Engine and Tender Inn, Broome
Ecological Assessment

Prepared for Hughes Architects

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Rev02

TURNSTONE ECOLOGY LIMITED

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Prepared by: [redacted]

Clare Knight
Ecological Consultant
30/09/2021

Checked and Approved for Issue by: [redacted]

Stephen Wilson
Director
01/10/2021

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SURVEY AND REPORT VALIDITY

It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases there will be specific guidance on this (such as for the age of data which may be used to support an EPS licence application) but in circumstances where such advice does not already exist, the Chartered Institute of Ecology and Environmental Management (CIEEM) has provided the general advice set out below.

Age of Data / Survey / Report	***Validity***
Less than 12 months	Likely to be valid in most cases.
12-18 months	Likely to be valid in most cases with the following exceptions: • Where a site may offer existing or new features which could be utilised by a mobile species within a short timeframe; • Where a mobile species is present on site or in the wider area, and can create new features of relevance to the assessment; • Where country-specific or species-specific guidance dictates otherwise.
18 months to 3 years	A professional ecologist will need to undertake a site visit and then review the validity of the report. Some or all of the other ecological surveys updated.
Protected Species Licensing	Licence applications usually only possible using data less than 2 years old

The likelihood of surveys needing to be updated increases with time and is greater for mobile species or in circumstances where the habitat or its management has changed significantly since the surveys were undertaken. Factors to be considered include (but are not limited to):

- Whether the site supports, or may support, a mobile species which could have moved on to site, or changed its distribution within a site;
- Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management;
- Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence.

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1 INTRODUCTION

1.1 Purpose of Report

This Ecological Assessment has been completed in connection with the proposed residential development at and renovation of the Engine and Tender Inn, Broome, Craven Arms, Shropshire (OS Grid Reference SO 399 811). The location of the proposed development sites is shown in *Figures 1* and *2* and the proposed development plans are fully detailed in *Section 4*.

A site survey was originally completed on 14th August 2014 by Turnstone Ecology Ltd and consisted of a Phase 1 Habitat Survey and a Protected Fauna Survey and Habitat Suitability Assessment. Three further visits to site were completed during 2016 (12th May, 6th June and 28th June) to update the previous survey and to complete further work with regard to bats and a further update survey and additional bat survey works has been completed between early April and end of July 2021.

This report details survey and assessment methodology and the results of a desk based study and on site surveys. It also provides an assessment of potential ecological impacts and appropriate mitigation to offset any ecological impacts associated with the proposal and to satisfy national and local planning policies.

Figure 1. Location of proposed development

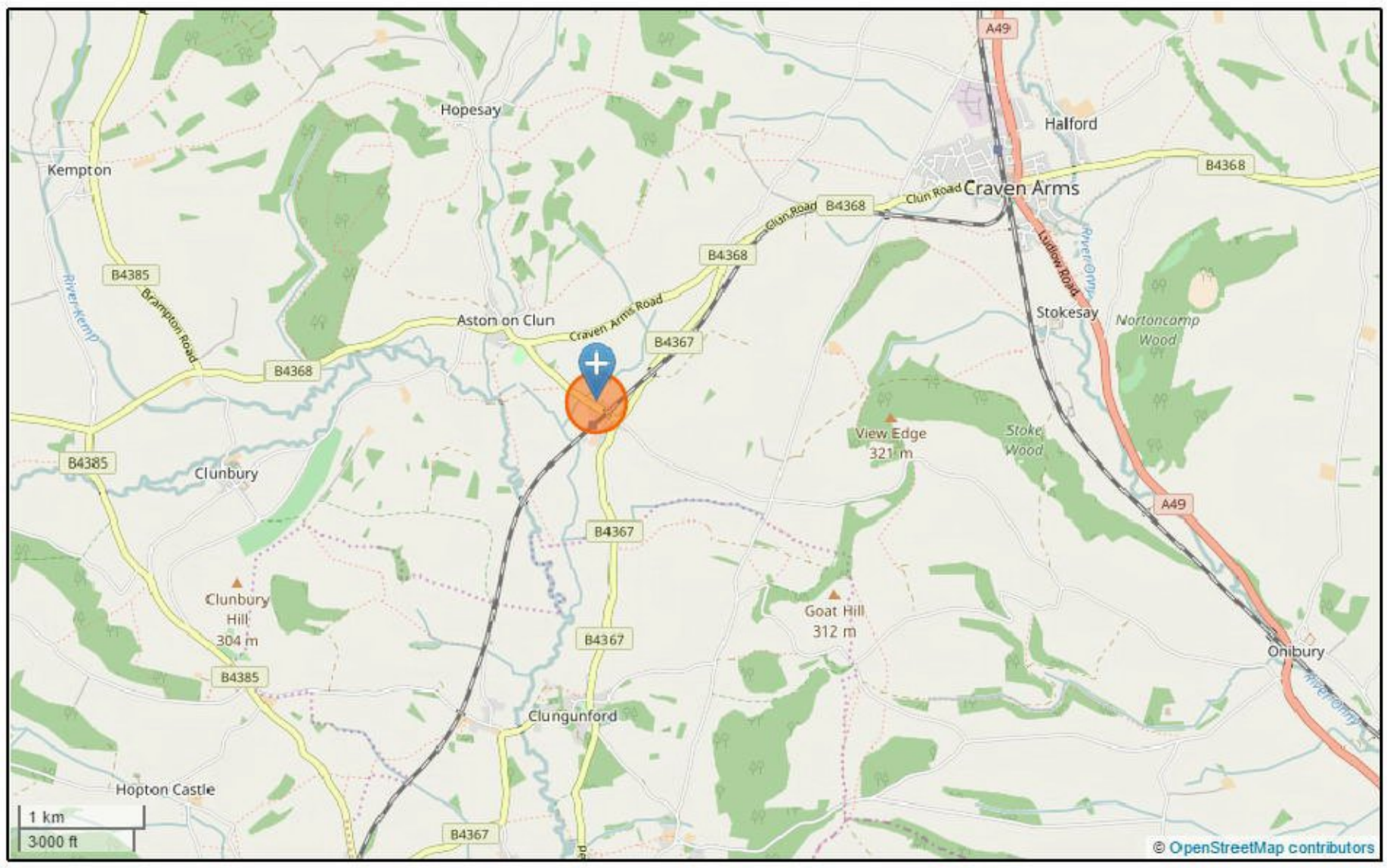
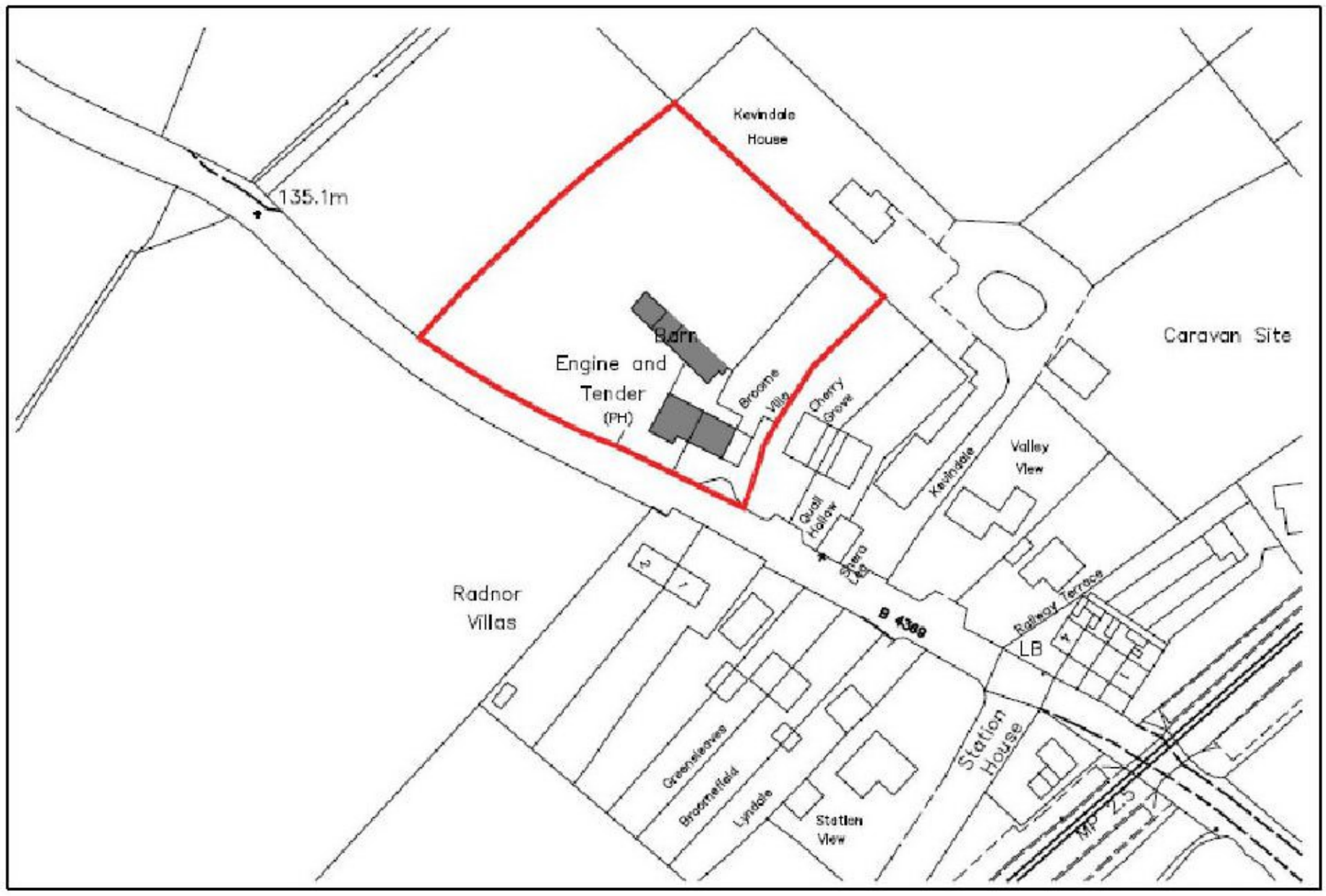


