DEVON WILDLIFE CONSULTANTS

# 29 Godfrey Gardens, Bow

# Ecological Appraisal (Bats & Birds)

Report No: 22/4003.02
Date: August 2022
Client: Wilf Richer

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| Revision | Prepared by | Authorised by | Dated |
|---|---|---|---|
| **Initial Issue** | **Edward Slade BSc. (Hons)** | **Carly Ireland MSc. MCIEEM** | 11/08/2022 |

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## Executive Summary

Devon Wildlife Consultants (DWC) was commissioned by Wilf Richer to undertake an Ecological Appraisal (Bats & Birds) of two buildings located within the village of Bow, Devon.

The buildings are currently utilised as a private residence and a garage, which are surrounded by hard standing and garden areas within a built-up residential area. It is understood it is proposed to extend the rear of the private residence southwards and into the garden, which will require demolition of the garage. The works will affect the roof of the private residence.

A Preliminary Ecological Appraisal identified potential for roosting bats within the private residence. No evidence or potential for roosting bats was noted within the garage. A subsequent emergence survey ascertained that the property does not currently support roosting bats.

No evidence of nesting birds was noted within the buildings, however there were opportunities for crevice nesting birds to utilise the private residence.

In light of the survey results, the following construction compliance recommendations are provided:

- No evidence of roosting bats currently using the building was identified however if bats were discovered during the proposed works, then any sheltering materials should be replaced around the bat and works within the immediate vicinity ceased until advice can be sought from Natural England or Devon Wildlife Consultants.

- Works to the private residence should ideally be undertaken outside of the main bird nesting season which extends from March to August (inclusive) or following a nesting bird check. The construction schedule should allow for potential delays in this case as any active nests must remain undisturbed until all the young have fledged naturally, which may take several months.

Recommendations to enhance the site post development are also provided to take into account the national biodiversity strategy detailed in the National Planning Policy Framework (NPPF) to preserve, restore and re-create priority habitats, ecological networks and to ensure the protection and recovery of priority species populations, linked to national and local targets.

# Contents

# 1 Introduction

## 1.1 Description of Site

The site comprises a private residence and garage situated in Bow, Devon at National Grid Reference SS 720 015.

## 1.2 Purpose of Assessment

DWC was commissioned by Wilf Richer to undertake an Ecological Appraisal (Bats & Birds) of the site. The purpose of the appraisal is to use the results of field surveys to describe and evaluate the ecological resources present within the site. The appraisal includes an assessment of the potential ecological constraints and opportunities which are likely to result from the development. Mitigation and enhancement proposals are included together with construction compliance recommendations to ensure the development conforms with relevant policy and legislation. The appraisal follows the steps set out by the mitigation hierarchy: avoid, minimise, restore and compensate.

## 1.3 Scope of Works

The current report comprises a Preliminary Ecological Appraisal and a subsequent evening emergence survey.

The two buildings present within the site were subject to a Preliminary Ecological Appraisal to assess their potential to support roosting bats and nesting birds. Potential for roosting bats which could not be inspected was identified within the private residence. Consequently, a further emergence survey was undertaken to ascertain presence/absence of roosting bats and if required, the species and number of bats utilising the building, their roost location and access points.

It should be noted that these surveys are valid for two years, after which an updated survey may be required.

## 1.4 Development Proposals

The buildings are currently utilised as a private residence and a garage, which are surrounded by hard standing and garden areas within a built-up residential area. It is understood it is proposed to extend the rear of the private residence southwards and into the garden, which will require demolition of the garage. The works will affect the roof of the private residence.

# 2 Survey Methodology

## 2.1 Preliminary Ecological Appraisal (Bats & Birds)

A visual inspection of the buildings was undertaken utilising binoculars, an endoscope, a ladder and a torch to search for evidence of bat activity such as droppings, insect prey remains, urine staining and/or actual bats. The buildings were also inspected for the presence of nesting birds or their field signs such as whitewash, droppings, pellets and/or nest debris. Legislation relating to these species is provided in Appendix 1.

The site was surveyed on 20th June 2022 by Daniel Hooper BSc. (Hons) working under the licence of Kitty Straghan, a Natural England licensed bat surveyor (Natural England Class Bat Licence Registration Number 2017-27979-CLS-CLS).

Following the Bat Survey Guidelines (BCT, 2016), each building was assigned a value of high/moderate/low/negligible.

