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# The Stone Wall, Ampney Park

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Bat Surveys

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May/June/July 2023

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Architects Ltd

Report Ref: SEB2428\_05b

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MCIEEM

[www.seasonsecology.co.uk](http://www.seasonsecology.co.uk)

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# 1. Introduction

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- 1.1.1 Seasons Ecology was instructed by Simon Morray-Jones Architects, on behalf of Ampney Park Ltd, to undertake bat surveys of the Stone Wall located within the Ampney Park estate, London Road, Ampney Crucis, Cirencester (central grid reference: SP 06493 02004). The surveys were recommended following a *Preliminary Bat Roost Assessment* of the Stone Wall undertaken in April 2023 by Seasons Ecology. The purpose of the bat surveys is to determine any use of the Stone Wall by roosting bats, to inform a planning application for various works across the estate, which includes removing a section of the Stone Wall to install a new gate and entranceway.
- 1.1.2 The *Preliminary Bat Roost Assessment* assessed the Stone Wall as *Moderate* suitability to roosting bats owing to the presence of numerous crevices within the wall, including deeper crevices evident between the stones on both the north and south elevations. No evidence of roosting bats was found during an inspection of the wall.
- 1.1.3 This report details the results of the bat surveys of the Stone Wall and should be read alongside the *Preliminary Bat Roost Assessment* report (Seasons Ecology, April 2023, report reference SEB2428\_05).

## 2. Survey Method

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- 2.1.1 The survey method is provided below and refers to survey guidelines in BCT (2016)<sup>1</sup>.

### 2.2 Dusk Emergence Surveys

- 2.2.1 Three dusk emergence surveys were carried out of the Stone Wall on 22<sup>nd</sup> May, 22<sup>nd</sup> June and 12<sup>th</sup> July 2023. These surveys commenced 15 minutes before sunset and continued for an hour-and-a-half after sunset.
- 2.2.2 Two surveyors attended each survey. Each surveyor was equipped with an Echo Meter Touch Pro bat detector supported by an Apple iPad Mini 4 interface, on which all bat activity was recorded.
- 2.2.3 The surveyors were located to the north and south of the Stone Wall, with one infrared camera (*Sony FDR-AX53*) positioned to the south of the Stone Wall during the first survey and one infrared camera (*Sony FDR-AX53*) positioned to the north of the Stone Wall for the second and third surveys. Infrared lighting, including torches and floodlights, were also used to aid in the identification of roosts.
- 2.2.4 Passive acoustic recording devices (*Titely AnaBat Express*) were also deployed. These were positioned near the centre of each wall elevation and were set on 'continuous' recording mode for the duration of the surveys. Recordings were later analysed using AnalookW 4.2.24. software to aid the identification of species with reference to Russ (2012<sup>2</sup>).

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<sup>1</sup> Bat Conservation Trust (BCT) (2016) *Bat Surveys for Professional Ecologists. Good Practice Guidelines*. Bat Conservation Trust. Third Edition. Collins.

<sup>2</sup> Russ, J. (2012) *British Bat Calls. A Guide to Species Identification*. Pelagic Publishing.



## 2.3 Constraints to Survey

- 2.3.1 There were no constraints to the surveys; all identified features on the Stone Wall were in full view, the weather conditions were suitable, and the surveys were undertaken during the recommended survey period.

## 2.4 Personnel

- 2.4.1 The surveys were led by Principal Ecologist, Kate Hayward, who has produced this report. Kate is a licensed bat ecologist registered to use Class Licence CL18 (Bat Survey Level 2) (class licence registration number 2015-15106-CLS-CLS) and is a full member of the Chartered Institute for Ecology and Environmental Management (CIEEM).
- 2.4.2 The surveys were assisted by Emma Shaw, Consultant Ecologist and Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Emma has over two years' experience in undertaking surveys for bats.
- 2.4.3 The surveys were also assisted by Assistant Ecologists, Patrick Ryan and Hayley Evenett.

# 3. Survey Results

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- 3.1.1 The results of the bat surveys are provided below. A site plan, surveyor locations and results are shown at Annex 1.

