

# BAT PRESENCE/ABSENCE SURVEYS OF:

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SEAVIEW  
McFARLANDS DOWN  
ST MARY'S  
ISLES OF SCILLY  
TR21 0NS

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*Client: Duchy of Cornwall*

*Our reference: BS27-2020PAS*

*Report date: 22<sup>nd</sup> July 2020*

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*Report peer reviewed: Sarah Mason.*

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***REPORT ISSUED IN ELECTRONIC FORMAT ONLY***

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## Non-Technical Summary

- On 20<sup>th</sup> March 2020, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of 'Seaview', McFarlands Down, St Mary's, Isles of Scilly, TR21 0NS (BS27-2019 & BS27a-2019), (BS21-2019), for which there is a proposal to demolish the existing bungalow to ground level and replace with three new dwellings within the plot. The proposal also includes the removal of the Maidenhair (*Muehlenbeckia* sp.) hedgerow to the east and part removal of the *Escallonia* sp. hedge to the south. The survey concluded that the building had low potential to support roosting bats. Two presence/absence surveys were recommended and the results of these surveys are outlined in this Presence/Absence (PAS) report.
- A first dusk survey conducted on the 19<sup>th</sup> May 2020 did not identify any bats emerging from roosting sites associated with the building but did identify bats commuting and foraging along the boundary hedgerow to the east of the property.
- A second dusk survey conducted on the 7<sup>th</sup> July did not identify any bats emerging from roosting sites associated with the building and very low levels of commuting behaviour along the eastern boundary hedge. However, the low level of activity could be attributed to a change in the forecasted weather, with low cloud and light rain commencing forty minutes after sunset and through to the end of the survey.
- Both the PEA/PRA and PAS reports should be considered together to provide a comprehensive assessment of nature conservation issues at the site.
- The results confirm the likely absence of bats using Seaview as a roost
- The results confirm that the eastern boundary hedge is used as a commuting and foraging route for pipistrelle bats.
- The recommendations from the PEA/PRA along with this report, suggest no further surveys and no requirement to obtain an EPS license.
- Mitigation measures (excluding bats) recommended in conjunction with the preliminary ecological appraisal survey (BS27a) carried out on the 23<sup>rd</sup> March 2020 should include the planting of native hedgerows that demarcate the boundaries between each new property and the planting of a minimum 3 standard trees as replacement for the eastern boundary hedge.
- Mitigation measures for bats should include the installation of 'in-line' bat box(es) at each gable end of at least one of the new properties

## 1.0 Introduction

### 1.1 Background

A Preliminary Roost Assessment report (BS27-2019) dated 23<sup>rd</sup> March 2020 identified that the building under consideration provided low roosting potential for bats. A Preliminary Ecological Appraisal identified that the removal of perimeter hedgerows could be detrimental ecologically to the site and may be detrimental to bats utilizing these as commuting or foraging routes. Additional presence/absence surveys were recommended to meet best practice guidance to support a future planning application. This report outlines the results of these additional surveys.

### 1.2 Survey Objectives

The objectives of this Presence and Absence Survey (PAS) report, is to provide further ecological information to support the planning proposal by:

- Ascertaining if roosting bats are present at the application site
- To identify the location of these bat roosts (including exit/entry points)
- Subjecting this information (and the information from the PEA and PRA) to evaluation and impact assessment
- To provide advice on the potential for contravention of legislation/policy
- To provide recommendations on any further actions needed (i.e. further surveys, licensing, mitigation or enhancement)

### 1.3 Surveyor details

The survey was undertaken by Darren Mason BSc (Hons) of the Isles of Scilly Wildlife Trust and with the assistance of Rob Carrier and Rhianna Pearce. 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, endoscopes, hand, and hand-held static nets.

## 2.0 Methodology

### 2.1 Bat Dusk emergence survey

The objective of the dusk emergence surveys was to detect active bat use of the site and identify any exit locations being used around the building. Survey effort was concentrated on areas of the site where suitable features or bat field signs were noted from the PRA. The survey involved;

- Starting the survey 15 minutes before sunset and continuing for approximately 1.5-2hours after<sup>1</sup>;
- Identification of bat species primarily using ultrasound characteristics. To aid identification flight and habitat characteristics were also noted (where possible) to determine the species.
- Identifying exit locations of bats by standing at different vantage points around the building that offered visual contact with any potential exit point previously recorded. Surveyors stood no more than 50m apart, or away from the building (see Fig 1 for location of surveyors).

