Preliminary Roost Assessment

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1 Black Cross, Newquay, TR8 4LU

Status	Issue	Name	Date
Draft	1	Merry Anderson BA(Hons) Consultant Ecologist Bat Level 4 Survey Class Licence CL20	21/09/2023
Final	2	Merry Anderson BA(Hons) Consultant Ecologist Bat Level 4 Survey Class Licence CL20	21/09/2023

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

> The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.
>
> The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.
>
> (BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Helene Hudson to undertake a Preliminary Roost Assessment (PRA) at 1 Black Cross, Newquay, TR8 4LU (hereafter referred to as "the site"). The survey was required to inform a planning application for the conversion of an existing detached garage into holiday accommodation (hereafter referred to as "the proposed development").

The following is work you will need to commission to comply with planning policy and legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 7 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Roosting bats building B1	Building B1 has been assessed as having low habitat value for bats. The dilapidated condition of the roof has no value for roosting bats. One area of cladding on the west (front) elevation was assessed to provide suitable habitat for crevice dwelling bats. The internal ground floor spaces are well sealed with no access identified for bats to enter the building and no evidence of bat occupation. The site is rural and well connected in the landscape with trees and hedgerows in close proximity to the site. 3 granted EPSLs were found within 2km of the site. As such, the surrounding habitat is considered of moderate value for supporting local bat populations.	The proposed development will result in the renovation to this building. This will include the removal of the existing cladding around the walls and roof, some which has been assessed as suitable to provide roost habitat for crevice dwelling bats. Destructive works to the building could cause disturbance, injury or death to bats if present.	Given the small area of suitable bat habitat identified within the building and the absence of any evidence of roosting bats recovered from the site, it is considered unlikely that bat roosts would be present. As such, further bat surveys and lengthy delays over the winter period would be disproportional to the anticipated risk posed to bats as a result of the proposed development. It is anticipated that any risk to bats can be reduced to an acceptably low level though the implementation of a Bat Mitigation Plan.
Foraging and commuting bats	Trees and hedgerows surrounding the site could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Helene Hudson to undertake a Preliminary Roost Assessment (PRA) at 1 Black Cross, Newquay, TR8 4LU (hereafter referred to as "the site"). The survey was required to inform a planning application for the conversion of an existing detached garage into holiday accommodation (hereafter referred to as "the proposed development"). A plan showing the proposed development is provided in Appendix 1.

The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting. This has been undertaken with due consideration to the "Bat Surveys for Professional Ecologists —Good Practice Guidelines" publication (Collins, 2016). No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author's knowledge, by any other consultancy.

1.2 Site Location and Landscape Context

The site is located in the hamlet of Black Cross at National Grid Reference SW90986071 and has an area of approximately 300m^2 comprising a plot of land extending from an existing dwelling with a detached garage and garden with trees, shrubs, hedgerows and a small stream. It is surrounded by agricultural farmland with the to the A30 to the west, which is lined with trees, creating a commuting corridor for bats. The wider landscape comprises parcels of broadleaved woodland extend further west with a network of watercourses. The garage is sited along a quiet side road with a hedgerow and large conifer pine adjacent to the building. A site location plan is provided in Appendix 2.

1.3 Scope of the Report

This report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation. To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken, including an inspection of built structures and a ground level assessment of trees, to determine the presence or the suitability of any features which bats could use for roosting and to assess the suitability of the site's bat foraging and commuting habitat.
- An outline of potential impacts on any confirmed or unidentified roosts has been provided, based on the proposed development.
- Recommendations for further surveys and mitigation have been made, along with advice on the requirements for a European Protected Species Licence (EPSL) application if appropriate.
- Opportunities for the enhancement of the site for roosting, foraging and commuting bats have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of statutory designated sites with bat qualifying interests and granted EPSL records for bats held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

2.2 Field Survey

The survey was undertaken by Merry Anderson (Natural England Bat Licence Number: 2022-10316-CL20-BAT, GCN license number: 2022-10738-CL08-GCN) on 19/09/2023.

The PRA focussed on 1 built structure (B1) and 1 tree (T1) which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the building for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine smear marks. An internal inspection of the building was also made, including the living areas and any accessible roof spaces, using a torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space. An endoscope was used to complete a close-up inspection of any accessible features, where appropriate.

For any surveyed trees delete if no trees surveyed:

A visual inspection was undertaken from ground level using binoculars to identify any possible roost features.

2.3 Breeding Birds and Other Incidental Observations

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls.

2.4 Suitability Assessment

Built structures and trees were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 and Table 2 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats

Classification	***Feature of building and its context***
High	Buildings or structures with features of particular significance for larger numbers of roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data).

