



Preliminary Ecological Appraisal and Nocturnal Bat Survey Report

Report prepared for: Mr Rob Evans

Orangeberg

Hornbury Hill

Minety

Malmesbury

SN16 9QH

June 2026

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Methods used to prepare this report, including those carried out in the field followed The Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.

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1 INTRODUCTION

- 1.1 This report provides the results of a Preliminary Ecological Appraisal and two dusk nocturnal bat surveys undertaken at Orangeberg, Hornbury Hill, Minety, Malmesbury SN16 9QH (central Ordnance Survey (OS) Reference SU 03266 89923). The site location is shown in Fig. 1. and survey boundary in Figure 2.
- 1.2 Development proposals are described as a residential scheme comprising two new-build dwellings with associated driveways and gardens.
- 1.3 The findings included in this report are based on a field survey undertaken during October 2025 and subsequent Nocturnal Bat Surveys undertaken during May and June 2026 by Cotswold Environmental Ltd. The purpose of the survey was to undertake an appraisal of the site for its potential ecological value to notable and protected wildlife, and to look for evidence of such species. The survey results provide information to determine the likely ecological impact the proposed development will have on wildlife species, and to inform the level of further survey effort and mitigation required to comply with relevant nature conservation policies and legislation. The evaluation and findings in this report can be used by Wiltshire Council in their view of a planning application. Survey results detailed within this report should be considered valid for a period of 18 months from the survey date.
- 1.4 All survey and assessment work was completed in accordance with official assessment guidelines¹ and largely followed that recommended by the Chartered Institute for Ecology and Environmental Management (CIEEM)² and follows the British Standard Code of Practice³.

Survey Objectives

- To identify and assess the habitats present within the site and evaluate their ecological value.
- To determine the suitability of the site to support protected and notable species, and to identify any evidence of their presence.
- To identify ecological constraints and opportunities associated with the proposed development.
- To assess the potential ecological impacts of the proposed development on habitats and protected species.
- To provide recommendations for avoidance, mitigation, compensation and enhancement measures, where required.
- To determine whether any further ecological surveys or assessment are necessary.

¹ Collins J (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th edn. Bat Conservation Trust, London.

² CIEEM (2017) Guidelines for Ecological Report Writing. CIEEM, Winchester.

³ British Standards Institution (2013) BS 42020:2013. Biodiversity – Code of practice for planning and development. British Standards Institution, London.

2 METHODOLOGY

Desk Study

- 2.1 A records search was undertaken using freely available desktop resources such as the Multi-Agency Geographic Information for the Countryside⁴ (MAGIC) website. MAGIC was used to search for records of designated sites, habitats and granted European Protected Species Licenses (EPSLs) within a 2km radius. Google Earth⁵ was also used to study the nearby landscape.

Field Survey

- 2.2 Ecological consultant Tom Charlton MSc MCIEEM MRSB carried out a field visit on Tuesday 14th October 2025.
- 2.3 The field visit involved a walkover using visual encounter survey techniques. The dominant vegetation structure was assessed, allowing habitats on site to be valued for their ecological importance to protected wildlife. Habitats were classified using the UK Habitat Classification Version 2.0 (UKHab V2)⁶, which provides a standardised framework for describing habitat types in the UK.
- 2.4 Binoculars were also used to scan for features likely to support protected species. All protected species were considered during the assessment and all wildlife species were recorded. The work was completed largely following methodologies set out by the Chartered Institute for Ecology and Environmental Management (CIEEM) and British Standard Code of Practice.

Species

- 2.5 All protected species were considered during the survey. Only those considered likely to utilise the site are mentioned in this report.

Bats

- 2.6 Survey effort was completed in line with official assessment guidelines⁷ and largely followed that recommended by the Chartered Institute for Ecology and Environmental Management (CIEEM)⁸ and British Standard Code of Practice⁹. The assessment followed the standard methodology. The site was searched using visual encounter survey techniques. Potential bat movement corridors and movement

⁴ Multi-Agency Geographical Information for the Countryside (MAGIC). Crown Copyright and database rights [2025]. Ordnance Survey 100022861. Available at: <http://www.magic.gov.uk/>

⁵ https://www.google.co.uk/intl/en_uk/earth/

⁶ UKHab Ltd (2023). UK Habitat Classification Version 2.0. Available at: <https://ukhab.org/>

⁷ Collins J (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th edn. Bat Conservation Trust, London.

⁸ CIEEM (2017) Guidelines for Ecological Report Writing. CIEEM, Winchester.

⁹ British Standards Institution (2013) BS 42020:2013. Biodiversity – Code of practice for planning and development. British Standards Institution, London.

barriers were assessed and noted. During the site visit, where possible, all suitable areas were examined for evidence of bats.

2.7 Trees deemed suitable for use by roosting bats were identified at species level, their specific features were photographed, and a GPS recording was mapped. Notable bat roosting features may include:

- Rot holes
- Woodpecker holes
- Horizontal and/or vertical cankers in the stems of branches
- Knot holes
- Scar crevices
- Loose/flaking bark
- Covering of dense ivy
- Bat boxes

Trees were classified by their PRFs in order to establish their likelihood of supporting roosting bats. A scoring system was applied to the tree using the following criteria:

PRF - I : Low probability of bat interest.

- Trees with low bat interest are usually trees without any deadwood or holes.

PRF - M: Medium probability of bat interest.

- Trees within this category will contain all the obvious roost features such as holes, cracks and crevices and loose bark.

Table 1: Guidelines summary for assessing potential bat roost suitability

Suitability	Description of building, tree or structure
None	The building, tree, or structure has no features with the potential to support roosting bats and is entirely unsuitable. This includes structures that are fully sealed, modern, well-lit, and/or in exposed locations with no access points, no internal voids, and high levels of human disturbance.
Negligible	The building or tree has minimal features (e.g. small gaps or cracks), but these are assessed as highly unlikely to be used by bats due to their condition, location, or lack of access to suitable internal voids.
Low	A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, potential roost sites not suitable for larger numbers or regular use (i.e. maternity or hibernation).
Moderate	A structure or tree with one or more potential roost sites that could be used by

	bats, but unlikely to support a roost of high conservation status.
High	A structure or tree 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.
Confirmed roost	Evidence of bats or use by bats found.

