

SITE LOCATION

The Pottery, The Old School, Culmington

ISSUE DATE

18 December 2021

OUR REFERNCE

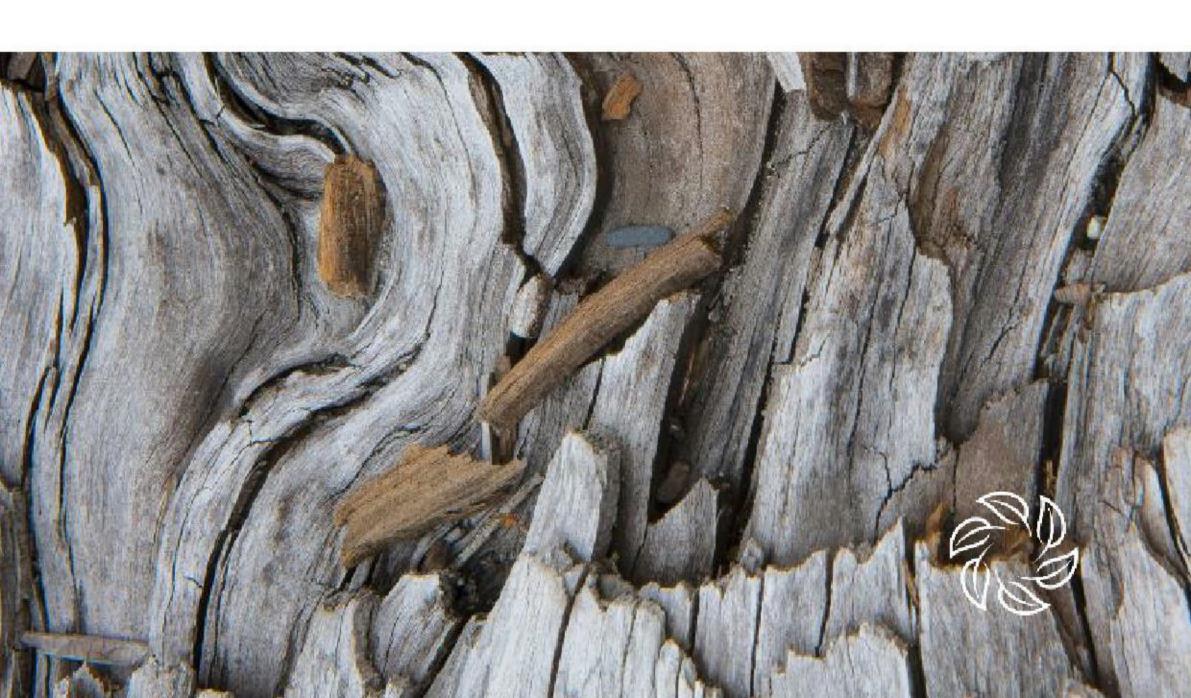
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Non-Technical Summary

The Site

The Site is located to the west of the B4365 road in the rural setting of Culmington, Ludlow and is located at Grid Reference SO 48863 82327.

The Site comprises a residential house also known as 'The Old School' with associated outbuildings known as the clay shed and the kiln shed amongst others. Also, within the client ownership is a large garden with hedgerow boundaries to the east and northwest of the Site.

The surrounding area is made up of open rural and pastoral grassland with the small village of Culmington to the southwest of the Site.

The Proposed Development

The proposal repurposes part of the existing gallery space, along with the brick-built clay shed, to form the base of the new dwelling.

The intention is to convert the clay shed into the living room, whilst opening up an existing doorway into the gallery allows the space to be converted to contain three bedrooms, utilising the existing windows.

An additional roof light is required to the front facade in line with the existing roof light above the stairs in the current house.

The two buildings are linked along the original axis of the covered link by a new single storey extension.

Statutory and Non-Statutory Wildlife Sites Summary

There are no anticipated pathways for impacts to occur to Statutory and Non-Statutory Wildlife Sites.

No significant effects to Statutory and Non-Statutory Wildlife Sites are considered likely to arise as a result of the Proposed Development.

Habitats Summary

There are no ecologically important habitats within the Site, excepting a line of trees along the northern and western boundaries of the Site.

No vegetation removal (including trees or hedgerows) is required to facilitate the Proposed Development. All of the works will take place within existing hard standing areas.

No significant ecological effects are anticipated to occur to important habitats as a result of the Proposed Development.

Species Summary

Badgers

Badgers may migrate through the land adjacent to the Site, within the client ownership, at night when the garden is likely to be less disturbed.

Therefore, in the absence of avoidance, mitigation, and compensation measures the Proposed Development may result in injury/death and trapping of badgers during the Site clearance and excavation work.

Bats (Roosting)

A maternity roost of common pipistrelle and the day roost of soprano pipistrelles have been confirmed to be roosting within the main house.

Bats are likely absent from the clay shed and the linked roof which connects the two buildings.

The main house (and therefore the bat roosts) is to be retained. Minor alteration i.e., construction of a roof

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window, are proposed which will not constitute the modification of a roost.

However, in the absence of avoidance, mitigation and compensation measures, the Proposed Development may result in disturbance to the bat roosts via the construction of the single story 'link' between the main house and the clay shed and the installation of the roof window into the pitched roof of the main house, as well as disturbance resulting from increased lighting of roosting access features or flight paths.

Nesting Birds

There was evidence that birds have historically nested within the clay shed.

Therefore, in the absence of avoidance, mitigation and compensation measures, the Proposed Development may result in the injury and/or death of birds, fledglings and/ or eggs.

Hedgehog

The Site supports some suitable foraging habitat for hedgehog along the tree line.

Therefore, in the absence of avoidance, mitigation, and compensation the Proposed Development may result in injury/death and trapping of hedgehog during the Site clearance and excavation work.

Avoidance, Mitigation and Enhancement Measures

No significant effects to protected or notable species are anticipated as a result of the Proposed Development. Measures have been included to avoid and mitigate potential impacts to badgers, roosting bats, nesting birds and hedgehog. These include:

- Any open excavations which cannot feasibly be infilled overnight must also be covered with
 a solid sheet material (i.e., plywood) to prevent fauna from falling into excavations and
 becoming trapped. Should this not be possible, a shallow slope must be dug into the
 excavation prior to it being left overnight to allow an escape route for any fauna that may fall
 in. All excavations should be checked for fauna in the morning prior to works commencing.
- The works to the clay shed must be undertaken outside of the bird nesting season (generally March to August inclusive) to avoid impacts to nesting birds. If this is not possible, the clay shed must be checked by the ECoW immediately (within 24 hours) prior to the clearance commencing, to ensure there are no nesting birds within the building.
- The construction of the single story 'link' between main house and outbuildings will be completed between 1st of October and the 30^{th of} April. This will reduce the likelihood of bats being present in the roost during these works therefore, avoiding potential disturbance events to roosting bats.
- No lighting will illuminate the apex of the roof at the northern gable end of the main house where bats were observed to emerge from.
- Short lighting columns and directional hoods on any new lighting to be installed within the Site will be included within the design of the Proposed Development.

These lighting measures must be designed in accordance with the Bat Conservation Trust and Institute of Lighting Professionals guidance (DEFRA, 2021).

The works to be undertaken as part of the Proposed Development, with the inclusion of the avoidance measures detailed above, are considered unlikely to affect the bat roost at the Site.

Therefore, a bat mitigation license to facilitate the Proposed Development is not required.

Providing that the avoidance, mitigation and compensation measures are secured and fully implemented,

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no significant adverse effects will occur to badgers, roosting bats, nesting birds and hedgehog. No significant effects any other wildlife species are considered likely to arise as a result of the Proposed Development.

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Introduction/Background

1.1 The Principal Author

- 1.1.1 The Principal Author of this report is Hattie Fuller BSc (Hons), ACIEEM (Ecological Consultant). The Principal Author has over five years of professional experience in ecological consultancy and has worked on projects ranging from large national infrastructure developments to commercial and residential sites throughout the country. The Principal Author currently holds a Class 2 survey licence from Natural England for bats (Chiroptera spp.) and a Class license from Natural England for surveying and handling dormice (Muscardinus avellanarius). She is a member of the Chartered Institute of Ecology and Environmental Management ('CIEEM'), she is therefore subject to CIEEM's Code of Professional Conduct.
- 1.1.2 The detail provided within this report is a true and accurate reflection of both the Site conditions at the time of the survey, as well as the professional opinion of the Principal Author.

1.2 Purpose and Brief

- 1.2.1 Mr Richard Griffiths (the Applicant) commissioned Wharton Natural Infrastructure Consultants Ltd (Wharton) to undertake a Preliminary Ecological Appraisal (PEA) for the Proposed Development at The Pottery, The Old School, Culmington ('the Site' outlined in red on Appendices 1 and 2).
- 1.2.2 Following recommendations from the PEA, Wharton were subsequently instructed to undertake the following phase 2 ecological surveys at the Site:
 - Two bat emergence/re-entry surveys.
- 1.2.3 Wharton have subsequently been instructed to produce an Ecological Impact Assessment (EcIA) for the Proposed Development. The purpose of the EcIA (as per CIEEM guidance (CIEEM, 2018) is:
 - To identify and describe all potentially significant ecological effects associated with the Proposed Development,
 - To set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects,
 - To identify how mitigation measures will/could be secured,
 - To provide an assessment of the significance of any residual effects.
 - To identify appropriate enhancement measures, and
 - To set out requirements for post-construction monitoring.

