *c.*355m to the north-west of the site, which also provides high quality foraging habitat for a number of different species of bat.

8. The hedgerows provide suitable habitat for dormice. All of the hedgerows are currently proposed to be retained.

9. According to aerial photographs (GoogleEarth™) and online Ordnance Survey 1:25,000 maps there are three ponds within 500m of the site. These are located as follows:
   - one pond *c*.330 to the south;
   - one pond *c*.390m to the north-west; and
   - one pond to the *c*.440m.

   The locations of these ponds are shown in *Figure 6* in *Section 6.* The site and landscape that connects the ponds to the site are sub-optimal terrestrial habitat for amphibians. However, the boundary hedgerows provide some foraging and hibernation habitat. The western and northern hedgerows will be retained and continue to provide habitat for amphibians.

10. No badger setts were found on the site. One mammal path was observed at the northern boundary of the site. In addition, several mammal scrapes were observed around the northern end of the site. However, it is unlikely that these features were created by badgers.

11. The trees and hedgerows provide suitable habitat for nesting birds. The removal of any vegetation with the potential to support nesting birds should be undertaken outside of the bird breeding season (which is late February to August inclusive) to avoid the destruction of active bird nests and hence comply with the law (*Wildlife and Countryside Act 1981,* as amended). If this is not possible, and vegetation has to be removed during the nesting season, then it should be inspected (by an ecologist) for nests immediately prior to removal of the vegetation. If any active nests are found during the works, a 5m buffer zone should be established around it and be temporarily fenced off to prevent plant or personnel disturbing the nest until the end of the breeding bird season (or until the nest is no longer in use).

12. The grassland on site is very short due to mowing. As such it is unsuitable for reptiles due to the lack of cover and risk of predation. There are several patches of low-growing bramble in the south-west corner of the site that could be used as foraging habitat for reptiles (see *Photo 3* in *Section 7*). In addition, the base of the hedge on the western boundary and a pile of brash provide suitable hibernation habitat. The bases of the hedgerows will be retained. Therefore, no further surveys are proposed.

13. It is recommended that as a precaution the pile of brash (*Target Note 2*) is dismantled and removed by hand by early October, before reptiles go into hibernation. If this habitat is not removed by early October, it should not be removed until late March/ April to avoid potentially disturbing species of hibernating reptile. If the plans change and it is later proposed to remove any hedgerow, reptile surveys may be required.

14. To minimise the impact on retained trees and hedges, Heras fencing or similar should be used to protect the roots of the trees and bushes during construction. Dust sheets or a similar impenetrable covering should be attached to the fencing to protect the retained vegetation from dust during construction. The guidance provided in BS 5837 *Trees in relation to Construction* provides further advice.

15. National Planning Policy Framework (NPPF 2018) states "*opportunities to incorporate biodiversity in and around developments should be encouraged*" as part of the consideration for "*presumption in favour of sustainable development*". Therefore, the following outline enhancements are proposed:
    - External lighting will not be installed near to or directed onto any retained vegetation or any planting carried out following construction, to enhance the site so that light disturbance will not be a problem for bats.
    - One bat brick (*e.g.* a Habibat™ Bat Box, an Ibstock Enclosed Bat Box or a Schwegler Bat Tube or similar) should be incorporated into the brickwork of each new dwelling.
    - The site will be enhanced for birds. The bird boxes should consist of a mixture of five boxes, including;
        - one typical garden single chamber bird box (e.g. for blue and great tits), such as Schwegler 1B or Vivara Pro Woodstone nest box, fixed to a tree at a height of 2-4m;
        - one open-fronted box (e.g. for robins and wrens) at a lower height and concealed among the foliage of shrubs, such as Schwegler 2H;
        - one multi-chamber box suitable for house sparrows, such as a Schwegler 1SP sparrow terrace or Vivara Pro WoodStone House Sparrow Nest Box;
        - one house martin box, such as No. 9a House Martin Nest or Vivara Pro WoodStone House Martin Nest, to provide nesting opportunities on the building structure; and
        - one swift box such as Ibstock Eco-habitat or No. 18 Schwegler swift box, to provide nesting opportunities incorporated into the build structure.
    - To maintain and enhance connectivity and habitat for bats (and other wildlife), the hedgerow and trees on the west and north boundaries should be retained where possible.
    - To enhance the site for dormice (and other wildlife) any gaps in the existing hedge will be filled with native woody species present on site.

16. If more than 12 months elapses after completion of all surveys, it may be advisable to conduct further survey work to obtain up-to-date information prior to commencement of construction to ensure protected species compliance.

17. There are two statutory designated sites within 5km of the site. These are listed in *Table 4.1.1.1*. Neither of these will be directly affected by this small-scale development, and all links will be maintained.

18. There has been one granted European Protected Species (EPS) licence for common pipistrelles, brown long-eared bats, and barbastelle bats within 2km of the site. As the hedgerows are being retained, it is unlikely that the current proposals will impact these bat populations.

2 INTRODUCTION

2.1 Purpose of this report

This report provides information from an ecological appraisal, carried out by Hampshire Ecological Services Ltd for SC Architecture Ltd, in connection with a proposal to build new residential dwellings on land at The Old Vicarage, Fringford Road, Caversfield, Oxfordshire, OX27 8TH (approximate Ordnance Survey Grid Reference SP584 248). The site location is shown in *Figures 1* and *2* in *Section 6*.

2.2 Site description

The site consists of grassland with a few scattered trees, surrounded by hedges and fencing. The Old Vicarage, outbuildings and gardens are to the south-east of the development site. A site plan showing the site in relation to The Old Vicarage is given in *Figure 3* in *Section 6*.

The site lies on the northern side of Fringford Road, on the western side of Caversfield. The immediate surroundings consist of stables and grazed pasture to the west; residential housing to the north and east; and an agricultural field to the south. In the wider landscape, Caversfield and Bicester extend to the east and south respectively. There are extensive arable fields and grazed pasture to the north and west, and to the east on the other side of Caversfield. There are several small patches of woodland to the north and west, in between agricultural fields. These include some areas of ancient semi-natural and ancient replanted woodland. In addition, a stream and a lake are *c*.355m to the west of the site.

2.3 Proposed activities

This survey was carried out in connection with a proposal to build four new residential dwellings on site.

2.4 Current planning status

Planning permission is being applied for.

2.5 Structure of this report

This report is structured as follows:

- *Section 1* contains the executive summary;
- *Section 2* contains an introduction;
- *Section 3* describes the survey methods;
- *Section 4* describes the results;
- *Section 5* evaluates the findings;
- *Section 6* contains the figures including:
  - *Figure 1* gives aerial photographs showing the site location;
  - *Figure 2* gives an Ordnance Survey map showing the location of the site;
  - *Figure 3* gives a site plan showing the site in relation to The Old Vicarage;
  - *Figure 4* gives a Phase 1 Habitat Survey map for the site;
  - *Figure 5* gives the locations of the proposed mitigation; and
  - *Figure 6* gives the locations of ponds within 500m of the site boundary.
- *Section 7 giv*es photographs of the site;
- *Section 8* lists the references;
- *Appendix A* lists key legislation and regulations;
- *Appendix B* gives the target notes; and
- *Appendix C* lists plant species recorded on site.

3 METHODS

3.1 Desk study

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

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

A data search from the Thames Valley Environmental Records Centre (TVERC) has not been commissioned in relation to this site.

3.2 Field survey

3.2.1 General

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

Significant species were defined as follows:

- European Protected Species (listed on *Schedules 2* and *5* of the *Conservation of Habitats & Species Regulations 2017)*;
- nationally protected species under *Schedules 1*, *5* and *8* of the *Wildlife & Countryside Act 1981*, the *Protection of Badgers Act 1992* (as amended) and the *Deer Act 1991*;
- non-native pest species listed on *Schedule 9* of the *Wildlife & Countryside Act 1981* (as amended);
- species listed as Critically Endangered, Endangered or Vulnerable on the *IUCN Red List*;
- all species listed on the RSPB *Birds of Conservation Concern 2002-2007* as Red or Amber; and
- Nationally Rare or Nationally Scarce species.

3.2.2 Date(s), times and weather

An ecological appraisal was carried out during the daytime on the 10th July 2019. The weather was warm (26°C) and dry with 70% cloud cover and a slight breeze (Beaufort scale 1).