## 3.2 Survey: 22<sup>nd</sup> May 2023

- 3.2.1 The survey commenced at 20:48 and finished at 22:33. Sunset was at 21:03. Weather conditions were suitable with a start temperature of 16°C and end temperature of 14°C, wind was at a Beaufort 2<sup>3</sup> (light breeze), with 20% cloud cover and no rain.

**3.2.2 One common pipistrelle bat was observed emerging from a crevice near the middle of the Stone Wall on the north elevation, at 21:17 (14 minutes after sunset).**

**3.2.3 One whiskered bat was observed emerging from a crevice at the east end of the north elevation of the Stone Wall at 21:52 (49 minutes after sunset).**

- 3.2.4 General bat activity was by up to seven species: common pipistrelle *Pipistrellus*, soprano pipistrelle *P. pygmaeus*, brown long-eared *Plecotus auritus*, serotine *Eptesicus serotinus* and *Myotis* species, including probable Daubenton's bat *Myotis daubentonii*, whiskered *Myotis mystacinus* and Natterer's bat *Myotis nattereri*.

- Common pipistrelle bats were recorded nineteen times during the survey. The first bat was seen at 21:15 (12 minutes after sunset) commuting over the Stone Wall from north to south. The other sightings were of between one and four bats foraging near to the Stone Wall, between 21:22 (19 minutes after sunset) and 22:16 (73 minutes after sunset).
- Soprano pipistrelle bats were recorded six times during the survey. One bat was first seen foraging adjacent to the Stone Wall at 21:26 (23 minutes after sunset) and again at 21:39 (36 minutes after sunset). Two bats were seen foraging at 21:49 (46 minutes after sunset). Bats were then observed and heard between 22:06 and 22:11 (63 and 68 minutes after sunset) commuting and foraging in the area.
- Brown long-eared bat was recorded twice during the survey, first seen foraging at 21:59 (56 minutes after sunset) and then commuting overhead at 22:02 (59 minutes after sunset).



- Serotine was recorded ten times during the survey. Two bats were first seen commuting over the Stone Wall at 21:44 (41 minutes after sunset), four bats were seen foraging at 21:54 (51 minutes after sunset) near to the Stone Wall and two bats were seen at 22:03 (60 minutes after sunset) and 22:08 (65 minutes after sunset) commuting and foraging in the area.
- Daubenton's bat was recorded twice during the survey. This bat was first seen foraging around nearby trees at 21:29 (26 minutes after sunset) and again at 21:49 (46 minutes after sunset).
- Whiskered bat was recorded five times during the survey. This bat was first seen foraging at 21:29 (26 minutes after sunset). One bat was seen commuting east to west over the Stone Wall at 21:32 (49 minutes after sunset) and again at 21:49 (46 minutes after sunset). One bat was heard as a brief pass at 21:40 (37 minutes after sunset) and one bat was heard foraging at 22:24 (81 minutes after sunset).
- Natterer's bat was recorded once during the survey as a brief pass at 21:35 (32 minutes after sunset).

3.2.5 Activity by common pipistrelle was highest during the survey, making up approximately 42% of all activity recorded. Serotine contributed 22%, soprano pipistrelle 13% and whiskered 11%. Brown long-eared and Daubenton's bat each contributed 4%, and Natterer's bat contributed 1% of all bat activity.

### 3.3 Dusk Emergence Survey: 22<sup>nd</sup> June 2023

3.3.1 The survey commenced at 21:14 and finished at 22:59. Sunset was at 21:29. Weather conditions were suitable with a start temperature of 20°C and end temperature of 17°C, wind was at a Beaufort 2<sup>3</sup> (light breeze), with 25% cloud cover and no rain.

**3.3.2 One probable Brandt's bat was recorded by one of the cameras emerging from a crevice at the top of the south elevation at the east end of the Stone Wall at 22:23 (54 minutes after sunset).**

3.3.3 General bat activity was by up to nine species: common pipistrelle, soprano pipistrelle, brown long-eared, serotine, noctule and *Myotis* species, including probable Daubenton's, Whiskered, Natterer's and Brandt's bat.

