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Bat Survey

3 Middleton Cottages, Belford

May 2022

Mr S Oades

Client	Mr S Oades
Project Name	22138
Project Number	3 Middleton Cottages, Belford
Report Type	Daytime Bat Risk Assessment
Version	V1 (DRAFT)

	Name	**Position**	**Date**
Report Originator	Mark Osborne	Director	April 2022
Reviewed	Becky White	Senior Ecologist	April 2022
Updated with Bat Survey results	Mark Osborne	Director	May 2022
Reviewed	Becky White	Senior Ecologist	May 2022

Contents

Tables

Summary

OS Ecology Ltd were commissioned by Mr S Oades in April 2022 to undertake a daytime bat risk assessment and subsequent activity survey of 3 Middleton Cottages, Belford, where it is proposed to extend to the rear of the property and redevelop the structure internally.

Summary Table	
Impacts on Designated Sites	No impacts on sites designated for bats are predicted from the development.
Survey Findings	The structure is of low suitability for roosting bats comprising the end cottage on a terrace of roadside cottages to the north of Belford, north Northumberland. The building is two storey, with a partially demolished rear projection. The building is of cut stone and supports a pitched, slate roof. The building has been stripped internally.
Activity Survey Findings	Dusk emergence survey completed on the 25th May 2022 did not identify any roosts within the property. Low to moderate levels of bat activity attributable to common and soprano pipistrelle were recorded throughout the survey, with a *Myotis* sp. bat also recorded. Bats were recorded flying into the site and on occasion foraging within the garden. The majority of activity was associated with the tree line adjacent to the site. The first record of activity was approximately 25 minutes after sunset.
Nesting Birds	No evidence of use by nesting birds was recorded and the property offers limited opportunities.
Impacts	As a result of the assessment completed and the nature of the proposed works, the likely impacts, without appropriate avoidance measures, mitigation and/or compensation scheme, are: • Loss of a small number of potential roosting features associated with the building. • Low risk of disturbance and harm to roosting bats, should they be present at the time of the works. • Potential harm and/or disturbance to nesting birds, should works be undertaken in the breeding bird season (March to August inclusive).
Recommendations	• External lighting that may affect the site's suitability for bats will be avoided. If required this will be limited to low level, avoiding use of high intensity security lighting. The final lighting strategy will be determined by the results of the bat activity survey work detailed above. • Alternatives to timber treatments that are injurious to mammals will be sought and used on site (see http://www.jncc.gov.uk/pdf/batwork_manualpt4.pdf). • Works will not be undertaken during the nesting bird season (March to August inclusive) unless the site is checked by an appropriately experienced ecologist and nests are confirmed to be absent.

	• Works to the building will be undertaken to a precautionary bat method statement. • The incorporation of opportunities for roosting bats and nesting birds within the development or the wider landholding.

1. Introduction

Site Location

1.1 The site is located at Middleton, Belford at an approximate central grid reference of NU 10081 35590. The site location is illustrated within figure 1 in the appendices.

Site Description

1.2 The site comprises the most northerly dwelling of a line of roadside cottages.

Objectives of the Study

1.3 The objectives of this report are:

- To identify and describe any potential ecological receptors that may be present on site or within an identified zone of influence.
- To identify and assess whether proposals may impact on the identified receptors.
- To identify potential mitigation, compensation or enhancement measures if required.
- To identify and detail further surveys if required.

Development Proposals

1.4 The following is proposed:

- Extension to the rear;
- Internal redevelopment.

2. Methodology

Scope of Study

2.1 The site was surveyed to identify whether the following were present for legislative and planning purposes:

- Habitats of conservation value
- Priority Habitats
- Protected and Priority Species

2.2 The ecological characteristics of the site were reviewed to identify the scope of the assessment, with the zone of influence determined through professional judgement.

2.3 The survey area comprised the "site" defined within figure 2 (Appendix 3) and where access was available an approximate 50m buffer[1].

2.4 Access permitting, all potential bat roosting sites within the survey area were assessed.

Desk Study

2.5 Desk study was undertaken to assess the nature of the surrounding habitats and included:

- Assessment of aerial imagery and Ordnance Survey mapping.
- A search of the MAGIC website[2] for designated sites and European protected species within 2km of the survey area.
- Data search submitted to the Local Record Centre including information from the local Bat Group (Northumberland).

Field Survey

Habitats/Protected Species

2.6 During the preliminary survey the site was checked for evidence of protected species and habitats were assessed for their potential to support such species. For this site, the development site comprises a built structure and as such the assessment focussed on the risk of bats being present within the structure.

