

PRELIMINARY ECOLOGICAL APPRAISAL & PRELIMINARY BAT ROOST ASSESSMENT OF:

AMARYLLIS
BUZZA HILL
HUGH TOWN
ST MARY'S
ISLES OF SCILLY
TR21 0NQ

Client: Mr and Mrs C & J Jones

Our reference: BS29-2020

Report date: 22nd April 2020

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REPORT ISSUED IN ELECTRONIC FORMAT ONLY

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Contents

Non-Technical Summary	4
1.0 Introduction	5
1.1 Survey and reporting	5
1.2 The application site.....	5
1.3 Details of proposed works	5
2.0 Methodology	6
2.1 Preliminary Ecological Appraisal - Desk Study.....	6
2.2 Preliminary Bat Roost Assessment.....	6
2.3 Classification of building	7
2.4 Surveyor details.....	7
3. Results	10
Preliminary Ecological Appraisal	10
3.1 Pre-existing information on bat species	10
3.2 Statutory and non-statutory sites.....	10
3.3 Habitats surrounding the application site.....	11
3.4 Habitats within the application site	13
Preliminary Roost Assessment.....	14
3.5 External	14
3.6 Internal.....	15
Assessment and recommendations (excluding bats)	17
4.1 Protected sites.....	17
4.2 Nesting birds	17
4.3 Ecological features of importance.....	17
Recommendations and Mitigation	19
5.1 Further survey requirements.....	19
5.2 EPS Licence requirement.....	19
5.3 Mitigation – Further Action.....	19
6. Summary	22
7. Bibliography	23
APPENDIX A – SUPPLIERS	25

Non-Technical Summary

- On 22nd April 2020, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of Amaryllis, Buzza Hill, Hugh Town, St Mary's, Isles of Scilly, TR21 0NQ (BS29-2020), in order to convert and extend an existing garage within the property's total footprint to create a retirement bungalow.
- This report outlines the findings of the PEA and PRA assessment and provides advice based on the surveys' conclusions.
- During the PRA an external/internal inspection of the building was undertaken (where accessible).
- All areas could be accessed and evaluated for roost potential and for evidence of bats.
- No evidence of nesting birds was found.
- Mammal droppings were found during the inspection, these were of Brown Rat and House Mouse
- The immediate habitat surrounding the proposed development provides tree cover for bats within 5m of the building and there are several species of shrub and plant that may attract a variety of invertebrates which bats may prey upon, making the immediate habitat optimal for bats to utilise.
- The surrounding habitat provides many opportunities to link the development to the wider countryside, providing optimal foraging and commuting conditions for several species of bat. Access to these habitats fall within the typical core sustenance zones of all 6 species of bat recorded on the islands.
- The proposed development, both externally and internally, presented with negligible features which all recorded species of bat could potentially use as a roost; therefore, the characteristics of the building and the surrounding habitat suggest negligible roost potential for bats.
- To assist in meeting both national and local planning policy obligations for net gains in biodiversity the proposed development should undertake at least one of the suggested enhancement measures outlined in this report
- The recommendations of this PEA and PRA are that no further surveys or an EPS license application are required
- Other than bats, if the recommendations given in this report are adhered to, there should be no further ecological constraints to the proposal.
- **This report is sufficient to support a planning application.**

1.0 Introduction

1.1 Survey and reporting

This report details the results of a preliminary ecological appraisal and a preliminary bat roost assessment of Amaryllis, Buzza Hill, Hugh Town, St Mary's, Isles of Scilly, TR21 0NQ. The survey, carried out on the 22nd April 2020, was undertaken to inform proposals to convert and extend an existing garage within the property's total footprint to create a retirement bungalow.

1.2 The application site

The development is located along the south-eastern edge of Hugh Town, St Mary's (National Grid Reference SV9066410351). The application site is comprised of 2 detached dwellings and a single garage all set within their own grounds. The total footprint for all the buildings is approximately 340m², the footprint for the proposed development is currently 25m² (see Photo 1.) and the sites total footprint being approximately 2,151m² (red area, see Figure 1).

1.3 Details of proposed works

The proposal is to convert and extend the existing garage to create a new retirement bungalow. The new east/west extensions will tie into the existing garages roof structure at a lower level than the existing ridge, but maintain the north and south-facing gable ends.



Figure 1. Location



Photo 1.