	Buildings with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Moderate	Buildings or structures with one or more features suitable for more regular roosting due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation value such as maternity or hibernation roosts. Continuous habitat connected to the wider landscape which could be used by bats for commuting such as lines of trees, linked gardens. Foraging habitat in the surrounding area such as trees, scrub, grassland or water.
Low	Buildings or structures with one or more features suitable for use sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators. Habitat suitable for foraging in close proximity, but largely isolated in the landscape. Or an isolated site not connected by prominent linear features.
Negligible	Unsuitable for use by bats.

Table 2: Features of a tree that are correlated with use by bats

Classification	***Feature of tree and its context***
Moderate to high (Difficult to separate moderate or high value trees from ground level without a close-up inspection)	A tree with one or more potential roost sites that are obviously suitable for use by bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. Trees with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	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 to be used sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators.
Negligible	Unsuitable for use by bats.

2.5 Limitations

It should be noted that whilst every effort has been made to describe the features on site in the context of their suitability for roosting bats, this does not provide a complete characterisation of the site. This survey provides a preliminary view of the likelihood of bats being present. This is based on suitability of the habitats on site and in the local area, the ecology and biology of bats as currently understood, and the known distribution of bats as recovered during the desk study. Bats are highly mobile creatures that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time.

The survey was conducted in the sub-optimal season (May-Aug optimal Sept Sub-optimal). However, given the condition of the building, it is not anticipated this is a limiting factor to the valuation of the building for roosting bats.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any statutory and non-statutory designated sites with bat qualifying interests within a 2km radius of the site, including their reasons for notification, are provided in Table 3 below.

Table 3: Statutory designated sites with bat qualifying interests within 2km radius of the site Delete if no sites identified. Order closest first

Designated site name	Distance from site	Reasons for notification from Natural England
Mid Cornwall Moors SSSI	1.1km northeast of the site	The Mid Cornwall Moors SSSI supports a diverse mosaic of semi-natural habitats, including heaths, fens, grasslands, woodlands, scrub and species-rich hedgerows, with ponds and waterways. Although this site is not designated for bats, the mosaic of lowland wet and dry heathland, woodland, ponds and bogs supports a rich diversity of habitats for roosting and foraging bats.
Quiot Farm CWS Pollawyn Moor CWS Halvenna Woods and Ennis Barton CWS	Within 2km of the site	County Wildlife Sites range from small copses and linear features like river valleys, to ancient woodlands, large moors and wetlands. Many of these are Biodiversity Action Plan (BAP) habitats; these are habitats which are considered of conservation significance either locally or nationally. Cornwall has its own list of BAP habitats. They were selected because of their high nature conservation value. Selection was based on distinctive, important or threatened species and habitats, in either a national, regional or local context and aimed to link and buffer other important areas for nature conservation, such as SSSIs.

3.2 Historical Records

A data search for bat records within 2km of the site has not been commissioned at the time of writing this report.

A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. EPSL records for bats are summarised in Table 4.

Table 4: Granted EPSLs for bats within 2km of the site

EPSL reference	Bat species affected	Impacts allowed by licence
2019-43748-EPS-MIT	Brown long-eared and common pipistrelle bat	Damage to a resting place ~1.4km west of the site
EPSM2011-3298 2018-38399-EPS-MIT	Common pipistrelle, soprano pipistrelle, lesser horseshoe, greater horseshoe, barbastelle, brown long-eared, whiskered, Daubenton's and Natterers bat.	Destruction of a resting place ~1.4km west of the site
2020-48951-EPS-MIT	Common pipistrelle and brown long-eared bat	Damage of a breeding site and resting place ~1.5km north