3.2.3 Personnel

The survey was carried out by Nicola Pyle MCIEEM, who is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). She has over 12 years of experience in ecological consultancy and is a highly competent ecologist trained in Phase 1 Habitat Survey and protected species surveys. She is a multi-species licence holder. She was assisted by Chloe Mockridge MSc GradCIEEM, and Ben Willers BSc (Hons), who are experienced in carrying out surveys for protected species.

This report was reviewed by Victoria Russell MCIEEM who is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM), with over 22 years of experience in ecological consultancy.

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

3.2.4 Botanical surveys - Phase 1 Habitat Survey

The botanical surveys in this report are based on the Phase 1 Habitat Survey methodology (Joint Nature Conservation Committee 2003) and involve the following elements: habitat mapping using a set of standard colour codes to indicate habitat types on a Phase 1 Habitat Survey map; and descriptions of habitats and features of ecological or nature conservation interest relating to locations on the Phase 1 Habitat Survey map.

Basic Phase 1 Habitat Survey methods are described in detail in Joint Nature Conservation Committee (JNCC, 2003). Limits to the method are discussed in Cherrill & McClean (1999).

Plant species lists were compiled for the various habitat types on the site. Subjective estimates of the relative abundance of species were added to the plant species list using a modified DAFOR scale. The DAFOR scale ranks species according to their relative abundance in a given parcel of land as follows: d – dominant, a – abundant, f – frequent, o – occasional, r – rare. The terms 'abundant' and 'rare' are used by convention and apply only to relative-abundance within the recorded area. It does not mean that species are 'rare' in the general sense.

Plant nomenclature in this report follows Poland & Clement (2009) for native, naturalised and garden species of vascular plant. Plant names in the text are given with scientific names first, followed by the English name in brackets.

3.2.5 Animal surveys

General

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

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

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

According to aerial photographs (GoogleEarth™) and online Ordnance Survey 1:25,000 maps, there are no rivers on or adjacent to the site, therefore otter, and water vole are not considered further.

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

Bats

General

The survey for bats concentrated on identifying foraging opportunities and potential roost locations or hibernation sites.

Tree assessment

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

Following the inspections, the trees are assigned a level of suitability for being used by roosting bats. This is based on the criteria in *Table 3.2.5.1* (Collins, 2016).

Table 3.2.5.1. Bat Roost Suitability.

Suitability	**Description of roosting habitats**	**Description of commuting and foraging habitats**
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features on site likely to be used by commuting or foraging bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (*i.e.* unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, *i.e.* not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only)	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. 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 and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. 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. The site is close to and connected to known roosts.

Assessment of commuting and foraging habitat

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

Dormice

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

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

Great crested newt

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

Badger

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

Birds

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

Widespread species of reptile

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

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

- adders (*Vipera berus*) use a range of fairly open habitats with some cover, but are most often found in dry heath.

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

4 RESULTS

4.1 Desk study

4.1.1 *Designated sites*

According to the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk), there are two statutory designated sites within 5km of the site. These are listed in *Table 4.1.1.1.*

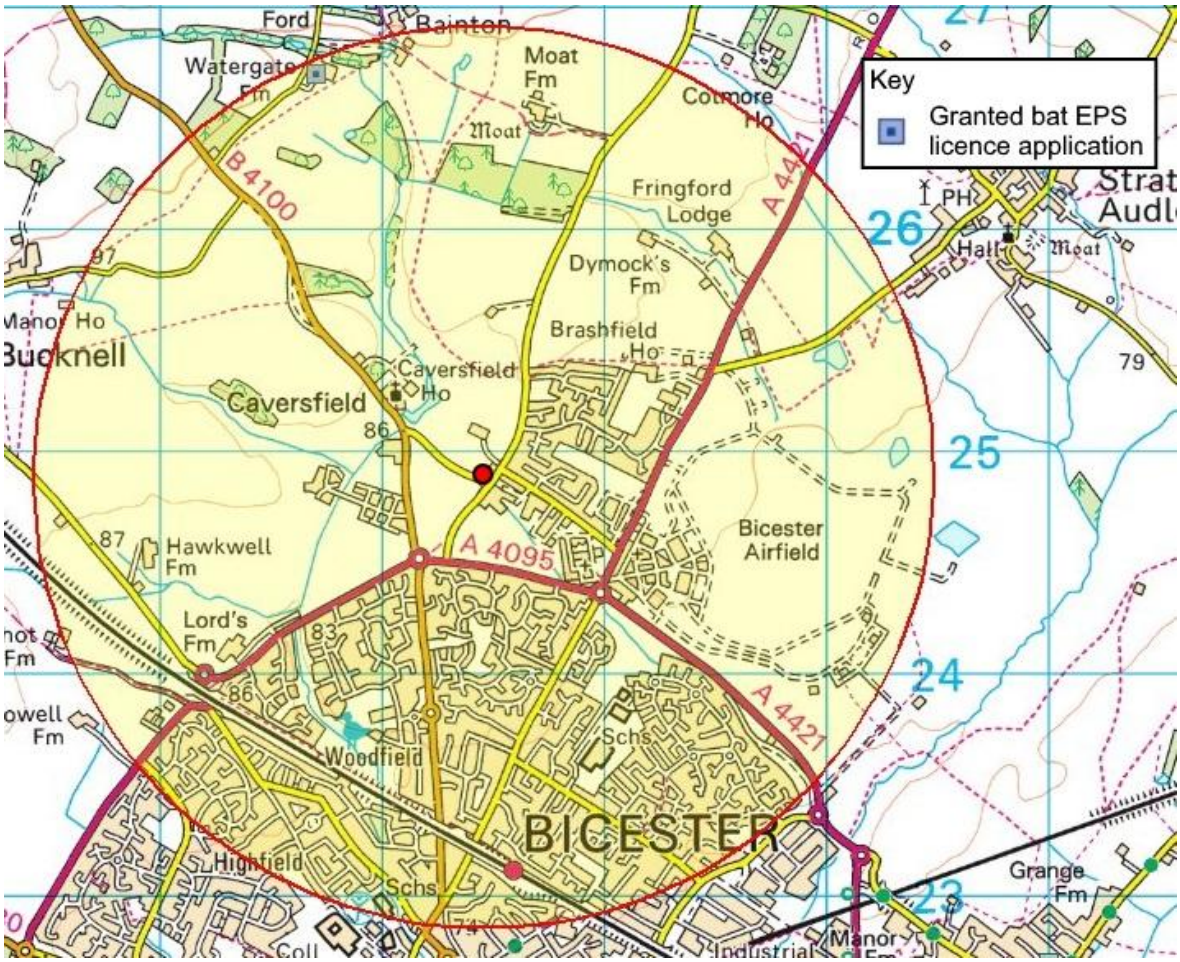
Table 4.1.1.1. Statutory designated sites within 5km of the site and Sites of Local Interest for Nature Conservation (SLINCs) and ancient semi-natural and ancient replanted woodlands within 500m of the site.

Level of designation	Designation	Name	Distance & direction from site
International	SPA	-	-
	Ramsar	-	-
	SAC	-	-
National	SSSI	Stratton Audley Quarries SSSI	*c.*1545m east
	NNR	-	-
County	LNR	Bure Park	*c.*1105m south-west
Local	SLINC	-	-
	Ancient woodland	-	-

4.1.2 *European Protected Species*

According to the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk), there has been one granted European Protected Species (EPS) licence *c.*1990m north-west of the site. This licence was granted on the 19th of June 2009 and allowed works to affect a resting place and breeding site for common pipistrelle, brown long-eared bat, and barbastelle.

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



Reproduced with permission of Ordnance Survey under licence no. 100049977.

4.2 Habitats and plant species

4.2.1 Habitats

The majority of the site is semi-improved grassland. There are scattered trees within the grassland and small patches of ruderal vegetation around the edges. There is also a vegetable patch and some hardstanding. The site is surrounded by a fence. On the western boundary there is also a native, species rich hedge with mature trees and adjacent dry ditch. There is a second hedge with mature trees adjacent to, but outside the northern site boundary. Access to the site is currently from the driveway of the adjacent Old Vicarage, which is in the south-east corner of the site.

