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Tregarthens Hotel
St Mary's, Isles of Scilly

Ecological Appraisal
and Bat Surveys

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BE255b

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Prepared by:
Dr Janine Bright CMIEEM CEnv

For:
Tregarthen's Hotel Limited

Bright Environment
Meadow Barn, Tregoney Hill, Mevagissey, Cornwall, PL26 6RH
T:07974204078 E:mail@brightenvironment.net W:www.brightenvironment.net

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1. INTRODUCTION

Tregarthen's Hotel Limited is seeking planning permission to renovate the hotel. The address of the site is Tregarthens Hotel, St Marys, Isles of Scilly, TR21 0PP. The OS Grid ref is SV 90096 10674.

Bright Environment was commissioned by Tregarthen's Hotel Limited in March 2015 to carry out an Ecological Appraisal of the proposed renovation. During the walkover survey evidence of bats was identified, further bat surveys were therefore commissioned. This report details the results from both surveys.

Bright Environment produced a report in July 2015 to detail the ecological impacts of a proposed scheme designed by Scott & Co involving demolition of parts of the hotel, construction of new guest accommodation and internal renovations. However Historic England raised objections with the Scott & Co scheme due to concerns over potential impacts to the Garrison Scheduled Monument. A new scheme has been designed by Grainge Architects and this updated report considers the ecological impacts of this proposed scheme, detailed as follows:

- Demolition of 3 number lower ground floor hotel bedrooms, and replacement with 6 number C3 use class dwelling units for restricted holiday letting.
- Change of use of part of the existing staff accommodation block to 2 number C3 use class dwelling units for restricted holiday letting and formation of pitched roof with chimneys, alterations to external facade of staff block including new windows, doors and cladding, demolition of redundant boiler room and chimney.
- Improvements to retained staff accommodation to include internal alterations, formation of new openings and service access.
- New pitched roof above dining room over existing flat roof. Partial demolition of flat roofed hotel reception lobby and replacement with new entrance to hotel, addition of green (Scilly Isles based mix) roof to retained flat roof area.
- Landscaping works to form outdoor dining terrace on former hotel garden. Installation of ground source heat pump, solar thermal panels and break tank for foul sewage.
- Partial demolition of wall to car park and rebuilding at lower cill level.
- Demolition of garage and bin store, and replacement with a relocated combined gas bottle and bin store.

The location of the site is shown on Map 1 (page 23) and the survey area is shown on Figure 1 (page 8). A proposed strategy plan and proposed roof plan are included in Appendix 1.

2. AIM

The aim of the report is to undertake an Ecological Impact Assessment (EcIA) of the proposed development. This involves the following:

- Describe and evaluate the ecological baseline of the site.
- Identify ecological impacts of the development.
- Design mitigation measures for adverse impacts and identify any requirements for further survey.
- Identify any residual impacts following mitigation.

The assessment has been carried in accordance with the 'Guidelines for Preliminary Ecological Appraisal' and 'Guidelines for Ecological Impact Assessment in the UK and

Ireland' produced by the Institute of Ecology and Environmental Management (IEEM, 2012 & CIEEM, 2016). The assessment is informed by UK and EU legislation, national and local planning policies. The assessment follows the guidance given in The Isles of Scilly Local Development Framework Supplementary Planning Document: Biodiversity and Geological Conservation.

During the initial walkover survey evidence of bats was found so further surveys were commissioned. The aim of these surveys was to establish whether the evidence found represents current bats use, and if so, establish numbers, species, type of roost and bat access points to inform the design of mitigation to minimise impacts on bats.

3. SURVEY METHODOLOGY

The ecological baseline of the site was assessed through a desk study and site surveys. The survey area is shown in Figure 1. A roof plan of the hotel is included as Figure 2.

3.1 Desk study

Biodiversity and ecological records for St Mary's Island were obtained from the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS). Information requested included the location and details of the following:

- Designated sites of nature conservation value (statutory and non-statutory).
- Records of protected and/or notable species, including UK and Cornwall Biodiversity Action Plan (BAP) Priority Species.

Information was also obtained from the following websites:

- www.nbn.org.uk – protected species distribution.
- www.cornwallwildlifetrust.org.uk – Cornwall BAP
- www.jncc.defra.gov.uk - UK BAP

3.2 Ecological walkover survey

A walk-over survey of the site was carried out on on 26th March 2015 to:

- identify the habitats present within the site according to the Phase 1 Habitat Survey methodology (JNCC, 1993) and compile a list of dominant and rare vascular plants. A full species lists was not compiled.
- undertake a preliminary faunal survey / habitat assessment to identify the presence or the potential of the site to support legally protected species or species of conservation importance.
- assess the ecological 'importance' of any hedges using the criteria in the Hedgerows Regulations 1997 (if applicable).
- Undertake a visual search of the hotel for bats. This included a detailed search of the interior and exterior of the hotel using a high powered torch to illuminate all areas thought suitable for bats. Any accessible cracks and crevices were investigated with the use of a torch and endoscope. The survey involved looking for bats and for evidence of their use, including droppings, staining and feeding remains.

An update walkover of the site was carried out on 27th June 2015 to identify any plants that may have been missed during the March 2015 survey.

