



Preliminary Roost Assessment

Timber Cottage, Lumley Road, Emsworth, West Sussex, PO10 8AF

Karen Doye

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Arbtech Consultant's Contact Details:

Romany Poole
Graduate Ecologist

<https://arbtech.co.uk>

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Industry Guidelines and Standards

This report has been written with due consideration to:

Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.

Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.

British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.

British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Karen Doye to undertake a Preliminary Roost Assessment (PRA) at Timber Cottage, Lumley Road, Emsworth, West Sussex, PO10 8A (hereafter referred to as “the site”). The survey was required to inform a planning application for demolition of existing bungalow following the erection of two storey detached house (hereafter referred to as “the proposed development”).

The following is work you will need to commission to comply with planning policy and legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 6 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Roosting bats B1	B1 has negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on roosting bats as a result of the demolition of this building.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.
Foraging and commuting bats	Scattered trees and shrubs could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	<p>Foraging and commuting bats</p> <p>The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. A small area of lawn will be removed as the new build footprint will extend slightly over the existing, however the lawn is not assessed to have any ecological value.</p> <p>Artificial lighting</p> <p>The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.</p>	<p>Foraging and commuting bats</p> <p>None</p> <p>Artificial lighting</p> <p>A low impact lighting strategy will be adopted for the site during and post-development.</p>

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Karen Doye to undertake a Preliminary Roost Assessment (PRA) at Timber Cottage, Lumley Road, Emsworth, West Sussex, PO10 8AF (hereafter referred to as “the site”). The survey was required to inform a planning application for demolition of existing bungalow following the erection of two storey detached house (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting. This has been undertaken with due consideration to the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2016). A Preliminary Ecological Appraisal was carried out in 2016 by The Ecology Co-Op in which they found the site to have negligible value for roosting bats. In 2020, Bright Green Environmental carried out an updated Preliminary Ecological Appraisal in which they confirmed the site still had negligible value for roosting bats.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference SU 75228 05994 has an area of approximately 0.1ha comprising a residential dwelling, driveway and garden. It is surrounded by urban infrastructure such as residential dwellings with gardens alongside Lumley Road to the west. The wider landscape comprises Brook meadow (LNR) 80m to the west which consists of woodland and two streams. This will provide suitable foraging and commuting habitat for bats. . A site location plan is provided in Appendix 2.

1.3 Scope of the Report

This report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation. To achieve this, the following steps have been taken:

- A desk study has been carried out.

- A field survey has been undertaken, including an inspection of built structures, to determine the presence or the suitability of any features which bats could use for roosting and to assess the suitability of the site’s bat foraging and commuting habitat.

- An outline of potential impacts on any confirmed or unidentified roosts has been provided, based on the proposed development.

- Recommendations for further surveys and mitigation have been made, along with advice on the requirements for a European Protected Species Licence (EPSL) application if appropriate.

- Opportunities for the enhancement of the site for roosting, foraging and commuting bats have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of statutory designated sites with bat qualifying interests and granted EPSL records for bats held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

2.2 Field Survey

The survey was undertaken by Romany Poole (Accredited Agent on Natural England Bat Licence Number: 2018-37888-CLS-CLS) on 12/09/2023.

The PRA focussed on one built structure which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the building for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine smear marks. An internal inspection of the building was also made, including the living areas and any accessible roof spaces, using a torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

2.3 Breeding Birds and Other Incidental Observations

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls.

2.4 Suitability Assessment

Built structures were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats.

Classification	Feature of building and its context
High	Buildings or structures with features of particular significance for larger numbers of roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data). Buildings with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Moderate	Buildings or structures with one or more features suitable for more regular roosting due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation value such as maternity or hibernation roosts.

	Continuous habitat connected to the wider landscape which could be used by bats for commuting such as lines of trees, linked gardens. Foraging habitat in the surrounding area such as trees, scrub, grassland or water.
Low	Buildings or structures with one or more features suitable for use sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators. Habitat suitable for foraging in close proximity, but largely isolated in the landscape. Or an isolated site not connected by prominent linear features.
Negligible	Unsuitable for use by bats.

2.5 Limitations

It should be noted that whilst every effort has been made to describe the features on site in the context of their suitability for roosting bats, this does not provide a complete characterisation of the site. This survey provides a preliminary view of the likelihood of bats being present. This is based on suitability of the habitats on site and in the local area, the ecology and biology of bats as currently understood, and the known distribution of bats as recovered during the desk study. Bats are highly mobile creatures that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time.

