

**PEMBERS HILL FARM, MORTIMERS LANE, FAIR
OAK, HAMPSHIRE**

ECOLOGICAL IMPACT ASSESSMENT

Final Document

July 2022

Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EclA • HRA • Management Plans
Habitats • Badger • Bats • Hazel Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

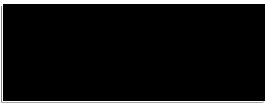
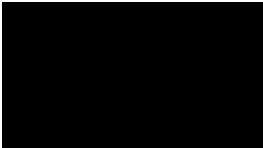
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This report has been produced in accordance with the CIEEM Guidelines for Ecological Report Writing 2017 (CIEEM, 2017). The survey work has been undertaken in line with references within CIEEM's Source of Survey Guidance (CIEEM, 2017).

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ECOLOGICAL IMPACT ASSESSMENT

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EXECUTIVE SUMMARY

Ecological Survey and Assessment Ltd (ECOSA) have been appointed by Drew Smith Group to undertake surveys in respects of bats to update the survey data of Plots 1 and 234 at Pemblers Hill Farm, Mortimers Lane, Fair Oak, Hampshire. The site is located at the eastern edge of the town of Fair Oak and comprises two existing buildings with associated gardens and hardstanding. This report presents the findings of the ecological survey work in relation to bats undertaken to date.

The main findings of the Ecological Impact Assessment are:

- The on-site buildings were assessed as being of low suitability for roosting bats. During the emergence survey no roosting bats were identified and therefore roosting bats are considered likely absent from the buildings.
- Surveys recorded six species of bats commuting and foraging at the site. The largest amount of activity recorded was associated with the common pipistrelle. As no roosts were recorded and no additional lighting is proposed, no impacts are anticipated on roosting, foraging or commuting bats as a result of the proposals.
- The field survey identified suitable opportunities for nesting birds. The proposals could cause disturbance to nesting birds and therefore mitigation measures have been recommended, including the reduction of lighting on site.
- As an enhancement measure, new roosting and nesting opportunities will be provided by the installation of bat and bird boxes.
- Given the impacts identified, and the mitigation, compensation and enhancement measures proposed it is considered that the proposals accord with all relevant local and national planning policy.
- If the planning application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by Drew Smith Group to undertake an Ecological Impact Assessment to support a planning application for the renovation of Plots 1 and 234 at Pembers Hill Farm, Mortimers Lane, Fair Oak, Hampshire SO50 7EA (hereafter referred to as the site).

A range of ecological surveys and assessments were conducted previously at the site and within the wider site ownership by Hampshire Ecological Services detailed in the Ecological Appraisal Report (Hampshire Ecological Services Ltd, 2015), Bat Foraging Survey Report (Hampshire Ecological Services Ltd, 2016), Bat Mitigation Strategy Report (Hampshire Ecological Services Ltd, 2018) and Ecological Management and Mitigation Strategy Report (Hampshire Ecological Services Ltd, 2019).

The wider site ownership is in receipt of an outline planning permission applied for in September 2015 and granted in May 2018 (Reference O/15/77190) for the construction of up to 250 dwellings with access from Mortimers Lane and pedestrian/cycle links, open space and landscaping, all matters other than access reserved

1.2 The Site

The site is located at the eastern edge of the town of Fair Oak, centred on National Grid Reference (NGR) SU 5041 1891 (**Map 1**).

The site consists of two plots of land that each have an existing residential building with associated gardens and hardstanding. These Plots of land are part of a wider development at Pembers Hill Farm as such the boundaries of the site there is residential development.

There are well developed hedgerows/tree lines within the wider landscape that lead to pockets of woodland. To the north, south and east of the site there is a series of arable fields. To the west there is urban development in the form of Fair Oak town.

1.3 Aims and Scope of Report

The information within this report is based on a field survey and desktop study and relevant species-specific surveys carried out between March 2022 and June 2022 by ECOSA. The report describes the habitats and species (hereafter referred to as ecological features) within the site's Zone of Influence (Paragraph **Error! Reference source not found.**) and provides a detailed assessment of potential ecological effects of the proposed development of the site. It identifies the need for any measures to

avoid, mitigate or compensate for significant adverse effects¹ ecological features and outlines enhancements to the site's ecology to be implemented as part of the development. The objectives of the assessment are:

- To provide baseline information on ecological features within the site's Zone of Influence and determine the importance of these features;
- To assess, characterise and quantify the effects on ecological features, including cumulative effects, and identify significant effects in the absence of any mitigation;
- To set out measures to avoid, mitigate and compensate for significant ecological effects in accordance with the 'mitigation hierarchy'²;
- To provide an assessment of the significance of any residual effects;
- To outline opportunities for enhancement in order to achieve a net gain for biodiversity; and
- To set out the requirements for any post-construction monitoring.