## 2.2 Emergence Survey

Potential for roosting bat activity was identified within the private residence, therefore in line with the BCT (2016) guidelines, one emergence survey was undertaken. The survey was carried out during suitable weather conditions.

The site was surveyed for emerging bats from 15 minutes before sunset until 1½ hours after sunset. Cloud cover, wind strength, precipitation and air temperature were all recorded at the start and on completion of the survey.

The survey was undertaken by two surveyors who were positioned to cover all aspects of the building. Particular emphasis was placed on the areas which were highlighted as having the potential to support roosting bats, where access was restricted, or where a potential bat access point was identified.

If a bat was detected emerging, the time and position of each emerging bat was noted on a field base plan, together with its direction of flight (light permitting) and, where possible, the specific point from which the bat was emerging.

All bat activity was recorded using Peersonic RPA3 full spectrum bat detectors. To aid species identification, recordings were analysed using Kaleidoscope computer software. A SANNCE CCTV system and additional infrared lighting was utilised to aid low light vision.

The building was surveyed for emerging bats on 1st August 2022. The survey was undertaken by Daniel Hooper BSc. (Hons) and Edward Slade BSc. (Hons).

## 2.3 Survey Limitations

Preliminary Ecological Appraisal

The results of this survey will depend on signs of bat activity being identified, as it is unlikely that bats will be visible. A number of bat species roost in very small crevices, consequently it is possible that individuals may not be seen during the survey. In addition, it is possible that bird nests may be situated in concealed locations which may not be visible to the surveyor.

Evening Emergence Surveys

It is not possible to distinguish between the calls of different species of the genera *Plecotus* or *Myotis* either in the field or during analysis. As such these species will be identified to genus unless key visual identification features were noted within the field which confirm identification to species level.

# 3 Results

## 3.1 Introduction

The landscape surrounding the site comprises residential development. A private residence and an associated garage building were subject to assessment. Details relating to evidence of bat/nesting bird activity are presented in Section 3.2 and results from the bat emergence survey are presented in Section 3.3. Descriptions of the buildings are provided in Appendix 2. Weather conditions recorded during the survey visits are presented Appendix 3.

## 3.2 Preliminary Ecological Appraisal

### 3.2.1 Roosting Bats

Garage

No droppings or further signs of bat activity were identified either within or on the exterior of the building. No potential roosting features are associated with the building.

Overall, the suitability of the garage for roosting bats is considered to be **negligible**.

Private residence

No droppings or further signs of bat activity were identified either within or on the exterior of the building. Gaps behind barge boards and in the wooden soffit provide potential access points for bats. In addition, gaps present under a small number of roof tiles and inside lead flashing offer potential access points. Potential roosting features identified include the loft lining and within the soffit box.

Overall, the suitability of the building for roosting bats is considered to be **low.**

### 3.2.2 Nesting Birds

Garage

No evidence of nesting activity was identified either within or on the exterior of the building.

Overall, the suitability of the garage for nesting birds is considered to be **negligible**.

Private residence

No evidence of nesting activity was identified either within or on the exterior of the building although there is potential for crevice nesting bird species such as house sparrow *Passer domesticus* to be present.

Overall, the suitability of the main residence for nesting birds is considered to be **low**.

## 3.3 Bat Emergence Survey Results

### 3.3.1 Survey Visit 1 – 1st August 2022

No bats were detected emerging from the building.

Non-emerging bat activity included common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* bats which were recorded throughout the survey on all aspects. Additionally, a single noctule *Nyctalus noctula* bat was recorded at 21:49 and two serotine *Eptesicus serotinus* calls were recorded at 21:54 and 22:04.

## 3.4 Conclusion

No roosting bat activity was identified during the further survey.

# 4 Impacts and Recommendations

This section details design and construction compliance requirements, based on current UK wildlife legislation and national and local planning policy. These recommendations must be followed to ensure the legislation is not contravened by the proposed development, including any site investigation or vegetation clearance works.

## 4.1 Construction Compliance

### 4.1.1 Roosting Bats

No evidence of roosting bats currently using the building was identified and therefore there are no perceived legal implications for the proposed development regarding bat species. It is important to note that although no evidence of roosting bats was present at the time of the survey, bats may use a variety of roost sites throughout the year and may on occasion roost under tiles. If bats were discovered during the proposed works, then any sheltering materials should be replaced around the bat and works within the immediate vicinity ceased until advice can be sought from Natural England or Devon Wildlife Consultants.

