

BURTON REID  
ASSOCIATES



BAT SURVEY REPORT  
**ST. ANDREWS'S CHURCH,  
BLAGDON, SOMERSET**  
NATURAL ENGLAND

| September 2021 | BR0547/B/A |



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# Document Control

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*"As we rekindle our imagination, we discover our power to act. And that is the point at which we become unstoppable."*

George Monbiot, journalist and author

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The report which we have prepared and provided is in accordance with the Chartered Institute for Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

This report has been produced in accordance with British Standard 42020:2013 "Biodiversity, Code of practice for planning and development" and the Chartered Institute of Ecology and Environmental Management's Guidelines for Ecological Report Writing (CIEEM, 2017).

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Please note that unless otherwise stated, the contents of this report will remain valid for a maximum period of 12 months from date of issue. Beyond this updated survey work may be required to establish any changes in baseline conditions.

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# CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Background and Objectives.....	1
1.2	Description and Location.....	1
1.3	Impacts of Bats on the Church.....	1
<b>2</b>	<b>SURVEY BACKGROUND AND METHODS.....</b>	<b>2</b>
2.1	Previous inspections.....	2
2.2	Burton Reid Associates (2020) .....	2
2.2.1	Light Touch Survey.....	2
2.2.2	Nocturnal Emergence & Re-entry Survey.....	2
2.2.3	Constraints.....	3
<b>3</b>	<b>SURVEY FINDINGS.....</b>	<b>4</b>
3.1	Previous inspections.....	4
3.2	Light Touch Survey.....	4
3.3	Nocturnal Emergence / Re-Entry Surveys.....	4
<b>4</b>	<b>EVALUATION AND IMPACT ASSESSMENT .....</b>	<b>6</b>
4.1	Roost Characterisation and Evaluation.....	6
4.2	Legislation and Planning Policy.....	6
4.3	Assessment of potential impacts .....	6
<b>5</b>	<b>RECOMMENDATIONS.....</b>	<b>7</b>
<b>6</b>	<b>REFERENCES .....</b>	<b>8</b>
<b>7</b>	<b>APPENDICES .....</b>	<b>9</b>
	Appendix I: Photographs.....	10



# 1 INTRODUCTION

## 1.1 BACKGROUND AND OBJECTIVES

This document has been prepared by Burton Reid Associates on behalf of Natural England to report on the results of bat surveys, carried out as part of the 'Bats in Churches' partnership project, and recommendations relating to reducing the impacts of bats roosting at St. Andrew's Church, Blagdon, Somerset, BS40 7SJ, hereinafter referred to as 'the Church'.

Due to impacts of droppings and urine deposited by roosting bats using the Church on a painting located on the rear wall of the chancel, bat surveys were instructed as part of the Bats in Churches project to assess the bat species present and levels of activity. An internal inspection and a suite of nocturnal surveys were carried in 2021 by Burton Reid Associates. The surveys recorded the presence of individual Common Pipistrelle *Pipistrellus pipistrellus* bats using the congregational areas of the Church and evidence in the form of droppings of Brown Long-eared bats *Plecotus auritus*.

This document includes a summary of surveys undertaken and outlines recommended measures to reduce the impact of bats on the Church's painting.

## 1.2 DESCRIPTION AND LOCATION

The Church is centred on National Grid Reference ST 50412 58970 and is located on the edge of the east end of Blagdon village. The churchyard has moderately tussocky grass and is surrounded by mature trees. The village with many older properties is located to the east and the wider surrounds include a mix of agricultural grassland, cropland and woodland. Blagdon lake is located c.700m to the north.

## 1.3 IMPACTS OF BATS ON THE CHURCH

During discussions with the Church representative (Margaret Speirs – Church warden) and the Architect (George Chedburn) during the Light Touch Survey visit in May 2021 it was communicated to Burton Reid Associates that the Church has had ongoing issues associated with the deposition of droppings and urine staining on a painting (Oswald Moser's 'The Last Supper') on the wall at the rear of the chancel and that this should therefore be the focus of the surveys undertaken there.

