

through the darkness

sharing the sacred space

BATS IN CHURCHES



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Bat Conservation Trust



**THE CHURCH
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**Churches
Conservation
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Historic England



**NATURAL
ENGLAND**

CONTENTS

CONTENTS.....	2
LIST OF TERMS AND ABBREVIATIONS	4
INTRODUCTION.....	8
EXECUTIVE SUMMARY.....	8
PROJECT MANAGER’S SUMMARY	9
Changes	16
Finance.....	18
WORKSTREAM ONE: SOLVING THE CONFLICT	42
Testing the Bats in Churches Class LicenCe	43
How did it work?	44
What did we do?	45
WORKSTREAM TWO: COMMUNITY ENGAGEMENT	59
Events	59
Other Engagement Work.....	67
Media and Communications.....	86
WORKSTREAM THREE: VOLUNTEERS AND TRAINING	96
Cleaning Advice and Workshops.....	96
Training For Churches And Bat Groups	108
WORKSTREAM FOUR: NATIONAL BATS IN CHURCHES STUDY	113
Summary Recommendations.....	114
Future surveys.....	123
References	124
WORKSTREAM FIVE: PARTNERSHIP AND EVALUATION.....	126
Flying to the Future	137
Evaluation	140
HANDOVER ACTIONS, GOVERNANCE AND LEGACY.....	144
Handover Actions	144
Challenges and Lessons Learned.....	147
Governance and Management Arrangements	163
Beyond Bats in Churches	167
FINAL RECOMMENDATIONS.....	170
Conclusion.....	172

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LIST OF TERMS AND ABBREVIATIONS

BCT - Bat Conservation Trust

BiC - Bats in Churches

BiCCL - Bats in Churches Class Licence, a new type of licence to allow a flexible approach to bat mitigation

BMP – Bat Management Plan, a document usually prepared by the ecologist in consultation with church and architect setting out options for bat management at a church

BES - British Ecological Society

BBG- Beautiful Burial Grounds, a Caring for God's Acre project

CfGA - Caring for God's Acre

CCB - Cathedral and Church Buildings Division, part of Church of England

CCT - Churches Conservation Trust

CBD - Church Bat Detectives, a simple citizen science survey of churches, not requiring the use of equipment

CIEEM - Chartered Institute of Ecology and Environmental Management

CofE - Church of England

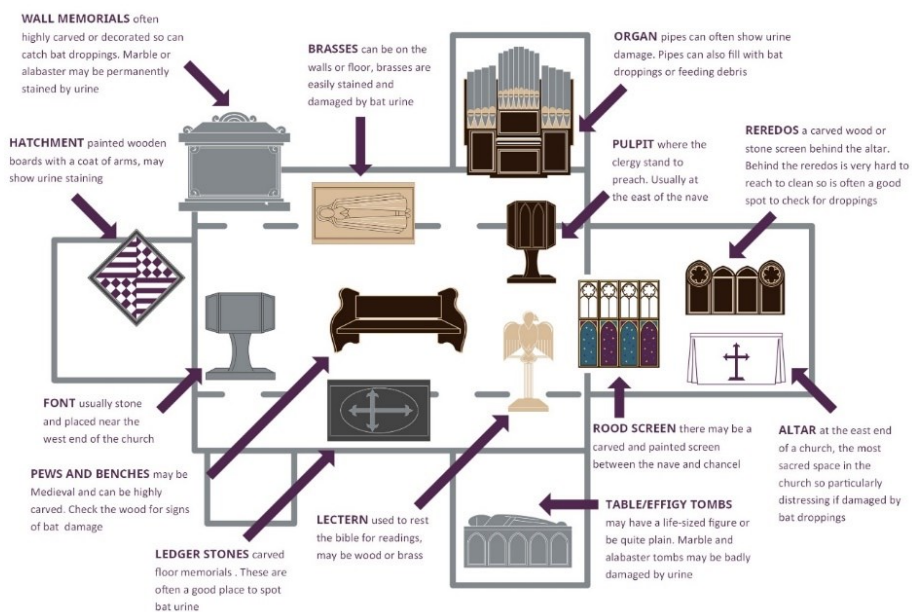
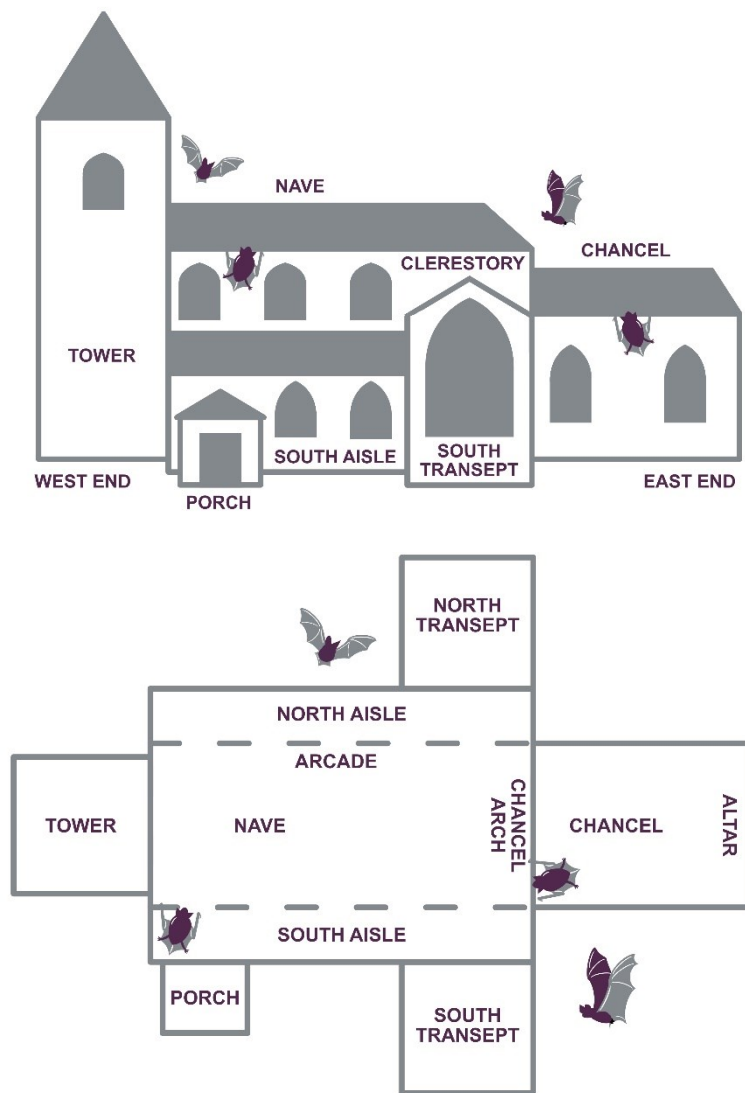
CHR - Church Heritage Record, the CofE online record of churches

Defra - Department for Environment, Food & Rural Affairs

DAC - Diocesan Advisory Committee, a group of qualified members who advise on church buildings and works including giving advice to the Chancellor on granting permissions through the faculty system

Diocese - CofE administrative regions, for the purpose of this project's work they are the body who can give faculty permission for works to go ahead

EASA - Ecclesiastical Architects and Surveyors Association



Faculty - a required permission to carry out works on a church and its surrounding land, normally granted by the Chancellor of the Diocese equivalent to planning or listed building consent in the secular system

FSC - Favourable Conservation Status, when a species is thriving at a site and is expected to continue to thrive in the future

HE - Historic England

Mitigation - activity to reduce the severity of the impact of bats

NBiCS - National Bats in Churches Study, a more detailed version of CBD, requiring the placement of specialist bat detection equipment in the church.

National Bat Helpline – national service managed by BCT and funded by NE providing free advice on bat issues

NBMP - National Bat Monitoring Programme, citizen science programme that monitors the conservation status of British bats through a range of surveys

NHLF - National Lottery Heritage Fund

NE -Natural England

NEWLS – Natural England Wildlife Licencing Services

OAWAAP – ‘On a Wing and A Prayer’ the project’s multimedia artwork exhibition

PCC – Parochial Church Council, a group of volunteers responsible for the running and maintenance of a church

SoS - Statement of Significance, a document outlining all items of historic, architectural or other significance in a church

PM - Project Manager

VBRV – Volunteer Bat Roost Visitor



INTRODUCTION

INTRODUCTION



EXECUTIVE SUMMARY

Bats in Churches (BiC) was a five-year, £4.6 million partnership between Natural England (NE), Bat Conservation Trust (BCT), Church of England (CofE), Historic England (HE) and The Churches Conservation Trust (CCT), funded by the National Lottery Heritage Fund (HF), running between 2019 and 2023.

The project's aim was to tackle the human/wildlife conflict issues that can occur when bats use the interior of church buildings, particularly historic churches which often contain precious heritage items that can be damaged by bat mess.

A major component was piloting a new type of class licence, the Bats in Churches Class Licence (BiCCL) that allowed a more flexible approach to bat mitigation. The BiCCL was tested through carrying out a range of novel capital works at 30 churches. Other works included a comprehensive programme of engagement activities, including organising bat nights at churches, stalls at church fetes, publication of a children's picture book and curriculum aligned school sessions for primary school children. A further workstream provided training for bat volunteers, and offered specialist cleaning workshops for those who care for churches. The fourth workstream rolled out a national citizen science programme which helped us to understand how bats use churches in England. A final workstream focused on partnerships and knowledge sharing, and included working with organisations such as Caring for God's Acre (CfGA) and arranging best practice forums for sector professionals such as architects and ecologists.

Bats in Churches has been a success, both in terms of delivering its objectives and as an example of a highly effective cross-sectoral partnership. We now understand far more about how to approach managing bat roosts in churches through trialling novel mitigation approaches at our sites, and can offer recommendations to churches with bats on that basis. Our engagement work has been particularly effective and has led to noticeable changes in attitudes towards bats and wildlife at some of our church sites, while our training

and knowledge sharing offerings have encouraged stakeholders on both sides of the issue to collaborate and listen to each other.

The project leaves behind a strong legacy offering. The website will remain up and maintained by Churches Conservation Trust for at least another 8 eight years, allowing access to case studies, e-learning modules, activity resources and detailed technical reports on works carried out. Bat Conservation Trust will continue to run the Bats in Churches Challenge Badge for uniformed and other groups, and Churches Conservation Trust will be beneficiaries of profits made from the sale of the *The Little Church Bat* picture book, which is on sale as print-on-demand at Waterstones and other online retail sites. Elsewhere, Natural England will continue to offer the Bats in Churches Class Licence (BiCCL) to allow more flexible approaches to work at churches with bats. Church of England has funded a two-year post of Bats in Churches Advisor at BCT through their 'Buildings for Mission' fund, which means there will remain a live point of contact for churches that are struggling with their bats, as well as resources to help churches live alongside their bats and, where possible, turn them into a natural asset that will bring new people to the church for bat walks and talks.

Please note that this report has been designed so that the main sections can be read in isolation; therefore some sections may contain slight repetition.



PROJECT MANAGER'S SUMMARY

The Bats in Churches project finished its five-year delivery phase on a high note, meeting its objectives, delivering additional benefits, and demonstrating the power of cross-sector partnership working.

The way the partners have overcome the differences that are bound to emerge in a human/wildlife conflict project has been notable. Although the early years were quite challenging, and sometimes saw differences of view at the project's governance bodies meetings, this was gradually overcome through taking time to listen to everyone's point of view, communicating the successes of the project team across both wildlife and heritage

conservation deliverables, and demonstrating to partners that what we were doing was leading to good outcomes for people, heritage and nature.

Assessment of Achievement of Project Objectives

The project has tested the Bats in Churches Class Licence at 26 sites, trialled a range of novel mitigation approaches and has provided Bat Management Plans (BMPs) for over 55 churches. We have carried out hundreds of engagement activities across England, delivered specialist training, shared knowledge and learning, and successfully completed a national citizen science programme that has led to better understanding of how bats use churches.

At the beginning of the delivery phase the project defined its objectives as follows:

1. Find practical solutions

The project will bring together communities, bat experts and volunteers to safeguard bat roosts while reducing their impact on England's built and cultural heritage. Building on the latest research, the project will work with 102 churches living with bats, to create practical, tailored solutions to reduce the impact of bats without harming their populations.

2. Motivate communities to appreciate and understand their built and natural heritage

A vital part of the project is to strengthen engagement with local communities and inspire them to value and care for their historic churches and the bats that live in them. The project will bring together church congregations, bat enthusiasts, local people and wider audiences to create a shared appreciation of England's historic places of worship and the bats that use them. Community activities will be run at project churches and people will engage beyond that via our nationwide National Bats in Churches and Church Bat Detectives studies, our online community and via subsequent volunteer run activities.

3. Create a national network of skilled volunteers

Very few professionals or volunteers currently have the knowledge to support churches with bat roosts. The BiC project will work with existing volunteers and recruit new volunteers to create a national network of 1,812 fully trained volunteers able to support churches around the country. Over five years it will offer 94 professionally led training courses, training 1,545 individuals and thus building nationwide specialist capacity to help churches and other historic buildings beyond the life of the project.

4. Build relationships

Through greater understanding, better outcomes can be achieved for all. The project will facilitate positive communication between bat and church groups at national and local levels to help each understand the issues involved and find collaborative solutions.

5. Share knowledge to help management of other historic buildings

Ground-breaking BiC trials will be of interest to those caring for historic buildings across the world. The project will share the new techniques trialled in this project via 'Models of

Success' demonstration days at project churches, specialist stakeholder workshops and the end of project symposium. The project will publish case studies and guidance on a new dedicated website that will continue to be available beyond the life of the project.

6. Collect nationally important data

A new study of churches in England, the National Bats in Churches Study and Church Bat Detectives, will be undertaken by hundreds of people surveying over 700 churches. The study will provide crucial evidence about which bat species are present and their impact upon communities and historic buildings, as well as building long-term volunteer support for bats in churches. The data will be an invaluable resource in assessing future issues and solutions

With the agreement of HF small adjustments were made to the targets outlined in these objectives once the project got underway. The 'professionally trained volunteers' target was changed to 'Professionals Trained' and the target was lowered to reflect the specialist nature of this training, which was largely targeted at groups such as architects, ecologists and conservation professionals. The new agreed target for this was 100, but it should be noted this revised target was agreed in 2020 during the pandemic when it was not clear if there would be opportunity to deliver as planned. Ultimately, the project delivered specialist training to 381 professionals..

Dear Honor

Thank you for this email which I will keep safely for reference.

I will look at the Buildings for Mission funding as we have talked about having a 'sail' under the area where there is the 'worst' of the droppings etc.

We have enjoyed being part of the project which then made us look at Eco Church. We are working towards Gold now. So what is on the website is all great evidence.

We have come to love the bats and the project has been a great focus for our mission. I will copy John Saxon into this email as he was instrumental in our initial involvement.

I hope you have another project ready to keep you busy! And if you are ever passing Wimbish let us know.

with best wishes to you and your team

On behalf of Wimbish PCC.

The target of 700 churches surveyed by citizen scientists was the original target but a reduction to 500 was agreed with Heritage Fund during the pandemic years. Hard work and determination by the project team meant that, with some focused work in 2022, the project was able to reach out to sufficient churches and volunteers to meet and then exceed the target of 700. The target of 94 professionally- led training courses was slightly exceeded, with a total of 98 recorded.

In terms of relationship-building the project has done a substantial amount of work to help change views about bats in churches. Through engagement events, and linking up churches with local bat groups, there has been an increase in understanding about both bats and heritage that has led to better relationships. Below are some example emails from churches the project has worked with.

Mid-project we were sent this email from our contact at Coggeshall:

*“The bat event was a great success. **We had 130 people come, with many families.** Pat Hatch [local bat group] gave a short talk, then answered questions while Kim Wallis showed a live bat and hot chocolate was available at the same time. On cue at 9 the bats emerged, and we had about 20 flying around in the church for quite a long time. People seemed to be thrilled and several nice comments went onto Facebook. **A great evening and no more talk of getting rid of the bats.**”*

Elsewhere, Jane O’ Connor at Stevington, Bedfordshire, gave this feedback on an event BiC helped to arrange at the church:

*‘It was hot but there were such lovely shady spots in the churchyard, people decided to stay and enjoy the afternoon. It was laid back and relaxing and the activities were right for the occasion. An Owl man and his owls were a big attraction; the Wildlife Trust had some good activities; there were areas for making bug hotels; sowing seeds for edible plants to take home and an art area for various arty creations; the story reading was a great success and the refreshments - loads of delicious cakes and ice creams went down a treat. Two local environment groups came along with information and a couple of MSc students working on water quality of our River Ouse were with them. The church was able to promote the Big Butterfly Count which is taking place at the moment.’ A perfect day to be honest and wonderful to see the Church enjoyed and children happy to play and be together there. **I have whittled on about it because I want to show you how much we and the village appreciated it and to thank you and the Project for making it possible. Not only was it a social occasion but it was the chance to welcome people into the church and show that we regard our natural environment as a priority and an opportunity to increase people's understanding of the natural world. Result!**’*

After a bat walk at Wetheringsett a representative of the PCC said:

‘Thank you for your support in getting this off the ground, I think it has been very timely and will help give the church confidence to run future fundraising and social events for the community (and of course dispelled some myths about bats).’