1.3 Description of Site and Local Area

- 1.3.1 The Site is located to the west of the B4365 road in the rural setting of Culmington, Ludlow and is located at Grid Reference: SO 48863 82327.
- 1.3.2 The Site comprises a residential house also known as 'The Old School' with associated outbuildings known as the clay shed and the kiln shed. Within the client ownership is also a large garden with hedgerow boundaries to the east and northwest of the Site.
- 1.3.3 The surrounding area is made up of open rural and pastoral grassland with the small village of Culmington to the southwest of the Site.

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1.4 Wildlife Corridors and Ecological Connectivity

- 1.4.1 The River Corve is c.0.5km east of the Site and the Seifton Brook is adjacent to the west of the Site, both provide connectivity to the wider area through tree lines and hedgerows along the embankments.
- 1.4.2 The vegetated tree lines along the western boundary of the Site partially contribute to the ecological connectivity of the Seifton Brook; this contribution to ecological connectivity is not significant due to the small length of the Brook adjacent to the Site.

1.5 Development Proposals

- 1.5.1 The proposal repurposes part of the existing gallery space, along with the brick-built clay shed, to form the base of the new dwelling.
- 1.5.2 The intention is to convert the clay shed into the living room, whilst opening up an existing doorway into the gallery allows the space to be converted to contain three bedrooms, utilising the existing windows.
- 1.5.3 An additional roof light is required to the front facade in line with the existing roof light above the stairs in the current house.
- 1.5.4 The two buildings are linked along the original axis of the covered link by a new single storey extension.
- 1.5.5 The proposals detailed above will be referred to throughout this report as the 'Proposed Development'.

2. Relevant Legislation & Planning Policy

2.1 Relevant Legislation

2.1.1 National and international legislation relevant to the Proposed Development is summarised below in Table 1.

Table 1. Legislation Relevant to the Proposed Development

Legislation [*]	Relevance to the Proposed Development
The Conservation of Habitats and Species Regulations 2017 (HMSO, 2017) Amended by1 The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (HMSO, 2019)	Affords protection to species listed under Schedules 2 and 5 and gives provision for the allocation and protection of European protected sites.
The Wildlife and Countryside Act 1981 (as amended) (HMSO, 1981)	Affords protection to species listed under Schedule 5 of the Act and gives provision for the allocation of statutory wildlife sites.
The Natural Environment and Rural Communities (NERC) Act 2006 (HMSO, 2006)	Places a duty on planning authorities to consider habitats and species of principal importance in planning applications.
The Protection of Badgers Act 1992 (HMSO, 1992)	Offences under the Act include damaging, destroying or obstructing access to a badger sett, disturbing a badger when it is occupying a badger sett, and killing or injuring a badger.

^{*}Full legislative text should be referred to as table text is a summary only.

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1 - The Conservation of Habitats and Species Regulations 2017 provides safeguards for European Protected Sites and Species (as listed in the Habitats Directive). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 which continue the same provision for European protected species, licensing requirements, and protected areas now the UK has left the European Union.

2.2 Relevant Planning Policy

2.2.1 Planning policies which are relevant to the proposed development are summarised below in Table 2.

Table 2. Planning Policy Relevant to the Proposed Development

Planning Policy

National Planning Policy Framework (Department for Communities and Local Goverment, 2021)

Relevance to the Proposed Development

National Planning Policy Framework section 174 states that planning policies and decisions should contribute to and enhance the natural end local environment by minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressure.

Section 179 of the NPPF states that to protect and enhance biodiversity, plans should identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Plans should also promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Section 180a and 180c (respectively) of the NPPF state:
"if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused".

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

*Full policy text should be referred to as table text is a summary only

2.2.2 The Shropshire Local Development Framework: Adopted Core Strategy (Shropshire Council, 2011) has been reviewed and an extract has been included in Appendix 3.

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3. Methods & Methodology

3.1 General

- 3.1.1 This EcIA has been written with reference to the most recent revision of the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018).
- 3.1.2 The Proposed Development layout upon which the impact assessment is based can be found at Appendix 4 and will be referred to throughout this document as the Proposed Development.
- 3.1.3 It is understood that the Proposed Development does not warrant a full Environmental Impact Assessment under the Town and Country Planning (Environmental Impact Assessment)
 Regulations 2017 (HMSO, 2017a).

3.2 The Scope of the Assessment

Ecological Features Considered

- 3.2.1 The following ecological features have been initially considered within this EcIA report prior to any scoping exercise:
 - Statutorily designated wildlife sites including: Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites, Sites of Special Scientific Interest (SSSIs) and Local Nature Reserves (LNRs), National Nature Reserves (NNRs). Candidate SACs and Proposed SPAs have also been considered.
 - Non-statutory wildlife sites
 - Ancient woodland Inventories for England (Data.gov.uk, 2019),
 - Habitats and Species of Principal Importance published by the Secretary of State in accordance with Section 41 of the Natural Environment and Rural Communities Act 2006 (HMSO, 2006),
 - Legally protected species including those listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (HMSO, 2017) amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (HMSO, 2019) and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (HMSO, 1981),
 - Native wild birds and birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (HMSO, 1981),
 - Red Data Book species (JNCC, 2018),
 - Birds of Conservation Concern (Eaton, et al., 2015), and
 - Nationally rare and nationally scarce species (JNCC, 2018).

3.3 Zone of Influence

3.3.1 The Zone of Influence (ZoI) for each ecological feature considered within this report is detailed within the baseline discussion for each feature. Where impacts extend beyond the boundary of the Site (as delineated at Appendices 1 and 2) rationale for this has been provided:

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3.4 Desk Study

Biological Records and Rationale

- 3.4.1 As part of the initial ecological assessment which fed into this EcIA, a desk study was carried out to gather background ecological data. Records were obtained from Shropshire Ecological Data Network in 2021 (Shropshire Ecological Data Network, 2021) for protected, notable and invasive species, as well as statutory and non-statutory wildlife sites within a 1km radius of the approximate centre of the Site.
- 3.4.2 A 1km data search was considered sufficient in this instance due to the connectivity features surrounding the Site and limited impact of the Proposed Development outside of the construction footprint.
- 3.4.3 In addition to biological records, the Multi-Agency Geographic Information for the Countryside (MAGIC) Interactive (DEFRA, 2021) was utilised to search the Site and local area for the following ecological features and information:
 - Priority habitats (identified as Priority Habitats on MAGIC Interactive Map, now known as Habitats of Principal Importance (HMSO, 2006))
 - Statutory wildlife sites and SSSI risk impact zone guidance
 - Granted European protected species licence applications
- 3.4.4 Google Earth Pro (Google, 2021) was utilised to analyse aerial imagery for ecological connectivity, to understand the land-use in the local and wider areas, and to review historical imagery to determine change in habitats over time for the purpose of impact assessment.
- 3.4.5 Please note that most biological records ≥25 years old have been excluded from this assessment as it is considered unlikely that they will be pertinent to the Site at present, this excepts records of plants which have been provided for the last 30 years or any records of bat roosts.

3.5 Field Survey

- 3.5.1 A UK Hab survey was carried out at the Site by the Principal Author on 3rd February 2021 in good weather conditions (sunny, no rain or high winds); this included a preliminary roost assessment (PRA) of the buildings at the Site.
- 3.5.2 Following recommendations made in the PEA report, further bat surveys of buildings at the Site were undertaken between May and August 2021.

UK Habitat Classification (UKHab) Survey

- 3.5.3 A UK Habitat Classification (UKHab) Survey (Butcher, Carey, Edmonds, Norton, & Treweek, 2020) was carried out at the Site and provides a comprehensive habitat classification system for the UK. UKHab enables details in relation to the presence of notable (such as Habitats of Principal Importance) or protected habitats (such as Annex I habitats) to be obtained.
- 3.5.4 The UK Habitat Classification Version 1.1 was used for assessment of the Site, using the Professional Edition Hierarchy. Habitats were classified to Level 5 unless otherwise stated.
- 3.5.5 In addition to the UKHab survey, an assessment of the Site for evidence of/suitability for protected/notable species was undertaken. Please note that these surveys are not comprehensive or targeted, and are simply intended to allow an informed decision to be made on whether further more detailed surveys for a particular species or species group are required.
- 3.5.6 Species of specific interest that were surveyed for include but are not limited to:

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- Badger (Meles meles)
- Bats (Chiroptera spp.)
- Great crested newt (Triturus cristatus) ('GCN')
- Hedgehog (Erinaceus europaeus)
- Invertebrates
- Hazel dormouse
- Reptiles
- Otter (Lutra lutra)
- Water vole (Arvicola amphibius)
- White-clawed crayfish (Austropotamobius pallipes)
- Wild birds
- Protected and invasive non-native plants
- 3.5.7 Habitats at the Site were identified and mapped; they are illustrated on the UK Habitat Classification Plan in Appendix 2. Where appropriate, target notes have been used to identify areas on the plan that require further detail, and this has been included in the report.
- 3.5.8 Plant names (common and scientific) within this report follow 'New Flora of the British Isles' (Stace, 2010).

Bat Preliminary Roost Assessment ('PRA')

- 3.5.9 The PRA and subsequent assessment of suitability of the buildings and trees at the Site for roosting bats followed current best practice guidance (Collins, 2016).
- 3.5.10 The building/s and trees were inspected by the Principal Author (who holds a Natural England Class 2 bat licence) for field evidence of bats including: droppings, individual bats (live or dead), feeding remains, scratch marks, urine staining, grease marks and clean cobweb-free gaps around potential entrance points and crevice roost sites.
- 3.5.11 The buildings and trees were classified according to the criteria set out in Table 3 below in accordance with standard guidance (Collins, 2016). With respect to roost type, the assessments in this report are made irrespective of species conservation status, which is established after presence is confirmed.