### 2.2 Equipment

The following equipment was used for the dusk emergence survey at the site:

- Anabat Express (Frequency Division) static bat recorder
- Elekon Batscanner Stereo Heterodyne
- Elekon Batscanner Heterodyne
- Magenta Bat 4 Bat Detector
- Bestguarder WG-50 Night vision camera

Sound recordings were analysed using Analook W 4.3x software to confirm surveyors' identification of species.

### 2.3 Survey Limitations

Surveys carried out during a specific season can only provide information on bat presence at that particular time, as bats are highly mobile in nature and may only use buildings at certain times of the year that favour a particular part of their roosting, maternity and hibernating requirements.

## 3.0 Results

### 3.1 Weather conditions, temperatures and timings

Survey Information:	Start and End Times:	Conditions (Start):	Conditions (End):
<b>Dusk emergence:</b> 19/5/20	Start: 20:55 Sunset: 21:10 End: 22:40	Temp: 17°C Humidity: 75% Wind speed: 2mph - SSE Cloud cover: 0% Rain: none	Temp: 9.5°C Humidity: 90% Wind speed: 2mph -SSE Cloud cover: 0% Rain: none
	<b>Surveyors</b>		
	1. Darren Mason 2. Rhianna Pearce 3. Rob Carrier 4. NV Camera	Notes: Temperature dropped below 10°C approximately 30 minutes before the end of the survey Light level at Lux 2: 21:40	

Table 1. Site conditions for 1<sup>st</sup> dusk emergence survey 19-5-20

Survey Information:	Start and End Times:	Conditions (Start):	Conditions (End):
<b>Dusk emergence:</b>	Start: 21:19 Sunset: 21:34 End: 23:00	Temp: 16.5°C Humidity: 81% Wind speed: 21mph WSW Cloud cover: 100% Rain: none	Temp: 14.5°C Humidity: 91% Wind speed: 29mph WSW Cloud cover: 100% Rain: Yes
	<b>Surveyors</b>		
	1. Darren Mason 2. Rhianna Pearce 3. Rob Carrier 4. NV Camera	Notes: Unexpected low cloud cover from 22:23 along with light rain until end of survey Light Lux 2 at 22:01	

Table 2. Site conditions for 2<sup>nd</sup> dusk emergence survey



Photo 1. Surveyor location for 1<sup>st</sup> dusk emergence survey 19-5-20 and 7-7-20

### 3.2 Dusk emergence roost survey results

The first dusk emergence survey recorded no bats entering or exiting the building. All bat activity was confined to commuting and feeding behaviour, recorded primarily along the eastern side of the eastern boundary *Muehlenbeckia* sp. hedge. In total 26 passes of Common Pipistrelle were recorded, the first 18 minutes after sunset, well within the normal temporal of this species<sup>2,3</sup>. 11 of the 26 calls were picked up by both Surveyor 1 and 2 at the same time. Of this 11 at least 4 were picked up by Surveyor 3 confirming that the main direction of travel was north to south (See Appendix A). Activity was deemed low, however this may be a result of the temperature dropping below 10<sup>0</sup>C (see Appendix B for environmental data) during the last 30 minutes of the survey, when only 7 calls were recorded. Bats are known to fly when temperatures rise above 8<sup>0</sup>C if insects are active, but as flight is energetically demanding and if insect levels are low hunting may not be profitable<sup>4</sup>, therefore overall low numbers of prey may also be a reason for reduced bat activity during this survey.

The second dusk emergence survey undertaken on the 7<sup>th</sup> July recorded no bats entering or exiting the building. Only 2 Common Pipistrelle were recorded, one unseen the 2<sup>nd</sup> seen flying north to south parallel

to the eastern boundary hedge. The first bat contact was made at 22:07, 33 minutes after sunset the second at 22:12. However, 11 minutes later un-forecasted low-level cloud and light rain began and remained until the end of the survey period. During this time no further bat contacts were made.

### **3.3 Summary**

The results of the two dusk emergence surveys have confirmed the likely absence of bats at Seaview. However, the results can only be based on presence/absence at a particular time as bats are highly mobile in nature may use the building at other times of the year. Avoidance measures set out under Section 5 will help to reduce the probability of committing an offence if bats were found during the demolition phase of the works.