- Common pipistrelle bats were recorded 30 times during the survey. One bat was first heard commuting at 21:50 (21 minutes after sunset). One bat was next observed foraging at 21:58 (29 minutes after sunset) and then flying over the Stone Wall from the south side. Bats were then observed foraging over the site and commuting past, or near to the Stone Wall, 28 times between 22.00 and 22.54 (31 and 85 minutes after sunset).
- Soprano pipistrelle bats were recorded ten times during the survey. One bat was first seen foraging adjacent to the Stone Wall on the south side at 21:47 (17 minutes after sunset). Two bats were seen foraging around the canopy of a nearby mature birch

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<sup>3</sup> The Beaufort scale of wind velocity: 0 = Calm, 1 = Light Air, 2 = Light Breeze, 3 = Gentle Breeze, 4 = Moderate Breeze, 5 = Fresh Breeze, 6 = Strong Breeze, 7 = Near Gale, 8 = Gale, 9 = Strong Gale, 10 = Storm, 11 = Violent Storm, = 12 Hurricane (<http://www.metoffice.gov.uk>).



tree at 21:48 (19 minutes after sunset). One bat was seen commuting east at 21:53 (24 minutes after sunset). Bats were then observed and heard a further six times between 22:25 and 22:42 (56-73 minutes after sunset) commuting and foraging in the area.

- Brown long-eared bat was recorded four times during the survey. This bat was first seen commuting at 22:34 (65 minutes after sunset) and then heard foraging nearby at 22:43, 22:52 and 22:57 (74, 83 and 88 minutes after sunset).
- Serotine was recorded ten times during the survey. One bat was first heard foraging at 22:04 and 22:05 (35 and 36 minutes after sunset). One bat was seen foraging above the Stone Wall at 22:06 (37 minutes after sunset). One bat was seen commuting north to south over the Stone Wall at 22:12 (43 minutes after sunset). One bat was heard foraging at 22:13 (44 minutes after sunset) and heard again at 22:17 (48 minutes after sunset) for several minutes. Bats were then observed and heard a further five times between 22:29 and 22:43 (60 and 74 minutes after sunset) foraging and commuting in the area.
- Noctule was recorded nine times during the survey. This bat was first heard at 22:06 (37 minutes after sunset) and again at 22:08-22:11 (39-42 minutes after sunset) foraging in the area. Further continuous foraging was heard between 22:13-22:27 (44-58 minutes after sunset). Bats were then observed and heard between 22:47 and 22:51 (78 and 82 minutes after sunset) commuting and foraging in the area.
- Probable Daubenton's bat was recorded four times during the survey, all foraging near the south elevation of the wall, at 22:20 (51 minutes after sunset), 22:37 (68 minutes after sunset), 22:39 (70 minutes after sunset) and 22:40 (71 minutes after sunset).
- Probable whiskered bat was recorded eight times during the survey. One bat was first heard foraging at 22:01 (32 minutes after sunset) then again at 22:02 (33 minutes after sunset). It was then seen foraging directly above the Stone Wall at 22:11 (42 minutes after sunset). Bats were then heard a further five times between and 22:26 and 22:32 (57 and 63 minutes after sunset) commuting and foraging in the area.
- Probable Natterer's bat was recorded four times during the survey. One bat first heard foraging at 21.57 (28 minutes after sunset), then again at 22:02 (33 minutes after sunset). One bat was heard foraging at 22:12 (43 minutes after sunset) then seen flying south at 22:29 (60 minutes after sunset).
- Brandt's bat was recorded three times during the survey, foraging in front of the south side of the wall at 22:00 (31 minutes after sunset), then again at 22:04 (35 minutes after sunset) and heard foraging at 22:23 (54 minutes after sunset).

3.3.4 Activity by common pipistrelle was highest during the survey, making up approximately 36% of all activity recorded. Soprano pipistrelle and serotine contributed 12% of activity and noctule and whiskered contributed 11% and 10% of activity, respectively. Whiskered bat contributed 10% of activity. Brown long-eared, Daubenton's and Natterer's bat each contributed 5% and Brandt's bat 4% of overall bat activity.



