

Knole Homes Limited

**Brindles
Emmer Green**

Ecological Report

**Job No: 233370
February 2024**



Environmental Consultants

AAe

AA Environmental Ltd
Units 4-8 Cholswell Court
Shippon
Abingdon
OX13 6HX
T 01235 536042
F 01235 523849
www.aae-ltd.co.uk

Report for:

Knole Homes Limited
41 Kippington Road
Sevenoaks
Kent
TN13 2LL

**Brindles
Emmer Green**

Issued by

.....
H R Simpson BSc (Hons) MSc

Approved by

.....
A R Beaumont BSc (Hons) MSc MCIEEM

Issue Date**Issue**

29 February 2024

Final

AA Environmental Limited (Registered Office)

Units 4-8
Cholswell Court
Shippon
Abingdon
Oxon
OX13 6HX
T 01235 536042
F 01235 523849
E info@aae-ltd.co.uk
W www.aae-ltd.co.uk

Company No. 8474322

Table of Revisions

Issue	Description of status

Contents

	Page No
1.0 INTRODUCTION	1
2.0 METHODOLOGY	1
3.0 RESULTS	4
4.0 DISCUSSION AND RECOMMENDATIONS	10
5.0 CONCLUSIONS	12
REFERENCES	13

FIGURES

- Figure 1 Site Location Plan
- Figure 2 Existing Habitats Plan

APPENDICES

- Appendix A Summary of the Ratcliffe Criteria
- Appendix B Plant Species List
- Appendix C Photograph Record Sheets 1 and 2
- Appendix D Toolbox Talk (Bats)

1.0 INTRODUCTION

Overview

- 1.1 AA Environmental Limited (AAe) has been commissioned by Knole Homes Limited to carry out an ecological survey of the development proposals at Brindles, Emmer Green. The aims of the survey were to:
- provide a description of the existing habitat types;
 - determine the existence and location of any ecologically valuable areas; and
 - identify the presence of any protected species.
- 1.2 This information will serve to assess the ecological impact of the proposals and identify any ecological constraints and/or mitigation measures required and also identify any enhancement measures that may be available.
- 1.3 The proposals are to construct nine new residential dwellings, with the partial demolition and part retention of the existing dwelling and to include both hard and soft landscaping. The proposed scheme requires the removal of various outbuildings and clearance of some garden vegetation. The majority of the established trees and boundary vegetation will be retained and protected during the works.

Site Description

- 1.4 The site is located off Kidmore End Road in Emmer Green, Reading, centred at National Grid Reference: SU 717766 and covers approximately 0.6 of a hectare. The site comprised the existing property and outbuildings, associated hardstanding and well-maintained garden areas. The site is bordered by a development site (currently under construction) to the north, Emmer Green Primary School to the west and Lyefield Court to the south and east (Figure 1).

2.0 METHODOLOGY

General

- 2.1 The study comprised two key phases: a desk-top study; and a walk-over field survey. The study was undertaken with reference to the Institute of Environmental Assessment's '*Guidelines for Baseline Ecological Assessment*' (1995), Chartered Institute of Ecology and Environmental Management (CIEEM) '*Guidelines for Preliminary Ecological Appraisal*' (2017) and BS 42020: 2013 '*Biodiversity - Code of practice for planning and development*'.

Desk-top Study

- 2.2 A review of AAe's Ecological report (dated May 2022) was carried out to provide baseline conditions for the site¹. Thames Valley Environmental Record Centre (TVERC) was consulted in order to obtain baseline data held for the site and the surrounding 2 km area. In addition, as certain baseline data is now readily available on the internet, the Multi-agency website (<http://magic.defra.gov.uk/>) was consulted to determine whether any part of the site or nearby habitats have been statutorily or otherwise designated and a review of Google Earth's satellite imagery (http://www.google.co.uk/intl/en_uk/earth/index.html) was completed to determine past land uses of the site and surrounding land.

Field Survey

- 2.3 It was necessary to supplement the information obtained from the desk-top study with a walk-over field survey, in order to:

¹ Although this survey did not cover the whole of the current application site, it included a significant proportion of the garden area.

- ascertain whether, while the site itself or nearby habitats might not be covered by any ecological designations, they could be of ecological interest and/or contain protected species; and
- establish the ecological value of the site in order for the overall disturbance to ecosystems within the area to be fully evaluated.

2.4 An ecological walk-over survey of the site was carried out on Tuesday 23 January 2024. The dominant plant species were recorded, and habitats classified according to their vegetation types and presented in the standard UK Habitat Classification System (*UK Hab Ltd, 2023*). The weather conditions at the time of survey were: 80% cloud cover; wind speed 3 (Beaufort scale); temperature 13°C; and light precipitation.

Habitat Evaluation

2.5 By applying recognised criteria produced by Ratcliffe (1977), the following seven-point scale was used to rank the importance of the habitat types and species they support. The value of each habitat was ranked according to its importance in a local context (a summary of the Ratcliffe criteria is attached at Appendix A):

- low value;
- low to intermediate value;
- intermediate value;
- intermediate to high value;
- high value (Local/District importance);
- very high value (County importance e.g. Site of Nature Conservation Importance (SNCI), County Wildlife Site); and
- exceptional value (National importance e.g. Site of Special Scientific Interest (SSSI)).

Fauna

2.6 Particular attention was paid to record the presence of/ or suitable habitat for badgers, bats and herpetofauna (amphibians and reptiles), that may be present on the site or within adjacent habitats, in accordance with the following survey methodologies:

Badgers

2.7 Badgers (*Meles meles*) and their setts are protected by *The Protection of Badgers Act 1992*, under which it is an offence to harm badgers or their setts. A sett is defined as “any structure or place which displays signs indicating current use by a badger”. Natural England has provided the following guidance on the interpretation of current use:

A sett is defined as such (and thus protected) as long as signs indicative of ‘current use’ are present. Thus, a sett remains protected by the Act until such times as the signs (i.e. ‘field signs’) have deteriorated or decayed to such an extent that they indicate that the sett is no longer in ‘current use’.

2.8 A thorough survey of the whole site and adjacent habitats, where access was available, was carried out. Particular attention was paid to dense areas of vegetation to check for any evidence of badger activity, which is usually detected by any one or more of the following signs:

- presence of holes with evidence of badger such as footprints, discarded hair, etc.;
- presence of dung pits and latrines;
- presence of well used runs with subsidiary evidence of badger activity; and
- presence of other indications of badger activity, such as signs of foraging and footprints.

