

BAT SURVEY

1 WELL ROAD, STOCKSFIELD



DATE: 6th September 2021
CLIENT: Mr Peter Judge
PROJECT NUMBER: 6523
AUTHOR: Declan Ghee
POSITION: Senior Ecologist
CONTACT DETAILS: declan.ghee@e3ecology.co.uk

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ENVIRONMENTAL RECORDS DATA

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Species	Recorder	Date	Location	Abundance	Comment
Common pipistrelle	E3 Ecology	30/06/21	1 Well Road, Stocksfield – NZ 058 602	1	Day roost used by one bat.
Common pipistrelle	E3 Ecology	30/06/21	1 Well Road, Stocksfield – NZ 058 602	3	Day roost used by three bats.
Soprano pipistrelle	E3 Ecology	14/07/21	1 Well Road, Stocksfield – NZ 058 602	1	Day roost used by one bat.
Soprano pipistrelle	E3 Ecology	14/07/21	1 Well Road, Stocksfield – NZ 058 602	1	Day roost used by one bat.
<i>Myotis</i> sp.	E3 Ecology	14/07/21	1 Well Road, Stocksfield – NZ 058 602	1	Day roost used by one bat.

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A. SUMMARY

E3 Ecology Ltd was commissioned to undertake a bat survey of 1 Well Road, Stocksfield, Northumberland where it is proposed to remove some sections of roof and add an additional storey onto the dwelling. A desk study was completed, including consultation with DEFRA's MAGIC website and the Environmental Records Information Centre North East (ERIC NE), and a preliminary roost assessment was undertaken in May 2021 in order to inform this survey report. Subsequent dusk and dawn bat presence / absence surveys were completed in June and July 2021.

The results of the desk study indicate that there are no internationally and nationally statutorily designated sites for bats within 2km. The site lies within a Site of Special Scientific Interest (SSSI) Impact Risk Zone (IRZ), the terms of which are not relevant to this development. There is a single record of a granted European Protected Species (EPS) mitigation licence affecting bats within 2km.

Overall, the site is situated in an area of moderate to high suitability for bats. The site is immediately surrounded by woodland, which is part of a larger woodland corridor and is well connected to suitable bat foraging and commuting habitats in the wider surrounding area. There are also residential properties with large connected gardens, and a small stream is present along the northern boundary. These habitats provide high quality foraging and commuting opportunities for bats.

The building comprises three connected sections of similar construction. The southern and northern sections (sections 1 and 3 respectively) are single storey, whereas the central section (2) is two storeys high. The roofs are pitched and clad with clay roof and ridge tiles, with some gaps recorded under tiles. The brick cavity walls are generally well-sealed with the upper storey of the central section (section 2) clad with timber, with gaps at the top and bottom of the cladding. Overall, the building (all sections) is considered to be of moderate roosting suitability.

During the presence / absence surveys, the following roosts were identified in section 2 only:

- A soprano pipistrelle day roost in a gap under a roof tile next to the chimney . Peak count of one bat using the roost.
- A soprano pipistrelle day roost in a gap above the tall window on the western elevation. Peak count of one bat using the roost.
- A *Myotis* sp. (considered most likely to be whiskered or Brandt's) day roost at the apex of the eastern hipped end . Peak count of one bat using the roost.
- A common pipistrelle day roost in a gap at the eaves on the southern elevation. Peak count of one bat using the roost.
- A common pipistrelle day roost in a gap in the timber cladding on the southern elevation. Peak count of three bats using the roost.

No roosts were identified in sections 1 or 3.

No evidence of a maternity roost was recorded but it does contain some features which could be used by bats throughout the year, including during winter, such as gaps which may lead onto wall tops or into the wall cavity.

A blue tit was also recorded nesting behind the house alarm on the western elevation, although no further evidence of nesting birds was recorded while inspecting the loft spaces.

The following potential impacts have been identified, though this should be reviewed following receipt of detailed development plans:

- Risk of disturbing bats and damage/destruction of roosts if present within the building, including hibernating bats if works commence during winter.
- Risk of harm/disturbance to nesting birds if building works are carried out during the bird breeding season (March – August inclusive).
- Increased lighting which could impact on bat foraging and commuting habitat within the adjacent area.

A preliminary avoidance, mitigation and compensation strategy is provided within this report which will need to be finalised based on the final development proposals. Key measures are likely to include:

- **Works to the building which may cause disturbance to bats or which may impact on roosts will not be undertaken until a Natural England development licence has been obtained. Works will then be completed in accordance with the approved licence method statement and section G.2 of this report.**
- The development proposals should seek to retain the identified bat roosts where possible.
- Roosting opportunities will be incorporated into the newly developed building to compensate for any roosts which will be lost. The exact number required is to be confirmed following receipt of detailed development proposals.
- A pre-commencement check for nesting birds will be undertaken by a suitably experienced ornithologist if works are to commence between March and August inclusive.
- Timing restrictions for certain work activities to outside of the bat hibernation period (November to end of February inclusive).
- In the event that bats are found during works, works will stop in that area and the ecological consultant will be contacted immediately. If it is necessary to move the bats for their safety, this will be undertaken by a licensed bat handler.
- Sensitive design of external lighting.
- Sensitive use of timber treatments.

The following additional enhancement measures are recommended in order to further enhance the site for biodiversity:

- Installation of additional bird nest boxes and bat boxes or nesting/roosting opportunities in the trees on site and integrated into the newly developed building. The exact number, types and locations are to be confirmed following receipt of detailed development proposals.
- Any landscape planting will be designed to enhance structural diversity, and will include plants bearing flowers, nectar and fruits which are attractive to invertebrates, thereby helping to maintain the food resource for bats and wildlife generally, with a focus on planting native species only.

The Local Planning Authority is likely to require the means of delivery of the mitigation to be identified. It is recommended that mitigation and enhancement proposals are incorporated into the master-planning documents.

If you are assessing this report for a local planning authority and have any difficulties interpreting plans and figures from a scanned version of the report, E3 Ecology Ltd would be happy to email a PDF copy to you. Please contact us on 01434 230982.

B. INTRODUCTION

E3 Ecology Ltd was commissioned by Mr Peter Judge in May 2021 to undertake a bat survey of a proposed development site at 1 Well Road, Stocksfield, Northumberland. The survey comprised a desk study and daytime preliminary roost assessment. Subsequent dusk and dawn bat presence / absence surveys were completed in June and July 2021.