The PCC at St Pega's, Peakirk, got in touch about the *The Little Church Bat* picture book:

'We absolutely love your book (Little Church Bat) and the story has many elements that mirror the journey St.Pega's Church have made as we learnt to love our bats.

Indeed I became so interested in bats as a species I spent much time researching those that habit the U.K. and gave a 20 minute unscripted talk at our Patronal Festival in January on St Pega's bats in particular and bats in general. Thank you so much for generously giving us twenty copies. St.Pega's run a "Messy Church" for parents and children once a month in the Village Hall and your book will be very much part of our future meetings.

On behalf of our PCC many thanks for all your support over the last three years.

Wishing you continued success in the protection of bats in Churches.'

Kind Regards,

Brian Lever Peakirk PCC.

Finally, one from Wood Dalling, Norfolk that illustrates both the issues with bats in churches but also how effective our educational engagement events have been in changing minds about bats as species.

Thanks for the email and the update on the project. We will of course be very interested to get the results of the survey at our church.

I have been meaning to write to you about the bat evening we had in our church, to tell you what a great success it was. Phil gave a very interesting presentation, and everyone has told me how informative and enlightening they found it and how glad they were that they came - in spite of the fact that not everyone loves bats! but at least they are now better informed about them and realise that they are not necessarily scary creatures, and indeed that they do useful things sometimes, if not always. The attendance was about 35, and we made a total of £185 for the church, for which we are very grateful.

Well done Phil and the Bats in Churches project!

Jonathan

The broad objective plan during the project's development phase suggested it developed an educational offer of some kind, but did not specify a target. BiC Engagement Officer (EO) Rose Riddell developed a schools' programme that was rolled out at 19 schools, delivered 74 sessions and engaged 800 children and 88 adults. Details on this, and on all the programme objectives, are given in Section 2 of this report. The target objectives and delivered activities are summarised in the table below.

Activity	Target	Delivered
Volunteer recruitment (general)	1,812	2,658
Professionally led training course	94	98
Professionally trained volunteers	100	381
Survey non-project churches through citizen science	700	753
Events at project churches	102	113 at churches, 168 total
School sessions	Non specified	74

There was no set target for delivering knowledge sharing/'Models of Success' days, but the project held forums for ecological and architectural/surveyor professionals, moving to virtual format during and after the pandemic and this proved the best way to reach larger numbers. In the final year, an additional forum for each of these sectors was held in the last month of the project to share the final recommendations. Every forum included a cross-over section that allowed ecologists to see the work from an architect/heritage professional view, and vice versa.

The project also gave detailed talks at the Diocesan Church Architect forum, which were well attended and ended with in-depth Q&A sessions. Elsewhere, the project gave talks at regional and national bat conferences, spoke at the Historic Religious Buildings Alliance, Historic England's Places of Workshop Forum, The Institute of British Organ Building, and gave a wide range of talks and workshops within each partner organisation. The details of the project's successful end of project event are given in Section 3 of this report.

The project website, www.batsinchurches.org.uk, has been a highly effective tool for the project and will provide a home for our legacy material. The website was set up using external contractors and practically managed day-to-day between Communications Officer (CO) Cathy Wallace and EO Diana Spencer, who fortuitously came to the project with a range of technical skills to support this. In 2021 Diana gave the website a re-design to reflect feedback and improve user interaction. The website will be transferred to CCT post-project who will maintain it while still allowing administrative access to the partners should it be necessary to make updates.

The project has produced a wide range of case studies covering various capital work approaches, the schools' programme, the artwork and the *The Little Church Bat* book. A selection of these is shown in Section 2 and they are all available on the project website.

Beyond the agreed deliverables the project has also: published a children's picture book, *The Little Church Bat*, which has proved an excellent engagement tool; created a 'Bats in Churches Challenge Badge' for uniformed and other groups; commissioned an interactive artwork *On A Wing And A Prayer* (OAWAAP) that has toured the country; created e-learning modules on key Bats in Churches topics; and delivered an online series of events called BiC LIVE! in response to the restrictions imposed by the pandemic. These sessions are available to watch on the BiC YouTube channel and cover a wide range of topics from 'Bats and Disease' to 'Heritage Treasures'.

In the final year of the project the team saw an opportunity to use the citizen science survey equipment to help more churches and ran 'engagement' surveys. These were for churches that already knew they had bats, but wanted to know what species they had. The equipment was deployed to volunteers, set up to record in the church overnight, and the resulting sound file sent back to BCT for analysis. The project used some specialist time underspend to deliver this at 37 churches. Knowing the species of bat has multiple benefits. It helps the church and their community better engage with their bats – being able to say 'we have Brown Long-eared bats here' is more compelling for wildlife engagement than 'we have bats'. It can inspire people to find out more about the species, and it can be an immediate help when engaging an ecologist or carrying out works which may disturb the colony.

Activity	Delivered
BiC LIVE!	12
BiC Challenge Badge – number of badges issued	300+
<i>The Little Church Bat</i> – total circulated (inc. promotional copies)	1,000+
<i>The Little Church Bat</i> – total sold	400+
Engagement surveys	37

CHANGES

The project underwent several changes during the delivery phase that were all agreed with HF. Some of the more minor changes to targets that were agreed are detailed above, but the most significant change concerned the delivery schedule for Workstream One.

Capital Works Scheduling

In the development phase of the project the plan had been to carry out capital works at sites in tranches, with a new set of churches commencing works each year of the project lifecycle. It was flagged very early in the delivery stage that this was a flawed approach. The reason for this is that the BiCCL required that the effect of the works be monitored for a minimum of two summer survey seasons after any elements that disturbed the bats took place. If a church had works starting in year five there would be a significant amount of work, including reporting and measurement of success, taking place years after the project had concluded. For this reason, it was agreed that all works would commence in the first half of the project, with the majority of works re-scheduled to start in spring 2020. Aside from the issues operating in 2020 (relating to the pandemic) the other impact of this change was that it meant the early part of the project felt quite heavily focused on bat mitigation, with less time-sensitive elements relating to heritage getting less focus. This did lead to some partners feeling that heritage was being overlooked and that the project felt overly focused on bats. This impression was likely exacerbated by the fact that heritage cleaning workshops could not be run during the lockdown years as they required practical face to face sessions at the churches. As the project progressed work began to feel more evenly balanced between bats and heritage.

COVID-19

The pandemic caused significant changes to the schedule of the project. As above, works were arranged to start in spring 2020, but in many cases they were unable to do so. There was a lack of lockdown guidance around the works planned for March/April 2020 so the project was required to pause work until it could be assured it could go ahead safely. In some cases, it was possible to carry out works in autumn 2020, while at other sites the work was delayed for a year until spring 2021. In some cases, churches were not comfortable with the works taking place, particularly when PCC members were isolating and therefore unable to provide site access or supervise contractors on site.

The pandemic also caused changes to the project's engagement approach. The project had planned for a range of in-person events in 2020, such as activities and stalls at church fetes, and bat walks and talks on summer evenings. With restrictions in place nationally very few of these were able to go ahead, although some bat walks were arranged as outdoor only events with limited numbers permitted. These restrictions persisted into summer 2021, although towards the end of the summer more churches were open to holding outdoor events, which people were able to attend in person.

In response to the situation the project looked at developing online offerings. The team created the BiC LIVE! series comprising hour long live sessions for stakeholders to attend, offering a variety of subjects relating to bats and church heritage. The series ran over three years, with four episodes a series, and is available to view on the project's YouTube channel after the project ends. The online platform allowed the project to reach a much wider audience, attracting people from across the country and, in some cases, from across the world. Viewing figures for the series are in the thousands.

Another adaptation to the pandemic was a virtual bat night, held in October 2020. The team and a project ecologist broadcast live from Saxlingham church in Norfolk and people logged on to follow along. The event was recorded and has over 1.5K views on YouTube. In this sense, although the pandemic was challenging and required significant adaptation of the programme, there were some notable benefits in terms of reach and legacy offering because of taking these differing approaches.

A selection of topics from BiC LIVE!

	<p>Bats in Churches LIVE: The Wonders of Church Wall Paintings 272 views • 3 years ago</p> <p>Bats in Churches</p> <p>Bats in Churches heritage advisor Rachel Arnold explores the Wonders of Wall Paintings thanks to special guests award-winning ...</p> <p>CC</p> <p>St George's Church, Trotton, Nr Midhurst, West Sussex North West corner of St Nicholas Church ... 5 moments</p>
	<p>Bats in Churches LIVE: A Date with a Church 471 views • 2 years ago</p> <p>Bats in Churches</p> <p>Our panellists take us on a tour of churches through the ages, their setting, architecture and interiors. Lead by Bats in Churches ...</p> <p>CC</p> <p>Rachel Arnold Dr Louise Hanson The Church of Saint Mary Harrow on the Hill Church of Saint... 16 moments</p>
	<p>Bats in Churches LIVE: Understanding Bats through their DNA 261 views • 3 years ago</p> <p>Bats in Churches</p> <p>Bats in Churches training and surveys officer Claire Boothby guides us through the secrets held in bat DNA with help from special ...</p> <p>Order Chiroptera (-1400 species) Unique life history adaptations! Secret of everlasting youth? ... 11 moments</p>

Budget

There were changes to the BiC budget profile on several occasions, notably the mid-project re-profile to account for changes in spending forecast largely related to the effects of the pandemic. There were also some changes relating to a failing supplier that required works to be scheduled outside the project lifecycle and for a reasonable amount of contingency to be used. All significant budget alterations were agreed with our HF monitors, and the

project and the partnership remain grateful to them for their support and advice throughout.

Staffing

There were no major changes to the staff profile of the project, although some people did leave to pursue new opportunities or start families. In each case the project was able to successfully recruit a new person with the same skillset or better.

The only notable change was the recruitment of an additional person to manage the citizen science survey in a highly focused way to ensure we met our target. Giada Giacomini joined the team from December 2021 to April 2022, working with the BiC CO to link BiC volunteers with local churches to facilitate carrying out the NBiCS citizen science survey during the summer season. This was a positive change and meant that the team started the summer with a full schedule of equipment delivery to volunteers, and the churches were aware of, and committed to, participate in the survey with plenty of advance notice.



FINANCE

Introduction

Careful budget management has been a hallmark of the BiC project. Across its five-year term the project was fortunate to have two excellent Finance Officers (FOs) who were able to support the Project Manager and the team in making the best use of the budget while keeping spending on track and ensuring prudent use of contingency where necessary. As well as managing the £4.6M budget across multiple workstreams and budget lines, the FOs had excellent interpersonal and communications skills and this was a particular advantage when dealing with, for example, PCC members/volunteers who found some of the procurement and reimbursement processes unfamiliar. Here, patience, understanding and an ability to explain things clearly and simply helped to maintain warm and positive relationships with partners at churches.

As outlined above in 'Changes' there were some alterations made to the budget at an early stage, particularly to deal with the lack of allocation for architectural fees. A full budget re-profile was undertaken mid-project to reflect actual spend against budget lines, some of

which varied from forecast due to unforeseen impacts (e.g. volunteer expenses were significantly underspent due to the pandemic).

Another notable financial change related to the fundraising commitment that was a part of the HF bid. This was a commitment to fundraise £269,500 from various external funders during the project to contribute to the total project budget. There was a minor issue with this early in the project in that no one on the team had much fundraising experience, but initially the BiC steering group agreed this could be contracted in.

Shortly after this the national fundraising picture shifted radically as the pandemic started. From 2020 to 2021 most funders were offering grants for pandemic recovery only, which was not a fit for the type of funding needed. The FO secured small grants for two churches via Tesco's 'Bags of Help' scheme, but otherwise there was little success in this area.

In 2021 NE's BiC project Senior Responsible Officer (NE SRO) was able to secure the full amount of fundraising from a Defra underspend, which was a significant help to the project and its partners. As noted elsewhere in this report, NE also stepped in to underwrite a supplier invoice of £43,300 which was creating an underspend risk in the final months of the project.

Every partner brought strengths to this partnership and one of the benefits of having a public body such as NE leading was the ability to respond to financial risks and issues in this way.

The following report on project finances gives more details on how the budget was managed and includes some case studies of how we have used funds.

Overview of total budget lines

The original budget was developed collaboratively with the input of the technical expertise of all project partners. The evidence resulting from the development stage of the project determined which activities were included in the BiC delivery phase.

			Amount
Total Project Budget			£4,559,530*
HF contribution			£3,511,100
Partner	Amount	Paid	Balance
Natural England	£333,300	£333,300	£0
Historic England	£22,000	£22,000	£0
Church of England	£120,000	£120,000	£0

The overall total budget amount reflected a best estimate of activity at the time of writing the Bats in Churches Heritage Lottery bid in 2018.

HF Budget Heading	Original Agreed Budget	Revised Budget as of 21/11/2021	Revised Budget as of 11/10/23
D–Delivery Capital (30 June 2023)	£1,773,382	£1,951,594	£1,994,894
ED–Delivery Activity	£1,836,153	£1,891,692	£1,891,692
F–Delivery Other	£646,395	£412,644	£412,644
Total	£4,255,930*	£4,255,930*	£4,299,230.00**

**Figure does not include volunteer time cash value.*

***Increase of £43,300 covered by NE due to risk from supplier – see 'Managing Contracts' section.*

D–Delivery Capital – capital works, ecologist and architect fees. This included environmental monitoring of work at churches and contract commitments.

ED–Delivery Activity – salaries, staff travel, volunteer travel, staff training, volunteer training, equipment, 'other', professional fees relating to activity.

F–Delivery Other – full cost recovery, publicity and promotion, recruitment, evaluation, inflation, and overall project contingency.

Changes

As the project progressed through the delivery stage, the budget needed to adapt to changes and circumstances that were not anticipated when it was initially set. These included national lockdowns in response to the COVID-19 pandemic, which restricted or prevented volunteer training and workshops, bat surveys and capital mitigation work, and unforeseen expenditure around professional fees relating to the capital works.

When the budget was planned during the development phase the allocation for professional fees was based on an average cost; however, there was no way to gauge exactly how much time the ecologists and their staff would spend on each church overseeing the work, which was highly variable depending on the type of works. These costs were also higher than anticipated due to the legal requirements of the BiCCL, which had not been clearly defined in the development phase.

It also became apparent that a budget for architects' fees had not been allocated in the original profile. Church architects play an integral part in determining the best bat mitigation option from a heritage point of view as they are well informed on the church heritage and structure, and therefore what is possible and appropriate at the site. They were also critical in ensuring our construction projects obtained faculty permission from the Diocese, without which no works could go ahead. In short, they were indispensable for the type of work we wished to carry out and so there was some adjustment to the budget to reflect this,

allocating more of the capital spend to professional fees. All changes were made in agreement with HF.

Below are the figures from the re-profiled budget as agreed in October 2021:

Revised costs include:

Capital

Additional fees for architectural work (omitted from original budget— £100,000 was taken from the inflation budget and added into capital.

£34,526 was taken from the contingency budget and added into capital.

Additional **£43,686** to cover the Philip Parker Associates contract (of which **£12,196** s taken from the original 'Inflation' line and **£31,490** was taken from the original 'Overall contingency' line).

Includes **£39,247** to spend on architects' fees for completing Statements of Significance.

Includes additional **£43,300** in revised budget and uncommitted for 11 October 2023 – as agreed to be covered by NE for previous supplier's potential contracted costs.

Delivery Activity

Salary budget increased due to incremental pay increases, plus allocations for maternity and redundancy pay.

Travel and subsistence budget for volunteers reduced due to COVID-19 measures such as lockdowns.

Equipment increased to cover additional equipment for project staff, bat groups and church cleaning.

'Other' budget reduced as church engagement cost less due to COVID-19, and some events were also combined.

Professional fees increased due to underestimates in DNA dropping analysis, statistician annual (rather than at project end), production of the *The Little Church Bat* book.