### 3.4 Dusk Emergence Survey: 12<sup>th</sup> July 2023

3.4.1 The survey commenced at 21:07 and finished at 22:52. Sunset was at 21:22. Weather conditions were suitable with a start temperature of 16°C and end temperature of 15°C, wind was at a Beaufort 2<sup>4</sup> (light breeze) with 40% cloud cover and no rain.

**3.4.2 One probable whiskered bat was observed emerging from a crevice at the east end of the north elevation of the Stone Wall at 22:18 (56 minutes after sunset).**

3.4.3 General bat activity was by up to eight species: common pipistrelle, soprano pipistrelle, brown long-eared bat, serotine, noctule and *Myotis* species, including probable Daubenton's, Natterer's and whiskered bat.

- Common pipistrelle bats were recorded ten times during the survey. Two bats were first seen foraging over the Stone Wall at 21:38 (16 minutes after sunset) and one bat was also observed foraging over the Stone Wall at 21:42 (20 minutes after sunset). One bat was observed foraging over the adjacent road to the south at 21:48 (26 minutes after sunset). Individual bats were the observed a further six times during the survey, foraging between 21:51 until 22:46 (29 and 84 minutes after sunset).
- Soprano pipistrelle bats were recorded four times during the survey. One bat was first seen foraging above the Stone Wall at 21:45 (23 minutes after sunset) and again at 21:51 (29 minutes after sunset), 21:53 (31 minutes after sunset) and 22:08 (46 minutes after sunset).
- Brown long-eared bats were recorded three times during the survey. This bat was first heard at 21:43 (21 minutes after sunset) and then at 21:46 (24 minutes after sunset) and 22:29 (67 minutes after sunset), all as brief, unseen passes.
- Serotine was recorded twelve times during the survey. One brief pass was first seen and heard above the Stone Wall at 21:58 (36 minutes after sunset) and again at 22:00 (38 minutes after sunset). Two bats were seen foraging and socialising between 22:14 and 22:18 (52 and 56 minutes after sunset). Bats were then observed and heard foraging and commuting between 22:20 and 22:45 (58 and 83 minutes after sunset).
- Noctule was recorded four times during the survey. This bat was first heard at 21:35 (13 minutes after sunset) then two bats were heard foraging at height at 21:42 (20 minutes after sunset). One bat was heard foraging at 22:28 (66 minutes after sunset).
- Daubenton's bat was recorded once during the survey, at 21:58 (36 minutes after sunset) as a brief and unseen pass.
- Natterer's bat was recorded twice during the survey, at 22:30 (68 minutes after sunset) and at 22:52 (90 minutes after sunset), both as brief and unseen passes.
- Whiskered bat was recorded a further seven times during the survey, all individual bats foraging above and adjacent to the Stone Wall, between 22:19 to 22:49 (57 and 87 minutes after sunset).

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<sup>4</sup> The Beaufort scale of wind velocity: 0 = Calm, 1 = Light Air, 2 = Light Breeze, 3 = Gentle Breeze, 4 = Moderate Breeze, 5 = Fresh Breeze, 6 = Strong Breeze, 7 = Near Gale, 8 = Gale, 9 = Strong Gale, 10 = Storm, 11 = Violent Storm, = 12 Hurricane (<http://www.metoffice.gov.uk>).



3.4.4 Activity by serotine was highest during the survey, making up approximately 28% of all activity recorded. Common pipistrelle contributed approximately 23% and whiskered 16%. Soprano pipistrelle and noctule each contributed 9% of overall bat activity and brown long-eared 7%. Natterer’s bat contributed 4% and Daubenton’s bat contributed 2% of activity.

### 3.5 Surveys Summary

3.5.1 Table 1 below summarises the results of the bat surveys.

Table 1: Survey Summary – Bat Emergence Surveys, 22<sup>nd</sup> May, 22<sup>nd</sup> June and 12<sup>th</sup> July 2023