Nocturnal Bat Survey

- 2.8 Two dusk nocturnal bat surveys were carried during May and June 2026 following recommendations from the preliminary survey. Survey effort was carried out by ecologists Tom Charlton MSc MCIEEM MRSB, Jason Skinner (Natural England Class Level 2 bat survey licence holder), and Kayleigh Stewart. Two surveyors supported by three Night Vision Aids were used to cover areas of the structure where PRFs and/or potential entry/emergence points were identified during the PRA. Nocturnal bat survey effort was completed in line with official assessment guidelines¹⁰.
- 2.9 During the surveys, the surveyors took up a static positions 15 minutes prior to and 1.5 hours after sunset. Visual observations of bats were noted, and bat species were identified using bat detectors. The information recorded included weather, timings, whether bats emerged or re-entered the building, direction of travel, species and activity e.g. foraging, commuting. Equipment used during the nocturnal surveys included Echo Meter Touch II recorders coupled to Apple and Android tablets and heterodyne bat detectors (Elekon Bat Scanner Stereo).
- 2.10 Nocturnal bat surveys were undertaken using infrared (IR) camera equipment to supplement direct observations and acoustic survey methods. Surveys utilised a Pixfra Arc A613 thermal camera, and Canon XA-series cameras (models XA11 and XA20) in conjunction with Nightfox ARC wide-beam infrared floodlights (850 nm wavelength) to provide continuous illumination and recording coverage of identified bat access points and flight paths throughout the survey period. The 850 nm wavelength was selected as it provides stronger illumination and improved survey performance over greater distances compared to higher wavelength alternatives. Cameras and infrared lighting were positioned strategically around the building to maximise visibility of identified Potential Roost Features, access points, and likely bat flight paths, whilst minimising shadowing and blind spots as far as reasonably practicable. The use of night vision aid technology allows improved detection and verification of bat emergences and activity during low-light conditions, in accordance with current best practice guidance.¹¹
- 2.11 Recorded bat calls were analysed using Kaleidoscope 5.1.9i where required.
- 2.12 Temperatures were monitored onsite using an Elitech RC-51 Temperature Logger.

¹⁰ Collins J (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th edn. Bat Conservation Trust, London.

¹¹ Bat Conservation Trust (2026). Bat Emergence Surveys with Night Vision Aids - A Technical Guide for Professional Ecologists. Bat Conservation Trust, London.

Badger

2.13 All habitats within the site boundary were inspected for badger *Meles meles* activity. Whilst on site, the search included evidence of:

- Scratching posts
- Faeces
- Latrines
- Guard-hairs
- Paw prints
- Trackways

European Hedgehog

2.14 The site was assessed for its suitability to support European hedgehog *Erinaceus europaeus*, a UK Biodiversity Action Plan species and Species of Principal Importance under Section 41 of the NERC Act 2006. Features such as hedgerows, scrub, dense vegetation, log piles, and gaps under fencing were checked for signs of hedgehog activity, including droppings, tracks, or nests. Habitat connectivity with surrounding green spaces was also considered to assess the site's value for hedgehog movement.

Reptiles and Amphibians

2.15 Habitats were assessed for their potential to support reptiles and amphibians, including great crested newt *Triturus cristatus* (GCN). Waterbodies typical of those utilised for breeding and foraging activity, and terrestrial refugia suited to sheltering and basking such as waste heaps and plastic/metal/timber sheeting were noted if present (see limitations). In addition, any dense vegetation including tall ruderal and scrub that is connected to hedgerows and linear tree features was inspected during the assessment.

Nesting Birds

2.16 The survey also included an internal and external inspection of the surveyed building for evidence of common nesting birds as well as notable and protected species. Inside the building, artificial light was used to search for birds, dead birds, dead chicks, nesting material and eggs.

2.17 All accessible elements of the surveyed building containing nesting potential were checked to see if the development would have any adverse effects on nesting birds. The active nests of all wild birds are protected under the Wildlife & Countryside Act 1981 (as amended). An active nest is one that is being built, containing eggs or chicks, or on which fledged chicks are still dependent. Birds within Schedule 1, such as barn owl *Tyto alba*, are also protected from disturbance during the nesting period.

- 2.18 The presence of notable and protected bird species and any signs indicative of their past and present use was taken into consideration during the inspection of the building. Likely perches and nesting locations were checked, and all ledges and cavities were examined for nesting debris where accessible.

Limitations

- 2.19 The absence of evidence for a particular species does not confirm its absence from the site. Wildlife, including protected species, can be elusive or transient, and may use habitats or structures intermittently, meaning they can go undetected during a single visit.
- 2.20 Evidence of bat activity, such as droppings or feeding remains, can degrade quickly due to weathering or be removed by wind or rain, particularly around external building features. Therefore, the absence of such signs should not be taken as confirmation that bats are not present.
- 2.21 Many UK bat species are crevice-dwellers and can roost in small or concealed spaces such as gaps under roof tiles, behind fascia boards, or within wall cavities. These features are often inaccessible and cannot always be fully inspected during a Preliminary Roost Assessment (PRA).
- 2.22 For Health & Safety purposes the roofs of the buildings were largely assessed from ground level.
- 2.23 Local Biological Records were not obtained. Given the modest scale and scope of the proposed development, the lack of data from the Local Environmental Records Centre (LERC) is not considered likely to materially affect the conclusions drawn in this report.

3 RESULTS

Desk Study

Designated sites

- 3.1 According to the MAGIC website, two statutory designated sites exist within a 2 km radius (see Table 2 below) although no non-statutory designated sites were identified within the same radius (see limitations) and no internationally designated sites, such as special areas of conservation (SACs) designated for their bat populations, exist within a 10 km radius of the site.

Table 2: Site Designations

Site Name	Designation	Distance	Direction	Relevant Information
Distillery Farm Meadows	SSSI	1.1 km	South-East	A 18.98 - ha site of biological interest comprised of Lowland Meadow
Ravensroost Wood	SSSI	1.9 km	South	A 43.63 - ha site of

				biological interest comprised of broadleaved woodland
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SSSI = Site of Special Scientific Interest

Granted European Protected Species Licences (EPSL) within a 2km radius

- 3.2 According to the MAGIC database, three EPS licence have been granted for bats within a 2 km radius of the site, and one EPS licence has been granted for Great Crested Newts (GCN). Additionally, two Great Crested Newt (GCN) pond surveys have been undertaken within the same radius, the results of which are shown below in Table 3.