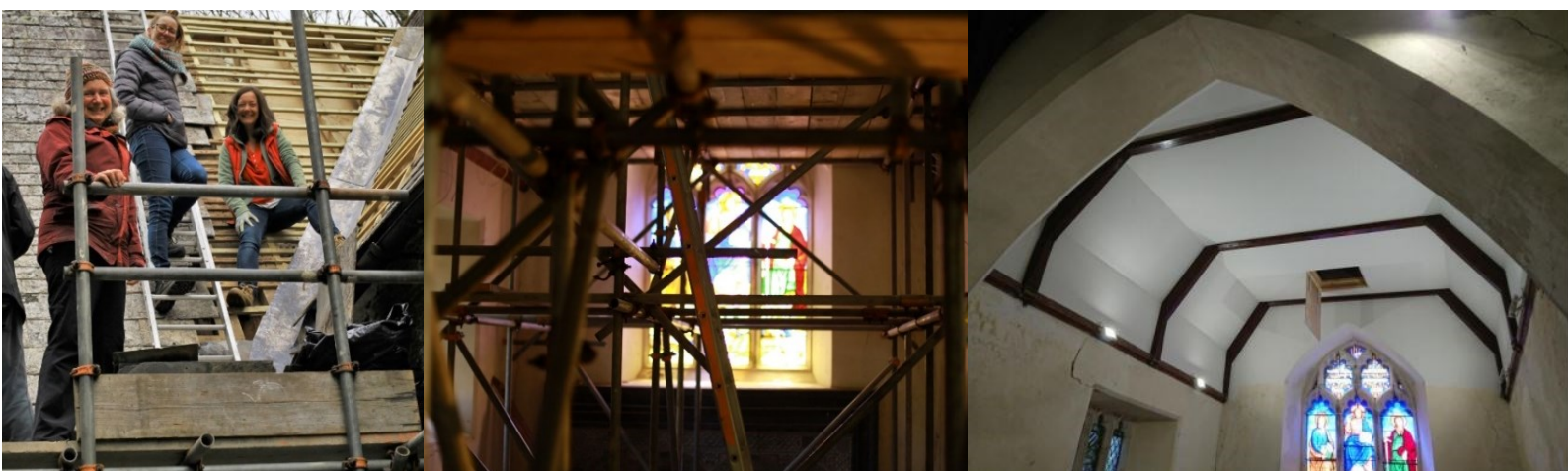
Delivery Other

Less inflation of £12,196, contingency less £31,490 (reprofiled in October 2023 with HF approval) to leave £23,089 as outlined above.

Expenditure Case Studies — High Cost Capital Works

St Moran, Lamorran, Cornwall

A small stone cruciform church lying in a remote wooded location, within the Tregothnan estate beside a creek of the River Fal. The location is within an Area of Outstanding Natural Beauty, and the church is listed Grade II*. Within the churchyard are a detached belfry, also



listed Grade II*, and the shaft of a medieval cross, listed Grade II and scheduled as an Ancient Monument. The church dates originally from the 13th century but was partly rebuilt in the 1840s for the Earl of Dartmouth and further restored in 1854 when work included re-roofing. The shiplap ceilings in the nave and chancel were installed during the Victorian period of works. St Moran's contains several items or furnishings of high or moderate archaeological or historical significance that needed to be protected from damage.

The church hosts a colony of Brown Long-eared bats and had been closed since 2014 because of the difficulty of cleaning the heavy accumulation of droppings, and damage from urine. This had caused extensive spotting on all the timber fittings and on the flagstone and tile floors.

The BiC project contracted an ecologist to survey the church and compile a Bat Management Plan (BMP) which recommended, in brief:

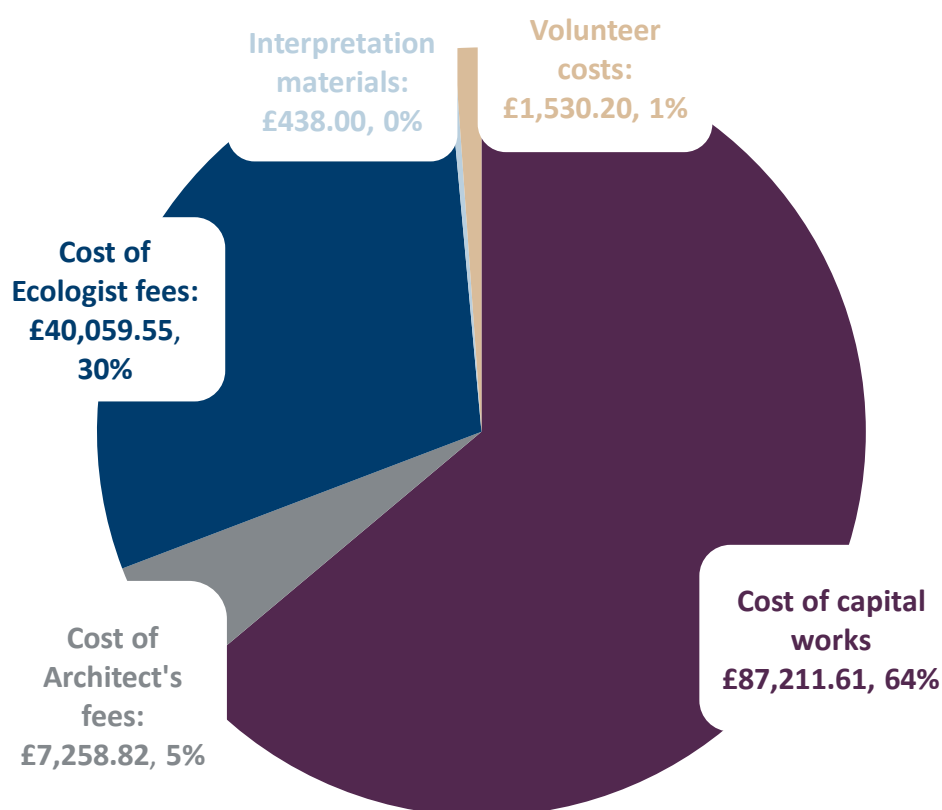
- further monitoring to establish the bats' pattern of use
- construction of closed bat lofts, connected by crawlways within the northern and southern transepts, by installing new ceilings at roof rafter and tie levels
- covering existing paneling down to the tops of the walls and maintaining existing access points while creating a new access point into the northern transept
- boarding in of restored shiplap ceiling above nave and chancel to seal all gaps to allow roosting/flying in the void while preventing access to the body of the church
- sealing gaps around roof timbers, doors and windows to block these access points.

Construction of two bat lofts connected by a crawlway (second recommendation) was prioritised due to concerns raised by local groups about the impact on the aesthetics and heritage of the church by boarding the restored shiplap ceilings in the nave and chancel.

Additional Costs/Required Budget Changes

Unfortunately, despite careful construction by the registered ecologist of more than one crawlway, and additional meshing around the eaves, bats were still able to enter the body of the church through gaps in the Victorian wood panelling after the initial works.

The church architect compiled three alternative options to take the work forwards. In October 2021 they wrote a detailed letter to the appropriate Inspector of Historic Buildings within partner organisation HE, summarising their options. Historic England then contacted the DAC with their preferred option for consideration, allowing the DAC to consider their own preferred solution. Ultimately, the faculty application was amended in January 2022 and boarding of the Victorian shiplap ceilings (as originally suggested in the BMP) was finally completed using Glasroc sheeting (a smooth, waterproof, plasterboard material) later in 2022. This was done so as to avoid damage or impact on the shiplap ceilings, which remain above the Glasroc and could be uncovered at a later date if required.



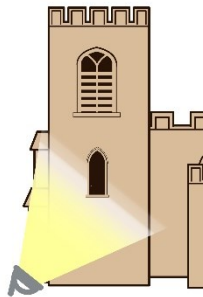
Total expenditure at Lamorran £136,498

The concerns raised around the aesthetic impact of blocking in the Victorian shiplap ceilings did add considerably to the cost of the mitigation at Lamorran:

- the architect and ecologist were both required for additional supervision and advisory work to ensure the change of plan was successful
- the ecologist was required by the terms of the BiCCL to complete more monitoring work than had originally been agreed

- the additional cost of supplies and work to construct more than one crawlway connecting the two bat lofts, and to reinforce the eaves with mesh
- the cost of supplies and labour required to block in the Victorian shiplap in the nave and chancel – this had not been included in the original budget due to the objections initially raised.

Today, St Moran's church at Lamorran is clean, open for visits and services, and the congregation lives happily alongside their bats. It is considered a flagship success of the project. The project was able to find the extra funds required to achieve this, and the extra expense involved represents a clear investment in protecting heritage, nature and biodiversity. The additional boarding in the chancel and nave ceilings has also improved thermal and acoustic insulation in these parts of the church, making it more sustainable financially and ecologically, as well as more comfortable for services and as an event venue.



Spotlight on: Volunteer Spend - Lamorran

Volunteer costs for Lamorran exceeded the budget set for reimbursing volunteer expenses – in this case by more than 300%. There are circumstances that explain why this cost felt justified.

When deciding whether to extend the volunteer expenses budget for this site, project staff considered multiple aspects: Would this be fair to other volunteers? Is this affordable? Does this represent value for money? How does this help the project achieve its targets?

This particular volunteer lived 15 miles from the church, which is located in a rural location accessible by only one route comprising partly of single track lanes. They were retired from work, and had been involved in caring for the church for a prolonged period, which had given them very valuable knowledge of the building. During the project's involvement with the church, they often prioritised site meetings to ensure contractors had access to the church as needed, and were available via email and telephone throughout the working week. They worked closely with project staff to ensure work was completed, and provided the project team with reliable and frequent communications throughout. Arguably, their most valuable contribution was that they cared personally for the church and for its place in the community, and this motivated them to work with the project team, the assorted contractors and specialists, the DAC and the PCC to achieve the best outcome for the church and its bats.

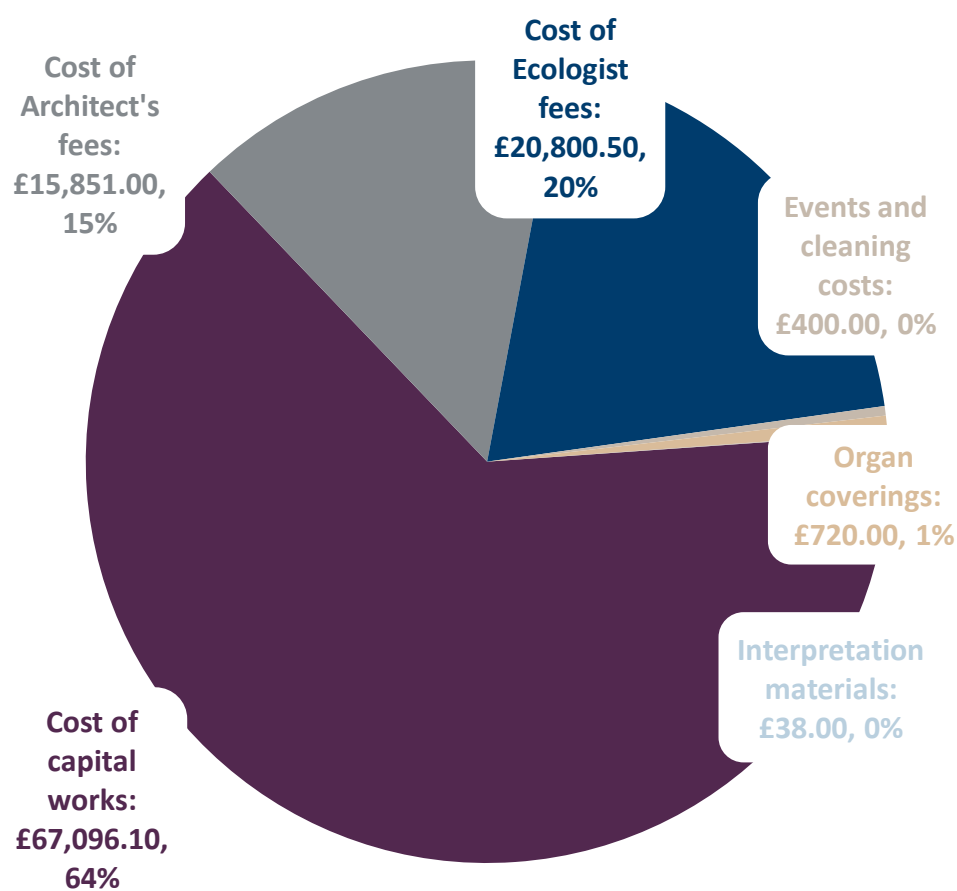
The success of the BiC project's involvement at Lamorran can be partly attributed to the hard work and dedication of this volunteer who, for the cost of fuel and return travel to the end of project event, carried out months of efficient work. Buoyed by the success at Lamorran, they have continued to work to raise funds for much needed repairs costing £56,392. They are currently raising funds for conservation work to the south transept, having raised in excess of £18,000 and are less than £5,000 short of their target. While these works are not related to bats accessing the church, they may become so in the long term, as protecting the structural integrity of the church through construction, repair and general maintenance will likely serve to prevent bats accessing the church in the future.

St George, West Grinstead, West Sussex

A stone church within a large churchyard with mature trees, St George's was originally built in the 11th century and added to throughout the 12th, 13th, 14th, 15th and 16th centuries, including the removal of a boarded, vaulted ceiling. St George's is of high architectural, archaeological and historical significance. It contains important historical artefacts such as medieval brasses and Georgian monuments, as well as unusual pews painted with the names of local farms. Some restoration work was completed in the 19th century, including stained glass windows and an external cement render.

Several species of bat were present and had caused significant damage to furnishings of heritage significance. This damage was mitigated by measures such as covers over sensitive areas, but as the bat damage was throughout the church this was not satisfactory as a long-term solution.

BiC contracted an ecologist to survey bat activity at the church and compile a BMP which recommended:



Total expenditure at West Grinstead £104,905



- reinstatement of the barrel-vaulted boarded ceiling to the nave and south aisle to provide roosting space in the resulting void above
- revised tower louvre vents to prevent bird access but allow bat access
- custom organ covers to be made from wood, to prevent damage to the organ from bat droppings or urine.

Additional Costs/Required Budget Changes

The PCC and DAC were in agreement and happy to follow the BMP, but complications arose during the implementation, due partly to the impact of COVID-19 and national lockdowns, which delayed the work starting. The roof void was to be constructed from western red cedar wood but, due to global shortages during the pandemic, the price doubled in a matter of weeks and was slow to arrive. The wood needed to be treated and stained prior to being installed and this required drying time. The wood dried more slowly than predicted by the contractor, meaning it was not able to go in before the bat hibernation period and the works had to be put back from October 2021 to March 2022.

The delays in receiving the timber added somewhat to the cost of the works:

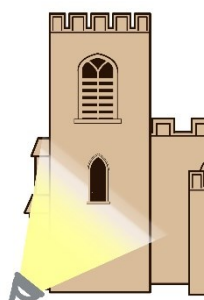
- the architect was required for additional supervision and advisory works, and requested further funding for additional visits to the church to ensure works were completed
- the ecologist was required to carry out additional monitoring surveys, as per the requirements of the BiCCL
- the custom organ cover may not have been required if the overall mitigation works, of which the new ceiling was the major part, had been completed on schedule.

Despite the setbacks in supply and delivery of materials, the works at West Grinstead have been completed successfully and the church is again open for services and community use. The new ceiling is a beautiful complement to the fabric of the church, and the community has come to regard their bats fondly – due in part to strong relationships built between the community, the PCC and the ecologist.

Spotlight on: Higher Cost Capital Works and Mitigation Plans

The similarities between St Moran's, Lamorran and St George's, West Grinstead go beyond broad similarities in cost and proportion of spend per budget line. The following comparisons can be made:

- *both churches are of comparable ages and construction, being built from stone in the early medieval period with additions made in subsequent centuries, culminating in considerable Victorian renovations*
- *both churches are in relatively rural settings*



- *both churches benefit from small but strongly supportive communities*
- *both churches required major works to the ceilings to provide their resident bats with space to fly and roost, while protecting the main interiors from droppings and urine.*

The works at both churches have been highly successful and the project considers the considerable expense and commitment of materials, time and effort to be investments in the long-term sustainability of both sites from the perspectives of community, heritage protection and biodiversity.