Figure 2. Proposed development site at Engine and Tender Inn (red line boundary)



1.2 Ecological Context

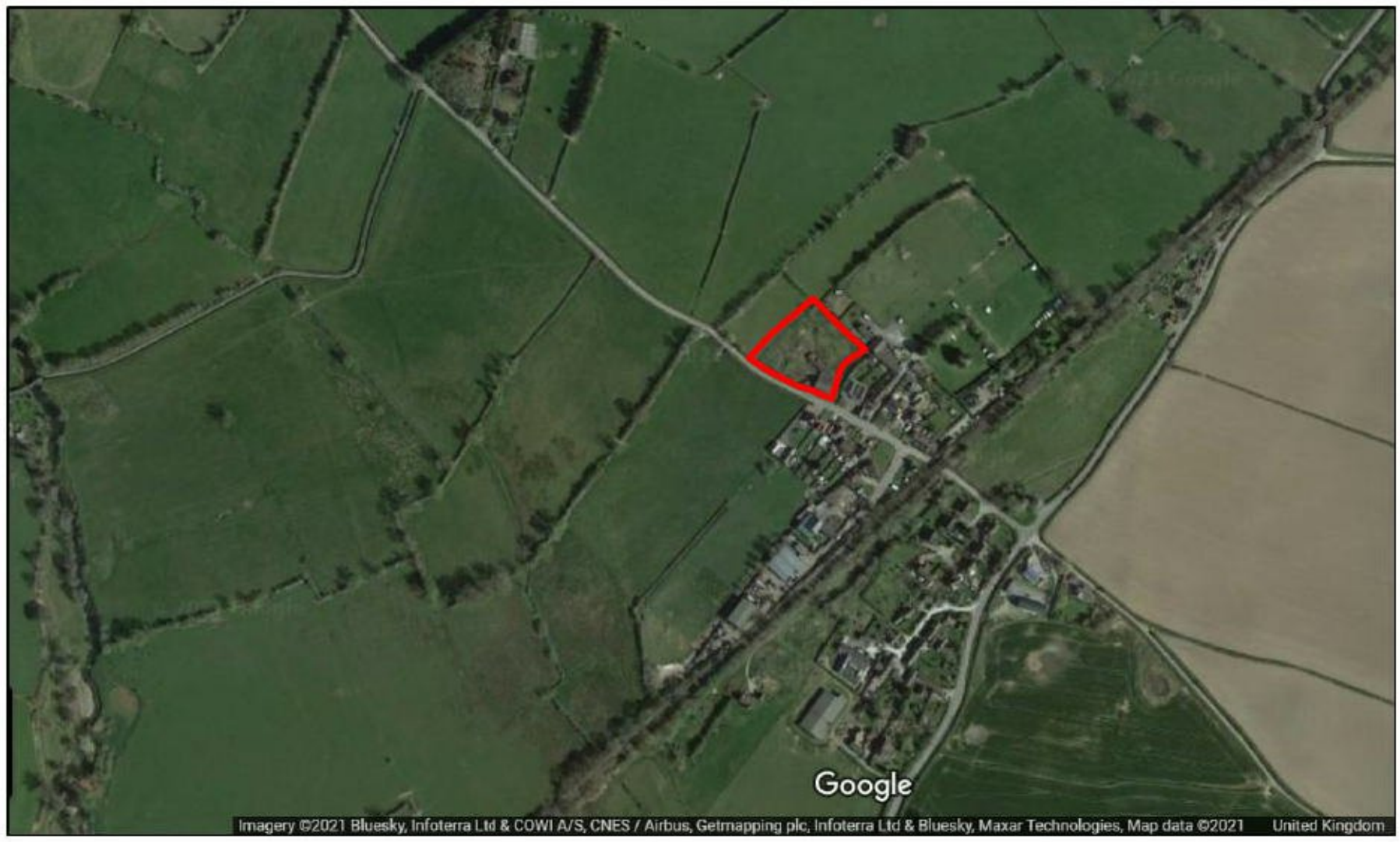
The proposed development site is located on the northern edge of Broome, approximately 12 km north-west of Ludlow, Shropshire (*Figures 2* and *3*). The proposal consists of the development of residential dwellings, associated access and gardens within a plot of land adjacent to the Engine and Tender Inn. The Inn and part of an attached Outbuilding will be retained, repaired and renovated as part of the proposals but part of the stone Outbuilding will be demolished.

The residential dwellings will be constructed in an area of partially cleared and disturbed ground that is vegetated with overgrown and unmanaged grassland, tall ruderals, scrub and scattered young trees. Areas of hardstanding are also present around the front, side and rear of the Inn and Outbuilding. A hedgerow forms the south-western boundary of the site with an existing access gate located in the south-west corner. The north-western and north-eastern boundaries are formed by fenceline bordered by scrub and tall ruderal vegetation and scattered trees and a wooden garden fence forms the south-eastern site boundary.

A stone Outbuilding is located across an area of hardstanding just to the north of the Engine and Tender Inn, which is located at the southern extent of site. The Outbuilding is attached to the rear of the Inn via a flat roofed extension and currently provides additional access into the Inn. The Outbuilding and the Inn have been unused for a number of years and are in poor condition.

Access to the site is currently off a minor road that serves the centre of the village of Broome and borders the south-western boundary of the site with extensive agricultural fields extending beyond. The village of Broome extends away to the south and south-east of site and further agricultural fields bordered by hedgerows and scattered trees extend to the north and west. The River Clun flows from north to south approximately 650m to the west of the proposed development.

Figure 3. Aerial image of the proposed development site and surrounding landscape



2 METHODS

2.1 Desk-based Study

Information relating to designated sites, sites where European Protected Species (EPS) Licences have been granted between 2009 and 2015 (only available in England) and historic records of protected species within 2 km of the proposed development site were obtained from Magic (www.magic.gov.uk) and other freely available information on the internet, such as planning portals.

Any species specific historic records are detailed within the relevant species accounts in the *Results* section.

2.2 Phase 1 Habitat Survey

The survey methods were based on the Phase 1 Habitat Survey approach (Joint Nature Conservation Committee 2003), which is a standardised method to survey main habitat types. Plant nomenclature in this report follows Rose (*Revised Edition 2006*) for native, naturalised and garden varieties of vascular plant. Introduced species and garden varieties are not always identified.

2.3 Protected Fauna Survey and Assessment

The habitats on site were assessed for suitability for protected fauna that occur in the region and obvious signs and incidental sightings of protected species were noted where present. Taking into consideration the geographical region and habitat types on and adjacent to site, the protected species and species groups that could be encountered are listed below.

