



Preliminary Roost Assessment

7 Hill Close, Peckleton, Leicestershire, LE9 7RQ

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Final	2	Katy Perry BSc (Hons) MCIEEM, Senior Consultant	25/09/2023

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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 Jeff Blackman to undertake a Preliminary Roost Assessment (PRA) at 7 Hill Close, Peckleton, Leicestershire, LE9 7RQ (hereafter referred to as “the site”). The survey was required to inform a planning application for the construction of a two-storey and single storey extension on the western elevation of an existing residential property, B1 (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 4 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Foraging and commuting bats	Scattered trees and vegetated gardens 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.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. 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.	A low impact lighting strategy will be adopted for the site during and post-development, which is detailed in Table 4.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Jeff Blackman to undertake a Preliminary Roost Assessment (PRA) at 7 Hill Close, Peckleton, Leicestershire, LE9 7RQ (hereafter referred to as “the site”). The survey was required to inform a planning application for the construction of a two-storey and single storey extension on the western elevation of an existing residential property, B1 (hereafter referred to as “the proposed development”). A plan showing the proposed development will be provided in Appendix 1 when available.

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). No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author’s knowledge, by any other consultancy.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference SK 47173 01266 and has an area of approximately 0.08ha comprising a residential property, B1, with surrounding hard standing for access and introduced shrubs, scattered trees, and amenity grass within the garden. It is surrounded residential properties, situated within a grove to the north of Peckleton village. There are arable fields to the south and north of the village and scattered trees, connected hedgerows along fields and scattered ponds. To the east there is a fisheries park and a large industrial unit. There are small pockets of woodland to the south-east and some drainage ditches and brooks within the surrounding landscape. 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 Katy Perry BSc (Hons) MCIEEM, Senior Consultant (Natural England Bat Licence Number: 2022-10404-CL18-BAT) on 12th September 2023.

The PRA focussed on the single 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 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.

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.

The loft space for the main section of the roof was fully accessible and inspected. The smaller section which is present at the cross-hip of the roof was inspected from its entrance within the main loft due to a lack of boarding and presence of numerous beams and joists in the way of access. Due to its smaller size compared to the main loft area, this is not considered to pose a constraint.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Designated Sites

No statutory designated sites with bat qualifying interests were identified within 2km of the site.

3.2 Historical Records

No EPSL records for bats have been returned within 2km of the site.

3.3 Field Survey Results

The weather conditions recorded at the time of the survey are shown in Table 2. The results of the field survey are detailed in Table 3 and illustrated in Appendix 3.

Table 2: Weather conditions during the survey

Date:	12/09/2023
Temperature	14°C
Humidity	68%
Cloud Cover	100%
Wind	1mph
Rain	Intermittent rain

Table 3: PRA Results

Feature	Description	Photographs
Bat foraging and commuting habitat	The waterbodies, arable fields with hedgerows and scattered trees and small pockets of woodland are suitable for foraging and commuting bats within the landscape, with waterbodies offering insects for foraging. Within the residential grove, the hard standing and lighting is less suitable for bats, though they will be present in the landscape.	

B1 - overview	B1 is a two storey, detached residential building with incorporated garage and two conservatories present, one on the northern elevation and one on the western elevation. A relatively modern property, likely built in 1994 from conversations with the owner, the house is situated within a grove of similar build properties. There is exposed brickwork around the property and UPVC windows and doors. The roof tiles are concrete and in good condition. On the front of the property, the western elevation has three dormer windows present reducing the internal loft space above that section within the roof of the building.	 A photograph showing the front of a two-story red brick house. On the left is a large, dark-colored garage door. Above it are three dormer windows with white frames. To the right of the garage is the main entrance with a white door and a small porch. Further right is a conservatory with a white frame. A dark car is parked in front of the garage. The roof is covered in dark grey tiles.
B1 – western elevation	The dormer windows are secure, and the lead flashing is present around the edges, with just a small triangular gap present. This gap, shown opposite in closer detail, does not extend under the tiles or extend into the roof space and is enclosed at the top of the triangular space, as seen when shining a torch on it from ground level. In addition to this small space being exposed to light, inclement weather and being too shallow to offer suitable roosting opportunities, it has cobwebbing present over it, indicating a lack of access from animals.	 A close-up photograph of the roofline where a dormer window meets the main roof. It shows a triangular gap in the lead flashing. The area is covered with dark, mossy tiles. A black gutter is visible at the bottom. The brickwork of the house is visible on the left.