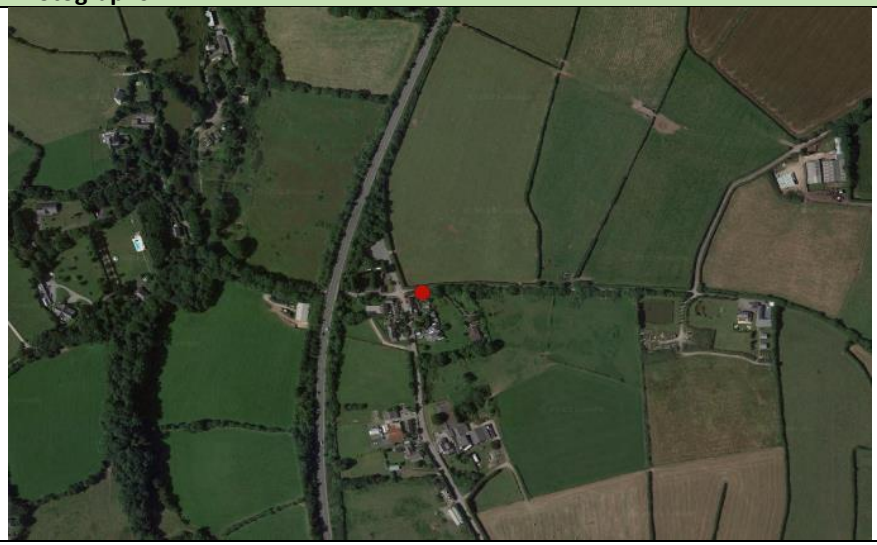
3.3 Field Survey Results

The weather conditions recorded at the time of the survey are shown in Table 5. The results of the field survey are detailed in Table 6 and illustrated in Appendix 3.

Table5: Weather conditions during the survey

Date:	19/09/2023
Temperature	17°C
Humidity	94%
Cloud Cover	100%
Wind	1mph
Rain	None

Table 6: PRA Results

Feature	Description	Photographs
Bat foraging and commuting habitat	The site is rural and situated within agricultural land comprising a mosaic of fields, woodland and tree lines. The network of hedgerows along roads and field margins provides good connectivity between these habitats and will be used by commuting bats as they navigate the landscape. Trees and grassland will provide a foraging resource of insects and invertebrates. The small number of houses and absence of mains street lighting makes the site inherently dark with little light spill to deter bats from the area.	

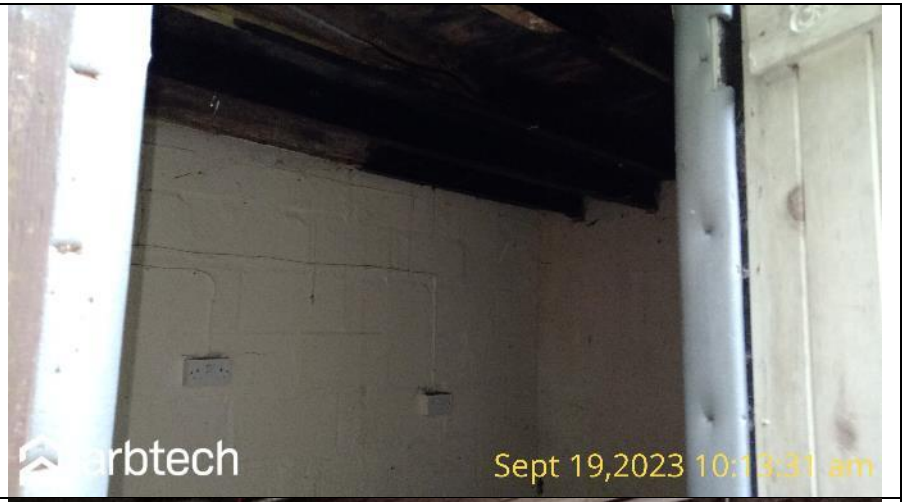
B1 – west elevation	B1 is a small, detached garage constructed from rendered block. There is timber cladding extending around the top of the wall and roof and above the doors which are also timber with two Perspex windows. The roof is constructed from sheet timber on a wooden frame, most of which is missing from this elevation. A window is present on the gable wall which is intact. The timber cladding has begun to weather, resulting in the boards becoming warped and lifted at the ends. This has created gaps which may be exploited by small crevice dwelling bats such as pipistrelles. An inspection using a high-powered torch and endoscope was conducted to look into the gaps between the cladding for roosting bats and signs of use by bats. No live bats were found at the time of the survey. No droppings were present within the gaps or stuck to the external cladding, however, evidence may have been removed by recent rain.	
B1- western elevation	Pictured opposite are the gaps between the cladding. Despite the boards being unlined, there is no daylight between the gaps on this elevation.	