[1] The survey buffer may be increased depending on the species present and their identified core sustenance zones.
[2] Multi Agency Geographic Information for the Countryside (www.magic.gov.uk)

Bats

2.7 Survey effort has been based on that provided by the Bat Conservation Trust Good Practice Survey Guidelines[3].

2.8 Structures and trees within the site and adjacent to the site, were inspected[4], where access was available, for potential roosting features (PRFs) and to record any field signs, including bats, if present[5].

2.9 Assessment follows the Bat Conservation Trust Guidelines[6], which classifies the suitability (negligible, low, moderate or high) of the potential roosting, foraging and commuting habitats within the site. Full details of the classifications are provided within the table in Appendix 1.

2.10 Survey was undertaken by Mark Osborne an experienced bay surveyor who holds both Class 3&4 Natural England survey licence (2015-14412 & 2015-14496).

2.11 The following equipment was utilised during survey:

- High power LED torch.
- Zeiss 8x30 binoculars.
- Digital camera.

2.12 The survey was undertaken on the 25th April 2022 in the following weather conditions:

Table 1: Daytime Survey Conditions

Date	Temperature	Cloud Cover	Precipitation	Wind Conditions
25th April 2022	12°C	100%	None	SW2

Activity Surveys

2.13 The daytime risk assessment indicated that the structure is of low suitability to roosting bats.

[3] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

[4] It should be noted that assessment relates entirely on the structure or tree's suitability to support bats and or other protected species. Assessment must in no way be taken as an assessment of the structure's integrity or safety.

[5] If bats are recorded during appropriate measures are undertaken to limit any potential disturbance

[6] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

2.14 Activity surveys were therefore completed in line with the current guidance provided by the Bat Conservation Trust[7] [8] and comprised a single dusk activity survey.

Table 2: Activity Survey Conditions							
Date	**Temperature (°C)**		**Cloud Cover (%)**	**Precipitation**	**Wind Conditions**	**Sunset Time**	**Survey Period**
	Start	**End**					
25th May 2022	14	10	0	None	SW3	2128	2115-2300

2.15 Activity surveys were undertaken in suitable weather conditions (no constant rain or high winds and sunset temperature of at least 10oC).

2.16 Surveyor locations are chosen to enclose the site to identify whether bats enter or leave the site.

2.17 Surveyors are placed where practicable to cover all potential entry/exits sites.

2.18 All surveyors are equipped with full spectrum detectors to enable high quality recordings to be taken and analysed following the survey, to allow for any potential surveyor error and to enable the cross referencing of calls.

2.19 Detectors enable the surveyors to listen to all activity during the survey.

2.20 Infra-red cameras and lighting and a thermal were used to provide more robust data.

2.21 The activity survey was undertaken by Mark Osborne (2015-14412 & 2015-14496) and supported by Zoe Dunnett.

2.22 The following equipment was utilised during survey:

- Anabat Walkabout (Full Spectrum detector)
- Anabat Chorus (Full Spectrum detector)
- Batlogger M bat detector (Full Spectrum detector)
- Canon XA20 Infrared Cameras and Lighting
- Thermal Camera

[7] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

[8] https://cdn.bats.org.uk/uploads/pdf/Interim-guidance-note-on-NVAs-May-2022-FINAL.pdf?v=1653399882

Limitations to Survey

2.23 The survey was undertaken in the early part of the season when external field evidence from the previous season such as droppings may have been weathered away.

Analysis of Data

2.24 Following the survey, all bat calls are manually assessed and analysed using Analook Insight and or Bat Explorer software, enabling the full spectrum of the call to be assessed.

2.25 Where possible bat calls are identified to species, referencing call parameters as detailed within Russ (2012)[9], Middleton et al (2014)[10] and Barataud (2015)[11].

2.26 Bats are identified to species, where possible, though it is noted that there can be a significant overlap in call parameters in some species, particularly the *Myotis* genus.

2.27 *Myotis* bat calls are assessed using a range of indicators, though due their modulated calls a number of external factors can impact the reliability. As such *Myotis* bats will often be identified as *Myotis* sp. where identification to species cannot be confirmed.

2.28 Where possible further detail on the *Myotis* species will be gathered, such as DNA. The use of full spectrum detectors gives a greater success rate in identification. This can also be backed up by computer programmes such as Bat Classify.

2.29 Although a greater certainty can be provided in other species, there is still an overlap in calls between other genera of bats such as *Pipistrellus* and *Nyctalus,* which can be affected by a range of environmental factors. The following table details the parameters utilised by OS Ecology Ltd and are based on "typical" open flight calls.