B1 – eastern elevation	The exterior of the property has wooden soffits and fascia around the perimeter of the building where the dormer windows are present and sloped roofs overhang. The wood is in very good condition with no gaps present between the brickwork or the wood that could enable bats to enter the building or roost between. In addition, the woodwork was assessed around the perimeter for any evidence of nesting birds, but none was seen.	
B1 – eastern elevation	The brickwork of the property is in very good condition. There are no gaps between the mortar around the property and no cracks present. This includes on the gable ends where the brickwork extends up to the roof tiles, as shown opposite. The mortar is present under the end tiles on the gable ends of the building with no gaps or means of ingress under the roof tiles. The windows and doors are UPVC around the property, with no gaps around for ingress into the property. The conservatories on the northern and eastern elevation are secure to the building with no gaps present between the brickwork and UPVC structures or the lead flashing.	

B1 – eastern elevation	Where the roof is cross-hipped or dormers are present, the valleys on the roof are in very good condition. The lead flashing in the valleys is secure and the tiles around the valleys are all present with none slipped, lifted, or broken. The mortar on the gable ends and on the ends of the dormer windows is all present with no gaps allowing ingress.	
B1 – northern elevation	The roof tiles of the building are in very good condition. There are no missing, broken, raised, or slipped tiles around the entire property. The exterior of the building is in very good condition with no gaps or features that could be utilised by bats for roosting or for obtaining means or ingress into the building.	

B1 – interior	The loft space is an 'L' shape internally with a taller pitch and larger area in the northern section of the roof above the main section of the property. It bends south to a smaller, shallower pitch roof where the dormer windows are present. There are modern timber beams present and membrane present within the loft space. The larger section of the roof is boarded with stored items within, this was searched for evidence of bats as bat droppings and feeding remains can accumulate on surfaces where present. However, only rat droppings were found within the loft void.	
B1 – interior	The modern timbers have no gaps between the joints and no warping that offer any roosting value. The membrane is in good condition across most of the interior of the loft space, but there are some occasional tears, as shown opposite. The tears were inspected for evidence of bats and underneath the tears to check for droppings accumulating or feeding remains and none were seen. In addition, no external light enters through these gaps as the roof tiles are in very good condition with no gaps present.	

B1 – interior	On numerous surfaces within the corners of the loft space, evidence of chewed materials for nesting and rat droppings were seen throughout. The gable ends of the northern section of the loft were secure with no gaps in the breezeblocks internally and no gaps in the brickwork or mortar on the exterior. When the lighting within the loft space was turned off during the inspection, no external light enters the loft void, indicating its secure nature.	
B1 – interior	There are cameras present within the loft space in order to capture the rat activity within the loft void space. These are motion detection cameras and follow any activity when detected. The resident identified that rats, moths, and other insects have been recorded and detected within the loft space but there have been no detections of bats by the resident. There was no evidence of bats observed within the loft space, but the roll insulation within the smaller section of the loft space was being utilised for nesting by rats within the loft.	

B1 – suitability assessment, breeding birds and other incidental observations	There is no evidence of bats internally or externally. There are no gaps, features, or means of ingress into the property and the building is in very good condition. In addition, there was no evidence of nesting birds externally on the building. There were rat droppings observed throughout the loft space within the building and no evidence of any protected or notable species. The building is concluded to have negligible value for roosting bats.	
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4.0 Conclusions, Impacts and Recommendations

Taking the desk study and field survey results into account, Table 4 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 construction of a two-storey and single storey extension on the western elevation of an existing residential property, B1.

Table 4: Evaluation of the site for bats and any other ecological constraints

Building/ Tree	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Roosting bats (B1)	Building 1 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 extension to 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 two bat boxes at the site will provide additional roosting habitat for bats. The bat boxes will be installed on the retained building and trees around the garden. 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 boxes will be a specification suitable for crevice dwelling bats such as Beaumaris, NHBS improved crevice boxes or a similar alternative brand.
Foraging and commuting bats	Scattered trees and vegetated gardens 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.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. 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.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: - Light spill on to vegetation around the perimeter and to the north of the site where the arable fields are present should be avoided. - Use narrow spectrum light sources to lower the range of species affected by lighting.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: Planting of native tree, shrub, and hedgerows to increase foraging opportunities.