Table 3: Granted EPSLs within 2km of survey site

Species	Distance	Direction	Year Granted
BLE, L-Horse, Natt	870 m	North	2019
C-Pip, Natt	1.3 km	North-East	2018
SER, S-Pip	110 m	North-West	2018
GCN	150 m	South-East	2010
GCN pond survey - positive	860 m	South-West	2017
GCN pond survey – negative	1.8 km	South-East	2018

S.Pip = *Pipistrellus pygmaeus*, BLE = *Plecotus auritus*, C-Pip = *Pipistrellus pipistrellus*, L-Horse = *R. hipposideros*, SER = *Eptesicus serotinus*, Natt = *Myotis nattereri*, GCN= *Triturus cristatus*

Surrounding Habitats

- 3.3 The property is situated in a semi-rural location characterised by a mix of residential and agricultural land uses, with medium-density housing primarily to the north and east, and agricultural buildings and farmland to the south and west. The wider landscape comprises a mosaic of arable fields and pastoral land interspersed with a well-established network of mature hedgerows, providing ecological connectivity across the area.
- 3.4 Consultation of the MAGIC database identified several areas of ecological interest within the surrounding landscape, including small patches of Good Quality Semi-Improved Grassland, the nearest located approximately 1.4 km to the south-east, and an area of Coastal and Floodplain Grazing Marsh situated 1.9 km to the north-east. Several parcels of Lowland Meadow habitat occur nearby, the closest being approximately 220 m to the south, along with several Deciduous Woodland areas, the nearest located 580 m to the south-west. In addition, three parcels of designated Ancient and Semi-Natural Woodland are present within the wider landscape, including Old Copse (850 m south-east), Waits Wood (950 m south) and Ravensroost Wood (1.9 km south).

Local waterbodies

- 3.5 According to the MAGIC database, two small ponds are located within 250 m of the site: Pond 1 was identified 40 m to the north-west (GR SU 02349 90632), and Pond 2 located 180 m to the south-east (GR SU 02540 90507). The location of Pond 1 was accessed, with no waterbody remaining. Pond 2 lies on private land and was therefore not accessed for assessment.

Field Survey

- 3.6 Weather conditions during the daytime assessment are shown in the below table. Temperatures were recorded onsite using an Elitech RC-51 Temperature Logger.

Table 4: Weather conditions during Preliminary Ecological Appraisal

Date	Start	Finish	Temp °C	Wind	Cloud %	Rain	Notes
14/10/2025	10:30	12:00	15	Calm	70	Dry	N/A

Onsite Habitats

- 3.7 The application site comprises a residential plot containing a dilapidated detached bungalow and surrounding garden. The property has roadside access present at its northern boundary. The majority of the plot is occupied by heavily disturbed, sparsely vegetated land of low structural and botanical diversity. No ponds exist within the survey area and no ponds are to be destroyed or impacted by the proposed works.
- 3.8 The individual habitat types recorded at the site are described under the sub-headings below, using the UK Habitat Classification (UKHab) framework, with the location and extent of each illustrated in the Habitat Map in Figure 2.

u1b5 – Buildings

- 3.9 A single-storey, concrete-rendered bungalow is centrally located within the site. The structure is dilapidated and has been unoccupied for an extended period.

u1f – Sparsely vegetated urban land

- 3.10 The surrounding garden comprises heavily disturbed and unmanaged urban habitat associated with the former residential curtilage. Large areas of the ground are covered by worn concrete hardstanding and gravel, interspersed with compacted bare earth and patches of unmanaged amenity grassland transitioning to ruderal vegetation. The habitat is generally species-poor, patchy and fragmented, with limited structural diversity and evidence of prolonged neglect. Vegetation is predominantly low-growing, with scattered tussocks and emergent pioneer species colonising cracks, edges and disturbed substrates. Species recorded include perennial rye-grass (F), annual meadow-grass (F), daisy (F), dandelion (F), white clover (O), creeping buttercup (O), ribwort plantain (O), common nettle

(O), cleavers (O), broad-leaved dock (O), bristly oxtongue (O), groundsel (R), prickly sow-thistle (R), smooth sow-thistle (R), chickweed (O) and shepherd's-purse (R).

Individual Trees

- 3.11 Eight individual mature trees are present within the site, comprising beech *Fagus sylvatica*, ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus* and apple *Malus domestica*. The trees are scattered across the garden area and appear to be remnants of former ornamental and boundary planting. Beech and ash specimens are semi-mature to mature with well-developed canopies, while sycamore and apple are smaller, likely formerly managed or self-seeded. Ground beneath the trees is sparsely vegetated.

h2a11 - Native Hedgerow with Trees

- 3.12 A native species hedgerow runs along the northern boundary of the site, comprising a sparse and unmanaged linear feature with intermittent shrub cover and scattered mature trees. The shrub layer includes hazel *Corylus avellana*, elder *Sambucus nigra*, field maple *Acer campestre* and laurel *Laurus nobilis*, occurring in loose, discontinuous patches with frequent gaps, including an approximate 5 m opening that provides access into the site. The hedgerow also supports occasional standard trees of Norway spruce *Picea abies*, ash *Fraxinus excelsior* and oak *Quercus robur*, with two prominent mature specimens of ash and oak recorded at approximately 80-90 cm diameter at breast height. Although non-native species are present, they occur only in low numbers and do not form a significant component of the hedgerow.

Notable Flora

- 3.13 No notable plant species were identified during the survey, and no Schedule 8 or 9 plant species of the Wildlife and Countryside Act 1981 (as amended) were identified on site (see limitations).
- 3.14 An indicative plant species list is provided in Table 5: Plant Species Recorded Onsite. Site habitats are shown in Fig 2: Site Map.

Species

Bats

- 3.15 The surveyed building is a single-storey bungalow with concrete-rendered block-built construction supporting a pitched, timber-framed hipped roof clad with interlocking concrete tiles. Concrete ridge tiles are present along the ridgeline. A brick-built chimney is located on the roof, lined at its base with lead flashing. Timber soffits are present along the roof eaves, and sparse ivy cover is noted on sections of the external walls. A mono-pitched boot room adjoins the western elevation, featuring a flat roof lined with bitumen felt.

- 3.16 Externally, the concrete-rendered walls exhibit areas of weathering and cracking, with sections of render missing and exposing the underlying masonry. Sparse ivy cover is present but is limited in extent and does not provide suitable opportunities for roosting bats. Roofing tiles are generally flush and tightly fitted; however, several slipped and cracked tiles were recorded, creating isolated gaps. A low number of visible gaps caused by failed bedding mortar were present along the concrete ridge tiles. The lead flashing at the base of the chimney is partially raised, creating additional crevice features. Timber fascia boards are deteriorated with evidence of decay and missing sections, resulting in multiple crevices and cavities suitable for bat ingress. Broken window panes are present at all elevations; however, these are boarded over with timber and therefore do not permit access to the interior.
- 3.17 Internally, a single loft void can be accessed via a traditional loft hatch and ladder. Inspection of the loft void revealed exposed timber rafters and a bitumen felt underlay, which was damaged and sagging in areas leaving the underside of roof tiles exposed. Light ingress was present at various locations throughout the loft, including through damaged and sagging felt, and gaps at the roof edge; these features would offer suitable access points for bats to the interior.
- 3.18 **No bats, droppings, or additional field signs (e.g. staining or feeding remains) were recorded during the building inspection.**
- 3.19 Two trees located within the northern boundary hedgerow, an ash (grid reference SU 02388 90632) and an oak (grid reference SU 02393 90637), were identified as supporting potential roosting features (PRFs), including rot holes, vertical slits and hazard beams. All other trees onsite were assessed from ground level and determined to offer negligible bat roosting potential.
- 3.20 Habitats immediately surrounding the site, including trees and hedgerow present at the site boundary, are likely to offer suitable foraging and commuting opportunities for local bat populations.