Bats

2.9 Currently there are 17 species of bat known to breed in the UK. All species and their roosts are protected under Regulation 41 of *The Conservation of Habitats and Species Regulations 2010 (as amended)*. As a signatory to the *Bonn Convention (Agreement on the Conservation of Bats*

in Europe) the UK is also required to protect their habitats. This legislation makes it illegal to kill, injure, capture or disturb bats or to obstruct access to, damage or destroy bat roosts. Under the law, a roost is any structure or place used for shelter or protection.

- 2.10 A visual survey of the site was completed to record any evidence of bats or features that could provide potential roosting opportunities. The survey was carried out following the guidelines provided by the Bat Conservation Trust² and by an experienced and licensed ecologist³. A thorough internal and external examination of the existing buildings was carried out, with any potential access points inspected for evidence of bats. All internal roof voids/spaces, where present, were accessed to check for any evidence of bats.
- 2.11 In addition, a careful inspection of each tree within the vicinity of the works was carried out to identify those features that are important for roosting bats. Surveying trees presents particular problems at any time of the year as bats will use a wide variety of roost sites in cavities, splits, cracks, knotholes and under loose bark, many of which are not easily detected from the ground. Each tree was assessed in accordance with the following criteria:
- **NONE** – Either no PRF's in the tree or highly unlikely to be any.
 - **FAR** – Further assessment required to establish if PRFs are present in the tree.
 - **PRF** – A tree with at least one PRF present.
- 2.12 The surrounding habitat was also surveyed to identify any important features such as mature trees with suitable features for roosting bats and any established lines of vegetation that might provide important flightlines.
- 2.13 Evidence of bats is usually detected by any one or more of the following signs:
- the presence of bat droppings, which tend to accumulate under established roost sites or at roost entrances;
 - the accumulation of large numbers of moth wings, which have been discarded by feeding bats;
 - areas of staining by urine or from fur rubbing; and
 - the presence of bats themselves or their corpses.
- 2.14 The visual survey was facilitated by the use of binoculars, ladders, powerful torches (1M candlepower) and a Ridgid Micro CA-350 Inspection Camera endoscope.

Herpetofauna

Amphibians

- 2.15 All amphibian species have some level of protection under *The Wildlife and Countryside Act 1981 (as amended)*. Great crested newts (*Triturus cristatus*) are protected under *The Wildlife and Countryside Act 1981 (as amended)* and *The Conservation of Habitats and Species Regulations 2010 (as amended)*. The intentional or reckless killing, injury or taking, and intentional or reckless disturbance of great crested newts whilst occupying a 'place used for shelter or protection', is prohibited, as is the destruction of these places.

Reptiles

- 2.16 All reptile species are protected at some level under Schedule 5 of the *Wildlife and Countryside Act 1981 (as amended)* and *The Conservation of Habitats and Species Regulations 2010 (as amended)*. The more common species of reptiles, which include slow-worm (*Anguis fragilis*), common or viviparous lizard (*Zootoca vivipara*), adder (*Vipera berus*) and grass snake (*Natrix helvetica*) are protected by the *Wildlife and Countryside Act 1981 (as amended)* by part of

² Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London.

³ Lead surveyor was Harry Simpson, BSc. (Hons), MSc (Licence Ref: 2023-11139-CL18-BAT)

Section 9(1) and all of Section 9(5). This means that they are protected against intentional or reckless killing and injuring (but not 'taking') and against sale and transporting for sale.

- 2.17 An assessment of the site was carried out to determine its suitability for herpetofauna by recording the habitats present. In addition, any natural/artificial refugia present on the site was lifted to check for any sheltering animals or evidence of animals, such as sloughs (shed skins)⁴.

Other Species

- 2.18 In accordance with good practice, the site was checked for any evidence of other protected species or species of particular note.

3.0 RESULTS

Desk-top Study

- 3.1 The results of the previous survey concluded that there are no habitats of international, national, county or local importance that would be affected by the proposals. The site was found to be of overall low ecological value, with the species recorded described as common or abundant and are found in similar places across much of Britain, with no evidence of bats or other protected species recorded.
- 3.2 A summary of the baseline data obtained from TVERC has been provided and detailed in Table 1; please note, due to sensitivity/copyright, a copy of the report cannot be reproduced but can be requested by the Local Planning Authority⁵.
- 3.3 There are no statutory designated ecological sites located on or adjacent to the site. The nearest statutory designated site is Clayfield Copse Local Nature Reserve (LNR), located approximately 0.59 km to the north-east of the site. The nearest non-statutory designated site is Rotherfield Way Copse Local Wildlife Site (LWS), located 0.4 km to the south of the site. Full details of the designated sites located within the 2 km search area are provided in Table 1.
- 3.4 There were no records of protected species located on or adjacent to the site. There are a number of records of protected species within the 2 km study area, the majority of which were supplied with specific 6-figure grid references allowing a high-resolution indication of their locations. Further details of protected species recorded within 2 km of the site are provided in Table 1.
- 3.5 According to the Multi-agency website, there are no Habitats of Principal Importance (HPIs) located on or directly adjacent to the site, with the nearest HPI being an area of Deciduous Woodland, also noted in the National Forest Inventory, located approximately 0.35 km to the south-west of the site.
- 3.6 Google Earth Imagery shows that the site has remained largely unchanged since 2003, being dominated by the existing property and outbuildings with associated hardstanding and garden area.

Table 1: Summary of Data Search Results (TVERC)

Statutory Designated Sites		
Description	Protection/designation	Distance/direction
Clayfield Copse	LNR	0.59 km to the NE
Non-Statutory Designated Sites		
Description	Protection/designation	Distance/direction
Rotherfield Way Copse	LWS	0.4 km to the S
Clayfield Copse	LWS	0.59 km to the NE

⁴ Although considered 'out of season' when reptiles will not be active, certain species can still be found hibernating under refugia.

⁵ TVERC data cannot be passed on to any third parties (excluding local authorities), without express written permission.