### 4.1.2 Nesting Birds

Works to the private residence should be undertaken outside of the main bird nesting season of March to August (inclusive). Nesting can extend outside this period however this is often dependent on weather conditions and species, therefore undertaking works outside of the nesting bird season would minimise the risk of potential delays to the works programme.

If such works cannot be undertaken outside of the nesting season, a nesting bird check should be undertaken by an ecologist immediately prior to development works. The construction schedule should allow for potential delays in this case as any active nests must remain undisturbed until all the young have fledged naturally, which may take several months.

## 4.2 Summary

Schedule 14 of the Environment Act 2021 will require a minimum 10% Biodiversity Net Gain as a condition of planning permission in England. Net biodiversity gain is currently required under the National Planning Policy Framework (NPPF) which sets out the UK Government's national policies on enhancement of biodiversity and promotion of ecosystem services through the planning system. The impact of the proposed works and recommendations for achieving biodiversity net gain are provided in Table 4.1. Examples of Bird Nesting & Bat Roosting Provisions are provided in Appendix 4.

| Ecological Receptor | Geographical scale of impact | Potential impacts | Mitigation | | Impact | |
|---|---|---|---|---|---|---|
| | | | Avoidance measures | Compensation & Enhancement measures | Short term | Long term |
| Roosting Bats | N/A | None | N/A | Provision of two bat roosting units/tubes within property post-development | None | Positive at Site level |
| Nesting Birds | N/A | Damage or destruction of active nests | Undertake works to private residence outside of bird nesting season or following a nesting bird check | Provision of two bird nest boxes within property post-development | Negative at Site level | Positive at Site level |

**Table 4.1 Summary**

## References


**Bat Conservation Trust. (2016).** *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.

**Conservation of Habitats and Species (EU Exit) Regulations 2019.** HMSO

**Countryside and Rights of Way Act (2000).** HMSO

**Dietz, C. (2007)** *Bats of Britain, Europe and Northwest Africa*. A & C Black Publishers Ltd.

**English Nature. (2004).** *The Bat Mitigation Guidelines***.** English Nature, Peterborough

**JNCC (2004).** *Bat Workers Manual*. 3rd Edition. Joint Nature Conservation Committee, Peterborough

**Ministry of Housing, Communities & Local Government (2021)** *National Planning Policy Framework (NPPF).* Ministry of Housing, Communities & Local Government, London.

**Mitchell-Jones A.J. & Mcleish A.P. (2004).** *Bat Mitigation Guidelines.* 3rd Edition. Joint Nature Conservation Committee, Peterborough

**Natural Environment and Rural Communities Act (2006).** HMSO

**Wildlife & Countryside Act (1981), as amended.** HMSO

## Appendices

Appendix 1: Legislation

Appendix 2: Building Descriptions

Appendix 3: Survey Weather Conditions

Appendix 4: Examples of Bird Nesting & Bat Roosting Provisions

# Appendix 1 – Legislation

## Bat Species

All British bats and their roosts are afforded strict protection under the Wildlife and Countryside Act 1981 (as amended), as well as the Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019. In combination, these pieces of legislation give substantial protection to bats and their roost sites, and make it an offence for any person to carry out the following acts:

- Intentionally or recklessly kill, injure or take a bat.
- Damage, destroy or obstruct access to any place that a bat uses for shelter or protection. This is taken to mean all bat roosts whether bats are present or not.
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.

In order to undertake actions that would result in damaging, destroying or obstructing access to a roost, or to disturb bats (whether in a roost or not), a licence is required from Natural England. In effect, this means that development activities that may disturb 'European protected species are subject to such licensing, in order to remain within the law.

## Nesting and Nest Building Birds

All birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended). Nesting is determined as being from when birds first initiate nest building up until the point when fledglings stop returning to the nest. It is an offence to:

- Intentionally kill, injure, or take any wild bird.
- Intentionally take, damage, or destroy the nest of any wild bird.
- Intentionally take or destroy the egg of any wild bird.