During both dusk surveys it was noted that bats use the eastern boundary hedge both as a commuting route and to feed along. Though the activity level is deemed low the unexpected changes in environmental conditions may account for the reduced level of activity.

## **4. Evaluation of Results**

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 undertaken<sup>5</sup>. 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
<b>Bats</b>	CHSR, W&CA	Local	A, & E	Low
<p><b>Impact to roost site:</b> Confirmed likely absence of a bat roost at Seaview suggests that the impact to a roost site at this location is low. However, if a roost were located this would have a negative effect on the population status of Common Pipistrelle bats on the Isles of Scilly. Therefore, consideration and due care must be considered and undertaken at the following stages:</p> <p><b>Impacts to bats:</b></p> <p><b>Demolition:</b> – Undertaking Reasonable Avoidance Measures (RAM) can reduce the likelihood of negatively effecting the local population status and minimise the probability of committing an offence with respect to bats and their roosts if measures are adhered to.</p> <p><b>Construction:</b> – A positive impact on the local population of Common Pipistrelle bats may result through the incorporation of new roost(s) in the new buildings<sup>6</sup></p>				
Habitat:	Relevant Legislation	Evaluation (of importance)	Mitigation Hierarchy	Impact Level
<b>Hedgerows</b>	HRA	Local	C, & E	Medium
<p><b>Impact on hedgerow</b> – A hedgerow is protected if it is more than 20m long and with gaps of 20m or less in its length. Therefore, in this instance the eastern boundary hedgerow will require a plan of action to be submitted to the Local Planning Authority (LPA) and written permission granted from the LPA before the hedgerow can be removed. Ecologically, the hedgerow is classed as non-native poor hedgerow</p> <p><b>Impact on Bats and Birds</b></p> <p><b>Removal</b> – The removal of the hedgerow may result in a loss nesting and feeding habitat for breeding birds and will affect commuting and foraging routes for bats (see below).</p> <p><b>Replacement</b> – If replaced by native species there is an opportunity to provide a small ‘net gain in biodiversity’, whilst increasing bat commuting and foraging routes and improving feeding and nesting opportunities for breeding birds.</p>				
Key to Legislation and Mitigation Hierarchy				
<p>CHSR – Conservation of Habitats and Species Regulations 2017<sup>7</sup> - <a href="http://www.legislation.gov.uk/uksi/2017/1012/made">http://www.legislation.gov.uk/uksi/2017/1012/made</a>  W&amp;CA – Wildlife &amp; Countryside Act 1981 (as amended)<sup>8</sup> - <a href="http://www.legislation.gov.uk/ukpga/1981/69/contents">http://www.legislation.gov.uk/ukpga/1981/69/contents</a>  HRA – Hedgerow Regulations Act 1997<sup>9</sup> - <a href="https://www.legislation.gov.uk/uksi/1997/1160/made">https://www.legislation.gov.uk/uksi/1997/1160/made</a>  <b>A</b> – Avoid, <b>M</b> – Mitigate, <b>C</b> – Compensate, <b>E</b> – Enhancement</p>				

## 5. 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 Survey constraints

The surveys were undertaken at an appropriate time of year, during the main summer active season.

### 5.2 Further survey requirements

**No further surveys** are recommended with regards to the proposed development – it is considered that this report, alongside the PRA (BS27) and the PEA (BS27a) produced separately, constitute a comprehensive ecological baseline from which to assess the impacts of the application.

### 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 was 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 Hedgerow Retention notice

Any hedgerow that meets the criteria of length, location or importance set out under the Hedgerow Regulations 1997 cannot be removed without first receiving written notice from the LPA. In this instance, the hedgerow meets the criteria of length (being over 20m long) therefore deemed **protected**. There will be a requirement to submit a plan of works to the LPA outlining how the hedgerow will be removed. Within 42 days the LPA will issue within a hedgerow retention notice (prohibiting removal), or written notice granting permission to remove the hedgerow in the way proposed in the plan of works.

### 5.4 Planning Recommendation(s)

The information gathered in the PRA (BS27-2020), PEA (BS27a-2020) and this report is sufficient to support a planning application with regards to protected species in accordance with relevant best practice guidelines.

It is considered that the impacts of the proposed works on protected species can be mitigated sufficiently to ensure that the conservation status of Common Pipistrelle on St Mary's is not negatively impacted. The mitigation outlined in Section 5.5. would represent appropriate measures.