1.4 Site Proposals

The proposals are for the renovation of the building on Plot 1 and 234. The Ecological Impact Assessment is based on the proposals plan produced by Kendall Kingscott, dated December 2021 (Drawing No. 2013 rev P03 and 2014 P01) (**Appendix 1**). The renovation will include the addition of a dormer window to the western elevation of Plot 1, two dormer windows on the southern and one on the northern elevation of plot 234, and work on the roofs including the replacement of the Velux.

¹ For the purposes of this assessment a 'significant' adverse effect is one which will have an adverse effect on the ecological feature at the site level or higher.

² In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

2.0 PLANNING POLICY CONTEXT

2.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the Eastleigh Borough Council administrative area. This information is then used to make necessary make recommendations for mitigation and enhancements in order to ensure any future planning application accords with relevant planning policy.

2.2 Planning Policy

2.2.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. The original document was published in 2012 with the most recent revised NPPF published in July 2021. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 11 of the NPPF "*Plans and decisions should apply a presumption in favour of sustainable development*". However, Paragraph 182 goes on to state that "*The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.*".

The NPPF sets out that development proposals should not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 174 states that the planning system should contribute to and enhance the natural environment by "*...minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures...*".

A number of principles are set out in Paragraph 180, including that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and incorporating biodiversity in and around developments should be encouraged. Specific reference is also made to the protection of irreplaceable habitats³, including ancient woodland⁴. Where loss to irreplaceable habitats occurs planning permission would normally be refused unless there are wholly

³ The NPPF defines irreplaceable habitats as "*Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.*"

⁴ Natural England defines ancient woodland as "An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)."

exceptional reasons and an adequate compensation strategy is in place. Paragraph 180 also states *“development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”*. Paragraph 181 also sets out that potential SPAs, SACs and listed or proposed Ramsar sites or sites acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as habitat sites.

In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states *“the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat”*. Paragraph 99 states *“it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the Proposed Project Development, is established before planning permission is granted”*.

2.2.2 Local Policy

The Eastleigh Borough Local Plan 2016-2036 was adopted on 25th April 2022. It sets out the policies and plans to guide future development to 2036 and replaced the ‘saved’ policies in the Adopted Local Plan 2001-2011. A number of policies relate to ecology:

- **Policy S9: Green Infrastructure**

In relation to ecology, this policy states that the council will seek to provide green steppingstones such as street trees, green roofs and walls, pocket parks and urban copses as well as connected habitats linking the network of designated sites and existing propriety habitats, taking account of the Hampshire ecological network map.

- **Policy DM10: Water and Wastewater**

This policy states that where new water supply or wastewater infrastructure is required or proposed, the development will be phased alongside the provision of infrastructure to ensure compliance with the Habitats Regulations; that there is no deterioration of the status of water bodies; and the avoidance or mitigation of any other adverse impacts.

- **Policy DM11: Nature Conservation**

This policy states that developments should seek to protect, conserve and enhance international, national and local nature conservations designations and networks of natural habitats. A ‘project level’ Habitats Regulations

Assessment will be required where there are likely significant effects on international or European nature conservation sites. In particular, reference is made to the Solent, the New Forest and the River Itchen designated sites. The policy also states that a net gain of biodiversity will be sought on all development sites.

Development will not be permitted if it is likely to have adverse effects on priority habitats, protected or priority species, or on the local ecological network, unless it can be demonstrated that there are no alternative solutions, there is an overall biodiversity net gain or the benefits clearly outweigh the adverse effects.

In relation to ecological survey work, the policy states that development will not be permitted unless it can be demonstrated that there have been thorough habitat and species surveys conducted; a great crested newt strategic survey and strategy have been considered in all developments within 500 metres of a great crested newt pond; and a strategic bat trapping survey has been considered in all developments within the locality of a woodland or connected habitat network.

3.0 METHODS

3.1 Introduction

This section details the methods employed as part of the bat surveys undertaken at the site to date. Any significant limitations to the survey methods are also considered.

3.2 Zone of Influence

To define the total extent of the study area for this appraisal (Zone of Influence⁵), the proposed scheme was reviewed to establish the spatial scale at which ecological features could be affected. The appropriate survey radii for the various elements of the appraisal (i.e., species-specific surveys) have been defined in the relevant sections below. These distances are determined based on the professional judgement of the ecologist leading the assessment, taking into account the characteristics of the site subject to assessment, its surroundings and the nature and scope of the proposals (if known when the appraisal was undertaken). Determination of the Zone of Influence is an iterative process and will be regularly reviewed and amended as the project evolves.

3.3 Scoping

Protected species considered within the Ecological Impact Assessment are those species/species groups considered likely to be encountered given the geographical location and context of the site. Where the site was found to be suitable to support these species/species groups, and adverse effects cannot be avoided from the outset, further species-specific surveys are undertaken. These are discussed within the results section (Section 4.0) of the current report. Where such a species is unlikely to be present on site a justification for likely absence is provided. Species considered likely absent from the site are not then considered in the assessment of ecological effects and mitigation/compensation measures section (Section 5.0) of this report.