2.0 Methodology

2.1 Preliminary Ecological Appraisal - Desk Study

A desk study data search was undertaken. This involved carrying out a review of the Local Records Centres (LRC) available records for bat species and publicly available datasets and citations of statutory designated sites of importance for nature conservation for sites within the zone of influence (ZOI) of the survey area (considered to be a maximum of 2km in this case). The desk study was also undertaken to identify habitats and features that are likely to be important for bats and assess their connectivity through the use of aerial photographs.

2.2 Preliminary Bat Roost Assessment

The Preliminary Bat Roost Assessment comprised a survey of the building for bats, signs of bats and features potentially suitable for use by roosting bats, and an assessment of the surrounding habitat in terms of its suitability for commuting and foraging bats.

The survey consisted of a ground based inspection and a detailed search of the interior and exterior of the building (from ground level), looking for bats and/or evidence of bats including droppings (on walls and windowsills and in roof and loft spaces), rub or scratch marks, staining at potential roosts and exit holes, live or dead bats and features, such as raised or missing tiles, potentially suitable for use by roosting bats. Binoculars, a ladder and a high-powered torch were used as required.

2.3 Classification of building

The building was classified according to its suitability for use by roosting bats. The classification was dependent on a number of factors including (but not limited to):

- Bats and/or signs of bats;
- External and internal features potentially suitable for use by roosting bats (e.g. raised or missing tiles, gaps behind fascia boards etc);
- Setting;
- Night time light levels;
- Disturbance levels;
- Proximity of suitable foraging habitat and commuting routes (e.g. ponds, streams, woodland, large gardens, hedgerows).

The categories used to classify buildings and the survey effort required to determine the presence or absence of bats (as per the Bat Conservation Trust's Bat Survey Guidelines¹, referred to by Natural England in their standing advice to planning officers) are described in Table 1 (see below).

2.4 Surveyor details

The survey was undertaken by Darren Mason BSc (Hons) of the Isles of Scilly Wildlife Trust. Darren has undertaken professional Bat Licence Training and holds a Natural England WML-A34-Level 2 (Class 2 License); registration number: 2020-46277-CLS-CLS which permits him to survey bats using artificial light and endoscopes and capture bats using hand and hand-held static nets.

Table 1 – Description of the categories used to classify a building’s bat roost potential and the survey effort required to determine the likely presence or absence of bats

	Roost status	Description	Survey effort required to determine the likely presence or absence of bats
Bat Roost Potential	High	Numerous features potentially suitable for use by roosting bats, optimal or good quality bat foraging habitat nearby and good habitat connectivity. Alternatively, a building with fewer features potentially suitable for use by roosting bats and optimal foraging habitat nearby.	Three dusk emergence and/or pre-dawn re-entry surveys between May and September. Optimum period May – August. Two surveys should be undertaken during the optimal period and at least one survey should be a pre-dawn survey.
	Moderate	More than a few features potentially suitable for use by roosting bats, good foraging habitat nearby and limited habitat connectivity. Alternatively, a building with a few features potentially suitable for use by roosting bats but optimal foraging habitat nearby.	Two or three dusk emergence and/or pre-dawn re-entry surveys between May and September (but only if features will be affected by the proposals).
	Low	Only a few features potentially suitable for use by roosting bats but good bat foraging habitat nearby. Alternatively, a building with more than a few features potentially suitable for use by roosting bats but sub-optimal foraging habitat nearby and limited habitat connectivity.	One or two dusk emergence and/or pre-dawn re-entry surveys between May and September (but only if features will be affected by the proposals).
	Negligible	Very few features potentially suitable for use by roosting bats and / or in an area (such as a densely populated urban area) which has limited habitat connectivity and poor foraging habitat.	No further surveys required.

Table 1. Categorising and classifying a building’s bat roost potential

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

3. Results

Preliminary Ecological Appraisal

3.1 Pre-existing information on bat species

The desk study showed that no species of bat had previously been recorded within the building. A data search of LRC records for bats revealed information on 6 species of bat recorded within the 2km ZOI of the site. The species conclusively identified were Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Brown Long-eared Bat (*Plecotus auritus*) both UK Biodiversity Action Plan (BAP) priority species, Whiskered Bat (*Myotis mystacinus*), Leisler's Bat (*Nyctalus leisleri*) and the rare Nathusius Pipistrelle (*Pipistrellus nathusii*). Thirteen bat roosts are known to exist within the 2km of the proposed development, with 2 known roosts within 500m of the property, the nearest being 238 north-west of the proposed development.