- Badger
- Bat species
- Dormouse
- Nesting birds
- Great Crested Newt
- Reptile species

Details of initial survey methods for each relevant species are given below.

2.3.1 Badger

Where access allowed, a comprehensive assessment was carried out to identify areas that are used by Badgers (*Meles meles*) for foraging and sett digging. Signs of Badgers including setts, foraging signs, paths and latrines, were recorded where present.

2.3.2 Bats

Preliminary Roost Assessment

The building and trees were assessed for potential to support bat roosts. The assessment involves a consideration of various factors including;

- Light levels;
- Temperature regime and protection from weather;
- Access to the interior of the building or to other suitable roost sites;
- Potential roost sites;
- Building construction;
- Tree structure; and
- Habitat context.

Based on these factors, an assessment was made of whether the buildings and trees affected by the proposals might support bats and the type and number of roosts that might be present.

A detailed inspection was made of the exterior and interior of the building and trees within the proposed development boundary for any evidence of bat use, such as live or dead bats, droppings, scratch marks, staining and prey remains, and in some cases the absence of cobwebs. Large quantities of cobwebs in roof voids or at access points tend to be suggestive of no bat use, although this evidence is not conclusive.

Features identified as possible bat access points or potential roosting locations were thoroughly searched where possible, using powerful torches and binoculars to facilitate the process. An endoscope and ladders were also used to enable more detailed inspection of cracks and crevices as far as access allowed.

The survey was undertaken in good light conditions and access to all areas of the building was possible. This type of survey can be completed at any time of year though the optimal time period for completion is at times when bats are most likely to be present in buildings (April-October). That said evidence of bats, if present in sheltered locations, is likely to persist well beyond this time period.

Buildings and trees are categorised according to their suitability for roosting bats as follows (taken from Bat Survey Guidelines, 3rd Edition):

Negligible – Negligible habitat features on site likely to be used by roosting bats

Low – A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (*i.e.* unlikely to be suitable for maternity or hibernation). Or a tree of sufficient size and age to contain potential roost features but with none seen from the ground, or features seen with only very limited roosting potential.

Moderate – A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).

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 due to their size, shelter, protection, conditions and surrounding habitat. They could be suitable for maternity roosts or hibernation sites.

Confirmed – Roosting bats confirmed as being present, either by the discovery of live or dead bats, droppings, prey remains, scratching or fur-staining.

Habitats were also assessed for their suitability for use by foraging or commuting bats. Areas of particular interest vary between species, but generally include sheltered areas and those habitats with good numbers of insects, such as woodland, scrub, hedges, watercourses, ponds, lakes and more species-rich or rough grassland.

Bat Activity Surveys

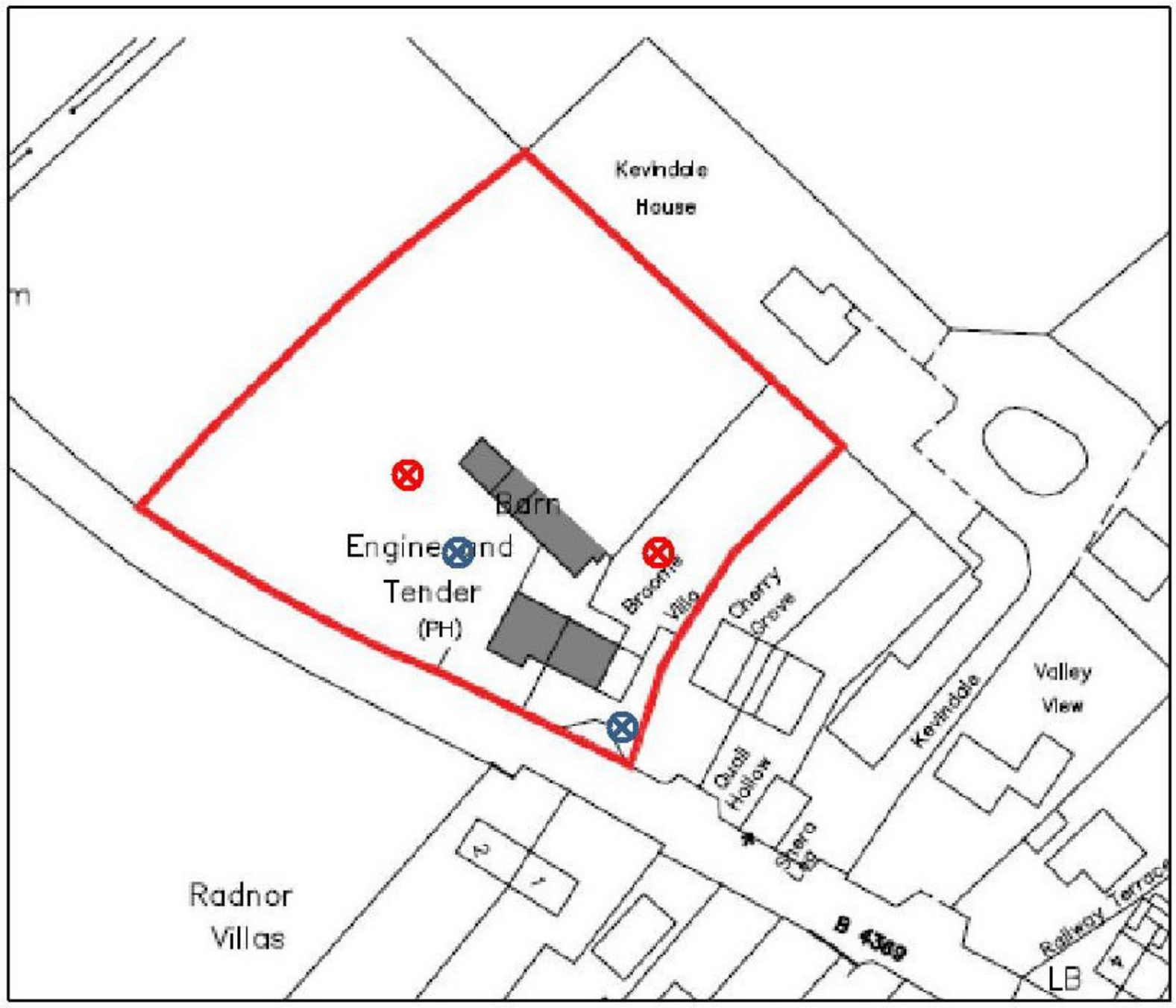
Activity surveys of the Outbuilding were first completed in 2016 (dusk emergence 12th May and 28th June and a dawn re-entry survey on 6th June). Additional bat activity surveys have been completed during 2021 and involved dusk emergence surveys on 25th May and 22nd June and a dawn re-entry survey on 21st July.

Evening emergence and dawn re-entry surveys are the primary methods for locating roosts in trees, buildings or built structures, as bats are not always found by internal and external inspection surveys (*e.g.* if the bats roost in areas that cannot be searched and/or leave little or no visible trace). These surveys can also give a reasonable estimate of the number of bats present.

The surveys were carried out by a principal ecologist and up to three ecologists from Turnstone Ecology who are experienced at completing bat surveys. The surveyors used Echo Meter Touch 2 Pro and EM3+ Bat Detectors and noted information on time, species and behaviour on to survey forms. They continually recorded for the duration of the survey to ensure all bat activity was saved. Audio tracks were downloaded and assessed using the appropriate software to confirm the identity of bats noted during the survey.

Two surveyors were considered sufficient to ensure that the Outbuilding's suitable roosting features were fully covered during each visit with the surveyors able to position themselves so any activity could be clearly observed (*Figure 4*). Two additional surveyors were used in 2021 to cover the Inn's suitable roosting features. General activity around the site could also be recorded from the surveyor's location.

Figure 4. Surveyor locations used during the Bat Activity Surveys completed in 2016 (red circles) and the two additional locations used in 2021 (blue circles)



The surveys were carried out during appropriate weather conditions (see *Tables 1 & 2* for full details) and access was sufficient to successfully complete the surveys.