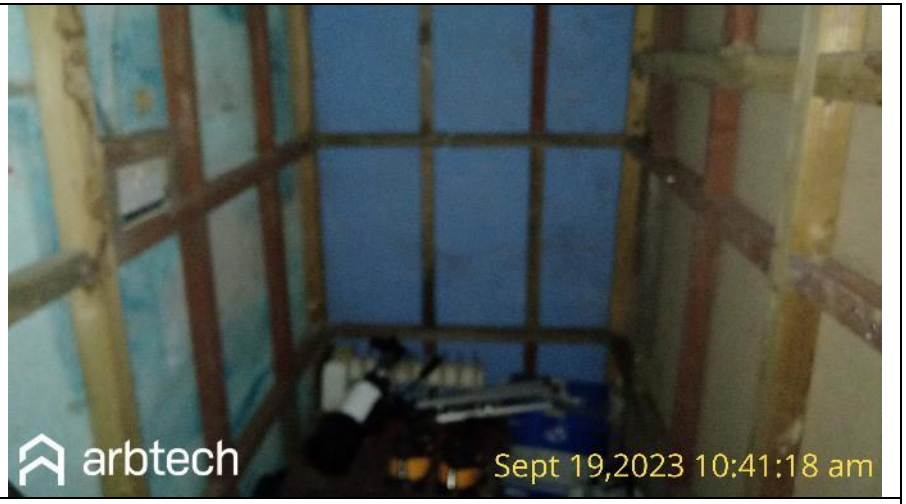
B1- south elevation	The south elevation has timber cladding extending around the roof of the building leading from the wall top. There is clematis and bamboo growing in close proximity to the wall on this elevation. Due to the absence of the roof overhang and with no lining behind the cladding, the gaps between the boards on this elevation are exposed to wind and rain. This makes them less suitable for roosting bats. An inspection was conducted in the climbing vegetation for evidence of nesting birds; however none were found and the density and structure assessed as being unsuitable for nesting birds due to exposure to predation. A cat was observed on site.	
B1-south elevation	Pictured opposite are the exposed gaps between the cladding. This would be subject to water ingress and draught making them less favourable for roosting bats.	

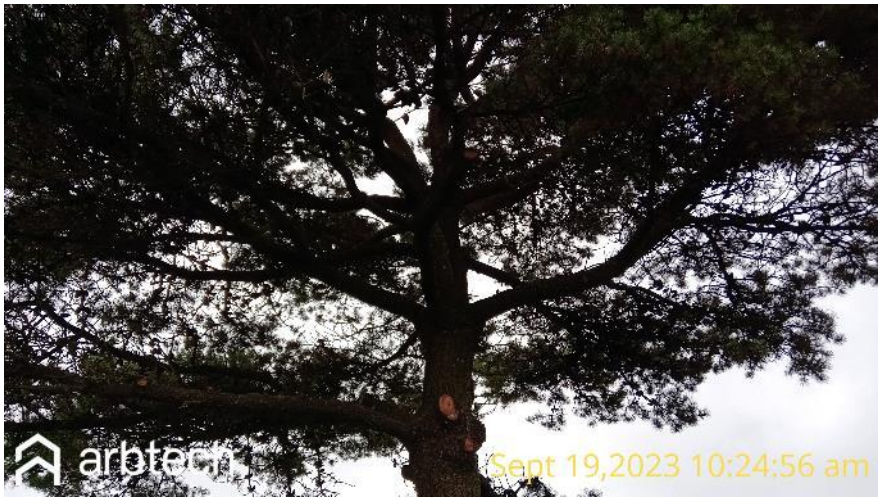
B1 north elevation and roof	The north elevation comprises a block wall and timber cladding around the roof. The roof comprises sheet timber covered in bitumen felt on a timber frame with Perspex windows. The roof is in a dilapidated condition with wet, warped and missing roof boards, sections of missing felt, tears and holes. The timber cladding on this elevation is intact and flush with no gaps between the boards. An inspection between the wall and the bottom row of cladding found no habitat for roosting bats. The gap was full of snails and ivy runners. No live roosting bats or evidence of bats was recovered on this elevation.	
B1 north elevation	Pictured opposite is the cladding which is flush. No gaps are present to provide roost habitat for bats.	

B1 east elevation	The east elevation has a timber door and window serving a small, enclosed room which is divided from the rest of the interior with a block wall. Similarly to the west elevation, the timber cladding extends to the roof where a Perspex window is present. The roof is extended on this elevation and is intact. Ivy is present climbing over the cladding. This is not dense enough to support nesting birds. An inspection of the cladding on this elevation found it to be in good condition, protected from the elements by the overhang of the roof. The boards are flush around the roof line, without any lifted gaps to provide roost habitat. The door is well fitted to the frame when closed. The window is intact.	
B1 – east elevation	Pictured opposite is a close up of the extended roof line. The boards are intact however the bitumen felt roof is loose and disconnected. This has resulted in damp ingress into the roof.	