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

			• 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 'dimmable' 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.	
Nesting birds (B1)	The building 1 offers no opportunities for nesting birds.	None.	None.	The installation of a minimum of two bird boxes on mature trees around the site boundaries or on retained buildings will provide additional nesting habitat for birds e.g. Schwegler 1SP Sparrow Terrace (buildings) Woodstone Nest Box (buildings or trees)

				Or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain, and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole. Sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction.
Other ecological constraints	None identified. The proposed works will be impacting an area of hard standing adjacent to the property and some short, managed grass and introduced shrubs. These are areas of negligible and low ecological value.	N/A	N/A	N/A

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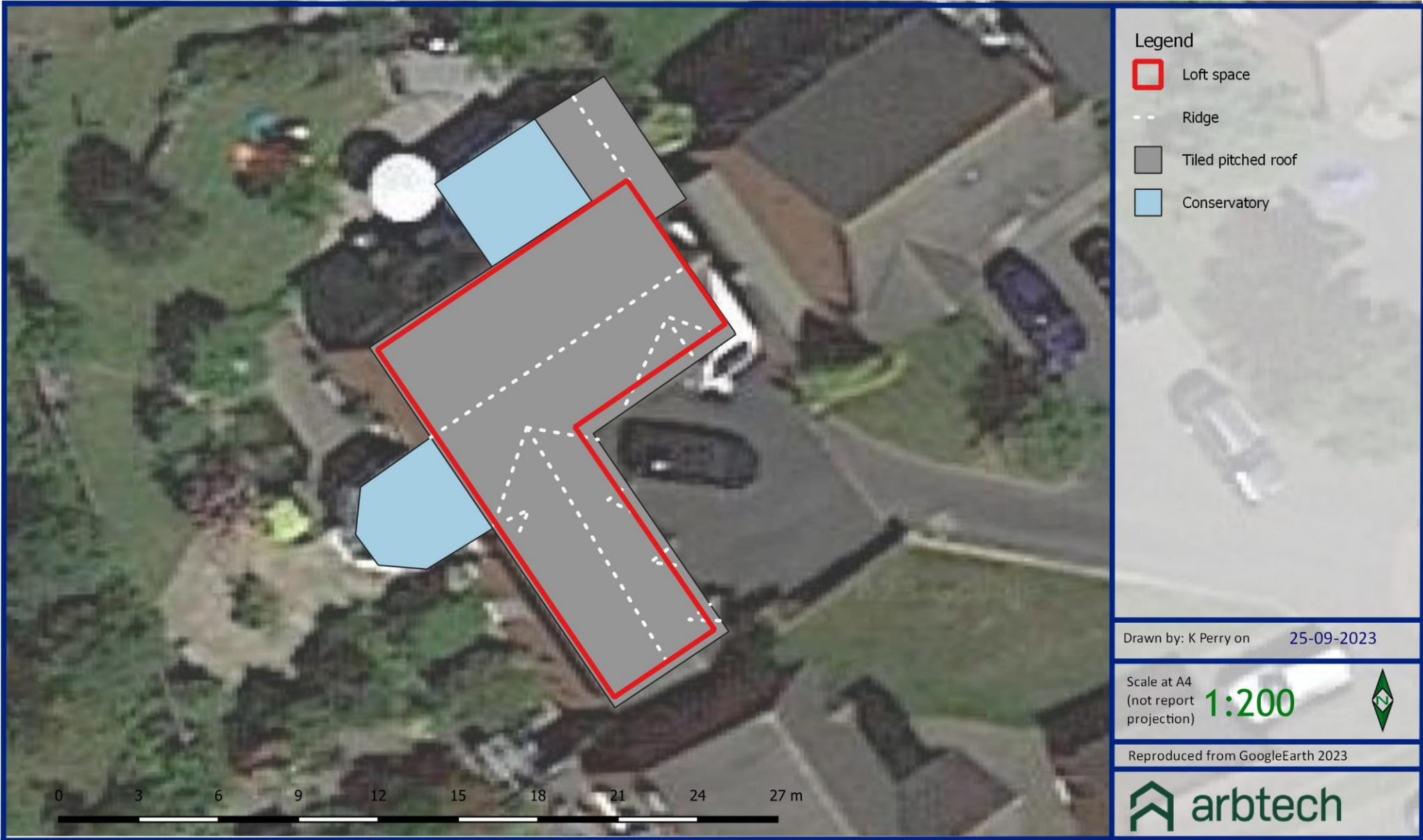
Appendix 1: Proposed Development Plan

Not available at the time of writing this report.

Appendix 2: Site Location Plan



Appendix 3: 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.

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.