## 2 SURVEY BACKGROUND AND METHODS

### 2.1 PREVIOUS INSPECTIONS

There have been various inspections and surveys of the Church over the last decade. The most recent was a Light Touch Survey (LTS) inspection carried out by Sam Davis of RSK in 2017.

### 2.2 BURTON REID ASSOCIATES (2020)

#### 2.2.1 Light Touch Survey

An update Light Touch Survey (LTS) was undertaken by Burton Reid Associates on 7th May 2021. The Church was inspected both externally and internally in accordance with best practice guidance (Collins, 2016) to search for bats, signs of their presence including droppings, staining, urine stains and feeding remains, and potential roosting features and access points. Suitable roosting features and signs of bats were recorded onto a base map.

The update LTS was undertaken by Jenni Reid CEnv MCIEEM (Natural England Bat Licence Number 2015-115427-CLS-CLS Level 2), a Registered Consultant (B32RC013) for the Bats in Churches Class Licence. The inspection was undertaken using a high-powered torch, camera and binoculars.

#### 2.2.2 Nocturnal Emergence & Re-entry Survey

In accordance with the Bat in Churches project methodology, four nocturnal survey visits were undertaken to record bat species, numbers and locations of roosts and access points present. The date and weather conditions for the nocturnal survey visit is displayed in Table 1 below.

*Table 1: Dates and weather conditions of survey visits*

SURVEY	DATE & TIME	PERSONNEL	WEATHER CONDITIONS*
Visit 1	17/05/2021	Jenni Reid, Tom Davies, Alex Leishman and Chrissy Mason	Temp: 11 - 9°C
Dusk	20:55 - 22:37		Wind: 1
Sunset: 20:58			Cloud: 7 Rain: None
Visit 2	02/07/2021	Tom Davies, Alex Leishman and Chrissy Mason	Temp: 13 - 13°C
Dawn	03:15 - 05:15		Wind: 1
Sunrise: 04:59			Cloud: 1 Rain: None



SUR-VEY	DATE & TIME	PERSONNEL	WEATHER CONDITIONS*
Visit 3 Dusk Sunset: 21:14	21/07/2021 20:55 – 22:50	Alex Leishman, Gavin Young, Nathan Orr	Temp: 25 - 22°C Wind: 1 Cloud: 0 Rain: None
Visit 3 Dusk Sunset: 20:44	09/08/2021 20:30 – 22:15	Gavin Young, Ella Dangerfield	Temp: 15 - 13°C Wind: 1-2 Cloud: 1 Rain: None

\* Wind as per Beaufort scale; Cloud cover given in Oktas (/8).

The nocturnal emergence surveys were undertaken by experienced surveyors in accordance with good practice guidelines by the Bat Conservation Trust (Collins, 2016) and commenced at least 15 minutes before sunset and continued until approximately 1.5 hours after sunset. During the survey, Surveyors were placed strategically on external elevations and inside the Church to best record roost locations and access points, focusing primarily on the eastern gable end of the chancel.

The surveyors used Wildlife Acoustics EMTouch or EM3 bat detectors with all calls recorded and bats identified to species level (where possible) in the field and later confirmed where possible using bat call analysis software (Titley Scientific AnalookW). Internally, the observation of bat activity was improved by the use of night vision camera equipment which was used to better track bat movement within the Church and record numbers of bats moving through key access points. Videos were recorded for later analysis. Where directly observed, all access and egress points were noted during surveys, as were incidental results (i.e. foraging and / or commuting activity), with flight lines recorded onto base maps in the field.

### 2.2.3 Constraints

No significant constraints were encountered during the surveys which provide sufficient information to support an assessment of the roosts present.

## 3 SURVEY FINDINGS

### 3.1 PREVIOUS INSPECTIONS

The initial Bat Roost Visit inspection carried out as part of the Bats in Churches project was carried out by RSK in August 2017, which recorded evidence of Common Pipistrelle in the congregational areas (c.50 droppings in the chancel) and Brown Long-eared bats in the tower of the Church.