Furzplat	LWS	0.65 km to the W
Highdown Wood	LWS	0.73 km to the SW
Reading Golf Course (east)	LWS	0.75 km to the NNW
Hemdean Bottom	LWS	0.88 km to the WSW
Blackhouse Wood	LWS	1.01 km to the NE
Reading Golf Course (west)	LWS	1.35 km to the NW
The Warren Woodlands Complex	LWS	1.76 km to the SW
Other Sites		
Description	Protection/designation	Distance/direction
Chilterns Dipslope and Plateau	CTA	0.57 km to the N
Protected/notable Species (Specific Grid References)		
Description	Protection/designation	Distance/direction
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	European Protected Species & Protected Species	0.13 km to the SE
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	European Protected Species, Protected Species & Priority Species	0.13 km to the SE
Brown Long-eared Bat (<i>Plecotus auritus</i>)	European Protected Species, Protected Species & Priority Species	0.14 km to the NNW
Myotis Bat species (<i>Myotis</i> sp.)	European Protected Species, Protected Species	0.14 km to the NNW
Nathusius's Pipistrelle (<i>Pipistrellus nathusii</i>)	European Protected Species & Protected Species	0.14 km to the NNW
Serotine (<i>Eptesicus serotinus</i>)	European Protected Species & Protected Species	0.14 km to the NNW
Western Barbastelle (<i>Barbastella barbastellus</i>)	European Protected Species, Protected Species & Priority Species	0.14 km to the NNW
Long-eared Bat species (<i>Plecotus</i> sp.)	European Protected Species, Protected Species	0.14 km to the SSE
Noctule Bat (<i>Nyctalus noctula</i>)	European Protected Species, Protected Species & Priority Species	0.14 km to the SSE
Song Thrush (<i>Turdus philomelos</i>)	Priority Species	0.15 km to the NE
Merlin (<i>Falco columbarius</i>)	Protected Species	0.18 km to the N
Stag Beetle (<i>Lucanus cervus</i>)	European Protected Species, Protected Species (against sale) & Priority Species	0.23 km to the S
West European Hedgehog (<i>Erinaceus europaeus</i>)	Priority Species	0.25 km to the ENE
House Sparrow (<i>Passer domesticus</i>)	Priority Species	0.28 km to the SSW
Greylag Goose (<i>Anser anser</i>)	Protected Species	0.32 km to the ESE
Herring Gull (<i>Larus argentatus</i>)	Priority Species	0.32 km to the ESE
Bullfinch (<i>Pyrrhula pyrrhula</i>)	Priority Species	0.32 km to the WNW
Duncock (<i>Prunella modularis</i>)	Priority Species	0.32 km to the WNW
Red Kite (<i>Milvus milvus</i>)	Protected Species	0.32 km to the WNW
Starling (<i>Sturnus vulgaris</i>)	Priority Species	0.32 km to the WNW
Eurasian Badger (<i>Meles meles</i>)	Badgers Act (1992)	0.51 km to the NW
Bluebell (<i>Hyacinthoides non-scripta</i>)	Protected Species	0.51 km to the S
Small Blue (<i>Cupido minimus</i>)	Protected Species & Priority Species	0.57 km to the WSW
Small Heath (<i>Coenonympha pamphilus</i>)	Priority Species	0.57 km to the WSW
Common Frog (<i>Rana temporaria</i>)	Protected Species (against sale)	0.6 km to the NNW
Common Toad (<i>Bufo bufo</i>)	Protected Species (against sale) & Priority Species	0.6 km to the NNW
Blood-vein (<i>Timandra comae</i>)	Priority Species	0.68 km to the NNW
Grey Dagger (<i>Acronicta psi</i>)	Priority Species	0.68 km to the NNW
Hornet Robberfly (<i>Asilus crabroniformis</i>)	Priority Species	0.68 km to the NNW
Mottled Rustic (<i>Caradrina morpheus</i>)	Priority Species	0.68 km to the NNW
Mouse Moth (<i>Amphipyra tragopoginis</i>)	Priority Species	0.68 km to the NNW
Oak Hook-tip (<i>Watsonalla binaria</i>)	Priority Species	0.68 km to the NNW
Small Emerald (<i>Hemistola chrysoprasaria</i>)	Priority Species	0.68 km to the NNW
Small Square-spot (<i>Diarsia rubi</i>)	Priority Species	0.68 km to the NNW
Spinach (<i>Eulithis mellinata</i>)	Priority Species	0.68 km to the NNW