It is recommended that planning permission be granted if compliance with the recommendations in Section 5.5 of this report is conditioned. However, Section 5.5.3 and 5.5.4 should be a compliance rather than a pre-commencement condition to ensure alternative feeding and/or commuting routes remain available for Common Pipistrelle.

## 5.5 Mitigation Proposals

### 5.5.1 Avoidance (A) – Bats

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:

- 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 1<sup>st</sup> November and 1<sup>st</sup> May inclusive, however the months of **November to February should be avoided where possible** as this is when bats enter a time of reduced activity and torpor which makes disturbance impacts more significant
- 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 other 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

#### 5.5.2 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 2006<sup>10</sup> (NERC 2006) to have due regard for biodiversity when carrying out their functions and under Section 15 paragraph 170(d) of the NPPF 2019<sup>11</sup>, 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 the following suggestion should be undertaken:**

- i. Install three (3) in-line Habibat bat boxes, or three (3) Schwegler 1FE Bat boxes at the apex of the gable end of each new dwelling (one box for each dwelling) two facing the same aspect, the remaining box to face the opposing aspect to provide varying environmental conditions that bats can take advantage of.

### **5.5.3 Compensation - Hedgerow**

Most bat species use 'edge' habitat, such as navigational landmarks, feeding opportunities and protection from predators. Loss of hedgerows can make it more difficult for bats to hunt and survive. As part of any good development, linear features such as tree lines and hedges should be retained, if this is not possible then compensatory planting should be considered wherever possible.

It is recommended that if permission is granted to remove the eastern boundary hedgerow, compensatory planting in the form of two 'native' boundary hedges between the 3 new dwellings should be provided, along with the planting of 3 native 'standard' trees approximately 10m apart along the length of the eastern boundary.

### **5.5.4 Enhancement – Hedgerow**

Trees and shrubs provide food for birds, mammals and invertebrates. To enhance the development and to provide a small 'net gain' in biodiversity all replacement hedgerows and standard trees should consist of native species, known to be present on the islands, or were once present on the islands. To enhance the hedgerow for bats and birds, species such as Oak, Birch, Hawthorn, Blackthorn, Crab Apple and Hazel could be planted.

## 6. Bibliography

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## APPENDIX A – BAT CONTACTS SURVEY TABLE