Expenditure Case Studies — Median Cost Capital Works

St Pega, Peakirk, Cambridgeshire

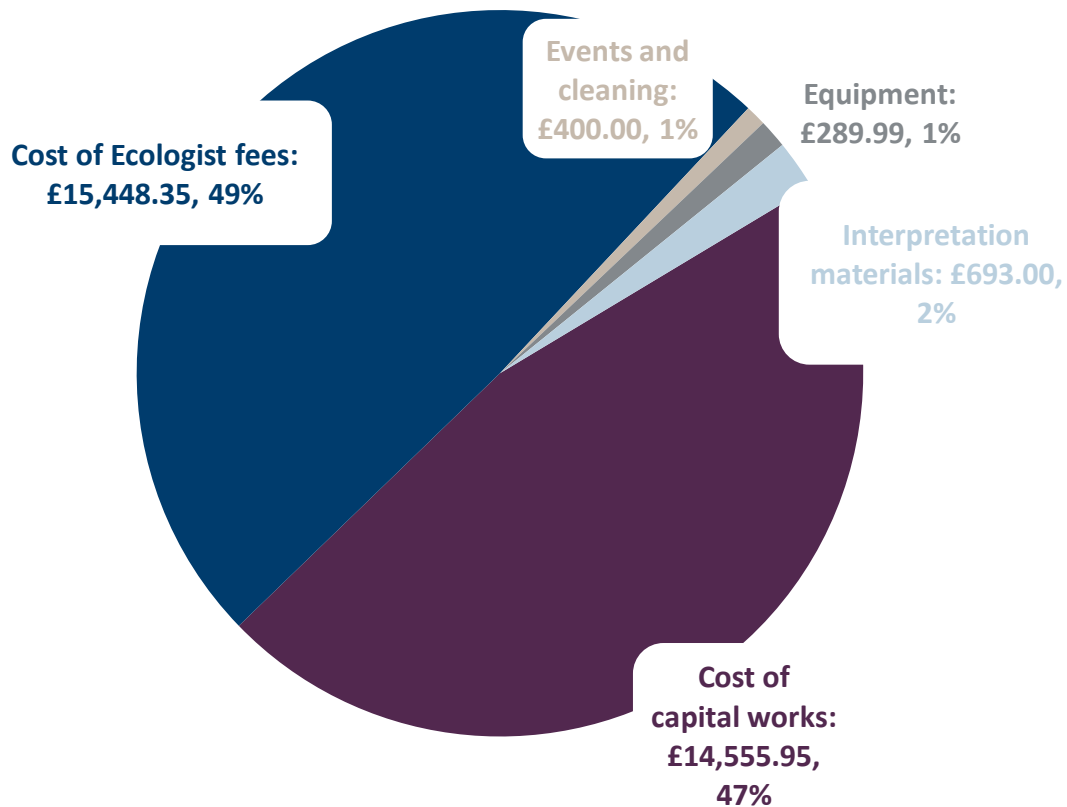
A Grade I listed church built originally in the 11th century, and extended in the 12th, 13th and 14th centuries, with renovations carried out in the 19th and 20th centuries. It sits in the village of Peakirk, three miles south-east of the town of Market Deeping. St Pega's church is considered to be of high architectural, artistic and historic interest due in part to its wall paintings, which are thought to have originally covered the interior of the church before being limewashed in the 16th century and rediscovered in the 19th century. The church also contains various architectural and religious features of varying significance.

The bat activity at Peakirk consists of a large maternity colony of 300 Soprano Pipistrelles, and a smaller colony of Brown Long-eared bats. The Pipistrelles had a maternity roost above the eastern wall of the chancel, in a gap between the chancel ceiling boards and lining of the slate roof. The Brown Long-eared bats were located under the eaves of the north aisle.

Significantly, the church's lead roof was stolen in 2018, and although a temporary roof was installed to protect the interior, the increased ease of access to the sheltered interior of the church may have contributed to the size of the bat colonies that made it their home.

The project contracted an ecologist to survey the church and compile a BMP which recommended:

- Total replacement, withterne-coated stainless steel, of the lead roof to both sides of the nave, chancel, north and south aisles and south porch
- Total replacement of the gutter lining
- Incorporation of bat roost boxes in the new roof space created.
- Extensive monitoring to confirm the continued presence and Favourable Conservation Status (FCS) of the bats.



Total expenditure at Peakirk £31,387

Additional Costs/Required Budget Changes

There were no major issues at this site, but some extra money was found to allow the ecologist to access the box on the roof in the final season of monitoring to ensure there were no issues with the build-up of droppings. The cost of a mobile platform was approximately £600, plus the ecologist's day rate. The inspection gave confidence that the mitigation was in good condition and working well, supporting the good bat numbers recorded through the monitoring surveys.

It is notable that architectural services are not included in the project costs here. This was due to the nature of the work – the bat mitigation was unobtrusively integrated into the re-roofing project, which was already required.

The mitigation work at Peakirk has been a huge success – the congregation is happy to live alongside their bats in their clean, dry church. The project received a request, which the project was happy to grant, for funds to purchase a safety ladder to enable the parishioners to maintain the works themselves.



Expenditure Case Studies — Lower Cost Capital Works

St Mary Magdalene, Brampton, Norfolk

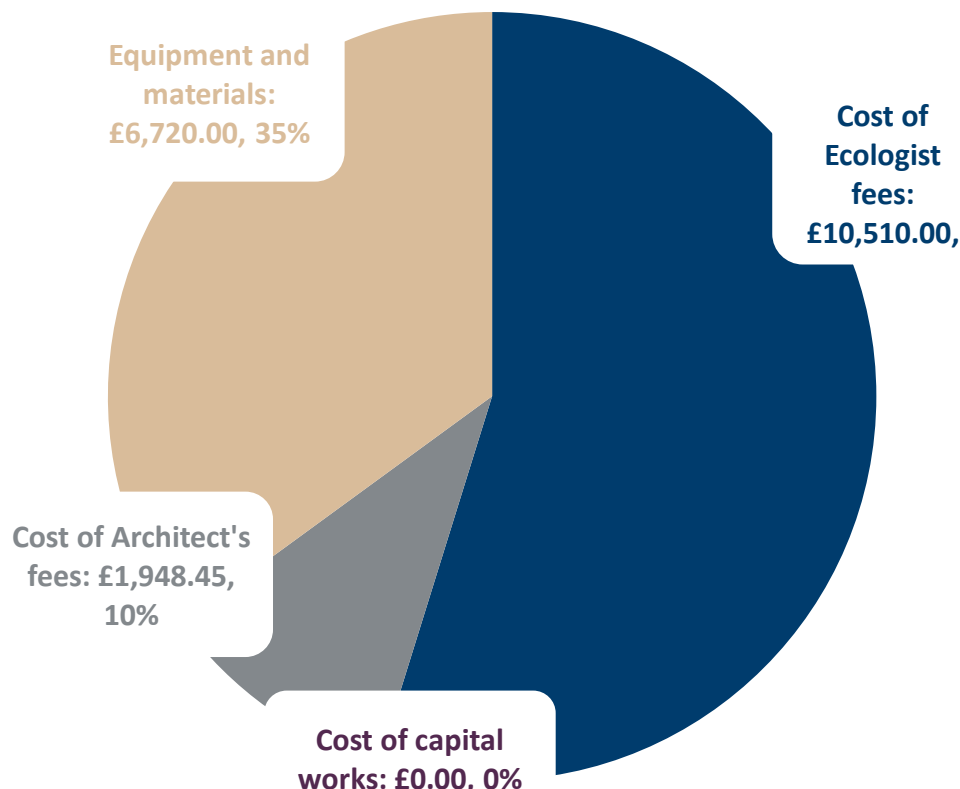
Unusually for the BiC project, the church of St Mary Magdalene, Brampton is in a large village with some 5,000 residents – most of our sites are more rural. The current church was originally built in the late 13th century, although it does contain a few pieces of 12th century chevron ornaments in the tower walls. Additions to the church were built in the 15th century and the building was renovated in the late 19th century. The Royal Commission on the Historical Monuments of England considers the church to be of some architectural interest, especially the tower. The church also contains several architectural features and items of furniture considered noteworthy by Historic England. Woodland and open fields lie beyond the eastern boundary towards the parish boundary at the River Ouse, and a Quaker burial ground and three old cottages lie to the north. The churchyard was extended in 1853 before being closed in 1882 as it was full; a piece of adjacent land formed the new cemetery, which was extended further in 1951. The historical significance of the churchyard is high and it also has some significance as a natural heritage site; there are some protected trees on the south side of the church.

Brampton had Pipistrelle bats flying throughout the church, but mainly over the chancel and tower arch. Bat droppings and urine had collected under the chancel arch and rotted the carpet.

The project contracted an ecologist to survey the church and compile a BMP which recommended five possible solutions to mitigate the impact of bats:

- boards to catch/deflect droppings and urine at primary roost points
- sails – small scale fabric, to catch droppings and urine at primary roost points
- boxing-in the nave bat access point (southeast corner – internal)
- closing up of the nave bat access point (southeast corner – external)
- box in chancel eaves including the chimney (south side).

After some discussion, it was decided that the opportunity would be taken to try out fabric sails that could be raised into position to catch and contain droppings and urine at key points. The sails could then be lowered for emptying and cleaning, and would be attached to the wall with unobtrusive brackets and a pulley system, all of which could be completely removed. The fabric itself could be customised to match the décor of the church, or even be changed for seasonal celebrations to form part of the decoration. This was an experimental approach that prioritised practicality, sustainability and aesthetics.



Total expenditure at Brampton £19,178

While similar fabric solutions such as gazebos, canopies or 'bat nappies' (sheets attached under a roosting area to catch droppings and urine) have been used successfully in other churches, these have been intended as a temporary measure and have been purchased ready made to put up quickly and cheaply. They are noticeable and often obviously intended for a different use. In some cases, these temporary measures are a pragmatic approach to an otherwise unsolvable problem, and may serve well as an interim measure or a compromise while funds are raised for more permanent works.

In Brampton the intention was to create a custom-designed solution that would be lightweight and durable enough to be easily maintained and sustainable in the long term.

Although the fixings were designed to be removable if needed, the solution was intended to be suitable for permanent use.

Additional Costs/Required Budget Changes

The ground-breaking nature of the approach taken at Brampton did necessarily require some extra costs, due to the absence of examples or specific guidance to follow:

- The project had originally budgeted £1,000 for architect's fees, which would likely have been sufficient, or even excessive, for a more typical approach of this size of mitigation. Due to the novel approach and the materials involved, the architect was required to make more visits and spend more time on drawings and advice than a more typical approach.
- The project would typically spend relatively little per church on equipment and materials, usually less than £500 for small items such as vacuum cleaners, pew covers, Perspex furniture covers, etc. However, as the sails were designed to be removable for cleaning or even replacing, as opposed to being a permanent change to the structure of the church, they were classed as equipment.
- It is notable that, despite the novel approach taken here, there was no associated increase in ecologist services. This is due to the positioning of the sails which do not obstruct the bats at all, but only serve to collect their droppings and urine. For this reason no licence or associated monitoring was needed.

Through close collaboration between the architect, ecologist, project team and PCC representatives, Brampton was able to achieve a successful outcome. For a relatively low cost the cleaning burden has been greatly reduced in these key areas, is largely confined to two unobtrusive 'sails' and is easily managed. The visual impact is very low, as the church chose a fabric and frame colour that match the finish on the walls, and the shape of the 'sails' blends almost seamlessly into the church architecture.

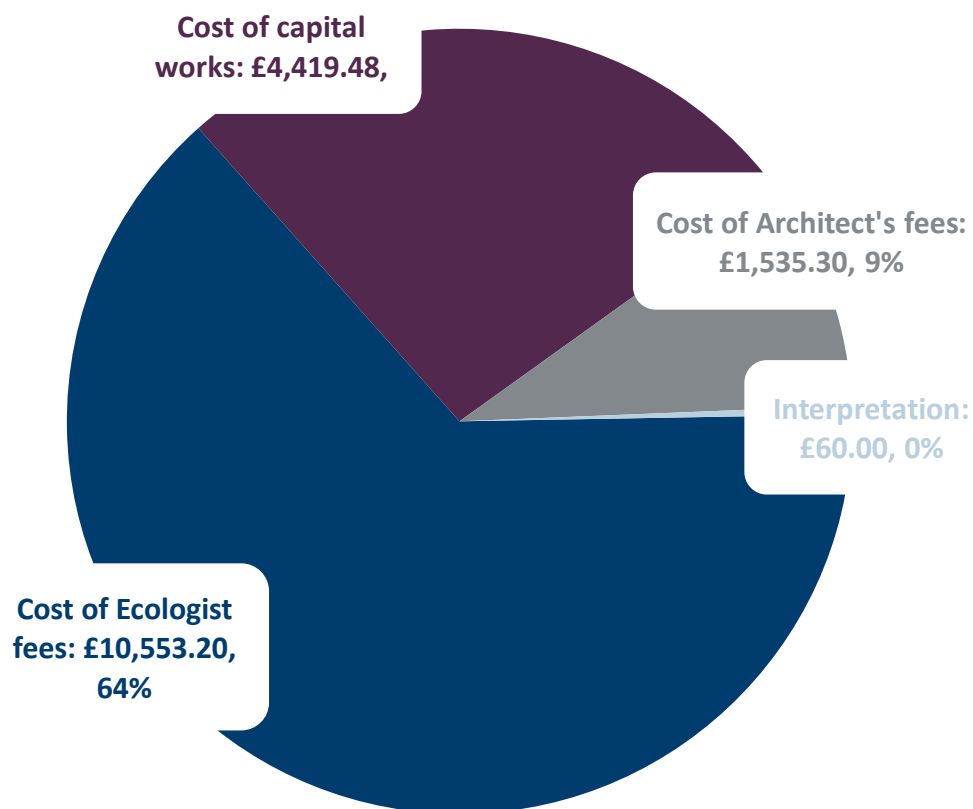
Although Brampton received a tailor-made solution, this could be affordably replicated in other churches due to the minimal cost, minimal alterations to the fabric of the church, lack of impact on bats, and the long-term sustainability and manageability of the sails. The BiC project and PCC alike consider the works at Brampton to be a significant success.



St Andrew, Coston, Leicestershire

A small, rural, stone church listed Grade I, mainly of the 14th and 15th centuries but with some 12th or 13th century elements. It was restored and rebuilt in the 19th century, when works included stripping the walls, reflooring, and installation of new benches and pulpit. The nave roof was repaired in 2020 following the theft of lead in 2017. The church contains several unusual artefacts of historic note. It stands in a large churchyard neighboured by 100 acres of meadow and an area of rough ground with a stand of mature trees.

The evidence of impact from bats was widespread. There was a concentration of droppings along the line of the south aisle, possibly indicating that bats enter the church through the south aisle roof, and the floors, timber furnishings and brass memorial plaques showed extensive staining and pitting from urine and droppings. The altar, reredos and lectern were protected, but other furnishings such as the nave pews were not.



Total expenditure at Coston £16,567

The project contracted an ecologist to survey the church and compile a BMP which suggested a 'shelf' spanning the length of the south aisle to catch droppings and urine. This

was granted faculty following consultation with HE on a temporary basis for a trial period, which proved to be successful.

The permanent shelves now installed at St Andrew's are a refined and less obtrusive design than the original temporary/trial version – they are painted to match the walls, are of a tray shape with raised sides, and have been placed directly under the bat roosts. Some roost access points were also closed, particularly the hole above the medieval stained-glass window in the south aisle. This enabled the mitigation to be completed effectively without obscuring or blocking the window, which was of historic importance. The trays can be lowered for easy emptying and cleaning, and then raised back into place, making this a manageable and sustainable solution.

Additional Costs/Required Budget Changes

Additional costs arose in connection with the refinement of approach to mitigation at Coston:

- The permanent trays, or shelves, were constructed of sturdier material and finished to match their surroundings to help them blend in more than the temporary ones and were therefore slightly more expensive than the trial models.
- Additional input from the architect was required when designing the permanent trays, and when determining appropriate materials and finish.
- The change in approach necessitated further monitoring by the ecologist due to the requirements of the BiCCL – although this did not increase the total spend on ecologist fees beyond the average expected cost for a mitigation project of this size.

St Andrew's is now easier to clean and maintain and the congregation is happy to live alongside their bats. The associated cleaning burden has been greatly reduced and is now manageable and incorporated into the regular maintenance routine. The project considers the work at Coston to be another example of lower cost, higher impact work that requires very little disruption or alteration of the fabric of the church itself to achieve a successful outcome.



Spotlight on: Volunteer Expenses

A considerable sum was budgeted for volunteer expenses from the beginning of the project. It was clear from the earliest stages of the project that PCCs and DACs rely on the commitment of volunteers to manage and monitor churches on a day-to-day basis. Volunteers organise and run community and religious events, and take responsibility for all aspects of cleaning, maintenance and fundraising. Project staff realised early on that success would depend on collaboration with church volunteers, who would be relied on to provide access to churches for contractors to carry out the mitigation work. The project therefore factored in the following:

- *It was important to ensure volunteers could travel as needed to churches, some of which were very rural, to provide access to ecologists, architects and contractors in a timely way that matched the schedule of works.*
- *Similarly, as the delivery phase progressed and more churches became interested in hosting nature-based engagement activities, it was important that volunteers could travel to organise, attend and host these.*
- *It also became a project priority to provide training for volunteers to disseminate knowledge gathered during the delivery phase. To make this accessible, the project budgeted for the cost of the training and associated professional fees and materials, as well as the travel to attend.*
- *To acknowledge the significant contributions of our volunteers, and how vital they were to the project's success, all volunteers were invited to the end of project event in London, with reasonable travel and accommodation costs covered to ensure as many people as possible were able to attend.*

Despite, or possibly because of, the strong relationships built between project staff and volunteers over the life of the project, there was a struggle to spend the full budget allocated to volunteer expenses. This is not unique to the BiC project – it is a common problem wherever volunteer expenses are available to claim. There are many reasons why a volunteer may be reluctant to claim their expenses, including:

- *Misunderstanding budget allocations – people will often say, “If I don’t claim it, you can spend it on something else”.*
- *Pride or embarrassment – people can be reluctant to claim relatively small amounts of money, for fear of being perceived as being unable to afford or absorb these costs, “I don’t need it”.*
- *Generosity – “I will save you a job” – based on the perception that processing an application is difficult or time consuming.*

It is important to communicate openly with volunteers to ensure they’re fully informed of what they can claim, and to provide reassurance or help as needed regarding the process. Building a relationship of trust and respect can go some way towards encouraging volunteers to claim back their costs and remove some of the above barriers to doing so.



