

# **PRELIMINARY ROOST ASSESSMENT FOR PRESENCE OF BAT ROOSTS:**

The New Fleurs Club, 2 Portmanmoor Road, Cardiff, CF24 5FX

Date of Survey: 12<sup>th</sup> August 2024 & 21<sup>st</sup> August 2024

Report by: Leigh Tuck

Licence Number S092478/1

Checked By: Sian Tuck

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## SUMMARY

Spectrum Ecology was commissioned to carry out a preliminary roost assessment (PRA) for bats and their roosts and an additional flight survey at a proposed redevelopment site located at The New Fleurs Club, 2 Portmanmoor Road, Cardiff, CF24 5FX Grid Ref: ST 20128 76346. The surveys are in support of a planning application to ensure that protected species are given due regard as part of the latest proposals.

The preliminary roost assessment for bats at the proposed development site was carried out on the 12<sup>th</sup> August 2024 (externally) and the 21<sup>st</sup> August (Internally) due to access permissions. A detailed internal and external scoping survey inspection was made of the buildings. During the course of these investigations, **no individuals were found and no field signs discovered to indicate that the buildings are currently being used as a roost for bats, although the western aspect of the roof surface was not visible due to the height of the building and narrow access lane which reduced the viewing angle.** 

Due to the extensive roofscape of the building complex coupled with the proximity of Moorland Park, one additional flight survey was therefore undertaken to gain a better understanding of the possible use of the property by bats. The survey detected no emergence, re-entry to or activity within the immediate vicinity of the visible areas of roof covering, fascia/soffit complex or ridge tiles.

No evidence of bats was recorded within or emerging from the surveyed structure. However, due to the constraints in surveying the roof slope visible from the lane, it is proposed, following the precautionary principle, that the dwelling should be subjected to a **destructive search of the roof covering and structure (before demolition commences) under the supervision of a licensed bat ecologist.** 

A number of mitigations and enhancements will be required to ensure that there is no net-loss to potential roosting habitat as per the requirements of Section 6 of the Environment (Wales) Act 2016. The enhancements will be integrated into the final design of the redeveloped structure. The design process is ongoing at the time of writing this report.

## **1. INTRODUCTION**

#### **1.1.** Site Description

1.0.1. The site comprises many linked structures that have been extended a number of times and historically used as a Sports and Social Club.

1.0.2. The property comprises a ground floor and first floor for the main building and single story for the outbuildings. The roof covering is concrete slate effect tiles underlaid with a plastic woven membrane. The walls, roof, soffits and fascia appear to be in good repair and weather tight.

1.0.3. The structure is currently closed but has been used since the 1950's as a social club with the first floor being used primarily as a residential dwelling for the owners of the club.





Figure 1: Pictures of the Exterior of the Property

1.0.4. *Wider Environment:* The site is situated in Splott, which is now considered to be part of an extension to Cardiff city centre, within a commercial and residential area. There are a number of reasonably-sized,

well-connected green spaces to the east (Pengam Green) however the closest green space, Moorland Park is isolated by housing and a train line.

The site is surrounded on all sides by significant urban and industrial development. The Severn estuary is located 1.2km to the south with the associated industrial docks providing very little foraging and commuting habitat for bats.



Figure 2: Development Site in a Wider Landscape Context.

1.0.5. *Commuting and Foraging Habitat Suitability:* The site and surrounding area should be considered to have **LOW** suitability as foraging and commuting habitat as described by Table 4.1 (pg. 44) of the BCT Survey Guidelines.

## **1.2.** Proposed Development

1.2.1. It is understood that the proposed development plans include demolition of all buildings currently on site. A purpose-built residential building will cover the whole of the existing footprint. The roof height will be raised to facilitate additional accommodation, although final designs are yet to be agreed by the developer.

## 1.3. Historic Survey Effort & Data Trawl

1.3.1. It is understood that no previous surveys for bats or bat activity have been undertaken at the property. However, whilst talking to local residents there is anecdotal evidence of bat sightings around the street lights within close proximity of the development site. 1.3.2. No Local Ecological Records Check was commissioned for the project, due to the limited potential to host bats.

1.3.3. An online data trawl reveals 3 records of Pipistrelle sps bats have been made at Moorland Park, on the railway corridor directly north of the PDS and at the old Cardiff docks over 1km away.

