



Preliminary Roost Assessment

1 Lakewood Close, Chandler's Ford, Hampshire SO53 1EY

Richard barker

Status	Issue	Name	Date
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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.

This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework for England.

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 Richard barker to undertake a Preliminary Roost Assessment (PRA) at 1 Lakewood Close, Chandler's Ford, Hampshire SO53 1EY (hereafter referred to as "the site"). The survey was required to inform a planning application for a rear two-storey extension, although the plans are not yet finalised (hereafter referred to as "the proposed development").

The following is work you will need to commission to obtain planning permission and to comply with legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 5 of this report.

Feature	Foreseen impacts	Recommendations <i>Measures required to adhere to guidance, legislation and planning policies.</i>
Roosting bats (B1)	The proposed development will not affect any of the features that could be used by roosting bats which were noted on the building during the survey and therefore no impacts to bat roosts are anticipated. The proposed development will not affect any of the features that could be used by roosting bats which were noted on the building during the survey and therefore no impacts to bat roosts are anticipated. The features identified as suitable for roosting bats are located on the southwest and northwest extent of the building and are not functionally linked to the area of the proposed works (the north-eastern elevation). The works are not within sufficient distance or of a scale to cause disturbance to the bat roost identified on the southwestern extent of the building behind the corner hanging tiles, nor any other roosts that may be present or other identified features on the building.	Owing to the nature of the proposed development and the low potential for impacts to bat roosts, further bat surveys are considered to be disproportionate. It is anticipated that any risk to bats can be reduced to an acceptably low level through the implementation of a precautionary working method during and post-development. Full details are in Table 5.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Richard barker to undertake a Preliminary Roost Assessment (PRA) at 1 Lakewood Close, Chandler's Ford, Hampshire SO53 1EY (hereafter referred to as “the site”). The survey was required to inform a planning application for a rear two-storey extension, although the plans are not yet finalised (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 Context

The site is located at National Grid Reference SU 43971 21756 and has an area of approximately 0.2ha comprising a main dwelling house and detached garage. There is a front and rear garden which is laid to lawn alongside introduced ornamental shrubs and flowers. The rear garden extends into deciduous woodland. The site is surrounded by residential housing and a network of roads, as well as a vast quantity of deciduous woodland. 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 external survey and internal inspection of built structures where possible, 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 Charlie Vaughan-Jones (2022-10755-CL17-BAT) on Tuesday 11th October 2022.

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 *Tyto alba*.

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 for buildings 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
Moderate to 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.
Low	A small number of possible roost sites or features, used 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 isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.
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 biological records data search 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 protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

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 Desk Study Results

A summary of desk study results is provided below.

3.2 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 (approx.)	Reasons for notification from Natural England
Hocombe Mead Local Nature Reserve (LNR)	1.2km northwest	The ancient woodland and wet meadows at Hocombe Mead are over 400 years old and support many special plants and animals, including purple loosestrife and 29 species of butterfly. The habitats could be of high value to roosting and commuting bats, as well hold a strong population of invertebrates for foraging.
Trodds Copse Site of Special Scientific Interest (SSSI)	1.9km northwest	Habitats include ancient woodland which could be of high value to roosting and commuting bats, as well hold a strong population of invertebrates for foraging.
Valley Park Woodlands (LNR)	2km southwest	Habitats include ancient woodland which could be of high value to roosting and commuting bats, as well hold a strong population of invertebrates for foraging.
River Itchen Special Area of Conservation (SAC)	2km southeast	The riverine habitat could be of high value to commuting and foraging bats.

3.3 Landscape

A review of aerial photographs (Google Earth) the magic.gov.uk database and OS maps has been undertaken. Collated together, the value of the landscape for bats is described below:

The site is in a suburban area of central south Hampshire, situated in the northern extent of Chandler Ford. The landscape is dominated by residential housing and a network of roads. There are parcels of deciduous and ancient woodland in the area, particularly to the northwest of the site which could be of high value to roosting, commuting and foraging bats. The River Itchen is also located ~2km east of the site, as well as the Hiltingbury Lakes which are ~50m northwest and will attract an abundance of invertebrates for bats to forage. Much of the surrounding woodland leads directly to the site and is excellent to support bats dispersing from nearby roosts.

