



St Mary the Virgin Church, Dalham, Suffolk

Bat Management Plan

Report for Natural England

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Contents

| | |
|---|----|
| Summary of Key Findings | 1 |
| 1 Introduction | 3 |
| 2 Methodology | 5 |
| 3 Results | 9 |
| 4 Recommendations & Mitigation Strategy | 15 |
| References | 17 |
| Appendix 1: Bat Survey & Mitigation Map | 18 |
| Appendix 2: Photographs | 21 |
| Appendix 3: Management Plan | 25 |

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Summary of Key Findings

The Ecology Consultancy was commissioned to undertake a Preliminary Roost Assessment (PRA) and dusk emergence/dawn re-entry surveys to determine the status of bats within St Mary the Virgin Church, Dalham, Suffolk.

The results of the bat surveys, assessment of impacts and information on bat management options are all detailed in this Bat Management Plan.

The site forms part of the Bats in Churches (BiC) project, which has identified a number of churches (>100) across the UK, which are subject to issues arising from the presence of large numbers of roosting bats. The primary aim of the BiC project is to empower church communities to co-exist with their resident bats.

The main findings of the surveys are as follows:

- The church was confirmed as a bat roost for three species including brown long-eared bat, common pipistrelle and soprano pipistrelle;
- A small maternity colony of common pipistrelle bats (maximum count of eight bats) was confirmed present within the church, with bats roosting under gaps between the walls and timbers throughout the church, and between the window and arch masonry at the eastern end of the nave.
- Three occasional day roosts for individual common pipistrelle bats were recorded, one on the eastern elevation of the porch and one on the western elevation, likely in gaps in flint or around guttering, and one under roof tiles on the southern elevation of the church.
- Two occasional day roost for individual brown long-eared bats were recorded, one within the church, likely at gaps between timbers and walls, and one under roof tiles on small section of tiles on southern elevation.
- Two day roosts for soprano pipistrelle bats were recorded, one for an individual bat under roof tiles on small section of tiles on southern elevation, and one for a maximum count of two soprano pipistrelles within the church, likely at gaps between timbers and walls.

The bat management options for the bat population at St Mary the Virgin, Dalham include the following (subject to faculty permission, where required):

- The installation of baffles around known and likely bat roosting areas between the timbers and walls to reduce the impact associated with bat droppings on the church walls;

- The installation of a bat box within the porch above the known access location for bats into the church to encourage bats to roost in an alternative location;
- The installation of a bat box on a tree within the churchyard to encourage bats to roost in an alternative location.

A bat licence for the above works is not considered necessary due to the lack of impacts upon the bat roosts, as long as the baffles are located at least 1m below the top of the gap behind the timbers. However, it is recommended that works are timed to avoid the sensitive hibernation and maternity seasons for bats. Should the location of the baffles not prove to be agreeable, and need to be installed at a higher position on the wall, then the church will need to become registered under the Natural England Bats in Churches Class Licence (BiCCL) by a Registered Consultant (more details are provided in Section 4 of this report).

1 Introduction

BACKGROUND TO COMMISSION

- 1.1 The Ecology Consultancy was commissioned by Natural England to undertake a bat survey and determine the status of roosting bats within St Mary the Virgin Church, Dalham, Suffolk.
- 1.2 The church had been identified by the Bats in Churches (BiC) project as being subject to impacts by roosting bats and in need of an appropriate mitigation strategy to enable the bats and church community to co-exist.

SCOPE OF REPORT

- 1.3 This report provides an assessment of the current status of bats at the St Mary the Virgin Church and includes the following:
 - Summary of bat survey data and a complete picture of how bats are utilising the church.
 - Floor plans of the church, internal and external photographs, roost locations, and entry/exit points identified for each species.
 - Assessment of the heritage impacts caused by bats.
 - Presentation of all bat management options considered and the reasons why non-favoured options were rejected.
 - Details of licensing requirements and justifications under the Bats in Churches Class Licence (BiCCL).
- 1.4 This report has been prepared with reference to best practice guidance published by the Bat Conservation Trust (Collins, 2016) and as detailed in British Standard 42020:2013 Biodiversity – Code of Practice for Biodiversity and Development (BSI, 2013).