3.2 Statutory and non-statutory sites

In addition, the desk study revealed the presence of the following statutory designated sites within the 2Km ZOI of the site:

- i.) **Peninnis Head SSSI** – Lying 362m due south of the proposed development is Peninnis Head SSSI. The site designated primarily for its maritime heathland, maritime grassland and scrub habitats together with good populations of a number of rare plant and lichen species, in addition to its significant quaternary geomorphology.

- ii.) **Lower Moors SSSI** – Situated 363m east-north-east of Amaryllis is Lower Moors SSSI. A topogenous mire that has a range of wetland habitats supporting a diverse range of wetland wildflower species, including the Nationally Scarce Tubular Water-dropwort (*Oenanthe fistulosa*). The site also holds locally important populations of Royal Fern (*Osmunda regalis*) and Southern Marsh Orchid (*Dactylorhiza praetermissa*) and is particularly important feeding for passage and wintering birds including Corncrake (*Crex crex*) and Spotted Crake (*Porzana porzana*).

- iii.) **Higher Moors & Porth Hellick Pool SSSI** – 1.4km east north-east of the proposed development is Higher Moors SSSI. A topogenous mire designated for several rare and notable plant species) including; Bog pimpernel (*Anagallis tenella*), Star Sedge (*Carex echinata*) and Marsh St John's-wort (*Hypericum elodes*).
- iv.) **Porthloo SSSI** – Situated 1.06km north-east of Amaryllis lies Porthloo SSSI designated for its geology, particularly for its Quaternary sediments in the cliffs that show changes in the climates and environments of the Quaternary period in Scilly.

3.3 Habitats surrounding the application site

Amaryllis is situated within the Built-Up Areas Boundaries² (2011) for England and Wales (published by the Office for National Statistics, Geography), lying just within its south-eastern border. The street lighting throughout Hugh Town is intermittent, consisting primarily of orange sodium lighting. Though intermittent, there are three lights within the immediate locality of the proposed development, the nearest being only situated at a small private car park 36m east-north-east and at the junction of King Edward's Lane and Hospital Lane 114m south east of the development respectively.

Immediately south of Amaryllis is a small complex of allotments bounded by mature non-native hedgerows which provides access to further hedgerow bound fields of Peninnis Farm, before reaching the open headland of Peninnis Head SSSI with its mosaic of conservation grazed maritime grassland, heathland and scrub. To the east there is a small suburban area with a mixture of small and large enclosed gardens with a variety of shrubs and trees of varying age and height. These gardens back onto further allotments below Pilot's Retreat before reaching the wetland of Lower Moors SSSI, which is dominated by its reedbed, wet woodland and open water habitats. Further east beyond the wetland the patchwork of small hedgerow enclosed fields continues beyond the 2km zone of interest. These fields are interspersed with small to large deciduous Elm (*Ulmus* sp.) or coniferous shelterbelts dominated by Monterey and Lodgepole Pines (*Pinus radiata* and *Pinus contorta*). This habitat helps to link to the wider countryside and to sites such as Higher Moors SSSI, another wetland complex, the woodland block at Holy Vale and the large, open expanse of semi-natural grassland at the airport.

To the north the suburban mixture of mature enclosed gardens continue leading to the Old School site at Carn Thomas that provides areas of open grassland, scrub and deciduous woodland, before reaching the

coast 370m away. North-west the landscape is dominated by further small cultivated fields and improved pasture before backing onto the large open expanse of the golf course with its mown semi-natural grassland and heathland habitat.

Immediately west lies Buzza Hill. The hill comprises an open area of grassland and scrub, which at its base further mature gardens of large detached properties are situated. The hill and these properties provide access to the main conurbation of Hugh Town and the strandline of Porthcressa beach. Five hundred and sixty metres west the beach meets the eastern slopes of the Garrison with its mixed woodland and low lying cliffs. The Garrison also contains further habitat including cattle-grazed mosaic of grassland and scrub, shelterbelts and areas of open amenity grassland for recreation.