B.1 AUTHOR, SURVEYORS & QUALIFICATIONS

The author's professional qualifications and survey licences are detailed in the table below, as well as those of additional lead surveyors who completed survey work at the proposed development site:

TABLE 1: LEAD SURVEYORS			
Name	Position	Professional Qualifications	Natural England Survey Licence Numbers
Declan Ghee	Senior Ecologist	BSc ACIEEM	2018-38363-CLS-CLS (Bats)
Georgia Vessey	Graduate Ecologist	BSc	-
Rosie Mackenzie	Graduate Ecologist	BSc MSc	-

Further details of experience and qualifications are available at www.e3ecology.co.uk.

All surveyors have the knowledge, skills and experience identified within the relevant CIEEM Competencies for Species Survey guidance, or were under the supervision of a surveyor with the required competencies.

B.2 OBJECTIVES

The objectives of the assessment are to:

- Complete comprehensive building inspections to search for evidence of bat use
- Establish the bat roosting suitability of any buildings, structures or trees which may be present on site and at risk of impact by the development
- Provide recommendations for further survey work, where required
- If sufficient survey assessment has been possible, to set out the mitigation, compensation and enhancement measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects
- Identify how these measures could be secured
- Identify any requirements for post-construction monitoring of the site

B.3 PROPOSED DEVELOPMENT SITE

The site is located in Stocksfield, at an approximate central grid reference of NZ 05854 60251.

The figures below illustrate firstly the site boundary and secondly the broad habitats present on site and within an approximate 500m buffer zone.

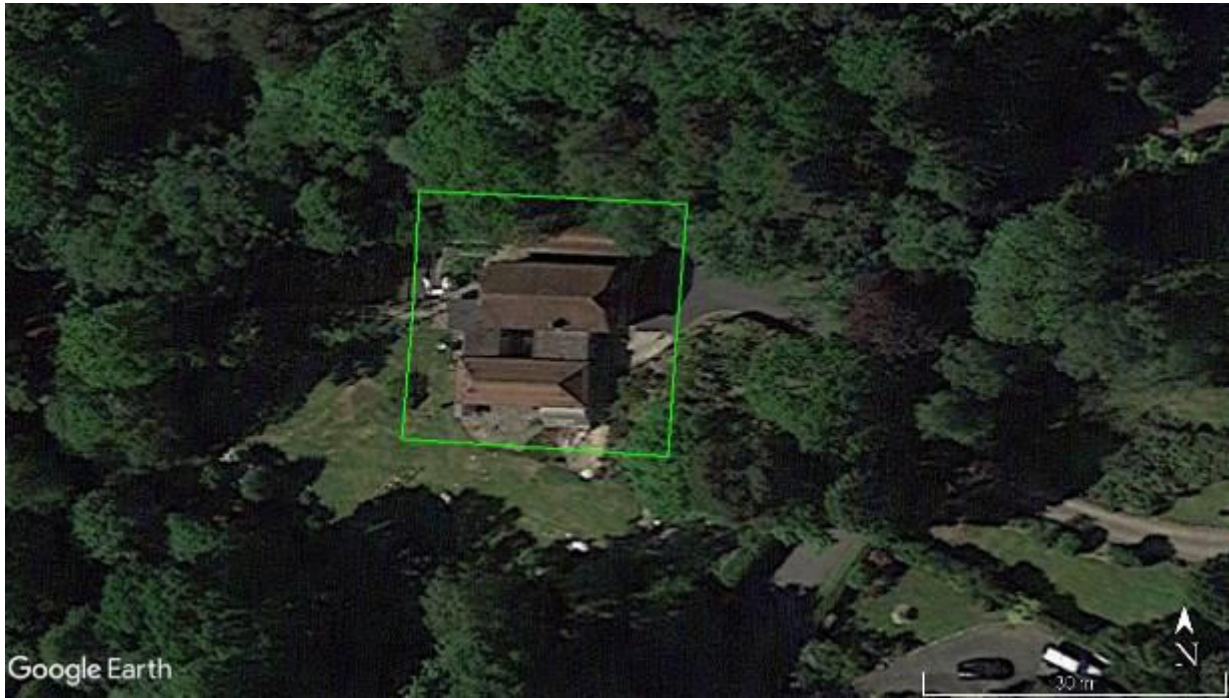


FIGURE 1: SITE BOUNDARY
(Reproduced under licence from Google Earth Pro.)



FIGURE 2: SITE AND SETTING
(Reproduced under licence from Google Earth Pro.)

B.4 DEVELOPMENT PROPOSALS

Development proposals are not yet finalised, but are expected to involve the removal of some of the newer roofs on the single storey sections and addition of a new floor.

C. METHODOLOGY

C.1 SCOPE OF STUDY

The scope of the study, in terms of the survey area and the desk study area, is based on professional judgement. The scope has been determined based on the site's characteristics, the nature of the surrounding area, the development proposed at the time of reporting and the likely associated zone of influence. Consideration has been given to potential effects both during the construction and operational phases of the development.

For this site the survey area comprised the green line boundary as defined within the figure in Section B. The survey area considered potential roost sites within and adjacent to the survey area, which may be affected by the proposed development.

The desk study included an assessment of land-use in the surrounding area and a data search covering a 2km buffer zone (see below for further detail).

The level of survey effort employed at the site has taken account of the recommendations within the Bat Conservation Trust (BCT) Good Practice Survey Guidelines¹.

C.2 DESK STUDY

Initially, the site was assessed from aerial photographs and 1:25,000 Ordnance Survey maps.

Following this, a data search was submitted to the local records centre June 2021, requesting data relating to bats within 2km of site. In addition, a search was made of the MAGIC website² for any granted bat licences within 2km.

C.3 PRELIMINARY ASSESSMENTS

C.3.1 FORAGING/COMMUTING HABITAT ASSESSMENT

The potential suitability of the habitats within the survey area and surrounding landscape in relation to commuting and foraging bats was classified as negligible, low, moderate or high, based on BCT guidelines and using the surveyor's professional judgement.

C.3.2 PRELIMINARY ROOST ASSESSMENT (BUILDINGS/STRUCTURES)

A daytime assessment was made of all structures affected by the proposed development, in order to evaluate their suitability to support bat roosts, and, where present, to record field signs of use by bats.

Buildings/structures were inspected both externally and internally where access was available. Binoculars and extendable ladders were used to assist with the inspection for potential roosting features and bat field signs, such as droppings, feeding remains, grease/urine staining, corpses/skeletons or bats themselves.