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Table 3. Bat Roost Suitability Descriptions (taken from Collins, 2016)

Suitability	Description of Roosting Habitats
Confirmed Presence	Presence of roosting bats within the building and/or tree confirmed by the survey.
High	A building and/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.
Moderate	A building and /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.
Low	A building and/or tree 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 a larger number of bats (i.e. unlikely to be suitable for maternity or hibernation).
Negligible	Buildings and/or Trees that appear unsuitable for roosting bats due to a clear lack of roosting spaces such as voids, small crevices etc. and/or absence of suitable access points such as lifted bark, cracked limbs etc.

Bat survey

- 3.5.12 It was recommended from the initial survey that a minimum of two further of the clay shed were undertaken as the building was identified as having **moderate potential** to support roosting bats, The presence/likely absence bat surveys, comprised a dusk emergence survey and a dawn re-entry survey. These surveys were undertaken between on the 9^{th of} August and 24th of August.
- 3.5.13 The results of the bat surveys can be seen in Appendix 5.

3.6 Method for Evaluation of Ecological Features

- 3.6.1 The potential of the Site to support legally protected or notable species during the preliminary ecological appraisal and subsequently in this assessment was determined through a review of field observations and desk study information.
- 3.6.2 The likelihood of the occurrence of any protected and/or invasive species is ranked and defined as follows and relies on habitat suitability for the species at the Site as well as an evaluation, in parallel, of desk study data and published guidance/literature which is referenced accordingly:
 - Negligible while presence cannot be absolutely discounted, the Site supports very limited
 or poor-quality habitat for a species or species group. There may be no local records of the
 species/species group from the data search, and the surrounding habitats are considered
 unlikely to support wider populations of a species/species group. The Site may also be
 outside or peripheral to the known natural range of a species/species group.

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

Geographical Frame of Reference for Impact Assessment

- 3.6.3 The CIEEM EcIA guidelines (CIEEM, 2018) state that "the importance of an ecological feature should be considered within a defined geographical context" the geographic frame of reference detailed below and adopted for this assessment is based on that detailed within current EcIA guidance (CIEEM, 2018):
 - International and European
 - National (England)
 - Regional (West Midlands)
 - County (Shropshire)
 - District (Ludlow)
 - Parish (Culmington)
- In respect of foraging and commuting bats, the importance of ecological features at the Site for these behaviours have been assessed based on guidance provided within IEEM [now CIEEM] InPractice Issue no.70 (Wray, Wells, Long, & Mitchell-Jones, Valuing bats in ecological impact assessment, 2010) and Bat Mitigation Guidelines (Mitchell-Jones, Bat Mitigation Guidelines, 2004).

3.7 Impact Assessment

- 3.7.1 When describing Impacts and effects to important ecological features (as defined by (CIEEM, 2018)), the following characteristics of impacts and effects have been considered (CIEEM, 2018) where appropriate to the important ecological feature:
 - Positive or negative
 - Extent
 - Magnitude
 - Duration

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- Frequency and timing
- Reversibility

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- 3.7.2 An assessment has also been made in respect of cumulative impacts and effects resulting from other known planning applications in the local area that may affect important ecological receptors.
- 3.7.3 An assessment of residual effects has also been made based on current guidelines (CIEEM, 2018).

3.8 Survey Limitations

- 3.8.1 This report is based solely on the Site conditions on the 3rd February 2021 for the PEA and 9th August 2021 and 24th August 2021 for the emergence/ re-entry surveys and provides a 'snapshot' of Site conditions at these times only.
- 3.8.2 Due to the presence of Covid-19 in the human population, there is a possible risk of transmission of Covid-19 to the wild bat population, and as such no handling of bats was undertaken as part of this assessment. Precautionary characterisation of roosts has been undertaken where handling would otherwise have confirmed roost type.

4. Baseline Ecological Conditions and Impact Assessment

Assessment of impacts and effects within this section is based on the Proposed Development Layout at Appendix 4 and are made in the absence of mitigation (unless this mitigation is embedded into the design).

4.1 Statutory Wildlife Sites

Zol

- 4.1.1 The ZoI for statutory wildlife sites is considered to be within 50m of the Site boundary for dust emissions, and up to 1km downstream of the Site in relation to potential impacts of pollution to any statutory wildlife sites associated with Seifton Brook.
- 4.1.2 In this instance 'association' is defined as any statutory wildlife sites which rely on the continued presence, ecological functionality, and good condition of the Seifton Brook, such as flood meadows, tributaries, etc.
- 4.1.3 Due to the small-scale nature of the Proposed Development and the lack of increase in occupation rates, no additional recreational impacts are anticipated as a result of the Proposed Development.

Baseline and Assessment of Impacts and Effects

- 4.1.4 There are no statutory wildlife sites within 50m of the Site or within 1km downstream of Site associated with Seifton Brook.
 - 4.1.5 The Pottery lies within the SSSI Impact Risk Zone for both Wolverton Wood and Alcaston Coppice SSSI and Prince's Rough SSSI.

Assessment of Impacts and Effects

- 4.1.1 There are no anticipated pathways for impacts to occur. The Proposed Development does not conflict with impact assessment guidance presented by Magic (DEFRA, 2020) and significant effects to the SSSIs as a result of the Proposed Development are not likely.
- 4.1.2 No significant effects to statutory wildlife sites are considered likely to arise as a result of the Proposed Development.

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4.2 Non-statutory Wildlife Sites

Zol

- 4.2.1 The ZoI for statutory wildlife sites is considered to be within 50m of the Site boundary for dust emissions, and up to 1km downstream of the Site in relation to potential impacts of pollution to any statutory wildlife sites associated with Seifton Brook.
- 4.2.2 In this instance 'association' is defined as any statutory wildlife sites which rely on the continued presence, ecological functionality, and good condition of the Seifton Brook, such as flood meadows, tributaries, etc.
- 4.2.3 Due to the small-scale nature of the Proposed Development and the lack of increase in occupation rates, no additional recreational impacts are anticipated as a result of the Proposed Development.

4.2.4 Baseline and Assessment of Impacts and Effects

4.2.5 There are no non-statutory sites within 50m of the Site or within 1km downstream of Site associated with Seifton Brook.

Assessment of Impacts and Effects

- 4.2.6 There are no anticipated pathways for impacts to occur to non-statutory wildlife sites.
- 4.2.7 No significant effects to non-statutory wildlife sites are considered likely to arise as a result of the Proposed Development

Assessment of Impacts and Effects to Statutory and Non-Statutory Wildlife Sites

- 4.2.8 There are no statutory or non-statutory sites within 50m of the Site or within 1km downstream of Site associated with Seifton Brook.
- 4.2.9 There are no anticipated pathways for impacts to occur to statutory or non-statutory wildlife sites.
- 4.2.10 No significant effects to statutory or non-statutory wildlife sites are considered likely to arise as a result of the Proposed Development

4.3 Habitats

- 4.3.1 A plan of the habitats detailed below is provided at Appendix 2.
- 4.3.2 The assessment of importance within section 4.4 relates solely to the botanical importance of habitats at the Site. It does not take use or possible use by protected species into account as this is addressed within section 4.6.

Zol

4.3.3 The ZoI for habitats in relation to the Proposed Development is the habitats within the Site boundary. This is because impacts to adjacent habitats as a result of the Proposed Development are unlikely to occur.

Baseline and Assessment of Impacts and Effects

4.3.4 The assessment of impacts and effects in this section takes into consideration all potential significant effect to habitats as a result of the Proposed Development in the absence of mitigation/compensation measures, unless these are embedded within the design.

Buildings - u1b5

4.3.5 The Site comprised the main house and the clay shed. There are also a number of other outbuildings, including a kiln shed, which will not be modified in any way as part of the

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Proposed Development.

- 4.3.6 The main house is an existing residential dwelling and gallery.
- 4.3.7 The clay shed is a small, brick-built, single-story structure which is currently used for storage.
- 4.3.8 The two buildings are superficially connected by a linking roof at the ground floor level. This roof provides cover over an external, pedestrian walkway between the two buildings.
- 4.3.9 The main house is to be retained throughout the Proposed Development with the gallery being repurposed into residential living space and the clay shed will be renovated as part of the Proposed Development.
- 4.3.10 The buildings are not ecologically important.

Hardstanding - u1b6

- 4.3.11 The remainder of the Site was dominated with hardstanding used as residential parking and walkways surrounding the buildings.
- 4.3.12 The hardstanding is not ecologically important and will be retained as part of the Proposed Development.

Line of Trees - w1g6

- 4.3.13 A continuous line of trees is present along the northern and western boundaries of the Site. Species consist of beech (*Fagus sylvatica*), blackthorn (*Prunus spinosa*) and sycamore (*Acer pseudoplatanus*).
- 4.3.14 The trees at the Site have ecological importance at the Parish level due to their age and size and cannot be replaced in the short to medium term.
- 4.3.15 The trees will be retained as part of the Proposed Development.