Spend on events and equipment

Although the BiC project had set aside a nature-based events budget for each project church, it emerged that not all churches were able or keen to make use of this. Some churches already had a full programme of events and didn’t have capacity or time for more, some were too rural to attract a sufficient number of attendees to justify the time and work involved, and some didn’t have the volunteer resources required.

COVID-19 and the associated containment measures also had a huge impact on project spending on church events. During the many national lockdowns people were legally prevented from gathering in groups or indoors, rendering church events unlawful. In

addition, many churches relied on volunteers who might be considered vulnerable to COVID-19 to organise, run and clean up after events, and who therefore could not reasonably provide this support

When lockdown measures were eased and events could begin to take place again, the project team found that many churches still did not take up the offered events budgets as they already had everything needed to run events successfully – or they would only require small amounts of partial funding for elements such as catering or cleaning materials.

This led the team to develop a more flexible approach in administering this budget.

Low Cost, Non-Capital Interventions — Cleaning Budgets

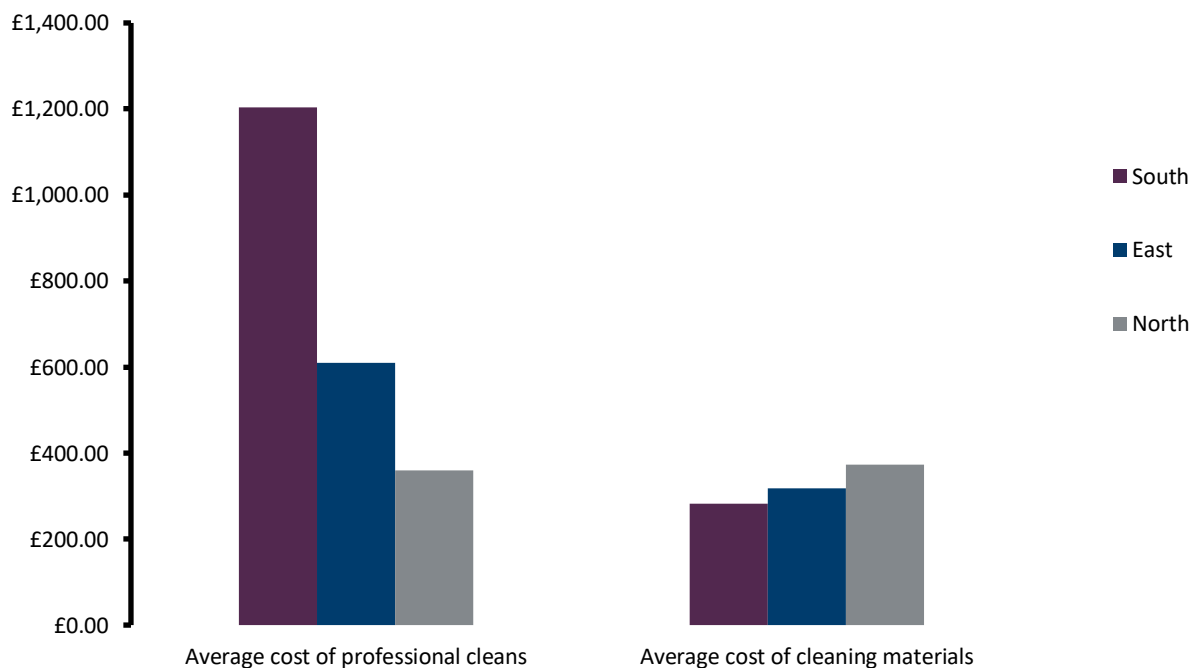
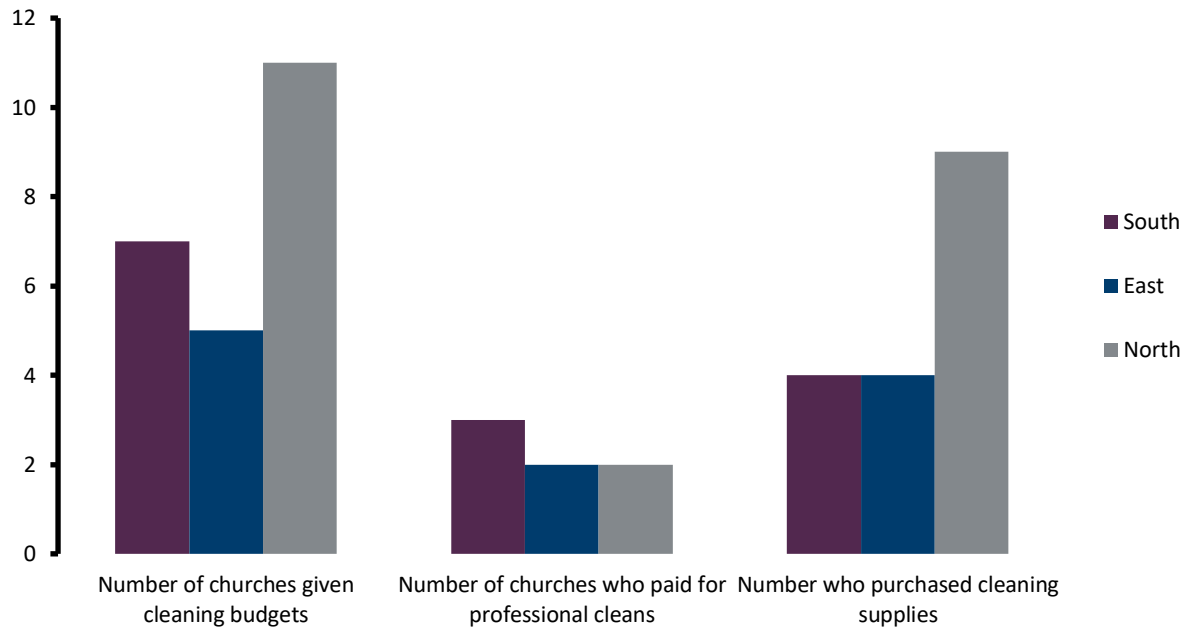
The project gathered extensive data through church visits during citizen science studies, ecologist surveys and architects' information gathering. On review, this data clearly indicates that the main issue of bat presence in churches is not the bats themselves, but the associated droppings and urine. Factors such as fear or revulsion were much less prevalent than it had been supposed they might be.

There are some hygiene risks presented by accumulations of bat droppings and urine, although it should be noted that these are much less significant than the threat posed by rodent droppings. As bat droppings are dry and crumbly they are easily compressed into fabric upholstery and carpet, and can then be difficult to remove. Bat urine is acidic and can cause corrosive damage to wood, metal and many kinds of stone, as well as having a strong smell. Where bats cannot be excluded, the droppings and urine can cause irreparable damage to historic materials and furnishings and make the church interior unpleasant to be in, or even unusable. Therefore, it was important to find a solution for churches where the bat population could not be managed by physically preventing them from entering sections of the church. The ideal result would be a clean, safe church with protected historical monuments, easily and sustainably maintained by the PCC.

After consultation with some church representatives, and review of the activity budget lines, and with approval of HF, the project agreed to provide cleaning budgets. For an individual church these were for an average of £500 per year across the project and were made available to the church by purchase order. The church could then use their budget to purchase cleaning supplies, or pay for cleaning professionals, and claim the cost back via invoice. There were multiple benefits to this flexible approach:

- The church representatives could use their knowledge of the cleaning burden and the help available to them to decide whether to employ professionals or to purchase materials and carry out the cleaning themselves, or to use a combination of both
- Where professional services were engaged, the money remained within the local community as services were often provided by small, independent, local businesses.
- Where churches decided to carry out their own cleaning and purchase supplies, volunteers gained a greater knowledge of their church and the contents within. Existing volunteers' efforts were supported and boosted with equipment that was more efficient and easier to use than previously, and some churches were able to use cleaning events to engage their community.

- Whether professional or volunteer services were used, churches were able to manage their own cleaning requirements on schedules to suit their own calendar of events. They were able to approach people they knew and trusted from within their own community, and to work flexibly to meet their needs.



Cleaning budgets in numbers Note: One church paid for a professional clean and then purchased cleaning supplies the following year to maintain the cleaning themselves.

When considering the above, it's important to note professional cleans are not a permanent solution, but they can help churches get back on top of their cleaning.

These graphs show the average spend per individual clean, but not the cost of incorporating professional cleans into a regular maintenance programme. If we assume three cleans per year, to prepare the church for Christmas, Easter and Harvest festivals, the average annual cost increases dramatically to £3,600 in the South, £1,800 in the East and £1,080 in the North. These are significant amounts to raise through fundraising in addition to any other funding requirements the church may have. This does not include the costs of interim cleans. Support with cleaning materials and modern cleaning equipment is much cheaper and represents a more sustainable long term solution.

Spotlight on: Cleaning Support

Project churches span the length and breadth of the country. They sit in isolated moorland, in woodlands, in small villages, farmsteads and towns. They were built between or throughout the 11th to 19th centuries. It was therefore vitally important to the success of the project that each church was approached as unique, with a bespoke bat management approach. Capital works mitigation and the physical exclusion of bats was not possible for every church and in these cases the project worked with church representatives to find pragmatic and effective solutions to enable communities to live with and alongside their bats:

- *The project compiled an extensive guide to cleaning and caring for historic artefacts, including a shopping list of specialist equipment and cleaning and care products, which was made available via the website and in hard copy.*
 - *The project's Heritage Advisor ran in-person cleaning workshops at multiple sites around the country, and produced an extensive video detailing the same, that can be viewed at any time.*
 - *Churches could request a cleaning budget to fund the purchase of any cleaning supplies they lacked, and could contact the project team for any further support they needed.*
 - *One church was unable to find a professional service and did not have the volunteer support to complete their own cleaning. In this case, the project was able to contact a local bat group, who happily took on a deep clean of the whole church for a small donation. This has built a mutually beneficial relationship between the heritage- and nature-focused communities in the area that will hopefully lead to greater collaboration and engagement in the future.*
 - *A guide to creating pew covers was also developed, detailing the process and advising on suitable fabric to use, following the successful creation and use of these by multiple churches. Most notably, one church even made their pew covers in the colour of their patron saint, Saint Andrew.*
- By engaging with, and listening to, communities, the project was able to develop and provide appropriate resources that enabled churches to empower themselves. PCCs are the long-term stewards of churches and their contents; it represents significant financial investment and savings to provide materials by which volunteers can educate themselves to carry out effective maintenance now, to avoid expensive repairs and construction later.*





Managing Contracts

An expense that was not anticipated at the outset was in relation to one contractor failing to deliver. This contractor held industry quality marks and had responsibility for compiling and carrying out the BMPs for multiple churches spread across a relatively large region. After a period of working with the project, it became clear that their contract could not be continued, and a replacement had to be found.

The replacement contractor necessarily had to spend some time surveying the sites and analysing the work already completed and data compiled by the previous supplier, all of which carried further costs which could not have been anticipated. The break in services caused some delay in the completion of the work and carried some additional monitoring requirements, which also had an additional cost.

The project was able to absorb most of this extra expense from the hitherto untouched overall project 'contingency' budget line, which was the obvious option to use to cover these additional expenses. As the need to replace this contractor came about relatively late in the project's delivery phase, the remainder of the additional costs could also be funded from the 'inflation' budget line; general inflation had already been written into the terms of all multi-year contracts, so this specific budget had not been required at this point in the project's lifecycle. This demonstrates the need for provision of a financial safety net and the importance of continuous, clear, communication between project staff and funders. Through close communication throughout this difficult contract termination period we were able to keep HF informed and present a clear rationale for the use of our contingency funds.

This was an important learning opportunity for the project. The initial set of project tenders were offered in lots comprising multiple churches, meaning the issue year had an impact on a significant number of our major works. Although the team was constrained by organisation-specific practices, the following could be universally useful points to consider in favour of offering site-by-site contracts rather than bundled lots. Site-specific contracts:

- allow for greater competition at tender, as being unable to reach one site would not rule out any contractor from bidding for another or others
- offer greater accessibility for those newer to the field. This was shown in the difference between bids received for the 'batched' sites against the later individual contracts tendered for churches requiring only BMPs. For the type of works we required the complexity alone could be offputting to contractors; this effect is increased when the work is required across multiple sites

- allow for easier contract management, giving the contract manager greater scope for a site-specific focus
- would likely allow for shorter procurement timescales as the values of the contracts would be smaller
- allow for easier budget management and control.

The above points were all considered when appointing the replacement contractor and have contributed to the successful completion of required mitigation work at the affected sites.

Lessons Learned — Benefits of the right people on the team

Throughout the life of the project the wide range of staff skills outside of those relating to their official roles were embraced and used to great effect and economy. For example, the project's budget for interpretation was underspent due to one staff member's skill at graphic design, saving huge costs on professional designer fees.

The project was also able to find an efficient, reasonably priced and reliable sign maker, further saving on these costs, and the projected underspend was then used on enhanced interpretation to explain those sites where mitigation could not be fully effective due to the fabric of the churches themselves.

The project was also able to surpass all funding workstream targets, producing educational and engagement materials that can be accessed and enjoyed by anyone long past the end of the project, without exceeding the amounts budgeted for contracted requirements, in part because of the educational expertise that came with one of our EOs.



Summary

Managing the budget for a project like BiC, with a small national team overseeing works across a broad area, requires a wider knowledge than just that of financial systems.

It is important to be open, and adaptable where appropriate, in approaching financial management, and to keep in mind the approved workstreams and goals – a small but well-

informed and careful investment can reap enormous dividends, and these may not be entirely monetary.

The cleaning budgets for PCCs showed that small grants that fund visible improvement to a church can be the stepping stone needed to community engagement and long-term involvement in the maintenance of a shared space. It could be the catalyst for a greater fundraising effort by conveying to people in a community that their space is important, their concerns are shared. It can drive greater engagement with, and care for, our natural environment and biodiversity.

Managing the finances of any project cannot be done in isolation and it is important to acknowledge and respect the specialist knowledge of all involved – partner organisations, project staff, contracted specialist professionals and, particularly, volunteers.

When engaging with churches, PCC members have almost all been volunteers which means they care enough about their church to devote time and energy to it which, due to declining congregations, small rural populations, and the age and complexity of these buildings, may feel like a lot of work for little to no reward or recognition at times. They know their churches and, even where their knowledge may not be the most accurate or up-to-date, it is nevertheless valuable and relevant. A collaborative, level approach rather than hierarchical is required; we are coming into their space, potentially making changes, and so alongside financial support it is also crucial to operate with respect and have the patience to communicate financial processes in a warm, sympathetic manner. Our FOs excellent interpersonal skills were an important factor in making this element work well, alongside their careful management of the budget.



Workstream One Solving the Conflict



WORKSTREAM ONE: SOLVING THE CONFLICT

Approved Purpose: Natural England led – undertake capital work to reduce the physical and social impacts of bats in 102 churches: at 20 most severely affected, Group 1 churches implement significant capital work interventions (such as acoustic deterrents, monitoring with radio tagging, monitoring/blocking/alternative roost space including boxes) with continued subsequent monitoring; at 82 less severely affected, Group 2 churches produce Bat Management Plans including in depth surveys to prepare proposals for future management, protection of monuments, repairs/redecoration, cleaning workshops, web cams.

As the project developed, the churches were reclassified from the groups described in the Approved Purpose above to ‘Capital Major’ (the 20 most severely affected churches), ‘Capital Minor’ (13 churches where less significant works were appropriate), ‘Capital Heritage’ (eight churches that were suitable for protective measures only) and a further 25 churches that were identified as being suitable to benefit from a detailed Bat Management Plan (BMP).

All sites were offered a Statement of Significance (SoS), covering heritage interest at the church, and adding in information about the bats at the church. This resulted in 96 statements being produced as some churches already had thorough statements or, in one case, refused the offer from the project.

Works	Target	Final Figure	Notes
Capital Major (>£10k)	20	20	Works at all Capital Major sites have been completed
Capital Minor (<£10k)	13	12	Hardwick to be finalised. This work is very simple but the church stopped responding to the project despite repeated attempts to communicate with them
Capital Heritage (protective measures)	8	7	Walpole St Peter has works planned but waiting architect sign-off
BMP only	25	25	Completed
SoS	102	96	Completed: revised figure of 96 agreed with HF.
Advice only	38	38	Completed

A major objective of this workstream was to trial the new Bats in Churches Class Licence (BiCCL). When any activity is undertaken that might cause disturbance to an active bat roost it is a legal requirement to obtain a licence before any work takes place. Some of the rules around licensing made carrying out work particularly difficult for churches with bats, especially in listed buildings where the rules conflicted with statutory requirements relating to preserving historic buildings. The new licence was designed to help with this issue.