Beaded Chestnut (<i>Agrochola lychnidis</i>)	Priority Species	0.69 km to the N
Brindled Beauty (<i>Lycia hirtaria</i>)	Priority Species	0.69 km to the N
Green-brindled Crescent (<i>Allophyes oxyacanthae</i>)	Priority Species	0.69 km to the N
Knot Grass (<i>Acronicta rumicis</i>)	Priority Species	0.69 km to the N
Powdered Quaker (<i>Orthosia gracilis</i>)	Priority Species	0.69 km to the N
Rustic (<i>Hoplodrina blanda</i>)	Priority Species	0.69 km to the N
White Ermine (<i>Spilosoma lubricipeda</i>)	Priority Species	0.69 km to the N
White-letter Hairstreak (<i>Satyrus w-album</i>)	Protected Species & Priority Species	0.69 km to the NE
Daubenton's Bat (<i>Myotis daubentonii</i>)	European Protected Species & Protected Species	0.76 km to the NE
Natterer's Bat (<i>Myotis nattereri</i>)	European Protected Species & Protected Species	0.76 km to the NE
Pipistrelle Bat species (<i>Pipistrellus sp.</i>)	European Protected Species, Protected Species	0.79 km to the W
Whiskered Bat (<i>Myotis mystacinus</i>)	European Protected Species & Protected Species	0.8 km to the WSW
Cinnabar (<i>Tyria jacobaeae</i>)	Priority Species	0.87 km to the NE
Marsh Tit (<i>Poecile palustris</i>)	Priority Species	0.87 km to the NE
Peregrine (<i>Falco peregrinus</i>)	Protected Species	0.87 km to the NE
Red-shanked Carder Bee (<i>Bombus rudarius</i>)	Priority Species	0.87 km to the NE
Redwing (<i>Turdus iliacus</i>)	Protected Species	0.87 km to the NE
Yellowhammer (<i>Emberiza citrinella</i>)	Priority Species	0.87 km to the NE
Sprawler (<i>Asteroscopus sphinx</i>)	Priority Species	0.93 km to the NE
Purple Emperor (<i>Apatura iris</i>)	Protected Species	1.03 km to the NNE
Wall (<i>Lasiommata megera</i>)	Priority Species	1.03 km to the NNE
Slow-worm (<i>Anguis fragilis</i>)	Protected Species & Priority Species	1.19 km to the SSW
Leisler's Bat (<i>Nyctalus leisleri</i>)	European Protected Species & Protected Species	1.2 km to the NNE
Smooth Newt (<i>Lissotriton vulgaris</i>)	Protected Species (against sale)	1.38 km to the WSW
Grape-hyacinth (<i>Muscari neglectum</i>)	Priority Species	1.46 km to the SW
Honey-buzzard (<i>Pernis apivorus</i>)	Protected Species	1.47 km to the W
Osprey (<i>Pandion haliaetus</i>)	Protected Species	1.47 km to the W
August Thorn (<i>Ennomos quercinaria</i>)	Priority Species	1.69 km to the SW
Dark-barred Twin-spot Carpet (<i>Xanthorhoe ferrugata</i>)	Priority Species	1.69 km to the SW
Deep-brown Dart (<i>Aporophyla lutulenta</i>)	Priority Species	1.69 km to the SW
Dot Moth (<i>Melanchra persicariae</i>)	Priority Species	1.69 km to the SW
Double Dart (<i>Graphiphora augur</i>)	Priority Species	1.69 km to the SW
Dusky Brocade (<i>Apamea remissa</i>)	Priority Species	1.69 km to the SW
Dusky Thorn (<i>Ennomos fuscantaria</i>)	Priority Species	1.69 km to the SW
Ear Moth (<i>Amphipoea oculatea</i>)	Priority Species	1.69 km to the SW
Figure of Eight (<i>Diloba caeruleocephala</i>)	Priority Species	1.69 km to the SW
Garden Dart (<i>Euxoa nigricans</i>)	Priority Species	1.69 km to the SW
Garden Tiger (<i>Arctia caja</i>)	Priority Species	1.69 km to the SW
Ghost Moth (<i>Hepialus humuli</i>)	Priority Species	1.69 km to the SW
Heath Rustic (<i>Xestia agathina</i>)	Priority Species	1.69 km to the SW
Lackey (<i>Malacosoma neustria</i>)	Priority Species	1.69 km to the SW
Large Nutmeg (<i>Apamea anceps</i>)	Priority Species	1.69 km to the SW
Olive Crescent (<i>Trisateles emortualis</i>)	Priority Species	1.69 km to the SW
Rosy Rustic (<i>Hydraecia micacea</i>)	Priority Species	1.69 km to the SW
September Thorn (<i>Ennomos erosaria</i>)	Priority Species	1.69 km to the SW
Shaded Broad-bar (<i>Scotopteryx chenopodiata</i>)	Priority Species	1.69 km to the SW
Small Phoenix (<i>Ecliptopera silaceata</i>)	Priority Species	1.69 km to the SW
Streak (<i>Chesias legatella</i>)	Priority Species	1.69 km to the SW
V-moth (<i>Macaria wauaria</i>)	Priority Species	1.69 km to the SW
Adder (<i>Vipera berus</i>)	Protected Species & Priority Species	1.7 km to the SE
Shepherd's-needle (<i>Scandix pecten-veneris</i>)	Priority Species	1.75 km to the E

Eurasian Otter (<i>Lutra lutra</i>)	European Protected Species, Protected Species & Priority Species	1.75 km to the ESE
Grass Snake (<i>Natrix helvetica</i>)	Protected Species & Priority Species	1.75 km to the SE
Bat (<i>Chiroptera</i> sp.)	European Protected Species, Protected Species	1.83 km to the SE
Barn Owl (<i>Tyto alba</i>)	Protected Species	1.88 km to the ENE
Hawfinch (<i>Coccothraustes coccothraustes</i>)	Priority Species	1.98 km to the WSW
Grizzled Skipper (<i>Pyrgus malvae</i>)	Priority Species	2.04 km to the SW
Protected/notable Species (Coarse Resolution Records)		
Description	Protection/designation	Record Accuracy
Avocet (<i>Recurvirostra avosetta</i>)	Protected Species	1 km
Bats (<i>Vespertilionidae</i> sp.)	Protected Species	1 km
Brambling (<i>Fringilla montifringilla</i>)	Protected Species	1 km
Crossbill (<i>Loxia curvirostra</i>)	Protected Species	1 km
Dingy Skipper (<i>Erynnis tages</i>)	Priority Species	1 km
Fieldfare (<i>Turdus pilaris</i>)	Protected Species	1 km
Firecrest (<i>Regulus ignicapilla</i>)	Protected Species	1 km
Goshawk (<i>Accipiter gentilis</i>)	Protected Species	1 km
Hobby (<i>Falco subbuteo</i>)	Protected Species	1 km
Kingfisher (<i>Alcedo atthis</i>)	Protected Species	1 km
Lapwing (<i>Vanellus vanellus</i>)	Priority Species	1 km
Lesser Redpoll (<i>Carduelis cabaret</i>)	Priority Species	1 km
Linnet (<i>Linaria cannabina</i>)	Priority Species	1 km
Reed Bunting (<i>Emberiza schoeniclus</i>)	Priority Species	1 km
Ring Ouzel (<i>Turdus torquatus</i>)	Priority Species	1 km
Spotted Flycatcher (<i>Muscicapa striata</i>)	Priority Species	1 km
Yellow Wagtail (<i>Motacilla flava</i>)	Priority Species	1 km
Skylark (<i>Alauda arvensis</i>)	Priority Species	2 km

NB: All distances are calculated from the centre of the site, National Grid Reference: SU 717766.

LNR = Local Nature Reserve; LWS = Local Wildlife Site; CTA = Conservation Target Area.

European Protected Species = species listed under *The Habitats Directive* Annexes II and IV.

Protected Species = species listed under the *Wildlife and Countryside Act 1981 (as amended)* Schedules 1, 5 and 8.

Priority Species = species listed under the *Natural Environment and Rural Communities (NERC) Act 2006* Section 41.

Field Survey

Introduction

- 3.7 The results of the survey are presented as a series of habitat descriptions for each of the areas on the site. The Existing Habitat Plan is shown on Figure 2 and the habitat descriptions should be read in conjunction with this Plan. Target Notes (TNs) were made on any species or features of particular importance. An indicative plant species list is attached at Appendix B (nomenclature follows Stace, 2019) and a series of site photographs attached at Appendix C.

Habitat Types and Evaluation

Vegetated Garden

- 3.8 Lawns dominated the garden areas with some ornamental planting also present. Species recorded in the lawns were typical of amenity grassland and included perennial rye-grass (*Lolium perenne*), Yorkshire-fog (*Holcus lanatus*), annual meadow-grass (*Poa annua*), yarrow (*Achillea millefolium*), wood-rush (*Luzula* sp.) and ragwort (*Senecio* sp.). Ornamental species included rhododendron (*Rhododendron ponticum*), bay laurel (*Laurus nobilis*), cherry laurel (*Prunus laurocerasus*), heathers (*Erica* spp.), peony (*Paeonia* sp.), hydrangea (*Hydrangea* sp.), privet (*Ligustrum* sp.), firethorn (*Pyracantha* sp.), grape-hyacinth (*Muscari* sp.), roses (*Rosa* spp.), pampas-grass (*Cortaderia selloana*), crocuses (*Crocus* spp.), daffodils (*Narcissus* spp.) and tulips (*Tulipa* spp.).