Habitats for Further Consideration

- 4.3.16 The ecologically important habitats present at the Site, and therefore those that will be subject to further consideration within this assessment are:
 - Line of trees (ecologically important at the Parish level)
- 4.3.17 Habitats at the Site that are not detailed within paragraph 4.3.15 are not considered to be ecologically important and therefore do not warrant further consideration.
- 4.3.18 Table 4 below details the potential impacts and effects to the line of trees at the Site as a result of the Proposed Development.

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Table 4. Potential impacts and effects to on-site Line of Trees

Impact	Effect	Considered further within this assessment? (Y/N)	Rationale
Movement of plant machinery/vehicles	Direct compaction of root systems in mature trees resulting in eventual deterioration and death of affected tree(s). This would result in a medium-term reversible effect, significant up to the Parish level.	Z	The proposed works will be taking place within areas of existing hard standing therefore, are unlikely to result in any increased compaction of tree root-systems compared with the baseline level of compaction.
Building construction causing dust deposition	Dust deposition to the trees (defined as low sensitivity receptors (IAQM, 2014)) is likely to result in a temporary not-significant negative effect.	Z	Due to the small-scale nature of the Proposed Development, it is not anticipated that dust deposition will result in a long-term negative effect on the trees within the Site. Trees are effective at metabolising small particulate matter (PM) and it is therefore unlikely that small amounts of dust created by the construction of the Proposed Development will results in permanent long-term effects.

please note that significant effects are in **bold** in the second column

4.4 Species

- 4.4.1 Biological records have been provided by Shropshire Ecological Data Network (Shropshire Ecological Data Network, 2021). The data will be licensed for use by Wharton and the Client for a 12-month period, it is not owned by Wharton, or the Client and ownership of the data remains with the data provider.
- 4.4.2 Please note that all data from pre-1996 (25+ years) has been filtered from the data search as data of this age and older is unlikely to be significant to the Proposed Development.
- 4.4.3 Where a species/species group has been scoped out of further assessment below, no significant effects (adverse or otherwise) to this species are anticipated as a result of the Proposed Development, and no legislative breach in respect of the species legal protection is anticipated.

Badger

Zol

4.4.4 The ZoI for badgers is considered to be the Site and 30m from the boundary where accessible.

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No important habitats for badgers are considered to be affected outside of the Site boundary by the Proposed Development.

Baseline and Assessment of Impacts and Effects

- 4.4.5 There were no biological records of badger within 1km of the Site.
- 4.4.6 No evidence of badger was identified at the Site and no suitable sett making habitat was recorded within the Site.
- 4.4.7 Badgers may migrate through the land adjacent to the Site, within the client ownership, at night when the garden is likely to be less disturbed.
- 4.4.8 The Proposed Development has the potential to adversely affect individual badgers that may use the Site via direct impacts from machinery or becoming trapped in excavations. This effect is unlikely to be significant, however, avoidance measures have been recommended in section 5.3 to reduce the likelihood of potential impacts occurring to a negligible level.

Bats

Zol

4.4.9 The ZoI for bats is considered to be the Site only as no impacts to bats are likely to occur outside of the Site.

Baseline and Assessment of Impacts and Effects - Roosting Habitat

- 4.4.10 The biological records did not provide records of roosting bats within 1km of the Site.
- 4.4.11 No European Protected Species Licensing Applications with regards to bats were provided on MAGIC map (HMSO, 1981) within 500m of the Site.
- 4.4.12 The buildings at the Site which were surveyed comprised the main house and the clay shed as well as the linking roof which connects the two buildings.
- 4.4.13 The other outbuildings at the Site, including a kiln shed, will not be modified in any way as part of the Proposed Development and therefore do not form part of this assessment.
- 4.4.14 The main house is a period building once utilised as a schoolhouse. It is now a residential property and gallery space for the homeowners' pottery business.
- 4.4.15 The clay shed is a small, brick-built, single-story structure, with a dual pitched roof which is in a reasonable condition with some lifted and missing tiles noted. There is a hay loft present within the clay shed which spans approximately 1/3 of the total floor space. The clay shed is open to the rafters internally. It is currently used for storage.
- 4.4.16 The two buildings are superficially connected by a linking roof at the ground floor level. This roof provides cover over an external, pedestrian walkway between the two buildings
- 4.4.17 There are multiple potential access features into the clay shed including slipped and missing tiles, missing mortar beneath ridge tiles, gaps at the eaves and a 30x30cm hole in the wall on the north-western elevation which would provide flight access into the building.
- 4.4.18 There is a small crack in the mortar on the south-eastern elevation which could be utilised opportunistically by individual bats.
- 4.4.19 There is lifted flashing around the chimney which could provide potential roosting features for small numbers or individual bats.
- 4.4.20 The clay shed had a metal shed attached at the north-western elevation which has very limited potential to support roosting bats owing to its single skin metal walls with one opened sided wall allowing for large fluctuations in temperature and drafts. The only likely potential of the metal shed

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would be as a feeding roost.

- 4.4.21 No evidence of bats was recorded within the clay shed during the PRA.
- 4.4.22 Details of the potential roost features are provided within Table 5 below.

Table 5. Detail of Bat Roost Potential for the clay shed

	External Assessm	ent
Feature	Present During Inspection?	Notes
Lifted/warped/missing tiles at roof level	Yes	There are several areas where the roofing tiles are slipped or damaged.
Missing mortar (at roof level)	Yes	In places along the ridge of the roof creating gaps beneath.
Missing mortar (in brickwork)	Yes	There are small cracks in the mortar which could be utilised by opportunistically by individual bats
Lifted lead flashing	Yes	Lifted lead flashing around the chimney,
Gaps around lintels (windows and doors)	No	N/A
Gaps at eaves	Yes	There is a gap along the majority of the eaves. Birds are also accessing into the building at the eaves (evidenced by bird droppings)
Other	No	N/A
	Internal Assessme	ent
Feature	Present During Inspection?	Notes
Light ingress to roof void?	Yes	Light ingress through windows. The room was well illuminated.
Roof lining	Yes	The roof was lined with Kingspan insulation panels. There are gaps between the joints.
Roof timbers	Yes	There are timber rafters and ridge board present.
Small/medium/large void	N/A	No void. The building was open to the rafters creating a large, open space.
Cobwebbing	Yes	Slight cobwebbing but not significant.
Temperature (°C)	Unstable	Drafts were noted within the building
Flight space	Yes	The building was open to the rafters creating uncluttered flight space.
Other	No	N/A
	of bats found?	None
Suitability	y of building	Moderate

- 4.4.23 Based on the presence of potential access features into the clay shed and the anecdotal evidence of a bat roost within the main house (which increases the likelihood of adoption of adjacent buildings), the clay shed has moderate suitability to support roosting bats.
- 4.4.24 Anecdotal evidence provided by the homeowners suggested that bats were roosting within the

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- roof of the main house and emerged from the northern gable end of the property.
- 4.4.25 The main house was subject to an internal and external preliminary roost inspection however, no evidence of bats was recorded within the loft void.
- 4.4.26 However, based on the anecdotal evidence provided by the homeowners the main house was presumed to be a bat roost.
- 4.4.27 Therefore, further surveys were required on the clay shed and main house. To confirm presence/likely absence of bats within the clay shed and to categorise the roost within the main house.
- 4.4.28 The trees on Site were considered to have negligible potential for roosting bats due to their overall good condition and absence of potential features that may be used to support roosting bats.
- 4.4.29 A technical appendix has been provided in this report detailing the methods and results of bat presence/likely absence surveys undertaken at the Site. Technical appendices are provided as follows:
 - Appendix 5 –Bat Surveys
- 4.4.30 In summary, common pipistrelles are confirmed to be roosting within the main house. Based on the low number common pipistrelles recorded emerging/re-entering the roost it is likely to be a day roost, however, given the surveys were carried out in August these number could suggest early dispersal of a maternity roost, therefore, a precautionary assessment of maternity roost has been made.
- 4.4.31 Soprano pipistrelles are utilising the main house as a day roost. Soprano pipistrelles typically have maternity roosts of very high numbers and the numbers at the Site did not reflect the dispersal of a maternity roost.
- 4.4.32 Two emergence points were identified near the apex of the gable end on the northern elevation of the main house and a third emergence point was identified as a gap between the soffit and the brickwork of the north gable end of the main house.
- 4.4.33 The maximum count of common pipistrelles at the Site was eight, recorded during the dusk survey on 9th August 2021. The maximum count of soprano pipistrelles was four recorded on the dawn surveys on 24th August 2021,
- 4.4.34 The maternity roost of common pipistrelle (based on a precautionary assessment) is deemed to be of moderate conservation significance at the local-level (Wray, Wells, Long, & Mitchell-Jones, Valuing Bats in Ecological Impact Assessment, 2010) (Mitchell-Jones, 2004)
- 4.4.35 The day roost of soprano pipistrelles is deemed to be of low conservation significance at the local-level (Wray, Wells, Long, & Mitchell-Jones, Valuing bats in ecological impact assessment, 2010) (Mitchell-Jones, Bat Mitigation Guidelines, 2004).
- 4.4.36 No bats were recorded roosting within the clay shed.
 - 4.4.37 The Proposed Development has the potential to adversely affect the maternity roost of common pipistrelle and the day roost of soprano pipistrelles that are confirmed to be roosting within the main house via the construction of the single story 'link' between main house and clay shed and the installation of the roof window into the pitched roof of the main house and due to lighting of roosting access features or flight paths therefore, avoidance measures have been recommended in section 5.4 to reduce the likelihood of potential impacts occurring to a negligible level.