SITE CONTEXT AND STATUS

- 1.5 St Mary the Virgin Church is located within the rural village of Dalham in Suffolk and centred upon Ordnance Survey National Grid reference TL 72432 62560. The church is bound to the north by Dalham Hall, to the east and west by Woodpasture and Parkland Priority Habitat, to the south by Deciduous Woodland and Woodpasture and Parkland Priority Habitat.

LEGISLATION

1.6 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 (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
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

1.7 Bats are also currently 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.

2 Methodology

BAT SURVEY

Personnel

- 2.1 The bat surveys were led by Rosie McLaughlin, a Principal Ecologist with over eight years' bat survey experience and holder of a Natural England Bat Survey Class Licence (Level 4; reference 2019-41253-CLS-CLS).
- 2.2 Rosie was assisted on the surveys by highly experienced licensed bat ecologists Beth Holmes (Natural England Level 2 licence reference 2021-53031-CLS-CLS), Verity Heard (Natural England Level 2 licence reference 2016-27343-CLS-CLS), George Siskos (Natural England Level 2 licence reference 2019-43903_CLS-CLS), Toni Cohen (Natural England Level 2 licence reference 2015-13024-CLS-CLS), Tracy Simpson (Natural England Level 2 licence reference 2015-14640-CLS-CLS), Andrew Lewis, Kevin Joyce and Charlotte Toon. The survey team were also supported by volunteers from the Suffolk Bat Group.

Aims and Objectives

- 2.3 The aim of the survey was to establish the status of bat roosts present within St Mary the Virgin Church, identify bat access points and identify any seasonal variations in roost usage. The information gathered was then used to inform an appropriate bat management plan.

Building Inspection

- 2.4 An internal and external building of the church was carried out on Wednesday 7th April 2021, in suitable weather conditions 6^oC, 1/8 okta cloud cover and no rain.
- 2.5 The internal and external inspection involved a search using a high-powered torch, binoculars and endoscope of all accessible architectural features for evidence of roosting bats. Evidence indicating potential presence of bats included:
 - presence of live or dead bats;
 - gaps that may be suitable to provide ingress and egress for bats;
 - bat droppings, urine staining, scratch marks around potential bat access points;
 - feeding remains.
- 2.6 The survey methodology followed best practice guidelines (Mitchell-Jones & McLeish, 2004; Collins, 2016).

Bat Emergence & Re-entry Surveys

- 2.7 Four dusk bat emergence surveys and one dawn re-entry survey were carried out by at least four experienced surveyors, who were positioned to allow clear views of all potential roost entry/exit points, which were identified during the building inspection survey. At least one bat surveyor was located inside the church during the first, second and fourth surveys along with infrared cameras, to enable bat activity inside the church to be recorded.
- 2.8 The dusk surveys were undertaken on 26th May, 23rd June, 26th July and 25th August 2021 and commenced 15 minutes before sunset and continued for up to 120 minutes after sunset. The dawn re-entry survey was undertaken on 24th June 2021 and commenced two hours prior to sunrise and continued until 15 minutes after sunrise.
- 2.9 Each surveyor recorded details of any bat activity including; bat passes, species, numbers, location, emergence, re-entry, foraging and commuting activity.
- 2.10 The surveyors were each equipped with a Elekon Batlogger M bat detector which recorded bat activity in full spectrum and were assisted with infra-red (IR) video cameras on all surveys. The cameras were used to provide surveyors with a night-time visual aid and reduced potential survey limitations associated with survey error resulting from visual impairment due to low light levels.
- 2.11 The audio recordings were analysed post survey using software: Elekon BatExplorer™ software (audio recordings only), to confirm the species and the timing of any bat activity. IR camera data was analysed using VLC, post survey to re-confirm bat activity, more specifically bat roost locations and bat ingress and egress points.

Automated static bat detector survey

- 2.12 In addition to bat emergence and re-entry surveys, a static bat detector was also placed within the tower of the church between 26th July and 6th August 2021.

EVALUATION AND IMPACT ASSESSMENT

Evaluation

- 2.13 The ecological importance of the site for bats has been assessed broadly following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2019) which ranks nature conservation importance according to a geographic scale of reference: international and European; national; regional; metropolitan, county vice county or other local authority wide area; local or of value at the site scale. The following factors are considered when making this evaluation: nature conservation

designations; rarity; vulnerability; distribution; and the conservation significance of any roosts.