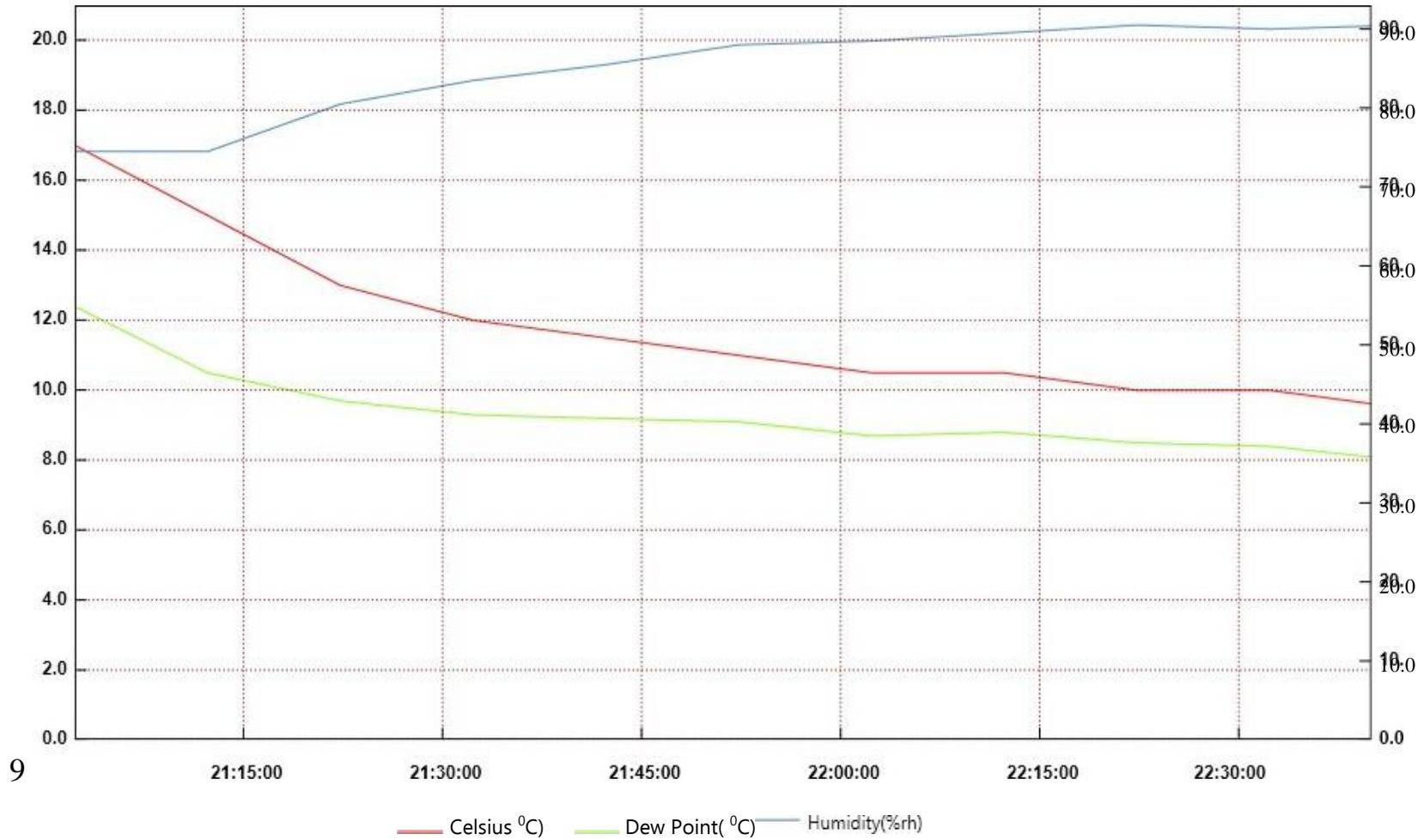
Date:	19/5/20 – 1 <sup>st</sup> Dusk emergence survey			
Survey Type:	Surveyor 1	Surveyor 2	Surveyor 3	Night vision camera
Location:	N to S, Unseen, Unseen, Unseen, Unseen, Unseen, Unseen, S to W from adjacent property, Unseen (fb), Unseen, Unseen, Unseen, Unseen (fb) and unseen	N to S, unseen, unseen, unseen, S to N, N to S, unseen, N to S, N to S, unseen, S to N, S to N, N to S, unseen, unseen, unseen, unseen, unseen, unseen, unseen	N to S, unseen, unseen, unseen, unseen, unseen, unseen, unseen, unseen, unseen	No contacts recorded
Exit/Entry point:	None recorded	None recorded	None recorded	None
Time(s):	<b>21:28</b> ; 21:29; 21:45; <b>21:50</b> ; 21:52; <b>21:53</b> ; <b>21:54</b> ; <b>21:55</b> ; 21:56; <b>22:00</b> ; 22:02; <b>22:03</b> ; <b>22:07</b> ; <b>22:09</b> (x3); <b>22:17</b> ; <b>22:23</b> & <b>22:30</b>	21:30; <b>21:50</b> ; <b>21:53</b> ; <b>21:54</b> ; <b>21:55</b> ; 21:59; <b>22:00</b> ; <b>22:03</b> ; 22:04; <b>22:07</b> ; <b>22:09</b> (x2), 22:13; <b>22:17</b> ; 22:20; <b>22:23</b> ; <b>22:30</b> ; 22:32 & <b>22:34</b>	<b>21:28</b> ; 21:47; <b>21:55</b> ; <b>22:00</b> ; <b>22:07</b> ; <b>22:09</b> ; 22:14; <b>22:17</b> ; <b>22:23</b> & <b>22:34</b>	None contacts recorded
Species of bat:	Common pipistrelle	Common pipistrelle	Common pipistrelle	None recorded
Roost present:	None confirmed	None confirmed	None confirmed	None confirmed

(fb) – feeding buzz

Date:	– 2 <sup>nd</sup> Dusk emergence survey			
Survey Type:	Surveyor 1	Surveyor 2	Surveyor 3	Night vision camera
Location:	Unseen, N to S	Unseen, N to S	Unseen	No contacts recorded
Exit/Entry point:	None recorded	None recorded	None recorded	None
Time(s):	22:07 and 22:12	22:07 and 22:12	22:08	
Species of bat:	Common pipistrelle	Common pipistrelle	Common pipistrelle	None
Roost present:	None confirmed	None confirmed	None confirmed	None confirmed