Nocturnal Bat Survey Results

Survey One

- 3.21 During the first nocturnal survey, undertaken on the 15th of May 2026, six bat species were recorded: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P.pygmaeus*, noctule *Nyctalus noctula* whiskered/Brandt's *Myotis mystacinus/brandtii*, Daubenton's bat *Myotis daubentonii* and brown long-eared bat *Plecotus auritus*.
- 3.22 Activity was dominated by regular commuting passes over the site grounds and frequent foraging activity within the area surrounding the surveyed building by both common and soprano pipistrelle. Pipistrelle activity began at 21:09 h, with activity remaining near-continuous throughout the remainder of the survey effort.

3.23 Single, isolated and non-visual passes by brown long-eared bat, whiskered/Brandt's bat and Daubenton's bat were recorded at 21:38 h, 21:50 h and 22:03 h respectively. Additionally, a total of three non-visual registrations from commuting noctule were recorded during the survey, at 21:02 h, 21:14 h and finally at 21:47 h.

3.24 **At no point were any bats observed emerging from or re-entering the structure.**

Survey Two

3.25 During the second nocturnal survey completed on the 5th of June 2026, activity from five bat species was recorded: common pipistrelle, soprano pipistrelle, noctule, Daubenton's bat and whiskered/Brandt's bat.

3.26 Common pipistrelle was the most frequently recorded species, with prolonged foraging activity and regular passes observed around boundary trees, starting at 21:35 h, and continuing through much of the survey until 22:20 h. Soprano pipistrelle activity was reduced compared to the first survey and comprised commuting passes by two individuals through the site in a westerly direction at 21:45 h and 22:09 h.

3.27 A single whiskered/Brandt's bat was observed commuting through the grounds in a southerly direction at 22:05 h. Daubenton's bat activity was limited to two non-visual registrations at 22:22 h and 22:26 h, whilst noctule activity comprised a single non-visual pass at 22:24 h.

3.28 **At no point were any bats observed emerging from or re-entering the structure.**

Table 5: Weather conditions during nocturnal bat survey

Date	Start	Finish	Sunset	Start/finish Temp °C	Wind	Cloud	Rain	Notes
15/05/2026	20:35	22:25	20:53	12/9	Still	40%	Dry	N/A
05/06/2026	21:00	22:50	21:18	13/11	Light Breeze	80%	Dry	N/A

Badger

3.29 The survey area provides limited habitat suitability for badger, consisting primarily of sparsely vegetated land offering minimal foraging potential. No evidence of badger activity was recorded within or immediately adjacent to the property boundary during the field survey. Specifically, no sett entrances, latrines, foraging signs, footprints, or hairs were identified. The surrounding pastoral fields and hedgerows in the wider landscape offer more suitable foraging and commuting opportunities for the species.

European Hedgehog

3.30 No field signs of hedgehog (such as tracks or droppings) were recorded within the survey area. The site lacks dense vegetation or scrub that would typically provide suitable nesting or refuge

opportunities. The hedgerow along the northern roadside boundary may offer some limited foraging and transient shelter; however, its sparse structure significantly restricts its potential to support this species.

- 3.31 Habitats located beyond the site boundary, such as the nearby grassland bound by mature hedgerows, offer more favourable conditions for foraging and refuge.

Nesting Birds

- 3.32 The bungalow offers very limited nesting potential for birds. The structure lacks ledges, cavities, or open eaves suitable for nesting by larger species, while the small gaps observed in the soffits may offer access for small passerine species such as blue tit *Cyanistes caeruleus*.
- 3.33 Trees and a native hedgerow would provide additional nesting opportunities for local birds, though no bird nests were recorded during the inspection, and no evidence of nesting material, droppings, or feathers was identified.

Reptiles and Amphibians

- 3.34 No reptiles or amphibians were recorded during the site walkover survey. The application site comprises heavily disturbed and sparsely vegetated ground with limited structural complexity, dominated by hardstanding, compacted bare earth and fragmented patches of ruderal vegetation. These habitats offer negligible suitability for amphibian breeding or terrestrial refuge, and only very limited potential for use by individual widespread reptile species seeking occasional basking or transient movement.
- 3.35 A small quantity of discarded waste material, including timber and artificial debris, is present in isolated piles within the garden area; however, these features are limited in extent and do not form continuous or well-connected refugia of a scale typically associated with supporting reptiles. Vegetation across the site lacks tussocky structure and does not provide cover or mosaic features suitable for foraging or sheltering reptiles.
- 3.36 The native hedgerow along the northern boundary provides only marginal connective habitat. The feature is of limited length, is fragmented by an existing access opening, and is located immediately adjacent to a road, reducing its effectiveness as a dispersal corridor. Furthermore, the hedgerow supports only a sparse understorey and offers limited structural complexity. As such, its suitability for commuting or dispersing reptiles and amphibians is considered to be low.
- 3.37 Two ponds were identified within a 250 m radius of the site boundary from desktop mapping. During the survey, the closest pond, located approximately 40 m to the north-west of the site, was found to no longer be present. A second pond occurs on private land and access was not obtained to confirm its status or suitability for amphibians. No waterbodies are present within the application site, and no aquatic habitats are to be directly or indirectly impacted by the proposed works.

4 DISCUSSION & RECOMMENDATIONS

Habitats

- 4.1 The application site comprises a single residential plot containing a dilapidated detached bungalow and surrounding garden located within a semi-rural setting characterised by a mosaic of agricultural land, scattered woodland and low-density residential development. Onsite habitats are limited in both extent and ecological value, consisting predominantly of heavily disturbed, sparsely vegetated urban land with extensive areas of worn concrete, gravel and bare ground interspersed with species-poor ruderal vegetation and unmanaged amenity grassland. A small number of mature trees and a sparse native hedgerow with trees occur along the site boundary, providing limited structural diversity but no Priority Habitats within the site itself.
- 4.2 Proposals comprise the demolition of the existing bungalow and the redevelopment of the plot. As a result, areas of sparsely vegetated urban land, gravel and concrete hardstanding, bare ground and unmanaged ruderal vegetation will be lost. These habitats are of low ecological value, being heavily disturbed, species-poor and lacking structural diversity. No loss of Priority Habitats will occur. The existing boundary trees and native hedgerow are to be retained, maintaining habitat continuity along the site edges.
- 4.3 Although no designated or Priority Habitats are present within the site, two Sites of Special Scientific Interest (SSSIs) occur within 2 km, the closest being Distillery Farm Meadows SSSI located 1.1 km to the south-east, designated for its Lowland Meadow habitat. Ravensroost Wood SSSI lies 1.9 km to the south. Both sites are spatially separated from the proposed development by agricultural land and established residential areas, and there is no direct ecological connectivity. No impacts to these statutory designated sites are anticipated as a result of the proposed development. However, it is recommended that nocturnal lighting schemes are sensitively designed to prevent unnecessary light spill into adjacent habitats, to protect nocturnal fauna and maintain ecological functionality of boundary habitats.