- 3.9 The garden due to its management regime of regular mowing and maintenance provided limited foraging and sheltering opportunities for wildlife.

Habitat value: Low

Developed Land/Sealed Surface

- 3.10 There were a number of buildings recorded on the site, including the property and various outbuildings with driveway and patio areas. A description of each building has been provided in Table 2.

Table 2: Building Descriptions

Building Ref	Title	Description
B1	Residential dwelling	The residential dwelling was masonry constructed, with a pitched and hipped roof of engineered tiles. The property had timber soffits/fascias, all tightly fitted and well-sealed. There was a single chimney stack, which had lead flashing at the base. Internally, the single roof space was lined with a bitumen-based felt and insulated with mineral wool.
B2	Annexe & Garages	A two-storey annexe and double garage was attached to the northern elevation of B1 and of masonry construction, with a pitched roof of engineered tiles. A single dormer window was present at the southern elevation, with restricted areas of cheek-tile hanging. Internally, as the majority of the roof space was used for accommodation, only a restricted roof space was present, which was lined with a bitumen-based felt and insulated with mineral wool.
B3	Outbuilding (home gym/games room)	The outbuilding was of timber construction with a shallow pitched bitumen-based felt roof and covered porch on the front. No separate roof space present.
B4	Greenhouse	The greenhouse had a concrete base and masonry lower wall, with a metal frame and glass panels above.
B5	Greenhouse	The greenhouse was on a concrete plinth and had a metal frame and glass panels.
B6	Garden shed	The garden shed was of single-skinned timber construction with a pitched bitumen-based felt roof and no separate roof space.
B7	Garden shed	The garden shed was of single-skinned timber construction with a pitched bitumen-based felt roof and no separate roof space.
B8	Garden shed	The garden shed was of single-skinned timber construction with a flat bitumen-based felt roof and no separate roof space.
B9	Store	The store was of single-skinned timber construction with a pitched bitumen-based felt roof and no separate roof space. There were windows on both sides of the property with a few glass panels missing.
B10	Garden shed	The garden shed was of single-skinned timber construction with a pitched bitumen-based felt roof and no separate roof space.

- 3.11 The buildings and hardstanding areas provided limited value for any wildlife.

Habitat value: Low

Hedgerows

- 3.12 A Lawson's cypress (*Chamaecyparis lawsoniana*) hedge was present along the western boundary, with a second cypress hedge adjacent to the outbuildings. A privet hedge was present at the eastern boundary, with a low yew (*Taxus baccata*) and holly (*Ilex aquifolium*) hedge present at the centre of the site, surrounding a patio area.

- 3.13 The hedgerows provide some sheltering and bird nesting opportunities but the ornamental nature and management reduces their overall ecological value.

Habitat value: Low to Intermediate

Urban Trees

- 3.14 A number of individual trees were recorded on site and at the site boundaries. Immature and semi-mature species recorded included weeping pear (*Pyrus sp.*), Lawson's cypress, magnolia (*Magnolia sp.*) and cherry (*Prunus sp.*), with mature tree species including sweet chestnut (*Castanea sativa*) and Himalayan cedar (*Cedrus deodara*) also present.
- 3.15 The trees provide sheltering and foraging opportunities for a range of wildlife and provide some bird nesting habitat.

Habitat value: Intermediate

Fauna

Badgers

- 3.16 No evidence of badgers or their setts was recorded on or adjacent to the site, with the nearest record for badgers returned by TVERC being located over 500 m away. A few mammal runs and disused mammal holes were recorded on the western site boundary (TN 1 on Figure 2), with a disused fox (*Vulpes vulpes*) earth recorded under one of the garden sheds (B7) (TN 2 on Figure 2). However the mammal holes on the western boundary were of restricted size, assessed to have been originally excavated by rabbits (*Oryctolagus cuniculus*) and currently disused.

Bats

- 3.17 No evidence of bats was found during the careful internal and external inspection of the property and various outbuildings recorded on the site. The masonry and mortar of the main dwelling and annexe were in good condition and the roof tiles well-aligned and tightly sealed, with no obvious access points recorded. The restricted area of cheek-tile hanging on the southern dormer window on the annexe was thoroughly inspected, facilitated by ladders and torches, and found to be in good condition and well-aligned with any restricted gaps filled with cobwebs and/or general debris. The timber soffits/fascias and areas of lead flashing were all tightly sealed. The roof spaces were all fully accessed, well-sealed and heavily cobwebbed throughout, with only rodent (rat, mouse and squirrel) droppings recorded. The outbuildings were each assessed to provide **negligible** roosting opportunities for bats, due to their construction type and condition.
- 3.18 The site, being a residential plot, provided only limited foraging opportunities for bats. All of the trees on site were assessed to be under the characterisation **NONE**, due to their age, size and lack of any obvious PRF's.

Herpetofauna

- 3.19 There were no ponds located on the site and therefore no breeding opportunities for amphibians. The site, being a managed residential plot within a residential area, does not provide suitable terrestrial habitat for any species of herpetofauna. Despite a careful search of the site, no species of herpetofauna were seen or found sheltering under any refugia lifted during the survey. In addition, there are no nearby records of any herpetofauna, with the nearest reptile record returned by TVERC being for slow worm, located over 1 km from the site and no records of great crested newts returned within the 2 km study area.

Other Wildlife

- 3.20 Apart from the historic evidence of rabbit and fox already mentioned, and a few common species of birds, either recorded on the site or flying overhead, no other species of any note were recorded.