3.3 Visual bat survey methodology

The bat surveys were carried out following the guidance given in 'Bat Surveys for Professional Ecologists – Good Practice Guidelines' (Collins, 2016).

A visual survey of all buildings within the survey area (defined in Figure 1) was carried out on 26th March 2015. During this survey the suitability of the buildings and surrounding habitats to support bats was assessed. A detailed search of the interior and exterior of the building was carried out using a high-powered torch to illuminate all areas thought suitable for bats. Any accessible cracks and crevices were investigated with the use of a torch and endoscope. The survey involved looking for bats for evidence of their use, including droppings, staining and feeding remains.

3.4 Bat emergence survey methodology

Two emergence surveys were carried out, on 26th and 28th June 2015, to record any bats emerging from the buildings surveyed and identify bat access points. The surveys commenced 15 minutes before sunset and continued until one hour after sunset. Three surveyors were employed. Surveyors used Bat Box Duet bat detectors, employing heterodyne and frequency division methods of detection. Bat calls were recorded (on a SongMeter SM2+) for computer analysis.

The survey area for the emergence surveys was informed by the visual survey and consideration of the proposed works. Surveyor's focus on the areas of the building that would be affected by the proposed works and either had features that had the potential to harbour roosting bats or areas of the building where evidence of bats was found.

3.5 Remote monitoring methodology

A remote monitoring survey was carried out from 26th June to 29th June 2015. A SongMeter (SM2+) detector was placed in the roof void of roof R5 (as indicated on Figure 2). This is the only roof void where there was a potential impact on any potential roosting bats. The detector was set to record bat calls from 1 hour before sunset until one hour after sunrise.

3.6 Baseline evaluation

Evaluation of the ecological baseline for the site was undertaken following the framework provided by CIEEM (2016). The biodiversity value of ecological features is assessed according to various characteristics; including non-statutory designations, rarity, threat, diversity (species-richness), connectivity and size of populations. Each ecological feature is assigned a biodiversity value at the following geographical scale:

- International
- UK
- National (England)
- Regional (South West)
- County
- District
- Parish
- Within immediate vicinity of site

3.7 Identification of impacts and mitigation

Assessment of impacts was undertaken following the framework provided by CIEEM (2016) and the 'Bat Mitigation Guidelines' (Mitchell-Jones, 2004).

The impacts magnitude, duration, reversibility, likelihood and nature (positive or negative) are described. Consideration to cumulative impacts is also given. Impacts are then assessed as being significant or not significant upon each valued ecological feature.

Mitigation measures to avoid or reduce impacts are included. To ensure proposed mitigation measures are adopted; Bright Environment consulted with the architect to agree achievable measures.

Any residual impacts, post mitigation are identified.

3.8 Personnel

Author: This report was prepared by Dr Janine Bright. Dr Bright has been a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) since 2001 and has been a Chartered Environmentalist (CEnv) since 2005. Dr Bright has a BSc in Environmental Science and a PhD in Ecology. She has worked as an ecological consultant since 1999.

Surveyors: Dr Bright. Protected species licenses: dormice (2016-21698-CLS-CLS), bats (2015-13156-CLS-CLS survey level 2) and Schedule 1 birds (20130998).

3.9 Limitations

The ecological surveys were carried out in March and June 2015. In March it is possible that some plants may have been missed. However it is possible to assess the value of habitats and their potential to support notable floral species. This is not considered a notable limitation for a project of this size and the nature of the habitats present, however to mitigate any limitations an update walkover was carried out in June 2015 to identify any plant species that may have been missed.

Access within the site was good and there are no limitations to report.

As ecological features can change over time it is recommended that this report is valid until June 2017. This ecological appraisal does not include a search for Tree Preservation Orders (TPO's) or Conservation Area status.

Table 1 Survey details.

Date	Type of survey	Weather conditions
26.03.15	Visual survey and ecological walkover	Dry, breezy, clear, temp 9C
26.06.15	Emergence survey	Clear, calm, dry temp 16C
26.06.15 to 29.06.15	Remote monitoring	The temperature range recorded by the remote detector whilst in the building was 20C – 26C. Average day temp for the period ranged from 18-22C and it was warm, sunny and dry for the duration.
28.06.15	Emergence survey	Patchy cloud, calm, dry, temp 15C
27.06.15	Update ecological walkover	Clear, calm, dry temp 17C

Figure 1. Aerial photograph (from Google maps 2015) showing survey area (location of the site is shown on Map 1 at the end of this report).