TESTING THE BATS IN CHURCHES CLASS LICENCE

The licence was developed specifically to acknowledge the issues churches with bats face and to allow more flexible approaches that could include the use of novel techniques to exclude bats from the interior of church buildings. Unlike existing class licences, the BiCCL requires ecological consultants to complete a face-to-face training session, including a site visit to better understand how churches function, before they could hold the licence. There was no specific target set for BiCCL test sites, but it was understood that the BiCCL would be used at major capital works sites and the use of the BiCCL was written into supplier contracts for the 20 core capital mitigation locations. Twenty-six BiCCLs were issued, and a variety of works were carried out, as detailed below.



Works taking place at Wetherden, Suffolk to incorporate bat boxes in the rafters and block the bat access points around them.

The outcome of the class licence pilot is a commitment by Natural England Wildlife Licensing Services (NEWLS) to continue to offer the licence, as it has been shown to have some benefits where it is suitably applied. Consultants fed back that the pre-works survey requirements were excessive in some cases, making it less practical, so the wording has been altered to allow for a variation in survey effort on a case-by-case basis. This will mean churches and ecologists will continue to benefit from these special licensing conditions. The taught element of the licence accreditation process is particularly important. The project offered a final session before it closed in November 2023 and left a recommendation that the training be offered again in approximately two years' time to allow new ecologists the opportunity to work towards holding the licence. More detail is given on this under Workstream Five.

HOW DID IT WORK?

Ecologists

At our major sites the project engaged a qualified ecologist who was able to hold a BiCCL. These ecologists had done the BiCCL training and were the first people to hold and trial this new licence. These ecologists were engaged through open tender via NE's procurement system. The ecologist's contract and payment were managed by the project's Finance Officer (FO) and the Project Manager. On site and day-to-day, the ecologists worked with our Engagement Officers (EOs) and liaised with the Parochial Church Council (PCC), construction contractors and church architects.

Construction Contractors

Contractors to carry out construction work were engaged locally by the PCC, typically supported by the church architect. The resulting tenders were shared with the project and a supplier agreed based on assessment of the cost and quality. The church held the contract and invoiced the project for the costs once the work had been completed and a completion certificate received from the architect. This generally worked well although in one case, during the pandemic, one church struggled with capacity to administer the construction contract and the project's FO stepped in to get payments processed in good time.



Roofing, heritage building repair and electrical contractors on site during works at Thornham, Norfolk

Architects

Most churches already had an associated architect, so a tender process was not used for this role. Using the church's own architect meant they already had an extensive knowledge of the building and an existing relationship with the people who care for the church and, in some cases, already knew about the issues with the bats. At sites with complex projects, they sometimes acted as local project managers and were onsite to supervise construction and work alongside the ecologist to ensure the best outcomes for the building and its

aesthetics. A key role of the architect was also to formulate applications for faculty permission for the works to go ahead.

Architects, ecologists, PCC members and the BiC team on site



Parochial Church Council

The PCC had a vital role in making mitigation efforts work at the church. It was their role to examine and approve the initial project proposals, along with the architect, and to be at the church when needed for access, as not all churches are open all the time, especially during the pandemic. They dealt with sourcing contractors and worked with the whole team to monitor the works taking place, often contacting the project with updates on the number of bats they were seeing and the changing level of droppings in the church. Having a good relationship with the PCC was important to project success, and it was also important to have someone on the PCC who was committed to the work and, preferably, comfortable with holding bat positive events. In cases where there was a lot of hostility towards bats it was harder to make progress, although this was at only a small number of our sites.

WHAT DID WE DO?

The project tried several mitigation approaches, using the flexibility of the new licence.

Types of capital work

The most common approaches were the installation of eaves and rafter boxes. These are boxes constructed in a way that was suitable for the species at the church, and sometimes included a heating element to make the space more attractive to maternity colonies when the location of the roost within the church was an issue. The boxes either sat between rafters in the roof of the church, often behind an existing bat access point, or either side of the eaves of the building, again, typically around an existing access point. The use of the existing access points was important as it did not require bats to 'find' the mitigation, which at some sites took a couple of seasons.

Another approach was the construction of voids, loft-like areas that the bats can roost in, typically created by lowering the ceiling. These approaches were expensive and required consideration to be given to the heritage value of the ceiling in the church. For instance, they would not be suitable for a church with an intricately carved ceiling that was a tourist attraction. At one church (Dunston, Norfolk), the construction of the building meant that voids suitable for bat use already existed along the edge of the nave, so in this case careful blocking up simply restricted the bats to a space they were already using and prevented them flying in the church.



Bat box installation in the nave eaves at Gayton Thorpe, Norfolk

Enhancement of existing spaces was also effective when the church tower was made suitable for bats. Tower windows were blocked to keep them dark and in some cases boxes were added to the tower interior to make them more attractive to bats. This approach was a good way to keep bats at the church but out of the areas used by the public and for services.

At some sites project ecologists tried keeping the bats from particular areas of the church so that the church had a clean space to hold services and have meetings. For example, at Tattershall, Lincolnshire, one of the approaches included a screen across the whole of the chancel arch to keep the chancel free of bats.

At some sites bat boxes were mounted on a pole in the churchyard or surrounding area. This approach relied on the bats finding the boxes and then using them, but appears to have worked well in some cases. Elsewhere, catch trays and 'sails' were installed to reduce the cleaning burden. These approaches were most effective when the mess was largely confined to concentrated areas, but less suitable for churches where bat droppings were more scattered.

At 'Capital Heritage' sites we tried approaches such as custom pew covers, breathable mats to protect brasses, catch shelves to protect specific items such as prayer boards, and professional protection of heritage items, for example the Keyston cadaver.

Below are a range of case studies that summarise some of these approaches. Details of all our capital works are available at www.batsinchurches.com

BATS IN CHURCHES



All Saints BRAUNSTON-IN- RUTLAND



The Issue

In 2013 a maternity colony of up to 400 Soprano Pipistrelles moved into the church. The bats settled in the south aisle roof void above the church's surviving medieval wall paintings.



What We Did

The gaps between the roost and the interior were blocked and bats excluded from the church. A pole-mounted triple bat box was installed next to the churchyard.

The church holds beer and bat nights with the local pub and bat group, has hosted a cleaning workshop and been a venue for training church NBMP surveyors. The story of All Saints and its bats is told in the children's picture book *The Little Church Bat*.

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BATS IN CHURCHES



St John the Baptist COLD OVERTON Leicestershire



The Issue

Maternity colonies of Soprano Pipistrelles and Natterer's Bats roost among the roof timbers of the nave. The droppings and urine were damaging the rare C13th wall paintings, adding to the cleaning burden, and putting some people off coming to church.



What We Did

Bespoke bat compartments were built within the nave roof. Although bats are using these compartments they are still entering the church and causing a mess.

The local bat group monitors the bats for the NBMP and has a stall at the annual church fete.

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Bat Conservation Trust



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BATS IN CHURCHES



St Edmund EGLETON Rutland



The Issue

A very large (>1,000) maternity colony of Soprano Pipistrelles roosts in the nave roof void and bats enter the church through a hole in the ceiling, leaving a lot of mess and also causing an unpleasant smell.



What We Did

Bat surveys in 2021 identified the bat access points. Repairs to the ceiling were carried out in autumn 2022. Monitoring in summer 2023 revealed no reduction in bat numbers. Some extra repair work will be carried out in autumn 2023 as bats are still getting into the church.

The local bat group monitors the church for NBMP. The church held several bat watching events in 2021 and a community bat count in July 2023.

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BATS IN CHURCHES



St Lawrence RADSTONE Northamptonshire



The Issue

St Lawrence is home to a large maternity colony of around 200 Natterer's Bats. The mess became so extensive that the church could not keep up with the cleaning and, in 2016, had to close.



What We Did

We installed a new ceiling in the chancel. The tower was also enhanced to create further roosting areas. The church re-opened in 2021.

In September 2022 the church held its first ever bat walk led by the local bat group, and was filmed for BBC2 Songs Of Praise.

The local primary school has visited several times to learn about bats and churches, and what the project is doing to help.



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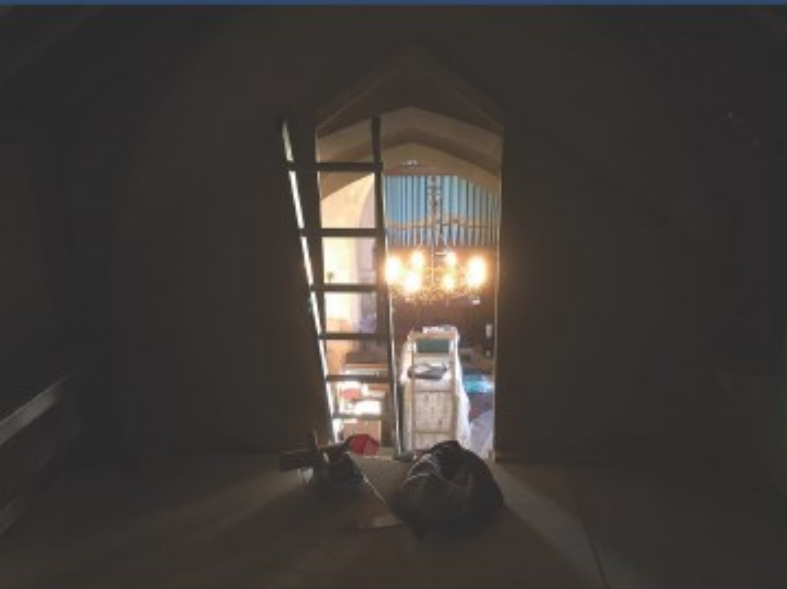


NATURAL
ENGLAND

BATS IN CHURCHES



St Margaret SAXLINGHAM Norfolk



The Issue

The largest colony of Natterer's Bats in Norfolk, causing a huge amount of mess in a relatively small church. The church was struggling to open for events and services, and this was the only church in Norfolk where our ecologist couldn't spend the night due to the amount of bat urine!



What We Did

In 2020 the project, with ecologist Phil Parker, Saxlingham PCC and Spire architects built a new bat loft above the existing vestry in the north transept.

This will have a decorative screen to match the current vestry screen.

We've also added extra roosts in the tower and used a drone to identify access points in the eaves, which can be blocked off once the new roost is being used.

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BATS IN CHURCHES



St Moran LAMORRAN Cornwall



The Issue

The church of St Moran was unofficially closed due to the impact of a large maternity colony of Brown Long-Eared bats, and several other bat species. Considerable damage had been caused to the fixtures and fittings, and the very small community could no longer keep the church clean.



What We Did

In 2018 the project engaged Burton Reid Ecology to work with the PCC and Robert Shaw Architects to produce a Bat Management Plan, which proposed sealing the nave roof and constructing two linked bat voids. The Project funded these major capital works, as well as restoration of all furniture and printing of a new guidebook, and the church re-opened for worship in January 2023.

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BATS IN CHURCHES

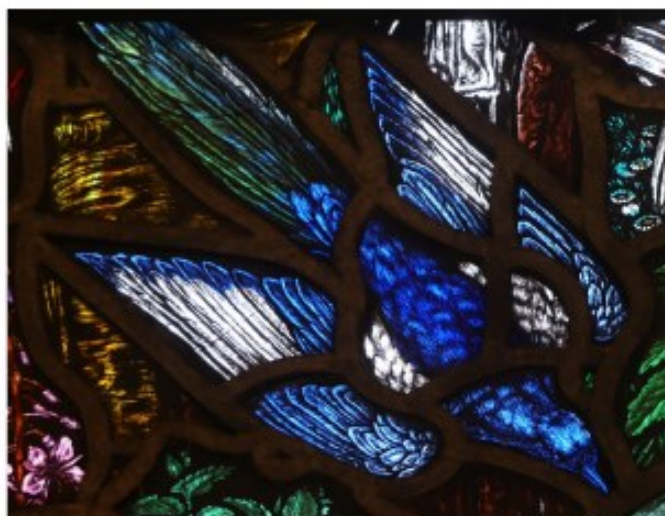


St George's WEST GRINSTEAD Sussex



The Issue

The Grade 1 listed church of St George's with its unique spire, shelters a medium sized maternity colony of Natterer's bats. These caused mess and necessitated the covering of important funerary monuments, and extra cleaning.



What We Did

Working with the church architect, the Church Buildings Council, and Bernwood Ecology, the project funded bat surveys, a Bat Management Plan, and the creation of a bat void by reinstating the cedar ceiling in the north aisle. This gave the bats a large, separated space for roosting and protected the interior from droppings and urine. The Project also funded environmental monitoring by Tobit Curteis Associates, and supplies for engagement events and specialist cleaning.

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BATS IN CHURCHES



St Pega PEAKIRK Cambridgeshire

The Issue

The Grade 1 church of St Pega's has a large maternity roost of Soprano Pipistrelles over the East window in the Chancel. In 2019, the lead fixings from part of the roof were stolen, enabling more bats to set up home in the church.



What We Did

The project engaged an ecologist, Matt Cook, who was able to use Antony Mould's data to produce a Management Plan which advised a bat box installation be incorporated into the church's re-roofing. The new box is accessed by the bats' original entrance, but prevents them accessing the rest of the church, protecting its contents from urine and droppings. The Project also funded a new guidebook, a specialist cleaning kit, and engagement events.

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BATS IN CHURCHES



St Wenappa GWENNAP Cornwall

The Issue

The church shelters a maternity roost of Brown Long-Eared bats, and Pipistrelle bats have also been seen in the church. The main problem was the extra cleaning required in the summer to manage the bat droppings and urine, as the church community is small.



What We Did

In 2019 the Project commissioned Burton Reid Ecology to survey the church and put together a Bat Management Plan. This Plan recommended confining the bats to the spacious roof void by sealing their access to the church interior. The Project bought two bat detectors so the church can monitor their bat activity, and in 2023 hosted a cleaning workshop at the church.



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BATS IN CHURCHES



St Mary Magdalene BRAMPTON Huntingdonshire



The Issue

A maternity colony of Common Pipistrelle were using the entire church, but primarily roosting under the chancel arch. This caused a build up of droppings in a very important part of the church including smell, rot and maggots caused by urine soaking in to the carpet



What We Did

Working alongside Bernwood Ecology, Archangel Architects, Tensile Fabric Ltd and the church PCC and community the project designed two fabric and aluminium framed sails to be installed directly under the chancel roof. These will catch droppings and urine from the roost to protect the church

The sails can be lowered to ground level with a pulley system so can be cleaned or replaced as they become dirty.

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STATEMENTS OF SIGNIFICANCE

The final element of this workstream was the provision of a SoS for each church in the project. A SoS is a document that explains the heritage value of a building in a clear and consistent way, including architectural and decorative aspects as well as specific objects of heritage interest. It can be an extremely useful document for a church as it is used to give context to works carried out and can support applications for faculty permission. The project's Heritage Advisor (HA) offered a SoS to every church and they were a requirement at sites where we carried out major works.

Most churches in the project had a SoS produced by BiC – 96 in total. The shortfall from the target of 102 was due to various reasons. Some churches already had a recent statement, one church had closed, and one refused to have one, denying permission for our HA to access the church. This was unusual and it is not clear why they refused. An attempt was made to contact other members of the PCC, but no response was received. Otherwise, all other churches were pleased to have the document. The contents of each SoS were also added to the Church Heritage Record, with EOs based at Cathedral and Church Buildings Division working to adapt the information in the SoSs to suit the format of the online database.





Workstream Two Community Engagement

WORKSTREAM TWO: COMMUNITY ENGAGEMENT

Approved Purpose: Church of England led: build community support bringing together church congregations, bat enthusiasts, local people and wider audiences running at least one locally appropriate activity at each church, from a 'menu' of engagement options.

The community engagement stream was particularly active and successful, despite the restrictions placed on the delivery team during the pandemic years of 2020 and 2021. This work was led by three Church of England (CofE) Engagement Officers (EOs) Diana Spencer, Rose Riddell and Honor Gay, each covering a different region, supported by the rest of the team as needed. All this work was backed up by CofE Communications Officer (CO) Cathy Wallace who ensured events were promoted and received widespread coverage on social media and in the traditional press.

In terms of meeting targets, the project exceeded the total number of events required, but did this by holding multiple events at some churches rather than one at each church. The reason for this was that, across the 108 churches that entered the project in 2019, there were some that closed, some that declined to hold an event due to lack of Parochial Church Council (PCC) capacity to support it or, in one case, the site was so rural and remote as to make an event unviable.

EVENTS

Much of BiCs engagement work took place through arranging and attending live events, both virtual and face-to-face. Details of the BiC LIVE! series are given in the Media and Communications section of this report, but other events, such as the live streamed bat walks (available to watch on BiC's YouTube channel) also took place during lockdown to compensate for the loss of opportunity to carry out face-to-face events. Other events, such as knowledge-sharing forums for professionals and the final project conference 'Flying to the Future' are covered in Workstream Five. This section is focused on events and other engagement activities that took place at or near churches; for instance, in some cases the



project delivered events at schools nearby that were associated with the local project church.