3.4 Field Survey

3.4.1 Survey Methods

The field survey broadly followed standard Phase 1 habitat survey methodology (JNCC, 2010) and included a search for evidence of, and an assessment of the site's suitability to support, protected and notable species as recommended by CIEEM (CIEEM, 2017).

Protected and Notable Species Appraisal

A preliminary appraisal of the site's suitability to support legally protected and notable species was carried out. Specific methods for species/species groups considered during the appraisal are provided in Appendix 3.

⁵ The Zone of Influence, as defined by CIEEM, is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities.

3.4.2 Survey Details

The field survey was carried out by Samantha Faggetter, Ecologist of ECOSA on 18th March 2022. The weather conditions were dry with approximately 0-30% cloud cover, an ambient temperature of 15°C and a light wind.

During the survey, the surveyor was equipped with a ladder, 10x40 binoculars, a high-powered torch and a digital camera.

3.4.3 Field Survey Limitations

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. The field survey has therefore not produced a complete list of plants and animals and in the absence of evidence of any particular species should not be taken as conclusive proof that the species is absent or that it will not occur in the future.

Online mapping resources provide an indication of habitat features present in the wider area, but do not provide a detailed assessment of habitat types.

For Plot 1 it was not possible to access the rear garden therefore it was not possible to survey the north-western elevation to get a full look at the building for the external survey. In addition, it was unclear at which point the loft void stopped due to water tanks being stored within the void. The hatch into a larger section of the loft void was too narrow to climb through. As such a detailed internal inspection was not possible.

3.5 Bat Survey

3.5.1 Survey Methods

Bat Emergence Survey

The bat emergence survey was undertaken in line with current best practice guidelines (Collins, 2016). In accordance with the guidelines for a building assessed as having low suitability to support roosting bats a single dusk emergence survey was undertaken in order to ascertain the presence/likely absence of roosting bats from within the building. Where the presence of roosting bats is confirmed, the data also allows for an assessment of the status of the roost present.

The dusk emergence survey commenced approximately 15 minutes before sunset until approximately two hours after sunset.

The surveys were carried out by eight experienced ECOSA surveyors, positioned at previously identified vantage points around the buildings (**Map 2**). These vantage point locations allowed a sufficient coverage of the Potential Roosting Features identified on the buildings impacted by the proposals.

During the surveys surveyors recorded the time, species, location and direction of flight for each bat encountered, with particular attention paid to establishing bat access/egress locations to any roosts within the buildings.

3.5.2 Survey Details

Bat Emergence Survey

The bat emergence survey was undertaken during June 2022. **Table 1** provides details of each emergence.

Table 1: Bat emergence survey details

Survey Date	Building/ Tree No.	Survey Type	Survey Timings	Weather Conditions	Sunset/ Sunrise Time
16 th June 2022	Plot 1 and Plot 234	Emergence	Start: 21:07 End: 23:22	General conditions: Dry Start temp: 23°C End temp: 19 Cloud Cover: 25-75% Wind Speed: No wind	21:22

During the bat emergence surveys the surveyors were equipped with Batlogger M bat detectors. The Batlogger detectors have a built-in recorder and recorded for the full duration of the survey. Recordings made with the detectors were later analysed using BatExplorer® (v2.1) to confirm the identity of any species encountered.

The bat emergence/re-entry surveys were coordinated by Samantha Faggetter, Ecologist of ECOSA assisted by suitably qualified and experienced ECOSA surveyors.

3.5.3 Survey Limitations

Some bat species, e.g. long-eared bats *Plecotus* species⁶, generally emerge from their roosts in total darkness and do not produce strong echolocations, and therefore these bats can be difficult to observe and record during bat surveys, leading to under-recording.

The quality of hand-held bat detector recordings is based, to a large extent, on the proximity of a bat to the detector's microphone. Obstructions such as vegetation or environmental variables will all influence the quality of sound reaching the microphone and thus some bat echolocation recordings are of insufficient quality for specific identification. Bats routinely alter their echolocations in relation to behaviour and their

⁶ There are two species of long-eared bat, the brown long-eared bat *Plecotus auritus* and the grey long-eared bat *Plecotus austriacus*. These species can only be separated by examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the two species shall be referred to in this report as long-eared bat. The brown long-eared bat is the commonest of the two species typically being found roosting within large roof voids although small voids and trees are also utilised. The grey long-eared bat is rare and confined to southern England and like the brown long-eared typically roosts in roof voids.

environment. It is not always possible to make a robust identification of every bat recording.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Introduction

This section details the results of the field surveys and species-specific surveys undertaken for the site to date. It assesses the baseline ecological conditions of the site based on the findings of the field survey and subsequent bat emergence surveys. This section also provides an assessment of the ecological value of ecological features present at the site.