There were no specific limitations to the survey.

A search for historical bat records has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for bats, it is not anticipated that the purchase of historical records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any statutory designated sites with bat qualifying interests within a 2km radius of the site, including their reasons for notification, are provided in Table 2 below.

Table 2: Statutory designated sites with bat qualifying interests within 2km radius of the site.

Designated site name	Distance from site	Reasons for notification from Natural England
Brook Meadow (Emsworth) LNR	80m to the west	It consists of 5 acres of grassland, surrounded by woodlands and flanked by two streams. It is likely that bats will commute and forage here.

3.2 Historical Records

A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. EPSL records for bats are summarised in Table 3.

Table 3: Granted EPSLs for bats within 2km of the site.

EPSL reference	Bat species affected	Impacts allowed by licence
2019-44235-EPS-MIT	Soprano pipistrelle	Destruction of a resting place

3.3 Field Survey Results



The weather conditions recorded at the time of the survey are shown in Table 4. The results of the field survey are detailed in Table 5 and illustrated in Appendix 3.

Table 4: Weather conditions during the survey

Date:	12/09/2023
Temperature	22°C
Humidity	81%
Cloud Cover	90%
Wind	6mph
Rain	None

Table 5: PRA Results

Feature	Description	Photographs
<p>Bat foraging and commuting habitat</p>	<p>Habitat onsite consists of grasslands, scattered trees and shrubs. This could provide suitable habitat for bats to commute and forage. There is direct connectivity to Brook Meadow (LNR) located 80m north-west of the site which is surrounded by woodlands and flanked by two streams. It is highly likely that bats will commute and forage here.</p>	 <p>The top photograph shows a wide, grassy garden area with scattered trees and shrubs. A green trash bin is visible in the middle ground. The bottom photograph shows a similar garden area with a house and a trailer in the background, surrounded by dense foliage and trees.</p>

<p>B1 - overview</p>	<p>B1 is a detached timber framed bungalow. The roof is gable ended and is clad in interlocking concrete tiles that appear in good condition throughout. There is one chimney located on the roof of B1. There are UPVC doors and windows around the property which are well-sealed and tight-fitting to the surrounding structure. No evidence of bats was found internally or externally during the survey.</p>	
<p>B1 – southern elevation</p>	<p>The timber boards appear in good condition throughout with no gaps between that could allow roosting opportunities for roosting bats. There are no areas of missing mortar between the roof tiles that could allow access for bats to roost and into the loft space.</p> <p>The proposed re-build will extend over the existing footprint on this elevation; however this will only impact a small area of lawn and therefore no ecological impacts are foreseen.</p>	

B1 – eastern elevation

The gaps located within the tiles on the first row are sealed with a hard material that will prevent both bats and birds such as swallows from accessing behind the tiles. The lead flashing around the chimney appears to be flat around the base with no gaps that could provide roosting opportunities.



B1 – northern elevation

The roof tiles on the northern elevation appear in good condition with no gaps suitable for bats to roost. The wooden cladding appears well sealed with no gaps between the boards that could provide roosting opportunities for crevice dwelling bats. The lead flashing around the base of the chimney sits flat with no gaps.



B1 – western elevation

The interlocking tiles appear to be in excellent condition with no gaps or missing tiles that could allow roosting opportunities to access into the loft space. The soffit boxes are well sealed with no gaps suitable for bats to roost.