3.4 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	Approx. distance from site	Bat species affected	Licence start date:	Licence end date:	Impacts allowed by licence
2020-49783-EPS-MIT	70m west	Soprano pipistrelle	02/01/2021	04/09/2026	Damage of a resting place
2017-27981-EPS-MIT	645m southwest	Brown long-eared bat, common pipistrelle and soprano pipistrelle and serotine bat	22/03/2017	20/03/2027	Destruction of a resting place
2016-21370-EPS-MIT	760m northeast	Soprano pipistrelle and common pipistrelle	01/03/2016	28/02/2021	Destruction of a resting place
EPSM2012-4192	1.5km east	Brown long-eared bat, common pipistrelle and soprano pipistrelle and natterer's	17/04/2012	30/09/2016	Destruction of a breeding site
2017-28716-EPS-MIT	1.5km east	Brown long-eared bat, common pipistrelle and soprano pipistrelle	27/04/2017	27/04/2022	Destruction of a resting place
2018-34234-EPS-MIT	1.9km northwest	Destruction of a resting place	16/04/2018	30/04/2019	Destruction of a resting place

3.5 Field Survey Results

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

Table 4: Weather conditions during the survey

Date: 11/10/2022	
Temperature	12°C
Humidity	91%
Cloud Cover	10%
Wind	0mph
Rain	None

Building B1 Exterior

B1 – southwest elevation (Figure 1)

B1 is a detached two-storey brick-built building with a cross-pitched and pyramidal roof, which is covered with single clay tiles. The roof tiles are in very good condition with no raised tiles under which bats could roost. There is however a gap in the mortar securing the end verge tile on the western extent of this elevation which is suitable for crevice dwelling bats to roost in (Figure 4 - circled).

The doors and windows are uPVC and appear in excellent condition with no suitable bat roosting sites, as are the soffits.

The brickwork around the building is in excellent condition with no gaps or cracks in which crevice-dwelling bats could roost. There are hanging tile sections on the first floor, which are raised at the corner tiles and are suitable for crevice dwelling bats such as a common pipistrelle to roost behind (Figure 3). Droppings were found at this location (circled in red – Figure 1).



Figure 1

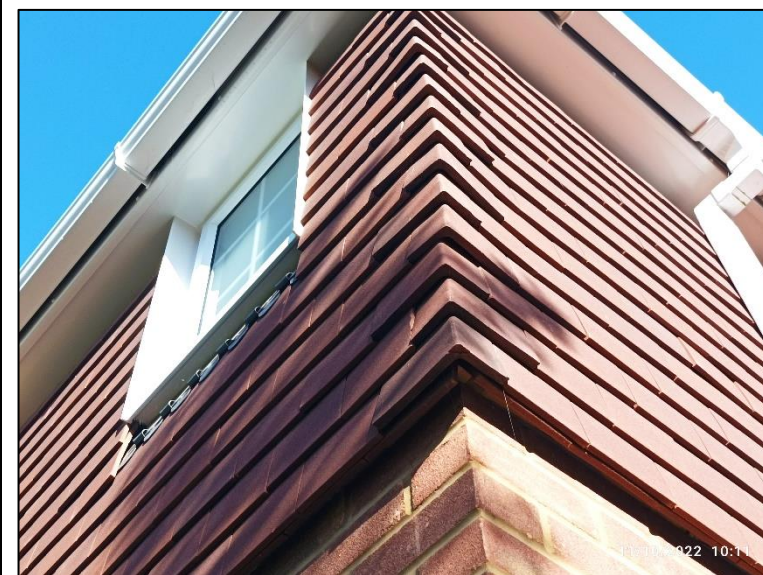


Figure 2



Figure 3



Figure 4

B1 – southeast elevation (Figure 5 & 6)

There are gaps in the corner hanging tiles on this elevation which a crevice dwelling bat could utilise as a roosting site.

The roof tiles, soffits and windows are all secured and sealed and do not contain any suitable roosting features.



Figure 5



Figure 6

B1 – northeast elevation (Figure 7)

There are no suitable roosting features on this elevation.

The roof tiles, hanging tiles, soffits and windows are all secured and sealed and do not contain any suitable roosting features.



Figure 7

B1 – northwest elevation (Figure 8)

There are gaps in the corner hanging tiles of the flat roof dormer (southwest corner – Figure 9 - circled) which a crevice dwelling bat could utilise as a roosting site.

There are also gaps in the roof tiles where lateral movement has occurred and displaced some of the verge tiles. The gaps present are suitable for a crevice dwelling bat to gain access to beneath the roof covering and roost (Figure 9 - circled).

The soffits and windows are all secured and sealed and do not contain any suitable roosting features.



Figure 8



Figure 9

B1 Interior

B1 – loft space (pictured opposite).

There is one loft space within the main roof void of B1. The roof structure is built from modern timber beams including a ridge beam, collar ties and rafters. The roof is lined with bitumen felt which is 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. There are also stored items in the loft.

No daylight enters the loft space which indicates that it is well sealed.