4.0 DISCUSSION AND RECOMMENDATIONS

- 4.1 The proposals are to construct nine new residential dwellings, with the partial demolition and part retention of the existing dwelling and to include both hard and soft landscaping. The proposed scheme requires the removal of various outbuildings and clearance of some garden vegetation. The majority of the established trees and boundary vegetation will be retained and protected during the works.
- 4.2 There are no habitats of international, national, county or local importance that would be directly affected by the proposals. The site is of overall low ecological value, with the species recorded described as common or abundant and are found in similar places across much of Britain, with no evidence of protected species recorded.
- 4.3 Although there are considered to be no ecological constraints to the redevelopment proposals, a series of generic mitigation measures, as detailed below, could be implemented to reduce any impact the development proposals may have on local wildlife. There is also an opportunity to implement some enhancement measures to increase the nature conservation value of the site in the long term in accordance with Government guidance as set out in National Planning Policy Framework (NPPF) 2023⁶.
- 4.4 A thorough examination of the buildings was completed, with all potential access points and/or roosting opportunities fully inspected for evidence of bats, with none recorded. The attic spaces within the buildings were fully accessed and not complex, allowing a thorough inspection and, therefore, there are considered to be no constraints to the survey findings. Although no evidence of bats was recorded and no further surveys are considered necessary, all site operatives should be made aware of current legislation protecting bats and their roosts. In the unlikely event of any bats being encountered on the site, then works should stop immediately and Natural England or AAe contacted so that appropriate advice can be provided.
- 4.5 Although no evidence of bats was recorded during the survey, it is recommended as a precaution that the restricted area of cheek-tile hanging be carefully removed by the appointed contractor using soft-strip methods, with the following controls implemented:
- all site operatives will be given a toolbox talk on the possibility of encountering bats and the legal protection they and their roosts are afforded (copy of a toolbox talk has been attached at Appendix D for reference);
 - initial works will be carried out with great care, with all roof and ridge tiles removed by hand, lifting each tile clear with two hands rather than lifting the front and rolling the tile backwards which may crush any bats beneath; and
 - tiles will also be checked underneath before being stacked as bats sometimes cling to the underside of tiles.
- 4.6 After this initial soft-strip the rest of the building can be demolished in the usual way. In the unlikely event that any evidence of bats is encountered, works will cease immediately and AAe or Natural England Natural England contacted so that appropriate advice can be provided (**N.B. a European Protected Species Licence may then be required to permit the works to continue**).
- 4.7 It should be noted that all species of wild bird and their nests are protected under the *Wildlife and Countryside Act 1981 (as amended)*. Therefore, site clearance should be timed to avoid the main bird nesting season, which, in general, runs from March to August inclusive. If this is not possible, a check should be carried out prior to any clearance works to ensure there are no active nests present.
- 4.8 All mammals are protected under the *Wild Mammals (Protection) Act 1996* and, therefore, prior to any site works a check should be made to make sure there are no active fox earths present on the site. The use of an animal repellent, such as Scoot, can be used to facilitate this.

⁶ Ministry of Housing, Communities and Local Government (2023). *National Planning Policy Framework*. London.

- 4.9 In order to protect any vegetation to be retained, suitable fencing may be required at certain locations to reduce the possibility of any damage that could be caused during the works. To minimise accidental damage, any overhanging branches should be pruned back to suitable live growth points. All works should be undertaken by a suitably qualified and experienced specialist contractor and should conform to current industry best practice, i.e. BS 3998: 2010 '*Tree Work - Recommendations*'. The retention of these features will maintain existing commuting/foraging routes currently utilised by local wildlife.
- 4.10 As part of the proposals, soft landscaping will be carried out. Where any new planting is proposed it should aim to use native species, but where this is not practicable then species of known value for wildlife can be used. In particular, flowering plants will be of benefit to invertebrate species and shrubs and trees may provide nesting opportunities for birds once they become established.
- 4.11 Any new boundary treatment should be designed to promote permeability of the site to minimise fragmentation and allow free movement of wildlife throughout the site, for example by strengthening/enhancing the existing boundary vegetation, planting up a series of new hedgerows and/or installing post and rail fences. If close boarded fences are required for security reasons these should be minimised and raised slightly off the ground (c. 150-200 mm) to allow animals to pass underneath.
- 4.12 The site could be further enhanced by providing roosting, nesting and sheltering opportunities for a range of species and the creation of new wildlife habitats, such as some of those recommended by the Chartered Institute of Ecology Environment and Management's published Biodiversity Net Gain Good Practice Guidance, and listed below:
- Nest boxes
 - Bug hotels
 - Bat boxes
 - Hedgehog houses
 - Pollinator nest sites
 - Planting wildflowers
- 4.13 The effects of lighting on plants and animals are difficult to assess, but it is thought that lighting can adversely affect invertebrates, birds and bats. Although the site is currently well-lit by on-site sources and neighbouring development, in accordance with best practice, a sensitive lighting scheme will be designed to minimise light spillage and pollution and not directed onto any wildlife boxes installed or onto the boundary vegetation.

5.0 CONCLUSIONS

- 5.1 The proposals are to construct nine new residential dwellings, with the partial demolition and part retention of the existing dwelling and to include both hard and soft landscaping. The proposed scheme requires the removal of various outbuildings and clearance of some garden vegetation. The majority of the established trees and boundary vegetation will be retained and protected during the works.
- 5.2 An ecological survey has been carried out, supplemented by obtaining available baseline data from Thames Valley Environmental Record Centre. The findings from the survey and review of baseline data have provided information to assess the impact of the proposals on species and/or features of ecological/biodiversity value.
- 5.3 There are no habitats of international, national, county or local importance that would be directly affected by the proposals. The site is of overall low ecological value, with the species recorded described as common or abundant and are found in similar places across much of Britain, with no evidence of protected species recorded.
- 5.4 Overall the findings of this ecological appraisal would indicate that there are no ecological constraints to the redevelopment proposals to preclude planning permission being granted. A range of generic mitigation/enhancement measures have been suggested and, if implemented effectively, would reduce the impact of the works on local wildlife and avoid contravention of current legislation, subject to an appropriately worded condition.

233370/HRS

AA Environmental Limited

February 2024

REFERENCES

Agreement on the Conservation of Bats in Europe. HMSO, London

BS 3998: 2010 *Tree Work - Recommendations*.

BS 42020: 2013 *Biodiversity – Code of practice for planning and development*.

Chartered Institute of Ecology and Environmental Management (CIEEM) (2013) *Guidelines for Preliminary Ecological Appraisal*.

http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf

Collins, J. (ed) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4rd edition). The Bat Conservation Trust, London.

Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. E & FN Spon, London.

Ministry of Housing, Communities and Local Government (2023). *National Planning Policy Framework*. London: Ministry of Housing, Communities and Local Government.

Protection of Badgers Act 1992. HMSO, London.

Ratcliffe, D.A. (ed). (1977) *A Nature Conservation Review (vols I & II)*. Cambridge University Press.