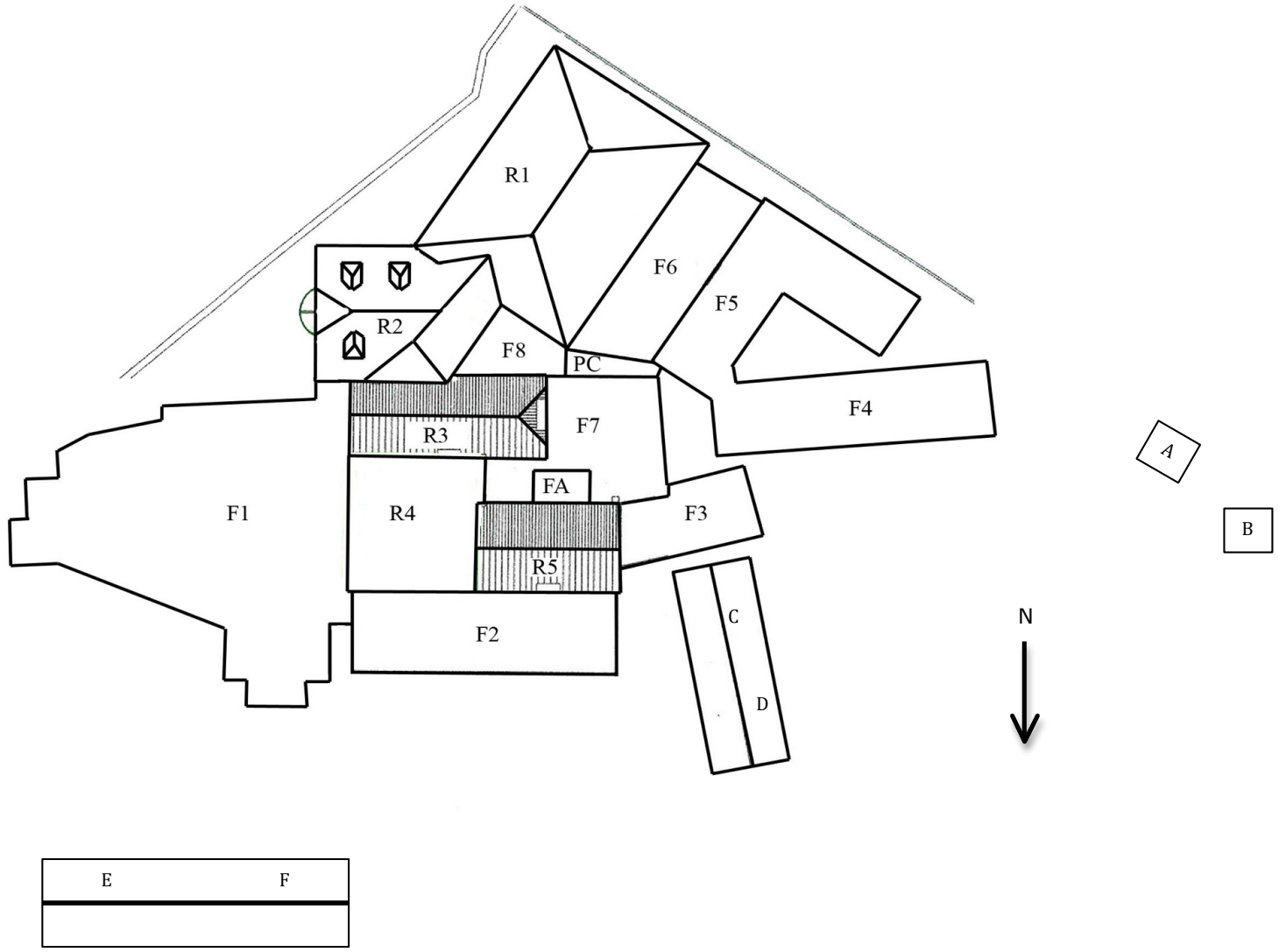

Figure 2. Roof plan of hotel (the location, shape and orientation of buildings labelled A, B, E and F are indicative and not to scale).

4. ECOLOGICAL BASELINE

4.1 Designated sites of nature conservation value

Tregarthens Hotel is not within a statutory designated site for nature conservation, however there are statutory sites nearby as follows.

The adjoining coastal (marine and intertidal) habitats are within the Isles of Scilly Special Area of Conservation (SAC). SAC's provide protected areas for certain key species and habitat types that are considered to be of European nature conservation importance, and are governed by the "Habitats Regulations" 1994 (HM Government, 1994). Formal consent from Natural England is a statutory requirement if a proposed project is likely to have a significant effect on the features for which a SAC was designated. It is important to note that operations outside of the SAC boundary may have a detrimental impact on the international feature of importance for which the site has been designated. The features for which the SAC was designated include sandbanks, mudflats, reefs, shore dock and grey seal.

There are five Sites of Special Scientific Interest (SSSI's) on St Mary's Island as follows:

- Lower Moors SSSI
- Peninnis Head SSSI
- Higher Moors & Porth Hellick Pool SSSI
- Porthloo SSSI
- Watermill Cove SSSI

Two are within 1km of the hotel. Lower Moors SSSI Lower Moors is located immediately to the east of Hugh Town and comprises a topogenous mire, exhibiting a range of wetland habitats. Penninis Head is located 1km to the southwest of the hotel and is designated for its geological value being particularly noteworthy for the prominent granite cliffs and tors but it also supports maritime heathland, maritime grassland and scrub habitats together with populations of a number of rare plant and lichen species. SSSI's are designated under s.28 of the Wildlife and Countryside Act 1981 to safeguard and enhance the characteristic plants, animals and physical features of our natural heritage (HM Government, 1981, 1985, 1989, 1991, 1992a, 1998, 2004). They are also protected under the Countryside and Rights of Way Act 2000 (HM Government, 2000). The designation covers important sites for nature conservation including those of national and international importance. As part of the planning process, Natural England is consulted over any proposed developments that may impact upon a SSSI. Natural England specify a list of operations likely to damage (OLDS) the special interest of a SSSI. Under the Acts, Natural England has to give written consent before any of these operations, or any other activities, which may affect the SSSI, can be carried out.