Where possible, species identification was either confirmed visually, through DNA analysis of droppings or acoustically through further survey work at dusk or dawn. If endoscope use or

¹ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

² Multi Agency Geographic Information for the Countryside (www.magic.gov.uk)

handling of bats were required to identify particularly cryptic species or to assess roost type, this was completed by appropriately licensed individuals and minimised where possible to reduce disturbance.

Structures were categorised as having negligible, low, moderate or high suitability to be used by roosting bats, based on guidelines provided by the Bat Conservation Trust³ and detailed within the table below.

TABLE 2: ASSESSMENT OF BAT ROOSTING SUITABILITY OF BUILDINGS/STRUCTURES & TREES (TO BE APPLIED USING PROFESSIONAL JUDGEMENT, TAKEN FROM TABLE 4.1 OF BCT'S BAT SURVEY GUIDELINES)	
Suitability	Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting 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 and/or suitable surrounding habitat to be used 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 roosting features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A building/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 (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).
High	A building/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.

Note that any comments within this report on the state or condition of buildings/structures relate solely to their potential use by bats and must not be taken as a professional assessment of the structural integrity or safety of the structures.

C.3.3 SURVEY EQUIPMENT

- High-powered torch
- Binoculars
- Camera
- Extendable ladders

C.3.4 SURVEY DATES & ENVIRONMENTAL CONDITIONS

The table below details the environmental conditions during the preliminary assessment survey.

TABLE 3: PRELIMINARY ASSESSMENT SURVEY CONDITIONS				
Date	Temperature (°C)	Cloud Cover (%)	Precipitation	Wind Conditions (Beaufort scale)
13/05/21	18	10	Dry	1

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

C.3.5 PRESENCE/ABSENCE SURVEY

C.3.5.1 SURVEY EFFORT

The level of survey effort employed has taken account of the guidance provided by the Bat Conservation Trust (BCT)⁴ and summarised within the table below.

TABLE 4: RECOMMENDED NUMBER AND TIMING OF PRESENCE/ABSENCE SURVEY VISITS REQUIRED TO PROVIDE CONFIDENCE IN NEGATIVE PRELIMINARY ROOST ASSESSMENT RESULTS (FROM TABLE 7.1 AND TABLE 7.3 BCT GUIDELINES)			
	Low Roost Suitability*	Moderate Roost Suitability	High Roost Suitability
Recommended minimum number of survey visits for presence/absence survey to give confidence in a negative result	One survey visit. One dusk emergence or dawn re-entry survey (structures). For trees with low roost suitability, no further surveys required.	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.
Recommended timings for presence/absence surveys	May to August	May to September with at least one of the surveys between May and August	May to September with at least two of the surveys between May and August
* If a structure is classified as having low suitability for bats an ecologist should make a professional judgement on how to proceed based on all of the evidence available. If sufficient areas of a structure have been inspected and no evidence found (and is unlikely to have been removed by weather or cleaning or be hidden), then further surveys may not be appropriate.			
Note: Where a roost is confirmed as being present, further surveys may be required to fully characterise the roost			

The recommendations provided above are guidelines and it is recognised by BCT that ‘the number of visits could be adjusted (up or down) if necessary by the ecologist, bearing in mind the site-specific circumstances’.

At this site, two dusk/dawn survey visits were completed in accordance with an assessment of moderate roosting suitability.

Details of dates, timings, weather, and surveyor numbers and names are provided in the results section.

C.3.5.2 SURVEY METHODS

Activity surveys were undertaken in suitably mild conditions when bats are active. Surveyors were positioned to ensure coverage of all high-risk areas of the site, including any potential flight-lines from structures within the site to adjacent cover such as woodland blocks. If bats were recorded within the site before bats were seen in the wider area, or seen flying into the site, it is assumed that roosts are present within the site.

All surveyors used both Batbox Duet bat detectors to listen for bats and Anabat Express detectors, at each surveyor location, to record and better identify bat species.

Timings for observations of key bat activity such as emergence, first records of each species and commuting routes were recorded. All data were recorded using the Anabat Express for future reference and to allow confirmation of species identification through call analysis (using

⁴ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

Analook software), and to capture brief echolocation calls that could not be reliably identified in the field⁵. Field survey recorded numbers of bats detected, feeding activity, flight paths, species (as far as is practicable), and social calls.

A total of eight person-nights work was undertaken and direct observation was reinforced by remote recording of bat activity adding one additional monitoring point in a covered walkway to the north of the house with poor visibility. In addition, surveyor coverage of the site was supplemented with the use of an infra-red camera to aid observation of bat activity in lower light levels, which is particularly useful for later emerging species. Figures provided within the results section of this report illustrate the approximate location of each surveyor, monitoring point and camera.

C.3.5.3 SURVEY EQUIPMENT

- Duet bat detectors
- Anabat Expresses
- Light meter
- Infra-red video camera
- Infra-red torches and floodlights

C.3.6 DATA ANALYSIS

All bat calls were analysed using Analook with calls identified to species where possible, referencing call parameters as detailed within Russ (2012)⁶ and Middleton et al (2014)⁷.

If identification to species is not practicable, then where possible calls are identified to genus.

C.4 SURVEY CONSTRAINTS

The survey completed at the site will provide reasonably typical data for the season in which it was undertaken, and internal field signs are likely to reflect activity over the preceding active season. Assessment of the bat use of the site at other times of year and the potential impacts of the proposed development is based on professional judgement. This is an approach supported by the Bat Conservation Trust Good Practice Guidelines⁸.

C.5 ASSESSMENT OF VALUE

The relative value of the ecological receptors (habitats, species and designated sites) was assessed using a geographical frame of reference. For designated sites this is generally a straightforward process with the assigned designation generally being indicative of a particular value, e.g. Sites of Special Scientific Interest are designated under national legislation and are therefore generally considered to be receptors of national value. The assignment of value to non-designated receptors is less straightforward and as recognised by the Guidelines for

⁵ Reviewing data recorded by surveyors using Duet detectors and the Anabat data indicated that reliable *Myotis* records increased through Anabat use, particularly once conditions were too dark for visual cues to assist in identification, when there was a lot of bat activity, and with bats in clutter. It also reduces errors where pipistrelles in clutter can be mis-identified as *Myotis* bats.

⁶ Russ, J. (2012) British Bat Calls: A Guide to Species Identification. Pelagic Publishing

⁷ Middleton, N., Froud, A. and French, K. (2014) Social Calls of the Bats of Britain and Ireland. Pelagic Publishing

⁸ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

Ecological Impact Assessment⁹, is a complex and subjective process and requires the application of professional judgement.