4.2 Scoping

Given that a Preliminary Ecological Appraisal has been produced for this scheme this report only provides details of the results of the bat emergence survey as recommended (Hampshire Ecological Services Ltd, 2015) who assessed the buildings as having low suitability to support roosting bats. In addition the scheme only impacts buildings and therefore the impacts assessed are restricted to just those features which could be present in buildings.

4.3 Bats

4.3.1 Baseline Ecological Conditions

Field Survey Results

Building Assessment

The results of the building assessment are provided in **Table 2**. The assessment found that both Plot 1 and 234 have buildings which have low suitability to support roosting bats.

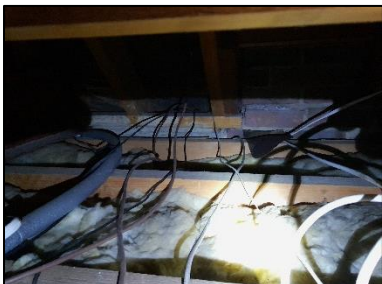
Tree Assessment

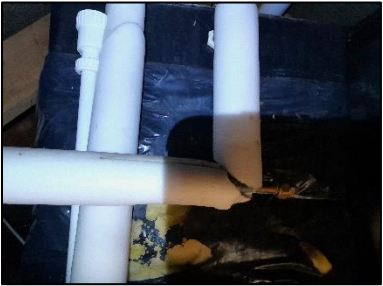
No trees are present on site as such there is no roosting suitability for bats. Therefore, tree roosting bats are not considered further in this report.

Foraging and Commuting Habitat

The site provides negligible habitat for foraging and commuting bats. There is very minimal vegetation at the site and there are no scrubs or tree to connect with any offsite habitat. The vegetation that is present is located on the southern elevation of Plot 1 and is heavily manicured. The area around the site is an active construction site in which there is minimal vegetation that would provide suitable for foraging bats and commuting bats may occasionally pass over the site. Therefore, the site is considered to be of low suitability for foraging and commuting bats.

Table 2: Building Assessment – Summary of Features with Bat Roost Potential and Evidence of Bat Roost Activity

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Plot 1	 Figure 1: Plot 1  Figure 2: Wooden cladding on the western gable end  Figure 3: Loft void lv1	Plot 1 is a two-storey red brick, L shaped, residential building that is unoccupied (Figure 1). The roof is multi pitched, with hipped and pitched sections, with clay tiles and dormer windows. There is wooden cladding on the gable ends on the south-western elevation (Figure 2). There is a wooden soffit in good condition on all elevations. There is a redbrick chimney present on the south-east elevation. There is a loft void (lv1) that extends east to west and is the length of the building (Figure 3). Lv1 is approximately one metre high and half a metre wide. There is a wooden framework including wooden joists, beams, rafters and purlins. This void is where the water tanks are stored along with associated pipework (Figure 4). In addition, there is an abundance of wires along the floor of lv1. Due to the size of the hatch, it was not possible to enter and inspect the whole void. The liner is bitumen felt and it is in good condition with no rips or tears. No day light can be seen in the parts of the void that were accessed. There is eaves storage (lv2) on the northern elevation of the building (Figure 5). Lv2 is	Occasional lifted tiles and gaps under wooden cladding that provides a small number of crevice opportunities for a roosting bat. No gaps found in the loft voids however as lv1 could not be fully inspected access cannot be ruled out.	No evidence of roosting bats was recorded during the survey.	Low suitability

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
	 Figure 4: Water tank filling the space within the loft void lv1  Figure 5: Loft void lv2  Figure 6: Metal grid at the eaves of the building	approximately half a metre high by half a metre wide by eleven metres long. There is a wooden framework including wooden rafters, joists, and beams. There is a bitumen felt liner which is in good condition with no damage. Day light is present at the eaves where there is a metal grid preventing access (Figure 6). Both voids appear to be well sealed.			

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Plot 234	 Figure 7: Plot 234  Figure 8: Loft void lv1  Figure 9: Loft void lv2	Plot 234 is an unoccupied two storey residential building (Figure 7). It is constructed of red brick outer layer and a break block inner layer. The roof has clay tiles and is hipped with sky lights allowing daylight into the converted loft. There is a wooden soffit on gable ends only which is in good condition. The other elevations do not have the soffit boxing but do have the wooden supports for the roof. External lights are present on the northern elevation. The led flashing present on the building is in good condition. A red brick chimney is present on the western elevation. The porch at the front door is constructed of wood and red brick with a pitch clay tile roof. The loft conversion has used up most of the loft space and is very well sealed. At the eaves there are storage areas, the dimensions for which are approximately half a metre wide by half a metre high by the length of the building. One on the southern and one on the northern elevation. The southern elevation is referred to as lv1 (Figure 8). Lv1 has a wooden structure including rafters, joists, purlins and purlin prop. The void had both Foil and fibre glass	There are occasional lifted tiles that provide a crevice opportunity for roosting bats. While daylight can be seen at the eaves of the building there is no obvious gap.	No evidence of roosting bats was recorded during the survey.	Low suitability

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
		insulation. Some of the piping for the building is stored here. Loft void (lv2) is located on the northern elevation and is the same size and construction as lv1 (Figure 9). In both voids the liner is in good condition and there are no rips.			