Impact Assessment

- 2.14 An assessment of potential impacts upon bats and a statement is made on the geographic scale at which impact is deemed to be significant, following CIEEM guidance (CIEEM, 2019) which considers types of impact to bats and their roosts including; disturbance, loss, modification and fragmentation in relation to duration and timing.

PROGRESS MEETINGS

- 2.15 Due to covid, on site progress meetings were kept to a minimum, with the preference being for calls over video link. Progress meetings, including calls for organising a bat walk were undertaken on 5th August 2021 and 14th September 2021, with an on site meeting on 6th October 2021. The PCC, architect and Natural England BiC representative were present during these progress meetings, where necessary.

DATA VALIDITY AND LIMITATIONS

- 2.16 Bats are highly mobile animals and can move roost sites both within and between years. Where surveys are not spread throughout the bat active season is possible that they could miss roosts that are occupied earlier or later in the year. However, where undisturbed, secondary evidence of bats inside a building is likely to be detectable throughout the year. The detection of small numbers of crevice dwelling species may remain problematic in some cases, such as where droppings accumulate within an inaccessible void.
- 2.17 It is believed that surveys of the church had previously been undertaken by a local consultant, however it was not possible to obtain the data from these surveys.
- 2.18 An assessment of the impacts of bats was not possible in this report as the Statement of Significance was not available at the time of writing.
- 2.19 Volunteers from Suffolk Bat Group were due to join surveyors on surveys in accordance with the scope of the project. Volunteers were going to join two of the four dusk emergence surveys and be paired with experienced surveyors for training. However, due to personal circumstances they had to cancel at late notice. This did not impact the results as the building was adequately covered by the experienced ecologists.

2.20 Hibernation surveys were not commissioned as part of the works. Therefore, a full evaluation of bat usage of the site is not possible.

3 Results

BAT SURVEY

Building Inspection

- 3.1 St Mary the Virgin Church is a 14th century, listed, medieval church. The church is constructed of flint and stone, with timber beams and comprises a nave with north and south aisles, chancel, vestry, porch and tower. Photographs of the church are shown in Appendix 2 and maps of the results are shown in Appendix 1.
- 3.2 Internally, the church was devoid of any roof voids and comprised timber rafters and walls rendered in a smooth plaster finish. Gaps were present between the walls and timber beams throughout the church.
- 3.3 A scattering of fresh droppings (approximately 20), identified as common pipistrelle (by DNA analysis from the University of Warwick), were evident on the back of the main door to the church.
- 3.4 Scatterings fresh and old bat droppings (approximately 20 droppings per area), attributed to pipistrelle species of bats, was evident on the floor and walls at both the eastern and western elevations of the nave, and the eastern and western elevations of the chancel. Roost were considered likely to be located under gaps between the walls and timber beams at these locations.
- 3.5 The church wardens advised that the church is cleaned regularly, as such, the droppings identified during the survey were likely an accumulation from the previous two weeks (excluding the walls which were not regularly cleaned).
- 3.6 No bats were observed inside the church at the time of the initial internal inspection on 7th April 2021 and no evidence of any other bat species (other than common pipistrelle bat droppings) were recorded at the time of the building inspection. However, during a pre-survey inspection of the church on 26th July 2021, two common pipistrelle bats were recorded between the window and arch masonry at the eastern end of the nave.

Assessment of heritage impacts

- 3.7 The Statement of Significance was not available at the time of writing but is being drafted .This document will provide a full assessment of heritage impacts. However, it was evident from the surveys that bat urine was causing staining on the floor of the church, particularly on the graves within the nave (noted during a progress meeting undertaken on 6th October 2021).

Bat Emergence Surveys

3.8 A bat emergence survey was undertaken each month on the following dates 26th May, 23rd June, 26th July and 25th August 2021. The weather conditions and results of these surveys are detailed below.

3.9 *26 May 2021* – Temperature: 12°C, cloud over 2 okta, light breeze, no rain. Sunset was at 21:03. Surveyors were located on four external corners of the church during the survey to fully cover all elevations. One manned IR camera was located inside the chancel of the church (facing west).