Church Events

The project attended a wide range of church events across the country including fetes, festivals, patronal saints' days, wildlife themed days, fundraising events and rededication ceremonies. The team's involvement often included running an information stall or stand with displays, promotions of *The Little Church Bat*, and often activities for children such as making bat masks or exploring the church, as well as giving talks about the work of the project.

The project attended general church events such as Walpole Christmas Fete 2022, Deopham Flower Festival 2023, Cranworth Church Fete 2022 and Cold Overton Village Fete 2021, setting up displays and engaging with local people about the project's work, as well as more specialist church events, highlighted below.

St Pega, Peakirk, Cambridgeshire – Guidebook and Celebration



Left: Stained glass window showing St Pega. Right: Members of the church community holding the guidebook

The project was actively involved in the launch of St Pega's guidebook at the Patronal Festival, a celebration of the life of St Pega on 15 January 2023. Peakirk is the only church in the country dedicated to St Pega, who lived at the site in the 7th century. Bats in Churches funded an attractive and comprehensive guidebook to this important church, including a description of the bats and mitigation. The BiC work at St Pega's was described at this event and the project was warmly thanked. There was a talk by Brian Lever (Church Warden) on the bats at St Pega's, based on the section in the guidebook written by the project, and BiC

provided leaflets, posters and refreshments. Dr. Samantha Graper sang an anthem in Latin dedicated to St. Pega, composed by the monks of Crowland Abbey and Dr. Avril Lumley-Prior, main author of the guidebook, gave a short talk on St. Pega.

The Arundel Choir Book

Following specialist ecologist recommendations laid out in a bat management plan, the project commissioned an architect to advise on incorporating bat boxes into the works already planned for Arundel church's roof. The proposed capital works were completed successfully, and the historically significant furnishings and décor of Arundel church are now protected against inadvertent damage by their bat population. Arundel church is famous for being the home of the Arundel Choir Book, one of the great treasures of English manuscripts, now held by Lambeth Palace Library.

It is one of only two complete choir books dating from the 16th century, the other being the Caius Choir Book held in Cambridge. It is an outstandingly important source for understanding early English music. Engagement Officer Honor Gay took members of Arundel and South Stoke PCCs to view the choir book at Lambeth Palace Library Conservation Studio, to celebrate the completion of the bat mitigation works at Arundel church. The huge choir book and the beautiful notation and illuminations are remarkable (see images below) and were greatly enjoyed by participants. Archivist Rachel Freeman and conservator Lara Artemis were on hand to give more information and increase the group's appreciation of the book. Members of the PCCs, who have a link to the choir book and know it from a digital copy, were quite moved by the experience.



Rededication Services

The project team attended several post-mitigation rededication services involving the blessing of a building or object and confirming its dedication to God. These rededication services were partly made possible by the work of the BiC project, before which the churches had been difficult to use safely due to the impact of their bats.

Wetherden's Organ Centenary on 30 May 2022 was a community event that attracted around 100 attendees who packed out this small but beautiful Suffolk church. The evening was led by Diarmuid MacCulloch, renowned historian and organist, who has a close connection with the church, and included a blessing/rededication of the organ. After a lecture on the heritage of the building, followed by an organ concert, project staff engaged with local people, discussed the project's work at the church and encouraged them to continue to engage with the church, their bats, and their historical and natural heritage. The event was partly funded by the project, which also helped to promote it, and the church was able to raise funds for future maintenance through ticket sales.

Left: Promotional flyer for the Wetherden event, created by the project team. Right: Bishop of Huntingdon at the Keyston rededication service



In May 2022 members of the team joined the rededication of the Keyston cadaver (see case study in Workstream One). There were talks from Dr Emma Wells, a specialist in funerary monuments, and Rachel Arnold BiC's Heritage Advisor, before the blessing ceremony by Dagmar Winter, Bishop of Huntingdon.

In late 2021 St Lawrence, Radstone, Northamptonshire held a service to rededicate the whole church, which had been informally closed for some time due to the bat mess and the mitigation works undertaken by the project. On a cold December day local people, members of the project team and the project ecologist gathered to hear a sermon, witness the rededication and enjoy the church looking clean, beautiful and ready for Christmas services.

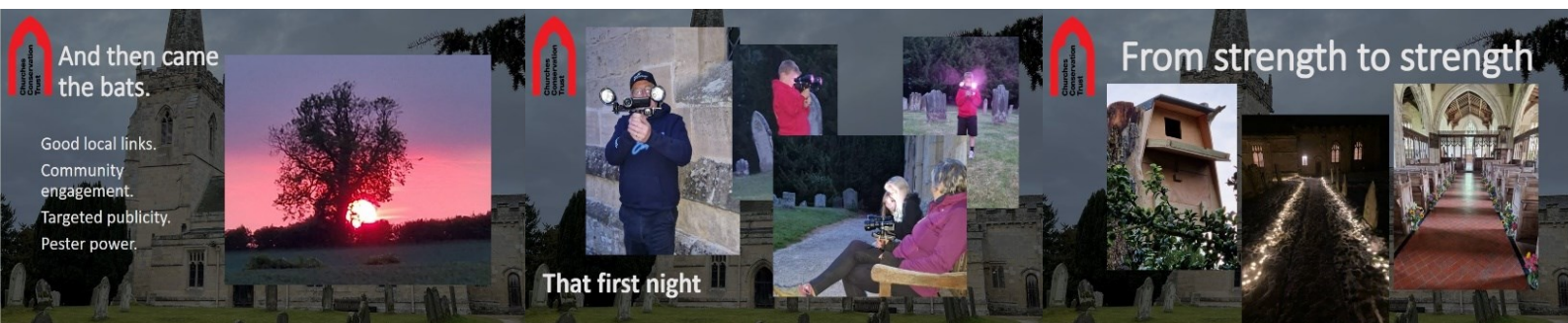


L-R: People from the community and project team gather ahead of the service; nativity and Christmas display; board explaining BiC's work at Radstone

Bat Walks and Talks

Arranging bat walks, talks and other events for churches and their communities was a significant part of the project's engagement offer, encouraging people to see the beauty and fascination of bats, and to appreciate the heritage value of the church and churchyard. In several cases the bat nights were a catalyst for local people getting much more involved with the church. A great example of this is at Wintringham church in North Yorkshire.

Brought Together By Bats: Wintringham's Story



A selection of slides from a CCT talk about how successful BiC's community engagement has been at Wintringham. Credit for slides: Mark Sproat, CCT

St Peter's, Wintringham is a CCT church that sits on the Yorkshire Wolds Way and the Centenary Way in a small rural village of about 140 homes. When it joined the project in 2019 it had just two volunteers taking care of it. In June 2022 the project helped organise two roost counts, in conjunction with the local bat group. This proved very popular and led to the establishment of a Friends group numbering around 30 people.

Now the church has regular heritage, wildlife and community events. It also provides a permanent venue for BiC's multimedia artwork *On A Wing And A Prayer (OAWAAP)*, which offers an extra attraction for walkers and other visitors.

A Date With Mr Grumpy, Great Horkesley, Essex

Another example of a successful bat night was at All Saints, Great Horkesley where the team were delighted to meet a local celebrity guest Mr Grumpy the Serotine bat – pictured in the hands of project ecologist Andrew Palmer who partnered with Essex Bat Group to lead a bat walk and talk.



'It was an excellent evening from our perspective. A mix of "church folk" and bat enthusiasts turned up. For some it was their first visit to the church and Geoffrey Baker was able to speak of our plans for improvements to the building. Andrew did well to enlist help from Essex Bat Group with live captive bats and preserved specimens. His illustrated talk was excellent and pitched at just the right level. At least one church member said afterwards that her attitude towards bats has mellowed a little now she knows more about them.'

'As we sold tickets and hot chocolate, almost £150 was raised for church funds, which is a bonus. Some good contacts were established all round.'

John Mehen, our contact at the church,:

'Everything went smoothly, and folks appeared to enjoy themselves. The talk was in two parts (the All Saints' project and a more general talk on bats), and Geoffrey (churchwarden) spoke on the church plans between the talks.'

Andrew Palmer

Songs of Praise at Radstone, Northamptonshire

In summer 2022 the BiC team were contacted by BBC2 Songs of Praise, who had become aware of the project thanks to the extensive coverage generated for the National Bats in Churches Study (NBiCS). The production team was keen to film a segment for an upcoming episode on the theme of 'All Creatures Great and Small'.



Engagement Officer Rose suggested the church of St Lawrence, Radstone, Northamptonshire as the perfect location for filming, and in September Rose and CO Cathy travelled to Radstone to greet the production team and assist with their filming. Rose was interviewed for the piece, alongside the churchwarden Penny Bonner (image below), and Zoe from Bernwood Ecology who were carrying out the bat surveying and mitigation works under a BiC contract.

The project also organised a bat walk, led by Nene Valley Bats, for the film crew to attend along with members of the church and local community.

The resulting episode was broadcast on Sunday 20 November 2022 and beautifully captured the ancient church of St Lawrence, with wonderful footage of the bats in the tower, now separated from the congregation thanks to mitigation work funded by BiC. The episode generated lots of interest across social media and was a positive and uplifting piece of publicity for the project, seen by Songs of Praise's 1M regular viewers.

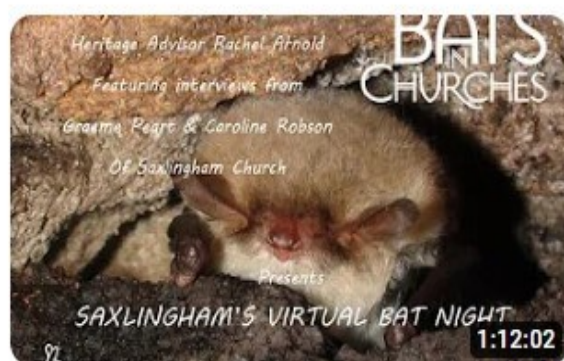
Beer and Bats at Braunston-in-Rutland



A successful 'Beer & Bats' night was held at Braunston on Sunday 3 September 2023 with 60 attendees and three dogs, one of whom attended in a bat outfit! This event was held in the first year of the project in August 2019 and was the first sizable event for the project in this region. *On A Wing And A Prayer* was at Braunston for this event and was viewed by an additional c. 100 people before heading to London for 'Flying to the Future'. The local pub, The Blue Ball, provided a delicious buffet for those attending, funded by the project. There were talks by the BiC EO and members of Leicestershire & Rutland Bat Group before people headed outside to see the bats emerge.

Adapting to Change

During the first 2020 lockdown, the team adapted to conditions by holding online bat nights



Events Saxlingham's Virtual Bat Night

1.5K views • 3 years ago



Events Thorham's Virtual Bat Night

245 views • 3 years ago

transmitted live from project churches. The project held three of these in total, all in Norfolk and in collaboration with the Norfolk Bats in Churches Project.

The Saxlingham event attracted 144 people on the night watching live, and the recorded version on the project's YouTube channel has been watched 1.5K times. Heydon and Thornham had similar live numbers and have been watched well over 200 times each.

Project Ecologists and Bat Groups

There were over 50 bat walks and talks held during the non-lockdown seasons of project delivery. These nights often included a talk about bats from the local bat group or an ecologist associated with the project. Project engagement with local bat groups was useful for building a relationship between the church and the group – this can have long term benefits as a bat group monitoring a church means there will be good knowledge of the bats ahead of any maintenance or repair works.



Brown Long-eared bat captured by project ecologist Chris Damant at Radstone. These high quality images help to engage people with bats and appreciate their beauty

OTHER ENGAGEMENT WORK

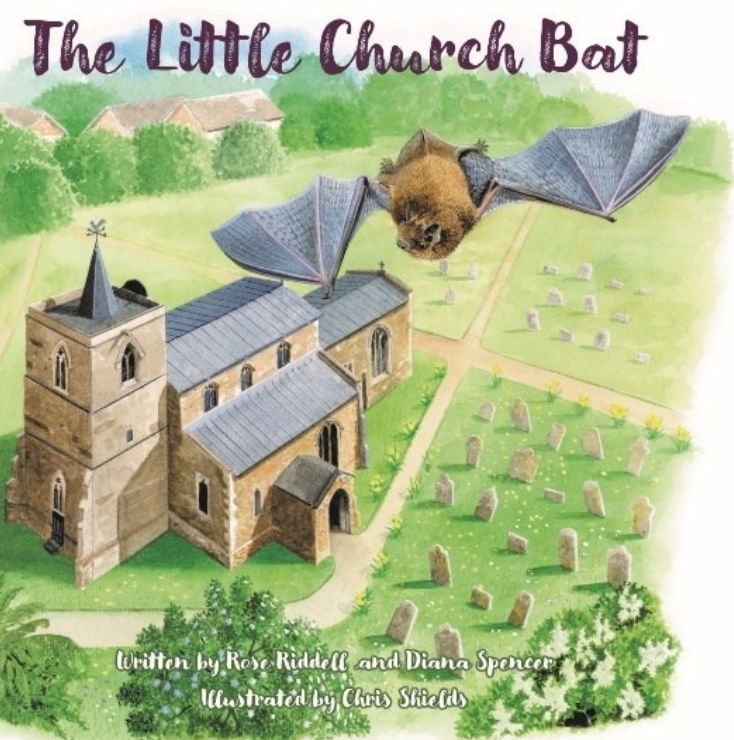
The project carried out a range of other engagement activities, many of which were outside of the original project plan, but were opportunistically incorporated with the agreement of the project's boards or, where appropriate, with approval from HF. Some of the additions were minor, such as the BiC themed seasonal cards the project produced, but others were more significant, like the publication of a picture book and the development of the schools' programme, the BiC Challenge Badge and the commissioning of the multimedia artwork OAWAAP.

Seasonal Greeting Cards

Engagement Officer Diana Spencer designed a BiC Christmas card in 2020 to send to project stakeholders. It was popular and there was interest in more, so the project approved a larger print run, and the cards were sold to help churches raise funds, as well as promoting the project. Later, an Easter card was produced and, when the project's first CO went on maternity leave, a unique BiC themed card was produced! Below are some samples from the range of cards produced, all featuring churches and bats.



THE LITTLE CHURCH BAT



The idea for a children's book was inspired by the real-life case of one of the pilot churches All Saints in Braunston-in-Rutland, a Grade II* listed 12th century church.

The aim of the book was to communicate issues around bats in churches to children (and indirectly their parents). The challenge was to find a way of talking about the problems caused by bat droppings and urine inside churches, and what to do about it, in a simple and engaging way while highlighting why churches are so important for bats, and why both bats and churches need our protection and support.

Written by two of the BiC EOs, Rose Riddell and Diana Spencer, and illustrated by award-winning wildlife artist Chris Shields, the book tells the story of Mo the Soprano Pipistrelle who lives with her female bat friends inside the chimney of an old tumbledown cottage on the edge of a village. When the cottage is knocked down to make way for new houses Mo and her friends take shelter in the village church where their droppings and urine cause cleaning problems for Bob the churchwarden, and complaints from some of the congregation. Bob calls an ecologist and church architect for help and together they produce a solution that works for the bats, the church and the village community.



Left: Looking east towards the chancel in All Saints, Braunston-in-Rutland. Right: Artist's impression for The Little Church Bat

The team chose an illustrator known for his ability to create biologically accurate and highly appealing and colourful images. Each picture is packed with detail to grab the reader's attention. Working closely with the illustrator was key to ensuring the text and the illustrations complement each other and present a coherent narrative. For example, when Mo woke from hibernation she returned to the church at dawn after a night foraging (front cover image) so, as the sun rises in the east, the shadows are cast on the west side of the church tower and gravestones.

The illustrator produced line sketches before the full colour version. This enabled the project to tweak and modify the images easily at an early stage of the process.

It was also important that the church was depicted as realistically as possible. The illustrator was sent numerous photos of the inside and outside of All Saints, and he also visited the church to make in situ sketches.

The book takes the reader through a year in the life of Mo, from when she loses her home in the spring to giving birth to a single pup in the summer. Her baby, Milo, must learn to fly, echolocate and catch insects before heading off on his own in the autumn. In the winter Mo hibernates until waking in the spring as it gets warmer and insects start to appear. Although

aiming to be as realistic as possible the team left the mating element of the bats' lifecycle, in the autumn, out of the book!

It was intended that the book be educational as well as entertaining, so the team used a design device of including factual text with the illustrations in a shaded 'box'. For example the winter scene is the obvious place to include some information about hibernation.



Illustration from line drawing to colour to finished book page

The last pages of the book provide further details about the BiC project, why bats like to roost in churches, the problems this can sometimes cause, and how people can get involved with bats and their local church.

The book was not one of the project's deliverables, so its development took place around the EOs other tasks and was able to happen initially due to less time spent travelling during the pandemic. It took time to germinate from initial thoughts in the 2020 COVID-19 lockdown to receiving the first printed hard copies in early March 2022.

Writing the text between them, Rose liaised with the illustrator and Diana did the page design.