In summary, the habitat surrounding the proposed development and its links to the wider countryside provides optimal foraging habitat for all 6 species of bat, despite Amaryllis being situated in a suburban setting with its associated street lighting. The dark corridors, particularly to the south and east of the property and the use of the beach at Porthcressa will assist in bats reaching favoured feeding habitat. These dark corridors are important as it has been shown that street lighting can negatively impact upon a bats commuting and foraging routes³. In contrast, it has been shown that species such as Common Pipistrelle and Leisler's Bat will feed around street-lighting, to take advantage of the insectivorous prey that congregates around them⁴. However this has been shown to be dependent on the light emitting from the lamps, with orange sodium light (found here in this instance) having the greatest negative impact on feeding opportunities⁴.

Though Soprano Pipistrelle have been shown to utilise more built up areas compared to Common Pipistrelle⁵, all species of bat require 'edge' habitat (like hedgerows) to both feed from and commute to other feeding areas^{6, 7&8}. This type of habitat is frequent throughout St Mary's particularly to the north and east of Amaryllis, with only a limited number of areas which are very open and which most species of bat prefer not to utilise⁹. These continuous linked hedgerows provides access to a wider variety of habitats for which Common Pipistrelle are known to take advantage of¹⁰, including the strand-line along the beaches¹¹. The former commuting routes are also important for both Soprano and Nathusius Pipistrelle as they provide commuting and feeding corridors to their preferred habitat of open water and watercourses^{6, 7&8}, habitats such as those found at both Lower and Higher Moors SSSIs and Holy Vale. The location of

Amaryllis also falls within the core sustenance zones of all three species being 1.7km, 1.5km to 3km respectively¹².

In contrast, Whiskered Bat in Britain has been shown to favour more open areas of semi-natural grassland and pasture with scattered hedgerows, or small woodland blocks^{13&14} in which to feed. Habitat such as the Garrison to the west and the golf course to the north-east are typical examples of such habitat which they could exploit and fall within the typical core sustenance zone for this species¹³. Brown Long-eared bat have been shown to prefer to feed in open canopy deciduous woodland typically located close to their roosts, which would also have larger tracts of woodland available to feed no greater than .5km away¹⁵, making the Garrison to the west and the former school site at Carn Thomas potential sites to feed. Both sites fall within this species core sustenance zone of 1.1km¹⁶. Likewise, Leisler's bat also take advantage of woodlands, particularly woodland edge¹⁷, making these woodland blocks and the woodlands at Lower Moors, Higher Moors and Holy Vale and even Trenoweth shelterbelt at 2.5km away as Leisler's bat has a large core sustenance zone of 4.2-7.4km¹⁸. Leisler's bats in England are also known to take advantage of open areas of pasture¹⁸, making the coastal headlands to the south, west and east potential feeding areas also. This is in contrast to most other species of bat which typically avoid this type of open habitat, particularly during peak times of prey abundance (dusk and dawn) to avoid predation^{19&20}.

3.4 Habitats within the application site

Amaryllis and its associated buildings sits within its own footprint, bounded to the south by a well-maintained non-native hedge of Cheesewood (*Pittosporum tenuifolium*), to the west and north west a combination of mature trees including Dutch Elm (*Ulmus x hollandica*) and Maidenhair (*Muehlenbeckia* sp.), whilst the boundary to the north and north-east is a dry stone wall. The proposed development sits at the north-east corner of the footprint below the drystone wall (the site appears to be dug slightly into the hill side), here along the northern boundary species include a mixture of non-native and native shrubs including; European Gorse (*Ulex europaeus*), Common Broom (*Cytisus scoparius*), Variegated Holly (*Ilex aquifolium* sp.), Tree Bedstraw (*Coprosma repens*), Cabbage Palm (*Cordyline australis*), Pride of Madeira (*Echium candicans*), Crimson bromeliad (*Fascicularia bicolor*), French Hydrangea (*Hydrangea macrophylla*), Butterfly bush (*Buddleia davidii*), Shrubby Veronica (*Hebe* sp.) and New Zealand Flax (*Phormium tenax*). Scattered amongst these shrubs ornamental plants included; Tree Houseleek (*Aeonium* sp.), African Lily (*Agapanthus africanus*), Cape Daisy (*Osteopermum* sp.), Ice plant (*Mesembryanthemum* sp.). Bulbs included; Spanish Bluebell (*Hyacinthoides hispanica*), Three-cornered Leek (*Allium triquetrum*), Bear's

Breeches (*Acanthus mollis*), Montbretia (*Crocsmia aurea*) and the native climber Common Ivy (*Hedera helix*).

