



**Ring O'Bells, 18 St Mary's Road, Meare, Glastonbury  
Somerset BA6 9SP**

Mr. Phil Peace

**Bat Survey – Emergence and Activity Surveys**

21/07/2023

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## Executive Summary

Quantock Ecology Ltd. undertook a suite of emergence and activity surveys on two outbuildings at Ring O'Bells, 18 St Mary's Road, Meare, Glastonbury, Somerset BA6 9SP on the 7<sup>th</sup> and 28<sup>th</sup> June 2023. The survey followed on from a Preliminary Roost Assessment for bats and breeding birds undertaken by Quantock Ecology during March 2023. The aim of the assessment is to determine the presence or likely absence of bats and if present, characterise the roost including species, numbers and levels of activity, to identify entrance and egress points, and to gain an understanding of the activity of bats using the building in the local landscape.

The current proposals, to be submitted to Somerset Council are understood to involve the conversion of the existing barn as annex buildings.

*Table 1: Summary of results*

<b>Building reference</b>	<b>Presence/likely absence of roosting</b>	<b>Roost character</b>	<b>Recommendations for further survey and/or mitigation</b>
B1 – Stone Barn	Likely absence	No roost identified.	No bats were recorded roosting within the structure and as such, there are no anticipated impacts on roosting bats. No further surveys or mitigation is required. However, site enhancements are recommended.
B2 – Breezeblock Barn	Likely absence	No roost identified.	No bats were recorded roosting within the structure and as such, there are no anticipated impacts on roosting bats. No further surveys or mitigation is required. However, site enhancements are recommended.

## **1.0 Introduction and Context**

### **1.1 Background**

Quantock Ecology were commissioned by Mr. Phil Peace to undertake a suite of emergence and activity surveys on two outbuildings at the Ring O'Bells, Meare. The assessment is informed by the Bat Conservation Trust publication: *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, J, (ed.), 2016).

The Preliminary Roost Assessment, undertaken in March 2023 by Quantock Ecology, suggested B1 had a moderate habitat value while B2 had a low habitat value for roosting bats. This was due to a low number of suitable roosting features for crevice dwelling bat species noted across the buildings in the form of lifted tiles and fascias.

### **1.2 Aims and Objectives**

This report provides a description of the bat activity observed and recorded during each survey, notably the egress and entrance points on the building; the numbers and species of bats using the roosts; and the type and levels of activity in and around the roost sites. The aim of the assessment was to determine the presence or likely absence of roosting bats and to gain an understanding of how bats (if present) use the building. The objectives of the surveys were to gain an understanding of the species, numbers and access points, roosting locations, timing of use and type of roost.

Robust data has been collected, following good practice guidelines, to inform an assessment of the potential impacts of the proposed development on bats, and inform any mitigation and enhancement measures. This report provides information on constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve Planning or other statutory consent, and to comply with wildlife legislation.

### **1.3 Scope of the Report**

Survey plans are presented in Appendix 1, showing the location of each surveyor and the bat activity observed and recorded during each survey; site plans showing proposed development are shown in Appendix 2 and a summary of relevant legislation can be found in Appendix 3. This report should be read in conjunction with the Preliminary Roost Assessment by Quantock Ecology (Quantock Ecology, 2023).

#### **1.4 Site Context**

The site is located at National Grid Reference ST 455 416 and comprises an area of approximately 0.01ha. There are two buildings within the survey boundaries.

The site is situated within the village of Meare, Somerset. The village comprises low density housing with connected residential gardens containing scattered trees. The local landscape surrounding the village is predominantly a mixture of arable and pastoral farmland, bordered by mature hedgerows and Rhynes. Substantial areas of woodland are lacking within the wider landscape, however several orchards are present around the fringes of the local villages. The River Brue runs ~150m north of the site at its closest point. Large wetland areas connected by a network of Rhynes are found ~1km south and ~1.7km north of the site. Connectivity to and from the site into the wider landscape is present; mostly in the form of the residential gardens surrounding the site, leading to mature tree heavy hedgerows and Rhynes.