Survey	Summary
1 - 22 <sup>nd</sup> May 2023	<p><b>One common pipistrelle bat was observed emerging from a crevice near the middle of the Stone Wall on the north elevation, at 21:17 (14 minutes after sunset).</b></p> <p><b>One whiskered bat was observed emerging from a crevice at the east end of the north elevation of the Stone Wall at 21:52 (49 minutes after sunset).</b></p> <p>General bat activity was by up to seven species.</p> <p>General activity by common pipistrelle was highest during the survey, making up approximately 42% of all activity recorded. Serotine contributed 22%, soprano pipistrelle 13% and whiskered 11%. Brown long-eared and Daubenton’s bat each contributed 4%, and Natterer’s bat contributed 1% of all bat activity.</p>
2 - 22 <sup>nd</sup> June 2023	<p><b>One probable Brandt’s bat was recorded by one of the cameras emerging from a crevice at the top of the south elevation at the east end of the Stone Wall at 22:23 (54 minutes after sunset).</b></p> <p>General bat activity was by up to nine species.</p> <p>General activity by common pipistrelle was highest during the survey, making up approximately 36% of all activity recorded. Soprano pipistrelle and serotine contributed 12% of activity and noctule and whiskered contributed 11% and 10% of activity, respectively. Whiskered bat contributed 10% of activity. Brown long-eared, Daubenton’s and Natterer’s bat each contributed 5% and Brandt’s bat 4% of overall bat activity.</p>
3 - 12 <sup>th</sup> July 2023	<p><b>One whiskered bat was observed emerging from a crevice at the east end of the north elevation of the Stone Wall at 22:18 (56 minutes after sunset).</b></p> <p>General bat activity was by up to eight species.</p> <p>General activity by serotine was highest during the survey, making up approximately 28% of all activity recorded. Common pipistrelle contributed approximately 23% and whiskered 16%. Soprano pipistrelle and noctule each contributed 9% of overall bat activity and brown long-eared 7%. Natterer’s bat contributed 4% and Daubenton’s bat contributed 2% of activity.</p>





## 4. Interpretation and Evaluation

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- 4.1.1 Based on the results of the Bat Surveys (May/June/July 2023), the Stone Wall at Ampney Park supports three day roosts, as follows:
- One day roost for low numbers (one individual) of common pipistrelle bat.
  - One day roost for low numbers (one individual) of probable whiskered bat.
  - One day roost for low numbers (one individual) of probable Brandt's bat.
- 4.1.2 Referring to the Bat Mitigation Guidelines (2004), day roosts for low numbers of common pipistrelle, whiskered and Brandt's bat have low conservation significance, being roosts for individual bats/low numbers of bats of common species.
- 4.1.3 General bat activity was by up to nine species; common pipistrelle, soprano pipistrelle, serotine, noctule, brown long-eared and *Myotis* species, including probable Daubenton's bat, Natterer's bat, whiskered and Brandt's. The wider Ampney Park estate supports high quality foraging and commuting habitats and is surrounded by further moderate to high-quality habitats; the Ampney Brook flows through the estate and there are patches of woodland, pastures, a lake and mature hedgerows and scattered mature trees in all directions.
- 4.1.4 Early passes by serotine, noctule and Natterer's bat indicate roosts nearby for these species, but not located within the Stone Wall.

## 5. Legislation

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- 5.1.1 Bat species in England and Wales are protected under the Conservation of Habitats and Species Regulations 2019 (as amended) (EU Exit) and the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to:
- Deliberately capture, injure or kill bats;
  - Intentionally or recklessly disturb bats;
  - Intentionally or recklessly obstruct access to any structure or place which bats use for shelter or protection; and,
  - Deliberately damage or destruction of a breeding site or resting place.
- 5.1.2 With the exception of disturbance, this legislation applies throughout the year whether bats are present or not at the time of works being carried out and irrespective of planning permission being obtained or being required.



## 6. Recommendations

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### 6.1 The Proposal

6.1.1 A section of the Stone Wall is proposed for removal to install a new gate and entranceway.

### 6.2 Impacts

6.2.1 The section of Stone Wall to be removed supports three day roosts for low numbers of bats, one common pipistrelle, one whiskered and one Brandt's bat. This will result in the permanent loss of the roosts. Without appropriate precautionary measures in place, removal of the Stone Wall could injure/kill bats. This impact is of moderate significance at a site level.

6.2.2 There is very low potential for bats to overwinter in the Stone Wall. Whilst deeper cracks have been identified, these are too shallow to provide suitable protection from colder winter temperatures and weather.