When assessing the value of species and habitats, relevant documents and legislation are considered including the lists of species and habitat of principal importance annexed to the NERC Act (2006) and those provided within relevant local Biodiversity Action Plans. Data provided through consultation is also considered. These data sources can provide context at a local, regional and national scale.

The table below provides examples of receptors of value at different geographical scales.

TABLE 5: ECOLOGICAL RECEPTOR VALUATION	
Level of Value	Examples
International	An internationally designated site or candidate site.
	A site meeting criteria for international designation.
	The site is of functional importance* to a species population with internationally important numbers (i.e. >1% of the biogeographic population)
National	A nationally designated site.
	The site is of functional importance* to a species population with nationally important numbers (i.e. >1% of the national population)
Regional	The site is of functional importance* to a species population with regionally important numbers (i.e. >1% of the regional population)
County	A Local Wildlife Site (LWS) or equivalent, designated at a County level
	The site is of functional importance* to a species population of county value (i.e. >1% of the county population)
District	A Local Wildlife Site (LWS) or equivalent, designated at a District level
	The site is of functional importance* to a species population of district value (i.e. >1% of the district population)
Parish	A species population considered to appreciably enrich the nature conservation resource within the context of the parish.
	Local Nature Reserves
Local	A species population that contributes to local biodiversity but are not exceptional in the context of the parish.
Low	Habitats that are unexceptional and common to the local area.

* *Functional importance defined as 'a feature which, based on professional judgement, is of importance to the day to day functioning of the population, the loss of which would have a detectable adverse effect on that population'.*

The site lies within Stocksfield Civil Parish which covers approximately 1,750ha and comprises a mixture of residential and agricultural land with some blocks of woodland.

9 Chartered Institute for Ecology and Environmental Management (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater and Coastal

D. RESULTS

D.1 DESKTOP STUDY

D.1.1 PRE-EXISTING INFORMATION

D.1.1.1 ORDNANCE SURVEY MAPPING AND AERIAL PHOTOGRAPHY

The most recent aerial photograph of the site (2020) indicates that habitats on site are dominated by the building and surrounding hardstanding and landscaped areas. Historic imagery suggests that the site has remained unchanged since 2002.

Aerial photography shows that the general land use in the surrounding area is predominantly residential to the north and east and agricultural to the south and west. The site is immediately surrounded by woodland, which is part of a larger woodland corridor and is well connected to suitable bat foraging and commuting habitats in the wider surrounding area.

D.1.1.2 MAGIC WEBSITE¹⁰

PROTECTED SITES

There are no internationally and nationally statutorily designated sites for bats within 2km.

The site does not fall within a SSSI impact risk zone for this type of development.

SPECIES

There is a single record of a granted European Protected Species (EPS) mitigation licence for works affecting bats within 2km, located approximately 230m to the east of site. The licence permitted the destruction of a common pipistrelle non-breeding roost.

D.1.1.3 PREVIOUS SURVEY WORK BY E3

E3 has previously completed surveys within the Painshawfield Estate in Stocksfield and recorded common pipistrelle day roosts, as well as foraging/commuting soprano pipistrelle, noctule and *Myotis* sp. bats.

D.1.2 CONSULTATION

D.1.2.1 LOCAL RECORDS CENTRE

The local bat group provided the following notable records within 2km of site:

Species	No. of Records	Closest distance (m – if sufficient record resolution provided)	Most recent date
Bats	1	1367	2019
Brown Long-eared Bat	8	250	10/11/2015
Common Pipistrelle	155	67	30/08/2017
Daubenton's Bat	1	1268	2018
Natterer's Bat	5	250	16/07/2013

¹⁰ MAGIC Website: www.magic.gov.uk

Noctule Bat	12	516	23/05/2017
Nyctalus Bat species	1	1150	18/07/2014
Pipistrelle Bat species	11	821	01/09/2019
Soprano Pipistrelle	69	250	15/07/2020
Unidentified Bat	9	1333	30/08/2017
Whiskered/Brandt's Bat	3	516	25/08/2015

Full data sets are available on request.

D.2 OVERVIEW OF SITE SUITABILITY

	NEGLIGIBLE	LOW	MODERATE	HIGH
HABITATS AND COVER WITHIN 200M	City Centre	Open, exposed arable or pasture with no hedges, amenity grassland, or relatively built up	Hedges and trees linking site to wider countryside, mature linked gardens	Excellent cover with mature trees/ woodland and/or good hedges
HABITATS WITHIN 1KM	City Centre	Little tree cover, few hedges, arable dominated, scattered green spaces	Semi-natural habitats e.g. trees, hedgerows	Good network of woods, wetland and hedges
ALTERNATIVE ROOSTS WITHIN 1KM	City centre	Numerous alternative roosting opportunities of a similar nature	A number of similar buildings in the local area	Few alternative buildings and site of good quality for roosts
SETTING	Inner city	Urban with little green space	Built development with green-space, wetland, trees	Rural Lowland with woodland and trees.
DISTANCE TO WATER/ MARSH	>1km	500m-1000m	200m-500m	<200m
DISTANCE TO WOODLAND/ SCRUB	>1km	500m-1000m	200m-500m	<200m
COMMUTING ROUTES	Isolated by development, major roads, large scale agriculture	No direct potential flyways linking site to wider countryside	Some potential commuting routes to and from site	Site is well connected to surrounding area with multiple flyways

	NEGLIGIBLE	LOW	MODERATE	HIGH
AGE (APPROX.)	Modern	Post 1940's	1900-1940	Pre 20 th C
BUILDING/ COMPLEX TYPE	Industrial complex of modern design	Single, small building	Several smaller buildings, larger single structures	Traditional farm buildings, large country house, large hospital/school
BUILDING - STOREYS	N/A	Single storey	Multiple storeys	Multiple storeys with large roof voids

¹¹ Building and habitat risk assessment technique audited in a research project with York University which compared the risk assessment scoring with the results of detailed field assessment for over 100 sites. Statistically significant associations were found between habitat setting and building features and the presence of absence of different bat species. For example habitat connections and nearby woodland were significant for brown long-eared bats and the presence of species-rich grassland is important for many species.