Baseline and Assessment of Impacts and Effects - Commuting and Foraging Habitat

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- 4.4.38 There have been no records of foraging or commuting of bats within 1km of the Site.
- 4.4.39 The habitats at the Site have low suitability for foraging bats. Connectivity to/from the Site is moderate owing to Seifton brook which is adjacent to the Site but botanical species diversity (which would suggest an abundance of invertebrate prey) is very low throughout the Site.
- 4.4.40 Suitable foraging habitat is present along the brook immediately west of the Site, and there is good connectivity to this area via a hedgerow and tree line.
- The Site itself is not ecologically important for foraging or commuting bats. Recommendations are made in section 5 to ensure that there are no adverse effects to the adjacent habitats as a result of the Proposed Development which could impact local bat populations.

GCN and other Amphibians

Zol

- 4.4.42 The ZoI for GCN is the Site and ponds within 250m of the Site due to the small-scale nature of the Proposed Development.
- 4.4.43 The ZoI for other amphibians is the Site only.

Baseline and Assessment of Impacts and Effects

- 4.4.44 There are no records for GCN or any other amphibian species within 1km of the Site.
- 4.4.45 No European Protected Species Licensing Applications or License Returns with regards to GCN were provided on MAGIC map (DEFRA, 2021) within 500m of the Site.
- 4.4.46 No ponds have been identified within 250m of the Site (DEFRA, 2021) (Google Earth Pro, 2021).
- 4.4.47 No evidence of GCN or other amphibians was recorded at the Site.
- 4.4.48 There is one ornamental, concrete pond within an area of close mown amenity lawn within the client ownership (adjacent to the Site). This pond had a habitat suitability index (HSI) of 0.40 ('poor' suitability for GCN). Therefore, it is unlikely that GCN will be present within this pond.
- 4.4.49 All of the proposed works will take place within areas of existing hard standing without the need for vegetation removal and it is therefore unlikely that amphibians, including GCN, will be adversely affected by the Proposed Development, and the Site is not likely to be ecologically important for amphibians.

Hedgehog

Zol

4.4.50 The ZoI for hedgehog is considered to be the Site only as this is the only likely area where impacts to hedgehog may occur as a result of the Proposed Development.

Baseline and Assessment of Impacts and Effects

- 4.4.51 There have been no records of hedgehog within 1km of the Site.
- 4.4.52 The Site supports some suitable foraging habitat for hedgehog along the tree line.
- 4.4.53 It is unlikely that important populations of hedgehog are present at the Site due to the small size of the Site. The Site is therefore unlikely to be ecologically important for hedgehog.
- The Proposed Development has the potential to adversely affect individual hedgehog that may use the Site via direct impacts from machinery or becoming trapped in excavations. This effect is unlikely to be significant, and avoidance measures have been recommended in section 5.4 to reduce the likelihood of potential impacts occurring to a negligible level.

Invertebrates

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Zol

4.4.55 The ZoI for invertebrates is considered to be the Site only as this is the only likely area where impacts to invertebrates may occur as a result of the Proposed Development.

Baseline and Assessment of Impacts and Effects

- 4.4.56 No records of protected or notable invertebrates were provided within the last 25 years.
- 4.4.57 The Site is likely to support some common invertebrate species that could use the tree species present at the Site as food, larval and egg-laying plants, the likelihood of red data book species or other notable species being present at the Site is considered low.
- 4.4.58 No vegetation removal is required to facilitate the Proposed Development. All of the works will take place within existing hard standing areas.
- 4.4.59 The Site is therefore unlikely to be important for protected or notable invertebrates and no adverse effect to protected or notable invertebrates are anticipated as a result of the Proposed Development.

Hazel dormice

Zol

4.4.60 The ZoI for hazel dormice is considered to be the Site only as this is the only likely area where impacts to hazel dormice may occur as a result of the Proposed Development.

Baseline and Assessment of Impacts and Effects

- 4.4.61 There was one record for hazel dormice within 1km of the Site located approximately 350m southeast of the Site, recorded in 2015.
- 4.4.62 No European Protected Species Licensing Applications with regards to hazel dormice were provided on MAGIC map (DEFRA, 2021) within 500m of the Site.
- 4.4.63 The Site is unsuitable for hazel dormice as the trees and hedgerows at the Site are limited botanically and would not provide the varied and abundant diet required by hazel dormice. The Site is also ecologically isolated from areas of high-quality habitats such as woodland.
- 4.4.64 The Site is separated from the location of the dormouse record by a number of small roads and the village of Culmington making it unlikely that the dormouse recorded approximately 350m southeast of the Site would be able to migrate to the Site.
- 4.4.65 No vegetation removal (including trees or hedgerows) is required to facilitate the Proposed Development. All of the works will take place within existing hard standing areas.
- 4.4.66 The Site is therefore unlikely to be important for hazel dormice and no significant effects to hazel dormouse are anticipated as a result of the Proposed Development.

Reptiles

Zol

4.4.67 The ZoI for reptiles is considered to be the Site only as this is the only likely area where impacts to reptiles may occur as a result of the Proposed Development.

Baseline and Assessment of Impacts and Effects

- 4.4.68 There have been no records of reptiles within 1km of the Site.
- 4.4.69 The Site itself is dominated by buildings and hardstanding therefore, the presence of reptiles is unlikely based on the habitats present within the Site.
- 4.4.70 No vegetation or tree removal is required to facilitate the Proposed Development. All of the

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works will take place within existing hard standing areas.

4.4.71 It is therefore highly unlikely that the Site is ecologically important for reptiles and that reptiles are unlikely to be affected by the Proposed Development and no further surveys are required for reptiles.

Otter, water vole and white clawed crayfish

Zol

4.4.72 The ZoI for otter, water vole and white clawed crayfish is considered to be the Site and 100m up and downstream of the watercourses adjacent to the Site as this is the only likely areas where impacts to otter may occur as a result of the Proposed Development (such as via small-scale accidental pollution).

Baseline and Assessment of Impacts and Effects

- 4.4.73 There is one record of otter within 1km of the Site located 250m southeast of the Site in 2003.
- 4.4.74 There have been no records of water vole or white clawed crayfish within 1km of the Site and are unlikely to be present within the local area.
- 4.4.75 The Site lies adjacent to Seifton Brook and there is some connectivity via the brook from the Site to the area where the otter record was located. It is, therefore, possible that otters are using the brook to commute however, there is no suitable holt making habitat within or adjacent to t the Site.
- 4.4.76 The development area within the Site is located approximately 35m from the Seifton Brook and all of the works will take place during daylight when otter are typically less active.
- 4.4.77 Therefore, it is highly unlikely that water pollution events will occur as a result of the Proposed Development, and it is highly unlikely that disturbance to otter (if using the brook for commuting purposes) will occur as a result of the Proposed Development, therefore, no further surveys are required for otters.
- 4.4.78 No adverse effect to water vole or white clawed crayfish are anticipated as a result of the Proposed Development.

Wild birds

Zol

4.4.79 The ZoI for wild birds is the Site only, as this is the only area where impacts to wild birds may occur as a result of the Proposed Development.

Baseline and Assessment of Impacts and Effects

- 4.4.80 There are several records for protected or notable birds within 1km of the Site. Species include:
 - Yellowhammer (Emberiza citronella)
 - House sparrow (Passer domesticus)
 - Kingfisher (Alcedo atthis)
 - Redwing (Turdus iliacus)
 - Fieldfare (Turdus pilaris)
 - Barn owl (Tyto alba)
- 4.4.81 All records for protected or notable birds were provided from within the grid reference square, as such the specific location of the records within 1km of the Site is unknown.

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- 4.4.82 No vegetation or tree removal is required to facilitate the Proposed Development. All of the works will take place within existing hard standing areas.
- 4.4.83 The Site supports suitable nesting habitat for wild birds via the clay shed.
- 4.4.84 Evidence of birds are accessing into the building via gaps at the eaves was recorded at the Site (evidence bird whitewash along the eaves and nesting material that was lodged into the gaps).
- 4.4.85 There is also a c.30x30cm hole in the wall on the north-western elevation which provides access into the clay shed. This has been previously used by corvids, who have attempted to make a nest within the hay loft of the building.
- 4.4.86 There is a risk of a breach of Section 1 of the Wildlife and Countryside Act 1981 (as amended) (HMSO, 1981) in relation to damage to/destruction of bird nests and their eggs if works to the clay shed are undertaken during the nesting bird season.
- 4.4.87 The works to the clay shed may result in a negative reversible not-significant effect to nesting birds; however, it could result in a legislative breach if undertaken during the nesting season.

Protected/ notable plants

Zol

4.4.88 The ZoI for protected plants is the Site only, as this is the only area where impacts to protected plants may occur as a result of the Proposed Development.

Baseline and Assessment of Impacts and Effects

- 4.4.89 There have been no records of protected or notable plants within 1km of the Site.
- 4.4.90 No protected or notable plant species were observed at the Site during the field survey.
- 4.4.91 The Site is dominated by building and hardstanding therefore, the Site is not likely to support protected or notable plant species.
- 4.4.92 No vegetation removal is required to facilitate the Proposed Development. All of the works will take place within existing hard standing areas. Therefore, no adverse effect to protected or notable plants are anticipated as a result of the Proposed Development.