B1 – eastern elevation	Pictured opposite is the cladding on this elevation which is good condition. An inspection did not find any evidence of bat droppings, scratch marks or fur stains on the cladding.	
B1 – internal roof	The roof is very damaged and exposed to daylight ingress, wind and rain. This has resulted water damage to the floor, particularly the south side which has multiple missing roof panels. The cladding extending around the roof is unlined and fixed directly into the timber frame. There are stored items comprising slate tiles, wood and building materials present along the north side. These were inspected, insofar as possible, for evidence of roosting bats however none was found. A search of the floor did not find any bat droppings or feeding remains. Due to the high level of exposure, the roof space is considered unsuitable for roosting bats. No evidence of night roosting bats was observed during the internal survey.	

B1 internal roof (east elevation)	Pictured opposite is the small, enclosed room at the rear of the garage. There is a block wall dividing this room from the rest of the garage interior. The wall does not extend fully to the roof resulting in a gap. An endoscope was used to check the wall top for signs of roosting bats. No bat droppings or feeding remains were found. The stains running down the wall are attributed to timber treatment rather than bat urine. The roof is damp with rotting timbers and boarding. There is no light ingress into this space with the door closed.	
B1 – interior	The main internal space inside the garage is used for storage and as a workshop. There is shelving installed and stored items leaning against walls. A small doorway in the wall leads to another enclosed space. A full inspection did not find any live roosting bats or evidence of bats. Dark corners, flat surfaces and the floor under various units and work benches was inspected. Areas behind leaning sheet material, hanging garments and stored items did not find any signs of bat occupation. Roof beams were checked for roosting bats or evidence of nesting birds such as swallow cups. None were found.	

B1 interior	This photograph shows a small space between the main garage and back room. The space is completely enclosed with no access for bats when the internal door is closed. The stud walls are intact. It is considered highly unlikely bats could enter into this space.	
B1 – suitability assessment	B1 has been assessed to provide low value for roosting bats. The dilapidated roof provides no habitat. The internal spaces on the ground floor are well sealed with no points of bat access or evidence of roosting bats identified. The timber cladding around the wall top and roof is unlined and lacking crevice habitat behind the cladding. Only a small area of suitable roost habitat is present under the cladding on the western elevation where the lifted boards are still connected at the top.	
B1 - breeding birds and other incidental observations	No evidence of breeding birds was observed during the survey. An inspection of the vegetation growing in close proximity to the building found it to comprise mainly bamboo and small conifers. The section of hedgerow extending the road side has been cut away leaving one large conifer pine and a bare embankment.	

T1 – suitability assessment	T1 is a large Scots pine growing out of the embankment on the north side of the building. The tree is mature with a high canopy oversailing the building and road. The main stem which is in close proximity to the wall has no features suitable for roosting bats such as holes, tears, wounds or disease resulting in rot and cavities. An inspection of the canopy was undertaken to look for nesting birds such as corvids which typically use conifer species. No nests were observed.	 

4.0 Conclusions, Impacts and Recommendations

Taking the desk study and field survey results into account, Table 7 presents an evaluation of the value of the site for bats and also details any other ecological constraints identified such as nesting birds in relation to the proposed development which will comprise the conversion of the garage into holiday accommodation.

Table 7: Evaluation of the site for bats and any other ecological constraints

Building/ Tree	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities[1]
Roosting bats building B1	Building B1 has been assessed as having low habitat value for bats. The dilapidated condition of the roof has no value for roosting bats. One area of cladding on the west (front) elevation was assessed to provide suitable habitat for crevice dwelling bats. The internal ground floor spaces are well sealed with no access identified for bats to enter the building and no evidence of bat occupation. The site is rural and well connected in the landscape with trees and hedgerows in close proximity to the site. 3 granted EPSLs were found within 2km of the site. As such, the surrounding habitat is considered of moderate value for supporting local bat populations.	The proposed development will result in the renovation to this building. This will include the removal of the existing cladding around the walls and roof, some which has been assessed as suitable to provide roost habitat for crevice dwelling bats. Destructive works to the building could cause disturbance, injury or death to bats if present.	As stipulated in professional survey guidance, low value buildings typically require one bat emergence or re-entry survey to be completed during the active bat season (optimal May to August, suboptimal September) to confirm presence or likely-absence of a bat roost. However, a single bat emergence or re-entry survey has a low detection rate for bat roosts and is often an unreliable way of identifying the presence of roosts, given the transient nature of roosting bats. Given the small area of suitable bat habitat identified within the building and the absence of any evidence of roosting bats recovered from the site, it is considered unlikely that bat roosts would be present. As such, further bat surveys and lengthy delays over the winter period would be disproportional to the anticipated risk posed to bats as a result of the proposed development. It is anticipated that any risk to bats can be reduced to an acceptably low level though the implementation of a Bat Mitigation Plan. This plan will include sensitive timings of works, to reduce the risk of bats being present, and ecological supervision of works	The installation of 1 bat boxes at the site will provide additional roosting habitat for bats. The bat boxes will be installed on existing trees within the site or on buildings within the curtilage. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. The bat boxes will be a specification suitable for crevice dwelling species such as Beaumaris Woodcrete bat box or a similar alternative brand.