STONE/BRICK WORK	No detectable crevices	Well pointed, limited or superficial gaps	Some cracks and crevices	Poor condition, many deep crevices, thick walls
FRAMEWORK – TIMBERS/STEEL	Modern metal frame with sheet cladding	Timber purlins, sheet asbestos, modern trusses	Timbers kingpost or similar	Large timbers traditional joints
ROOF VOID	Fully sealed or flat roof	Small, cluttered void	Medium, relatively open	Large, open, interconnected
ROOF COVERING	Modern sheet materials, tightly sealed, very well sealed roof tiles	Good condition or very open, not weatherproof, modern sheet materials, generally well sealed roof tiles	Some potential access routes e.g. raised, slipped or missing slates or tiles, low number of gaps in bedding/end mortar	Numerous gaps, not too open, e.g. uneven stone slates, many gaps in mortar
ADDITIONAL FEATURES	None	Very limited features with potential access	Some features with low number of potential access points	Numerous or good quality gaps in features such as hanging tiles, cladding, barge boards, soffits
EXTERNAL LIGHTING	Extensive security lights covering much of the site	Widespread areas above 2 lux at night	Intermittent lights of low intensity	Minimal
BUILDING USE	Very noisy, dusty	Regular use	Intermittent use	Disused

Overall, the site is situated in an area of moderate to high suitability for bats.

Based on the assessment table, the building is considered of moderate suitability for roosting bats.

D.3 PRELIMINARY ROOST ASSESSMENT

D.3.1 HABITATS

FORAGING HABITATS & COMMUTING ROUTES

The building is surrounded by mature woodland and residential properties with large connected gardens, and a small stream is present along the northern boundary. The habitats provide high quality foraging and commuting opportunities for bats.



The site itself comprises the building, hardstanding areas and a garden with shrubs and trees.

SHELTERED FLIGHT AREAS

There is a covered walkway which offers some shelter for foraging / light sampling bats, though this small and of limited suitability.



ALTERNATIVE ROOST LOCATIONS

There are numerous alternative roosting opportunities in the nearby residential dwellings.

D.3.2 BUILDINGS/STRUCTURES

The building has been split into sections for the purposes of this report. The location of each section referenced is illustrated within the figure below, with descriptions detailed below.

Where recorded, field signs that confirm bat use are in bold.



FIGURE 3: BUILDING LOCATIONS
(Reproduced under licence from Google Earth Pro.)

BUILDING SECTION 1

External

- Single storey.
- Cavity brick walls – well sealed.
- Hipped roof with clay tiles – generally well-sealed but with a few gaps under ridge and roof tiles.
- Timber soffit boxes, some gaps where not fully sealed to wall.
- Greenhouse attached to southern elevation.
- No external field signs of bats recorded

Internal

- Floor to apex height of ~1.5m.
- Relatively uncluttered/open.
- Modern A-frame timber trusses.
- Breathable roofing membrane underlay – a few tears but generally in good condition.
- Blanket loft insulation.
- Some small areas of light ingress at eaves.

- Several small wasps' nests and mouse droppings.
- No internal field signs of bats recorded.
- A flat roofed single storey link connects it to section 2



BUILDING SECTION 2

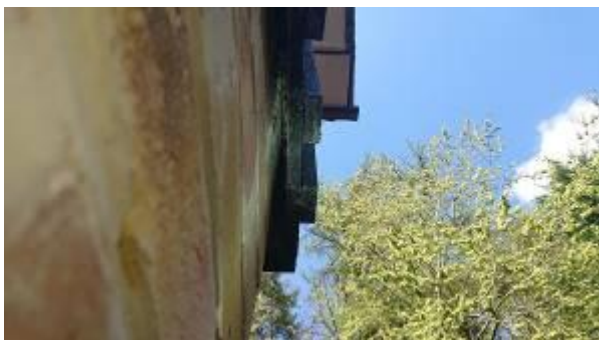
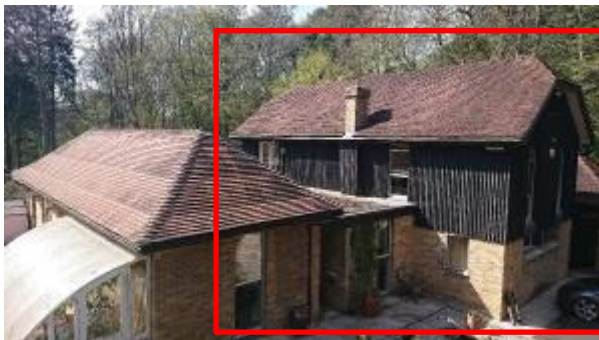
External

- Two storey.
- Brick cavity wall construction with timber cladding on upper storey.
- Timber cladding is generally well-sealed but there are gaps at the tops and bottoms leading behind cladding or into timber soffits above.
- Hipped roof with clay tiles – generally well-sealed but with a few gaps under ridge and roof tiles.
- Flat bitumen felted roof single storey extension to west and connections to section 1.
- Brick chimney, well-sealed with lead flashing.
- Blue tit nest behind house alarm on western elevation.
- No external field signs of bats recorded

Internal

- Internally used for storage.
- Open rafter and purlin construction with no trusses, but still quite cluttered due to storage.
- ~1.8m floor to apex height.
- Boarded with some blanket loft insulation at eaves.
- Timber framed windows at either gable resulting in quite bright internal conditions – sealed with duct tape to surrounding wall.
- Lights installed within.
- Roof and walls are lined with breathable roofing membrane – sealed to the rafters, windows and floor boarding with duct tape.

- Dead wasps and flies by windows.
- No internal field signs of bats recorded.



BUILDING SECTION 3

External

- Single storey garage, connected to section 2 by a flat bitumen felted roof corridor.
- Brick cavity wall construction – well-sealed.
- Hipped roof with clay tiles – generally well-sealed but with a few gaps under ridge and roof tiles.
- No external field signs of bats recorded

Internal

- Internally used for storage, with no separate loft space.
- Roof is internally lined with Kingspan insulation.
- No internal field signs of bats recorded.



Overall the property is considered to be of moderate suitability for roosting bats.

D.4 PRESENCE/ABSENCE SURVEY

D.4.1 DUSK /DAWN SURVEY SURVEYORS, TIMINGS & CONDITIONS

Date	Start	End	Sunset / Sunrise	Start Temp (°C)	End Temp (°C)	Cloud (%)	Precipitation	Wind (Beaufort)
30/06/21	21:30	23:20	21:48	16	15	0	Dry	0
14/07/21	02:55	05:05	04:47	13	13	90	Dry	1

Date	Lead Surveyor	Assistant surveyors
30/06/21	G Vessey	J Appleby, A Crolla, J Cone
14/07/21	R Mackenzie	S Velasquez, A Crolla, D Hall

D.4.2 30/06/21 DUSK SURVEY RESULTS

The survey was undertaken in mild, dry and still conditions suitable for bats to be active.