### 3.2 LIGHT TOUCH SURVEY

During the inspection carried out by Burton Reid Associates in May 2021, low numbers of droppings characteristic of pipistrelle and Brown Long-eared bats was recorded around the chancel and organ to the north. Low numbers (<5) droppings were recorded around the Moser painting and alter, and urine staining was also present on the painting. The Church is regularly cleaned and the highest concentration of droppings was a small collection of pipistrelle droppings on the wall and floor in the south-east corner of the chancel, located below a gap between roof timbers and eastern wall of the chancel. A low number of pipistrelle and long-eared bat droppings (of undetermined age) were recorded behind a small cabinet along the southern wall of the chancel where regular cleaning is not carried out. Small accumulations of bat droppings (<20) were also recorded in the chapel at the eastern end of the southern aisle during the suite of nocturnal surveys below gaps between the roof timbers and surrounding walls.

### 3.3 NOCTURNAL EMERGENCE / RE-ENTRY SURVEYS

The results of the nocturnal bat survey effort are summarised in the section below. Location points referenced correspond to those shown in photos in Appendix I.

Nocturnal survey: 17/05/2021 Dusk (Sunset 20:58)

A single Common Pipistrelle *Pipistrellus pipistrellus* was recorded flying inside the chancel of the Church at 21:40 and promptly entered the gap between the roof timbers and eastern wall at the south-eastern corner of the chancel. It was not seen where the bat emerged from inside the Church prior to this. The bat was observed emerging outside the Church.

Nocturnal survey: 02/07/2021 Dawn (Sunrise 04:59)

No bat recorded internally. No emerging/ re-entering bats recorded externally.

Nocturnal survey: 21/07/2021 Dusk (Sunset 21:14)

No bat recorded internally. No emerging/ re-entering bats recorded externally.

Bat species recorded occasionally passing or foraging close to the Church externally included Soprano Pipistrelle, Common Pipistrelle and Serotine.

Nocturnal survey: 17/05/2021 Dusk (Sunset 20:58)

Common Pipistrelle was recorded on bat detectors briefly at 21:09 and 21:13 inside the chancel of the Church but was not observed emerging or re-entering, so locations of access points and roosts were not identified. A possible single Common Pipistrelle emergence was recorded externally at 21:15 from the southern elevation of the chancel at the eaves/ parapet level of the walls.

Other bat species recorded passing or foraging close to the Church externally included Soprano Pipistrelle, Serotine and *Myotis* species.

## 4 EVALUATION AND IMPACT ASSESSMENT

### 4.1 ROOST CHARACTERISATION AND EVALUATION

The survey results indicate that the congregational areas of the Church are currently in occasional use by an individual/ low numbers of Common Pipistrelle bats as a non-breeding day roost.

Although no Brown Long-eared bats were recorded using the Church during the surveys, there is evidence of past use of the congregational areas by this species indicated by low numbers of droppings in parts of chancel not subject to very regular cleaning. Evidence from the inspection from RSK in 2017 suggests that Long-eared bat activity is more restricted to the bell tower at the western end of the Church, however an assessment of the roosts present in these areas of the Church was not carried out due to the survey objectives focussing on impact of bats in the chancel and in particular on the Oswald Moser's 'The Last Supper' painting.

### 4.2 LEGISLATION AND PLANNING POLICY

All bats are afforded full protection under UK and European Legislation including the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Together, this legislation makes it illegal to:

- Intentionally or deliberately take, kill or injure a bat;
- Damage, destroy or obstruct access to bat roosts;
- Deliberately disturb bats.

Due to this protection and their status as a European Protected Species (EPS) it is necessary to obtain a licence from Natural England for any development works which will impact on individual bats or their roosts, either by destruction, modification or disturbance. It is also necessary for individuals to hold a class licence from Natural England to disturb or handle bats.

### 4.3 ASSESSMENT OF POTENTIAL IMPACTS

Excluding bats from roosting or accessing the Church via the gap between the roof timbers and eastern end wall of the Chancel would likely result in the loss of day roosts for individual/ low numbers of Common Pipistrelle bats. It would also be unlikely to solve the problem of bats entering the Church given the alternate number of possible access points that have not been identified during the surveys. It is considered that other reasonable alternative solutions exist for protecting the painting that would not adversely impact the bats roosting in the Church and would be proportionate and cost effective for the Church in terms of capital expenditure. These are outlined in Section 5.