#### **1.5 Project Description**

This report is prepared to accompany a planning application to be submitted to Somerset County Council. It is proposed that the two outbuildings will be converted as annex buildings. Part of the plans showing the proposed works are included in Appendix 2, the full plans can be included upon receipt. The programme for the scheme is yet to be confirmed.

## 2.0 Methodology

### 2.1 Site Survey

#### 2.1.1 Surveyors and weather conditions

The surveys were undertaken and overseen by Ella Colenso, BSc (Hons). Ella holds a class 1 bat licence, Natural England Licence number: 2022-10564-CL17-BAT. Also present were experienced bat surveyors Adrian Woodhall BSc (Hons), MSc, MCIEEM, (Licence number: 2015-11617-CLS-CLS), Hannah Pidgeon and Indie England BSc (Hons) QCIEEM. Weather conditions for each survey are shown in Table 2 below.

Table 1: Weather conditions during surveys

Date of survey	Weather conditions at start of survey	Weather conditions at end of survey
07/06/2023 (Dusk)	Temperature: 16°C Humidity: 63% Cloud Cover: 5% Wind speed: 0/8 Precipitation: None	Temperature: 15°C Humidity: 57% Cloud Cover: 0% Wind speed: 1/8 Precipitation: None
28/06/2023 (Dusk)	Temperature: 19°C Humidity: 77% Cloud Cover: 100% Wind speed: 0/8 Precipitation: None	Temperature: 18°C Humidity: 84% Cloud Cover: 100% Wind speed: 0/8 Precipitation: None

The survey methods were informed by the Preliminary Roost Assessment (PRA), which identified potential roosting and access points on the building. All building that were assessed as being suitable for roosting bats was subject to survey; two surveyors were used to provide sufficient coverage of all suitable structures on site. The location of each surveyor during each survey is shown in Appendix 1.

#### 2.1.2 Timing

The dates and times of each survey are shown in the table below.

Table 2: Survey schedule, dates and times

Reference	Suitability	Survey date	Sunset/sunrise time	Survey start time	Survey end time
B1	Moderate	07/06/2023	21:22	21:05	22:55
B2	Low	07/06/2023	21:22	21:05	22:55
B1	Moderate	28/06/2023	21:30	21:15	23:00



### *2.1.3 Equipment*

All surveyors utilised high powered torches, an echo meter touch (EMT2 Pro) connected to an apple iPad/Android device. Two-way radios were also used to communicate between surveyors across the site. A Cannon XA11 Infrared camera was deployed on the first dusk survey, observing the northern and eastern elevations of the building B1.

## **2.2 Limitations**

This survey follows best practice guidance to confirm presence/absence of roosting bats and where present, characterise the roost. However, this information is collected at finite dates and times, and provides an indication of the conditions on site only. The use of the structures and trees, and site as a whole, by bats, at all times cannot be established based on this information.

No site-specific limitations were noted during the surveys, which were undertaken during the optimal survey season. Due to the lack of any suitable roosting features identified on the eastern elevation of building B2 during the PRA stage, one surveyor was deemed sufficient to cover the remaining northern and western elevations.

## 3.0 Results

### 3.1 Survey Results

#### *3.1.1 Presence/absence and roost characterisation surveys*

##### *Buildings B1 and B2*

No bats were recorded emerging from either of the buildings during the surveys. Foraging and commuting activity was recorded across the site; with the majority of the activity from soprano pipistrelles *Pipistrellus pygmaeus* foraging around the central garden area and around the driveway to the southwest of the site. This information is shown on the plans in Appendix 1 and in tables 4 and 5.