Bat Emergence/Re-entry Survey Results

The surveys recorded six species of bat foraging and commuting within the site: common pipistrelle *Pipistrellus pipistrellus*, pipistrelle *Pipistrellus* species⁷, soprano pipistrelle *Pipistrellus pygmaeus*, serotine *Eptesicus serotinus*, noctule *Nyctalus noctula* and *Nyctalus* species⁸.

No bats were recorded emerging from the either Plot 1 or Plot 234 therefore roosting bats are considered likely absent from the site.

Table 3 provides details of the species, numbers and locations of bats recorded foraging/commuting during the emergence/re-entry surveys.

Table 3: Bat Emergence/Re-entry Survey Results

Visit 1 - Survey Details	
Survey Date:	16 th June 2022
Structures Surveyed:	Plot 1 and Plot 234
Survey Type:	Dusk Emergence Survey
Time of Sunset:	21:22
General Bat Activity	
No bats were recorded roosting during the survey. Numerous bats were recorded flying around and over both plot 1 and 234. The first bat was recorded at 20 minutes after sunset. The majority of the bats recorded were common pipistrelle. The bats commuting near plot 234 were recorded flying north and south of the building. The bats commuting near plot 1 travelled north, south and east of the building. Foraging behaviour was recorded around both plots.	

4.3.2 Evaluation

Foraging and Commuting Bats

Bat surveys recorded at least six species of bat foraging and commuting at the site.

Numerous bats were recorded commuting and foraging at the site during the survey period. The vegetation around the site is limited and the majority of the records consisted of one species, it is considered that the site is not an important resource for foraging and commuting bats and only has local value for this species group.

⁷ There are three species of *Pipistrellus* bats in Britain, the Noctule common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and Nathusius's pipistrelle *Pipistrellus nathusii*. *Pipistrellus* bats are very difficult to identify specifically, this can generally only be done by examination of physical features and Phylogenetic Analysis Identification of bat droppings. The soprano and common pipistrelle are the more common species of these bats and will utilise buildings for roosting often occupying small and inaccessible voids. For the purpose of this report all species shall be referred to as *Pipistrellus* bats unless a specific identification has been possible.

⁸ There are two species of *Nyctalus* bats in Britain, the Noctule *Nyctalus noctule* and Leisler's bat *Nyctalus leisleri*. *Nyctalus* bats are very difficult to identify specifically, this can generally only be done by examination of physical features and Phylogenetic Analysis Identification of bat droppings. The noctule being the more common species of these bats and will utilise buildings for roosting often occupying small and inaccessible voids. For the purpose of this report all species shall be referred to as *Nyctalus* bats unless a specific identification has been possible.

4.4 Birds

4.4.1 Baseline Ecological Conditions

Field Survey Results

House sparrow *Passer domesticus* and woodpigeon *Columba palumbus* were recorded during the field survey perching on the roof and foraging around the buildings. The house sparrow is a red listed⁹ bird and woodpigeon is amber listed¹⁰. The roof and gutters on the buildings provide suitable opportunities for nesting birds.

4.4.2 Evaluation

Breeding Birds

All vegetation around the buildings and the suitable nesting features on the building are assessed as being of no more than site value.

⁹ The UK's birds are split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green. Red List criteria include species which are: globally threatened; have been subject to historical population decline in UK during 1800–1995; are in severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period, or; subject to severe (at least 50%) contraction of UK breeding range over last 25 years, or longer-term period.

¹⁰ The UK's birds are split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green. Amber list criteria include species which are: in unfavourable conservation status in Europe; subject to historical population decline during 1800–1995, but recovering; subject to moderate (25-49%) decline in UK breeding population or contraction of UK breeding range over last 25 years, or the longer-term period; subject to moderate (25-49%) decline in UK non-breeding population over last 25 years, or the longer-term period; rare breeders (1–300 breeding pairs in UK); rare non-breeders (less than 900 individuals), or; internationally important species with at least 20% of European breeding or non-breeding population in UK.

5.0 ASSESSMENT OF ECOLOGICAL EFFECTS AND MITIGATION/COMPENSATION/ENHANCEMENT MEASURES

5.1 Introduction

This section assesses the ecological effects of the proposed development scheme on the identified ecological features as identified in Section 4.0. Methods for addressing potential impacts on ecological features have been approached in accordance with the mitigation hierarchy¹¹ with avoidance of impacts prioritised where possible. Where significant adverse effects cannot be avoided other forms of mitigation are prioritised over compensation. Enhancement measures have been detailed, where relevant, in order to not only minimise the impacts on biodiversity but also to provide enhancement in accordance with Paragraph 174 of the NPPF (Paragraph 2.2). It is anticipated that mitigation, compensation and enhancement measures will be secured through the planning process.