## **1.4. Ecology of Bats**

1.4.1. There are 18 species of bats, of which 17 are known to breed, in the United Kingdom. Most of them are regarded as threatened species, due to a variety of factors including habitat loss and disturbance/damage to roosts. Of these species, a number regularly use buildings or trees at certain times of year in order to find safe secure roost sites.

1.4.2. Bats are highly-mobile, flying mammals, which in the United Kingdom feed entirely on insects. Having evolved over seventy million years, they have developed sophisticated mechanisms to allow them effectively to 'see' in the dark by using sound. Called echolocation, this system allows them to hunt down and track small moving insects whilst in flight, rather like radar does in a modern military fighter aircraft.

1.4.3. In winter, when their prey is scarce, British bats hibernate in the cool parts of caves, buildings and tree cavities. They might wake occasionally and will feed if evening temperatures are greater than 7°C, when flying insects will be active. Generally, however, activity in winter is very limited, and bats only become fully active in spring.

1.4.4. In late spring, female bats will gather together in maternity roosts in order to give birth and rear their single baby in June. Such maternity roosts are often near to foraging areas in order to minimise energy usage, as flight requires vast energy resources.

1.4.5. Whilst females form maternity colonies, usually in warmer roofs or trees, male bats tend to seek out cooler sites, which may not be so close to the foraging areas. Males are often solitary and do not exhibit the social behaviour that marks out females during the birthing period.

1.4.6. Several British bat species are known to rely heavily on buildings to roost. The Soprano pipistrelle bat, *Pipistrellus pygmaeus*, appears to be well represented in the county and can often be encountered in built structures, such as the building under survey, as can Common pipistrelle bats, *Pipistrellus pipistrellus*. The Brown long-eared bat, *Plecotus auritus*, is another species which commonly roosts in buildings and again is well represented in the county.

## 1.5. Relevant Legislation

1.5.1. All British bats are protected by the following legislation:

- 1.5.1.1. **The Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019** superseded The Habitats and Species Regulations 2010, and amended in 2017, as of January 1<sup>st</sup> 2021 and provides the same level of protections as the previous legislation - Annex IV of the European Communities Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora - which required the United Kingdom government to provide bats with strict protection.
- 1.5.1.2. Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The marked decline of all British bats has resulted in their being given protection under Section 9 of the Act (through provisions in Schedule 5) making it illegal to intentionally kill, injure or take any British bat. It also made it an offence

to intentionally damage or destroy their place of rest (the roost).

1.5.1.3. **The Environment Act (Wales) 2016, Section 6** - 'Biodiversity and resilience of ecosystems' which places a duty on public authorities under subsection (1) to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duties in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.

In complying with subsection (1), a public authority must take account of the resilience of ecosystems, in particular the following aspects:

- (a) diversity between and within ecosystems;
- (b) the connections between and within ecosystems;
- (c) the scale of ecosystems;
- (d) the condition of ecosystems (including their structure and functioning);
- (e) the adaptability of ecosystems

## 2. PRA

### 2.1. Methodology

2.1.1. The building survey was undertaken on two separate occasions 12<sup>th</sup> August 2024 (externally) and the 21<sup>st</sup> August (Internally) due to access permissions.

2.1.2. A thorough investigation of all accessible features within the site was carried out for potential roosting features, both internally and externally, as detailed below.

2.1.3. Internal Inspection – All accessible areas are inspected at close hand from ground level or from a ladder. High-powered focusable lamps were used to illuminate areas and, where close hand inspection is not possible due to access limitations, high powered-focusable lenses are used to inspect the area. All accessible voids are exposed to inspection under UV light to search for evidence of staining. In addition to this, all accessible holes, cracks, crevices and cavities are inspected utilising an illuminated dual-camera endoscope with the ability to capture photographic evidence of the inspection.

2.1.4. The external Inspection – The external surface of the walls and roofscapes are inspected at close hand to a height of 5m from ground level. Areas above 5m are inspected using high-powered focusable lamps and lenses. If any potential roosting features are identified, investigation with a dual-camera illuminated endoscope is undertaken, if safe to do so.

## 2.2. Constraints to Access

2.2.1. The main roof could not be assessed at close hand, due to the size and height of the structure and its proximity to a busy highway, but a thorough examination was made with the use of the high-powered spot lamp and close focussing monocular. The single storey roof areas were observed from the second-floor windows.