Table 3: Summary of survey results, Survey Date: 07/06/2023

<b>Surveyors:</b> A: Ella Colenso B: Adrian Woodhall C: Hannah Pidgeon			
<b>Survey Date: 07/06/2023</b>			
<b>Building reference</b>	<b>Surveyor and Position</b>	<b>Start Time – End Time</b>	<b>Brief summary of passes and behaviour observed</b>
B1 – Stone Barn	Surveyor A, (located to the northeast of B1)	21:05 – 22:55	Soprano pipistrelles were recorded passing from the east to the north across the eastern elevation of B1 at 21:41 and 22:02, as well as flying north through the gap to the west of B1 at 21:45 and 21:55. Foraging activity from soprano pipistrelles was recorded frequently from 22:04 until 22:31 around the garden to the east of B1. Further soprano pipistrelle passed north to south across the site at 22:12 and passed unseen at 22:18, 22:30, 22:33 and 22:35. At 22:10 a common pipistrelle <i>Pipistrellus pipistrellus</i> flew north to the west of B1, with another pass at 22:27 going west to east, north of B1 and unseen passes recorded at 22:33 and 22:41. At 22:13 a noctule <i>Nyctalus noctule</i> passed unseen. No bats were recorded emerging from the building during the dusk survey.
B2 – Breezeblock Barn	Surveyor B, (located to the south of B1)	As above	The first bats recorded were soprano pipistrelles flying north through the gap to the west of B1 at 21:45 and 22:55, with another pass at 22:02. Unseen soprano pipistrelles were recorded at 21:57, 22:00, 22:08, 22:13, 22:19, 22:23, 22:36 and 22:40. At 22:04 a soprano pipistrelle flew south down the driveway to the south of B1. Common pipistrelles were recorded flying north at 22:09 and south along the western elevation of B1 at 22:11 before passing unseen at 22:32 and 22:33. At 22:13 a noctule past unseen. No further activity was recorded.
B1 – Stone Barn	Surveyor C, (located to the northwest of B2)	As above	Unseen soprano pipistrelles were recorded occasionally throughout the survey, from the first pass at 21:57 until 22:35 with fairly constant foraging activity noted around the garden to the west of B2 from 22:01 until 22:30. Faint passes from unseen serotines <i>Eptesicus serotinus</i> were noted at 22:00 and 22:38. Noctules passed unseen at 22:04 and 22:13. Faint passes from unseen long-eared bats <i>Plecotus sp.</i> were recorded at 22:07, 22:15 and 22:34. Common pipistrelles past unseen at 22:24, 22:29, 22:33 and 22:38 with one passing west to east over the site at 22:27. No bats were recorded emerging from the building during the survey.

Table 4: Summary of survey results, Survey date: 28/06/2023

<b>Surveyors:</b> A: Ella Colenso D: Indie England			
<b>Survey Date: 28/06/2023</b>			
<b>Building reference</b>	<b>Surveyor and Position</b>	<b>Start Time – End Time</b>	<b>Brief summary of passes and behaviour observed</b>
B1 – Stone Barn	Surveyor A, (located to the northeast of B1)	21:15 – 23:00	The first recording was from a soprano pipistrelle passing north through the gap to the west of B1 at 21:53, before foraging activity from soprano pipistrelles was observed around the garden to the east from 21:55 until 22:15 and again briefly at 22:26. Further unseen soprano pipistrelles were recorded at 22:16, 22:28, 22:33, 22:35, 22:43 and 22:44. Unseen noctules were recorded fairly frequently from 22:16 until 22:44, with one observed passing north over the site before returning and circling high above then exiting to the west. Two unseen myotis bats <i>Myotis sp.</i> were recorded at 22:40 and 22:42 before the final pass from an unseen Leisler's bat <i>Nyctalus leisleri</i> at 22:41.
B1 – Stone Barn	Surveyor D, (located to the south of B1)	As above	The first pass was from a soprano pipistrelle flying west across the surveyor before passing north through the gap to the west of B1 at 21:53 (this was the same bat observed by Surveyor A). Unseen soprano pipistrelles were heard at 21:55, 22:36 and 22:43 before one passed northeast through the driveway to the south of B1 at 21:58. Almost constant foraging activity was recorded within the driveway area from 22:02 until 22:16 and again at 22:44 until the end of the survey. Unseen noctules passed frequently throughout the survey from 22:18 until 22:43, with the final pass from an unseen common pipistrelle at 22:35.

## 4.0 Conclusions and Impact Assessment

### 4.1 Conclusions

The main conclusions of the PRA and emergence surveys undertaken at this site are described below. Two buildings were surveyed, following recommendations made in the PRA.