Species

Bats

- 4.4 The building contains a limited number of features suitable for crevice-dwelling bats, including isolated lifted roof tiles, gaps beneath raised lead flashing and localised areas of deteriorating fascia boards. The presence of a bitumen felt roof underlay further increases suitability for crevice-roosting species. In addition, isolated access points into the loft void, created by damaged felt and light ingress around

the roof edges, provide potential opportunities for void-dwelling species such as brown long-eared bat. However, despite the presence of these access points, use of the internal roof space by void-dwelling bats can be reasonably discounted, as the loft was fully accessible and subject to a detailed internal inspection during which no bats or evidence of roosting activity, including droppings, feeding remains or staining, were identified. The combination of the remaining external roosting features and the availability of suitable surrounding foraging and commuting habitat nevertheless results in the building being assessed as having moderate roosting suitability for bats.

- 4.5 In line with the Bat Conservation Trust Guidelines (2023), two dusk nocturnal emergence/re-entry surveys were undertaken to determine presence or likely absence of roosting bats. These surveys were undertaken during the optimal bat activity season of May and June.
- 4.6 The nocturnal surveys undertaken during May and June 2026 recorded activity from six bat species: common pipistrelle, soprano pipistrelle, whiskered/Brandt's *Myotis*, Daubenton's bat, brown long-eared bat and noctule. Activity was dominated by common pipistrelle and soprano pipistrelle, with regular foraging and commuting activity recorded within the site grounds and around boundary trees. Common pipistrelle was consistently the most frequently recorded species across both surveys, with prolonged periods of foraging activity observed within the surroundings of the surveyed structure. Soprano pipistrelle was also regularly recorded, undertaking commuting passes and foraging behaviour within the site grounds. Activity from noctule, whiskered/Brandt's bat, Daubenton's bat and brown long-eared bat was comparatively limited and comprised occasional commuting passes and isolated non-visual registrations.
- 4.7 No bats were observed emerging from or re-entering the surveyed building during either survey. The activity recorded was therefore considered to relate to bats commuting through and foraging within the wider landscape, rather than use of the surveyed structure as a roost. Accordingly, the results indicate the likely absence of a bat roost being present, and no further bat survey effort is considered necessary. Furthermore, the proposed works may proceed without the need for a bat mitigation licence.
- 4.8 All personnel must remain vigilant for bats throughout the duration of works. Should a bat be encountered, all works in the immediate area must cease immediately and the appointed ecologist contacted for further advice. Bats are protected by law and must not be handled or disturbed under any circumstances. Depending on the circumstances, further works may not be able to proceed until appropriate advice has been obtained and, where necessary, authorisation secured from Natural England. This may require additional surveys and the preparation of a mitigation strategy, and could necessitate the application for a Bat Mitigation Licence.
- 4.9 Two boundary trees were identified as supporting moderate potential roost features (PRF-M), including rot holes and vertical fissures suitable for crevice-roosting species. These trees are to be retained under the current proposals and will not be impacted. Should future plans require their

removal or pruning, further survey effort will be necessary, and a suitably qualified ecologist must be consulted to ensure legal compliance.

- 4.10 Habitat surrounding the site, including the hedgerow and mature trees, offer foraging and commuting opportunities for bats. As such, nocturnal lighting associated with the proposed development must be carefully considered.

Nocturnal lighting measures

- 4.11 The insensitive use of external lighting within the proposed development could have a negative impact upon bats using the site for foraging and commuting activity.
- 4.12 As suitable bat habitat occurs within the nearby surrounding environment, low-level lighting measures will be implemented to avoid indirect disturbance to bats and other nocturnal animal species that may exploit local habitats. Measures must be taken to ensure nocturnal animals are safeguarded from inappropriate use of light and noise throughout the hours of night during the construction period, as well as to protect important commuting corridors for bats. Any external lighting installed as part of the development must be used in accordance with Guidance Note 08/23: Bats and Artificial Lighting¹².
- 4.13 Sensitive lighting strategy measures during the construction period are as follows:
- Works must not be carried out after dusk and must not commence until after dawn where possible.
 - Generators and machinery that emit significant noise levels must not be left to run after dusk.
 - LED lighting sources must be used, which generally have a narrower and more directional beam.
 - Light spill must be controlled and if lighting is required at night, hooded shields must be fitted to prevent spill onto nearby habitats that are likely to support wildlife, including nearby trees and hedgerows.
 - Lighting must not be directed towards any bat or bird compensation features.
- 4.14 In addition to the above, when selecting appropriate external lighting, the following specifications should be taken into consideration:
- Any external lighting incorporated into the proposed development will be LED luminaires due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
 - Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats¹³.
 - All luminaires will lack UV elements when manufactured. Metal halide, fluorescent sources will not be used¹⁴.

¹² <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

¹³ Stone, E.L. (2013) *Bats and lighting: Overview of current evidence and mitigation*

Badger

- 4.15 No evidence of badger activity was recorded during the field survey, and the sparsely vegetated ground offers negligible sett-building potential. Given the lack of suitable features and signs of activity, no further survey effort is required. However, standard Reasonable Avoidance Measures (RAMs) should be implemented during the construction phase to safeguard any individual badgers that may traverse the site opportunistically.

European Hedgehog

- 4.16 Although no evidence of European hedgehog was observed during the survey, the species could infrequently access the garden area while foraging within the wider landscape. The site offers limited sheltering and foraging opportunities, limited to the northern boundary hedgerow. Given the low habitat suitability and lack of signs recorded, impacts to hedgehogs are considered unlikely, and no further survey effort is recommended. Hedgehog access gaps measuring at least 130 mm by 130 mm will be installed within each linear fence line at the site, either in gravel boards or fence panels, to allow continued commuting access for hedgehogs throughout the area.

Nesting birds

- 4.17 Although no evidence of recent (current season) or historic nesting was discovered during the assessment, trees, and the northern boundary hedgerow would offer value for nesting birds. Therefore, without appropriate mitigation, nesting birds may be impacted by the development proposals.
- 4.18 Impacts to nesting birds can be avoided by timing works outside the bird nesting season which generally runs between February-August, or by ensuring a site visit is carried out by a suitably qualified ecologist ahead of works commencing. In the event that any nesting birds or suspected nesting activity is discovered prior to works commencing, works must cease and Cotswold Environmental Ltd contacted for further advice.