### 2.3. Results

### 2.3.1. External Inspection

#### 2.3.1.1. Roof Coverings

Whilst the majority of roof surfaces were too high to inspect at close hand, good sight lines were achieved for the inspection using high-powered focusable lenses and a high-powered torch. The visible tiled roof coverings on the property appear to be well maintained and weather tight, with no cracked, lifted or missing tiles. No PRFs were noted on the main aspects of the roof covering.

#### 2.3.1.2. Fascia and Soffits

The fascia were too high to allow inspection at close hand but were inspected utilising high-powered focusable lenses and a high-powered torch. All the installed fascia and are of a wooden design fitted tight to the external walls, in a good state of repair and appear to be weather tight with no access potential to the fascia. **No significant PRFs were noted within the fascia complex**.

#### 2.3.1.3. Walls

The external surfaces of the walls appear to be in good repair, There was two vertical cracks of the rendered external surface which were no deep enough to support individual bats or a roost. **No PRFs were noted on the external surfaces of the walls.** 



There is a single, L-shaped roof void above the main structure which was accessed via a hatch in the hallway. The loft space was boarded out and easily accessible. There was no light bleed into the loft space which would indicate potential access points.

The lost spaces above the single storey section were either a flat rooved arrangement or a pent roof. The pent roof loft areas had a hatch to enable an inspection and the flat roof extension had a false ceiling tile which could be removed to reveal the gap. In all instances no evidence of bat use were found.

## **3.** FLIGHT SURVEY

### 3.1. Method

3.1.1. The methodology used to undertake the surveys detailed in this report conform with the guidelines set out in the Bat Conservation Trust's guidance - Bat Surveys: Good Practice Guidelines 3rd Edition (BCT, 2016) and the addendum relating to Night Vision Aids.

3.1.2. *Dusk Survey* – The features will be visually observed by an appropriately experienced surveyor from a clear view point. Each surveyor will be equipped with at least one heterodyne bat detector to record the ultrasonic calls made by any bats present in the area. The survey will commence at least 30mins prior to sunset and be concluded 120mins after sunset to ensure that the typical emergence times of all species are covered.

3.1.3. All surveys will conducted under suitable weather conditions and conducted within the peak survey season for bats in the UK (May-Aug).

#### **3.2. Equipment**

3.2.1. All surveys were carried out with the aid of a Batbox Duet heterodyne / frequency division bat detectors, a Wildlife Acoustics Echo Meter Touch 2 Pro recorded onto a smartphone/tablets and a Night Vision Aid – Nightfox Whiskers.

#### **3.3. Constraints to survey**

3.3.1. No problems were encountered in finding or accessing the site. A good clear view of the structures was achieved from the selected vantage point.

3.3.2. The climatic conditions during the survey periods was compliant with the optimal survey conditions.

3.3.3. It should be noted that due to the significant light spill from the street lights and from neighbouring houses, the night vision equipment was not effective. However, this was not considered significant enough to cause a disturbance to the survey methodology and there were no other disturbing influences that would hinder either the ability of the surveyors and their equipment to survey effectively or cause a disturbance to the 'normal' bat activity within the site during the survey periods.

3.3.4. As a result of the above, the surveyors are confident that the assessment at the site has been as thorough as the Bat Conservation Guidelines require.

## 3.4. Results

Table 1: Climatic conditions

Survey	Date	Survey time	Sunset/	Weather
Dusk	12/8/24	20:15 – 23:00	20:40	Start -15°C, 2 octa high light cloud, Occasional gentle breeze (7mph ENE), no precipitation End – 14oC, 1 octa high light cloud, no wind, no precipitation

Table 2: Dusk Survey Observations

Time	Records	Species	Peak count	Observation
21:49	3	Common Pipistrelle	1	Detection and observation of foraging behaviour above the business unit courtyard to the rear of the property with several feeding buzzes. Bat entered from the north and spent 15 minutes foraging and left site to the south towards Moorland Park

No emergence from the structure was detected throughout the survey period.

#### 3.5. Discussion

During the survey 3 records of bats within the survey area were made. The records were dominated by 1 common species, Common Pipistrelle.