3.10 In summary, the following bat activity was recorded (as shown in Appendix 1):

- One soprano pipistrelle emerged from the main door of the church on the southern elevation but the internal roosting location was not confirmed by the surveyor or camera inside the church;
- One common pipistrelle emerged from an unconfirmed location on the eastern elevation of the porch, likely to be from gaps in the stone or flint, or around the guttering;
- No bats were observed emerging from any other aspects of the church;
- Noctule, *Myotis* sp., common pipistrelle and soprano pipistrelle bats were all recorded foraging or commuting within the grounds of the church.

3.11 *23rd June 2021* – Temperature: 15°C, cloud over 2 okta, light breeze, no rain. Sunset was at 21:24. Surveyors were located on four external corners of the church during the survey to fully cover all elevations. One manned IR camera was located inside the chancel of the church (facing west).

3.12 In summary, the following bat activity was recorded (as shown in Appendix 1):

- Seven common pipistrelle emerged from the main door of the church on the southern elevation. The internal roosting location was not confirmed for all bats but common pipistrelle bats were recorded roosting between the timbers and the wall at both the eastern and western elevations of the nave;
- One brown long-eared bat emerged from the main door of the church on the southern elevation. The internal roosting location for this bat was not confirmed;
- One soprano pipistrelle emerged from under a roof tile on the southern elevation of the church, adjacent to the door to the chancel;

- No bats were observed emerging from any other aspects of the church;
- Noctule, common pipistrelle and soprano pipistrelle bats were all recorded foraging or commuting within the grounds of the church.

3.13 *26 July 2021* – Temperature: 19°C, cloud over 1 okta, still, no rain. Sunset was at 20:57. Surveyors were located on the external corners of the church during the survey to fully cover all elevations. One unmanned IR camera was located inside the chancel of the church (facing west).

3.14 In summary, the following bat activity was recorded (as shown in Appendix 1):

- Two common pipistrelle bats were recorded roosting between the window and arch masonry at the eastern end of the nave during a pre-survey inspection of the church;
- Eight common pipistrelle emerged from the main door of the church on the southern elevation. The internal roosting location was not confirmed for all bats but common pipistrelle bats were recorded roosting between the timbers and the wall at both the eastern and western elevations of the nave;
- One soprano pipistrelle emerged from the main door of the church on the southern elevation but the internal roosting location was not confirmed;
- One brown long-eared bat emerged from the main door of the church on the southern elevation but the internal roosting location was not confirmed;
- Noctule, serotine, brown long-eared, common pipistrelle and soprano pipistrelle bats were all recorded foraging or commuting within the grounds of the church.

3.15 *25 August 2021* – Temperature: 18°C, cloud over 8 okta, light breeze no rain. Sunset was at 20:02. Surveyors were located on the south western and south eastern corners and the northern elevation of the church during the survey to fully cover all elevations. Two manned IR cameras were located inside the nave of the church (facing west and east).

3.16 In summary, the following bat activity was recorded (as shown in Appendix 1):

- Four common pipistrelle emerged from the main door of the church on the southern elevation. The internal roosting location was not confirmed for all bats but common pipistrelle bats were recorded perching below timbers and the wall at the eastern end of the south aisle;
- One soprano pipistrelle emerged from the main door of the church on the southern elevation but the internal roosting location was not confirmed;

- One brown long-eared bat emerged from under a roof tile on the southern elevation of the church, adjacent to the door to the chancel;
- One common pipistrelle emerged from under a roof tile on the southern elevation of the church, adjacent to the door to the chancel;
- One common pipistrelle emerged from an unconfirmed location on the western elevation of the porch, likely to be from gaps in the stone or flint, or around the guttering;
- Noctule, *Myotis* sp., brown long-eared, common pipistrelle and soprano pipistrelle bats were all recorded foraging or commuting within the grounds of the church.

Bat Dawn Re Entry Survey

3.17 *24 June 2021* – Temperature: 8°C, cloud over 4 okta, light breeze, no rain. Sunrise was at 04:39. Surveyors and cameras were located in the same position as the dusk survey carried out on the 23 June.

3.18 In summary, the following bat activity was recorded (as shown in Appendix 1):

- Four common pipistrelles re-entered the church via the main door and were recorded returning to roost between the timbers and walls at the western end of the chancel, eastern end of nave, and eastern end of the south aisle;
- Two soprano pipistrelles re-entered the church via the main door;
- *Myotis* sp., brown long-eared, common pipistrelle and soprano pipistrelle bats were all recorded foraging or commuting within the grounds of the church.