Scoping Following Preliminary Ecological Appraisal

- 4.4.93 The following species groups have been scoped out of further assessment following the initial Site survey and significant effects to these species groups are not considered likely to arise as a result of the Proposed Development:
 - GCN and other Amphibians,
 - Invertebrates,
 - Hazel dormice,
 - Reptiles,
 - Otter
 - Water vole,
 - White-clawed crayfish, and
 - Protected/ notable plant species

Species for Further Consideration

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- 4.4.94 The following species groups will be considered further in this report:
 - Badgers,
 - Bats (Roosting),
 - Wild Birds, and
 - Hedgehogs
- 4.4.95 A summary of the impacts and resultant effects to these species, in the absence of mitigation, has been detailed below.
- 4.4.96 Summary of Impacts and Resultant Effects to Protected Species
- 4.4.97 This section provides an overview of the likely impacts and resultant effects to protected species as a result of the Proposed Development in the absence of avoidance, mitigation and compensation measure.
- 4.4.98 Significant effects have been detailed in bold for ease of reference.

Badgers

 A temporary, short, term not-significant effect to badgers due to Site clearance and excavation work leading to injury/death and trapping of badgers

Bats (Roosting)

- A temporary short-term not significant effect to roosting bats due to the construction of the single story 'link' between main house and clay shed and the installation of the roof window into the pitched roof of the main house.
- Permanent long-term, significant effect to roosting bats due to lighting of roosting access features or flight paths.

Nesting Birds

- A reversible, negative, not-significant effect to nesting birds will arise due to loss of breeding habitat as a result of the works to the clay shed.
- A permanent negative not-significant effect to nesting birds will arise due to injury and/or death of birds, fledglings and/ or eggs due to vegetation clearance at the Site.

Hedgehog

- A temporary, short, term not-significant effect to hedgehog due to Site clearance and excavation work leading to injury/death and trapping of hedgehogs.
- 4.4.99 Measure to avoid, mitigate and compensate for these potential impacts are detailed within Section 5 below.

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5. Avoidance, Mitigation and Compensation Measures

5.1 Overview

5.1.1 In order to off-set the likely impacts and resultant effects to statutory and non-statutory wildlife sites, important and notable habitats and protected and notable species as a result of the Proposed Development the following avoidance, mitigation and compensation measures will be implemented at the Site.

5.2 Statutory and non-Statutory Wildlife Sites

5.2.1 No avoidance, mitigation or compensation measures required.

Statement of Residual Significant Effects- Statutory and Non-Statutory Wildlife Sites

5.2.2 On the basis of the Proposed Development layout to-date, it is not considered likely that there will be significant adverse residual effects to statutory or non-statutory wildlife sites as a result of the Proposed Development.

5.3 Habitats

5.3.1 No avoidance, mitigation or compensation measures required.

Statement of Residual Significant Effects- Habitats

5.3.2 On the basis of the Proposed Development layout to-date, it is not considered likely that there will be significant adverse residual effects to habitats at the Site as a result of the Proposed Development.

5.4 Species

5.4.1 Each species group is considered separately below.

Badgers

- It is possible that individual badgers may be impacted by Site clearance and excavation works (injury/death and trapping respectively).
- Any open excavations which cannot feasibly be infilled overnight must also be covered with a solid sheet material (i.e., plywood) to prevent fauna from falling into excavations and becoming trapped. Should this not be possible, a shallow slope must be dug into the excavation prior to it being left overnight to allow an escape route for any fauna that may fall in. All excavations should be checked for fauna in the morning prior to works commencing.

Bats

Disturbance during construction

- 5.4.4 Impacts to the roosting bats within the main house must be avoided therefore, certain aspects of the works must be carried out between 1st of October and the 30^{th of} April of any given year. Specifically, the works required to create:
 - the single storey 'link' between the main house and the clay shed, and
 - the installation of the velux roof window into the main house.
- 5.4.5 All other works are not considered likely to cause disturbance to the bat roosts present within the main house and therefore no timing restrictions apply to all other works, excepting those listed above.
- 5.4.6 Hibernation opportunities within the buildings are considered low therefore, bats are not likely

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- to be present within the winter months. Therefore, disturbance to the roost will be avoided as works will be carried out whilst the bats are absent.
- 5.4.7 The works listed about must take place under the observation of a suitably qualified ecologist.
- 5.4.8 If a bat (or evidence of bats) is discovered during the work all works must cease Natural England must be consulted.

Lighting

- 5.4.9 Impacts to the roosting bats via disturbance from increasing lighting must also be avoided.
- 5.4.10 Short lighting columns and directional hoods on any new lighting to be installed within the Site will be included within the design of the Proposed Development.
- 5.4.11 No lighting will illuminate the apex of the roof at the northern gable end of the main house where bats were observed to emerge from.
- 5.4.12 Lighting should be designed to avoid the boundary features at the Site and in accordance with the Bat Conservation Trust and Institute of Lighting Professionals guidance (DEFRA, 2021).

Nesting Birds

The works to the clay shed must be undertaken outside of the bird nesting season (generally March to August inclusive) to avoid impacts to nesting birds. If this is not possible, the clay shed must be checked by the ECoW immediately (within 24 hours) prior to the clearance commencing, to ensure there are no nesting birds within the building.

Hedgehog

- 5.4.14 It is possible that individual hedgehog may be impacted by Site clearance and excavation works (injury/death and trapping respectively).
- 5.4.15 It is considered that recommendations made with in paragraph 5.4.3 are sufficient to reduce the likelihood of potential impacts occurring to a negligible level.

Statement of Significant Residual Effects- Species

5.4.16 Providing those recommendations made within the above assessment are implemented in full, no significant residual effects as a result of the Proposed Development are considered likely to arise on important or protected species from known or predictable impacts.

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6. Enhancements

- 6.1.1 The Proposed Development provides the opportunity to increase the availability of artificial roosting habitat via provision of artificial bat boxes on trees within the Site. This enhancement has the potential to be significant up to the County level, however this is entirely dependent on the uptake of boxes and the species utilising the boxes.
- 6.1.2 It is unlikely that the enhancements detailed above will result in significant positive effects to the target species at or above the Parish level, however they should be viewed as a positive contribution to enhancing biodiversity for targeted species in the local area.

7. Cumulative Effects

7.1.1 There are no known planning applications within 1km of the Site that will result in cumulative effects.

8. Conclusion

- 8.1.1 The Proposed Development will not result in significant effects to statutory or non-statutory wildlife sites or protected and/or notable habitats.
- 8.1.2 No significant effects to protected or notable species are anticipated as a result of the Proposed Development. Measures have been included to avoid and mitigate potential impacts to roosting bats. These include:
 - Any open excavations which cannot feasibly be infilled overnight must also be covered with
 a solid sheet material (i.e., plywood) to prevent fauna from falling into excavations and
 becoming trapped. Should this not be possible, a shallow slope must be dug into the
 excavation prior to it being left overnight to allow an escape route for any fauna that may fall
 in. All excavations should be checked for fauna in the morning prior to works commencing.
 - The works to the clay shed must be undertaken outside of the bird nesting season (generally March to August inclusive) to avoid impacts to nesting birds. If this is not possible, the clay shed must be checked by the ECoW immediately (within 24 hours) prior to the clearance commencing, to ensure there are no nesting birds within the building.
 - The construction of the single story 'link' between main house and outbuildings will be completed between 1st of October and the 30^{th of} April. This will reduce the likelihood of bats being present in the roost during these works therefore, avoiding potential disturbance events to roosting bats.
 - No lighting will illuminate the apex of the roof at the northern gable end of the main house where bats were observed to emerge from.
 - Short lighting columns and directional hoods on any new lighting to be installed within the Site will be included within the design of the Proposed Development.
- 8.1.3 These lighting measures must be designed in accordance with the Bat Conservation Trust and Institute of Lighting Professionals guidance (DEFRA, 2021).
- 8.1.4 Providing that appropriate avoidance, mitigation, compensation and enhancement measures are secured and fully implemented, no significant residual effects are considered likely to arise as a result of the Proposed Development in respect of known impacts.