## APPENDIX B – Environmental Data

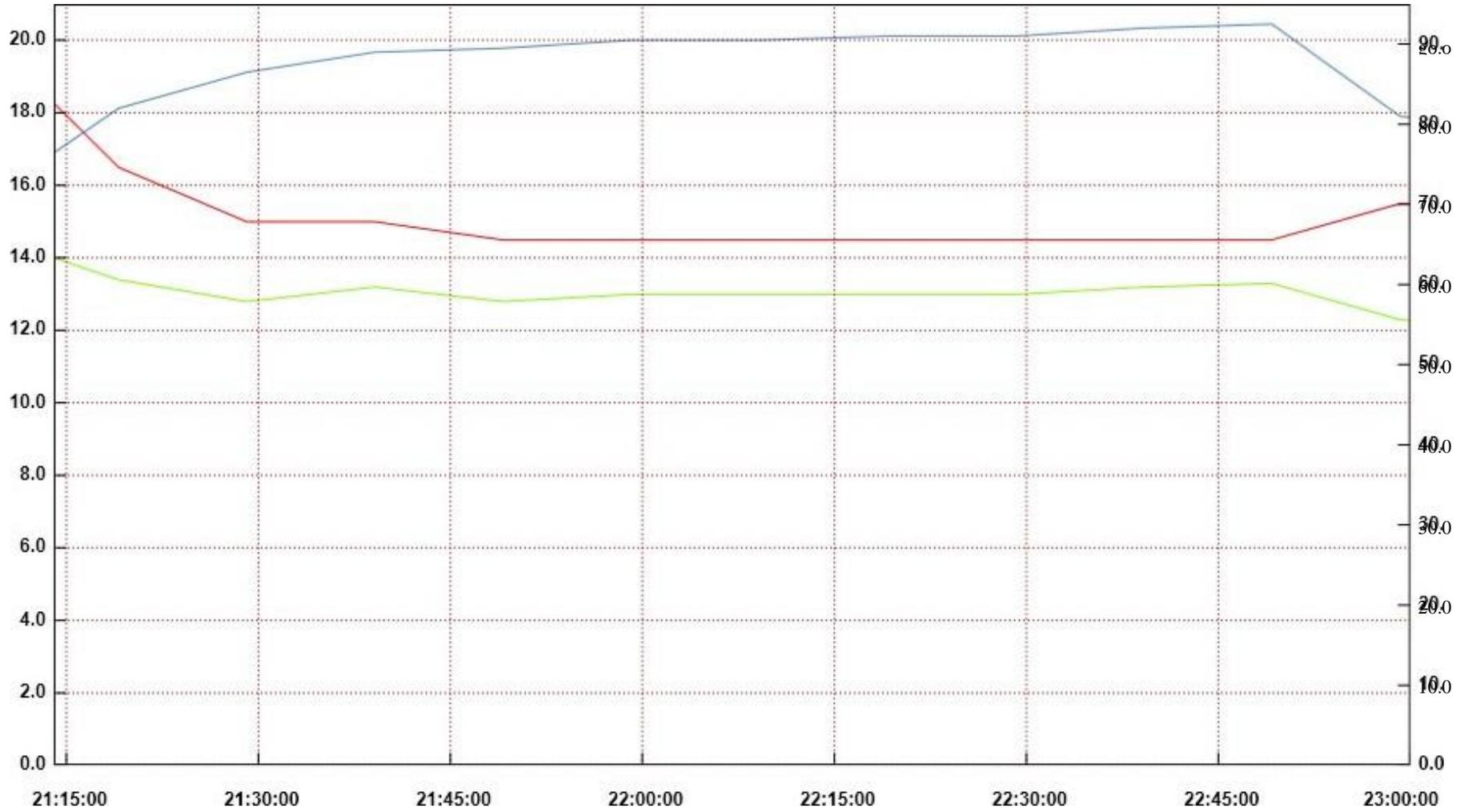
Seaview – 19-5-20



9

From: 19 May 2020 21:15:00 - 19 May 2020 22:40:00

### Seaview - 7-7-20



9

— Celsius (°C)    — Dew Point( °C)    — Humidity(%rh)

From: 07 JULY 2020 21:14:00 - 07 JULY 2020 23:00:00