Bat Automated Static Detector Surveys

3.19 *26th July – 6th August 2021* – Minimum night time temperature: 14-17°C, no rain and a light breeze throughout, with the exception of the 5th August where stronger winds were recorded. Sunset was at 20:57-20:38 over the three nights. One automated static bat detector was located within the tower of the church.

3.20 No bat calls were recorded on the detector located within the tower.

EVALUATION AND IMPACT ASSESSMENT

Evaluation

- 3.21 A small common pipistrelle maternity colony is present within the church. A maximum count of eight common pipistrelle bats has been recorded emerging from the church, with roosting locations located between timbers and the wall. Although pipistrelle maternity roosts are often much larger, it is considered this is likely to be a maternity roost due to the increase in numbers on the lead up to maternity season. The common pipistrelle maternity roost is considered to be of value at **county level of importance** (as per Wray et al., 2010).
- 3.22 Three day roosts for individual common pipistrelle bats were recorded at the following locations:
- on the eastern elevation of the porch, likely in gaps in flintwork or stone, or around the guttering;
 - on the western elevation of the porch likely in gaps in flintwork or stone, or around the guttering; and
 - under roof tiles on small section of roof tiles on southern elevation of church.
- 3.23 These roosts were all used occasionally, each having only been recorded during one survey. The three day roosts for common pipistrelles are considered to be of value at a **site level of importance**.
- 3.24 Two occasional day roost for individual brown long-eared bats were recorded at the following locations:
- within the church, likely at gaps between timbers and walls; and
 - under roof tiles on small section of tiles on southern elevation.
- 3.25 These roosts were used occasionally, with the roost within the church used during two of the four surveys, and the roost under the roof tiles used during one of the surveys. These day roosts are considered to be of value at a **site level of importance**.
- 3.26 Two day roosts for soprano pipistrelle bats were recorded at the following locations:
- one occasional under roof tiles on small section of tiles on southern elevation; and
 - one within church likely at gaps between timbers and walls.

3.27 Both roosts were used occasionally, with the roost within the church used by a maximum count of two soprano pipistrelle bats during two of the surveys, and the roost under the roof tiles used by one bat during one of the surveys. These day roosts are considered to be of value at a **site level of importance**.

Impact Assessment

3.28 In the absence of suitable mitigation, unauthorised modifications to existing bat roosts and/or bat access points, could result in potential death, injury, entrapment or unlawful exclusion of roosting bats from the church.

3.29 Loss of the common pipistrelle maternity roost would be likely to result in significant adverse effects at **county level of importance**.

3.30 Loss of the brown long-eared, soprano and common pipistrelle day roosts would result in adverse significant effects at a **site level of importance**.

4 Recommendations & Mitigation Strategy

4.1 A total of three species of bats were confirmed roosting at St Mary the Virgin Church, Dalham, during the 2021 surveys.

4.2 Due to issues associated with droppings and urine damage to the fabric of the church and church artefacts, an appropriate mitigation strategy is required to be devised to enable the church community and roosting bats to be able to co-exist, without usage constraints being imposed. Therefore, the following recommendations are provided (subject to formal faculty permission where required) and it is considered likely that, if implemented, would result in a favourable outcome for both the church community and the roosting bats that inhabit the church:

- The roosts within the church are recommended to be retained *in situ*. Modifications to the areas beneath the main roosting locations between the timbers and walls are recommended in the form of baffles, to help reduce the impact associated with bat droppings accumulating on the walls of the church. The premise being that droppings will slide off the baffles, landing on the floor rather than the walls, making cleaning of hard to reach areas easier, and reducing impacts of staining on the walls and artefacts.
- The baffles should be installed in known and likely bat roost areas (refer Figure 2) and by a competent tradesman, installed under the supervision and guidance of the licensed bat ecologist and in accordance with the architects drawing. Baffles should be made from or coated in material that will allow droppings to slide off, and should be located at least 1m below the top of the gap behind the timbers to allow the bat access locations to remain the same.
- It is recommended that a wall mounted bat box is installed above the known bat access point into the church, above the door in the porch, to encourage bats to roost in an alternative location.
- It is recommended that a bat box is installed on the tree to the north east of the churchyard, to encourage bats to roost in an alternative location.
- As long as baffles are installed at least 1m below the gap behind the timbers then a bat licence for the above works is not considered necessary due to the lack of impacts upon the bat roosts and maintenance of flight lines to and from the roost entrance. However, it is recommended that works are undertaken outside the bat maternity and hibernation seasons to reduce any disturbance to bats that may be present during these sensitive times. Therefore, the installation of baffles should be undertaken in spring (March-April) or autumn (September-October). Bat boxes can be installed at any time of year.