## Appendix 2 – Building Descriptions

| | |
|---|---|
| **Walls** | Rendered concrete block |
| **Roof structure** | Corrugated iron<br>Flat roof<br>Wooden beams |
| **Potential access points for bats & birds** | Open door<br>Between roof and wall (north, west and southern aspects)<br>Masonry peeling away in south-eastern and south-western corners |

**Table A2.1 Garage**

| | |
|---|---|
| **Walls** | North and south: rendered stone block<br>West: stone block<br>East: attached to neighbouring property |
| **Roof structure** | Concrete tiles<br>Single pitched roof<br>Wooden soffits<br>Concrete barge boards<br>Lead flashing around main chimney and boiler chimney<br>Partially underlined with bitumen felt<br>Brick chimney |
| **Potential access points for bats & birds** | Gaps behind barge boards<br>Gaps in wooden soffit |

**Table A2.2 Main residence**

## Appendix 3 – Survey Weather Conditions

| Date: 01/08/2022 | | | | | |
|---|---|---|---|---|---|
| **Sunset: 21:00** | | | | | |
| **Parameter** | **Time** | **Temp** (ºC) | **Wind Speed** (Beaufort Scale) | **Cloud Cover** % | **Precipitation** |
| Start of Survey | 20:45 | 19 | F0 | 95 | None |
| End of Survey | 22:30 | 16 | F0 | 95 | None |

**Table A3.1 Survey 1**

## Appendix 4 – Examples of Bird Nesting & Bat Roosting Provision

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# BAT ROOSTING PROVISION

**This information is provided as an indication of different types of roosting provision, and is not comprehensive. DWC does not endorse any particular products or suppliers.**

| | |
|---|---|
|  | **General Purpose Wooden & Woodcrete Bat Boxes**<br>e.g. Schwegler Bat Boxes 2F & 2FN for trees<br><br>Woodcrete boxes e.g. Schwegler are more durable and provide more stable temperatures<br><br>Position: Upon external walls or mature trees with a southerly aspect, at approximately 3m or higher from ground level.<br><br>**http://www.wildcareshop.com/product/nest-boxes-artificial-habitats/bat-boxes.html**<br><br>**http://www.nhbs.com/bat_boxes_eqcat_421.html** |
|  | **Bat boxes for external walls**<br><br>e.g. Schwegler 1FQ Bat Box (pictured)<br><br>Position: On external walls with a southerly aspect, beneath eaves or approximately 3m or higher from ground level. Front panel can be painted to match building. |

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| | |
|---|---|
|  | e.g. Beaumaris Woodstone Bat Box (pictured) |
|  | **Integrated bat boxes**<br><br>e.g. Schwegler 2FR Bat Tube (pictured left)<br>or Build-in WoodStone Bat Box (pictures right)<br><br>Position: Within or on external walls with a southerly aspect, beneath eaves or approximately 3m or higher from ground level.<br><br>Additional information: Can be painted or rendered. No maintenance required. The top can be removed to allow access to cavity walls, or optional holes in the sides mean that several units can be installed together to form a larger roost. |
|  | **Schwegler N27 Bat Box** (pictured)<br><br>Position: Within external walls with a southerly aspect, beneath eaves or approximately 3m or higher from ground level. |

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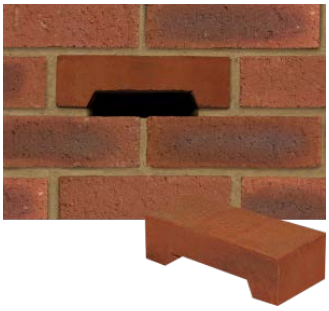
|  <br>  | **Bat roost access panels/bricks**<br><br>e.g. Schwegler 1FE Bat Access Panel with Optional Back Panel (pictured above)<br><br>By fitting the optional back panel the Schwegler 1FE becomes a self-contained bat roosting unit<br><br>Alternative: Ibstock Bat Access Brick (pictured below)<br><br>Position: Within or on external walls with a southerly aspect, beneath eaves or approximately 3m or higher from ground level.<br><br>Additional Information: Installation of access panel alone would allow bats to access into a building, potentially into a cavity wall spaces or loft spaces. No maintenance required<br>. |
|  | **Permanent provision within structure of the building**<br><br>It is possible to create more traditional access into the roof space and suitable crevices within a building, for example through raised ridge tiles or slates, or gaps behind the soffit boxes e.g. Tudor Roof tiles (pictured)<br>http://www.tudorrooftiles.co.uk/bat.html |

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## BIRD NESTING PROVISION

**This information is provided as an indication of different types of nesting provision, and is not comprehensive. DWC does not endorse any particular products or suppliers.**

| | |
|---|---|
|  | **General Purpose Wooden & Woodcrete Bird Boxes**<br>e.g. Greenalyte range (pictured), Schwegler Bird Boxes 1B & 2H for trees, and Schwegler 1MR Avianex for buildings.<br><br>Woodcrete boxes e.g. Schwegler are more durable and provide more stable temperatures<br><br>A range of entrance hole sizes will cater for different species e.g.<br>**26mm:** Blue Tit, Coal Tit, possibly Wren.<br>**32mm:** Great Tit, Nuthatch, Pied Flycatcher.<br>**45mm:** Starling<br>**Open Fronted:** Robin, Wren, Pied Wagtail.<br><br>Position: External walls or mature trees with a northerly aspect, approximately 2m or higher from ground level, with nearby tree or hedge cover.<br><br>**http://www.wildcareshop.com/product/nest-boxes-artificial-habitats/bird-boxes.html**<br><br>**http://www.nhbs.com/bird_boxes_eqcat_426.html** |