Table 1. 2016 emergence survey timings and conditions

Date	Start Time	End Time	Sunrise/Sunset	Weather Conditions
12/05	20:27	22:27	20:57	17°C, 4/8 Cloud, 2 Wind, Fine and dry.
06/06	03:19	04:49	04:49	18°C, 1/8 Cloud, 2 Wind, Fine and dry.
28/06	21:09	23:09	21:37	12°C, 6/8 Cloud, 2 Wind, Shower pre-survey, cleared by start of survey

Table 2. 2021 emergence survey timings and conditions

Date	Start Time	End Time	Sunrise/Sunset	Weather Conditions
25/05	20:50	22:50	21:16	13°C, 8/8 Cloud, 1 Wind, Overcast but dry.
22/06	21:15	23:15	21:40	17°C, 1/8 Cloud, 1 Wind, Fine and dry.
21/07	03:40	05:30	05:15	14°C, Cloud 0/8, Wind 0. Fine and dry

2.3.3 Dormouse

Habitats were assessed for their general suitability for use by Dormouse (*Muscardinus avellanarius*), which generally use areas of dense woody vegetation cover. Dormice are most likely to be found where there is a wide diversity of woody species contributing to three-dimensional habitat complexity, a number of food sources, plants suitable for nest-building material and good connectivity to other areas of suitable habitat.

2.3.4 Nesting birds

Habitat that might be used by nesting birds was identified and actively nesting birds or evidence of nesting birds noted where present.

Different bird species use buildings, trees and shrubs, undergrowth or even open fields for nesting and suitability of the site for use by a range of nesting bird species was considered.

2.3.5 Great Crested Newt

The suitability of any aquatic and terrestrial habitat on the site, and in the immediate vicinity, was assessed for suitability for use by Great Crested Newts (*Triturus cristatus*). Great Crested Newts are known to travel up to 500 m between breeding ponds and suitable terrestrial habitat, so a desk-based search was undertaken for any ponds up to 500 m from the site using OS maps and aerial imagery. The terrestrial habitat between the site and these ponds, and therefore connectivity to the site, was also considered.

If required and access allowed, ponds were assessed using the Habitat Suitability Index (HSI) developed by Oldham *et al.* (2000), which is a derived from systems developed by the US Fish and Wildlife Service. It is a numerical index, between 0 and 1, where 0 indicates unsuitable habitat and 1 represents optimal habitat. The HSI for the Great Crested Newt uses ten factors (suitability indices (SI) 1 to 10), which are thought to affect Great Crested Newts:

- geographic location (SI 1);
- surface area (SI 2);
- hydrology (drying) (SI 3);
- water quality (SI 4);
- shade (SI 5);
- presence of water fowl (SI 6);
- presence of fish (SI 7);
- number of adjacent water features (SI 8);
- terrestrial habitat (SI 9); and
- macrophyte cover (SI 10).

Each factor is scored using field and desk-based survey. These ten scores are then converted to SI scores using a scale from 0.01 to 1 from graphs given in Oldham et al. (2000) and a HSI result is calculated using the following formula:

HSI = (SI1 × SI2 × SI3 × SI4 × SI5 × SI6 × SI7 × SI8 × SI9 × SI10) 1/10

Further research by Brady (unpublished) has developed a system for using HSI scores to define pond suitability for Great Crested Newts according to the following categories.

- HSI <0.5 = poor
- HSI 0.5 – 0.59 = below average
- HSI 0.6 – 0.69 = average
- HSI 0.7 – 0.79 = good
- HSI > 0.8 = excellent

HSI cannot guarantee the presence or absence of Great Crested Newts however, there is a positive correlation between HSI scores and presence and abundance. Generally, ponds with high HSI scores are likely to support larger populations. The relationship is however not sufficiently precise to conclude that any pond with a high HSI will support newts in high populations, or that any pond with a low score will support low numbers of newts or no newts at all.

2.3.6 Reptiles

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

- Common Lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to walls and pastures, although one habitat they use is brownfield sites
- Slow-worms (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land
- Grass Snakes (*Natrix natrix*) have broadly similar requirements to Common Lizards but with a greater reliance on ponds and wetlands, where they prey on amphibians
- Adder (*Vipera berus*) use a range of fairly open habitats with some cover, but are most often found in dry heath

2.4 Constraints

August is an optimal time to undertake Phase 1 surveys and the update survey in June 2016 was also carried out at an optimal time of year for Phase 1 surveys, although certain early flowering plants may not be present or identifiable in June or August. However, for a site of this size, location and habitat composition it is not considered that this would have had a significant effect on the survey results or assessment of the site.

2.5 Criteria for Assessment

The scientific value of habitats for nature conservation is assessed according to widely accepted criteria of which the most important are naturalness, extent, rarity, and diversity.

The assessment of impacts is based on the principles within Chartered Institute of Ecology and Environmental Management (CIEEM) Environmental Impact Assessment (EIA) Guidance (2016) which assesses the impacts of the proposal on ecological receptors taking in to consideration extent, duration, reversibility, timing, frequency and certainty.

Mitigation and enhancement is designed to reduce the level of impact upon receptors and provide ecological enhancement in order to meet current legislation and planning policy. The information below has therefore been considered during assessment.

- Criteria that have been developed to assist in the identification of statutory Sites of Special Scientific Interest (SSSIs) (JNCC 2013)
- Habitats and species of Principal Importance included under Section 41 (England) and Section 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006
- The legal status of habitats and species according to The Conservation of Habitats and Species Regulations 2017 (as amended)
- CIEEM Guidelines (2018) for assessing the value of ecological receptors within a defined geographical context using the following categories: international (*i.e.* Europe); UK and national (England); regional; county; Unitary Authority; local or parish; and zone of influence. Receptors are identified as 'important' at these levels, or as 'not important
- Species protected by European directives
- Species protected by the *Wildlife and Countryside Act 1981* (as amended)
- Other species listed as scarce or notable in literature issued by conservation organisations or learned societies *e.g.* vascular plant species listed in Stewart *et al.* (1994) and Red and Amber List Birds of Conservation Concern (Eaton et al. 2015)
- Local Wildlife Site selection criteria
- National Policy Planning Framework (NPPF), 2012
- BS42020:2013 – Biodiversity Code of practice for planning and development
- Protected species handbooks and best practice guidelines
- The Shropshire Local Biodiversity Action Plan (BAP), which identifies and prioritises local habitats and species of conservation importance. These habitats and species are stated as
    - Habitats: Field margins, floodplain grazing marsh, hedgerows, lowland dry acid grassland, lowland heathland, lowland wood pasture, parkland and veteran trees, peat bogs, reed beds, rivers and streams, semi-improved upland rough grazing, semi-natural broadleaved woodlands, species rich grassland, standing open water, upland heathland and urban areas.
    - Species: Farmland birds, Argent and Sable Moth (*Rheumaptera hastata*), Great Crested Newt, Barn Owl (*Tyto alba*), Lapwing (*Vanellus vanellus*), Song Thrush (*Turdus philomelos*), Common Snipe (*Gallinago gallinago*), Brown Hare (*Lepus europaeus*), Club-tailed Dragonfly (*Gomphus vulgatissimus*), Curlew (*Numenius arquata*), Dingy Skipper

(*Erynnis tages*), Dipper (*Cinclus cinclus*), Dormouse, Water Vole (*Arvicola amphibius*), Floating Water Plantain (*Luronium natans*), Marsh Flapwort (*Jamesoniella undulifolia*) and Grayling (*Hipparchia semele*).

3 RESULTS

3.1 Desk Study

3.1.1 Designated Sites

The proposed development site is located within the catchment of the River Clun and is approximately 4.4 km from the River Clun Special Area of Conservation (SAC) / River Teme Site of Scientific Interest (SSSI).

The River Clun SAC (and River Teme SSSI) is notified for its populations of White-clawed Crayfish (*Austropotamobius pallipes*), Freshwater Pearl Mussel (*Margaritifera margaritifera*), European Brook Lamprey (*Lampetra planeri*), Atlantic Salmon (*Salmo salar*), European Bullhead (*Cottus gobio*) and Otter (*Lutra lutra*). Although the River Clun SAC and sections of the river outside the designation will not be directly affected by the proposals, there is a requirement to assess all potential impacts from proposed drainage and foul water discharge on the River Clun. For this reason, the potential impacts on the River Clun SAC are considered further within this report.

Coston Farm Quarries SSSI is located within 2 km of the proposed development but is designated only for its geological interest and therefore unaffected by the proposals.

3.1.2 European Protected Species Licence Sites

An EPS mitigation licence for the damage of a resting place of Brown Long-eared Bats was issued in 2016 for a development approximately 1 km south-east of site.

No other licences have been issued within 2 km of the proposed development site.

3.2 Ecological Surveys

Phase 1 habitat types were recorded within and immediately adjacent to the proposed development sites are listed below and shown in *Figure* 5.