In summary, the habitat within the footprint of Amaryllis and around the proposed garage development provide cover for bats within 5m of the building and there are several species of shrub and plant that may attract a variety of invertebrates which bats may prey upon, making the immediate habitat optimal for bats leaving and entering a roost and to feed from.

Preliminary Roost Assessment

3.5 External

The garage at Amaryllis is modern in construction, being a single skin, block-built smooth-rendered building with UPVc windows, door and guttering. The garage is open gable ended in design with wooden fascia present on all elevations, attached directly onto the block-work which is tightly bound throughout. The roof has an east/west aspect with an approximate pitch of 30⁰ and is constructed with modern well-fitting slate tiles that are capped with concrete ridge tiles with the mortar between the ridge tiles and the upper roof tiles was intact throughout.

The western and eastern aspects are dominated by well-fitted UPVc door and window furniture, with no obvious gaps between the block-work and frames and with no glazing missing. The southern aspect is dominated by the entrance into the garage, which was open during the survey, but is closed at all other times by a modern roller door. Also present on the southern elevation was a security light (PIR) with a movement sensor. The design of the light encourages light spill in all directions apart from upwards. Here again the frame and lintel were in good condition with no obvious gaps. The northern elevation consisted only of smooth-render. At the apex of each gable end (north and south elevations) a decorative piece of woodwork used to cover the butt joint of the fascia which stood proud of the elevation was inspected (see Photo 2.) as the gap behind could be used by bats. However, on inspection numerous cobwebs were present and no grease marks or urine stains were noted.

In summary the development externally has minimal features potentially suitable for roosting bats which consisted of:

- A gap created as a result of a decorative piece of woodwork standing proud of the north and south elevations at the apex of the gable ends (see Photo 2).



Photo 2.

3.6 Internal

The internal roof space of the garage occupies the whole of the area between the eaves and the ridge of the roof. The design incorporates two top chords (rafters) which tie into a central ridge board that has several simple kingpost for support situated along its length (see photo 3.).



Photo 3.



Photo 4

All joints are 'butt joints' in design that create no crevices. Modern woven sarking felt sits between the rafters and the tiles. No modern breathable membrane is present. The felt is in good condition throughout. No lift insulation was present, but the floor is boarded (separating the garage room below). Here, particularly in the south-west corner numerous Brown Rat (*Rattus norvegicus*) droppings along with droppings of House Mouse (*Mus musculus*) were found (see photo 4.). No evidence of bat droppings were recorded on the floor, or the scattered toolboxes in the loft space, neither were any wing caches of prey species such as moth or butterfly. A brief inspection of the garage room below, particularly the shelves and window ledges to search for bat droppings were also undertaken,

but none were found.

In summary, it has been shown that all 3 pipistrelle species of bat along with Whiskered bat typically roost within buildings, utilising a very wide variety of features^{14 & 21} including, crevices, cracks, holes etc either as individuals up to several hundred at a time.

In contrast, Brown Long-eared bats prefer to roost in roof voids that provide flight space within their chosen roost, or roofs that are divided into several smaller compartments. Brown Long-eared bats also typically roost between the joints where the rafters meet the ridge board, or along the ridge board itself¹⁵. Brown Long-eared bats also show high roost fidelity where it would be expected to see concentrations of droppings, which was not found during the roost assessment.

Leisler's bat in contrast to the other species is a typical tree dwelling species, particularly during the non-breeding season with roosts typically found in cavities such as mechanical breaks, rot cavities, loose bark and woodpecker holes of large live trees, in open conditions¹⁷. However, it has been shown that nursery roosts of Leisler's bat show a limited preference for buildings, but only those with lined with roof felt and are constructed of stone, rather than of block and brick¹⁸.

Therefore, the garage at Amaryllis presents with negligible features suitable for roosting crevice-dwelling bats.

Assessment and recommendations (excluding bats)

4.1 Protected sites

The proposed development falls into the SSSI Impact Risk Zones of Lower Moors, Higher Moors and Peninnis Head SSSIs. Impact zones are used in the assessment of planning applications for likely impacts on SSSI's, Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar Sites (England). However, the likely attributable impact in these zones is for residential developments of 100, or 50 or more houses outside existing settlement/urban areas. Therefore, in this instance the development is not likely to impact on the surrounding SSSIs.