## 5 RECOMMENDATIONS

The damage to the Moser painting on the eastern wall of the Chancel is a result of deposition of bat droppings and urine, likely when bats have been circling the end of the Chancel and/or flying up to the access point identified between the roost timbers and the eastern wall. Although the preferred solution for those responsible for maintaining the Church is for blocking the bat access point at the top of this wall to stop or, at least, reduce the deposition of droppings and urine in this area, it is considered that Satisfactory Alternative solutions exist and so proposals to modify, damage or destroy roosts would not pass the three mitigation licence legal tests.

It is considered that the impacts of bats on the painting can be avoided by shielding the painting either by a permanent transparent covering (e.g. glass) over the front of the painting, by installing a ledge above the painting, or by adding curtains that are drawn between dusk and dawn each night. These options are discussed in the Bats in Churches Roost Visit Report Form produced following the 2017 Light Touch Survey by RSK and were also discussed during the LTS in May 2021.

## 6 REFERENCES

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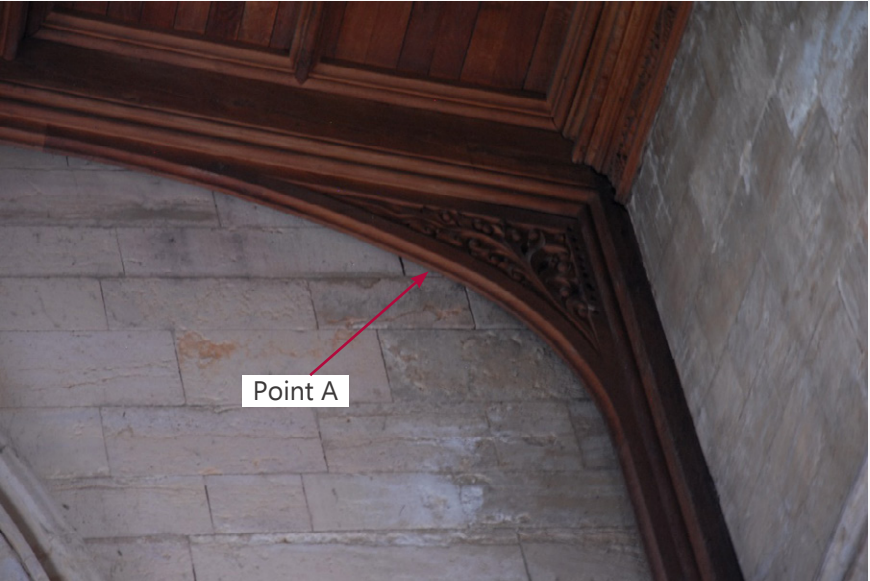
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## 7 APPENDICES

APPENDIX I: PHOTOGRAPHS

REF.	DESCRIPTION	IMAGE
North-eastern external view	View of church from the north-east.	
Southern external view	View of church from the south	

REF.	DESCRIPTION	IMAGE
Chancel & Point A	<p>Chancel of Church looking eastwards at the end wall showing the Moser painting and alter.</p> <p>Point A access shown by red arrow. Common Pipistrelle bat entered gap between end roof timbers and wall.</p>	
Point A	<p>Close up view of Common Pipistrelle access in south-eastern corner of the chancel.</p>	

REF.	DESCRIPTION	IMAGE
Southern aisle and chapel	View eastwards along the southern aisle with the chapel at the end.	 A photograph showing the interior of a church, viewed from the southern aisle looking eastwards. The view is through a series of pointed arches supported by tall, slender columns. The ceiling is a dark, exposed wooden beam structure. In the distance, a chapel is visible, featuring a large, ornate Gothic window with multiple panes and a decorative metal screen in front of the altar area. The lighting is soft, highlighting the architectural details of the stone and wood.

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