Figure 10

B1 Evidence of bats

There were two bat droppings behind the corner hanging tiles on the southwest elevation (Figure 11). The size, shape and colour of the droppings indicate that they were deposited by a crevice dwelling species such as a pipistrelle spp., (Figure 12).

A sample of the bat droppings was retained for DNA analysis.

B1 Breeding birds and other incidental observations

There was no evidence of nesting birds located internally or externally on the survey building.



Figure 11



Figure 12

Foraging and Commuting Habitat

The site contains excellent habitat for commuting and foraging bats, as the garden extends into mature deciduous woodland. There are also defined hedgerows which are also excellent for commuting bats. The diverse vegetation will attract an abundance of invertebrates for bats to forage.



Figure 13

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 4.

Bats

Bats are protected under the Wildlife and Countryside Act and the Conservation of Habitats and Species Regulations 2017 (amended by the Conservation of Habitats and Species Regulations (amendment) (EU Exit) Regulations 2019).

There are three possible outcomes of this survey, each with specific recommendations. These are outlined below:

Confirmed bat roost

Best practice survey guidelines (Collins, 2016) recommend additional surveys for confirmed roosts. Three further surveys are required to characterise the bat roost present including species, roost type and access points to inform an EPSL application to Natural England. Surveys must be completed during the active bat season (May – September). At least two of the surveys should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey.

Low, moderate or high likelihood of a bat roost present

Best practice survey guidelines (Collins, 2016) recommend additional surveys for features assessed as having low to high suitability for roosting bats. One, two or three further surveys are required to confirm presence or likely absence of a bat roost, based on a low, medium or high roost likelihood evaluation. Surveys must be completed during the active bat season (May – September). If more than one survey is recommended, at least one of them should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey. If two or one further survey is recommended these surveys must be completed during the optimal survey period (mid-May to August). For low and moderate roost likelihood evaluation the survey effort recommended at this stage is iterative and if bats roosts are confirmed in the building, a further survey will be required to provide sufficient information to inform an EPSL application to Natural England.

Negligible likelihood of a bat roost present

Buildings assessed as comprising negligible suitability for roosting bats do not normally require further surveys. However, if bats are found during any stage of the development, work should stop immediately, and a suitably qualified ecologist should be contacted for further advice.

Birds

Legislation protects all wild birds whilst they are breeding, and prohibits the killing, injuring or taking of any wild bird or their nests and eggs. Certain species of bird, including the barn owl, are subject to special provisions; it is an offence to disturb any bird or their young during the breeding season.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 5 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 a rear two-storey extension, although the plans are not yet finalised.

Table 5: Evaluation of the site for bats and any other ecological constraints

Feature	Survey conclusions (with justification)	Foreseen impacts	Recommendations <i>Measures required to adhere to guidance, legislation and planning policies.</i>	Biodiversity Enhancements <i>The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021)</i>
Roosting bats (B1)	There are six granted bat EPSLs within 2km of the site, with the closest being ~70m west for the destruction of a resting place of a soprano pipistrelle roost. Building B1 has a confirmed roost, as identified by two bat droppings found behind the corner hanging tiles of the southwest elevation. This is likely to be a day roost of a small number of crevice dwelling bats, such as a common pipistrelle. The building contains gaps in the corner hanging tiles on the southwest and northwest elevations, as well as a gap in the verge tiles and slipped roof tiles on the northwest elevation. No evidence of void dwelling species was recorded in the loft, as such this species of	The proposed development will not affect any of the features that could be used by roosting bats which were noted on the building during the survey and therefore no impacts to bat roosts are anticipated. The proposed development will not affect any of the features that could be used by roosting bats which were noted on the building during the survey and therefore no impacts to bat roosts are anticipated. The features identified as suitable for roosting bats are located on the southwest and northwest extent of the building and are not functionally linked to the area of the proposed works (the north-eastern elevation). The works are not within sufficient distance or of a scale to cause disturbance to the bat roost identified on the southwestern extent of the building behind the corner hanging tiles, nor any other roosts that may be present or	The works will be restricted to the northeast elevation and the adjoining areas of roof. No works will be undertaken on any other elevation, particularly the southwest, and none of the roost features in this area will be impacted. If the proposals change then further bat surveys will be required in the form of BERS between May and September Owing to the nature of the proposed development and the low potential for impacts to bat roosts, further bat surveys are considered to be disproportionate. It is anticipated that any risk to bats can be reduced to an acceptably low level through the implementation of a precautionary working method during and post-development. This will include the following measures: • Works will be scheduled during the winter months (November to March) when bats are least likely to be present, insofar as is possible. • A toolbox talk will be given to contractors to make them aware of the possible presence of bats on the site. • An inspection of the potential roost features identified in this report will be undertaken prior to works commencing. • 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 a minimum of two bat boxes on a mature tree around the site boundaries and on the retained building will provide additional roosting habitat for bats e.g. • 2F Schwegler Bat Box (trees) • 1FF Schwegler Bat Box (trees) • 2FN Schwegler Bat Box (trees) • Beaumaris Bat Box (buildings) • Vivara Pro Woodstone Bat Box (buildings) Or a similar alternative brand. 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.