4.2 Nesting birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). Section 1 of this Act makes it an offence to kill, injure or take any wild bird, or intentionally to take damage or destroy the nest of any wild bird while that nest is in use or being built²². During this survey, no evidence of nesting birds was found. However, if demolition was to commence between the months of March and August inclusive, then the site would need to be checked first for nesting birds and if, any evidence of breeding activity was found, or nests are identified works that would disturb the adults, the nest or young must be postponed until all young have fledged the nest and it is no longer in use.

4.3 Ecological features of importance

To identify which ecological features are important and which could potentially be affected by the proposed project, an evaluation of their importance for example; in a geographical context, degree of scarcity or level of protected status needs to be undertaken²³. The table below outlines those features identified as important, the nature conservation legislation relevant to those features and an assessment of the level of impact from the proposed development on those features.

Ecological Feature	Relevant Legislation	Evaluation (of importance)	Mitigation Hierarchy	Impact Level
Habitats:				
Building (roost sites)	CHSR, W&CA, NPPF	Local	A, M, E	Low
<p>Impacts:</p> <p>Demolition: – None predicted as long as Reasonable Avoidance Measures (RAM) are followed (see section 5)</p> <p>Construction: – None. Positive impact may result through enhancement by creating/incorporating new roosts in the building²⁴</p> <p>Operational impact: - None predicted, however please note a summary of criminal offences with respect to bats and their roosts. This can be found at: http://www.bats.org.uk/pages/bats_and_the_law.html</p>				
Species:				
Bats	CHSR, W&CA, NPPF	International	A, M, E	Medium
<p>Impacts:</p> <p>Demolition – None predicted as long as Reasonable Avoidance Measures (RAM) are followed (see section 5)</p> <p>Construction/post-construction - Positive impact may result through enhancement by increased roost availability^{24, 25}</p> <p>Operational impact: - None predicted, however please note a summary of criminal offences with respect to bats and roosts. This can be found at: http://www.bats.org.uk/pages/bats_and_the_law.html</p>				
Key to Legislation and Mitigation Hierarchy				
<p>CHSR – Conservation of Habitats and Species Regulations 2017²⁶ - http://www.legislation.gov.uk/ukxi/2017/1012/made</p> <p>W&CA – Wildlife & Countryside Act 1981 (as amended)²² - http://www.legislation.gov.uk/ukpga/1981/69/contents</p> <p>NPPF – National Planning Policy Framework 2019²⁵ - https://www.gov.uk/government/publications/national-planning-policy-framework--2</p> <p>A – Avoid, M – Mitigate, C – Compensate, E - Enhancement</p>				

Recommendations and Mitigation

The recommendations in this section are provided as information only and specialist legal advice may be required. If works are delayed for more than one year, then re-assessment may be required.

5.1 Further survey requirements

In the professional opinion of the author there are **no further surveys required**. The justification for this is; BCT guidance suggests that for buildings with negligible roost potential no further surveys are required¹. The survey carried out to date follows this guidance, is proportionate to the scale of the development and the information provided is believed to be sufficient to inform the planning decision.

5.2 EPS Licence requirement

For any development that is likely to commit an offence (or offences) in respect to a European Protected Species (EPS) i.e. bat, or their habitat, a licence will be required. In this instance based on sufficient survey work **no licence is required**. If, in the unlikely event a bat were found during the demolition phase of the project, Reasonable Avoidance Measures (RAM) must be followed and will determine any further action, such as licensing if necessary.

5.3 Mitigation – Further Action

As there is a very low risk that bats may roost within the building, prior to demolition, precautions should be taken to reduce the probability of committing an offence. By undertaking Reasonable Avoidance Measures (RAM), if affected RAM should include:

Avoidance – Bats

- i. When roofing works are planned these should avoid the main breeding and mating season of *Vespertilionidae* bats, **work should typically take place between the 1st October and 1st May inclusive**.
- ii. Ensure all workers on site (including sub-contractors) are made familiar with bat legislation and agree to work in accordance with and fully follow best practice measures.
- iii. Carry out prior to demolition careful checks of any cracks/crevices and cavities in or on the building. Signs of usage include; bat droppings, dis-colouration or polishing of access points where bats rub against them, urine stains and a lack of cobwebs, particularly if other crevices around them have plenty.