3.5.1. The front aspects of the property were clearly visible and keenly observed throughout the survey period. No emergence from, re-entry to, or activity in the immediate surrounding of the roof covering, fascia complex or apex tiles was noted during any of the survey periods.

- 3.5.2. <u>Common pipistrelle</u> The 'average emergence time' of the common pipistrelle is 20-30 mins after sunset but sometimes before. The earliest record of the species is outside of this window
  - Common pipistrelle 21:49 (69 minutes after declared sunset)

Therefore, as the climatic conditions during the survey were optimal for typical emergence it is assumed that the individual detected at the site emerged from roosts in the wider environment and commuted to the site prior to their recording.

The dusk flight survey therefore does not indicate usage of the property by bats as a roost.

## 4. MITIGATIONS AND ENHANCEMENTS

## 4.1. Integral Bat Bricks and Bat Tiles – General Measures

4.1.1. As the final design is not yet completed the following measures should be taken into consideration. The final enhancement scheme should be agreed with a suitably qualified bat surveyor.

4.1.2. Bat bricks are recognised as a superior enhancement over bat boxes and should be considered first in any mitigation measures. In addition tiles should be placed at the centres of 2.4m spacing along the central line of any roof slope of the roof covering.

4.1.3. If the ceilings within any proposed loft storey will be vaulted, there will not usually be a void within the loft space. Therefore, to utilise bat tiles as a roosting potential enhancement specific modification will be required. This will take the form of **specially constructed enclosure (1m x 1m)**, **lined with bitumen felt**, **which must be battened off within the vaulted ceiling to house bats directly under the bat tile**.

4.1.4. If there are plans to install solar panels on the roof of the redeveloped property, it should be noted that the areas of roof under the solar panels will not be suitable for the installation of bat tiles.

## 5. OVERALL CONCLUSIONS

**5.1.** The site and surrounding land was noted to have **LOW suitability for foraging and commuting purposes** due to the significant disturbance and light bleed from the residential dwellings, traffic and street lights.

**5.2.** The PRA assessed the structure to hold **LOW potential** to support bat roosts due to the absence of evidence of use by bats and the lack of any significant Potential Roosting Features found within the structure. Due to the proximity to Moorland Park, the only green space in the area, the building was subjected to **one additional presence/absences surveys** (Table 7.1, pg. 70 of the BCT Survey Guidelines, 2024). This will also inform the nature and number of enhancements and mitigations required to ensure there is no net loss of potential habitat caused by the development.

**5.3.** A single dusk emergence survey was undertaken at the property. It was not possible to assess the western aspect of the roof covering due to the narrow lane of the surrounding streets obscuring the sight lines. However, no individuals were noted emerging from the visible aspects of the roof covering or structure during the dusk flight survey.

5.4. It is not believed that any additional surveys, using traditional emergence survey techniques, the deployment of static/passive detectors or use of Infrared or Thermal imaging would provide any additional useful information regarding the use of the building by individual or small groups of bats throughout the year. Therefore, the precautionary principle must be followed and property must be subjected to additional safe-guarding practises to minimise the risk of harm to bats utilising the structure. These include the completion of a destructive search, under the supervision of an appropriately licensed ecologist. The destructive search must be undertaken outside of the bat maternity season  $1^{st}$  May –  $31^{st}$  August 2025 and works must cease if a bat is found until an appropriately licensed ecologist is able to attend the site and consult with NRW.

**5.5.** To ensure there is no net loss of roosting potential the enhancements should be incorporated into the final design of the development, which can be secured by the imposition of an appropriately worded planning condition.

**5.6.** Bats are highly mobile flying animals which may set up new roosts at any time, therefore this report can only be considered **valid for 12 months**.

## 6. SURVEYOR EXPERIENCE

6.1.1. The lead surveyor, and author of this report, was Leigh Tuck (Licence Number S092478/1), assisted by Sian Tuck.

6.1.2. Leigh is a NRW licensed bat worker and has held protected species licences for over 12 years, with over 16 years surveying and bat monitoring experience.

6.1.3. Within the course of his career, he has also been involved in monitoring and surveying of other European protected species such as Otter, Dormouse and Great crested newt and have worked extensively in habitat management for the enhancement of protected species. Spectrum Ecology have undertaken a number of surveys in the local area and are familiar with the area and the locations of known bat roosts therein.