Table 3: Bat Species Identification Parameters	
Species	**Peak Frequency Range (KHz)[9]**
Pipistrellus	
Common pipistrelle	>42 and <49
Soprano pipistrelle	≥51
Nathusius' pipistrelle	<39
Common or soprano pipistrelle ('50KHz pip')	≥49 and <51
Common or Nathusius' pipistrelle ('40KHz pip')	≥40 and ≤42
Nyctalus	
Noctule	≥17 and <23.5
Leisler's	≥23.5 and <29.9
Eptesicus	
Serotine	≥24.1 and <32.2

[9] Russ, J. (2012) British Bat Calls: A Guide to Species Identification. Pelagic Publishing
[10] Middleton, N., Froud, A. and French, K. (2014) Social Calls of the Bats of Britain and Ireland. Pelagic Publishing
[11] Barataud, M. (2015) Acoustic Ecology of European Bats – Species Identification, Study of their Habitats and Foraging Behaviour

Plectocus	
Brown Long-eared Bat	≥25.5 and <42.1
Barbastellus	
Barbastelle	≥29.2 and <44.7
Rhinolophus	
Greater Horseshoe	77-84
Lesser Horseshoe	107-114

2.30 Where there is uncertainty in species identification species are identified to genus.

Assessment Methodology

2.31 Guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) is utilised to provide habitat valuations.

2.32 The level of value of specific ecological receptors is assigned using a geographic frame of reference. For, example international value being most important (SACs, SPAs and pSPAs), then national (SSSIs), regional, county (LWS), district (LNR), local and lastly, within the immediate zone of influence of the site only (low).

2.33 In terms of species, for example breeding birds, should the population within the site constitute greater than 1% of the geographic population, it would be considered significant at that level. In addition, presence of designated sites, scarce species and or quality[12]/diversity of habitats are used to guide that valuation

2.34 Assessment methods for bats have been undertaken with reference to Wray et al. (2007)[13], which correlates with the geographic frame of reference. Within which they define the relative rarity of each species based on the known distribution[14] at the time and the value of the roost type, assuming that roosts such as feeding perches are of lower value that maternity roosts or sites that have a high level of fidelity.

[12] Quality can be subjective and vary in different geographic areas. Reasoned professional judgement is therefore used to inform the assessment.
[13] Wray et al (2007) Valuing Bats in Ecological Impact Assessment. In Practice. Based on a presentation at the Mammal Society – Specific Issues with Bats
[14] It should be noted that there are regular changes to our understanding of distribution as further studies are undertaken.

3. Results

Desk Study

Designated Sites

3.1 A search of the Multi Agency Geographic Information for the Countryside (MAGIC) Website[15] indicated that there are no protected sites designated due to the presence of bats within 2km of the development site.

European Protected Species Licensing

3.2 The MAGIC website identified no granted Natural England European Protected Species licenses within 2km of the site[16].

Local Bat Group

3.3 Data from the Environmental Records Information Centre for the North East (ERIC NE) is awaited.

General Land Use

3.4 A review of aerial imagery and Ordnance Survey mapping highlighted that the general land use in the surrounding area is dominated by agricultural fields, appearing predominantly pastoral, and woodland blocks associated with Middleton Hall Estate to the north and west.

3.5 A body of water, Upper Hall Lake, on the Middleton Hall estate is also present 350m to the west, whilst the A1 trunk road is present 450m to the east.

3.6 The village of Belford is approximately 1.7km to the south.

[15] Multi Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk (April 2022)
[16] The dataset published by Natural England was last updated in January 2022

Field Survey

Protected Species

Bats

3.7 The results of the bat risk assessment of the structures on site is provided below. A figure is provided within the appendices showing building locations.