Although some commuting and foraging activity was recorded during the survey, no bats were recorded roosting within either of the buildings (B1 or B2). The majority of the activity across the site was from soprano pipistrelles foraging around the central garden area with occasional foraging and passes around the driveway to the southwest of the site.

### 4.2 Impact Assessment

No bats were recorded present roosting within the building and as such, there are no impacts anticipated on the species. Bats are protected under the Wildlife and Countryside Act and Conservation Regulations; see Appendix 3 for a summary of legislation protecting bats in the UK.

### 4.3 Recommendations

#### 4.3.1 Mitigation

There is a likely absence of roosting bats within the existing buildings (B1 and B2). As such, no mitigation measures are required. However, if bats are found during any stage of the development, work should stop immediately and a suitably qualified ecologist should be contacted to seek further advice. Careful consideration should be given to any future lighting across the site. Bats were observed using the gardens between the buildings for foraging and commuting. As such, the lighting of this area should be maintained as close to current conditions as possible. Any future lighting should be kept to a minimum, and in line with guidance produced by the Bat Conservation Trust and Institute of Lighting Professionals: <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>.

#### 4.3.2 Enhancements

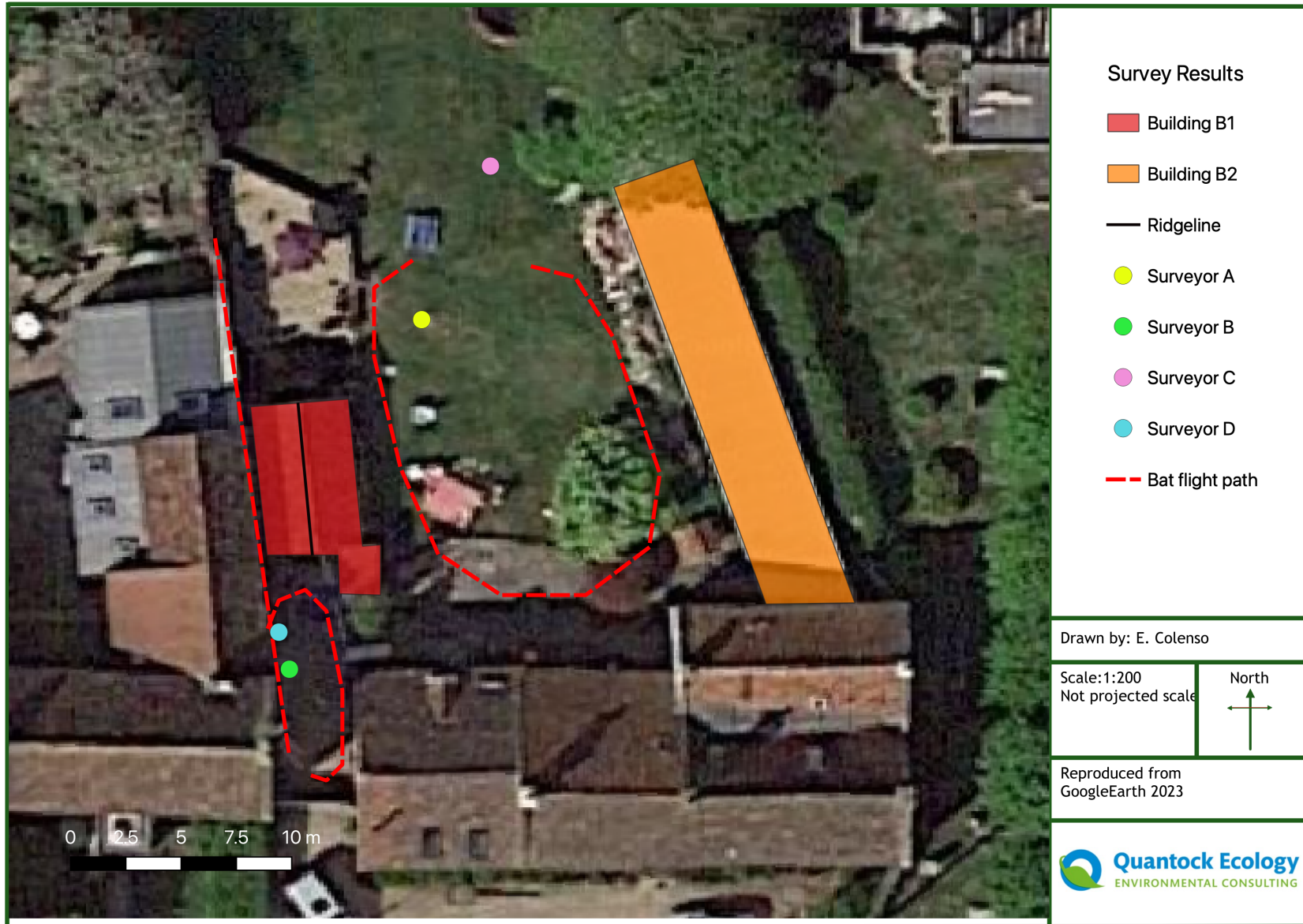
The installation of a single Schwegler 1FF or 2FN bat box could be considered; erected on the proposed annexes or any suitable trees on site. This should be installed facing a southerly direction, approximately 3-5m above ground level. Such bat boxes would provide additional roosting habitat for bats present within the local area.