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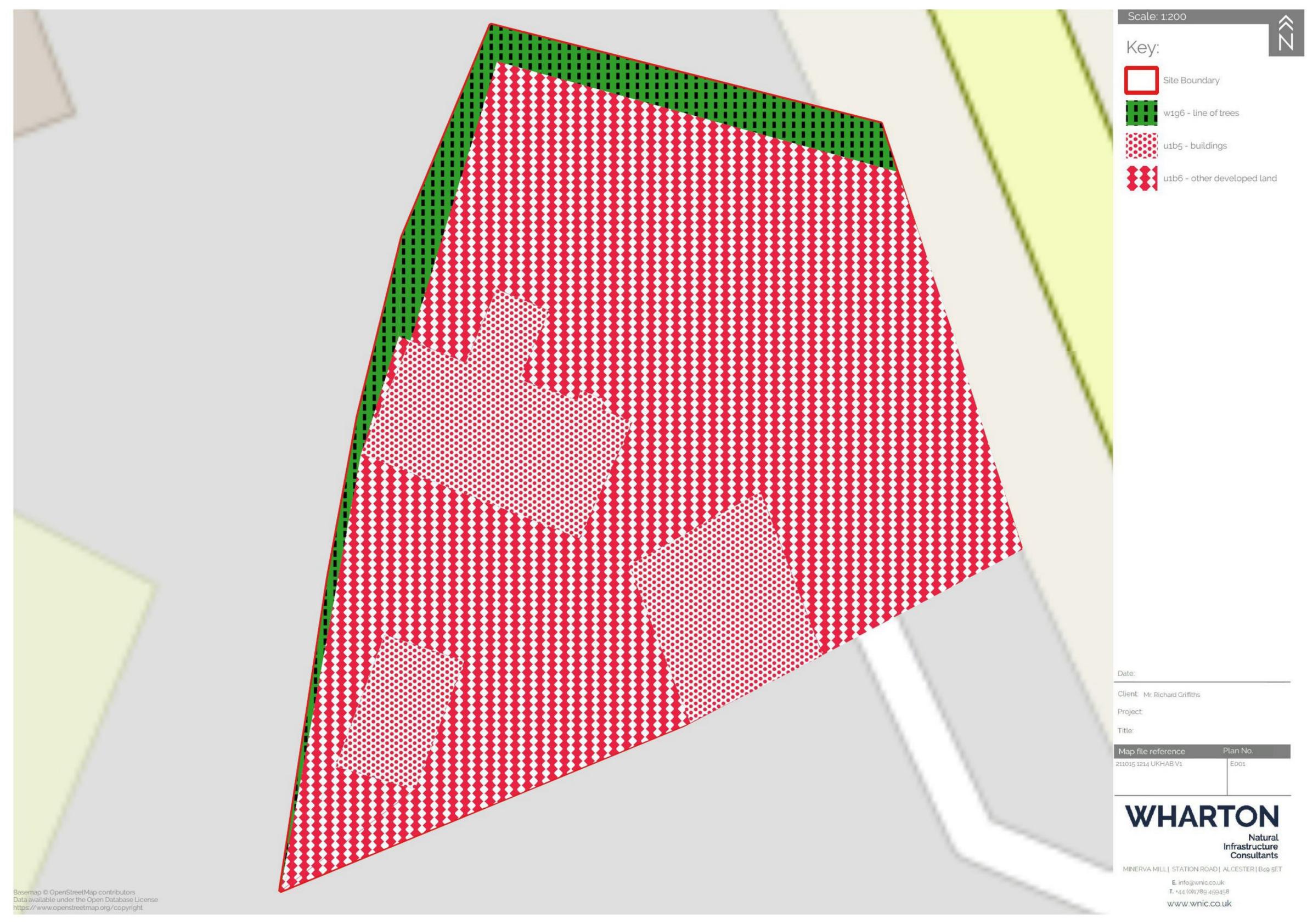
Appendix 1 - Site Location Plan



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Appendix 2 - UK Habitat Classification Plan



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Appendix 3 - Local Planning Policy Excerpts (Shropshire Council, 2011)

CS17: Environmental Networks

Development will identify, protect, enhance, expand and connect Shropshire's environmental assets, to create a multifunctional network of natural and historic resources. This will be achieved by ensuring that all development:

- Protects and enhances the diversity, high quality and local character of Shropshire's natural, built and historic environment, and does not adversely affect the visual, ecological, geological, heritage or recreational values and functions of these assets, their immediate surroundings or their connecting corridors;
- Contributes to local distinctiveness, having regard to the quality of Shropshire's environment, including landscape, biodiversity and heritage assets, such as the Shropshire Hills AONB, the Meres and Mosses and the World Heritage Sites at Pontcysyllte Aqueduct and Canal and Ironbridge Gorge;
- Does not have a significant adverse impact on Shropshire's environmental assets and does not create barriers or sever links between dependant sites;
- Secures financial contributions, in accordance with Policies CS8 and CS9, towards the creation of new, and improvement to existing, environmental sites and corridors, the removal of barriers between sites, and provision for long term management and maintenance. Sites and corridors are identified in the LDF evidence base and will be regularly monitored and updated.

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Appendix 4 - The Proposed Development



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Appendix 5 - Bat Survey Technical Appendix

Background

Preliminary Roost Assessment Summary

8.1.1 The clay shed was assigned moderate potential to support roosting bats as potential roosting features were identified during the PEA. Therefore, two bat emergence/re-entry surveys were required.

Methodology

Bat Activity Survey Method

- 8.1.2 Two bat surveys were carried out on the clay shed, the linking roof (that provides cover over an external, pedestrian walkway between the two buildings) and the northern gable end of the main house (areas where works are to take place) in accordance with good practice survey guidelines (Collins, 2016) on 9th August 2021 and 24th August 2021. These comprised a dawn return-to-roost survey and a dusk emergence survey as detailed below.
- 8.1.3 Surveyors were positioned to view all elevations of the clay shed to observe the emergence or re-entry of any bats that may be roosting within the building.
- 8.1.4 The equipment used for the surveys were the PeerSonic, Echo Meter Touch 2 Pro and an Anabat Walkabout detector, which record calls in full spectrum in case subsequent analysis is required, however, due to the ease of identification of species recorded, no subsequent call analysis was necessary in this instance.
- 8.1.5 Both surveys were undertaken using one infra-red camera (Canon XA40 with two high intensity infrared LED lights) which surveyed the main house.

Dusk Emergence Survey - 9th August 2021

8.1.6 The dusk emergence survey was undertaken on 9th August 2021 by the following surveyors, led by the Principal Author.

Table 6. Surveyor Details

Surveyor Position	Personnel	Relevant Licences held	Equipment used
1	Hattie Fuller	Bat level 2	EMTouch
2	Jake Dimon	Experienced Bat Surveyor	EMTouch
3	Harry Lines	Capable Bat Surveyor	Peersonic

8.1.7 Locations of surveyors are shown with the results of the survey at Appendix 6.

Dawn Re-entry Survey - 24th August 2021

8.1.8 The dawn re-entry survey was undertaken on 24th August 2021 by the following surveyors, led by the Principal Author:

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Table 7. Surveyor Details

Surveyor Location	Personnel	Relevant Licences held	Equipment used
1	Hattie Fuller	Bat level 2	EMTouch
2	Laura Carter	Bat level 1	PeerSonic
3	Tom Heath	Capable Bat Surveyor	PeerSonic

8.1.9 Locations of surveyors are shown with the results of the survey at Appendix 6.

Bat Survey Results

Dusk Survey - 9th August 2021

8.1.10 The dusk re-entry survey was undertaken on 9th August 2021 using three surveyors led by the Principal Author. Sunset was at 20.49hrs.

Table 8. Weather conditions during Dawn survey on 9th August 2021.

Parameter	Start	End
Time	20.34	22.49
Temperature	15	14
Precipitation (Y/N)	Υ	N
Wind speed (Beaufort scale)	0	0

Roosting Bats

- 8.1.11 No bats were observed returning to the clay shed at the Site during the dawn survey.
- 8.1.12 A total of eight common pipistrelles and two soprano pipistrelles emerged from the main house between 21.00pm-21.40pm.
- 8.1.13 Of which, seven common pipistrelle and two soprano emerged from beneath a raised tile at the apex of the gable end on the northern elevation of the main house.
- 8.1.14 One common pipistrelle emerged from a gap between the soffit and the brickwork of the north gable end of the main house. See photographs in Appendix 7.
- 8.1.15 General observations in respect of foraging and commuting activity are noted separately below.

Dawn Survey- 24th August 2021

8.1.16 The dawn emergence survey was undertaken on 24th August 2021 by three surveyors led by the Principal Author. Sunrise was at 06.07hrs.

Table 9. Weather conditions during dusk survey on 24th August 2021.

Time	04.06	06.26
Temperature	12	10
Precipitation (Y/N)	N	N
'ind speed (Beaufort scale)	0	0

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Roosting Bats

- 8.1.17 No bats were observed emerging from the clay shed at the Site during the re-entry survey.
- 8.1.18 A total of four soprano pipistrelles re-entered beneath a lifted tile at the apex of the gable end on the northern elevation of the main house between 04,28am-05.52am.
- 8.1.19 General observations in respect of foraging and commuting activity are noted separately below.

Commuting and Foraging Behaviour

- 8.1.20 Commuting and foraging activity was noted during both the re-entry and emergence surveys by common pipistrelles, soprano pipistrelles and Myotis species.
- 8.1.21 Much of the foraging activity was located within the trees to the north of the Site.
- 8.1.22 Common and soprano pipistrelles were also recorded social calling throughout the surveys.
- 8.1.23 Noctules were also recorded commuting high above the Site.
- 8.1.24 General activity is shown at Appendix 6.

Limitations

- 8.1.25 There was heavy rain prior to the dusk survey with short spells of light rain during the survey however, there was still lots of bat activity and ten bats were recorded emerging from main house. It is not likely that the weather conditions significantly impacted the results of the survey.
- 8.1.26 No other significant limitations were noted during the surveys.

Roost Status

- 8.1.27 Common pipistrelles are confirmed to be roosting within the main house. Based on the low number common pipistrelles recorded emerging/re-entering the roost it is likely to be a day roost, however, given the surveys were carried out in August these number could suggest early dispersal of a maternity roost, therefore, a precautionary assessment of maternity roost has been made.
- 8.1.28 Soprano pipistrelles are utilising the main house as a day roost. Soprano pipistrelles typically have maternity roosts of very high numbers and the numbers at the Site did not reflect the dispersal of a maternity roost.
- 8.1.29 Two emergence points were identified near the apex of the gable end on the northern elevation of the main house and a third emergence point was identified as a gap between the soffit and the brickwork of the north gable end of the main house.
- 8.1.30 The maximum count of common pipistrelles at the Site was eight, recorded during the dusk survey on 9th August 2021. The maximum count of soprano pipistrelles was four recorded on the dawn surveys on 24th August 2021,
- 8.1.31 The maternity roost of common pipistrelle (based on a precautionary assessment) is deemed to be of moderate conservation significance at the local-level (Wray, Wells, Long, & Mitchell-Jones, Valuing Bats in Ecological Impact Assessment, 2010) (Mitchell-Jones, 2004)
- 8.1.32 The day roost of soprano pipistrelles is deemed to be of low conservation significance at the local-level (Wray, Wells, Long, & Mitchell-Jones, Valuing bats in ecological impact assessment, 2010) (Mitchell-Jones, Bat Mitigation Guidelines, 2004).
- 8.1.33 No bats were recorded roosting within the clay shed.