Table 4: Bat Risk Assessment Results

Building: 3 Middleton Cottages, Belford

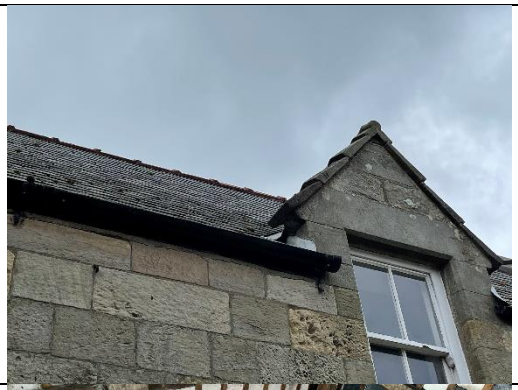
Suitability: Low

Building Description and Summary of Potential Roost Features

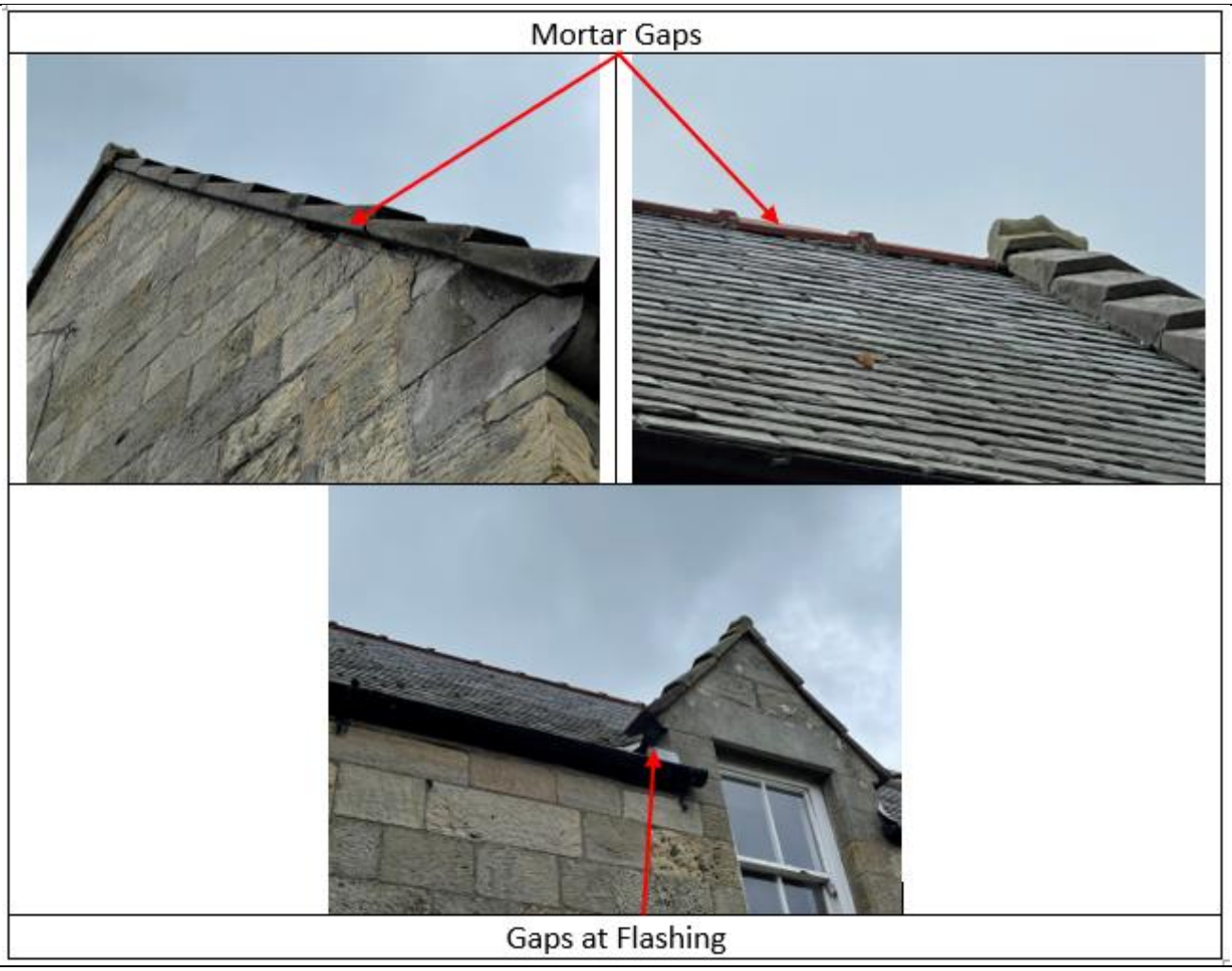
The structure comprises the end cottage on a terrace of roadside cottages to the north of Belford, north Northumberland. The building is two storey, with a partially demolished rear projection. The building is of cut stone and supports a pitched, slate roof. The building has been stripped internally.

Potential roost features are largely limited to mortar gaps on the outside of the structure.

Building Type	Two storey, end terrace cottage	
No. of Storeys	Two	
Roof Type	Pitched	
Roof Material	Slate	
Ridge Tiles	Terracotta	
Coping Tiles	Stone – gaps at wall top	
Gable Ends	Well sealed	
Chimney	Cut stone – appears well sealed	
Skylights/Velux	Single pane on rear elevation	
Roof Condition	Good – occasional mortar gaps at ridge	
Other Roof Features	Flashing at chimney in good condition Dormer windows with slight gaps Air vent on rear elevation	
Soffits	N/A	
Fascias	N/A	
Bargeboards	N/A	
Wall - Material and Condition	Cut stone, random to rear. Well-sealed, with rubble fill	
Lintels and Sills – Material and Condition	Stone – good condition	
Windows – Material and Condition	Wooden – tightly fitted	
Doors – Material and Condition	Wooden – tightly fitted	

Other Wall Features	Western projection partially demolished	
Loft Height	Stripped and open to roof	
Internal Lining	None present	
Support System	Wooden timbers	
Internal Gable -Wall Material and Condition	Gaps in brick work	
Ridge Beams	Open	
Loft Env. Conditions (light, draughtiness)	Open, light and still	
Other Features	N/A	
Loft Survey Conditions	Good	

Potential Roosting Features
The structure provides potential roosting features for individual or small numbers of bats associated with crevices on the outside of the property, with occasional gaps recorded where mortar is missing at the ridge line, at the edge of the water table and where the dormer type windows meet the roof.