- Improved grassland
- Buildings and hardstanding
- Tall ruderals
- Hedgerows, trees and scrub

The site or immediately adjacent areas contain habitat suitable for the protected species listed below.

- Badger
- Bats
- Dormouse
- Nesting birds
- Great Crested Newt

- Reptiles

Figure 5. An aerial image of the area affected by the proposed development

3.3 Phase 1 Habitat Survey

3.3.1 Improved grassland

The proposed development site is dominated by overgrown and unmanaged improved grassland (*Plates 1 and 2*). The grassland consists of a variety of common grasses, such as Perennial Rye-Grass (*Lolium perenne*), Yorkshire Fog (*Holcus lanatus*), Annual Meadowgrass (*Poa annua*), Meadow Foxtail (*Alopecurus pratensis*), False Oat-grass (*Arrhenatherum elatius*) and Cocks Foot (*Dactylis glomerata*). Whilst forb species are less diverse and comprise Common Daisy (*Bellis perennis*), Common Dandelion (*Taraxacum officinale*), Broad Leaved Dock (*Rumex obtusifolius*), Cleavers (*Gallium aparine*), Common Nettle (*Urtica dioca*), Creeping Buttercup (*Ranunculus repens*), Groundsel (*Senecio vulgaris*), Meadow Vetchling (*Lathyrus pratensis*), Pineapple Weed (*Matricaria discoidea*) and White Clover (*Trifolium repens*).

Plate 1. Improved grassland in the centre of site (looking north-west)

Plate 2. Improved grassland at north-east extent of site (looking east)

3.3.2 Buildings and hardstanding

The proposed residential development at the Engine and Tender Inn will include repair and renovation of the Inn and eastern part of the Outbuilding to the rear and the demolition of the western part of the Outbuilding and attached single storey extension at its north-western extent (*Plate 3*). Further details on the buildings can be found in Section 3.4.2.

Plate 3. The southern aspect of the Outbuilding and single storey extension (looking north-east)

The Outbuilding is built on and surrounded by compact hardstanding to the north, south and west (*Plates 4 and 5*). The hardstanding is in poor condition with ruderal vegetation growing through the tarmac across site. Ruderal species include Common Dandelion, Common Nettle, Groundsel, Pineapple Weed, Rosebay Willowherb (*Chamerion angustifolium*) and Scarlet Pimpernel (*Anagallis arvensis*). Several piles of timber, rubble and spoil are located on the hardstanding to the north-east and west of the Outbuilding (*Plates 6, 7 and 8*).

Four static caravans were located within the improved grassland at the eastern extent of the site but have been cleared since the 2016 site visit.

Plate 4. Hardstanding at the southern extent of site (looking north-west)

Plate 5. Hardstanding in the centre of site (looking north)

Plate 6. Rubble piles (looking west)

Plate 7. Spoil heap (looking north-east)

Plate 8. Timber pile at rear of Outbuilding (looking south-west)

3.3.3 Tall Ruderal

Tall Ruderal vegetation is present and become dominant across the north-western extent of site (*Plate 10*), along the eastern and southern site boundaries and in scattered patches at the eastern extent of site associated with the static caravans (*Plate 2*). Species are dominated by Rosebay Willowherb and Common Nettle but Common Hogweed (*Heracleum sphondylium*), Creeping Thistle (*Cirsium arvense*), Broad-leaved Dock (*Rumex obtusifolium*), False Oat-grass, Yorkshire Fog, Poppy (*Papaver* sp.) and Soft Rush (*Juncus effusus*) are also present.

Plate 10. Tall ruderal vegetation at the north-western extent of site (looking west)

3.3.4 Hedgerows, trees and scrub

A dense and mature hedgerow forms the south-western boundary of the proposed development site (*Plate 11*). Species are dominated by Blackthorn (*Prunus spinosa*) and Holly (*Ilex aquifolium*) with occasional Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), Elder (*Sambucus nigra*), Field Maple (*Acer campestre*), Wych Elm (*Ulmus glabra*), Beech (*Fagus sylvatica*), Dog Rose (*Rosa canina*) and Bramble (*Rubus fructicosus*) and a ground flora comprising Ground Ivy (*Glechoma hederacea*), Ivy (*Hedera sp.*), Cleavers (*Galium aparine*) and Common Nettle (*Urtica dioica*).

A single semi-mature Sycamore (*Acer pseudoplatanus*) is present along the north-eastern site boundary and scattered sapling/young trees are becoming established within the areas of grassland and ruderals and consist mainly of Sycamores and Willows (Salix sp.). Bramble scrub has spread into the site from the south-western boundary hedgerow and also become established in north-eastern parts of the site.

Plate 11. The southern extent of the south-western boundary hedgerow (looking north-west)

3.4 Protected Fauna

3.4.1 Badger

No Badger setts were recorded on or adjacent to the proposed development site but the grassland, scrub and hedgerow base are suitable habitats for setts to be located in.

No evidence of Badger was found (*e.g.* tracks, latrines, hair and footprints) however the improved grassland provides suitable foraging habitat for any Badgers that do occur in the area.

3.4.2 Bats

Preliminary Roost Assessment

The proposed residential development will affect a stone Outbuilding, which was surveyed for its suitability for bats and searched for evidence of bats in both 2016 and 2021. The Inn and associated extensions will also be impacted due to required repair and renovation and have also been assessed for suitability to support roosting bats in 2016 and 2021.

The Outbuilding has a timber frame and pitched and unlined clay tiled roof (*Plates 12, 13, 14 and 15*). A window is present on the upper halves of the gable ends, both of which have been blocked up with bricks and corrugated metal sheeting. Single storey extensions are present on the north-western and south-eastern gable end. The north-western gable end is formed of traditional stone and concrete breeze blocks with a pitched corrugated metal roof to the eastern aspect and clay tiled roof to the western aspect and double wooden doors and window on the southern aspect. The south-eastern single storey extension is formed of traditional stone with a pitched roof and window on the eastern aspect. Suitable roosting features include slipped and broken tiles, gaps in the wooden frame, gaps between the wooden frame and tiles and gaps in the stone and brickwork.

Plate 12. South-western (front) aspect of Outbuilding and extension at north-western end

Plate 13. The north-eastern elevation of the Outbuilding

Plate 14. The south-eastern gable end and north-eastern elevation of the Outbuilding with single storey extension at south-eastern extent

Plate 15. North-eastern elevations and north-western gable ends of Outbuilding and single storey extension (looking south)

Internally, the walls forming the north-western and south-eastern gable ends and eastern elevation of the Outbuilding all consist of exposed stonework. The clay tiled roof is unlined and attached to an exposed wooden frame with two low tiebeams present across the width of the building (*Plate 16*). The roof is in poor condition with large holes present on the eastern aspect and numerous missing, lifted and broken tiles making the Outbuilding exposed and draughty. The single storey extensions at the north-western and south-eastern ends of the Outbuilding are comprised of wooden frames, traditional stone and concrete block walls and a mixture of unlined clay tiles, roofing felt and corrugated metal roofs (*Plate 17*).

Plate 16. Internal space of Outbuilding (looking towards south-eastern end from north-western end)

Plate 17. Internal space within the north-western extension

The Inn building is two-storey with rendered brick walls and a pitched slate tile roof (*Plates 18, 19* and *20*). Three large brick chimneys are present at both ends and the middle of the roof and along the south-western elevation (front) there is a timber veranda with sloping slate tile roof. Timber framed windows are present on all but the eastern gable end with some broken glazing on the south-western and north-eastern elevations. A single storey flat-roofed garage is attached at the eastern gable end and a single storey flat-roofed extension connects the north-western end of the main Inn building to the eastern end of the Outbuilding. A rendered brick and sloping slate tiled roof extension is present along the north-eastern elevation (rear) of the Inn. The Inn is bordered by a mix of overgrown gardens and harstanding.

Plate 18. Eastern gable end and south-western (front) elevation of the Inn building

Plate 19. Western gable end, north-eastern (rear) elevation of the Inn and the flat roof extension connecting Inn and Outbuilding

Plate 20. North-eastern elevation of Inn and extension and overgrown garden

Internally, there are rooms related to the old Inn business across the ground floor and living accommodation on the first-floor (*Plate 21*). The rooms haven't been in use for a number of years and are all in poor condition with extensive weather damage and general disrepair. An approximate 3m wide and 1.5m high roof void spans across the entire apex of the roof (*Plate 21*). The roof void has glass fibre insulation on the floor and exposed timber frame and the roof tiles are unlined.