5.2 Scheme Design

The proposed development entails the renovation of the existing buildings in Plot 1 and Plot 234. This renovation will include the addition of a dormer window to the western elevation of Plot 1, two dormer windows on the southern and one on the northern elevation of Plot 234, some of the windows will be replaced and work on the roofs including the replacement of the Velux.

The potential ecological impacts and effects of these proposals, in the absence of mitigation, are described for each ecological feature below. For each ecological feature, measures to mitigate and/or compensate for significant effects are described.

5.3 Bats

5.3.1 *Potential Impacts and Effects*

As no roosting bats were recorded during the emergence survey no impacts are anticipated as part of the proposals.

5.3.2 *Mitigation Measures*

No mitigation measures are required in relation to bats

5.3.3 *Significance of Residual Effects*

Following mitigation measures there are no anticipated residual effects on bats.

¹¹ In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

5.3.4 Compensation

No compensation measures are proposed with regards to bats.

5.3.5 Enhancement

Enhancement opportunities include installation of a bat box such as Vivara Chillon WoodStone Bat Box, or similar, on each building. These will be installed as high up as possible on the existing buildings facing a south or south westerly direction

5.3.6 Monitoring

No monitoring is required in relation to bats.

5.4 Birds

5.4.1 Potential Impacts and Effects

The suitable nesting features on the building may be lost as a result of the works to the roof and the installation of the dormer windows and harm and disturbance to nesting birds if undertaken in nesting bird season.

All birds, their nests, eggs and young are legally protected, with certain exceptions, under the Wildlife and Countryside Act 1981 (as amended). Refer to Error! Reference source not found. for details.

5.4.2 Mitigation Measures

The proposed works within the site should be undertaken outside of the breeding bird season (March to August, inclusive). If this is not possible a suitably qualified ecologist should inspect the building immediately prior to the roof removal. Should any active nests be encountered, the work will be paused until the chicks have fledged and/or the nest is no longer in use.

5.4.3 Significance of Residual Effects

Should the compensated measures all be followed then no significant residual effects are anticipated.

5.4.4 Compensation

The lost suitable nesting features will be compensated by the installation of two bird boxes (Vivara Woodstone Single Chamber House Sparrow Nest Box, or similar) on the walls of the buildings. These should be installed as high up as possible facing north or north-east.

5.4.5 Enhancement

For enhancement for nesting birds at the site it is recommended that two bird boxes be installed on the walls of the buildings or suitable vegetation within the wider site ownership. The recommended type of box is Vivara Pro Seville 32mm WoodStone Nest

Box, or similar. These should be installed as high up as possible on the facing north or north-east.

5.4.6 *Monitoring*

No monitoring is required in relation to birds.

5.5 Cumulative Effects

Assuming that the mitigation measures outlined in the paragraphs above are implemented, no significant residual effects are anticipated. As such it is considered unlikely that the proposals will contribute to cumulative adverse effects in association with other proposals in the local area.

6.0 CONCLUSION

6.1 Conclusion

A single bat emergence survey was undertaken on the on-site building, no roosting bats were identified during the survey and six species of bats were recorded foraging and commuting around the site. New dormer windows and roof works will cause the loss of suitable nesting features and may cause disturbance to nesting birds. Appropriate mitigation and compensation measures have been proposed. Post-development no residual or cumulative impacts are anticipated. The site will be enhanced for bats and birds through the inclusion of new roosting features. As such it is considered that the proposals will accord with all relevant national and local planning policy in relation to ecology including Policy DM11 set out in the Eastleigh Borough Local Plan.

6.2 Updating Site Survey

If the planning application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

7.0 REFERENCES

CIEEM, 2017. *Chartered Institute of Ecology and Environmental Management Website*.
[Online]

Available at: www.cieem.net

CIEEM, 2017. *Guidelines for Ecological Report Writing*. 2nd ed. Winchester: Chartered Institute of Ecology and Environmental Management.

CIEEM, 2017. *Guidelines for Preliminary Ecological Appraisal*. 2nd ed. Winchester: Chartered Institute of Ecology and Environmental Management.

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

Collins, J., 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3rd ed. London: Bat Conservation Trust.

Hampshire Ecological Services Ltd, 2015. *Ecological Appraisal Report*, s.l.: s.n.