Maternity Roost Assessment

The site is considered to be of low suitability to support a maternity roost. The building supports an unlined roof, that is completely open internally, whilst walls are rubble filled.

Hibernation Assessment

The structure is of low suitability to hibernating bats, being open internally and lacking suitable cavities for bats to access. Individual bats may use occasional crevices on the structure throughout the year.

Foraging Habitat

The site is surrounded by woodland blocks and connected wetlands providing abundant foraging opportuinities.

Connectivity

The structure is well connected to suitable areas of foraging habitat by a woodland belt adjacent to the north of the site, linking to further woodland and open water.

Alternative Roositng Opportunites Alternative roosting opportunites are limited to the adjoining terrace of buildings and scattered dwellings and suitable trees in the surrounding area.

Activity Surveys

3.8 Full details of the bat activity survey results are provided in the appendices.

3.9 Survey on the 25th May 2022 recorded no bats emerging from the property.

3.10 Low to moderate levels of bat activity, primarily attributable to common and soprano pipistrelle, were recorded throughout the survey, with a *Myotis* sp. bat also recorded.

3.11 Bats were recorded flying into the site and on occasion foraging within the garden. The majority of activity was associated with the tree line adjacent to the site.

3.12 The first record of activity was approximately 25 minutes after sunset, when a soprano pipistrelle flew into the site from the direction of the Middleton Hall Estate.

Additional Species Groups

Birds

3.13 No evidence of nesting birds was recorded on the property.

Other Protected Species

3.14 It is considered that other protected species are likely absent.

4. Site Assessment

Assessment of Survey Findings

4.1 The assessment is based on survey effort undertaken to date.

Bats

4.2 The building externally is relatively well sealed and is considered to be of low suitability for use by roosting bats with occasional mortar gaps providing opportunities for individual or small numbers of bats.

4.3 Internally the building has been completely stripped.

4.4 The site lies on the edge of an area of high suitability habitat for bats including woodland and open water associated with the Middleton Hall Estate.

4.5 Dusk survey undertaken in May 2022 recorded no evidence of roosting bats.

4.6 Low to moderate levels of activity were recorded during survey, primarily associated with the conifer shelter belt, lining the route to the Middleton Hall estate.

4.7 The site is considered to be of low value to bat species.

Nesting Birds

4.8 The site provides limited opportunities for nesting birds, although no evidence was recorded during the survey.

Other Protected Species

4.9 Other protected species are considered likely absent.

Designated Sites

4.10 There are no protected sites designated due to the presence of bats within 2km of the development site.

5. Impact Assessment

5.1 The following impacts are based on the survey work to date and the understanding that the Client wishes to undertake the following:

- Extension of the existing building including re-roofing and internal refit.

5.2 As a result of the assessment completed and the nature of the proposed works, the likely impacts, without appropriate avoidance measures, mitigation and/or compensation scheme, are:

- Loss of a small number of potential roosting features associated with the building.
- Low risk of disturbance and harm to roosting bats, should they be present at the time of the works.
- Potential harm and/or disturbance to nesting birds, should works be undertaken in the breeding bird season (March to August inclusive).

6. Recommendations

Further Survey

6.1 No further survey is recommended given the nature and extent of the development proposals. Should no works be undertaken to the property within 12months, an updating survey is recommended.

6.2 Based on the nature of the site and the proposed works, no further survey work for other protected species or habitats (other than pre-commencement checks detailed below) are considered necessary for this site.

Avoidance Measures

6.3 The following measures should be incorporated into the design of the scheme to avoid impacts on wildlife:

- External lighting that may affect the site's suitability for bats will be avoided. If required this will be limited to low level, avoiding use of high intensity security lighting. The final lighting strategy will be determined by the results of the bat activity survey work detailed above.
- Alternatives to timber treatments that are injurious to mammals will be sought and used on site (see http://www.jncc.gov.uk/pdf/batwork_manualpt4.pdf).
- Works will not be undertaken during the nesting bird season (March to August inclusive) unless the site is checked by an appropriately experienced ecologist and nests are confirmed to be absent.

Mitigation Strategy

6.4 The following is recommended:

- Works to the building will be undertaken to a precautionary bat method statement.

Compensation Scheme

6.5 The following is recommended:

- The incorporation of opportunities for roosting bats and nesting birds within the development or the wider landholding.

Appendix 1 – Bat Suitability and Survey Effort

Classifications of suitability are based on those provided within the Bat Conservation Trust Good Practice Survey Guidelines[17], with the table below taken from page 35 of the guidelines (table 4.1).