The semi-improved grassland (see *Target Note 13*) has a short sward as a result of mowing. It is dominated by *Lolium perenne* (Perennial Rye-grass) together with the common forbs *Achillea millefolium* (Yarrow) and *Bellis perennis* (Common Daisy). There are smaller amounts of the coarse grass *Dactylis glomerata* (Cock's-foot) and the common forbs *Cerastium fontanum* (Common Mouse-ear), *Geranium dissectum* (Cut-leaved Crane's-bill), *Plantago* (Ribwort Plantain), *Plantago major* (Greater Plantain), *Prunella vulgaris* (Selfheal), *Ranunculus repens*

(Creeping Buttercup), *Taraxacum officinale* agg. (Dandelion) and *Trifolium repens* (White Clover) are present throughout.

Towards the site entrance (*Target Note 12*) there is a small earth mound that has been colonised by the coarse grass *Arrhenatherum elatius* (False Oat-grass) with small amounts of the grass *Holcus lanatus* (Yorkshire-fog). There is also some *Convolvulus arvensis* (Field Bindweed), *Dactylis glomerata* (Cock's-foot), *Glechoma hederacea* (Ground-ivy), *Sonchus oleraceus* (Smooth Sow-thistle) and *Potentilla reptans* (Creeping Cinquefoil).

Towards the northern end of the site (within the grassland) are eight broad-leaved trees, seven of which are fruit trees. They consist of the following:

- one *Fraxinus excelsior* (Ash) (*T4*);
- three *Malus domestica* (Apple) (*T1, T2, T7*);
- three *Prunus avium* (Wild Cherry) (*T5, T6, T8*); and
- one *Pyrus communis* (Pear) (*T3*).

The locations of the trees are shown in *Figure 4*.

Within the grassland is a compost pile (*Target Note 3*) which is covered with an abundance of *Hedera helix* (Ivy). There is also some *Chelidonium majus* (Greater Celandine) as well as scattered ruderals including *Anagallis arvensis* (Scarlet Pimpernel), *Cirsium vulgare* (Spear Thistle), *Malva sylvestris* (Common Mallow), *Medicago lupulina* (Black Medick) and *Myosotis arvensis* (Field Forget-me-not).

There is a vegetable patch (*Target Note 7*) adjacent to the eastern site boundary. This contains crops of *Solanum tuberosum* (Potato) and *Lycopersicon esculentum* (Tomato) plants. Occasional ruderals are starting to colonise including *Anagallis arvensis* (Scarlet pimpernel) and *Solanum nigrum* (Black Nightshade).

The hedgerow on the western boundary (*Target Note 8*) is intact and species-rich. It is dominated by *Crataegus monogyna* (Hawthorn) with *Corylus avellana* (Hazel), which is locally abundant at the southern and northern ends of the hedge. The evergreen creeper, *Hedera helix* (Ivy) is frequent throughout the hedge, both as ground cover and climbing through the bushes. There is one *Malus sylvestris* (Crab Apple) tree and one *Prunus* species (Cherry) in the centre of the hedge. At the southern end of the hedge *Prunus spinosa* (Blackthorn) is locally abundant. Other woody species present include *Rubus fruticosus* agg. (Bramble) and *Sambucus nigra* (Elder). The latter only occurs once at the northern end of the hedge. There are several semi-mature trees scattered along the hedge including *Acer campestre* (Field Maple) and *Fraxinus excelsior* (Ash). No one species dominates the field-layer, which has a mixture of ruderal and shade-tolerant plants. The most frequently occurring of these are *Chelidonium majus* (Greater Celandine), *Galium aparine* (Cleavers), *Picris echioides* (Bristly Oxtongue) and *Urtica dioica* (Common Nettle). Less common are *Convolvulus arvensis* (Field Bindweed), *Geum urbanum* (Wood Avens) *Rumex sanguineus* (Wood Dock) and *Tamus communis* (Black Bryony,) which occur sporadically throughout the hedgerow. Scarcer species includes *Arum maculatum* (Lords and Ladies), *Cirsium vulgare* (Spear

Thistle), *Crepis vesicaria* (Beaked Hawksbeard), *Solanum nigrum* (Black Nightshade) and *Stachys sylvatica* (Hedge Woundwort).

The hedgerow adjacent to the northern boundary (*Target Note 17*) is less diverse and consists of a mixture of deciduous and non-native coniferous trees. The trees are predominantly the conifer ×*Cupressocyparis leylandii* (Leyland Cypress) with occasional *Fraxinus excelsior* (Ash). The hedge is mainly *Ilex aquifolium* (Holly) and *Ligustrum vulgare* (Wild Privet) with some *Rubus fruticosus* agg. (Bramble). The climber *Bryonia dioica* (White Bryony) appears once, climbing through the bushes. A *Rhododendron* species (Rhododendron) is growing at the western end of this hedgerow (*Target Note 11*), close to a *Cotoneaster* species (Cotoneaster) (*Target Note 10*).

On the southern side of the fence on the southern boundary there is a narrow strip of short, mown grassland (*Target Note 16*). The sward is dominated by the grass *Lolium perenne* (Perennial Rye-grass) with smaller amounts of *Arrhenatherum elatius* (False Oat-grass) and *Poa annua* (Annual Meadow-grass). The broad-leaved herbs are mainly shade-tolerant and those tolerant of disturbance. Species include *Alliaria petiolata* (Garlic Mustard), *Galium aparine* (Cleavers), *Senecio jacobaea* (Common Ragwort), *Lamium purpureum* (Red Dead-nettle), *Malva sylvestris* (Common Mallow), *Sherardia arvensis* (Field Madder) and *Veronica* species (a Speedwell). There are also patches of *Glechoma hederacea* (Ground Ivy) and *Urtica dioica* (Common Nettle).

A Phase 1 Habitat Survey map showing the location of the various habitats is given in *Figure 4* (see *Section 6*) with species lists in *Appendix C*.

4.2.2 Plant species

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

A *Rhododendron* species (Rhododendron) is growing within the hedgerow along the northern site boundary. Some species such as *Rhododendron ponticum* (Rhododendron), are highly invasive. Although this is outside of the proposed works area it should be monitored to ensure it doesn't spread. A Cotoneaster species (Cotoneaster) was also present within the same hedgerow. Several species of Cotoneaster are also invasive. This should also be monitored to avoid its' spread.

4.3 Protected vertebrates

4.3.1 Bats

Bat roost suitability of trees

All the trees on site have negligible bat roost suitability.

Commuting and foraging bats

The hedgerows, semi-mature and mature trees provide good foraging habitat for bats. The hedges also link to a wider network of hedges, tree-lines and strips of woodland that provide links into and

from the wider landscape in all directions. In addition, there is a stream *c.*355m to the north-west of the site, which also provides high quality foraging habitat for a number of different species of bat.

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

4.3.2 Dormice

There is suitable habitat for dormice on site. The western hedgerow (*Target Note 8*) provides suitable habitat for nesting, foraging and hibernating dormice. The hedgerow contains a mixture of plants producing flowers and berries such as *Crataegus monogyna* (Hawthorn) and *Rubus fruticosus* agg. (Bramble); and plants producing nuts such as *Corylus avellana* (Hazel). This mixture of different species provides food sources throughout the year and as such provide good foraging habitat.

A records check found that no European Protected Species licences for dormice have been granted within 2km of the site and only one record of dormice was recorded, *c.*9km from the site. Additionally, the habitat between the site and the dormouse record has low connectivity.

4.3.3 Great crested newt

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

- one pond *c.*330 to the south;
- one pond *c.*390m to the north-west; and
- one pond to the *c.*440m.

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

The site has a mixture of suitable and sub-optimal terrestrial habitat for amphibians, including great crested newt. Although the grassland is sub-optimal habitat due to its short sward, the bases of the hedges provide cover and foraging habitat for great crested newts.

There are no great crested newt records within 500m of the site.

4.3.4 Badger

No badger setts were found on the site. One mammal path was recorded at the northern boundary of the site leading under the fence. In addition, several mammal scrapes were observed at the northern end of the site. However, due to the absence of any hairs, footprints or faeces, it is considered unlikely that these features were created by badgers and it is more probable that rabbits created these features.

4.3.5 Birds

All the trees, hedgerows and bushes on the site provide suitable habitat for nesting birds during the breeding season.

There are many bird species on the UK and Local BAP (or in the RSPB *Birds of Conservation Concern*) that could be using this site for nesting and foraging. No birds of Conservation Concern were recorded on site during the survey.

Bird species recorded during the Phase 1 Habitat Survey (along with their activity) are tabulated in *Table 4.3.5.1*.