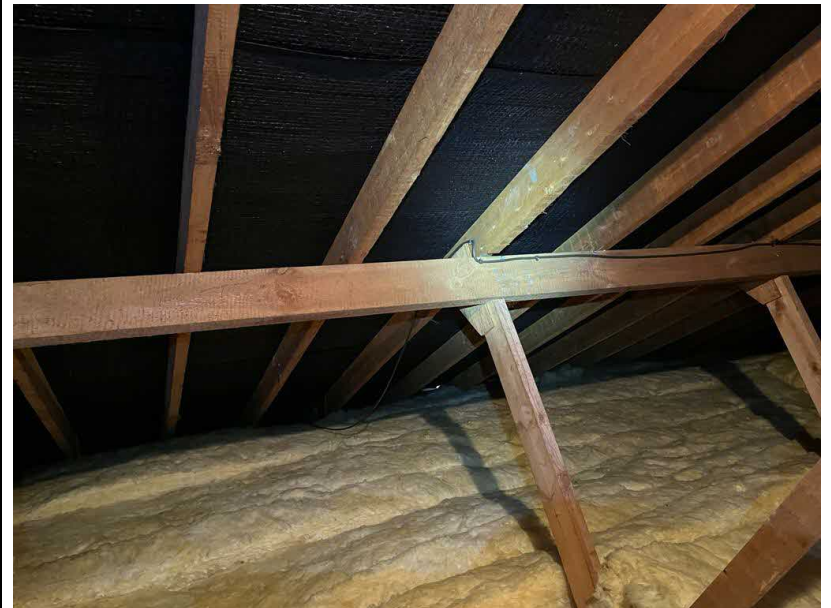


B1 – interior

There is one loft space within the main roof void of B1. The roof structure is built from modern timber beams including the ridge beam. The roof is lined with bitumen felt which appears to be in very good condition with no gaps or tears. The floor of the loft space is lined with mineral wool insulation and there are timber boards in places. The mineral wool insulation appeared to be in new, good condition therefore all insulation was checked underneath for any evidence of roosting bats.

No daylight enters the loft space which indicates that it is well sealed. There is evidence of mouse activity including mouse droppings and carcasses.

No evidence of bats was found internally during the survey.



B1 – suitability assessment	In line with Good Practice Guidelines (Collins, J. (Ed) 2016) B1 is assessed to have ‘negligible’ habitat value for roosting bats due to the lack of suitable roost features. The interlocking tiles are well fitting with no gaps suitable for bats to roost. The timber cladding appears in good condition with no gaps suitable for crevice dwelling bats to roost. The loft space appears well sealed with no obvious access points. No evidence of bats was found internally or externally during the survey.
B1 - breeding birds and other incidental observations	No evidence of nesting birds was found internally or externally during the survey.

4.0 Conclusions, Impacts and Recommendations

Taking the desk study and field survey results into account, Table 6 presents an evaluation of the value of the site for bats and also details any other ecological constraints identified such as nesting birds in relation to the proposed development which will comprise the demolition of existing bungalow followed by the erection of two storey detached house.

Table 6: Evaluation of the site for bats and any other ecological constraints

Building	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Roosting bats B1	B1 has negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on roosting bats as a result of the demolition of this building.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	The installation of one bat box at the site will provide additional roosting habitat for bats. The bat box will be installed on a mature tree around the site boundary. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. The bat box will be a specification suitable for crevice dwelling species such as NHBS Beaumaris Woodstone Bat Box a similar alternative brand.
Foraging and commuting bats	Scattered trees and shrubs could be used by local bat populations for foraging and commuting. These could also be used by bats	Foraging and commuting bats The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. A small area of lawn will be removed as the new build footprint will	Foraging and commuting bats None Artificial lighting	None.