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

			affecting features of bat roost value. The plan will include precautionary working methods, measures to be adopted should a bat or evidence of a bat roost be discovered during work and include mitigation and site enhancement measures for roosting bats. Acceptance of this approach would be at the discretion of the Local Planning Authority, given that this would be a deviation from standard survey guidance.	
Tree T1	T1 was assessed as having negligible value for roosting bats due to a lack of suitable features.	No impacts are anticipated as a result of the proposed development.	None.	None.
Foraging and commuting bats	Trees and hedgerows surrounding the site could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Direct light spill on to trees and hedgerows should be avoided. • Internal and external lighting schemes should use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • Planting of native tree, shrub and hedgerows to increase foraging opportunities.

			• Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. • Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.	
Nesting birds B1 and T1	No evidence of nesting birds was observed during the survey. Climbing woody clematis is present on the south elevation wall however it has an open structure and small leaved foliage and is unsuitable for nesting due to a risk of predation. The vegetation in close proximity to the building comprises bamboo and a small fir which is unsuitable for nesting birds.	Given the small scale of the proposed development and proximity to optimal nesting habitat, no impacts on nesting birds are anticipated.	None.	The installation of 2 bird boxes at the site will provide additional nesting habitat for birds. E.g. Vivara Biblao Nest Box (Wildcare) NHBS **Apex Bird Box** The bird boxes will be installed on the gable ends of the new building or on surrounding trees in the site. General purpose bird boxes should be positioned 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight.

	T1 did not have any evidence of nesting birds at the time of the survey.			