Reptiles and Amphibians

- 4.19 The application site currently offers low ecological value for reptiles and amphibians. Habitats are dominated by hardstanding, compacted bare ground and sparsely vegetated urban land, with only limited and fragmented areas of ruderal vegetation present. Suitable refugia features are largely absent, being limited to a small rubbish pile and occasional scattered waste materials that do not form extensive or well-connected sheltering habitat, and no aquatic habitats occur within the site boundary. Although two off-site ponds were identified within 250 m of the site during the desk study, the nearest pond was found to no longer be present during the site visit, whilst access to the second pond was

¹⁴ Bat Conservation Trust & Institute of Lighting Professionals (ILP) 2023. *Guidance Note 08/23: Bats and artificial lighting in the UK*. Bats and the Built Environment Series.

not possible. The northern boundary hedgerow provides only limited connective habitat due to its short length, fragmented nature, existing access gap, sparse understorey and location immediately adjacent to a road.

- 4.20 Taking the above into account, the application site is considered to provide low suitability for reptiles and amphibians. Whilst a pond remains present approximately 180 m to the south-east of the site and historic records of great crested newt exist within the wider landscape, the application site itself comprises predominantly hardstanding, bare ground and sparsely vegetated urban land of very low ecological value. Suitable terrestrial habitat for great crested newt is largely absent, and habitat connectivity with the surrounding landscape is limited. Consequently, the likelihood of reptiles or amphibians occurring within the site, or being adversely affected by the proposed development, is considered to be low. No further survey is therefore considered necessary, and significant impacts are not anticipated. As a precaution, the implementation of Reasonable Avoidance Measures during vegetation clearance would minimise any residual risk to transient individuals of common species that may occasionally utilise the site.

Biodiversity Enhancement

- 4.21 The NPPF (2024) outlines obligations of Local Planning Authorities to promote biodiversity enhancement where possible:

Bats

- 4.22 Biodiversity enhancement for bats will be achieved through the installation of integrated bat roosting features within the fabric of the new dwellings, such as Schwegler 1FR bat tubes or Ibstock bat bricks (or equivalent). Bat boxes must be positioned no lower than 4m above ground level, with unobstructed flight access, and they must not face in a northerly direction.

Nesting Birds

- 4.23 Enhancements for nesting birds will be delivered through the inclusion of integrated bird nesting features within the new buildings, such as swift bricks, house sparrow terraces or universal bird boxes (e.g. Schwegler 1SP or similar). These shall be installed at heights of no less than 3 metres above ground level, positioned away from sources of disturbance, and oriented to provide shelter from prevailing winds and rain.

5 REASONABLE AVOIDANCE MEASURES

- 5.1 Vehicles will use existing tracks onto and within the construction zone. It is advisable that only building products to be used on the day are brought and stored on the site. If building products need to be stored onsite (e.g. overnight or for more than one day), they will be stored on pallets or retained in bags on pallets to ensure that refuges are not created that may attract animals. Building products will be placed on existing hard standing if possible.

- 5.2 All holes created during the construction period will be filled in and finalised on the same day so as not to leave any pitfall traps. If this is unavoidable, they will be left with a sloping end or ramp to allow animals that may fall in to escape.
- 5.3 Lighting must be carefully considered during the construction phase and post-development. If lighting must be used at night, it will not be allowed to spill over habitats beyond the site boundaries or nearby sensitive features that may be used by nocturnal wildlife and it will only be used when absolutely necessary (see Nocturnal Lighting Measures point 4.11).
- 5.4 Any spoil resulting from excavations will either be spread and compacted within the area on the same day or be removed from the construction area on the same day. It will not be left in loose heaps overnight.
- 5.5 All cut vegetation will be removed from the development site and immediate surroundings to avoid use by birds as nesting habitat.
- 5.6 Vegetation within the zone of impact will be cut and maintained at a height of 15 cm or below throughout the development to discourage wildlife from taking refuge within the site boundary.
- 5.7 Should any impacts to protected species be determined during phased development, then all works must cease immediately and Cotswold Environmental be contacted on 07557539979. A European Protected Species Licence may be required from Natural England in order to allow works to proceed further.
- 5.8 Should onsite habitats become significantly overgrown, a new mitigation plan may be required in the form of a site specific Precautionary Working Method Statement (PWMS) which will contain more stringent RAMs.

APPENDIX A: PLANTS RECORDED¹⁵

Table 6: Indicative plant list recorded on site

Scientific Name	Common Name	DAFOR*
<i>Sparsely Vegetated Urban Land</i>		
<i>Lolium perenne</i>	Perennial ryegrass	F
<i>Poa annua</i>	Annual meadowgrass	F
<i>Taraxacum sp.</i>	Dandelion	F
<i>Ranunculus repens</i>	Creeping buttercup	O
<i>Bellis perennis</i>	Common daisy	O
<i>Trifolium repens</i>	White clover	F
<i>Plantago lanceolata</i>	Ribwort plantain	O
<i>Urtica dioica</i>	Common nettle	O
<i>Galium aparine</i>	Cleavers	O
<i>Rumex obtusifolius</i>	Broad-leaved dock	O
<i>Helminthotheca echioides</i>	Bristly oxtongue	O
<i>Senecio vulgaris</i>	Groundsel	R
<i>Sonchus asper</i>	Prickly sow-thistle	R
<i>Sonchus oleraceus</i>	Smooth sow-thistle	R
<i>Stellaria media</i>	Chickweed	O
<i>Individual Trees</i>		
<i>Fagus sylvatica</i>	Beech	n/a
<i>Fraxinus excelsior</i>	Ash	n/a
<i>Acer pseudoplatanus</i>	Sycamore	n/a
<i>Malus domestica</i>	Apple	n/a
<i>Native Hedgerow with Trees</i>		
<i>Corylus avellana</i>	Hazel	O
<i>Sambucus nigra</i>	Elder	O
<i>Acer campestre</i>	Field Maple	O
<i>Laurus nobilis</i>	Laurel	R

¹⁵ Plant names according to Rose F, O'Reilly C (2006) The Wild Flower Key, Revised Edition. Penguin Books, London.