Two confirmed roosts were identified (see image below) and bat activity levels were high for most of the survey. A common pipistrelle emerged from under the eaves of section 2 on the southern aspect at 22:01 (~70 lux) (red circle). Three common pipistrelle bats emerged from a gap in the cladding at the base of the chimney where it meets the flat roof; one at 22:04 and two at 22:18 (~40-10lux) (orange circle).

A further possible roost was identified, with a soprano pipistrelle first seen between sections 1 and 2 at 21:30 (>200 lux, the first bat seen during the survey). The bat flew toward surveyors to the east from the building, but surveyors to the west did not record it entering the site. The exact roosting position was not recorded, though a soprano pipistrelle roost was recorded in that location during the subsequent dawn survey (see D.4.3).



High levels of foraging activity were seen across the site and mainly at tree canopy height. At least four noctule bats were seen at one time foraging at height in the garden and among trees south of the building. Key commuting routes recorded included from north to south, skirting around the building, and in both directions above the covered walkway. A *Myotis* sp. bat was seen flying above the covered walkway at 22:30, but did not appear to emerge from a roost.

Activity levels decreased towards the end of the survey; however occasional noctule and common pipistrelle passes were still recorded. No bat calls were detected from the remote monitoring location within the covered walkway north of the building.

The figure below provides a summary of the results of dusk emergence survey. An infra-red camera was used by Surveyor 3 to provide more robust survey coverage in this darker area of site beneath the overhanging tree canopy. More detailed data is available on request.

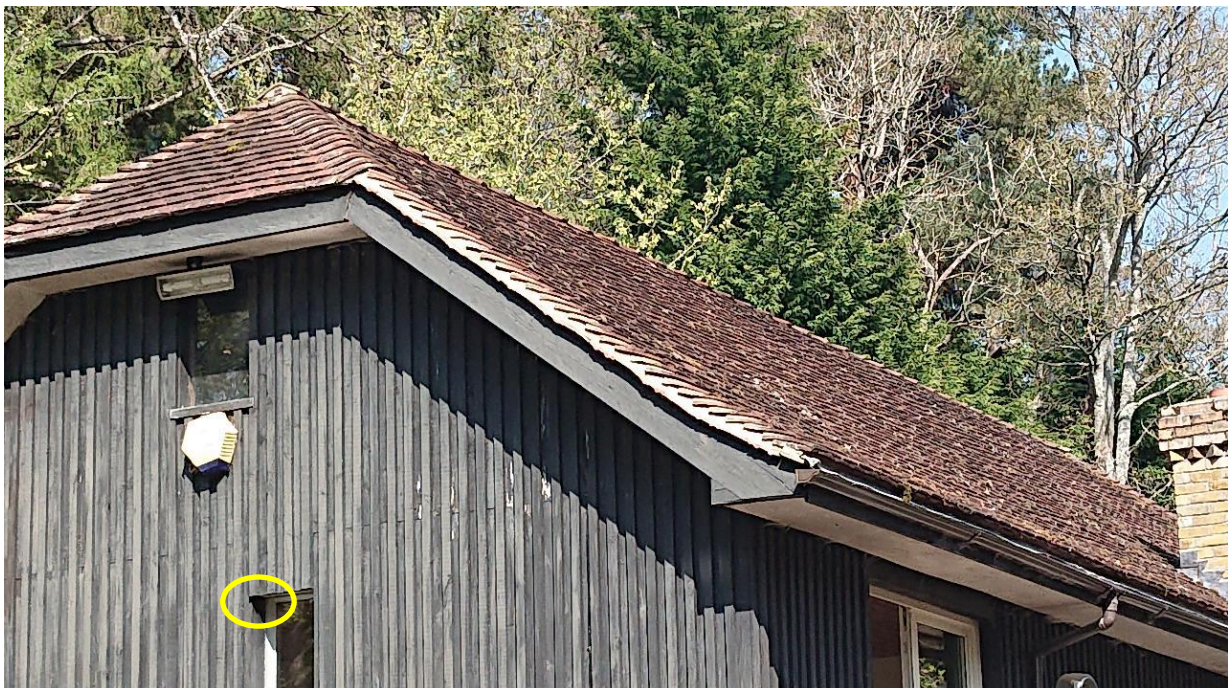


FIGURE 4: SUMMARY OF DUSK SURVEY RESULTS
(Reproduced under licence from Google Satellite)

D.4.3 14/07/21 DAWN SURVEY RESULTS

The survey was undertaken in mild, dry and still weather following a night of weather conditions suitable for bats to be active. Moderate levels of bat activity were recorded throughout the survey with the last bats recorded at 04:49, two minutes after sunrise at 149lux. Three roosts were identified and are also shown in the images below:

- A soprano pipistrelle day roost (red circle) in the main house (section 2), with a single bat entering to the bottom south-eastern corner of the chimney on the southern elevation, where a roof tile is lifted (04:16, 31 minutes before sunrise at ~8lux). This correlates with the possible soprano pipistrelle day roost recorded during the preceding dusk survey.
- A soprano pipistrelle day roost (yellow circle) in the main house (section 2), with a single bat entering at the top northern corner of a tall window on the western elevation at 04:44, three minutes before sunrise at 83 lux.
- A *Myotis* sp. day roost in the main house (orange circle), with a single bat entering at the apex of the eastern hipped end at 04:13, 34 minutes before sunrise at 6lux. Based on the echolocation call characteristics, the bat is considered most likely to be a whiskered or Brandt's bat.



Soprano pipistrelle bats were the most commonly recorded species, with occasional common pipistrelle, *Myotis* sp., noctule and brown long-eared bats also recorded.

The figure below provides a summary of the results of dawn re-entry survey. More detailed data is available on request.



FIGURE 5: SUMMARY OF DAWN SURVEY RESULTS
(Reproduced under licence from Google Satellite)

D.5 ADDITIONAL HABITAT/SPECIES GROUPS

A blue tit was recorded nesting behind the house alarm on the western elevation.