Plate 21. One of the first-floor rooms of the Inn

Plate 22. The roof void at the apex of the Inn roof

No evidence of bats was found in or around the Inn building or the outbuilding during the 2014 surveys. During the 2021 PRA, droppings characteristic of a Lesser Horseshoe Bat were found on the floor of a cupboard in first-floor, front bedroom in the Inn building. Two further accumulations were found in the same bedroom same room, both under ceiling spotlight fittings, and another accumulation on the first-floor landing under another spotlight fitting (*Plate 23*). The cupboard provides a dark feature that is more suited for day roosting Lesser Horseshoe Bats, whilst the light fittings are more likely to be just used for feeding or possibly as night roost locations.

No other evidence of bats was found but suitable roosting features in and around the Inn include under roof and ridge tiles, gaps along tile verges and at wall tops and within the roof void, although the void appears to be well sealed. Bats can access internal rooms of the Inn too, via broken windows and through the Outbuilding and extension attached to the rear of the Inn. Due to the poor condition of the Outbuilding, suitable roosting features are limited to gaps at wall tops and between timber frame and tiles and holes in the walls.

Plate 23. First floor Bedroom cupboard where evidence of a roosting Lesser Horseshoe Bat was found

Plate 24. Lesser Horseshoe Bat droppings below light fitting on first floor of Inn

The hedgerow along the south-western boundary is suitable habitat for foraging and/or commuting bats but the semi-mature sycamore at the north of site has no features suitable for roosting bats. The improved grassland has low botanical diversity and is of limited suitability for foraging bats.

Bat Activity Surveys

Suitable roosting features were found in the Outbuilding during the Preliminary Roost Assessments and evidence of bats and further suitable features were found in the Inn. A total of two Dusk Emergence survey and one Dawn Return survey of the Outbuilding were carried out in suitable weather conditions during May and June 2016 to help confirm the species and number of bats using the Outbuilding for roosting. Further surveys covering the Outbuilding and the Inn were undertaken in May, June and July 2021.

No bats were recorded emerging or re-entering the Outbuilding during the 2016 surveys but an individual Soprano Pipistrelle (*Pipistrellus pygmaeus*) was recorded re-entering the western gable end apex of the adjacent Engine and Tender Inn on the dawn survey and an unidentified bat (considered likely to be Soprano Pipistrelle due to calls recorded pre-roosting) was recorded emerging from the same location during the dusk survey on 28th June 2016. A summary of emergence/re-entry activity is shown in *Table 3* and roosting locations/access points shown in *Plates 25* and *26*.

Table 3. Summary of 2016 activity survey results.

Survey	Time	
Dusk 12/05/2016 (Sunset: 20:57)		No bats recorded emerging from the Outbuilding
Dawn 06/06/2016 (Sunrise: 04:49)	04:05	No bats recorded re-entering Outbuilding 1 Soprano Pipistrelle recorded re-entering the western gable end apex of the adjacent Engine and Tender Inn (*Plate 25*)
Dusk 28/06/2016 (Sunset: 21:37)	21:59	No bats recorded emerging from the Outbuilding Silent bat emerged from western gable end apex of the adjacent Engine and Tender Inn (*Plate 25*)

No bats were recorded emerging or re-entering the Inn building during the 2021 surveys but a single Natterer's Bat (*Myotis nattereri*) was recorded emerging from the window opening at the north-western

gable end of the Outbuilding on the May dusk survey and an unidentified bat was recorded emerging from the same location during the dusk survey on 28th June 2016. A summary of emergence/re-entry activity is shown in *Table 4* and roosting locations/access points shown in *Plates 25* and *26*.

Table 4. Summary of 2021 activity survey results.

Survey	Time	
Dusk 25/05/2021 (Sunset: 21:16)	21:42	No bats recorded emerging from the Inn building 1 Natterer's Bat emerged from first-floor window at western gable end of Outbuilding 26 minutes after sunset (*Plate 26*)
Dusk 22/06/2021 (Sunset: 21:40)	04:05	No bats recorded emerging from the Inn building 1 silent / unidentified bat emerged from first-floor window at western gable end of Outbuilding 45 minutes after sunset (*Plate 26*)
Dawn 21/07/2021 (Sunrise: 05:15)		No bats recorded re-entering any building on site

Plate 25. Location of re-entering Soprano Pipistrelle during 2016 dawn survey

Plate 26. Location of emerging Natterer's Bat during May 2021 dusk survey

During each survey visit single Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle were recorded foraging around the buildings, over site and along boundary hedgerow and single Daubenton's Bat (*Myotis daubentonii*) and Natterer's Bat were recorded foraging/commuting on/over site during the May 2021 dusk survey only. Overall though, bat activity at and over the site was low during all completed surveys.

3.4.3 Dormouse

There are no apparent records of Dormouse within 2 km of the proposed development site.

The south-western boundary hedgerow on site provides a suitable variety of foodplants and cover for Dormouse and whilst it is connected at its northern extent to further hedgerow habitat extending across the adjacent field the hedgerow is unconnected at its southern extent.

3.4.4 Birds

The buildings, trees, scrub and hedgerow present on and immediately adjacent to the proposed development site provide good cover and features for nesting birds.

No evidence of nesting Barn Owl (*Tyto alba*) was found (pellets, droppings, feathers *etc.*) during the survey and it is unlikely to be used regularly for feeding or roosting.

Ground nesting species, such as Skylark (*Alauda arvensis*), a UKBAP and Red List species, are very unlikely to occur in the areas of improved grassland due to the close proximity to buildings, hedgerow and/or trees.

3.4.5 Great Crested Newt

There are two historic records of Great Crested Newt within 2 km of the proposed development site. One 2004 record is from terrestrial or an unmapped garden pond approximately 100 m south-east of site (SEDN / NBN) and the other is a 2018 record from a pond approximately 1.5 km south-west of site (Magic) but separated from site by the River Clun. There are no apparent ponds within 250m of the proposed development site.

The compact and sparsely vegetated hardstanding affected by the proposals is only of very limited suitability for dispersing Great Crested Newts and unsuitable for hibernation and foraging due to the lack of cover and features. The hedgerow along the south-western boundary of site, tall ruderals, scrub and rubble and timber piles around site do provide cover and opportunities suitable for foraging, hibernating and dispersing Great Crested Newts. The site is however poorly connected to more extensive suitable terrestrial habitat and any suitable breeding ponds.

3.4.6 Reptiles

There are no apparent records of reptiles within 2km of the proposed development site.

The compact and sparsely vegetated hardstanding affected by the proposals is only of very limited suitability for dispersing reptiles and unsuitable for hibernating and foraging due to the lack of cover. The hedgerow and associated margins around the south-western boundary of site, tall ruderals, scrub and rubble and timber piles around site do provide cover and opportunities suitable for foraging, hibernating and dispersing reptiles. However, the site is poorly connected to any extensive optimal reptile habitat.

4 EVALUATION

4.1 Summary of Impacts

The proposed development involves the construction of seven detached residential dwellings and associated access, car parking spaces and gardens within the plot of land adjacent to the Engine and Tender Inn (*Figure 6*). These proposals will affect improved grassland, hardstanding, rubble and timber piles, tall ruderals, scrub, sapling/young trees and a section of hedgerow. The proposals also include the part-demolition of the Outbuilding and repair and renovation of the Inn building and retained part of Outbuilding.

Figure 6. The proposed development plan

The Shropshire BAP lists 16 Habitat Action Plans of which Hedgerows will be affected by the proposed development. Under the proposed plans the south-western boundary hedgerow will need to be removed in order to meet sightline requirements from Highways for a visibility splay. Appropriate project design and mitigation will need to be adhered to reduce the impacts of this loss of habitat to limit negative impacts as a result of the proposals.

The Shropshire BAP also lists 14 Species Action Plans, including Song Thrush, Great Crested Newt and Dormouse. These species could be directly or indirectly affected by the proposed development and appropriate project design and mitigation will need to be adhered to ensure there will be no negative impacts on them as a result of the proposals.