Parts of the southern coastline of St Mary's are within a Marine Conservation Zone (MCZ), designated under the Marine and Coastal Access Act 2009. MCZ's protect nationally important marine wildlife, habitats, geology and geomorphology in English inshore waters and offshore waters next to England, Wales and Northern Ireland.

It is also noteworthy to include that the Isles of Scilly is an Area of Outstanding Natural Beauty (AONB) and that the site lies within a Heritage coast area. This is a non-statutory designation whereby these sites are managed so that their natural beauty is conserved and where appropriate, the accessibility for visitors is improved. Also of note is that the Isles of Scilly Wildlife Trust cares for approximately 60% of the landmass of Scilly and includes all the uninhabited islands.

4.2 Habitat Description and Evaluation

This section describes the habitats present, according to the standard Phase 1 notation (JNCC, 2007b).

The survey area includes Tregarthens Hotel and associated buildings and grounds (see Figure 1). The hotel is a complex structure with single, two-storey and three storey sections. The roof-scape is also complex including flat roof sections, pitched roofs with voids and dormer sections. Also included within the hotel grounds are four semi-detached stone cottages, and concrete block outbuildings. A roof plan with references is included as Figure 2. Within the hotel grounds are small garden areas, flower borders and beds. The site is bound by an access road along the northern boundary, beyond this is a stone battery wall marking the back of the seashore (see Photograph 4). The western boundary is marked by a tall granite Garrison Wall. The road known as Garrison Hill marks the southern boundary.

The site does not contain any semi-natural habitats. Most of the site is built environment of buildings with concrete/tarmac between. Green landscape is limited to small areas of lawn and garden borders (see Figure 1).

Each of the habitats recorded during the Phase 1 Habitat Survey are described below. The dominant species recorded within each habitat are given together with any notable floral species observed.

Photograph 1. Front (north) elevation of Tregarthens Hotel

4.2.1 Amenity grassland and introduced shrub

The garden areas associated with the hotel are very small in extent. There are areas of lawn with perennial ryegrass, common bent grass, cock's-foot, daisy, white clover, common cat's-ear and ribwort plantain. The borders and flowerbeds support kitchen herbs and garden plants that are mostly non-native and common in the residential gardens of the island, including *Phormia* sp., *Agapanthus*, *Echium* sp. and acaves. Native species include alexander's and butterbur. No plant species of biodiversity value were observed within the gardens. The garden areas of the hotel are not considered to have notable biodiversity value.

Photograph 2. Kitchen garden

Photograph 3. Lawn and gardens

4.2.2 Buildings

The hotel is a complex structure including single, two and three-storey sections and semi-detached cottages and outbuildings. These structures are described in more detail in section 4.4.1 where there potential to support bats is assessed. The buildings do not have any biodiversity value.

4.2.3 Stone wall

The western boundary is marked by a tall granite Garrison Wall, there is a stone wall along the road known as Garrison Hill and a stone retaining wall is present between the access road and the seashore on the northern boundary (Photographs 4 & 5). The joints between these stones have tight cement mortar and there is little plant cover. *Aeonium* sp. were observed in the Garrison wall. There is also a stonewall with an earth core and without cement mortar between the northern access road and the kitchen garden (shown on Photograph 5). Sea spleenwort was noted here.

Due to a lack of earth and/or little/sparse vegetation cover the walls cannot be described as hedgerows and therefore would not be protected by the Hedgerow Regulations 1997 nor do they qualify as Biodiversity Action Plan (BAP) priority habitat. The Isles of Scilly Biodiversity Audit 2008 (Lewis *et al*., 2008) states that there are virtually no true native hedgerows in the Isles of Scilly. Lewis *et al*. (2008) states that 'hedges' come in three main types, dry-stone walling (single leaved), 'Cornish hedges' (double leaved) and granite masonry (such as the Garrison walls). All three types are present within/along the boundaries of Tregarthens Hotel. Such boundary features can play a role in enabling species to move through the landscape by connecting semi-natural habitats. However those within the site are present within an urban setting and do not have connections with semi-natural habitat. The wall with the earth core shown on Photograph 5 may provide a refuge for invertebrates and small mammals. The walls may also support notable lichen populations. They are likely to be of value at the level of the site.

Photographs 4 & 5. Stone walls either side of access road on northern boundary

4.2.4 Bare ground

The bare ground within the Hotel is concrete or tarmac and of no biodiversity interest.

4.3 Floral Species Description and Evaluation

This section describes and evaluates the species of plants and animals found within the site based on the results of the field survey.