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|---|---|
|  | **Sparrows**<br>e.g. NHBS FSC sparrow terrace (pictured)<br><br>Position: At a height of at least 2m upon external wall, facing east. Several boxes can be installed approximately 1.5m apart |
|  | **Swifts**<br>e.g. Schwegler Swift No. 16 Swift Box (pictured), No. 18 Schwegler Swift Box (for eaves), Ibstock swift bricks, WoodStone Built-in Swift Boxes and Bricks.<br><br>Position: At a height of 5m or above. Within external walls with a northerly aspect or beneath eaves and out of direct sunlight. Away from windows, obstructions and creepers. Provide several boxes.<br><br>Note: Swift calls can be played in May to help swifts locate the nest site **http://www.swift-conservation.org/Nestboxes&Attraction.htm** |
|  | **House Martins**<br>e.g. Schwegler House Martin Nesting Cups (pictured)<br><br>Positioning: On unobstructed walls directly beneath eaves, at a height of 2m or above, facing north or east. Install a droppings board beneath, or install where droppings will not be an issue.<br><br>Several nests can be placed together. House martins nest in colonies, and the cups may encourage birds to build their own nests. |

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|---|---|
|  | **Swallows**<br>e.g. Schwegler No 10 Swallow Nest (pictured)<br><br>Positioning: Inside of buildings or larger covered areas (e.g. carport or stables), ensuring clear flight path in and out of the structure. Nests should not be placed close together. |
|  | **Barn Owl nest boxes**<br>Barn Owl Trust design has been developed to reduce juvenile mortality.<br><br>Positioning: Over 3m in height, facing towards open countryside (more than 1km from a motorway or dual carriageway).<br><br>Different designs for trees, poles and buildings are available from the Barn Owl Trust: **https://www.barnowltrust.org.uk/shop/** |
|  | **Barn Owl permanent provision**<br>The best option for barn owls is to provide permanent space within a building. Further detailed information is available from the Barn Owl Trust: **http://www.barnowltrust.org.uk/infopage.html?Id=244** |

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# BEE PROVISION

**Bee Brick**

e.g. Green&BlueBuild range (pictured)

'Britain has more than 250 bee species, but numbers have fallen dramatically due to disease, an increase in chemical use and habitat loss' (Friends of the Earth, 2013).

Solitary bees are non-aggressive and as such are very pet and child friendly. Solitary bees will not sting you unless you squash them, and even then their stings are not painful.

Specification: Each concrete brick is 215mm x 105mm x 65mm.

Position: The bee brick has been created to be used either as an integral part of a building, used within landscaping, or to be positioned as a free standing bee nest in the garden. It offers the dual function of being a construction material that also promotes biodiversity. The bee brick should be positioned in a warm sunny spot, preferably a south facing wall, with no vegetation in front of the holes. They should be positioned at least 1m from the ground with no upward limit.

Function: Each Bee brick contains cavities for solitary bees to lay their eggs. Each cavity is moulded part way into the brick ensuring bees cannot enter the building. Bees lay their eggs inside the holes and seal the entrance with mud or chewed up vegetation. The offspring emerge the following Spring and begin the cycle again.

https://greenandblue.co.uk/product/bee-brick/

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## References and Further Information


- **Bat Conservation Trust** http://www.bats.org.uk/pages/accommodating_bats_in_buildings.html

- **Envisage Wildcare** http://www.wildcareshop.com/

- **NHBS** http://www.nhbs.com/

- **Panks, S. White, N. Newsome, A. Nash, M. Potter, J. Heydon, M. Mayhew, E. Alvarez, M. Russell, T. Cashon, C. Goddard, F. Scott, S.J. Heaver, M. Scott, S.H. Treweek, J. Butcher, B. & Stone, D. (2022).** *Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide.* Natural England.

- **Williams, C. (2010)** *Biodiversity for Low and Zero Carbon Buildings.* RIBA Publishing, London