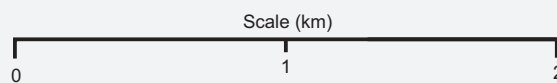
Stace, C. (2019) *New Flora of the British Isles (4th edition)*. Cambridge University Press.

The Conservation of Habitats and Species Regulations 2010 (as amended). TSO, London.

The Wildlife and Countryside Act 1981 (as amended). HMSO, London.

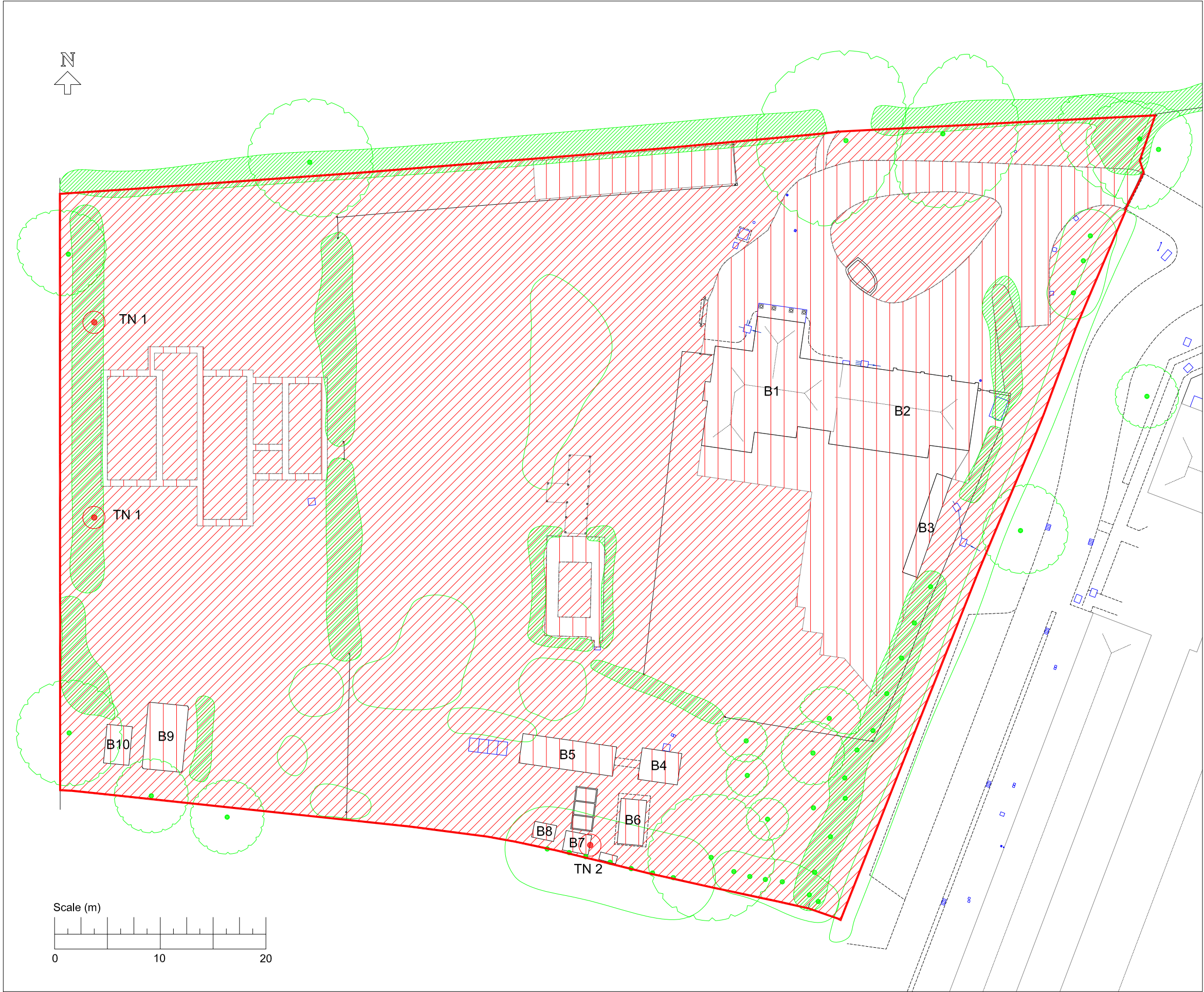
UKHab Ltd (2023) *UK Habitat Classification Version 2.0* at <http://ukhab.org>

Figures



KEY	
Site Boundary:	
2 km Study Area:	
© Crown Copyright. All Rights Reserved. Licence Number 100038323.	

Rev.		Details	Drawn		Date		
			Chkd.				
 Environmental Consultants AA Environmental Ltd Units 4-8 Cholswell Court Shippon, Abingdon Oxon OX13 6HX T: 01235 536042 F: 01235 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk			Project 233370 Brindles Emmer Green		Title Site Location Plan		
Scale As shown		Date 29.02.24		Drawn NAB	Chkd. ARB	Drg. No. Figure 1	Rev.



UK HABS KEY

- Site Boundary*
- Vegetated Garden
- Developed Land/Sealed Surface
- Hedgerow
- Individual Trees
- Target Note
- * Indicative location

Notes

- TN 1 - Single disused mammal hole (indicative of rabbit).
- TN 2 - Disused fox earth under shed.

Rev.	Details	Drawn Chkd.	Date
Project 233370 Brindles Emmer Green			
Title Existing Habitats Plan			
 AA Environmental Ltd Units 4-8 Cholswell Court Shippon Abingdon Oxon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk			
Scale As shown	Date 29.02.24	Drawn NAB	Chkd. ARB
Drg. No. Figure 2			Rev.

Appendix A

Summary of Ratcliffe Criteria

Fragility – some habitats, communities and species are particularly sensitive to environmental change and as such tend to be rare.

Rarity – the threat of loss of a particular habitat or species lends value to the organism and the site it occupies. Whether a species has rarity value is largely dependent upon the context, as a species or habitat can be internationally rare, but relatively common locally or nationally. Likewise, a nationally rare species can in some circumstances be more common at internationally level.

Size (area or extent) – size does play an important part in determining the ecological interest of an area, but is also a relative concept. For example, a 30 acre woodland or a one acre meadow could have a similar degree of nature conservation importance.

Diversity – the diversity of a site can be expressed in a number of ways and both low and high diversity can have a high nature conservation value under different circumstances.

Potential value – some sites have the potential to provide greater nature conservation interest than presently exists.

Position within the Ecological/Geographical Unit – a site which is near or adjacent to other similar habitats may have a higher nature conservation value than an isolated one because the range of fauna can be greater.