### 6.3 European Protected Species Licensing

6.3.1 A European Protected Species Licence will be required before works commences to remove the section of Stone Wall.

6.3.2 The following approach will be required:

- Obtain a European Protected Species Licence to allow removal of the section of Stone Wall.
- Named Ecologist to provide a toolbox talk to site contractors on bat legislation and sensitive working methods.
- Provision of three bat boxes (Vivara Pro bat box or similar) on one suitable tree near to the Stone Wall to offer a receptor site for any bats found during the works and to provide long-term roosting habitat.
- Named Ecologist to carry out pre-works checks with the aid of an endoscope and supervise the dismantling of the entire section of Stone Wall by hand. Any bats found during checks/works will be relocated to the bat boxes.

6.3.3 Due to the type of roosts present in the Stone Wall and very low potential for bats to overwinter in the Stone Wall, there are no constraints to the timing of works and no monitoring requirements.

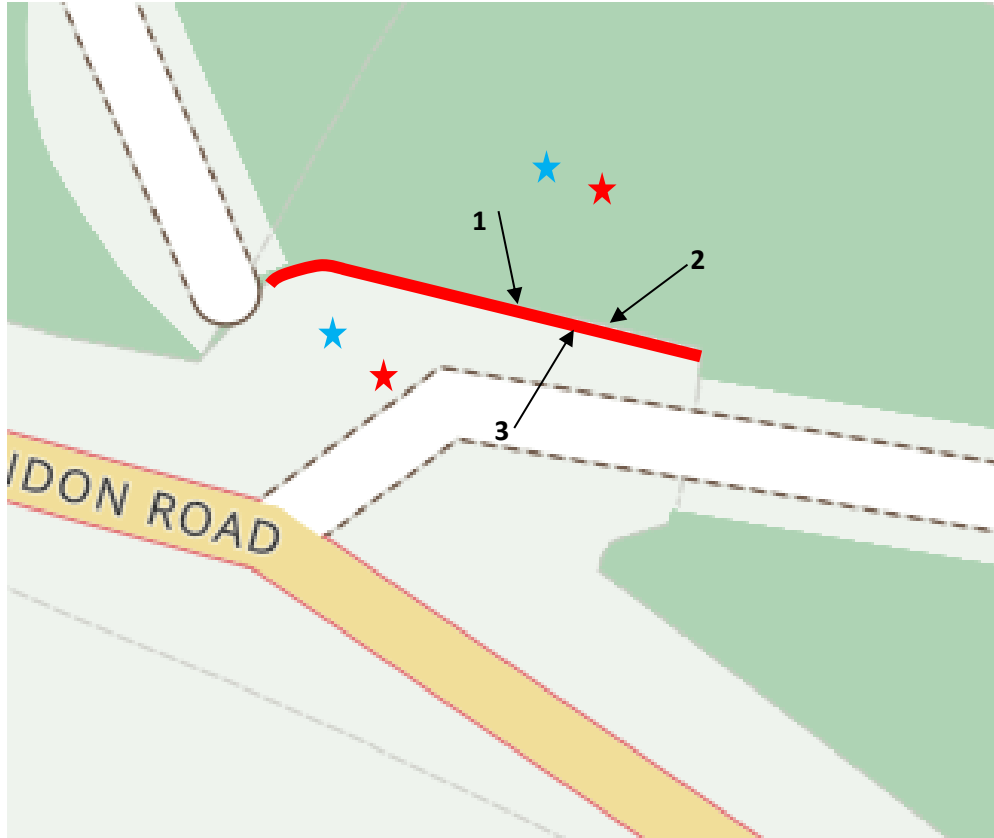
6.3.4 The works will be undertaken in accordance with the above measures, to avoid breaching legislation protecting bats and to ensure the maintenance of favourable conservation status of the bat species concerned.




## 7. Annexes

### Annex 1: Site Plan, Surveyor Locations and Survey Results (May/June/July 2023)


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#### Key

 = Survey area (Stone Wall)

 = Surveyor location

 Camera location

 Emergence locations: One common pipistrelle (1), one whiskered bat (2) and one Brandt's bat (3)