Table 5: Guidelines for assessing the potential suitability of proposed development sites for bats (based on the presence of habitat features within the landscape, to be applied using professional judgement)

Suitability	Description	
	Roosting Habitats	**Commuting and foraging habitats**
Negligible	Negligible habitat features on site, likely to be used by roosting bats	Negligible habitat features on site, likely to be used by commuting and foraging bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[a] 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[b]. A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential[c].	Habitat that could be used by small numbers of commuting bats such as gappy hedgerow or unvegetated 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 (not in a parkland situation) or a patch of scrub.
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[a] and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	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.
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[a] 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 watercourse and grazed parkland.

[17] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

		Site is close to and connected to known roosts.

a. For example in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.
b. Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of potential for larger numbers of this species to be present during the autumn and winter in larger buildings in highly urbanised environments.
c. The system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015)

The classification of the suitability relates to the level of further survey recommended.

Table 6: Survey effort and timing depending on suitability of the structure or tree (Tables 7.1-7.3 in the BCT Guidelines

	Low roost suitability	**Moderate roost suitability**	**High roost suitability**
Survey Effort	One survey visit One dusk emergence or dawn re-entry survey	Two separate visits One dusk emergence and a separate dawn re-entry survey	Three separate visits At least one dusk emergence and a separate dawn re-entry survey. The third can be either dusk or dawn.
Timings	May-August (structures) No further survey (trees)	May to September. At least one must be in the optimum period (May to August)	May to September. two must be in the optimum period (May to August)
If bats are recorded	If bats emerge during surveys, the survey schedule will be adjusted to increase the survey effort so that enough information can be collected to characterise the roost and provide data should a Natural England Licence be required.		

Appendix 2 – Policy and Legislation

Planning Policy

National Planning Policy Framework (NPPF)[18]

The revised National Planning Policy Framework sets out the government's planning policies for England and how these are expected to be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. Planning law requires that applications for planning permission be determined in accordance with the development plan. The key paragraphs from the relating to the natural environment are detailed below.

Table 7: Ecologically Relevant Paragraphs of the NPPF

Paragraph	Statement
8	Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives): a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure; b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy
174	Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate

[18] National Planning Policy Framework July 2021 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf)

Table 7: Ecologically Relevant Paragraphs of the NPPF	
Paragraph	**Statement**
175	Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries
179	To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
180	When determining planning applications, local planning authorities should apply the following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons63 and a suitable compensation strategy exists; and d) 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.
181	The following should be given the same protection as habitats sites: a) potential Special Protection Areas and possible Special Areas of Conservation; b) listed or proposed Ramsar sites64; and c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites
182	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.

Government Circular ODPM 06/2005 Biodiversity and Geological Conservation[19] (England only)

[19]ODPM Circular 06/2005 Office of the Deputy Prime Minister Eland House, Bressenden Place, London SWIE 5DU Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System

This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

Part IV - Conservation of Species protected by Law details that the presence of a protected species is a material consideration when considering a development proposal that may result in harm to the species or its habitat and that planning authorities must have regard to species protected under the Habitat Regulations.

It goes on to say that: *it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted.*

Natural Environment and Rural Communities (NERC) Act 2006[20] [21]

Section 40 – To conserve biodiversity

Section 40 puts a duty on public authorities to conserve biodiversity when undertaking its duties and functions,

Section 41 – Biodiversity list and Action

Section 41 – Requires the Secretary of State *to publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity*. They must also *take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section or promote the taking by others of such steps*.

The 2007 lists were superseded by the UK Post-2010 Biodiversity Framework.

Table 8: UK Priority Habitats (excl. marine habitats)[22]

UK BAP broad habitat	**UK BAP priority habitat**
Rivers and Streams	Rivers
Standing Open Waters and Canals	Oligotrophic and Dystrophic Lakes
	Ponds
	Mesotrophic Lakes
	Eutrophic Standing Waters
	Aquifer Fed Naturally Fluctuating Water Bodies
Arable and Horticultural	Arable Field Margins
Boundary and Linear Features	Hedgerows

[20] https://www.legislation.gov.uk/ukpga/2006/16/section/40
[21] https://www.legislation.gov.uk/ukpga/2006/16/section/41
[22] http://jncc.defra.gov.uk/page-5706