During the desk study it was noted that almost the entire property is within an area recorded as ancient semi-natural woodland on DEFRA’s MAGIC mapping website, including the building and garden. Part of the garden is listed as Deciduous Woodland Priority Habitat. The extent of the ancient woodland mapping is therefore not in accurate to the existing habitats though woodland habitats are present towards the western end of the garden and surrounding the property. As the initial development proposals only impact on the buildings, no significant impacts are anticipated on the woodland habitats within the curtilage of the property.

E. SITE ASSESSMENT

E.1 ASSESSMENT OF SURVEY FINDINGS

The habitats on site are considered to be of local value to foraging and commuting bats, with the surrounding woodland of much higher value.

During the presence / absence surveys, the following roosts were identified in section 2 only:

- A soprano pipistrelle day roost in a gap under a roof tile next to the chimney. Peak count of one bat using the roost.
- A soprano pipistrelle day roost in a gap above the tall window on the western elevation. Peak count of one bat using the roost.
- A *Myotis* sp. (considered most likely to be whiskered or Brandt's) day roost at the apex of the eastern hipped end. Peak count of one bat using the roost.
- A common pipistrelle day roost in a gap at the eaves on the southern elevation. Peak count of one bat using the roost.
- A common pipistrelle day roost in a gap in the timber cladding on the southern elevation. Peak count of three bats using the roost.

No roosts were identified in sections 1 or 3.

No evidence of a maternity roost was recorded but there is a low residual risk that the building may be used by hibernating bats.

A blue tit was recorded nesting behind the house alarm on the western elevation, though no further evidence of nesting birds was recorded when inspecting the loft spaces.

E.2 POPULATION SIZE CLASS ASSESSMENT

Section 2 is used by up to two soprano pipistrelle bats, up to four common pipistrelle bats and a single *Myotis* sp. bat.

F. IMPACT ASSESSMENT

The likely effects of the proposed development, without appropriate targeted mitigation and/or compensation, are detailed below. Impacts have been considered in both the construction phase and operational phase of the development, though this assessment is based on the worst case scenario of all roosts being lost. Once development plans are finalised, this section should be reviewed and updated.

F.1 DIRECT DEVELOPMENT IMPACTS

- Risk of disturbing bats if present within the building at the time of work and damage/destruction of roosts, including hibernating bats if works commence during winter.
- Risk of harm/disturbance to nesting birds if building works are carried out during the bird breeding season (March – August inclusive).

F.2 INDIRECT IMPACTS ON LOCAL POPULATIONS

- Increased lighting which could impact on bat foraging and commuting habitat within the adjacent area.

G. RECOMMENDATIONS

G.1 FURTHER SURVEY

If development does not happen within 12 months of the last survey, an updating survey will be required, ideally to be undertaken between May and August.

Depending on the extent of the development proposals, a Natural England licence may be required for works to the main house (section 2), which will require a site visit within the 3 months prior to the application submission. If this is later than May 2022, this should be in the form of a dusk emergence survey.

G.2 AVOIDANCE, MITIGATION AND COMPENSATION STRATEGY

The following strategy is subject to change based on finalising of detailed development proposals. However, a precautionary strategy is provided below which should be reviewed and updated on receipt of development plans:

G.2.1 SITE DESIGN

- External lighting that may reduce bat use of retained or new potential roost sites will be avoided. High intensity security lights will be avoided as far as practical, and any lighting in areas identified as being important for bats will be low level (2m) and low lumen. Light spillage to areas used by foraging or commuting bats should be less than 2 lux. No lighting will be installed along the flyways between the roosts and adjacent trees, woodland and foraging areas. Where security lights are required, these will be of minimum practicable brightness, be set on a short timer and will be motion sensitive only to larger objects.
- The development proposals should seek to retain the identified bat roosts where possible.
- Roosting opportunities will be incorporated into the newly developed building to compensate for any roosts which will be lost. These may constitute 20mm diameter gaps at the eaves leading onto the wall tops, dedicated bat access slates or ridge tiles, or bespoke integrated bat bricks. Only bitumen roofing felt will be used in locations where bat roosting opportunities are provided; breathable roofing membrane will not be used in these areas. They will be installed in elevations with the minimal light spillage from adjacent windows/doors and roof lights. The exact number required is to be confirmed following receipt of detailed development proposals.

G.2.2 TIMING OF WORKS

- A pre-commencement check for nesting birds will be undertaken by a suitably experienced ornithologist if building works are to commence between March and August inclusive.
- **Works to the buildings which may cause disturbance to bats or which may impact on roosts will not be undertaken until a Natural England development licence has been obtained.**
- The following key elements of work will not be completed during the bat hibernation period (November to end Feb inclusive) as a precaution to avoid disturbance and harm during this sensitive period:
 - Exposing of the wall tops via roof stripping works
 - Removal of timber wall cladding

G.2.3 WORKING METHODS AND BEST PRACTICE

- Works will be undertaken in accordance with the approved licence method statement and the mitigation measures included in this document, which include:
 - Pre-commencement site induction / toolbox talk for key contractors on site carrying out work which may affect bats
 - Three concrete-type bat boxes will be erected on suitably mature trees within the garden prior to the commencement of works to act as interim roosting habitat during construction and will be retained in situ following completion of the development. The boxes will be used as a receptor for translocated bats (see below).
 - Pre-commencement inspection of confirmed and potential roosting areas by the ecologist, such as gaps under roof tiles, ridge tiles and in timber cladding.
 - Sensitive dismantling of roosting areas that cannot be retained under ecological supervision, taking care not to harm bats in the process. If bats are found, the ecologist will capture the bat by hand, check the health of the bat and transport it to the aforementioned bat box.
 - If bats cannot be safely captured from roosting features that cannot be retained, they will be excluded from the roost using standard exclusion devices. These will be fitted by, or under supervision of, the ecologist and will remain in place for a minimum of five consecutive nights of suitable weather, in accordance with the most up to date edition of the Bat Workers Manual¹². No exclusion will take place during the hibernation period (November to end of February inclusive).
- In the event that bats are found during works, works will stop in that area and the ecological consultant will be contacted immediately. If it is necessary to move the bats for their safety, this will be undertaken by a licensed bat handler.
- Timber treatments that are toxic to mammals will be avoided. If required, timber treatment will be carried out in the spring or autumn. Both pre-treated timbers and timber treatments will use chemicals classed as safe for use where bats may be present (see <https://data.jncc.gov.uk/data/e5888ae1-3306-4f17-9441-51a5f4dc416a/Batwork-manual-3rd-edn.pdf> - Chapter 10).