¹ The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

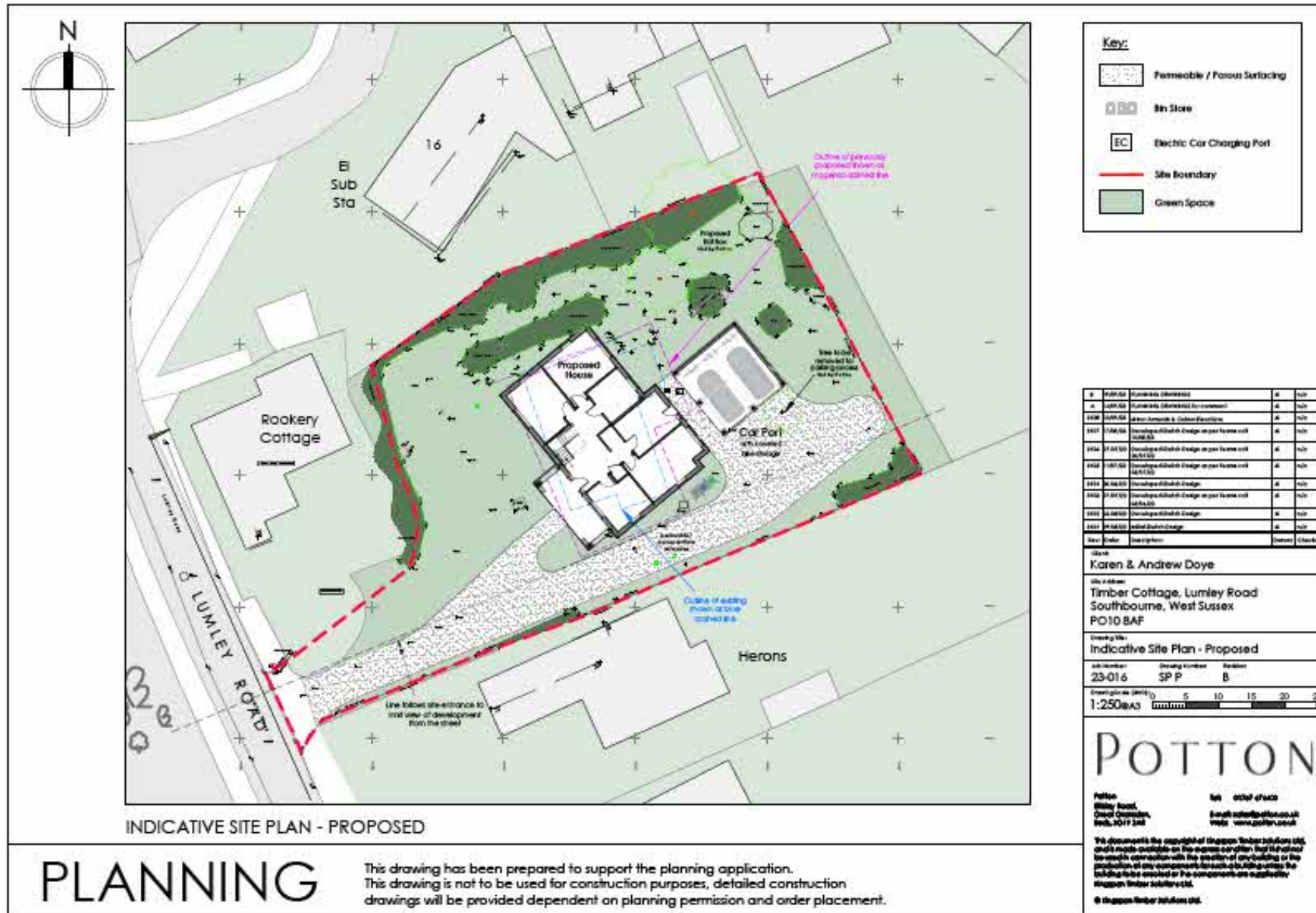
	<p>dispersing from nearby roosts outside of the site.</p>	<p>extend slightly over the existing, however the lawn is not assessed to have any ecological value.</p> <p>Artificial lighting The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.</p>	<p>A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures:</p> <ul style="list-style-type: none"> Light spill on to scattered trees and shrubs should be avoided. Use narrow spectrum light sources to lower the range of species affected by lighting. Use light sources that emit minimal ultra-violet light. Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. Wall lights and security lights will be 'dimnable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available. 	
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Nesting birds B1	The building offers no opportunities for nesting birds by the nearby trees and hedgerows could provide nesting habitat.	None.	None.	
Other ecological constraints	None identified.	N/A	N/A	N/A