4.3.1 Higher Plants

The desk study identified that 91 notable plants species have been recorded on St Mary's. This is a very high number of notable records and reflects the value of the semi-natural habitats on St Marys'. The list was reviewed and none of the species listed were observed within the hotel grounds during the walkover surveys and none of the desk

study records relate to the hotel site. No notable higher plants were observed. The site does not contain any semi-natural habitats. Most of the site is built environment of buildings with concrete/tarmac between. Green landscape is limited to small areas of lawn and garden borders. The site is considered unlikely to be of value for higher plants.

4.3.2 Lower Plants

A specialised survey for non-vascular plants, bryophytes and lichens, was outside the scope of this study. However an assessment of the habitats potential to support notable assemblages was made during the site survey. It is possible that the stonewalls within and around the boundaries support notable lichens. However as mitigation has been designed to protect and reuse the stones, to avoid impacts on lichens, a specialist lower plant survey was not required.

4.3.3 Invasive non-native species

The small garden areas around the hotel support three invasive weed species that are included under Schedule 9 of the Wildlife and Countryside Act 1981; making it an offence to 'cause them to spread'. These are:

- Montbretia (*Crocosmia x crocosmiiflora*)
- Three cornered garlic (*Allium triquetrum*)
- Hottentot fig (*Carpobrotus edulis*)

Invasive species represent a significant threat to nature conservation. Not only do they directly compete with the native flora, but they also threaten native fauna indirectly through the displacement of their food plants.

4.4 Faunal Species Description and Evaluation

4.4.1 Lesser white-toothed shrew

The lesser white-toothed shrew (otherwise known as the 'Scilly shrew') is absent from mainland Britain but is found on the Isles of Scilly. It is mostly associated with the seashore and feeds on a variety of invertebrates including small crustaceans that live amongst rocks on the seashore. The desk study identified 29 records for lesser white-toothed shrew on St Mary's. One of the records was from Garrison Hill, which borders the site. The Scilly shrew is protected from being killed or taken by certain methods under Schedule 6 of the Wildlife and Countryside Act and is a Cornwall Red Data book species. They nest under logs, between boulders or in abandoned mouse burrows. It is therefore possible that the Scilly shrew is present in the stonewall with an earth core without cement mortar between the northern access road and the kitchen garden (shown on Photograph 5).

4.4.2 Badger

Badger is absent from the St Mary's Island. No evidence of badgers was observed and it is unlikely that any evidence was overlooked.

4.4.3 Otter

Otter is absent from St Marys' Island.

4.4.4 Dormice

Dormouse is absent from St Marys' Island.

4.4.5 Hedgehog

The desk study identified 27 records for hedgehog on St Marys' Island. None of the records relate to the hotel site although there are several records for the nearby Star Hotel on the Garrison. Hedgehogs are associated with garden habitats with dense leaf

cover and log piles. There is a small chance that they are present within the garden habitat onsite, although the garden areas are small, isolated from wider suitable habitat and are exposed to high levels of disturbance from human activity.

Hedgehogs are listed as a priority species for conservation on the UK BAP. They hibernate in log / leaf / rubble piles, at the base of Cornish hedges and under tree roots from October to March inclusive. They are listed on Schedule 6 of Wildlife & Countryside Act 1981 (as amended), which protects them from being killed or taken by certain methods under Section 11(1) of the Wildlife and Countryside Act 1981.

4.4.6 Invertebrates

The desk study identified a high number of notable invertebrates on St Mary's island. None of the records relate to the hotel site.

An assessment of the potential of the habitats present to support notable invertebrate assemblages has been made. None of the habitats within the site are considered to be of notable value to invertebrates.

4.4.7 Birds

The Isles of Scilly supports notable bird populations however these are associated with intertidal and marine habitats or semi-natural terrestrial habitats.

The site does not contain any semi-natural habitats. Most of the site is built environment of buildings with concrete/tarmac between. Green landscape is limited to small areas of lawn and garden borders. The site is considered very unlikely to be of value for birds. Common species may nest on the hotel in small none-notable numbers and the following legislation is relevant. The nests (while in use or being built) and eggs of all wild birds are protected against taking, damage and destruction under the Wildlife and Countryside Act 1981 (as amended). It is also an offence to kill, injure or take any wild bird.

4.4.8 Reptiles

Terrestrial reptiles are absent from St Marys' Island.

4.4.9 Amphibians

There are records for common toad and common frog on St Mary's Island. All of the frog records come from Lower Moors SSSI.

The site does not offer suitable breeding habitat for amphibians as there are no watercourses or water bodies present. It is possible that common frog and common toad use the garden habitat and the stonewall with the earth core during the terrestrial stages of their life cycle, however it is very unlikely that notable populations are present.

4.4.10 Bats

The desk study identified that two species of bat have been recorded on St Mary's Island. There are 132 records for common pipistrelle and one record for brown long-eared. The record for brown long-eared is from 1904 and this species is now thought to be absent from the island. Detailed bat surveys of the site were carried out. This involved visual and emergence surveys and remote monitoring. See sections 3.2, 3.3 and 3.4 for mehtodologies. The results of these surveys are detailed in section 4.5.

All British bat are European protected species and are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species 2010. Together, this legislation makes it illegal to:

· Deliberately or intentionally capture, kill or injure a bat.

· Damage or destroy a bat roost; or intentionally or recklessly obstruct access to bat roosts.