G.3 COMPENSATION STRATEGY

As detailed in Section G2.1 above, roosting opportunities will be incorporated into the newly developed building to compensate for any roosts which will be lost. The exact number required is to be confirmed following receipt of detailed development proposals.

G.4 MONITORING

Given the results of the survey, no monitoring is proposed.

G.5 ADDITIONAL ENHANCEMENT RECOMMENDATIONS

The following additional enhancement measures are recommended in order to further enhance the site for biodiversity:

- Installation of additional bird nest boxes and bat boxes or nesting/roosting opportunities in the trees on site and integrated into the newly developed building. The

¹² At the time of issue of this report, the latest version is: Mitchell-Jones, A.J. & McLeish, A.P. (2012) The Bat Workers' Manual (3rd Edition). Pelagic Publishing, Exeter.

exact number, types and locations are to be confirmed following receipt of detailed development proposals.

- Any landscape planting will be designed to enhance structural diversity, and will include plants bearing flowers, nectar and fruits which are attractive to invertebrates, thereby helping to maintain the food resource for bats and wildlife generally, with a focus on planting native species only.

H. CONCLUSIONS

Provided that the recommendations in this report are implemented, it is anticipated that proposals may proceed with no significant impacts with regard to bats, though this should be reviewed following receipt of detailed development proposals. The proposals provide an opportunity for ecological benefit through bat and bird nest box provision, contributing to local and national conservation targets.

APPENDIX 1. LEGISLATION

NATIONAL PLANNING POLICY

The table below details the key paragraphs from the National Planning Policy Framework (NPPF)¹³ relating to the natural environment:

TABLE 9: NATIONAL PLANNING POLICY FRAMEWORK: CONSERVING AND ENHANCING THE NATURAL ENVIRONMENT	
Statement	Paragraph
<p>Planning policies and decisions should contribute to and enhance the natural and local environment by:</p> <ul style="list-style-type: none"> 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 	174
<p>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 Framework¹⁴; 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.</p>	175
<p>Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads¹⁵. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.</p>	176
<p>When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development¹⁶ other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:</p> <ul style="list-style-type: none"> a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy; b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated 	177
<p>Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 176), planning policies and decisions should be consistent with the</p>	178

¹³ National Planning Policy Framework (July 2021), Department for Communities and Local Government,

¹⁴ Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.

¹⁵ English National Parks and the Broads: UK Government Vision and Circular 2010 provides further guidance and information about their statutory purposes, management and other matters.

¹⁶ For the purposes of paragraphs 177 and 178, whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.

TABLE 9: NATIONAL PLANNING POLICY FRAMEWORK: CONSERVING AND ENHANCING THE NATURAL ENVIRONMENT	
Statement	Paragraph
special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.	
To protect and enhance biodiversity and geodiversity, plans should: <ul style="list-style-type: none"> 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 biodiversity¹⁷; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation¹⁸; 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. 	179
When determining planning applications, local planning authorities should apply the following principles: <ul style="list-style-type: none"> 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. 	180
The following should be given the same protection as habitats sites: <ul style="list-style-type: none"> a) potential Special Protection Areas and possible Special Areas of Conservation; b) listed or proposed Ramsar sites¹⁹; 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. 	181
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.	182

Section 40 of the Natural Environment and Rural Communities Act 2006, places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity.

Planning Practice Guidance²⁰ states:

¹⁷ Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

¹⁸ Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

¹⁹ Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.

²⁰ Planning Practice Guidance: Natural Environment (www.planningguidance.communities.gov) Updated July 2019 2021

- Planning authorities need to consider the potential impacts of development on protected and priority species, and the scope to avoid or mitigate any impacts when considering site allocations or planning applications. (para. 016)
- Information on biodiversity and geodiversity impacts and opportunities needs to inform all stages of development (including site selection and design, pre-application consultation and the application itself). An ecological survey will be necessary in advance of a planning application if the type and location of development could have a significant impact on biodiversity and existing information is lacking or inadequate. (para. 018)
- Even where an Environmental Impact Assessment is not needed, it might still be appropriate to undertake an ecological survey, for example, where protected species may be present or where biodiverse habitats may be lost. (para. 018)
- As with other supporting information, local planning authorities should require ecological surveys only where clearly justified. Assessments should be proportionate to the nature and scale of development proposed and the likely impact on biodiversity. (para. 018)
- The National Planning Policy Framework encourages net gains for biodiversity to be sought through planning policies and decisions. Biodiversity net gain delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development. Biodiversity net gain can be achieved on-site, off-site or through a combination of on-site and off-site measures. (para. 022)

RELEVANT LEGISLATION

Within England all bat species are specially protected under the Conservation of Habitats and Species Regulations 2017 (as amended).

As a result there is a requirement to consult with Natural England before undertaking any works that may disturb bats or their roost, and under the Conservation of Habitats and Species Regulations it is illegal to.

- Deliberately kill, injure or capture bats.
- Deliberately obstruct access to a bat roost.
- Damage or destroy a bat roost.
- Deliberately disturb bats; in particular any disturbance which is likely to impair their ability:
 - (i) to survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong.

Under the Wildlife and Countryside Act (1981) the above offence of disturbing bats includes low level disturbance and as such under this act it is also an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a roost.
- Intentionally or recklessly obstruct access to a roost.

Under the above legal protection, only the offences under the Conservation of Habitats and Species Regulations 2017 (as amended) are strict liability offences; the remaining offences, under the Wildlife and Countryside Act (1981), are offences only where they are carried out "intentionally or recklessly".

Under the Countryside and Rights of Way Act 2000 (CROW Act) the offence in section 9(4) of the Wildlife and Countryside Act 1981 of disturbing bats is extended to cover reckless damage or disturbance.

The Hedgerow Regulations 1997 provide for the conservation of important hedgerows and their constituent trees. The presence of a protected species such as bats is a relevant consideration when assessing whether a hedgerow is important and may influence a local planning authority's decision on whether to approve removal of such hedges.

PRIORITY SPECIES

Although not afforded any legal protection, national priority species (species of principal importance, as listed in Section 41 of the NERC Act (2006)), and local and regional priority species, as detailed within the relevant biodiversity action plans, are material considerations in the planning process and as such have been assessed accordingly within this report.

The following bat species are listed as national priority species: Barbastelle bat, Bechstein's bat, noctule, soprano pipistrelle, brown long-eared bat, greater horseshoe bat and lesser horseshoe bat. 'Bats' as a species group is also listed on the relevant local biodiversity action plan for this site.