Broadleaved, Mixed and Yew Woodland	Traditional Orchards
	Wood-Pasture and Parkland
	Upland Oakwood
	Lowland Beech and Yew Woodland
	Upland Mixed Ashwoods
	Wet Woodland
	Lowland Mixed Deciduous Woodland
	Upland Birchwoods
Coniferous Woodland	Native Pine Woodlands
Acid Grassland	Lowland Dry Acid Grassland
Calcareous Grassland	Lowland Calcareous Grassland
	Upland Calcareous Grassland
Neutral Grassland	Lowland Meadows
	Upland Hay Meadows
Improved Grassland	Coastal and Floodplain Grazing Marsh
Dwarf Shrub Heath	Lowland Heathland
	Upland Heathland
Fen, Marsh and Swamp	Upland Flushes, Fens and Swamps
	Purple Moor Grass and Rush Pastures
	Lowland Fens
	Reedbeds
Bogs	Lowland Raised Bog
	Blanket Bog
Montane Habitats	Mountain Heaths and Willow Scrub
Inland Rock	Inland Rock Outcrop and Scree Habitats
	Calaminarian Grasslands
	Open Mosaic Habitats on Previously Developed Land
	Limestone Pavements
Supralittoral Rock	Maritime Cliff and Slopes
Supralittoral Sediment	Coastal Vegetated Shingle
	Machair
	Coastal Sand Dunes

Protected Species Legislation

European Protected Species

European Protected Species (EPS) are species of plants and animals (other than birds) protected by law throughout the European Union. They are listed in Annexes II and IV of the European Habitats Directive and receive full protection under The Conservation of Species and Habitats Regulations 2017 (as amended). This make it an offence to:

- deliberately capture, injure or kill any European Protected Species (EPS)
- to deliberately disturb any European Protected Species (EPS);
- to damage or destroy a breeding site or place of rest or shelter used by any European Protected Species (EPS).

The Wildlife and Countryside Act 1981 (as amended) adds further protection by making it an offence to intentionally or recklessly[23] disturb an EPS while it is occupying a structure or place which it uses for shelter or protection, or to obstruct access to any structure or place the species uses for shelter or protection.

Table 9: European Protected Species relevant to the UK			
Animals		**Plants**	
All bat species	Great Crested Newt	Shore dock	Creeping marshwort
Large blue butterfly	Otter	Killarney fern	Slender naiad
Wild cat	Smooth snake	Early gentian	Fen Orchid
Dolphins, porpoises and whales (all species)	Sturgeon fish	Lady's slipper	Floating-leaved water plantain
Dormouse	Natterjack toad	Yellow marsh saxifrage	
Sand lizard	Pool Frog		
Fisher's Estuarine Moth	Snail, Lesser Whirlpool Ram's-horn		
Marine turtles			

Other Protected Species

Table 10: Other Protected Species		
Species	**Legislation**	**Level of Protection**
Birds	Wildlife and Countryside Act 1981 (as amended)	Under the Wildlife and Countryside Act (1981) it is an offence if any person: • intentionally kills, injures or takes any wild bird • intentionally takes, damages or destroys the nest of any wild bird whilst that nest is in use of being built; • intentionally takes, damages or destroys eggs of any wild bird; Wild birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are protected from: • intentional or reckless disturbance whilst it is building a nest or is in, on or near a nest containing eggs or young; • disturbance of dependent young

[23] Under the Countryside and Rights of Way Act 2000 (CROW Act) extended the protection to cover reckless damage or disturbance

Appendix 3 – Bat Activity Survey Data Tables

Table 11: Bat Activity Table – Dusk 25th May 2022			
Date	25th May 2022	**Sunset**	2128
Start Time	2115	**End Time**	2300

Time	**Surveyor 1** **Mark Osborne**	**Surveyor 2** **Zoe Dunnett**
21:15		
21:20		
21:25		
21:30		
21:35		
21:40		
21:45		
21:50	2153 - First bat (55) commuting from the west, flew through site.	2153 - First bat (55) commuting from the west, flew through site.
21:55		
22:00	2206 – 50 – HNS behind VP	
22:05		
22:10	2212 – 2256 – Regular activity (45 & 55) bats predominantly foraging along the tree line off site and regularly entering the site, both commuting through and foraging in the back garden. 2125 – *Myo* commuting through the site.	
22:15		2217 – 2253 – Regular activity (45 & 55) bats commuting through the site and foraging.
22:20		
22:25		
22:30		
22:35		
22:40		
22:45		
22:50		
22:55		

	Flight Activity	<u>Species</u>	
	Potential Emergence	39 = Nathusius' pipistrelle	*Myo* = Myotis sp.
	Confirmed Emergence	45 = Common pipistrelle	55 = Soprano pipistrelle
HNS	Heard Not Seen	50 pip = Common/Soprano pipistrelle	BLE = Brown long-eared bat
SNH	Seen Not Heard	Noc = Noctule	

Appendix 4 – Figures

Key

Site Boundary

North

Figure No: 1
Figure Name: Site Location
Project Name: 3 Middleton Cottages
Project Ref. No: 22138
Date: April 2022
Author: MO