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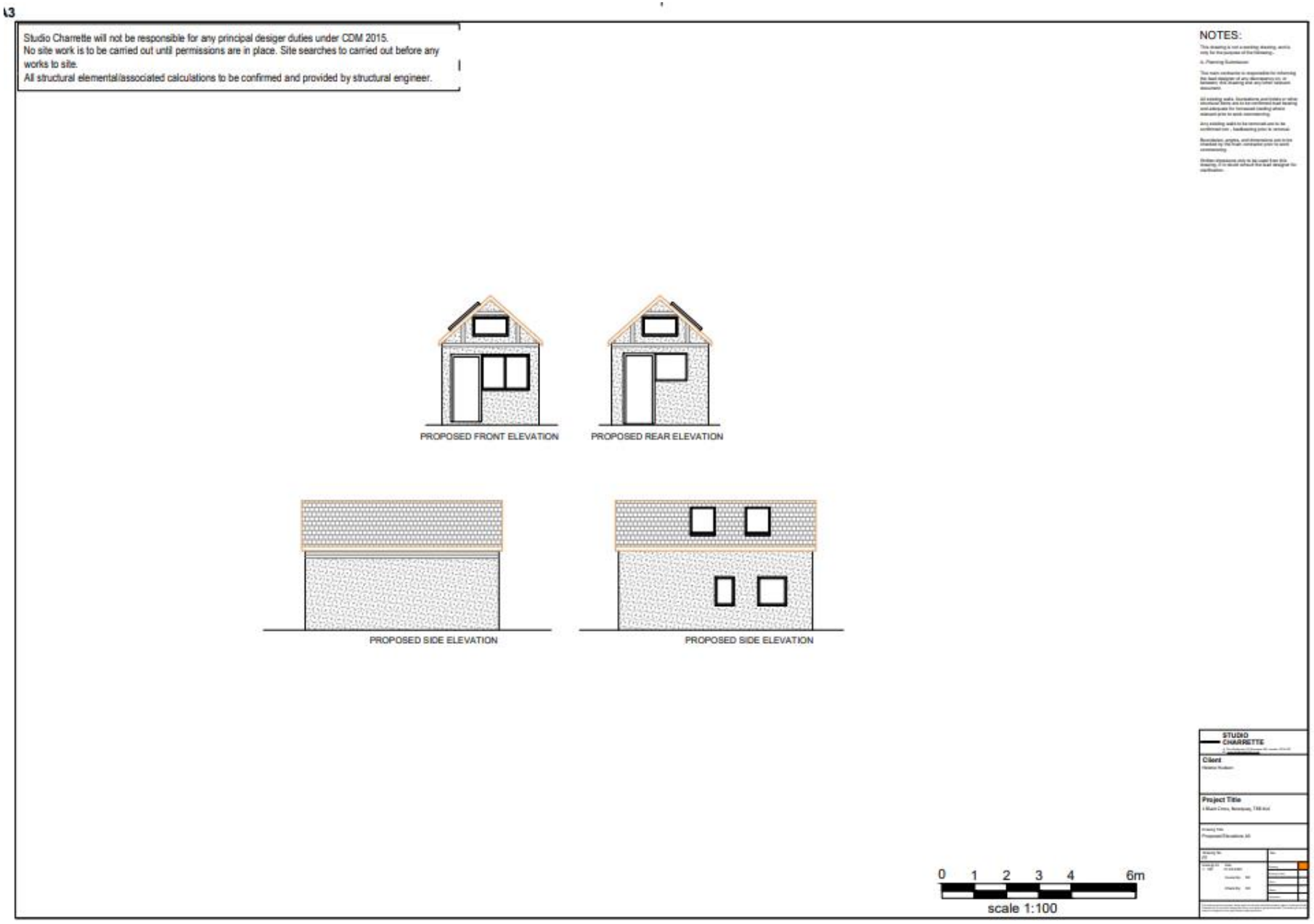
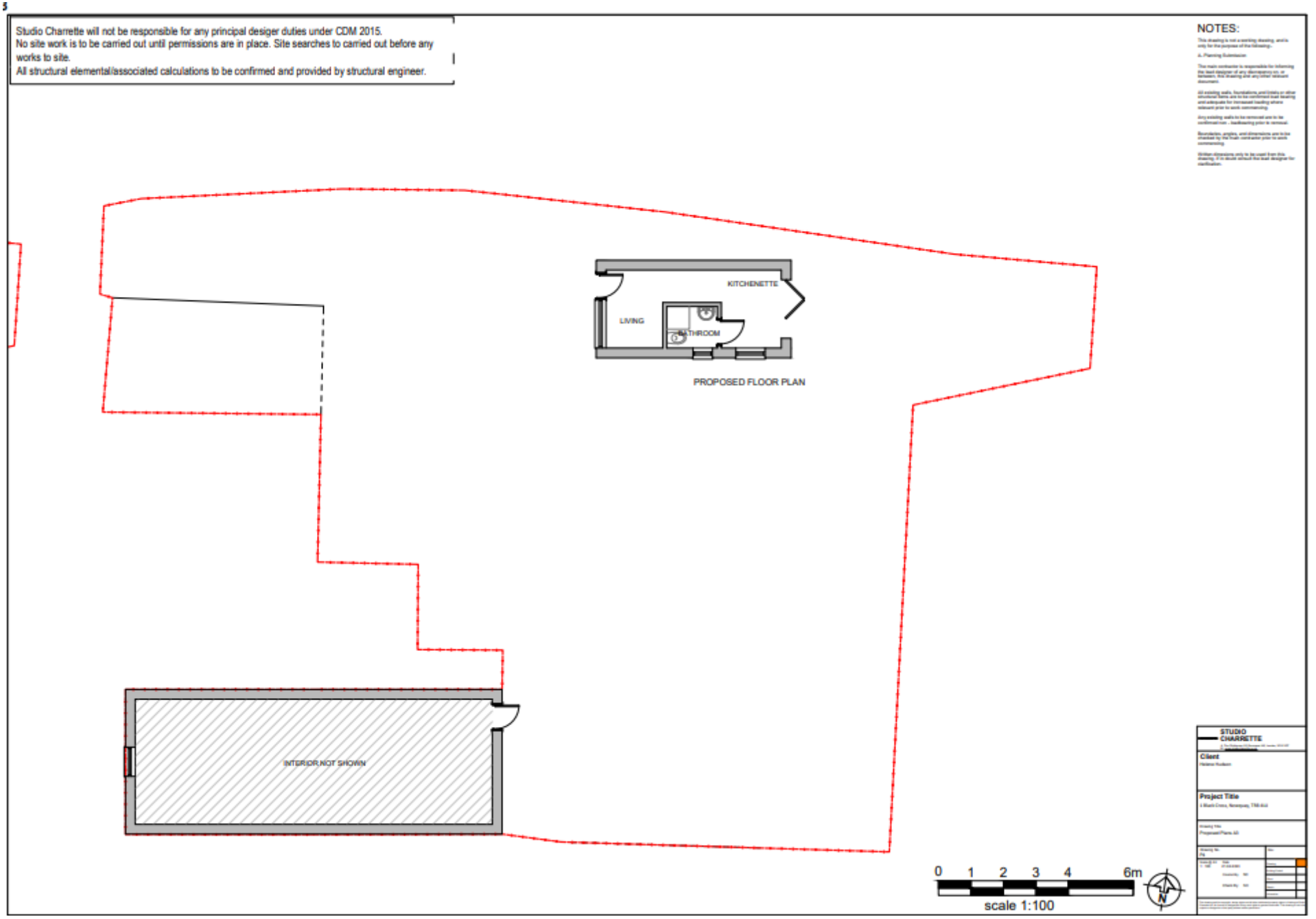
- Wray, S., Wells, D., Long, E., Mitchell-Jones, T (2010) Valuing Bats in Ecological Impact Assessment. IEEM In-Practice. Number 70 (December 2010). Pp. 23-25.