- Where baffles are required by the church to be located closer than 1m from the top of the gap behind the timbers then the works would comprise modification of bat roost/access points which is a licensable activity. Therefore, subject to obtaining faculty consent (if required), St Mary the Virgin Church would be required to be registered under the Natural England Bats in Churches Class Licence (BiCCL) by a Registered Consultant. Contingent upon approval by Natural England of the site registration, works involving modifications to the bat roost/access points, may proceed in accordance with mitigation measures set out within the licence. If there are any deviations, revised timings or mitigation measures become necessary, a modification to the licence will be required to be obtained, prior to proceeding with any revised works.

4.3 A plan of the recommendations above is shown in Appendix 1 with approximate costs detailed in Appendix 3.

4.4 An alternative option considered during the progress meeting on 6th October 2021 was a bat box located above the main door of the church to encourage bats to roost close to the access to the church, to try to help reduce droppings and urine within the church. However, due to the shape of the area above the door, this would have to be a bespoke bat box which would have a higher cost, and be located at a relatively low height within the church, reducing the effectiveness of such a bat box. Therefore, this option was not considered to be favourable.

POST MONITORING

4.5 Although a licence is not considered necessary for the works should the baffles be placed more than 1m below the top of the gap behind the timbers, it is recommended that post monitoring surveys are undertaken to determine the success of the measures put in place, and to inform whether any further mitigation is required.

4.6 Post monitoring surveys to be carried out include an inspection of the building (timed to avoid recent cleaning) and a single dusk emergence survey of the interior of the church only, undertaken between May and August.

4.7 If baffles are located closer to the roost location then additional monitoring surveys would be required under licence, for a minimum of two years post-works. This would include an inspection of the building and dusk emergence survey of the entire church, undertaken between May and August in the first and third year post-works.

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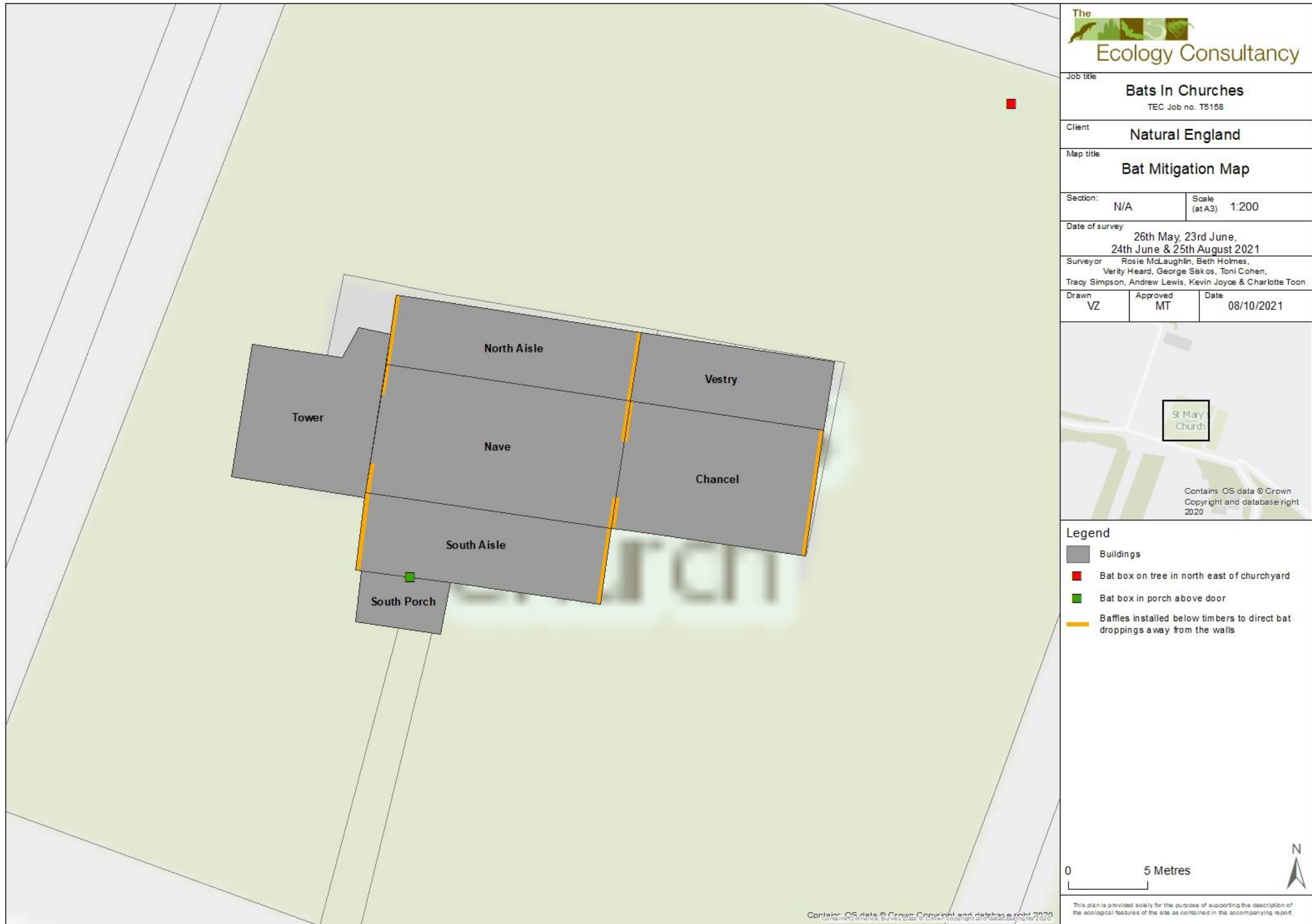
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Appendix 1: Bat Survey & Mitigation Map