· Deliberately, intentionally or recklessly disturb bats.

A bat roost is defined in the legislation as "any structure or place which a bat uses for shelter or protection". Roosts are protected whether or not bats are present at the time.

Barbastelle (Barbastella barbastellus), Bechstein's (Myotis bechsteinii), noctule (Nyctalus noctula), soprano pipistrelle (Pipistrellus pygmaeus), greater horseshoe (Rhinolophus ferrumequinum) and lesser horseshoe (Rhinolophus hipposideros) bats are priority species for conservation on the UK BAP (BRIG, 2007). Barbastelle, pipistrelle, greater and lesser horseshoe bats are county priority BAP species (CBI, 2004).

4.5 Detailed bat survey results

4.5.1 Visual bat survey results

Figure 2 shows a roof plan of the hotel and associate buildings with references. The results of the visual bat assessment for each of these hotel areas is detailed below.

F1-7 and R4 are flat roof sections of the hotel. These have bitumen felt roofs. Some have wooden fascias and other have stone cornices. The fascia board on the western elevation of F2 has gaps that could potentially harbour roosting bats and could not be visually searched. This would be assessed by the emergence surveys at dusk. All other flat roof section of the hotel do not have the potential to harbour roosting bats due to lack of access or suitable roosting sites.

R1 is a large pitched roof in the southern part of the hotel. It has a covering of natural slate with an underlay (both traditional bitumen felt and plastic membranes are present). The fascias and soffits are grilled and would prevent bat access. However there are missing slates and holes in the roofing membrane that would allow bats to gain access into the roof space. The large roof void houses water tanks. A search within the void found <10 bat droppings, which appeared to be old.

R2 is a small pitched roof with a covering of natural slate. The void can be accessed from a hatch near room 43 or it is possible to gain access from the void of R1. No evidence of bats was found within the roof void of R2.

R3 is a small pitched roof over the original / oldest part of the hotel. It is accessed via a hatch in room 8. It has a covering of natural slate with an underlay (both traditional bitumen felt and plastic membranes are present). There is a small fireplace at the western end of the roof void. No evidence of bats was found within this roof void. It is possible that bats could roost unseen behind gaps in the fascia boards in this section of the hotel. This would be assessed by the emergence surveys at dusk.

R5 is a pitched roof of natural slate (with an plastic membrane underlay) over the tallest part of the hotel. A small amount of what appeared to be old bat droppings were found within the roof void (<10 droppings in total). Mouse droppings were also found. Large gaps were observed at the gables of the roof that would allow bats to gain access.

Building A is the bin store and is a single storey concrete block (single skin i.e. no cavity) building with a roof covering of corrugated sheets (asbestos and perspex). It is very light within and does not contain suitable roosting sites for bats within. Gaps behind fascias were thoroughly searched and no evidence of bats found.

Building B is a small workshop. It is a single storey concrete block (single skin i.e. no cavity) building with a roof covering of corrugated asbestos sheets. There are no fascias. No evidence of bats was found.

Building C is Gibbson Cottage and **Building D** is Hendra Cottage. The properties are semi-detached, two storey and constructed of stone a natural slate pitched roof (with a plastic membrane). A search within the roof voids found <10 old bat droppings in the void of Gibbson and approx. 40 old bat droppings within the roof void of Hendra. There is a large stone chimney between the two properties that has crevices that could not be thoroughly searched. This would be assessed by the emergence surveys at dusk. There

is also a stone and concrete block shed outside Gibbson. No evidence of bats was found here and it was possible to carry out a through search.

Building E is Star Board Light. This is a two-storey house with a pitched roof of natural slate with no membrane in the main part of the roof. The western section of the roof void is smaller (semi-vaulted ceiling below) and has bitumen felt membrane. A search within the roof voids found <10 old bat droppings in the eastern part of the house. It was noted that there are many gaps at the fascias that would allow bats to gain access.

Building F is Port light which is guest accommodation adjoining Building E. It has a pitched roof of pressed cement/asbestos tile with a bitumen underlay. The ceilings are semi-vaulted with no access to the small void above. A thorough search for bats was not possible.

4.5.2 Bat emergence survey results

26th June 2015 – One common pipistrelle was recorded flying along the Garrison wall south to north. Another common pipistrelle was recorded flying near to the southern boundary of the hotel. These bats did not emerge from the buildings within the hotel complex. Both were recorded at least 45 minutes after the expected time of emergence for this species (suggesting they commuted to the site from elsewhere).

28th June 2015 – One common pipistrelle was recorded flying near to the southern boundary of the hotel. It did not emerged from the buildings within the hotel complex and was recorded 25 minutes after the expected time of emergence for this species.

Although surveyor's focused on the areas of the building that had work proposals that had the potential to impact upon bats, good coverage of most of site was achieved. Building E and F (Star Board Light and Port Light) were not covered by the emergence surveys as work proposals here will not impact upon the potential bat roosting areas. As bat activity was very low; with only two bat passes during the first survey and one bat pass during the second survey (and the direction of flight of these bats was seen) it can be confidently concluded that no bats emerged from the rest of the hotel complex during the emergence surveys at dusk.

4.5.3 Remote monitoring bat survey results

No bats were recorded using the void of roof R5 during the remote monitoring period.