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Table 10. Summary of Bat Roosts within the Building at the Site.

	Summary of E	Bat Roost within the Build	ling at the Site
Building	Confirmed Roost	Species	Roost Characterisation
The main building	Yes	Common Pipistrelle	Maternity roost
		Soprano pipistrelle	Non-breeding day roost
The clay shed	No	N/A	N/A

Impact Assessment

- 8.1.34 As part of the Proposed Development the roost within the main house will be retained in the long term.
- 8.1.35 However, in the absence of mitigation there may be:
 - A temporary short-term not significant effect to roosting bats due to the construction of the single story 'link' between main house and clay shed and the installation of the roof window into the pitched roof of the main house.
 - A permanent long-term significant effect to roosting bats due to lighting of roosting access features or flight paths.

Proposed Mitigation and Licensing Strategy

- 8.1.36 The works to be undertaken as part of the Proposed Development are considered unlikely to affect the bat roost at the Site.
- 8.1.37 Therefore, a bat mitigation license to facilitate the Proposed Development is not required.
- 8.1.38 The main house (and therefore the bat roost) is to be retained. Minor alteration i.e., construction of a roof window, are proposed which will **not** constitute the modification of a roost.
- 8.1.39 Avoidance measures are included based on the survey results, as well as guidance provided within the Bat Mitigation Guidelines (Mitchell-Jones, 2004) and Bat Workers Manual (Mitchell-Jones & McLeish, Bat Workers Manual 3rd Edition, 2004).

Avoidance Measures

Disturbance during construction

- 8.1.40 Impacts to the roosting bats within the main house must be avoided therefore, certain aspects of the works must be carried out between October and April of any given year. Specifically, the works required to create:
 - the single storey 'link' between the main house and the clay shed, and
 - the installation of the velux roof window into the main house.
- 8.1.41 Hibernation opportunities within the buildings are considered low therefore, bats are not likely to be present within the winter months. Therefore, disturbance to the roost will be avoided as works will be carried out whilst the bats are absent.
- 8.1.42 The works listed about must take place under the observation of a suitably qualified ecologist.

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8.1.43 If a bat (or evidence of bats) is discovered during the work all works must cease Natural England must be consulted.

Lighting

- 8.1.44 Impacts to the roosting bats via disturbance from increasing lighting must also be avoided.
- 8.1.45 Short lighting columns and directional hoods on any new lighting to be installed within the Site will be included within the design of the Proposed Development.
- 8.1.46 No lighting will illuminate the apex of the roof at the northern gable end of the main house where bats were observed to emerge from.

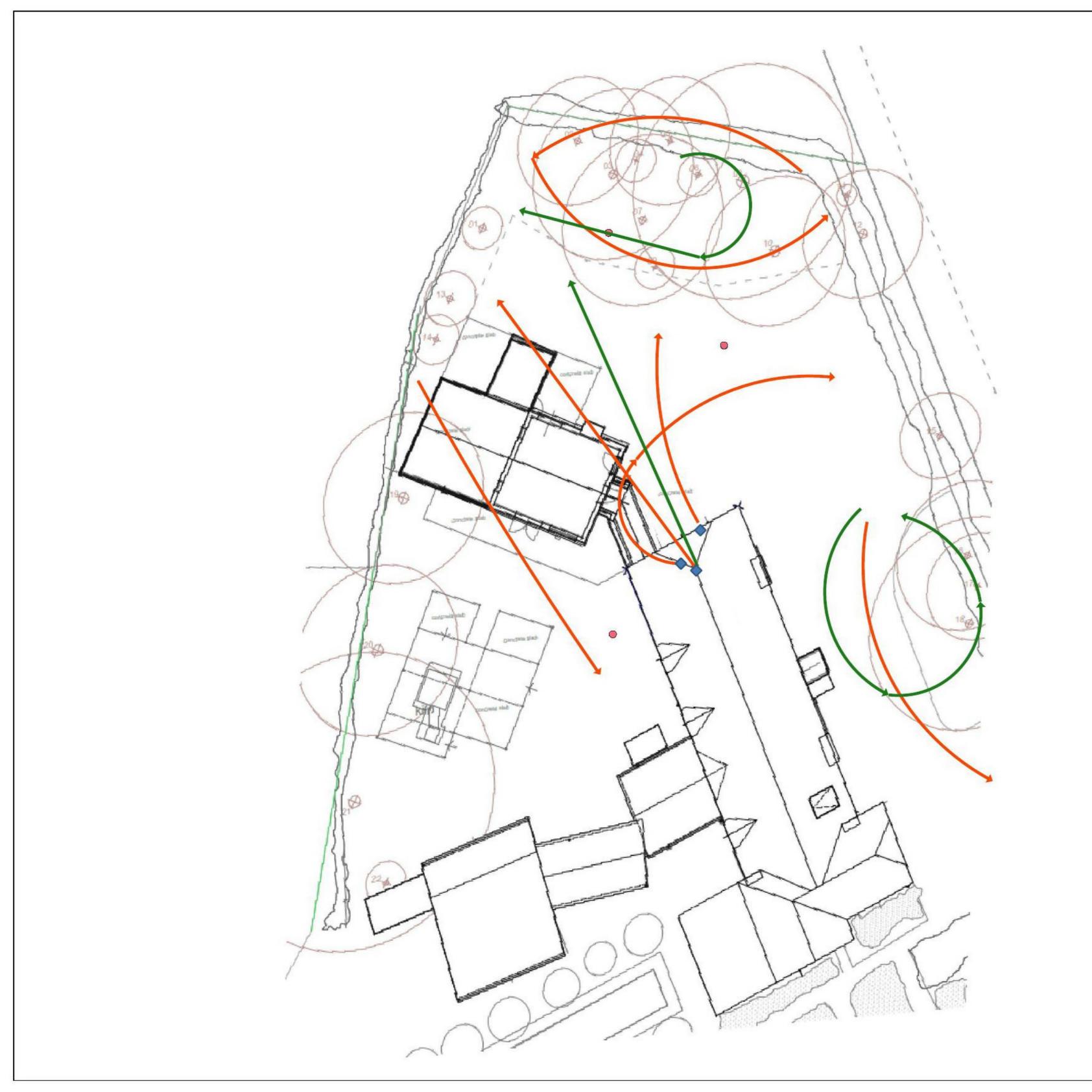
Conclusions

- 8.1.47 A maternity roost for common pipistrelles and a day roost of soprano pipistrelles, roosts of moderate and low conservation importance at the local level respectively, have been identified within the main building at the Site.
- 8.1.48 No bats were found to be roosting within the clay shed.
- 8.1.49 A Bat Mitigation License application to Natural England is not required as the roost is being retained throughout the development and avoidance measures will be undertaken to ensure that no negative impacts occur to the roosting bats.
- 8.1.50 It is advised that works to create the single storey 'link' between the main house and the clay shed and the installation of the roof window avoid the active bat season and are undertaken between 1st of October and the 30^{th of} April of any given year to avoid disturbance to roosting bats.
- 8.1.51 Short lighting columns and directional hoods on any new lighting to be installed within the Site will be included within the design of the Proposed Development.
- 8.1.52 No lighting will illuminate the apex of the roof at the northern gable end of the main house where bats were observed to emerge from.
- 8.1.53 Avoidance measures have been detailed within this report to ensure that the favourable conservation status of the species roosting at the Site is maintained upon completion of the Proposed Development.

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Appendix 6 - Bat Activity Plan



Scale: 1:275

| Â

Key

Emergence Re-entry point

→ S pip

Surveyor

Date:

Client: Mr Richard Griffiths

Project

Title:

Map file reference Plan N 211015 1214 BAT V1 E002

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Appendix 7 - Photographs

Figure 1. Entrance to the Site and the main house



Figure 3. The clay shed adjoining to the main house



Figure 5. The main house



Figure 2. The clay shed adjoining to the main house



Figure 4. The clay shed



Figure 6. The clay shed adjoining to the main house



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Figure 7. The metal shed attached the clay shed

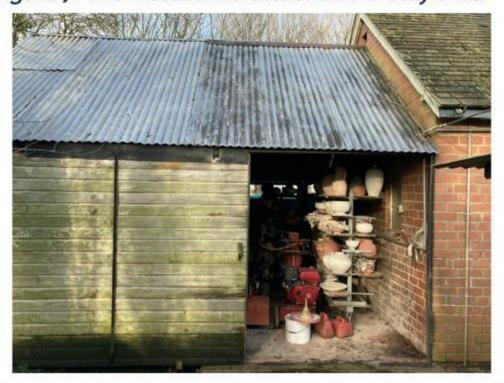


Figure 9. The kiln shed (not affected as part of the Proposed Development)



Figure 11. Emergence/ re-entry points on the main house



Figure 8. Car parking area



Figure 10. A line of trees along the western boundary of the Site



Figure 12. Gap in the soffit on the main house where pipistrelles emerged from



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