Table 4.3.5.1. Bird species recorded during the Phase 1 Habitat Survey.

Species	**Detection method/ activity**	**Conservation status**
Erithacus rubecula (European robin)	Observed in the hedgerow at the south-west corner of the site	Least concern
Columba palumbus (Wood pigeon)	Flying overhead heading west	Least concern
Parus major (Great tit)	Flying into the hedgerow on the western boundary	Least concern

4.3.6 Widespread species of reptile

The grassland on site is very short due to mowing. As such it is unsuitable for reptiles due to the lack of cover and risk of predation. There are several patches of low-growing bramble in the south-west corner of the site that could be used as foraging habitat for reptiles (see *Photo 3* in *Section 7*). In addition, the base of the hedge on the western boundary and a pile of brash provide suitable hibernation habitat.

5 INTERPRETATION AND EVALUATION

5.1 Constraints on survey

The survey was carried out at a suitable time of year, in suitable weather conditions. There are not considered to be any constraints to the survey.

5.2 Survey report expiry

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

5.3 Legal context

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

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

5.4 Potential impacts of the proposed development

5.4.1 Desk study

According to the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk), there are two statutory designated sites within 5km of the site. Neither of these sites will be directly affected by these works and all links will be maintained.

There has been one granted European Protected Species (EPS) licence for common pipistrelles, brown long-eared bats, and barbastelle bats within 2km of the site. As the hedgerows are being retained, it is unlikely that the current proposals will impact these bat populations.

5.4.2 Habitats and plants

The habitats and plant species observed on site are widespread and common and as such have no conservation importance from a botanical point of view. The exception is the hedgerow and mature trees on the western boundary that would take many decades to replace. Although this hedgerow does not qualify as important under the *Hedgerow Regulations 1997,* it is of high ecological value and should be retained and protected where possible (see *Section 5.6*).

No plant species listed on *Schedule 9* of the *Wildlife and Countryside Act 1981* (as amended) were recorded on the site. However, a *Rhododendron* species (Rhododendron) and a *Cotoneaster* species (Cotoneaster) were present within the hedgerow along the northern boundary. Some *Rhododendron* species (Rhododendron) and *Cotoneaster* species (Cotoneaster) are invasive.. Although these species were in the neighbouring property, they extend over the boundary into the

site. Therefore, care should be taken to avoid spreading these species onto the site or off-site during site works. Care should be taken to avoid machinery, tools, or boots accidentally carrying them off site.

5.4.3 Bats

Bat roost suitability of trees

The trees on site have negligible bat roost suitability. Therefore, they can be removed as necessary without the need for further surveys.

The roots of any retained trees should be protected (where appropriate) during construction (see *Section 5.6*).

Foraging and commuting

There is good foraging habitat for bats on and surrounding the site. Therefore, it is likely that bats are using the site for foraging and commuting. Retaining and enhancing the connectivity of the hedgerows along the western and northern boundaries of the site will help minimise any potential impact to bat populations in the local area. If the hedgerow along the western boundary is to be removed or subject to artificial lighting, further surveys will be required to confirm the importance of the hedgerow for commuting and foraging bats (see *Section 5.5*).

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

Any lighting installed should avoid spillage of greater than 1 lux onto retained vegetation, particularly the hedgerows and mature trees. The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended so as to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

5.4.4 Dormice

The hedgerows along the western and northern boundaries of the site provide suitable habitat for dormice.

The current proposals involve trimming the western hedgerow, which should have little impact on dormice if present. Therefore, no impacts are anticipated on dormice in the area and no further surveys are currently proposed.

5.4.5 Great crested newts

The grassland is mown and has a very short sward with no cover. This is generally unsuitable terrestrial habitat for great crested newts, although they could use the bases of the hedgerows.

Whilst there are ponds within 500m, the landscape between the ponds and the site is of low quality for great crested newts. Additionally, the site is not in range of any known populations of great crested newts.

Given the lack of habitat suitability and lack of records, great crested newt surveys are not considered necessary. The western and northern hedgerows will be retained and continue to provide habitat for amphibians.

5.4.6 Badger

Areas within 30m of development activities are usually searched for setts (where access is possible) as former guidelines suggest badgers and their setts could be disturbed by work using heavy machinery within 30m of a badger sett, light machinery within 20m, and light work (such as digging) within 10m.

As no badger setts were found on site, development works are free to proceed without further regard to this species, although if a badger sett is subsequently discovered within 30m of the proposed works then it may require a licence from Natural England to proceed. Guidance to what may be classed as disturbance to a badger (when occupying a sett) can be found at: http://www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf.

5.4.7 Birds

All trees, hedgerows and bushes provide suitable habitat for nesting birds. Any affected vegetation with the potential to support nesting birds should be cut to near ground level (approximately 30cm) outside the bird breeding season (which is late February to August inclusive). The destruction of active bird nests is prohibited under the *Wildlife and Countryside Act 1981* (as amended). If this is not possible, and vegetation has to be removed during the nesting season, then it should be inspected (by an ecologist) for nests immediately prior to removal of the vegetation.

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

5.4.8 Widespread species of reptile

The majority of the site is unsuitable for widespread species of reptile due to the lack of cover and risk of predation. There is some limited suitable foraging and hibernating habitat including the patches of low-growing *Rubus fruticosus* agg. (Bramble), at the base of the hedges on the boundaries, and the pile of brash.

The bases of the hedgerows will be retained. Therefore, no further surveys are proposed. It is however recommended that as a precaution the pile of brash (*Target Note 2*) is dismantled and removed by hand by early October, before reptiles go into hibernation. If this habitat is not removed by early October, it should not be removed until late March/ April to avoid potentially

disturbing species of hibernating reptile. If the plans change and it is later proposed to remove any hedgerow, further surveys may be required.

5.5 Further survey

5.5.1 Bat activity survey

As the majority of foraging and commuting habitat is to be retained, no bat activity surveys are required. However, if the hedgerows along the western and northern boundaries are to be removed, bat transect surveys should be undertaken monthly between May and September (inclusive) following the standard survey protocol in *Bat Surveys for Professional Ecologist – Good Practice Guidelines, 3rd edition* (Collins 2016). A predetermined transect route will be designed to give coverage of the site. This will be combined with point surveys whereby surveyors stop at designated listening stations along the transect route and record all the bat activity observed over an approximate three-minute period.

5.6 Outline mitigation & enhancement measures

5.6.1 General

From the 24th July 2018, the Government published the revised National Planning Policy Framework. The document sets out the government's planning policies for England and how these are expected to be applied. This replaces a previous version which was published in March 2012. It states: "*at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).*"

5.6.2 Habitats

Heras fencing or similar should be used to protect the roots of the hedgerows and mature trees during construction. Dust sheets or similar protective covers should be attached to the fencing to protect from dust generated during construction. The guidance provided in BS 5837 *Trees in relation to Construction* provides further advice on minimising the impact to retained trees on a development site.

5.6.3 Invasive species

Care should be taken not to disturb the *Rhododendron* species (Rhododendron) and *Cotoneaster* species (Cotoneaster) so not to cause the plants to spread on this or other sites as a result of erecting a fence, earth moving, soil and rubble removal, or other operations.

5.6.4 Bats

Due to its location on the edge of a village, with good commuting habitat, it is recommended that the site is enhanced for bats. This could be as simple as using hanging tiles or timber cladding offset with 30mm gaps for bats to roost behind on the new buildings. Bat bricks (*e.g.* a Habibat™ Bat Box, an Ibstock Enclosed Bat Box or a Schwegler Bat Tube or similar) provide cavities that are incorporated into the build structure to offer roosting space for bats.

It is proposed that one bat brick (*e.g.* a Habibat^{TM} Bat Box, an Ibstock Enclosed Bat Box or a Schwegler Bat Tube or similar) is incorporated into each new dwelling. These bat features should be located on elevations near to retained vegetation. This will optimise potential roosting opportunities. Depending on the final design of the housing some or all of these may be replaced with hanging tiles fixed to battons on blockwork or bricks (no breathable membranes will be used).