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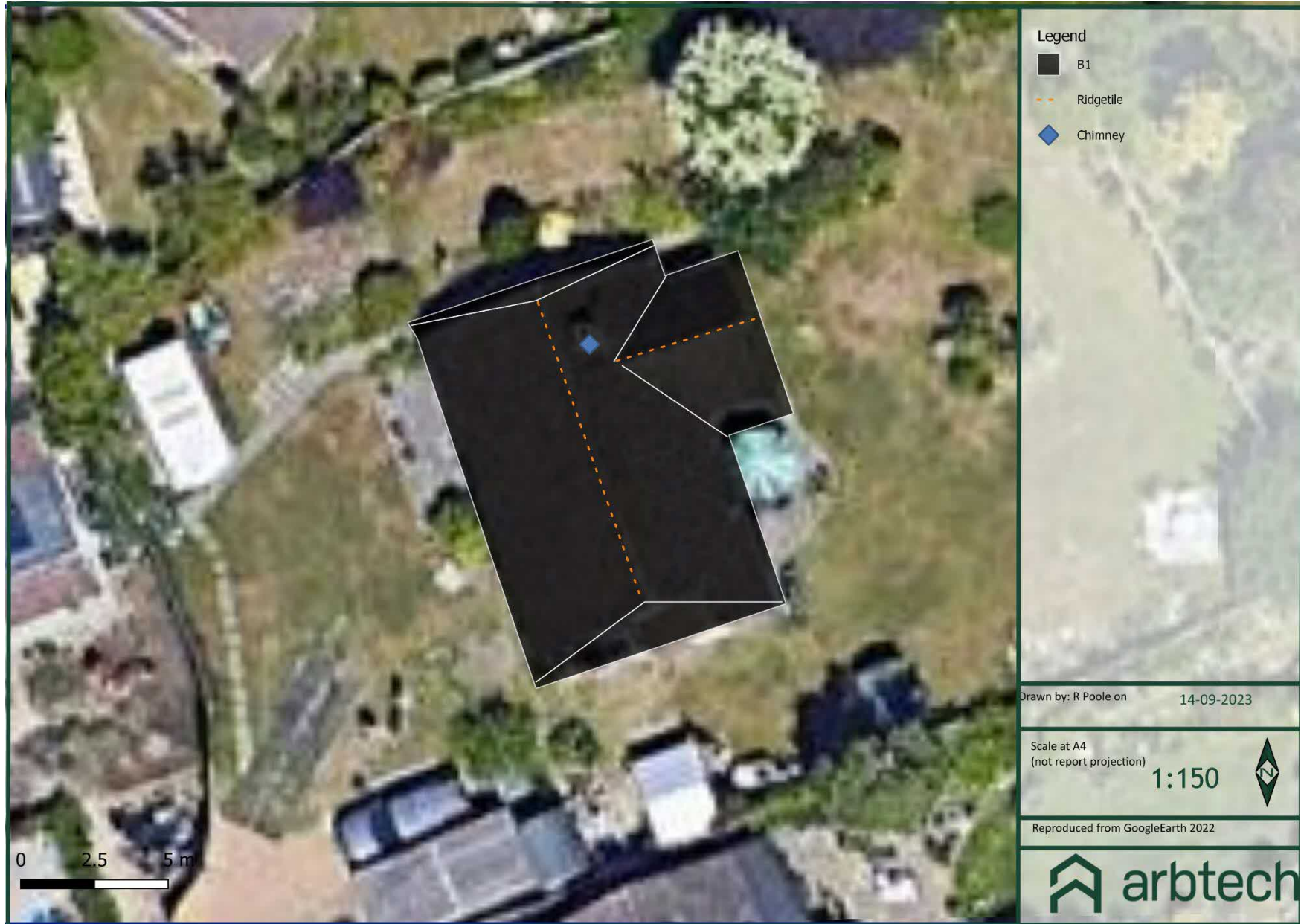
Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3a: PRA Plan



Appendix 4: Legislation and Planning Policy Related to Bats

LEGAL PROTECTION

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2.

Regulation 43: Protection of certain wild animals - offences

(1) A person is guilty of an offence if they:

- (a) Deliberately captures, injures or kills any wild animal of a European protected species,
- (b) Deliberately disturbs wild animals of any such species,
- (c) Deliberately takes or destroys the eggs of such an animal, or
- (d) Damages or destroys a breeding site or resting place of such an animal,

(2) For the purposes of paragraph (1) (b), disturbance of animals includes in particular any disturbance which is likely—

- (a) To impair their ability:
 - (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.

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

NATIONAL PLANNING POLICY

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

LOCAL PLANNING POLICY

Adopted Chichester Local Plan: Key Policies 2014-2029

The Chichester Local Plan can be viewed here: https://www.chichester.gov.uk/media/24759/Chichester-Local-Plan---Key-Policies-2014---2029/pdf/printed_version.pdf

The following planning policies have implications for developers in relation to bats:

A.20 - protected species networks. Further consideration is required for the commuting routes of bats, mainly hedgerows and treelines along field margins and connecting to the harbour.

Chichester Biodiversity Action Plan (BAP)

The Chichester Biodiversity Action Plan can be viewed here: https://www.chichester.gov.uk/media/23393/Local-Biodiversity-Action-Plan-2020---2024/pdf/LBAP20120_2024_mastercopy.pdf

All bat species are included in the plan.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by Natural England will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded de facto protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008).

There are 17 species of bat breeding in England and Natural England issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below);
- That there is no satisfactory alternative;
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

1. include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
2. scientific and educational purposes;
3. ringing or marking; and,
4. conserving wild animals.

Development works fall under the first purpose and Natural England issues bat mitigation licences for developments.

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.