4.5.4 Conclusion of detailed bat surveys

The visual survey identified old bat droppings within the following parts of the hotel: R1, R5, Buildings C, D and E. R3, F2 and Building F, C, D and E had areas that could not be thoroughly searched but which could potentially harbour bats. Of these areas only R5 and F2 have work proposals that could potentially impact upon bats. F2 is not suitable for remote surveying (as it is a flat roof), but was covered by emergence surveys. Remote monitoring of R5 was undertaken as this was the only void where remote monitoring was suitable and which had work proposals that could potentially impact upon bats. No bats were recorded during the remote monitoring exercise.

The emergence surveys covered the entire hotel with the exceptions of Building E and F (Star Board Light and Port Light) as work proposals here will not impact upon the potential bat roosting areas. No bats emerged from the areas of the hotel surveyed during the emergence surveys at dusk.

The surveys have identified that the following areas of Tregathens Hotel do not support roosting bats; F1-8, R1, R2, R3, R5, Buildings A-D. Any droppings found were old and represent historic use. Old droppings were found in Building E and F but as proposed works will not affect the roofs of these buildings they were not investigated further as there is no potential for bat impacts.

Through assessment of the habitats present it is considered very unlikely that the site is of value to commuting of foraging bats. Foraging within the site is very limited and the

site does not link wider areas of suitable foraging. This assessment was confirmed by the low levels of bat activity recorded during the emergence surveys at dusk.

4.6 Overall Site Evaluation

The site is not a designated site of nature conservation importance. The adjoining coastal (marine and intertidal) habitats are within the Isles of Scilly Special Area of Conservation (SAC); there are five Sites of Special Scientific Interest (SSSI's) on St Mary's Island; and parts of the southern coastline of St Mary's are within a Marine Conservation Zone (MCZ).

The survey area includes Tregarthens Hotel and associated buildings and grounds (see Figure 1). The hotel is a complex structure with single, two-storey and three storey sections. The roof-scape is also complex including flat roof sections, pitched roofs with voids and dormer sections. Also included within the hotel grounds are four semi-detached stone cottages, and concrete block outbuildings. A roof plan with references is included as Figure 2. Within the hotel grounds are small garden areas, flower borders and beds. The site is bound by an access road along the northern boundary, beyond this is a stone battery wall marking the back of the seashore. The western boundary is marked by a tall granite Garrison Wall. The road known as Garrison Hill marks the southern boundary.

The site does not contain any semi-natural habitats. Most of the site is built environment of buildings with concrete/tarmac between. Green landscape is limited to small areas of lawn and garden borders. Of the habitats present only the stone walls have biodiversity value. Which is likely to be at the level of the site. The wall with the earth core (between the access road near the shore and the gardens as shown on Photograph 5) may provide a refuge for invertebrates and small mammals. It and the other boundary walls within the site may support notable lichen populations. As mitigation has been designed to protect and reuse the stones, to avoid impacts on lichens, a specialist lower plant survey was not required.

It is possible that hedgehog is present within the garden habitats of the hotel and that lesser white-toothed shrew is present in the stonewall with an earth core without cement mortar between the northern access road and the kitchen garden (shown on Photograph 5).

The surveys have identified that the following areas of Tregathens Hotel do not support roosting bats; F1-8, R1, R2, R3, R5, Buildings A-D. Any droppings found were old and represent historic use. Old droppings were found in Building E and F but as proposed works will not affect the roofs of these buildings they were not investigated further as there is no potential for bat impacts.

The site is not of value to commuting of foraging bats.

The small garden areas around the hotel support three invasive weed species that are included under Schedule 9 of the Wildlife and Countryside Act 1981; making it an offence to 'cause them to spread'. These are Montbretia (*Crocosmia x crocosmiiflora*), Three cornered garlic (*Allium triquetrum*) and Hottentot fig (*Carpobrotus edulis*).

5. ECOLOGICAL IMPACTS, MITIGATION AND MONITORING

5.1 Details of proposed works

Tregarthen's Hotel Limited is seeking planning permission to renovate the hotel. A proposed strategy plan and proposed roof plan are included in Appendix 1. The proposals involve the following:

- Demolition of 3 number lower ground floor hotel bedrooms (marked as F2 on Figure 2), and replacement with 6 number C3 use class dwelling units for restricted holiday letting.
- Change of use of part of the existing staff accommodation block to 2 number C3 use class dwelling units for restricted holiday letting and formation of pitched roof with chimneys (Building F4 on Figure 2), alterations to external facade of staff block including new windows, doors and cladding, demolition of redundant boiler room and chimney.
- Improvements to retained staff (F5) accommodation to include internal alterations, formation of new openings and service access.
- New pitched roof above dining room over existing flat roof (F4).
- Partial demolition of flat roofed hotel reception lobby (F1) and replacement with new entrance to hotel, addition of green (Scilly Isles based mix) roof to retained flat roof area.
- Landscaping works to form outdoor dining terrace on former hotel garden. Installation of ground source heat pump, solar thermal panels and break tank for foul sewage.
- Partial demolition of wall to car park and rebuilding at lower cill level.
- Demolition of garage and bin store (Building s A and B on Figure 2), and replacement with a relocated combined gas bottle and bin store.
- The Garrison wall and retaining wall bordering the beach will not be affected.
- The stone wall shown in Photograph 5 will not be impacted.
- Buildings C, D, E and F will undergo internal renovations with no roof work planned.