No lighting should be installed near to or directed onto the retained vegetation (particularly the boundary hedgerows) so that light disturbance is not a problem. This is because lighting can impact bat populations directly by disturbing roosts and reducing their foraging area, or indirectly by severing commuting routes from roosts. Therefore, the following (modified from *Bats and lighting in the UK* (ILP 2018)) should be undertaken:

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

For any security lighting, the following should also apply:

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

5.6.5 Dormice

The habitat with potential dormouse suitability will be retained. However, to enhance the site for dormice (and other wildlife) any gaps in the existing hedge will be filled with native woody species present on site including *Acer campestre* (Field Maple), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Fraxinus excelsior* (Ash), *Ilex aquifolium* (Holly), *Malus sylvestris* (Crab Apple) and *Prunus spinosa* (Blackthorn). In addition, the landscaping for the new houses will include new hedges of native species. These can be species that are also decorative and/ or commonly used for garden hedges such as *Fagus sylvatica* (Beech), *Ilex aquifolium* (Holly), *Ligustrum ovalifolium* (Garden Privet) and *Taxus baccata* (Yew).

5.6.6 Birds

To allow the site to be cleared for development without harm to nesting birds (so as to comply with the law – the *Wildlife and Countryside Act 1981* (as amended)), any affected vegetation with the potential to support nesting birds should be cut to near ground level (approximately 30cm) outside the bird breeding season (late February to August inclusive).

In addition, the site will be enhanced for birds. To maximise the number of species of bird attracted, several different types of bird boxes will be placed in various locations within the development site. It is not advisable to place many boxes with identical dimensions, because individuals of the same species would not tolerate each other's presence, especially in built-up areas with limited food resources.

The bird boxes will consist of the following:

- one typical garden single chamber bird box (*e.g.* for blue and great tits), such as Schwegler 1B or Vivara Pro Woodstone nest box, fixed to a tree at a height of 2-4m;
- one open-fronted box (*e.g.* for robins and wrens) at a lower height and concealed among the foliage of shrubs, such as Schwegler 2H;
- one multi-chamber box suitable for house sparrows, such as a Schwegler 1SP sparrow terrace or Vivara Pro WoodStone House Sparrow Nest Box;
- one house martin box, such as No. 9a House Martin Nest or Vivara Pro WoodStone House Martin Nest, to provide nesting opportunities on the building structure; and
- one swift box such as Ibstock Eco-habitat or No. 18 Schwegler swift box, to provide nesting opportunities incorporated into the build structure.

The proposed bird boxes to be erected on site, with additional details on positioning to increase their chances of occupancy, are detailed in *Table.5.6.6.1.* and their locations are shown in *Figure 6* in *Section 6.*

Table.5.6.6.1. Bird boxes to be erected within the development site, with additional details on positioning to increase their chances of occupancy.

Type (example)	Typical species	No.	Height	Additional information
Schwegler 1B  or Vivara Pro Seville 32mm Woodstone Nest Box 	Blue tits, great tits	1	2-4m	• Position on a building or tree, angled north-east (away from prevailing winds) and tilt forward slightly. • Chances of occupation can be increased by positioning boxes near vegetation.
1SP Schwegler Sparrow Terrace  or WoodStone Build-in House Sparrow Nest Box  or Vivara Pro WoodStone House Sparrow Nest Box 	House sparrows	1	≥ 2m	Should be fixed onto a sturdy building, not onto fences or garden sheds due to its weight.
Schwegler 2H  or Vivara Pro Barcelona	Robins, wrens	1	≤ 2m	• Mount on a tree or large shrub. • Conceal amongst foliage to keep well-hidden from predators.

WoodStone Open Nest Box 				
No.9a Schwegler House Martin Nest  or Vivara Pro WoodStone House Martin Nest 	House martins	1	≥ 5m	• Position out of direct sunlight (below the eaves on the north elevation), away from windows and in a straight line. • Should be in an open area so that it is less accessible to predators and birds are not obstructed as they leave the nest.
Ibstock Eco-habitat for swifts  or No. 18 Schwegler Swift Box 	Swifts	1	≥ 5.5m	Site high, as close to the eaves as possible.

5.7 Requirement for Natural England licences

5.7.1 European Protected Species (EPS) licences

Currently there is no need for an EPS licence. However, if the scope of work changes, further survey work may be required, and an EPS licence may be necessary.

An EPS licence from Natural England permits activities that may otherwise be offences under the *Conservation of Habitats & Species Regulations 2017.*

Evidence is required from surveys in order to gather enough information about populations to support an EPS licence application.

Survey data supporting EPS licence applications must be up-to-date, *i.e.* have been conducted within the current or most recent optimal survey season (May to September for bats and April to October for dormice). Therefore, if surveys show protected species are present, and any licensable work is delayed until, during or after the next survey season, updated survey(s) will be required to support an application.

Natural England takes a minimum of 30 working days to process licence applications following receipt of all the relevant documentation. This includes an application form and a Method Statement. The latter includes a detailed mitigation strategy to eliminate or reduce impacts.

It is not possible to apply for an EPS licence until full planning permission has been granted and any conditions relating to wildlife fulfilled, although Local Planning Authorities usually request the information prior to determining a planning application request. Additional time will be required where any revisions to a proposed mitigation strategy are necessary to obtain the licence.

5.7.2 Protection of Badgers Act (1992) licences

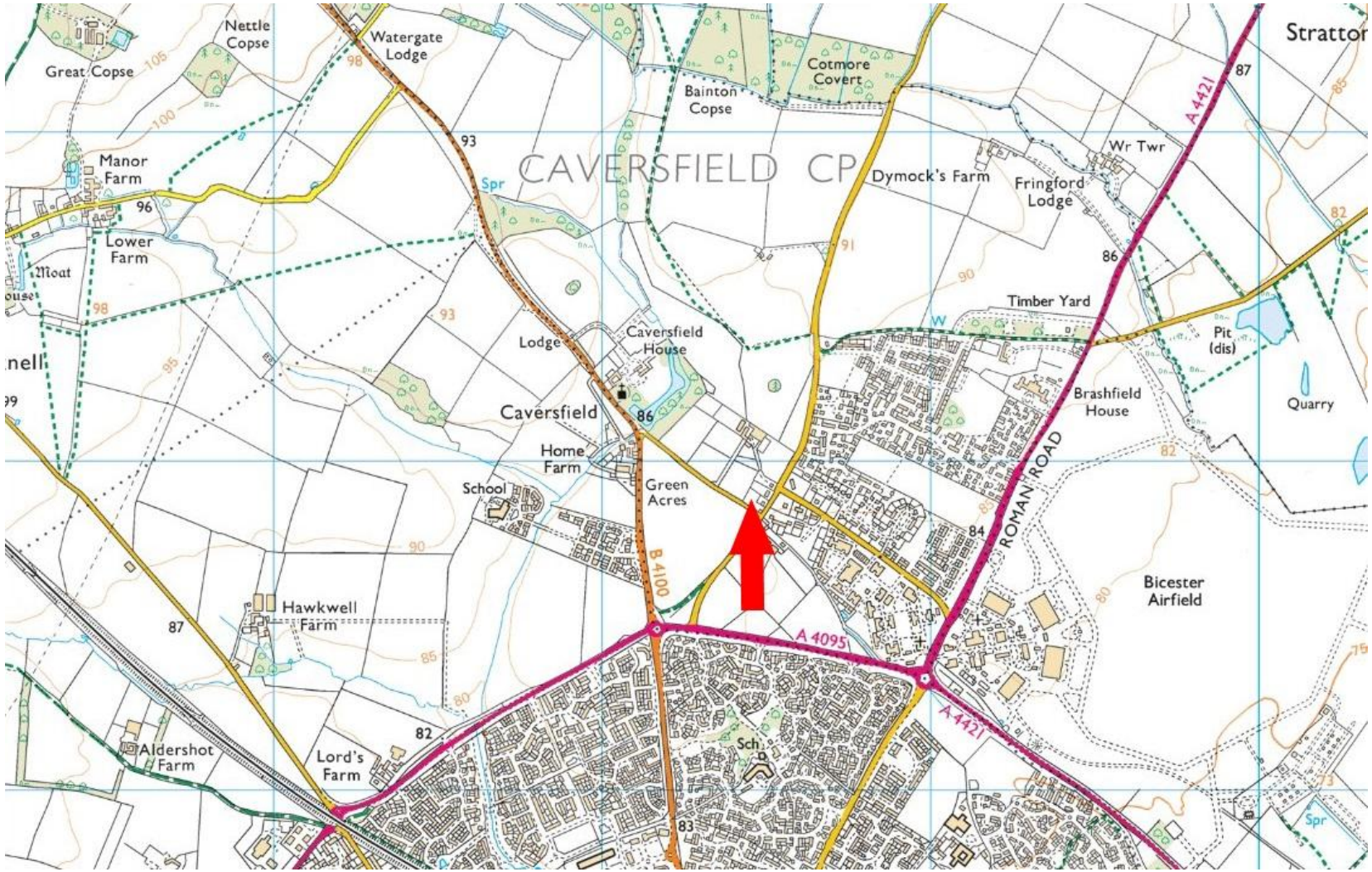
As no setts have been identified within (or close to) the site boundary, a licence is currently not required.