	bat can be ruled out from being present. Building B1 has a moderate value for roosting bats.	other identified features on the building.		
Foraging and commuting bats	The woodland and hedgerows 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.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • The creation of a wildlife pond. • Planting of native tree, shrub and hedgerows to increase foraging opportunities.
Nesting birds (B1)	The building could be used by nesting birds, using such features as the slipped tiles on the northwest elevations roof.	None.	None.	The installation of a minimum of two bird boxes on a mature trees around the site boundaries and on the retained building will provide additional nesting habitat for birds e.g. • Schwegler No 17 Swift Nest Box (buildings) • Schwegler 1SP Sparrow Terrace (buildings) • Schwegler 1B Nest Boxes (trees) • Schwegler 2H Robin Boxes (trees) • 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.
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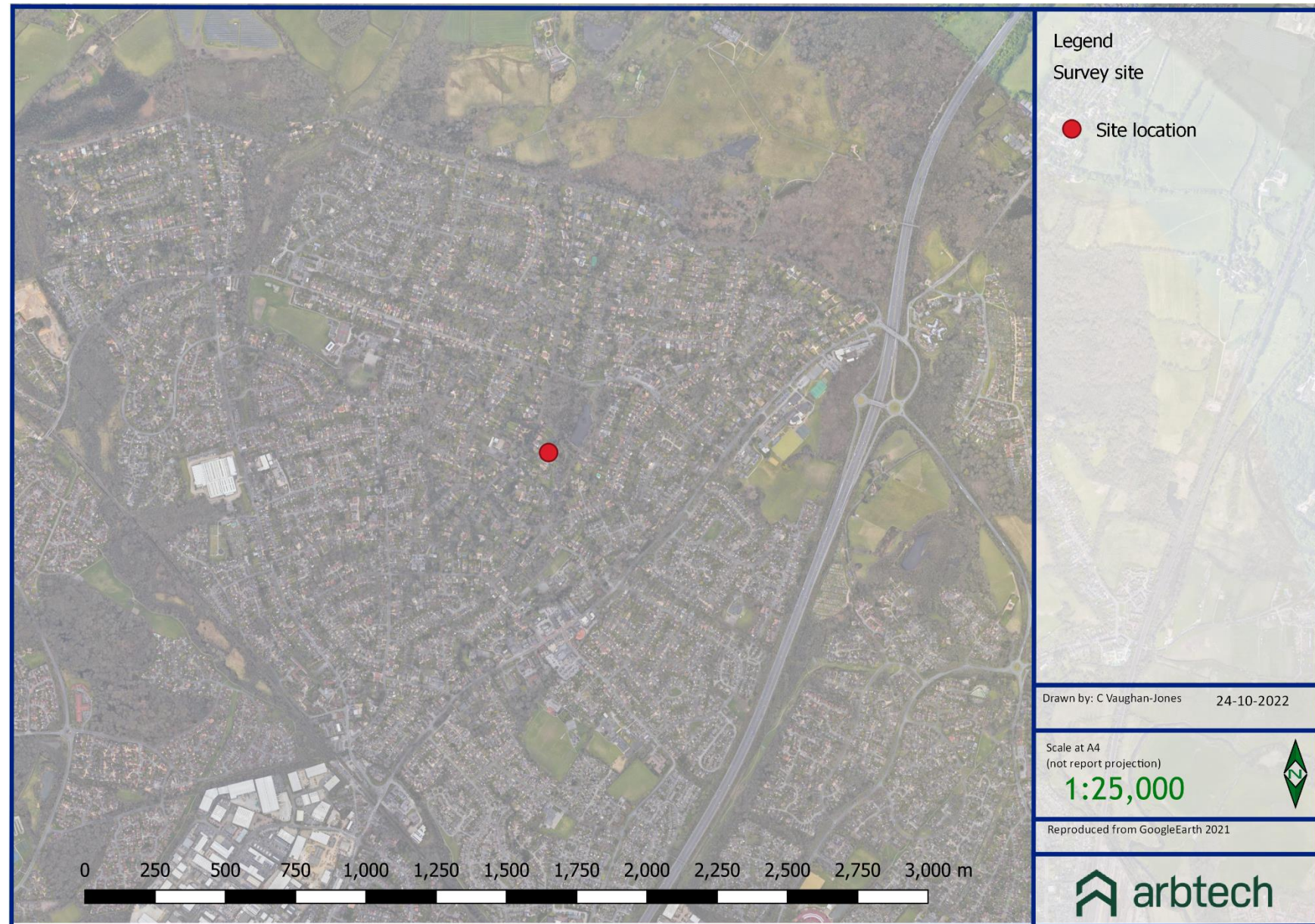
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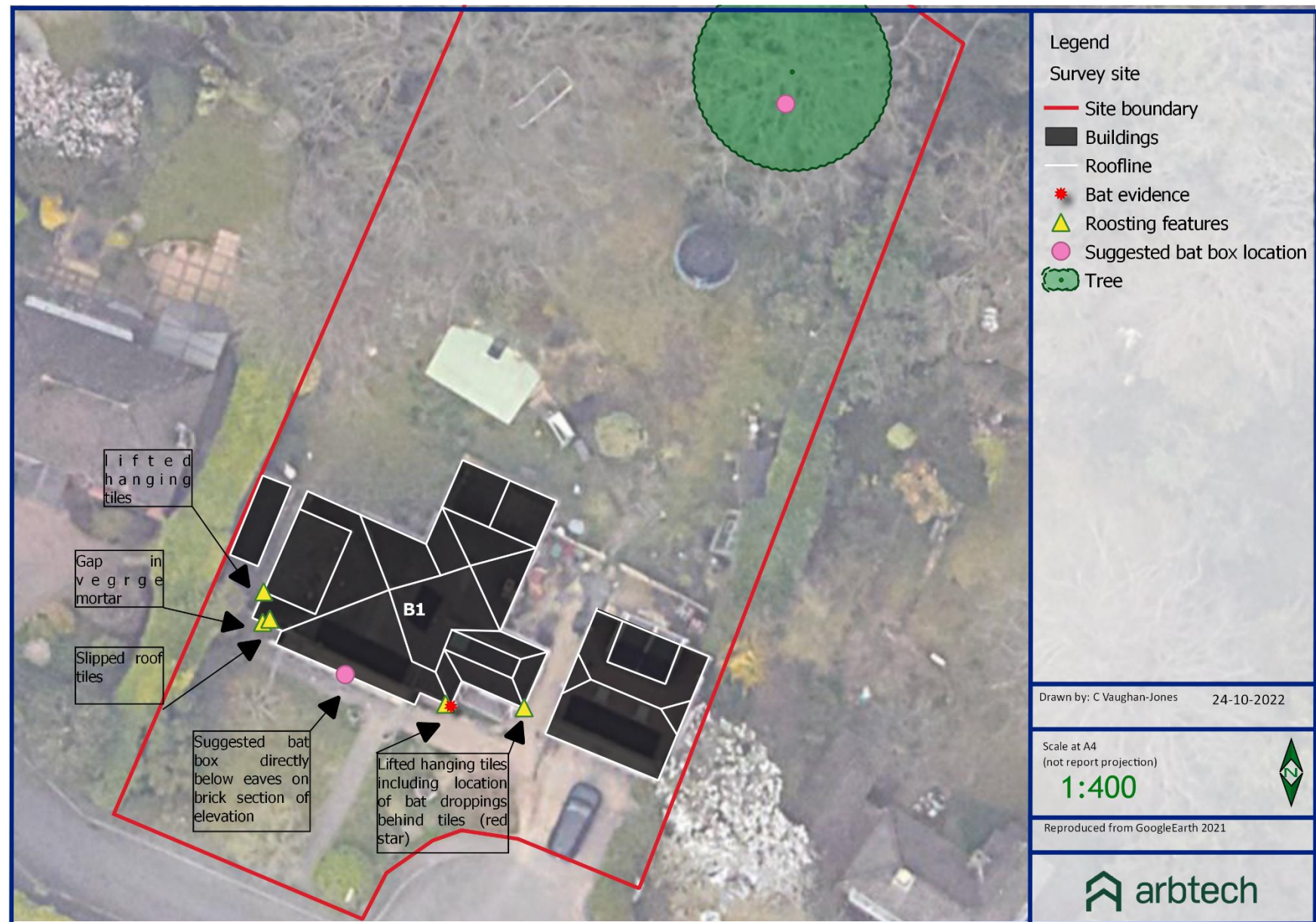
Appendix 1: Proposed Development Plan

Not available.

Appendix 2: Site Location Plan



Appendix 3: Bat Survey 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 (ENGLAND)

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.