The likely ecological impacts of the proposed development are considered below, along with suitable mitigation and requirements for further survey and monitoring. An assessment of the residual impacts is given at the end of this section.

5.2 Impacts to designated sites

The proposed development will not impact upon any designated sites of nature conservation importance or the features for which they were designated. The Environment Agency's 'Pollution Prevention Guidelines for Works and maintenance in or near water (PPG5)' will be followed to ensure the works do not impact upon the adjoining SAC. These are included in Appendix 2. Works will be confined to the site boundary (defined in Figure 1) and all workers will be briefed that under no circumstances must works extend onto the seashore.

5.3 Loss of habitat

It is likely that most of the garden habitats will be lost to the renovation. These are of no biodiversity value and their loss does not require mitigation.

With the exception of partial demolition of the wall to car park and rebuilding at lower cill level, all other stonewalls around the boundary of the site will be retained and mitigation measures to protect these will be implemented (see section 5.4). The stonewall with the earth core (Photograph 5) between the access track and the kitchen garden will be retained.

5.4 Degradation of habitat

There is the potential for the Garrison Wall, which may support notable lichens, to be degraded during the construction phase by vehicle movements and storage of materials. Mitigation to protect boundary features will be implemented.

- Protective fencing will be placed 0.5m from the foot of the Garrison Wall and 0.5m south of the shoreline retaining wall before construction activities commence.
- This fencing will remain in *situ* until all construction activities are complete.

There is the potential to degrade neighbouring habitat through the spread of invasive weeds. The garden habitats support three invasive weed species that are included under Schedule 9 of the Wildlife and Countryside Act 1981; making it an offence to 'cause them to spread'. These are Montbretia (*Crocosmia x crocosmiiflora*), Three cornered garlic (*Allium triquetrum*) and Hottentot fig (*Carpobrotus edulis*). These species were observed across the Garrinson invading semi-natural habitat. The proposed scheme could exacerbate the spread of invasive species across the island by the movement of contaminated material off-site. Mitigation to avoid this will be implemented.

- Montbretia, Hottentot fig and three-cornered garlic will be eradicated prior to works commencing onsite. Invasive plants (taking care to include roots and bulbs) will be dug up by hand. This material will be composted onsite. This is achievable as the infected areas are small.

5.5 Disturbance to species

The proposed works will not impact upon bats. If the scope of works for Buildings E and F alter to inolve impacts to the roof then these need to be informed by bat emergence surveys at dusk.

The proposed demolition works have the potential to disturb nesting birds. If demolitoin is to be carried out between March and October (inclusive) then a search for nesting birds will be carried out. If active nests are found the works will not proceed until dependant young have fledged.

Garden clearance has the potential to disturb hibernating hedgehogs or casue injury to hedgehogs and lesser white-toothed shrew (Scilly shrew). To avoid these impacts once invasive weeds have been removed or treated the remaining garden foilage will be cleared to ground level by hand at least three days prior to earth movements. The cut material will be removed from the construction zone. The areas are small so this is achievable. This will degrade the habitat and allow hedgehog and lesser white-toothed shrew to move away from the site on their own. The stone wall shown on Photograph 5 will be retained and protected during development to avoid impacts to shrews. If hedgehog and shrews do not move to safety on their own accord they may be transferred to a neighbouring garden.

5.6 Habitat gain

It is proposed to create a green roof on the retained part of the hotel reception lobby (F1). In order to maximise biodiversty benefits and create a habitat that is 'in keeping' with the landscape it is intended that these green roofs employ a 'Scilly-based mix'. This will include native drought tolerant, maritime cliff species that occur locally. The following species are suggested; thrift, buck's-horn plantain, sea campion, red fescue and kidney vetch. The aim would be to create a varied structure to provide sheltered niches for invertebrates and other fauna and recreate a maritime cliff habitat. This design would provide a positive contribution to the biodiversity of the setting.

5.7 Opportunities for ecological gain

Landscaping schemes should aim to compliment neighbouring coastal semi-natural habitats and where possible native species of local providence should be used.

There is an opportunity to provide permanent roosting and nesting sites for bats and birds within the completed building. Nest and roost boxes can be incorporated into the fabric of the building or bats can be given access to roof spaces by the inclusion of bat slates of gaps at the fascias.

5.8 Further Surveys

If the scope of works for Buildings E and F alter to inolve impacts to the roof then these buildings need to be informed by bat emergence surveys at dusk.

If demolitoin is to be carried out between March and October (inclusive) then a search for nesting birds will be carried out. If active nests are found the works will not proceed until dependant young have fledged.

5.9 Monitoring

Successful establishment of the green roof habitats should be monitored.

5.10 Residual Impacts

Through the removal of invasive weeds and the creation of two green roofs with 'Scilly-based maritime cliff habitats' the proposals will overall make a long-term positive contribution to biodiversity at the local scale.

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