4.2 Designated Sites

The proposed development is approximately 650m from the River Clun and 4.4 km from sections designated as SSSI and SAC. Any increase in the amount of phosphate entering water courses in the River Clun Catchment could impact on the River Clun SAC / River Teme SSSI, which are notified for the presence of Freshwater Pearl Mussel. Therefore, any proposed development within the River Clun catchment will need to be supported by detailed information relating to drainage and fowl water treatment. Details of the proposed drainage and foul water treatment and discharge should be provided with the planning application, including identifying the watercourse to which any proposed discharge will be made, proposed waste water treatment method and an assessment of the nutrient load within any proposed output.

4.3 Habitats

4.3.1 General

The proposed development will mainly affect botanically poor areas of improved grassland, hardstanding, tall ruderals and buildings. However, in order to protect habitats and maintain and increase biodiversity of the site the following mitigation measures and safe working methods will need to be incorporated into the proposals.

4.3.2 Mitigation

In order to maintain and increase biodiversity of the site and protect adjacent habitat, including the River Clun, it is recommended the following mitigation measures and safe working methods are incorporated into the proposals.

The construction works will mainly be within an area of botanically poor improved grassland, scrub, ruderals and hardstanding therefore no specific habitat mitigation is required to negate this loss. The south-western boundary hedgerow will be removed as result of the proposals to enable an appropriate visibility splay from the newly created access. To negate for this loss, a replacement hedgerow will be planted further back from the road with further hedgerows and trees planted along the north-western and north-eastern site boundaries to improve connectivity around the site. Hedgerows should be planted using a mix of native broadleaved species and be of a similar diversity to that present within the existing hedgerow. Where possible, such as around the southern and western boundaries of the site and between the houses and the access roads, any landscaping buffers should be seeded with a native species wildflower and grass seed mix.

The proposed areas of groundworks will need to be confined to areas that will not impact on the root systems of any existing and retained boundary trees. An appropriate buffer (as detailed in BS5837:2012) will need to be established.

Due to the proximity of the site to the River Clun there needs to be measures put in place to ensure there are no significant negative impacts on the river and the species it is designated for, including the Freshwater Pearl Mussel. Details of the proposed drainage and foul water treatment will identify the watercourse to which any proposed discharge will be made, proposed waste water treatment method and an assessment of the nutrient load within any proposed output. The methods of treatment and discharge will need to confirm that there will be either no discharge into the River Clun and/or the treated foul drainage resulting from the new development does not exceed the phosphate target for the river of *0.02mg/l*.

The proposed habitat protection, enhancement and creation would maintain and increase connectivity and species diversity around the site and provide increased opportunities for a range of flora and fauna. The methods related to the treatment and discharge of foul water will also ensure there is no significant negative impact on the River Clun.

4.4 Protected Fauna

4.4.1 General

No evidence of protected species was found within or immediately adjacent to the proposed development footprint during the survey however there are habitats with suitability for Dormouse, nesting birds, Great Crested Newt and reptiles within or adjacent to the proposed construction areas.

4.4.2 Badger

No Badger setts were recorded within or immediately adjacent to the boundaries of the proposed site however the improved grassland and hedgerow base provide suitable habitat for setts to be located. The boundary hedgerow and improved grassland are also suitable for foraging Badger.

Whilst there is suitable habitat for Badger setts to be located within the proposed development footprint, the lack of definitive evidence within and adjacent to site suggests the potential for setts to be dug prior to works is very unlikely. Due to the relatively small size of suitable foraging habitat affected it is also considered unlikely to be a significant habitat loss for any local Badger populations.

Although significant negative impacts on Badgers are not predicted it is recommended that mitigation measures are put in place to ensure foraging Badgers do not become trapped within any excavation works associated with construction works. Excavations should either not be left uncovered overnight or ways of escape for Badgers provided (wooden planks or graded earth banks).

4.4.3 Bats

Summary of Survey Results

Features suitable for roosting bats were found within the Outbuilding and the Inn building during the preliminary roost assessments completed in 2016 and 2021 and although no evidence of bats was found

in or around the Outbuilding, droppings characteristic of a Lesser Horseshoe Bat were found under a number of suitable roosting locations in the Inn building in 2021.

Bat activity surveys completed in 2016 and 2021 confirmed the following roosting bats and roosting features:

- Individual Soprano Pipistrelle roosting at apex of western gable end of Inn building (2016)
- Individual Natterer's Bat roosting within the Outbuilding (2021)

Evaluation and Impacts

The proposed demolition of part of the Outbuilding would cause the possible injuring/killing of individual Natterer's Bat and the long-term loss of roosting features used by these bats.

The proposed repair and renovation of the Inn building would cause the possible injuring/killing of individual Soprano Pipistrelle and Lesser Horseshoe Bat and the long-term loss or modification of roosting features used by these bats.

Soprano Pipistrelle is a common bat species in the United Kingdom, with approximately 1,300,000 individuals estimated to be present. For the purpose of this project, these species are considered to be common on a regional scale (with the scale stretching through common, rarer to rarest species). In accordance with the Bat Mitigation Guidelines the requirement for mitigation for loss of roosts of individuals of common species of bat, such as pipistrelles, includes;

- Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements.
- Minimal timing constraints
- Minimal monitoring requirements

Natterer's Bat are a locally common and widespread bat in the United Kingdom with approximately 148,000 individuals estimated to be present. For the purpose of this project this species is considered to be rarer on a regional scale. In accordance with the Bat Mitigation Guidelines the requirement for mitigation for non-maternity roosts of individual / small numbers of Natterer's Bat includes;

- Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements.
- Minimal timing constraints or monitoring requirements

Lesser Horseshoe Bat are considered to be a rare bat, with the total UK population of about 17,000 individuals occurring in over 170 maternity roosts and over 300 hibernation sites (hibernacula) in south-west England and Wales. For the purpose of this project Lesser Horseshoe is considered to be rare on a regional scale and in accordance with the Bat Mitigation Guidelines the requirement for mitigation for loss of a day/feeding roosts of low numbers of a rare species of bat includes:

- Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements.
- Minimal timing constraints or monitoring requirements

Mitigation

Destruction of bat roosts can only occur under a Bat Mitigation Licence (BML) obtained from Natural England. All agreed methods will be included in the licence application and appropriate mitigation and safe working methods can only be confirmed upon agreement of the licence. The methods (which may be updated upon confirmation of an accepted Licence application) will include;

- Works affecting suitable roosting features present in the Inn and Outbuilding to only commence following receipt of an BML licence.
- Timing of works on known roosting locations to ideally be completed when bats are usually active (usually March to November) and when overnight temperatures consistently above 7°C.
- Prior to the start of works, a suitably qualified ecologist will deliver a tool box talk to contractors and staff on site, informing them of the likelihood of encountering bats, what to do if they find bats and give a brief overview of the licence documents.
- Provision of two Schwegler 2FN bat boxes (or equivalent) erected on eastern ends of retained section of Outbuilding and/or Inn where no works will be taking place and no impacts from noise/obstruction from scaffolding. These boxes will remain present on site post-works but could be moved to less disturbed areas on new-build houses if not in use.
- Wooden bird boxes will be placed adjacent to the bat boxes to help ensure the bat boxes remain open for use by bats.
- Pre-works check by a licenced ecologist of all known and potential roosting locations around the property. If the entirety of a feature can be searched and found to be empty these will be blocked. If the feature cannot be fully searched it will be excluded using folded acetate or similar to allow bats to leave the feature but not re-enter. If exclusions are used, they will be left in place for a minimum of 5 nights in suitable weather conditions. Following this they will be permanently filled using the same methods as above (newspaper or expanding foam).
- The existing roof tiles on the Inn and Outbuilding will be carefully removed by hand and under the supervision of a licensed ecologist with particular attention paid to wall top areas.
- If bats are found pre or during works, they will be caught by a licensed ecologist who will be wearing suitable gloves. The bat will be placed in to a cloth bag and carefully moved in to a previously erected bat box.
- During and/or on completion of the Inn roof works and renovation, gaps allowing access to wall top roosting space will be recreated at the western gable end and be suitable for use by crevice dwelling bats such as Pipistrelles (*Figure 7*).
- At the eastern gable end of the Inn, an approximate 30cm wide x 20cm high opening will be created in the wall and allow open access into the roof void for Lesser Horseshoe Bat and also other species such as Natterer's Bat (*Figure 7*). The roof void will be enhanced to include a variety of roosting features suitable for crevice dwellings species, such as pipistrelle and myotis species, hanging space for Lesser Horseshoe Bats and also an enclosed flight space and features suitable to be used by feeding bats.
- Internal roosting locations will be created by fitting shaped wooden baffles at the apex of either gable wall. These will be triangular in shape and be roughly 450mm high by 450mm wide and be fitted to the wall using 28mm batten so that a narrow but tall gap is created. The ceiling will

be of rough sawn wood with rough sawn battens and ridge beam to enable Lesser Horseshoe Bats (and other species) to hang off.