Figure 1: Bat Survey Map



Figure 2 Bat Mitigation



Appendix 2: Photographs

Photograph 1
Southern elevation of church,
with main access location for
bats at the porch shown by the
arrow



Photograph 2
Eastern and northern elevations
of church



Photograph 3
Interior of church chancel



Photograph 4
Chancel and north aisle



Photograph 5
Internal roosting areas between
wall and timbers



Photograph 6

Bat droppings on wall below gaps between wall and timbers



Photograph 7

Location of roof tiles where individual common pipistrelle, soprano pipistrelle and brown long-eared bats were recorded emerging, on southern elevation of church



Appendix 3: Timings, Responsibilities and Approximate Costs of Works

Table 1: Works Management Plan

| Mitigation Measure | Timing | Person Responsible | Approximate Costs (inclusive of VAT) |
|--|-------------------|--|--------------------------------------|
| Obtain quotes from local contractors for scaffolding (if required) and installation of baffles (including materials) | November 2021 | Project architect | £0 |
| Obtain faculty consents, if required | Dec 2021 | Church Wardens | £0 |
| Submit site registration application to Natural England: under the Natural England Bats in Churches Class Licence (BiCCL) if required ⁴ | February 2021 | Registered Consultant | £2448.00 |
| Install baffles in accordance architects drawing | March/April 2022 | Carpenter/Contractor and materials ¹ | £26,807.00 |
| | | Supervision of the licenced ecologist | £2,762.40 |
| Source and install bat boxes within church porch and on tree within churchyard | March/April 2022 | Contractor if required for drilling into wall ² | TBC |
| | | Supervision by the licenced ecologist | £742.80 |
| Monitoring surveys including a building inspection and one dusk emergence survey (1 x surveyor + 1 | May – August 2022 | Licenced ecologist and experienced assistants | £595.00 |

¹ Estimated costs based on similar works

² Could be done on same day as baffle installation to reduce costs

| Mitigation Measure | Timing | Person Responsible | Approximate Costs (inclusive of VAT) |
|--|----------------------------|---|--------------------------------------|
| volunteer from TEC) ³ | | | |
| Monitoring surveys including building inspection and one emergence survey (4 x surveyors) if required ⁴ | May – August 2023 and 2025 | Licensed ecologist and experienced assistants | £5,066.00 |

³ Should a licence not be required

⁴ Should a licence be required



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