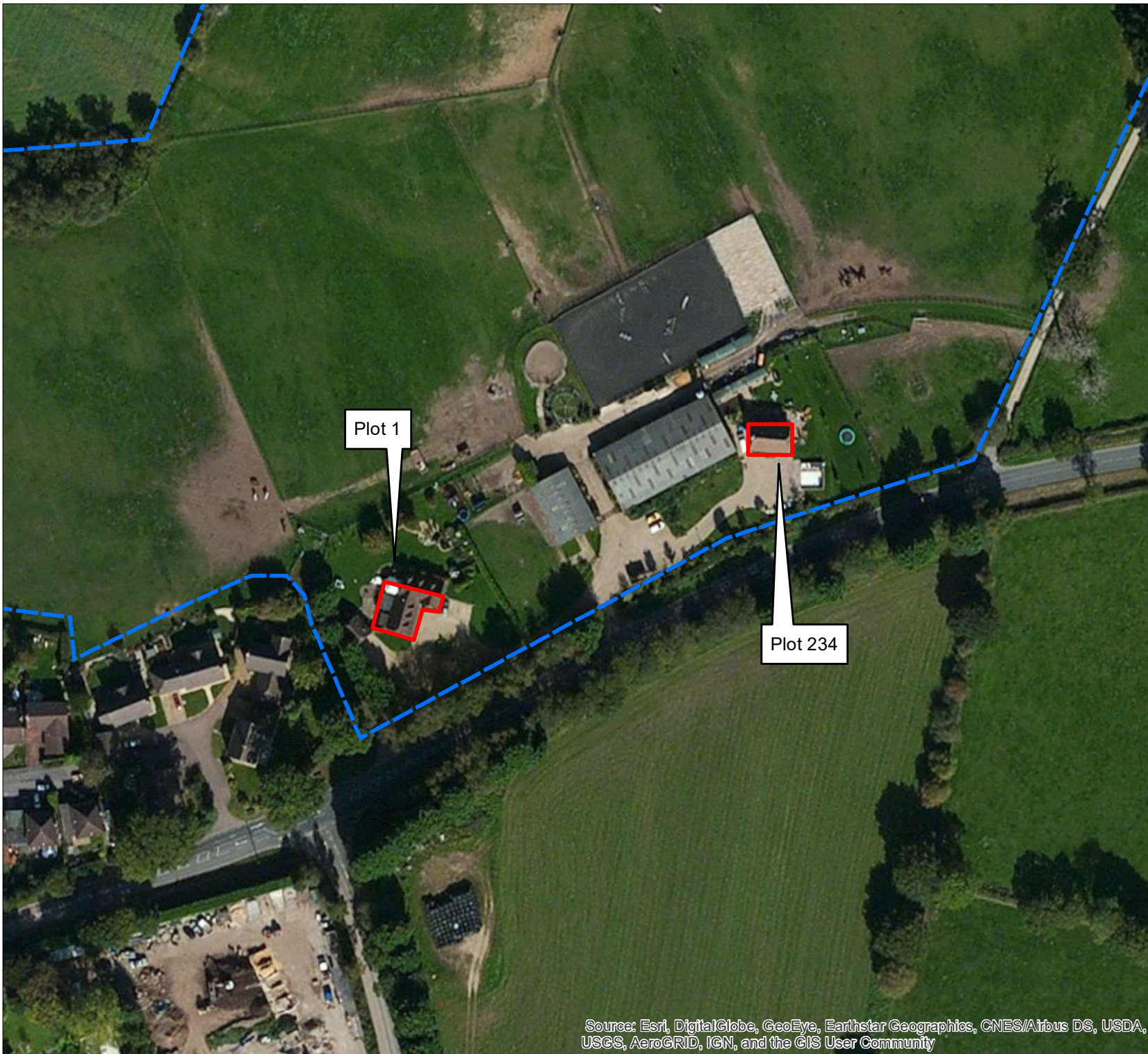
Hampshire Ecological Services Ltd, 2016. *Bat Foraging Report*, s.l.: s.n.

Hampshire Ecological Services Ltd, 2018. *Bat Mitigation Strategy Report*, s.l.: s.n.

Hampshire Ecological Services Ltd, 2019. *Ecological Management and Mitigation Strategy Report*, s.l.: s.n.

JNCC, 2010. *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit*. Peterborough: Joint Nature Conservation Committee.

Map 1 Site Location Plan



**PEMBERS HILL FARM, MORTIMER'S
LANE, FAIR OAK, HAMPSHIRE**

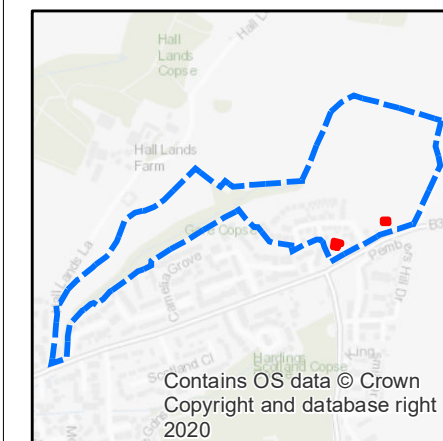
ECOLOGICAL IMPACT ASSESSMENT

Map 1 - Site Location Plan

Client:	Drew Smith Group
Date:	July 2022
Status:	Final

KEY

-  Buildings Surveyed
-  Wider Ownership Area



Scale at A4: 1:1,500

0 15 30 60 Metres

N

Prepared by: EV	Date: 060722
Last amended by:	Date:

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,
USGS, AeroGRID, IGN, and the GIS User Community

Map 2 Bat Emergence/Re-entry Survey

No bats were recorded emerging from the buildings. Therefore, roosting bats are likely absent.