- A box suitable for larger colonies of pipistrelles (such as a Schwegler 1FF) will be permanently erected at the apex of the eastern gable end of the Inn on completion of works (*Figure 7*).
- Bat tubes will also be incorporated into the walls of three of the proposed new dwellings (*Figure 7*).
- Breathable roofing membranes (BRM) must **not be used** in the new roof of the Inn where bats will have access to the roof void or any other new roofs if gaps are left where roosting bats could occur. This is due to issues with bat entanglement and reduced membrane performance if used in areas of bat use. 1F bitumastic felt be used in all areas where roosting bats could occur.
- Eastern, northern and western site boundaries to all be planted-up to enhance suitable bat flightpaths all around the site and to and from new roosting locations.
- No lighting directed on known, potential or newly created bat roost access points and roosting features and only movement activated timed security lighting used outside of potential roosting locations.

Figure 7. Locations of bat roosting features during and post works (during construction boxes - orange circles, post works bat tubes and large roost box – blue circles, recreated wall top roosting – red circle; and extent of roof void available for roosting bats – red rectangle)

4.4.4 Dormouse

There are no records of Dormouse within the vicinity of the proposed development site and hedgerow affected by the proposals is of limited suitability for Dormouse due to lack of connectivity to any extensive suitable Dormouse habitat within the wider area. It is therefore considered that the presence

of Dormouse in the section of hedgerow to be removed as part of the proposals is very unlikely and there will be no negative impact on this species.

Any hedgerow replacement and creation and tree planting within and around the proposed development site will ultimately increase suitable Dormouse habitat in the area and improve connectivity.

4.4.5 Birds

The buildings, hedgerow, scrub, dense areas of ruderals, trees and larger piles of timber are all suitable for nesting birds.

Works affecting suitable bird nesting habitat should ideally be completed outside the breeding bird season (March – August inclusive). If this is not possible then a pre-construction bird survey will need to be completed by a suitably qualified ecologist and depending on the presence and location of nesting birds, breeding effort may have to be allowed to finish before works commence.

Any habitat creation, enhancement and management, such as the replacement and creation of hedgerows and planting of trees, would only have a positive impact on nesting birds at the site. A mix of open fronted and hole nest boxes should be incorporated into the design of the proposed buildings with special consideration to providing specific nesting opportunities for House Martin (*Delichon urbicum*) and House Sparrow (*Passer domesticus*).

4.4.6 Great Crested Newt

There is a historic record of Great Crested Newt approximately 100 m south-east of site but no apparent ponds within 250 m of site. A more recent record is from a pond separated from site by the River Clun, which will be a barrier to dispersal.

The improved grassland affected by the proposals is only of very limited suitability for dispersing Great Crested Newts and unsuitable for hibernation and foraging due to the lack of. The hedgerow around the boundaries of site do provide cover and opportunities suitable for foraging, hibernating and dispersing Great Crested Newts although connectivity between suitable Great Crested Newt habitat on site and breeding and more extensive optimal terrestrial habitat is relatively poor.

Due to the distance of the site from the nearest pond, the historic record from approximately 100 m away (and beyond residential dwellings) and the extent and suitability of habitats affected by the proposals it is considered unlikely that Great Crested Newts will be impacted by the development. However, as a precaution it is recommended the following mitigation measures and safe working methods are adhered to:

- The improved grassland should be maintained short (just above ground level) up until the start of construction.
- Tall ruderals will be firstly cut by use of hand tools to a height of approximately 0.1 m and under a watching brief of an Ecologist.

- The areas of cut vegetation will then be subject to a hand search by an experienced Ecologist before any groundworks can take place at a time when Great Crested Newts are likely to be active (March to October and when overnight temperatures are over 5°C)..
- The piles of rubble, spoil and timber scattered around site will also be cleared by hand and under a watching brief and hand search by an experienced ecologist.
- Any excavations will be backfilled (and suitably compacted) before nightfall or if this is not possible a ramp (or similar structure) will be provided to allow animals an opportunity to escape.
- All cleared vegetation and soil or construction materials will be stored at least 5 m away from site boundaries and either on the hardstanding or temporary compound surface. If possible material will be kept raised off the ground, *e.g.* on pallets.
- Machinery and vehicles left on site overnight will remain on bare surfaces or compound areas and at least 5 m from site boundaries.

If a Great Crested Newt is found during any stage of the construction process all works must cease, an Ecologist informed if not already present on site and Natural England contacted to discuss an acceptable course of action.

4.4.7 Reptiles

There are no historic records of reptiles within 2 km of site.

Although the improved grassland isn't ideal habitat for reptiles the hedgerow and associated margins along the south-western boundary of site, hardstanding, rubble and timber piles and tall ruderals on site do provide good opportunities for foraging, basking and hibernating reptiles and there is the potential for dispersal across site.

The presence of reptiles within the proposed works areas is considered unlikely but as some suitable habitat will be affected by the proposals it is appropriate that safe working methods are put in place to ensure no reptiles are harmed. These methods should include habitat modification (*e.g.* cutting and maintaining the vegetation to just above ground level prior to works) to discourage reptiles from occurring and clearing these areas when reptiles are usually active (March to October inclusive). The section of hedgerow should be subject to a hand search by a licensed ecologist prior to removal and the hedgerow removed under a watching brief at a time when reptiles are generally active (March to November). If any reptiles are found these will be moved to appropriate habitat away from the development site. During construction, any storage of piles of materials and excavated earth on the site should be kept to a minimum and away from the boundaries to deter reptiles from using them for temporary cover.

4.4.8 Other Species

A Hedgehog was recorded on site during the completed bat surveys and the hedgerow, overgrown vegetation across site and piles of timber and building materials are suitable for year round use by Hedgehogs. Safe working methods and mitigation measures are to be adhered to avoid killing or injuring Hedgehog during works and these measures will include:

- The removal of hedgerows and piles of timber should ideally be carried out between March to April or October to November when Hedgehogs are active but outside of the time when they may have dependent young.
- A hand search of the hedgerow and timber piles will be completed by an ecologist pre-clearance (combined with amphibian and reptiles safe working methods).

In order to enhance the site for European Hedgehog a Hedgehog house, such as Vivara Pro Woodstone Hedgehog House, will be positioned in the south-eastern corner of the site. The Hedgehog box will be retained and maintained for the lifetime of the development.

Any fence lines around the site and/or between gardens of the proposed properties should contain gap measuring a minimum 13 cm by 13cm to allow Hedgehogs to move freely between gardens and around site.

5 LEGAL PROTECTION

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

5.1 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.

5.2 Bats

All species of British bat are protected by *The Wildlife and Countryside Act 1981* (as amended) extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

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

Bats are also European Protected Species listed on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017* under *Regulation 41*. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats in such a way as to be likely to (a) impair their ability to: (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or b), to affect significantly the local distribution or abundance of the species to which they belong; and
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.

Where it is necessary to carry out an action that could result in an offence under the *Conservation of Habitats and Species Regulations 2010 (SI 2010/490)* it is possible to apply for a European Protected Species (EPS) licence from Natural England (NE). Three tests must be satisfied before this licence (to permit otherwise prohibited acts) can be issued:

- Regulation 53(2)(e) states that licences may be granted to "preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment."
- Regulation 53(9)(a) states that a licence may not be granted unless "there is no satisfactory alternative".
- Regulation 53(9) (b) states that a licence cannot be issued unless the action proposed "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range".

5.3 Dormouse

The Dormouse is on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receives full protection under *Section 9*. This species is also listed as European Protected Species on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017* which gives them full protection under *Regulation 41*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRoW Act).

Under the above legislation it is an offence to:

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

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

5.4 Nesting Birds

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

The legislation makes it an offence to intentionally:

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

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

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

5.5 Great Crested Newt

Great Crested Newt is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. These species are also listed as European Protected Species on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2010 (SI 2010/490)* which gives them full protection under *Regulation 41*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRoW Act).

Under the above legislation it is an offence to:

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

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

5.6 Common Reptile Species

Common Lizard, Grass Snake, Slow-worm and Adder are listed under *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the CRoW Act.

Under the above legislation it is an offence to:

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