<i>Fraxinus excelsior</i>	Ash	R
<i>Quercus robur</i>	Oak	R
<i>Picea abies</i>	Norway Spruce	R

*D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

APPENDIX B: LEGISLATION SUMMARY

Habitats Directive

Species listed in the Habitats Directive 1992 (transposed into UK law through the Conservation of Habitats and Species Regulations 2010 and subsequently 2017 as amended) for which it is illegal to deliberately capture, kill or disturb any individual, or deliberately damage or destroy a breeding site or resting site. In 2007 and 2009, the Habitats Regulations were amended to define illegal disturbance as that which would affect the ability of a significant group of animals of a European Protected Species to survive, breed or to rear or nurture their young, or to hibernate or migrate, or to affect the local distribution or abundance of the species.

Natural Environment and Rural Communities (NERC) Act 2006

The act to makes provision about bodies concerned with the natural environment and rural communities; to make provision in connection with wildlife, Sites of Special Scientific Interest, National Parks and the Broads; to amend the law relating to rights of way; to make provision as to the Inland Waterways Amenity Advisory Council; to provide for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes.

Countryside and Rights of Way (CRoW) Act 2000

The CRoW applies to England and Wales only, enforcing a statutory policy for biodiversity conservation. The UK Biodiversity Action Plan (BAP) provides the framework for fulfilling the UK's responsibilities towards the Convention on Biological Diversity. The CRoW Act is compliant with the provisions of the European Convention on Human Rights, requiring consultation where the rights of the individual may be affected by these measures.

The Conservation of Habitats & Species Regulations 2017 (the Habitat Regulations) (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations came into force on 30th November 2017 and extend to England and Wales (including the adjacent territorial sea) and to a limited extent

in Scotland (reserved matters) and Northern Ireland (excepted matters). In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the and the Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

Bats

In England and Wales, bats and their roosts are protected under the Conservation of Species and Habitats Regulations 2017 (as amended) and the Wildlife & Countryside Act 1981 (as amended). Taken together, this legislation makes it an offence to:

- Deliberately capture (or take), injure or kill a bat
- Intentionally or recklessly disturb a group of bats where the disturbance is likely to significantly affect the ability of the animals to survive, breed, or nurture their young or likely to significantly affect the local distribution or abundance of the species whether in a roost or not
- Damage or destroy the breeding or resting place of a bat
- Possess a bat (alive or dead) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost
- Sell (or offer for sale) or exchange bats (alive or dead) or parts of bats

A roost is defined as being 'any structure or place that is used for shelter or protection' and since bats regularly move roost site throughout the year, a roost retains such designation whether or not bats are present at the time.

Reptiles

All native British species of reptile (of which there are six) are listed in Schedule Five of the Wildlife and Countryside Act (1981) (as amended) and as such are protected from deliberate killing, injury or trade. Therefore, where development is permitted and there will be a significant change in land use, a reasonable effort must be undertaken to remove reptiles off site to avoid committing an offence. The same act makes the trading of native reptile species a criminal offence without an appropriate licence.

Great Crested Newts

Great crested newts and their habitats receive protection under The Conservation of Habitats and Species Regulations 2017 (as amended). This species is also afforded full protection under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under such legislation it is an offence to:

- Intentionally or recklessly kill, injure or capture a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt;
- Intentionally or recklessly* damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; and

- Intentionally or recklessly* disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.
- Damage or destroy a breeding site or resting place.
- Sell, barter, exchange or transport or offer for sale great crested newts or parts of them.

*Reckless offences were added by the Countryside and Rights of Way Act 2000, which applies only to England and Wales.

Badger

Badger is protected in Britain under the *Protection of Badgers Act 1992* 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.

Birds

All common wild birds are protected under The Wildlife and Countryside Act 1981 (and as amended).

Under this legislation it is an offence to:

- Kill, injure or take any wild bird
- Take, damage or destroy the nest of any wild bird while it is in use or being built
- Take or destroy the egg of any wild bird

Certain rare breeding birds are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (and as amended). Under this legislation they are afforded the same protection as common wild birds and are also protected against disturbance whilst building a nest or on or near a nest containing eggs/unfledged young.

APPENDIX C: MAPS & SITE PLANS

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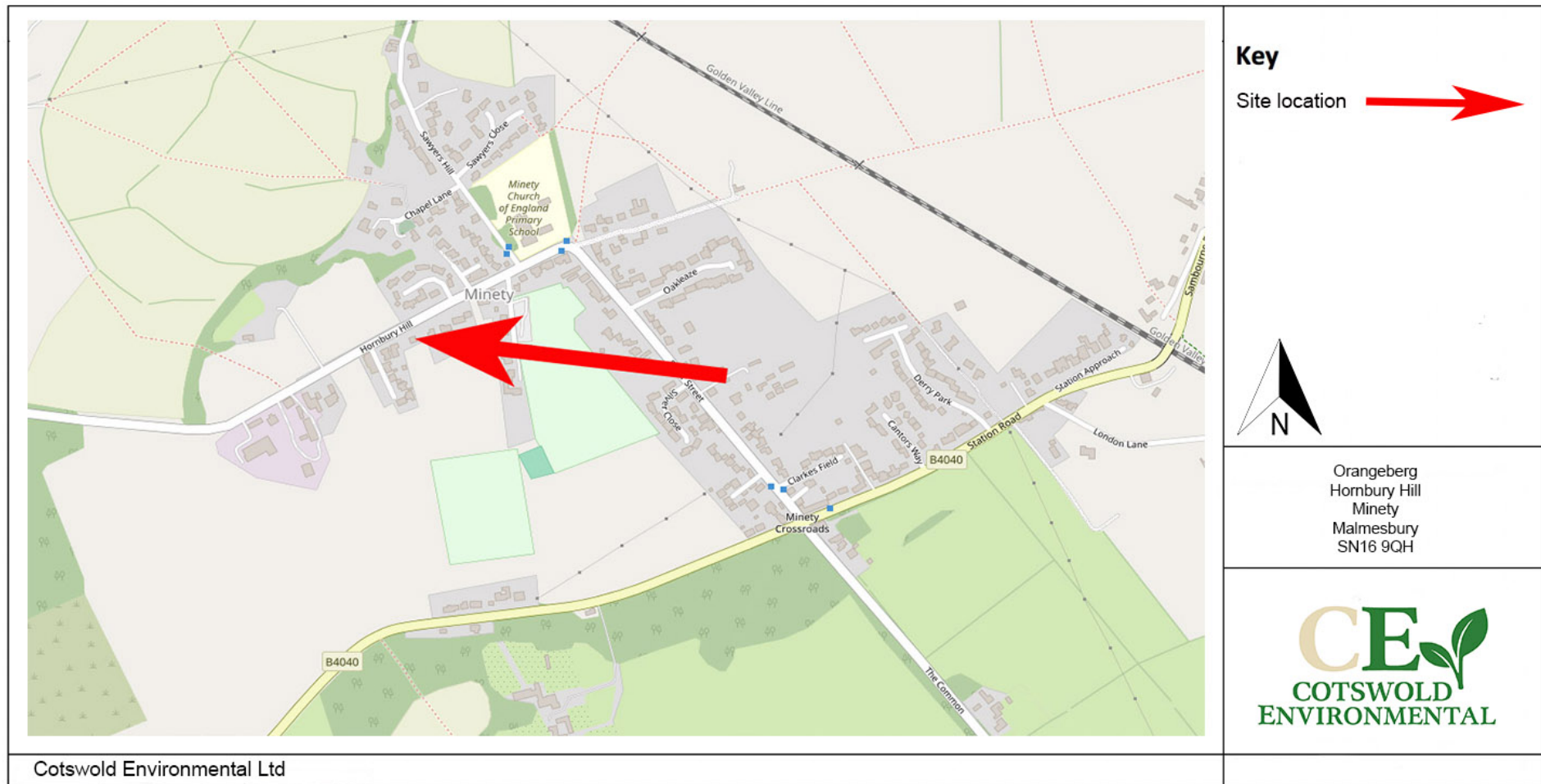