Typicalness – certain habitats have become important as they are good examples of what is, or has historically been, typical of the area. Efforts have been made to safeguard representative areas to prevent what was once common becoming fragmented or rare.

Recorded history – a well-documented site with detailed biological and/or natural history records presents a valuable insight into the ecology of a site. Such information is important for current and future management.

Naturalness – this is a measure of the degree to which an area has been modified by human activity. In England unmodified habitats are extremely rare being restricted to remote, inaccessible areas such as cliffs, and some saltmarshes. The bulk is either semi-improved, improved or artificial.

Intrinsic Appeal – this refers to value in a popular rather than ecological sense, and highlights the fact that value is also derived from society's preferences for landscape and other aesthetic features and is not just based on ecological considerations.

Appendix B

PLANT SPECIES LIST

<i>Achillea millefolium</i>	Yarrow
<i>Calluna spp.</i>	Heathers
<i>Castanea sativa</i>	Sweet chestnut
<i>Cedrus deodara</i>	Himalayan cedar
<i>Chamaecyparis lawsoniana</i>	Lawson's cypress
<i>Cortaderia selloana</i>	Pampas-grass
<i>Crocus spp.</i>	Crocuses
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hydrangea sp.</i>	Hydrangea
<i>Ilex aquifolium</i>	Holly
<i>Laurus nobilis</i>	Bay laurel
<i>Ligustrum sp.</i>	Privet
<i>Lolium perenne</i>	Perennial rye-grass
<i>Luzula sp.</i>	Wood-rush
<i>Magnolia sp.</i>	Magnolia
<i>Muscari sp.</i>	Grape-hyacinth
<i>Narcissus spp.</i>	Daffodils
<i>Paeonia sp.</i>	Peony
<i>Poa annua</i>	Annual meadow-grass
<i>Prunus laurocerasus</i>	Cherry laurel
<i>Prunus sp.</i>	Cherry
<i>Pyracantha sp.</i>	Firethorn
<i>Pyrus sp.</i>	Weeping pear
<i>Rhododendron ponticum</i>	Rhododendron
<i>Rosa spp.</i>	Roses
<i>Senecio sp.</i>	Ragwort
<i>Taxus baccata</i>	Yew
<i>Tulipa spp.</i>	Tulips

Appendix C



Photograph 1: Showing the front of the Residential Dwelling (B1).



Photograph 2: Showing the front of the attached Annexe/Garages (B2).



Photograph 3: Showing the rear of the Residential Dwelling (B1) and attached Annexe/ Garages (B2), with well-maintained garden.



Photograph 4: Showing the rear of the Annexe/Garages (B2), with well-sealed cheek tile hanging and adjacent outbuilding (B3).

Rev.	Details	Drawn	Date
		Chkd.	
PROJECT			
233370 Brindles Emmer Green			
TITLE			
Photograph Record Sheet 1 (Photographs 1 to 4)			
 Environmental Consultants AA Environmental Ltd Units 4-8 Cholswell Court Shippon Abingdon Oxon OX13 6HX T: 01235 536042 F: 01235 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk			
Scale	Date 29.02.24	Drg No.	
NTS	Drawn NAB	Chkd. ARB	Rev. Appendix C



Photograph 5: Showing the well-maintained garden and cypress hedgerow.



Photograph 6: Showing the remaining garden vegetation.



Photograph 7: Showing a number of outbuildings (B4, 5 & 6) set within the garden area.



Photograph 8: Showing the timber constructed store (B9).

Rev.	Details	Drawn Chkd.	Date
PROJECT 233370 Brindles Emmer Green			
TITLE Photograph Record Sheet 2 (Photographs 5 to 8)			
 AAe Environmental Consultants		AA Environmental Ltd Units 4-8 Cholswell Court Shippon Abingdon Oxon OX13 6HX T: 01235 536042 F: 01235 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk	
Scale	Date 29.02.24	Drg No.	Rev.
NTS	Drawn NAB	Chkd. ARB	Appendix C

Appendix D

TOOLBOX TALK:

BATS

Did you know?

- Bats are the world's only flying mammal.
- There are 17 species of bat known to be breeding in the UK, 6 of which are endangered or rare and 6 are classed as vulnerable.
- Bats can be found across the country in urban and rural locations.
- They are often sighted at dusk as they leave their roost, flying around hedgerows, woodland and waterbodies, feeding on insects.
- Throughout the year bats will often change their roost, depending upon the season.
- Usually a pregnant female will only have one baby a year, this makes colonies vulnerable to population decline.
- During the winter bats hibernate and may not wake up, even if disturbed. Therefore it's important not to work on sites with bats during these months.
- Bats may not use the same roost throughout the year, however they are legally protected with or without a bat occupying them.

Identification

- You may find bats in any number of places, they tend to prefer dark, quiet spots with good shelter, such as holes and cracks in trees, roofs and walls of buildings, under bridges, old tunnels and in caves.
- Signs of bat presence include discarded moth wings, staining around crevices and small mouse-like droppings which crumble easily.

Legislation

- All bats and their roosts are protected by UK and European Law. This makes it **illegal to kill, injure, capture or disturb bats** or obstruct access to, damage or destroy their roosts and protects important feeding areas from damage or disturbance.
- Under law, a roost is any structure or place used for shelter or protection.

Site Controls

- There is always a **risk** that bats, as they move between different roost sites and occupy new roosts, could be encountered during site works.
- **If any bats are encountered during works the following controls must be applied to avoid breaking the law:**
 1. If bats are discovered/suspected works must stop **immediately** with any bat left in-situ and AAe immediately contacted (contact details above).
 2. If any injured bats are found during the works AAe would care for them and where possible be released in the same location once recovered.
 3. During works staff must wear gloves in case of accidental contact with bats.
 4. Any roof tiles will be lifted straight up, rather than being rolled over, minimising the risk of harming bats which may be sheltering underneath.
 5. Areas must be fully checked for any bats or their evidence prior to filling any gaps and repointing any brickwork.
 6. Any lighting must be installed must avoid illuminating vegetation and or bat boxes/access points.

These controls have been put in place to protect all site operatives from breaking the law. You're not expected to be able to identify bats or their presence so remember, **if in doubt shout and contact the relevant person.**

Key Contacts

AA Environmental Ltd, Units 4-8 Cholswell Court, Shippon, Oxfordshire, OX13 6HX
Tel: 01235 536042



Brown long-eared bat.



Lesser horseshoe bat in rail tunnel.



Common pipistrelle bat.