If setts are subsequently identified within 30m of the development, a licence may be required, depending on the location of the sett in relation to the works.

6 FIGURES

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

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



Reproduced with permission of Ordnance Survey under licence no. 100049

Figure 3. Plan showing the site boundary (outlined in red) in relation to The Old Vicarage (outlined in blue).

Figure 4. Phase 1 Habitat Survey map.

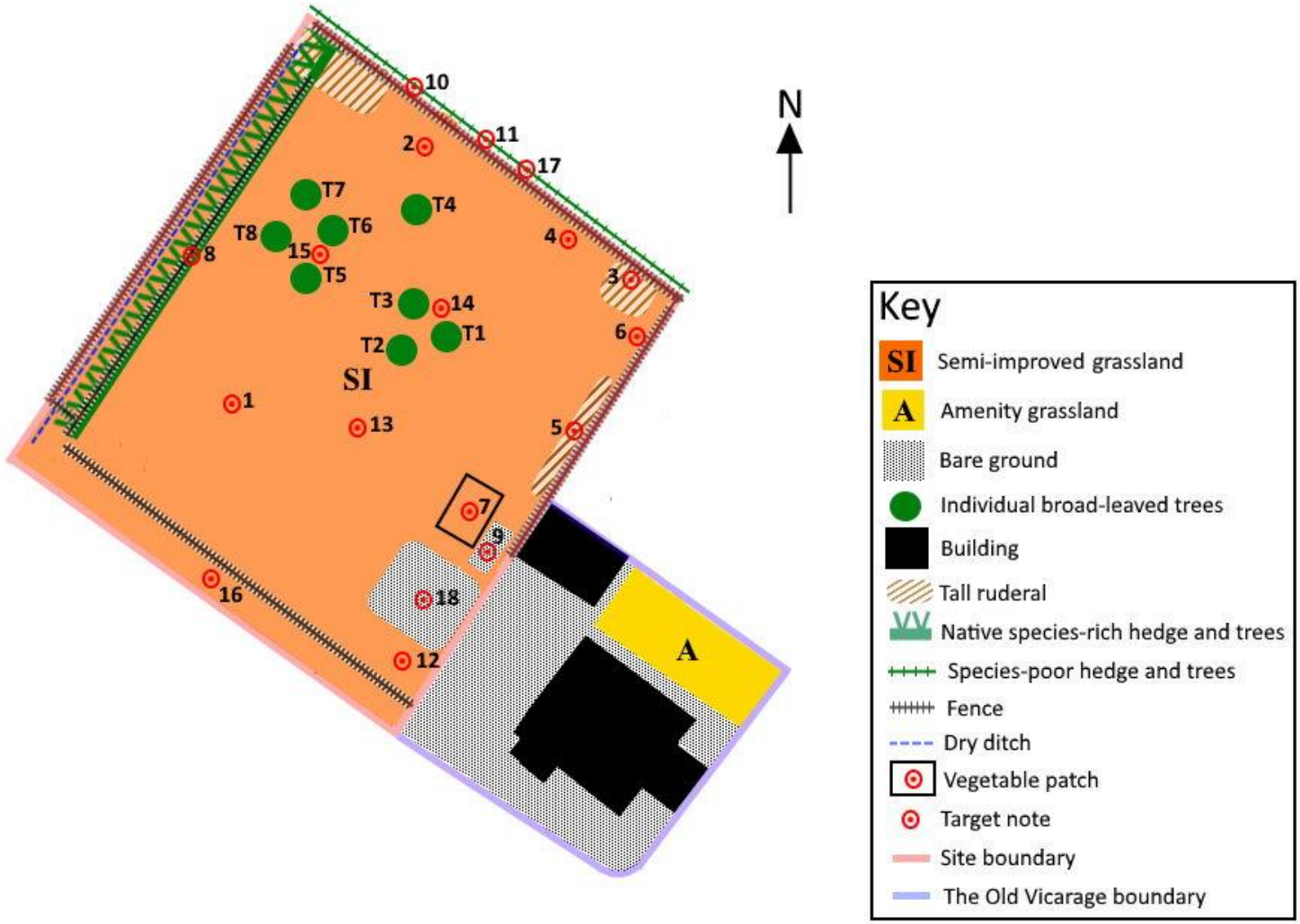


Figure 5. Plan showing the indicative locations for the proposed enhancement measures to be incorporated into the new houses and on the wider site.

Figure 6. Aerial photograph showing the location of ponds within 500m of the site boundary.

7 PHOTOGRAPHS

*Photo 1. Semi-improved grassland (*Target Note 13*) showing the fenced southern boundary (*Target Note 16*) & species-rich hedge and trees on the western boundary (*Target Note 8*).*

*Photo 2. Semi-improved grassland (*Target Note 13*) showing scattered trees (*Target Notes 14 & 15*), species rich & species poor hedge (*Target Notes 8 & 17*) looking toward the north-west corner.*

*Photo 3. Hedgerow base along the western boundary (*Target Note 8*).*

*Photo 4. A pile of brash (*Target Note 2*) located at the northern end of the semi-improved grassland.*

Photo 5. Compost pile with ruderal vegetation in the north-west corner of the semi-improved grassland.

Photo 6. The horse-grazed field the other side of the western boundary.

Photo 7. Hedera helix *(Ivy) covering an area toward the north-east corner of the site (*Target Note 6*).*

*Photo 8. Strip of grassland on the southern side of the southern fence, facing west (*Target Note 16*).*

Photo 9. Pyrus communis *(Pear) and* Malus domestica *(Apple) trees located to the north-east of the site.*

*Photo 10. Vegetable patch on the east side of the site (*Target Note 7*).*

*Photo 11. Mammal scrapes toward the northern end of the site (*Target Note 4*).*

*Photo 12. A patch of unmown grass on a small earth mound in the south-east corner of the site (*Target Note 12*).*

8 REFERENCES

Beebee, T. and Griffiths, R. (2000). *Amphibians and Reptiles*. New Naturalist Series 87. Harper Collins, London.

Birds of Conservation Concern 4 Summary Booklet. www.rspb.org.uk. Accessed 16/07/19.

Cherrill, A. & McClean, C. (1999). *Between-observer variation in the application of a standard method of habitat mapping by environmental consultants in the UK*. Journal of Applied Ecology, **36**, 989-1000.

Collins, J. (ed) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition.* The Bat Conservation Trust, London.

HMSO (1981). *Wildlife and Countryside Act 1981*. HMSO, London.

HMSO (1992). *The Protection of Badgers Act*. HMSO, London.

HMSO (2000). *Countryside and Rights of Way Act.* HMSO, London.

HMSO (2006). *Natural Environment and Rural Communities Act.* HMSO, London.

HMSO (2017). *The Conservation of Habitats and Species Regulations 2017*. HMSO, London.

Institute of Lighting Professionals (2018). *Bats and artificial lighting in the UK*. Institute of Lighting Professionals, Warwickshire.

Joint Nature Conservation Committee (2003). *Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit* (revised reprint). Joint Nature Conservation Committee, Peterborough.

Multi-Agency Geographic Information for the Countryside (2008). www.magic.gov.uk. Accessed 09/07/19.

Natural England (2011). *Standing Advice for Protected Species*. Natural England, Peterborough. http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/advice.aspx

Poland, J. and Clement, E. J. (2009). *The Vegetative Key to the British Flora*. John Poland in association with the Botanical Society of the British Isles, Southampton.

UK Biodiversity Action Plan. www.ukbap.org.uk.

9 APPENDIX A - PROTECTED SPECIES LEGISLATION

9.1 General

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

9.2 Bats

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

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

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

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

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

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

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

9.3 Dormice

Muscardinus avellanarius (dormice) are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. This species is also listed as a European Protected Species on *Schedule 2* of the *Conservation of Habitats & Species Regulations 2017*, which gives it full protection under *Regulation 43*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRoW Act).