0 100 200 m

Key

Site Boundary

North

Figure No: 2
Figure Name: Site Aerial
Project Name: 3 Middleton Cottages
Project Ref. No: 22138
Date: April 2022
Author: MO

0 5 10 m

Key

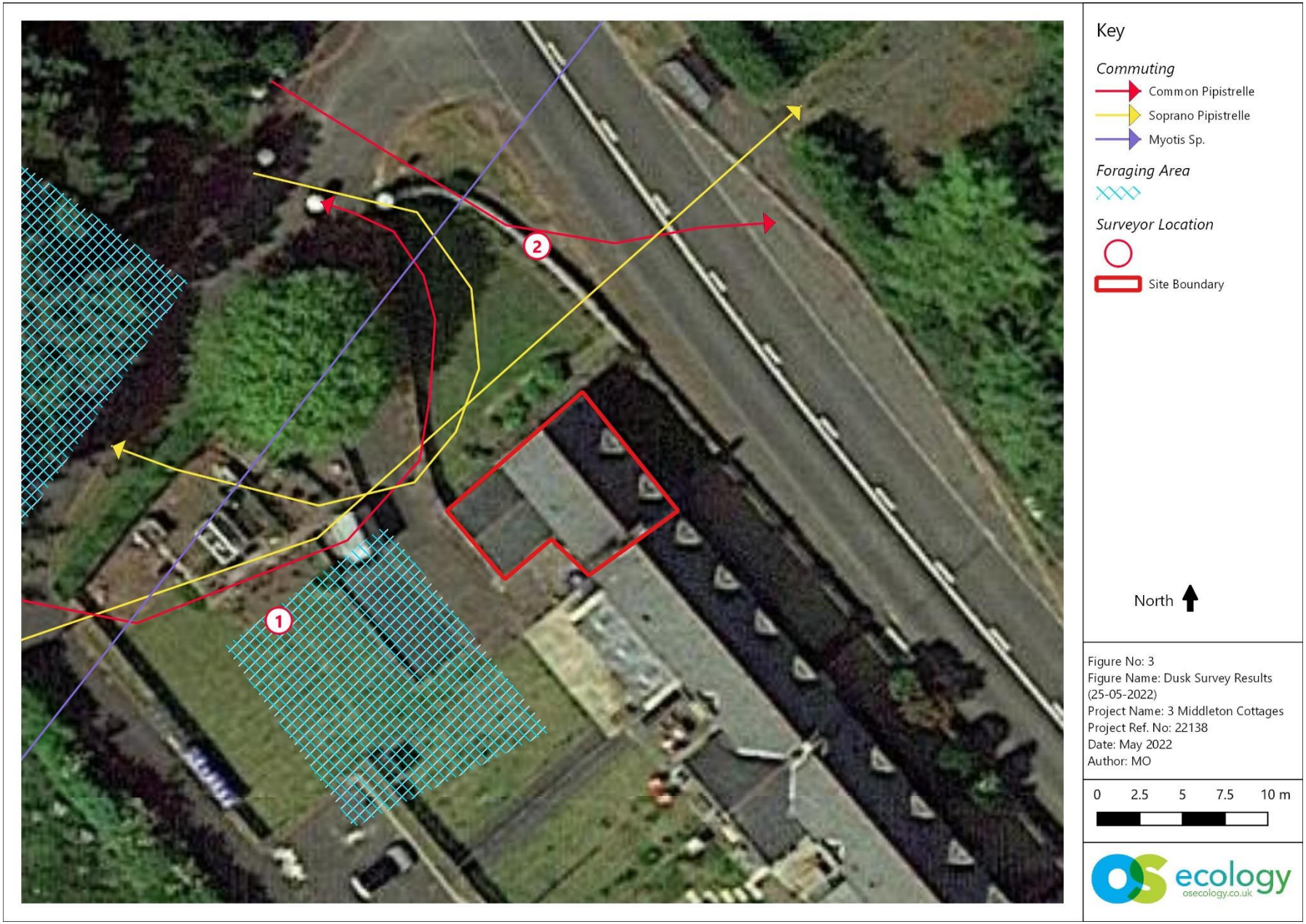
Site Boundary

Habitats within 500m

North

Figure No: 3
Figure Name: Habitats within 500m
Project Name: 3 Middleton Cottages
Project Ref. No: 22138
Date: April 2022
Author: MO

0 100 200 m


Key
Commuting
Common Pipistrelle
Soprano Pipistrelle
Myotis Sp.
Foraging Area
Surveyor Location
Site Boundary
North
1
2
Figure No: 3
Figure Name: Dusk Survey Results (25-05-2022)
Project Name: 3 Middleton Cottages
Project Ref. No: 22138
Date: May 2022
Author: MO
0 2.5 5 7.5 10 m