- iv. Individual bats may be found in/under; cladding, between timber boards, between corrugated sheeting, in soffit boxes, behind lead flashing and sometimes just clinging to timber beams around joins as well as others areas. When any of these are removed, please do so carefully, lifting outwardly, and checking for bats continually. If in doubt, consult a licensed bat worker.
- v. Try to minimise any dust generated from demolition works from entering off-site buildings and gardens
- vi. In the unlikely event that a bat is found please see below:

1. At no point should a worker handle a bat. Untrained handling may cause undue stress and injury to the bat, and if bitten may expose the worker to rabies-related European Bat Lyssavirus
2. Where possible replace any covering without damaging the bat, then halt works and contact **Natural England** (Tel: 0845 601 4523), or the **Bat Conservation Trust Helpline** (0845 1300 228), or **IoSWT** (01720 422153) for advice.
3. Any bats that go to ground should be covered with a box and left alone until a licensed bat worker arrives to assess the condition of the bat
4. If the bat attempts to fly at any point allow it to do so. Preventing natural behavior will cause unnecessary stress and may cause injury. Attempt to see where bat goes. If the bat returns to the building, halt works and report the escaped bat to the local bat worker

Enhancement (E) – Bats

The Isles of Scilly have the most southern population of Common Pipistrelle (*Pipistrellus pipistrellus*) bats in the United Kingdom. The islands also hold small populations of Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Brown Long-eared Bat (*Plecotus auritus*) both UK Biodiversity Action Plan (BAP) priority species and holds records for the rare Nathusius Pipistrelle (*Pipistrellus nathusii*). Any loss of roosting, commuting or foraging sites could have a detrimental effect on these species distributions as a whole and cause a net loss in biodiversity on the islands.

Each local planning authority in England and Wales has a statutory obligation under Part 3 Section 40 of the Natural Environment & Rural Communities Act 2006²⁷ (NERC 2006) to have due regard for biodiversity when carrying out their functions and under Section 15 paragraph 170(d) of the NPPF 2019, all planning policies and decisions shall contribute to and enhance the natural and local environment by providing net

gains in biodiversity. **Therefore, to assist in meeting these obligations at least one of the following suggestions should be undertaken:**

- i. All new roofing felt laid to be traditional Type 2 bitumen felt, as modern breathable membranes have been shown to kill bats²⁸.
- ii. If Type 2 bitumen felt is used, then select 10 tiles on each roof aspect (if tiles are to be used) and raise their leading edge by 25mm (using mortar) to create a wedge shaped crevice that provides access to the underlying felt, to provide potential roost space
- iii. Alternatively, Erect two free-standing bat boxes developed for crevice-dwelling species (see figure 2 for examples and Appendix A for supplier details) one on each gable end of the main building. Erect at the apex of the gable ends below the soffit boards (the west and east elevations).



Figure 2. free-standing bat box examples

https://www.nhbs.com/browse/search?q=bat%20boxes&hPP=30&idx=titles&p=0&is_v=1&qtview=158636

<https://www.nhbs.com/browse/search?q=bat+boxes&qtview=176916>

6. Summary

The garage at Amaryllis is deemed as having negligible roost potential for bats, despite the optimal foraging habitat immediately surrounding the proposed development and its commuting and foraging links to the wider countryside. In the professional opinion of the author no further surveys are required and no EPS license is required. However, to enhance the area for local populations of bat and assist the local authority's obligation to provide net gain in biodiversity at least one enhancement measure outlined in this report should be undertaken.

Other than bats, if the recommendations given in this report are adhered to, there should be no further ecological constraints to the proposal.

7. Bibliography

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APPENDIX A – SUPPLIERS

1. Natural History Book Service
1-6 The Stables
Ford Road
Totnes
Devon, TQ9 5LE
Tel: 01803 865913
Email: customer.services@nhbs.com
Website: <https://www.nhbs.com/>
2. Habibat
Tel: 01642 724626
Email: <http://www.habibat.co.uk/contact>
Website: www.habibat.co.uk
3. Dreadnought Tiles
Dreadnought Works
Brierley Hilly
West Midlands, DY5 4TH
Tel: 01384 77405
Email: sales@dreadnought-tiles.co.uk
Website: www.dreadnought-tiles.co.uk
4. Wildlife & Countryside Services
Covert Cottage
Pentre Lane
Rhuddlan
North Wales, LL18 6LA
Tel: 0333 9000927
Email: support@wildlifeservices.co.uk
Website: www.wildlifeservices.co.uk
5. Wildcare
Eastgate House
Moreton Road
Longborough
Gloucestershire, GL56 0QJ
Tel: 01451 833181
Email: sales@wildcare.co.uk
Website: www.wildcare.co.uk