Appendix 1: Proposed Development Plan




Studio Charrette will not be responsible for any principal desiger duties under CDM 2015.
No site work is to be carried out until permissions are in place. Site searches to carried out before any works to site.
All structural elemental/associated calculations to be confirmed and provided by structural engineer.
NOTES:
KITCHENETTE
LIVING
BATHROOM
PROPOSED FLOOR PLAN
INTERIOR NOT SHOWN
0 1 2 3 4 6m
scale 1:100
STUDIO CHARRETTE
Client
Project Title

Appendix 2: Site Location Plan

Appendix 3a: PRA Plan

Appendix 3: Legislation and Planning Policy Related to Bats

LEGAL PROTECTION

All species of bat are fully protected under ***The Conservation of Habitats and Species Regulations 2017*** (as amended) through their inclusion on Schedule 2.

Regulation 43: Protection of certain wild animals - offences

(1) A person is guilty of an offence if they:

(a) Deliberately captures, injures or kills any wild animal of a European protected species,

(b) Deliberately disturbs wild animals of any such species,

(c) Deliberately takes or destroys the eggs of such an animal, or

(d) Damages or destroys a breeding site or resting place of such an animal,

(2) For the purposes of paragraph (1) (b), disturbance of animals includes in particular any disturbance which is likely—

(a) To impair their ability:

(i) To survive, to breed or reproduce, or to rear or nurture their young; or

(ii) In the case of animals of a hibernating or migratory species, to hibernate or migrate; or

(b) To significantly affect the local distribution or abundance of the species to which they belong.

Bats are also protected under the ***Wildlife and Countryside Act 1981*** (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

NATIONAL PLANNING POLICY

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

LOCAL PLANNING POLICY

Cornwall Local Plan 2010-2030

Cornwall Local Plan 2010-2030 can be viewed here: https://www.cornwall.gov.uk/media/ozhj5k0z/adopted-local-plan-strategic-policies-2016.pdf

Development and mitigation

Policy 2.166 Development should avoid any adverse impact on biodiversity and geodiversity. Where significant adverse impacts would result, the first priority should be relocation of the development to an alternative site. If impacts cannot be avoided then suitable mitigation is required. If that is not possible, then full compensation must be provided. 2.167 Planning applications which have the potential to impact on biodiversity and geodiversity (including but not restricted to, Local Nature Reserves (LNR), Regionally Important Geological/ Geomorphological Sites (RIGs), and habitats of species of principal importance for biodiversity) will need to be accompanied by ecological statements, which describe the ecological value of the site and the nature and extent of any impact of the proposed development. They should outline any mitigation measures and the steps to be taken to enhance biodiversity features, avoid adverse impact on ecological features and where appropriate manage the biodiversity interest, as part of the proposals. Further information on the standard of surveying and reporting required is set out in the biodiversity SPD being prepared by the Council to assist applicants.

The Cornwall Planning for Biodiversity and Net Gain Supplementary Planning Document 16/10/2018

The Cornwall Planning for Biodiversity and Net Gain Supplementary Planning Document can be viewed here: https://www.cornwall.gov.uk/media/v1roqk0x/planning-for-biodiversity-and-net-gain-spd-v11.pdf

The following species could be present on the site or in the surrounding area (based on the site survey and a review of the magic.gov.uk database) and are included in the plan:

- Species: Barbastelle bat, Greater horseshoe bat, Lesser horseshoe bat, Soprano pipistrelle bat, Brown long-eared bat, Noctule bat,

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by Natural England will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008).

There are 17 species of bat breeding in England and Natural England issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below).
- That there is no satisfactory alternative.
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

1. include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
2. scientific and educational purposes.
3. ringing or marking; and,
4. conserving wild animals.

Development works fall under the first purpose and Natural England issues bat mitigation licences for developments.

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision.
- Policy 2; provides greater flexibility in the location of compensatory habitat.
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.