## 5.0 Bibliography

- Barn Owl Trust (2012) Barn Owl Conservation Handbook, Pelagic Publishing, Exeter.
- British Trust for Ornithology (2016) [www.bto.org/about-birds/nnbw/putting-up-a-nest-box](http://www.bto.org/about-birds/nnbw/putting-up-a-nest-box)
- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3<sup>rd</sup> edition, Bat Conservation Trust, London.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

# Appendices

### Appendix 1: Survey Plan



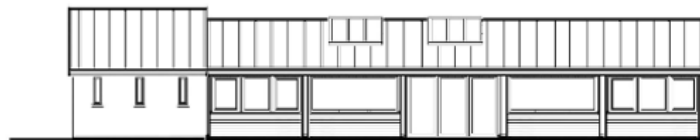
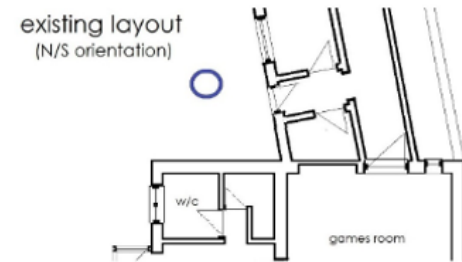


### Appendix 2: Proposed Site Plan

**specification:**

walls: green oak verticals/glazing or timber-cladding or blue liss  
roof structure: cut-roof/purlins for annexe, tied truss for studio, standard truss for services  
roofing materials: seamed metal  
doors/windows: anodised metal  
verandah: green oak

Ring O' Bells  
18 St Marys Road  
Meare  
BA6 9SP  
**proposed alterations**



west elevation



north elevation



south elevation



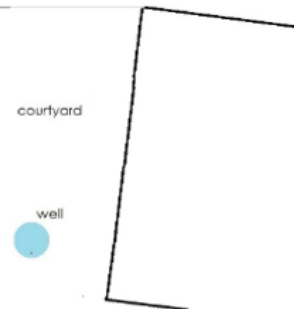
floor plan



north elevation (picture window)



relationship to main building  
(E/W orientation)



blackledge**design**.co.uk  
scale 1:200 NB 4/4/22

## Appendix 3: Legislation and Planning Policy related to bats

### LEGAL PROTECTION

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2.

Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
  - a) to impair their ability:
    - (i) to survive, breed, or reproduce, or to rear or nurture young
    - (ii) to hibernate or migrate
  - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

#### *Effect on development works:*

A European Protected Species Mitigation (EPSM) Licence issued by the relevant statutory authority (e.g. Natural England) will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored.

The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008)

## **NATIONAL PLANNING POLICY (ENGLAND)**

### *National Planning Policy Framework*

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

### *The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty*

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

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