PEMBERS HILL FARM, MORTIMER'S LANE, FAIR OAK, HAMPSHIRE

ECOLOGICAL IMPACT ASSESSMENT

Map 2 - Bat Emergence and Re-entry Survey

Client:	Drew Smith Group
Date:	July 2022
Status:	Final

KEY

-  Buildings Surveyed
-  Wider Ownership Area
-  Surveyor Locations

Plot 1

Plot 234

No bats were recorded emerging from the surveyed buildings.

Scale at A4: 1:1,000

0 10 20 40 Metres



Prepared by: EV	Date: 070722
Last amended by:	Date:

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Appendix 1 Proposed Site Layout



EAST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION



WEST ELEVATION

Scale 1:50 @ A1

0 1 2 3 4 5 M

 **Kendall Kingscott**
Chartered Architects
Chartered Building Surveyors
Interior Designers
CDM Services

Client
Drew Smith

Project
Pemblers Hill

Project Number
210894 2013

Scale
1:50

Paper Size
ISO A1

Filename
Pemblers Conversions 3.vwx

Date
16/12/21

Drawn
PW

Checked
PW

Purpose/Status
CONSTRUCTION

P03	14/03/2022	PW	PW	New opening window heights added
P02	04/03/2022	PW	PW	Single storey extension re-planned, dormer added to master bedroom.
P01	16/12/2021	PW	PW	First Issue
Rev	Date	By	Ap	Note
Drawing Title				
Plot 1 Proposed Elevations				

Only to be used on the site for which designed. The electronic transmission of design information contained in this drawing is carried out entirely at the User's risk and Kendall Kingscott Ltd. will have no liability for any errors or inaccuracies arising therefrom. The production of amended or updated information from the said design information by the User is entirely the responsibility of the User and Kendall Kingscott Ltd. shall have no responsibility in respect thereof whatsoever.

Appendix 2 Relevant Legislation

Bats

All UK bat species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations. These make it an offence to:

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb any such animal, including in particular any disturbance which is likely:
 - To impair its ability to survive, breed, or rear or nurture their young;
 - To impair its ability to hibernate or migrate;
 - To affect significantly the local distribution or abundance of that species;
- Damage or destroy a breeding site or resting place of any such animal;
- Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat *Rhinolophus ferrumequinum*;
- Lesser horseshoe bat *Rhinolophus hipposideros*;
- Bechstein's bat *Myotis bechsteinii*;
- Barbastelle *Barbastella barbastellus*; and
- Greater mouse-eared bat *Myotis myotis*.

In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

Breeding Birds

With certain exceptions, all wild birds, their nests and eggs are protected by Section 1 of the Wildlife and Countryside Act 1981 (as amended). Therefore, it is an offence, to:

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

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls. Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

- Intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young; or
- Intentionally or recklessly disturb the dependent young of any such bird.

Appendix 3 Protected and Notable Species Appraisal Methods

Bats

The survey conformed to current Bat Conservation Trust guidelines (Collins, 2016). An assessment was made of the suitability of buildings on the site and immediately on the site boundary to support roosting bats based on the presence of features such as loose or missing roof tiles or lifted lead flashing for buildings. A detailed external and internal inspection of accessible structures was undertaken to compile information on potential and actual bat entry/exit points; potential and actual bat roosting locations; any evidence of bats found.

An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The assessment of the potential for the site to support roosting, foraging and commuting bat is based on a four-point scale as detailed in **Appendix 4**.

Birds

The appraisal of breeding birds on the site was based on the suitability of habitat present to support nesting bird communities, the presence of bird species that may potentially nest within the available habitat and evidence of nesting such as old or currently active nests.

Appendix 4 Appraisal Criteria for Bats

The criteria used to assess the suitability of roosting and foraging/commuting habitat for bats is based on industry guidelines and outlined in **Table 4**¹².

Table 4: Criteria used to Assess Suitability of Roosting and Foraging/Commuting Habitat for Bats

Suitability	Description of roosting habitats	Commuting and foraging habitats
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically/structure that does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerows or un-vegetated stream, but isolated (i.e. not very well connected to the surrounding landscape by other habitat). Suitable, but isolated, habitat that could be used by small numbers of foraging bats such as a lone tree or a patch of scrub.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

¹² Table adapted from (Collins, 2016)