Under the above legislation it is an offence to:

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

9.4 Great crested newt

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

Under the above legislation it is an offence to:

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

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

9.5 Badger

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

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

- wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;

- interfere with a sett by damaging or destroying it;
- to obstruct access to, or any entrance of, a badger sett; or
- to disturb a badger when it is occupying a sett.

Guidance to what may be classed as disturbance to a badger (when occupying a sett) can be found at: http://www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf

9.6 Birds

9.6.1 Birds - general protection

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

The legislation makes it an offence to intentionally:

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

9.6.2 Birds - specially protected species

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

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

9.7 Widespread species of reptile

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

Under the above legislation it is an offence to:

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

9.8 European Protected Species Licences

Where it is necessary to carry out an action that could result in an offence under the *Conservation of Habitats & Species Regulations 2017*, it is possible to apply for a European Protected Species (EPS) licence from Natural England. Licences are only issued where Natural England are satisfied that three derogation tests are met. These are that the activity is for **imperative reasons of**

overriding public interest, that there must be **no satisfactory alternative** and that **favourable conservation status of the species must be maintained**.

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

9.9 National planning context

9.9.1 General

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

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

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

9.9.2 National Planning Policy Framework (NPPF)

From the 24th July 2018, the Government published the revised National Planning Policy Framework. The document sets out the government's planning policies for England and how these are expected to be applied. This replaces a previous version which was published in March 2012. It states: "*at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).*"

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

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

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

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

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

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

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

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

It should be noted that the "*presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined*".

The NPPF also encourages "*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*" and aims to "*promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species*; *and identify and pursue opportunities for securing measurable net gains for biodiversity*". This applies to non-statutory designated sites including Sites of Importance for Nature Conservation (SINCs) and equivalent county wildlife sites.

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

10 APPENDIX B – TARGET NOTES

Target Note 1. A well kept *Rheum rhabarbarum* (Rhubarb) patch. The semi-rudereal *Urtica dioica* (Common Nettle) is also starting to grow through the rhubarb.

Target Note 2. Stacked tree cuttings creating a pile of brash. This is suitable foraging and hibernating habitat for widespread species of reptiles.

Target Note 3. A compost pile (*Target Note 3*) within the grassland described in *Target Note 13*. It is covered with an abundance of *Hedera helix* (Ivy). There is also occasional *Chelidonium majus* (Greater Celandine). Other broad-leaved herbs at lower levels of abundance include *Anagallis arvensis* (Scarlet Pimpernel), *Cirsium vulgare* (Spear Thistle), *Malva sylvestris* (Common Mallow), *Medicago lupulina* (Black Medick) and *Myosotis arvensis* (Field Forget-me-not). The compost pile is small and isolated, being surrounded by short mown grassland. It is unlikely to be used by reptiles.

Target Note 4. Mammal scrapes that do not appear to be made by badgers.

Target Note 5. Rough grassland and nettlebed against a fence. The grassland is dominated by *Lolium perenne* (Perennial Rye-grass) and the nettlebed vegetation is dominated by *Urtica dioica* (Common Nettle).

Target Note 6. The evergreen creeper *Hedera helix* (Ivy) is covering the ground and is climbing parts of a nearby fence as well as starting to climb standard trees.

Target Note 7. A vegetable patch (*Target Note 7*) that contains crops of *Solanum tuberosum* (Potato) and *Lycopersicon esculentum* (Tomato). Ruderals are starting to colonise including *Anagallis arvensis* (Scarlet Pimpernel) and *Solanum nigrum* (Black Nightshade).

Target Note 8. An intact, species-rich hedgerow (*Target Note 8*). It is dominated by *Crataegus monogyna* (hawthorn) together with *Corylus avellana* (Hazel), which is locally abundant at the southern and northern ends of the hedge. The evergreen creeper *Hedera helix* (Ivy) is frequent throughout, both as ground cover and climbing through the bushes. There is one *Malus sylvestris* (Crab Apple) tree and one *Prunus* species (Cherry) in the centre of the hedge. At the southern end of the hedge *Prunus spinosa* (Blackthorn) is locally abundant. Other woody species present include *Rubus fruticosus* agg. (Bramble) and *Sambucus nigra* (Elder). The latter only occurs once at the northern end of the hedge. There are several semi-mature trees scattered along the hedge including *Acer campestre* (Field Maple) and *Fraxinus excelsior* (Ash). No one species dominates the field-layer, which has a mixture of ruderal and shade-tolerant plants. The most frequently occurring of these are *Chelidonium majus* (Greater Celandine), *Galium aparine* (Cleavers), *Picris echioides* (Bristly Oxtongue) and *Urtica dioica* (Common Nettle). Less common are *Convolvulus arvensis* (Field Bindweed), *Geum urbanum* (Wood Avens) *Rumex sanguineus* (Wood Dock) and *Tamus communis* (Black Bryony) which occur sporadically throughout the hedgerow. Scarcer

species includes *Arum maculatum* (Lords and Ladies), *Cirsium vulgare* (Spear Thistle), *Crepis vesicaria* (Beaked Hawksbeard), *Solanum nigrum* (Black Nightshade) and *Stachys sylvatica* (Hedge Woundwort).

Target Note 9. Concrete foundations with four courses of brick (*c.*3m by 5m) between the vegetable patch (*Target Note 9*) and the garage of the adjoining property (The Old Vicarage). The structure has no gaps or cracks and no roof.

Target Note 10. A *Rhododendron* species (Rhododendron) is present directly behind the fence on the northern boundary. Branches are overhanging into the site. Some species such as *Rhododendron ponticum* (Rhododendron) are invasive. Care should be taken to avoid spreading this plant during the proposed work. *Target Note 11.* A *Cotoneaster* species (Cotoneaster) is also present directly behind the fence on the northern boundary. Branches are overhanging into the site. Some species of are invasive and therefore care should be taken to avoid spreading this plant during the proposed works.

Target Note 12. Towards the site entrance (*Target Note 12*) there is a small earth mound that has been colonised by the coarse grass *Arrhenatherum elatius* (False Oat-grass) with small amounts of the grass *Holcus lanatus* (Yorkshire-fog). There is also some *Convolvulus arvensis* (Field Bindweed), *Dactylis glomerata* (Cock's-foot), *Glechoma hederacea* (Ground-ivy), *Sonchus oleraceus* (Smooth Sow-thistle) and *Potentilla reptans* (Creeping Cinquefoil).

Target Note 13. The semi-improved grassland has a short sward as a result of mowing. It is dominated by *Lolium perenne* (Perennial Rye-grass) together with the common forbs *Achillea millefolium* (Yarrow) and *Bellis perennis* (Common Daisy). There are smaller amounts of the coarse grass *Dactylis glomerata* (Cock's-foot) and the common forbs *Cerastium fontanum* (Common Mouse-ear), *Geranium dissectum* (Cut-leaved Crane's-bill), *Plantago* (Ribwort Plantain), *Plantago major* (Greater Plantain), *Prunella vulgaris* (Selfheal), *Ranunculus repens* (Creeping Buttercup), *Taraxacum officinale* agg. (Dandelion) and *Trifolium repens* (White Clover) are present throughout.

Target Note 14. Planted fruit trees consisting of two *Malus domestica* (Apple) and one *Pyrus communis* (Pear). All these trees have negligible bat roost suitability.

Target Note 15. Planted fruit trees consisting of one *Malus domestica* (Apple) and three *Prunus avium* (Wild Cherry). All these trees have negligible bat roost suitability.

Target Note 16. A narrow strip of short mown grassland. The sward is dominated by the grass *Lolium perenne* (Perennial Ryegrass) together with smaller amounts of *Arrhenatherum elatius* (False Oat-grass) and *Poa annua* (Annual Meadow-grass). The broad-leaved herbs are mainly shade-tolerant and those tolerant of disturbance. Species include *Alliaria petiolata* (Garlic Mustard), *Galium aparine* (Cleavers), *Senecio jacobaea* (Common Ragwort), *Lamium purpureum* (Red Dead-nettle), *Malva sylvestris* (Common Mallow), *Sherardia arvensis* (Field Madder) and

Veronica species (a Speedwell). There are also patches of *Glechoma hederacea* (Ground Ivy) and *Urtica dioica* (Common Nettle).