Figure 1: Location Map



Key

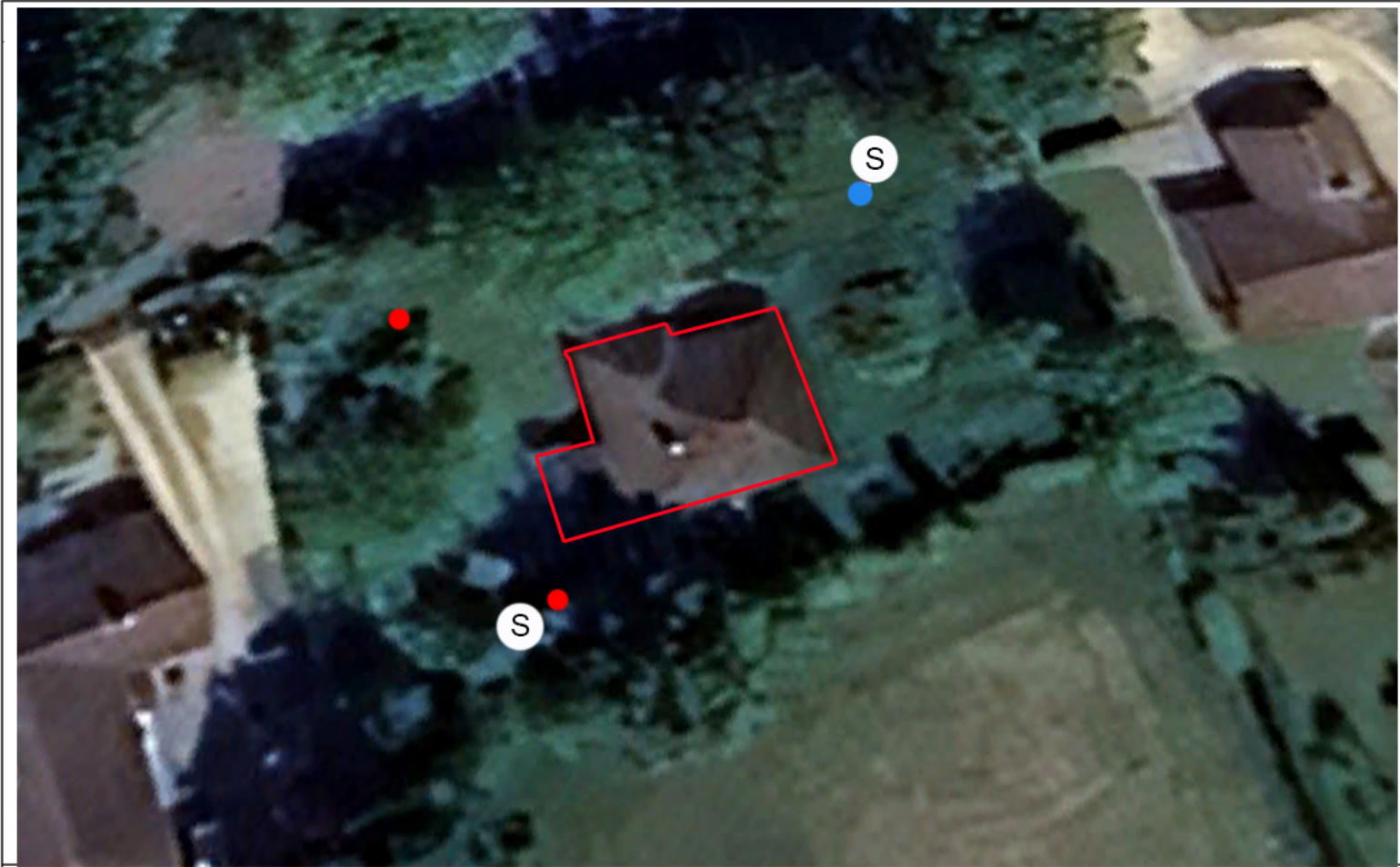
- Survey boundary 
- u1b - Developed Land/Sealed Surface 
- u1f – Sparsely vegetated urban land 
- Individual tree 
- h2a11 - Native hedgerow with trees 

Orangeberg
Hornbury Hill
Minety
Malmesbury
SN16 9QH



Cotswold Environmental Ltd

Figure 2: Habitat Map



Key

- Survey boundary
- Surveyor position
- Infrared camera paired with Nightfox ARC IR floodlight
- Supplementary Nightfox ARC IR floodlight
- Pixfra thermal camera

Orangeberg
Hornbury Hill
Minety
Malmesbury
SN16 9QH



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Figure 3: Nocturnal Bat Survey Map

APPENDIX D: SITE IMAGES



Photo 1: Northern boundary native hedgerow with trees.



Photo 2: Sparsely vegetated ground dominating the survey site.



Photo 3: Front north-facing elevation of bungalow and rubble pile.



Photo 4: South-facing elevation and timber boarded windows.



Photo 5: Western extent of bungalow within flat roofed boot room.



Photo 6: Gaps leading beneath lead flashing lining chimney base.



Photo 7: Concrete roof tiles, largely flush and tightly fitted, and with gap leading beneath failed bedding mortar.



Photo 8: Damaged concrete render at eastern elevation.



Photo 9: Damaged timber soffit.



Photo 10: Internal view of loft void within torn and sagging felt.



Photo 11: Internal view of loft void with light ingress at roof eaves.



Photo 12: Mature oak at northern boundary



Photo 13: Rot hole present in mature ash.



Photo 14: Damaged limb base of mature ash.



Photo 15: Location of Pond 1, no longer present.



Photo 16: Example thermal camera view - Pixfra Arc A613



Photo 17: Example infrared camera view. Unmanned camera. Canon XA20



Photo 18: Example infrared camera view. Canon XA11