Target Note 17. The hedgerow on the northern boundary is less diverse than the hedge on the western boundary (*Target Note 8*) and consists of a mixture of deciduous and non-native coniferous trees as well as shrubs. The trees are predominantly the conifer ×*Cupressocyparis leylandii* (Leyland Cypress) with occasional *Fraxinus excelsior* (Ash). The hedge is mainly *Ilex aquifolium* (Holly) and *Ligustrum vulgare* (Wild Privet) with some *Rubus fruticosus* agg. (Bramble) and the evergreen creeper *Hedera helix* (Ivy). The climber *Bryonia dioica* (White Bryony) appears once, climbing through the bushes.

Target Note 18. An area of bare earth and sparsely spread gravel.

11 APPENDIX C – PLANT SPECIES LISTS

Species	**TN 1**	**TN 3**	**TN 5**	**TN 6**	**TN 7**	**TN 8**	**TN 10**	**TN 11**	**TN 12**	**TN 13**	**TN 14**	**TN15**	**TN16**	**TN 17**
Woody species														
Acer campestre (Field Maple)	-	-	-	-	-	R	-	-	-	-	-	-	-	-
Cotoneaster species (Cotoneaster)	-	-	-	-	-	-	R	-	-	-	-	-	-	R
Corylus avellana (Hazel)	-	-	-	-	-	A	-	-	-	-	-	-	-	-
Crataegus monogyna (Hawthorn)	-	-	-	-	-	F	-	-	-	-	-	-	-	-
×*Cupressocyparis leylandii* (Leyland Cypress)	-	-	-	-	-	-	-	-	-	-	-	-	-	D
Fraxinus excelsior (Ash)	-	-	-	-	-	O	-	-	-	-	-	-	-	O
Hedera helix (Ivy)	-	A	-	D	-	F	-	-	-	-	-	-	-	O
Ilex aquifolium (Holly)	-	-	-	-	-	-	-	-	-	-	-	-	-	R
Ligustrum vulgare (wild Privet)	-	-	-	-	-	-	-	-	-	-	-	-	-	R
Malus domestica (Apple)	-	-	-	-	-	-	-	-	-	-	F	-	-	-
Malus sylvestris (Crab Apple)	-	-	-	-	-	R	-	-	-	-	-	O	-	-
Prunus cerasifera (Cherry Plum)	-	-	-	-	-	R	-	-	-	-	-	-	-	-
Prunus avium (Wild Cherry)	-	-	-	-	-	-	-	-	-	-	-	F	-	-
Prunus spinosa (Blackthorn)	-	-	-	-	-	A	-	-	-	-	-	-	-	-
Pyrus communis (Pear)	-	-	-	-	-	-	-	-	-	-	O	-	-	-
Rhododendron species. (Rhododendron)	-	-	-	-	-	-	-	R	-	-	-	-	-	R
Rubus fruticosus agg. (Bramble)	-	-	-	-	-	F	-	-	-	-	-	-	-	F
Sambucus nigra (Elder)	-	-	-	-	-	R	-	-	-	-	-	-	-	-

Herbs														
Achillea millefolium (Yarrow)	-	-	-	-	-	-	-	-	-	F	-	-	-	-
Alliaria petiolata (Garlic Mustard)	-	-	-	-	-	R	-	-	-	-	-	-	R	-
Anagallis arvensis (Scarlet Pimpernel)	-	R	-	-	R	-	-	-	-	-	-	-	-	-
Anisantha sterilis (Barren Brome)	-	-	-	-	-	-	-	-	-	-	-	-	A	-
Arrhenatherum elatius (False Oat-grass)	-	-	-	-	-	-	-	-	D	-	-	-	F	-
Arum maculatum (Lords and Ladies)	-	-	-	-	-	R	-	-	-	-	-	-	-	-
Bellis perennis (Daisy)	-	-	-	-	-	-	-	-	-	F	-	-	-	-
Bryonia dioica (White Bryony)	-	-	-	-	-	-	-	-	-	-	-	-	-	R
Cerastium fontanum (Common Mouse-ear)	-	-	-	-	-	-	-	-	-	R	-	-	-	-
Chelidonium majus (Greater Celandine)	-	O	-	-	-	R	-	-	-	-	-	-	-	-
Cirsium vulgare (Spear Thistle)	-	R	-	-	-	R	-	-	-	-	-	-	-	-
Convolvulus arvensis (Field Bindweed)	-	-	-	-	-	O	-	-	O	R	-	-	R	-
Crepis vesicaria (Beaked Hawk's-beard)	-	-	-	-	-	F	-	-	-	-	-	-	-	-
Dactylis glomerata (Cock's-foot)	-	-	-	-	-	-	-	-	R	O	-	-	-	-
Tamus communis (Black Bryony)	-	-	-	-	-	R	-	-	-	-	-	-	-	-
Galium aparine (Cleavers)	-	-	-	-	-	F	-	-	-	-	-	-	R	-
Geranium dissectum (Cut-leaved Crane's-bill)	-	-	-	-	-	-	-	-	-	R	-	-	-	-
Geum urbanum (Wood Avens)	-	-	-	-	-	O	-	-	-	-	-	-	-	-
Glechoma hederacea (Ground Ivy)	-	-	-	-	-	A	-	-	F	-	-	-	O	-
Picris echioides (Bristly Oxtongue)	-	-	-	-	-	R	-	-	-	-	-	-	-	-
Holcus lanatus (Yorkshire-fog)	-	-	-	-	-	-	-	-	R	-	-	-	-	-
Lamium album (White Dead-nettle)	-	-	-	-	-	-	-	-	-	-	-	-	R	-
Lamium purpureum (Red Dead-nettle)	-	-	-	-	-	-	-	-	-	-	-	-	R	-
Lolium perenne (Perennial Rye-grass)	-	-	A	-	-	-	-	-	-	D	-	-	D	-

Lycopersicon esculentum (Tomato)	-	-	-	-	A	-	-	-	-	-	-	-	-	-
Malva sylvestris (Common Mallow)	-	R	-	-	-	-	-	-	-	-	-	-	-	-
Medicago lupulina (Black Medick)	-	R	-	-	-	-	-	-	-	-	-	-	-	-
Myosotis arvensis (Field Forget-me-not)	-	R	-	-	-	-	-	-	-	-	-	-	-	-
Plantago lanceolata (Ribwort Plantain)	-	-	-	-	-	-	-	-	-	O	-	-	-	-
Plantago major (Greater Plantain)	-	-	-	-	-	-	-	-	-	R	-	-	-	-
Poa annua (Annual Meadow-grass)	-	-	-	-	-	-	-	-	-	-	-	-	R	-
Potentilla reptans (Creeping Cinquefoil)	-	-	-	-	-	-	-	-	O	-	-	-	-	-
Prunella vulgaris (Selfheal)	-	-	-	-	-	-	-	-	-	O	-	-	-	-
Ranunculus repens (Creeping Buttercup)	-	-	-	-	-	-	-	-	-	O	-	-	-	-
Rheum rhabarbarum (Rhubarb)	D	-	-	-	-	-	-	-	-	-	-	-	-	-
Rumex sanguineus (Wood Dock)	-	-	-	-	-	O	-	-	-	-	-	-	-	-
Senecio jacobaea (Common Ragwort)	-	-	-	-	-	-	-	-	-	-	-	-	R	-
Sherardia arvensis (Field Madder)	-	-	-	-	-	-	-	-	-	-	-	-	R	-
Silene latifolia ssp. *alba* (White Campion)	-	-	-	-	-	-	-	-	R	-	-	-	-	-
Solanum tuberosum (Potato)	-	-	-	-	A	-	-	-	-	-	-	-	-	-
Sonchus oleraceus (Smooth Sow-thistle)	-	-	-	-	-	-	-	-	-	O	-	-	-	-
Stachys sylvatica (Hedge Woundwort)	-	-	-	-	-	R	-	-	-	-	-	-	-	-
Taraxacum officinale agg. (Dandelion)	-	-	-	-	-	-	-	-	-	O	-	-	-	-
Trifolium repens (White Clover)	-	-	-	-	-	-	-	-	-	O	-	-	-	-
Urtica dioica (Common Nettle)	R	-	-	-	-	F	-	-	-	-	-	-	O	-
Veronica species (a Speedwell)	-	-	-	-	-	-	-	-	-	-	-	-	R	-
D – dominant, A – abundant, F – frequent, O – occasional, R – rare.														