Initially 500 copies were printed by Swallowtail Press in 2022, with a reprint in early 2023 to reflect the project coming to an end in October 2023. A print-on-demand (POD) version was created via the IngramSpark platform, available online from Waterstones in the UK and Barnes & Noble in the US, and other online retailers. It

usually retails at £5.99. Nearly 400 POD copies have been sold since the book went to press.

The book was launched at the Braunston May Fayre in 2022. The book is also stocked at Rutland Water Visitor Centre, Bath Abbey, and in Canterbury, Coventry and Peterborough Cathedral bookshops. The project gave copies to churches and bat groups to sell at fetes and other events to raise funds. It has also given a copy to each school that has taken part in the schools' programme. After the project ends CCT will take over ownership and benefit from royalties.

INTRODUCTION TO BATS AND CHURCHES FOR PRIMARY SCHOOLS



L-R: The churchwarden at All Saints, Hoby, Leicestershire showing the war memorial to children from Frisby CofE Primary School; children from Bishop Henderson CofE Primary School looking at church features in Holcombe Old Church, Somerset; children from Ubley CofE Primary School looking for bat evidence in St Michael, Compton Martin, Somerset

The schools' programme was created by EO Rose who has experience of developing and delivering outdoor environmental education programmes to primary schoolchildren. Children can be a key audience for engagement as they go home and tell their parents about what they have been learning; if children understand then adults will too. The programme was also a way of building links between the school and its local church, and of getting the key messages of the BiC project across in a simple way.

The EO also engaged with PCCs and bat groups, inviting members to take part either as observers or as active participants. In this way we have had several bat group members helping to deliver the programme and PCCs talking directly to the children about church heritage and history, and also about the challenges bats can pose when they roost and fly about inside churches.

'The programme was excellent and very well delivered. The content was explained clearly in advance to the teaching staff, meaning the day of delivery was well organized and ran smoothly. The children were engaged throughout the activities and found the subject very interesting – the content sat well within the Year 5 living things science unit and has added value to the curriculum we provide. Explaining and showing the children how this issue is a local one and how they can help really motivated them to think about how we can help make sure bats are looked after without damaging our local churches.'

Teacher feedback The Rissington School, September 2019

The sessions also aimed to demonstrate to schools that churches can be used as a free and available venue for learning outside the classroom, as many village schools and churches are often within walking distance and so the expense of hiring a coach or minibus is avoided.

'They were able to understand, and see the viewpoint of, churchgoers who aren't so positive, due to bat mess.'

Teacher feedback Wellington School, February 2020

'The children loved the sessions – being able to go to the church and learn in context was really valuable and all the children were highly engaged by the learning. ' Teacher feedback The Rissington School, October 2021

'They really enjoyed being inside the church and exploring for signs of bats – they particularly enjoyed looking for the poo! ' Teacher feedback Radstone Primary School, June 2022

' They loved the hunt for evidence in the church, and their absolute conviction that they saw bats; it gave them a sense of it being real, rather than simply a learning activity.' Teacher feedback Rushbury CofE Primary School, May

The programme was developed over the summer of 2019 and was piloted in two sessions at The Rissington School in Gloucestershire. The school's positive feedback meant that we were confident to roll the programme out to other schools close to project churches.

L-R: Rushbury CofE Primary School children in St Andrew, Hope Bowdler, Shropshire are convinced they could see a bat in the rafters; Radstone Primary School children comparing their skeletons with a picture of a fossilised bat. They can identify many similarities and a few differences – the bat has a tail and very long fingers! The children learn that bats fly with their hands



The programme aims to help students understand that bats and churches are wonderful examples of natural and cultural heritage but risk coming into conflict. Whilst many church communities co-exist happily with bats, they sometimes cause unacceptable impacts (droppings, urine, smell, dead bats) upon nationally recognised heritage, vital community space and the people who look after church buildings.

Schools are much more likely to take part in out-of-school sessions that enhance and reinforce classroom learning so the programme incorporated elements of the national curriculum for Key Stage 2:

- *Living things and their habitats*
- *Animals, including humans*
- *Sound*
- *Evolution and inheritance*
- *Local, religious and social history*
- *Geographical skills*

Although primarily aimed at Key Stage 2 children (ages 7–11) the programme could also be delivered to younger year groups with some simplifications to allow for age.



L-R: Children from Ubley CofE Primary School at St Michael, Compton Martin, Somerset are surprised at how small adult bats in the UK are. Here they are looking at a Pipistrelle (smaller) and a Natterer's bat (larger); by contrast children from Saighton Primary School at St Mary, Bruera, Cheshire are amazed at the size of the biggest bat in the world, the giant golden-crowned flying fox; a volunteer from North Bucks. Bat Group and the BiC EO introducing Key Stage 1 (ages 5–7) children at Newton Blossomville CofE School to the BiC programme

Using a mixture of observation, group discussion, critical thinking, games, activities and role play the programme's key learning outcomes were for the children to:

- *Understand that bats are mammals and there are different species of bats in the UK and worldwide*
- *Consider the special adaptations of bats and their lifecycle throughout the year*
- *Identify similarities and differences between humans and bats*
- *Appreciate that most bat species are threatened by human activity*
- *Recognise that bats are misunderstood animals that play important and varied roles in ecosystems*
- *Understand the importance of church heritage and the role of churches in local communities*
- *Understand that some churches are also important bat roost sites*
- *Understand that churches and bats can sometimes come into conflict*
- *Begin to think about how this conflict can be fairly managed and how bats and churches can live in harmony*
- *Learn about the Bats in Churches project and what is happening at their local church*

The session always included a game of ‘bat and moth’ where one child is the bat and wears a blindfold and a couple of other children are moths. The bat shouts out ‘bat’ and the moths must reply ‘moth’. The bat uses the sound to try and tag the moths. The other children stand in a circle to represent trees and keep the bat and moths safe inside the circle. The game explains how echolocation works in a fun and exciting way.



L-R: Children from Newtown Primary School playing bat and moth at King Charles the Martyr, Newtown, Shropshire; children from Netherseal Primary School learning about the bat year with a Derbyshire Bat Group volunteer in St Peter, Netherseal, Derbyshire; some children like to wear a bat hat when playing bat and moth to get in character!; children from Saighton Primary School playing bat and moth in the churchyard of St Mary, Bruera, Cheshire

Challenges and Lessons Learned

COVID-19 lockdowns, school closures and restrictions on travel meant that we could not deliver the programme at all for parts of 2020 and 2021.

Making initial contact with the right person (usually the Y5/6 teacher[s]) via the school office sometimes proved difficult. In a few cases the school office was not fully staffed, and emails and voicemail messages were not responded to. In others the teacher was not available or had left the school or changed roles, meaning that contact had to start from scratch.

Catching the school at the right moment in its curriculum planning was also important as schools need to plan ahead, especially for out-of-school trips. In two cases the school was unable to transport the children to the nearest project church (Loppington and Granborough) as transport costs made the trip unaffordable and so instead opted to visit their local churches (which also had bats).

In a couple of cases, where there was no direct contact with the lead teacher, the school office did not forward the Teacher's Notes or introductory email so the lead teacher did not know what to expect. Even when they did receive this information, they were often not sure what to expect, but feedback indicated they were pleased with the sessions and their outcomes.

'I wasn't sure what to expect but the session exceeded my expectations. A great mixture of interesting and informative activities which made 2 hours seem to fly by.'

Teacher feedback St Laurence CofE Primary School, Shropshire, May 2023

'I must admit I was slightly skeptical about how the session would last 2 hours, but the activities and timings were thought out brilliantly. They gave the children enough time to listen to information and then to go and actively participate in a variety of well-planned activities.'

Teacher feedback Newtown Primary School, Shropshire, June 2023

Number of Schools Engaged	Number of Sessions Delivered	Number of Children Engaged	Number of Adults Engaged
19	74	800	88

CHALLENGE BADGE

The BiC Challenge Badge was created to help children and young people learn about the wonderful world of bats in churches in a fun, entertaining and engaging way. Through a range of activities, young people discover the hidden world of bats and a world of history on their doorstep at their local church.

Launched in July 2022, the Challenge Badge is an offshoot of the BiC schools' programme and was developed by Diana and Rose, BiC EOs. It was not one of the project's workstreams, so its

development took place around the EOs other tasks.



The idea was to extend and rework some of the school activities for uniformed groups, home schoolers, Sunday Schools, youth groups, schools and families, using the scout and guide movement badge initiative as inspiration. Although not an official scout/guide badge the team found the guidance on activity badge development in *Challenge Pack Guidelines: Tips for writing and producing an activity pack for local guiding* from www.girlguiding.org.uk very useful. The project also received some helpful advice from a girl guide volunteer leader during development of the badge.

The project designed the challenges to be age-appropriate, balanced and varied, easy for leaders/parents to use, not requiring complicated equipment, flexible and suitable for different abilities.



L-R: Tregadillett Brownies exploring their local church; Tregadillett Brownies with bat masks; hunky punk (grotesque) made by a Tregadillett Brownies; stained glass designs made by 1st Raunds Methodist Brownies and 1st Woodford Rainbows at Keyston church; flower arranging by 1st Raunds Methodist Brownies and 1st Woodford Rainbows at Keyston church

The challenges are divided into four sections:

Discover

- *Worksheets*
- *BiC website*
- *Role play*
- *Quiz*

Explore

- *Visit a church*
- *Church spotter sheets*
- *Bat spotter sheets*
- *Bat walk*

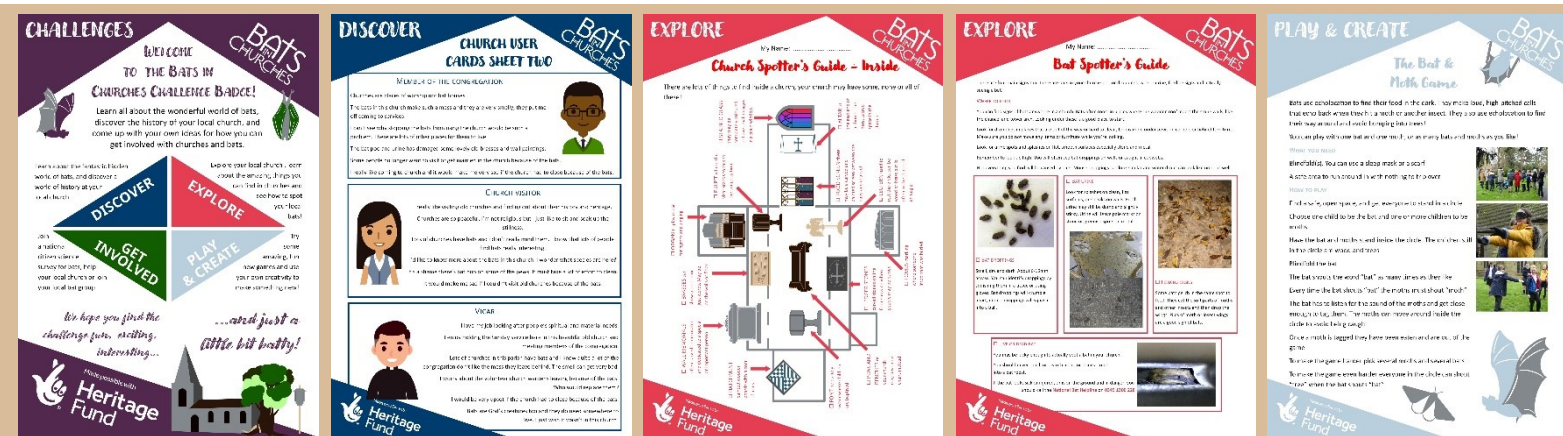
Get Involved

- *Local bat group*
- *Local church*

Play & Create

- *Make bat biscuits*
- *Design a stained glass window*
- *Make a hunky punk (grotesque) out of salt dough*
- *Make a poster*
- *Play bat and moth*
- *Make a bat box*

Participants can pick from a wide range of different games, crafts, indoor and outdoor activities from the different sections. Activities can be recorded on a downloadable record sheet which, once complete, can be exchanged for a woven badge. So far **317** children have received a badge. The Bat Conservation Trust will continue running the Challenge Badge after the end of the project.



ON A WING AND A PRAYER: COMMUNITY ART

In late 2021 BiC commissioned artist/photographer Ilene Sterns to create a community art installation celebrating the long-standing relationship between bats and churches. Ilene, and her husband Phil Atkin, initially became involved in the BiC project as volunteers for the NBiCS, surveying a mammoth 30 churches across the southwest.



L-R: Ilene taking photos in St Michael's April 2022; one of the completed panels in St Michael's; Phil carrying out sound recording

When the team found out that Ilene was a talented artist and photographer, they took the opportunity to commission her to create a community art piece at St Michael the Archangel,

Compton Martin, Somerset. St Michael's was chosen because it shelters seven bat species, is bat friendly, with a good relationship with the local bat group, and a very active community committed to Eco Church ideals, as well as a well-equipped hall next to the church suitable for bringing people together for events and community activities.

With Phil, the BiC EO and Jean Luckett, one of the churchwardens, Ilene visited the church in April 2022 to gather information, take photos and get a feel for the space. Over summer 2022 she developed the artwork and wrote a blog for the BiC website.

FROM THE CREATOR'S BLOG

I began by visiting St Michael the Archangel Church in Compton Martin, Somerset, one of Bats in Churches' project churches, which will be the initial venue for my piece. There I met Jean Luckett, Compton Martin's bat champion, who graciously offered to be my liaison with the church community. One of my priorities was to engage people of all ages in the art work, by asking children as well as adults for their thoughts about their church bats. Jean was happy to help me gather those comments. My inspiration for the piece would come from the community's words and also from the beauty of the historic church itself, which glows with warm light even on a dark day.

As I stood quietly in St Michael's, I envisioned a number of large, atmospheric images complemented by the echoing calls of bats. In my mind's eye, I could see four, free-standing, transparent panels made up of layered photographs and text. By taking words from the church community and combining them with my own photos (shot using a selective focus lens on a digital camera), I could immerse viewers in an experience that would celebrate both bats and churches.

The Compton Martin community turned out to be the perfect creative partners. Not only are they excited and inspired by their church bats, but they also have poetry in their souls. I have incorporated their lyrical comments into this piece, both as part of the installation and also as an original poem, which soars and sparkles like the bats it celebrates.'

On A Wing And A Prayer is an immersive and multi-layered artwork set to recordings of bats inside churches, slowed down to be audible to the human ear. It aims to foster a greater understanding of bats in churches based on emotion and empathy. Weaving words, sound and images, the multimedia experience evokes the spirit of bats in churches. Printed on transparent natural fabric, each of the four images represents a different aspect of the enduring relationship between bats and sacred spaces, using words collected from the church community at St Michael's, complemented by verses from Isaiah and lines from a poem by Rupert Brooke.

For the accompanying soundscape, bat echolocation calls were recorded by Phil at churches he and Ilene surveyed for the NBiCS in Wiltshire, Gloucestershire, Oxfordshire and Somerset. Those recordings were then slowed down via time expansion to make them audible to human ears. The final soundscape sounds much like birdsong, which is what the bats themselves hear as they forage and call to one another on the wing (https://soundcloud.com/on_a_wing_and_a_prayer/batscape).

The tour launched at St Michael the Archangel, Compton Martin, Somerset on 29 October 2022
St Michael the Archangel, Compton Martin, Somerset 29 October – 5 December 2022
St Sampson, Cricklade, Wiltshire 13 – 15 January 2023
St Peter, Wintringham, North Yorkshire 1 – 27 February 2023
Holy Trinity, Tattershall, Lincolnshire 27 February – 30 March 2023
St Peter, Walpole St Peter, Norfolk 30 March – 16 April 2023
St Margaret, Saxlingham, Norfolk 18 April – 14 May 2023
St Botolph, Banningham, Norfolk 16 May – 5 June 2023
St Mary the Virgin, Dalham, Suffolk 6 – 19 June 2023
St Paul, Chacewater, Cornwall 4 July – 22 August 2023
All Saints, Braunston, Rutland 31 August – 12 September 2023
St Mary Magdalene, Paddington, Flying to the Future end of project celebration, London 14 September 2023



THE BATS OF ST MICHAEL'S

A POEM BY THE CHILDREN AND ADULTS OF COMPTON MARTIN

Welcome, furry friends!
 Moth munchers, minuscule munchers, caterpillar crunchers.
 Many bugs we eat, many times we sleep.

Baked bean sized batlings
 Roosting in snugly huddles,
 Roosting in the roof.

Sleepy meditation by day
 No peeping, just listening!
 Roost, fly, eat, repeat.

ASSEMBLED BY ILENE STERNS FROM COMMUNITY CONTRIBUTIONS
 AUGUST 2022

ILENE STERNS
 Artist Photographer
corydora.co.uk

BATS IN CHURCHES
[BatsInChurchesProject](https://www.facebook.com/BatsInChurchesProject) [batsinchurches](https://twitter.com/batsinchurches)
batsinchurches.org.uk



Made possible with
 Bat Conservation Trust



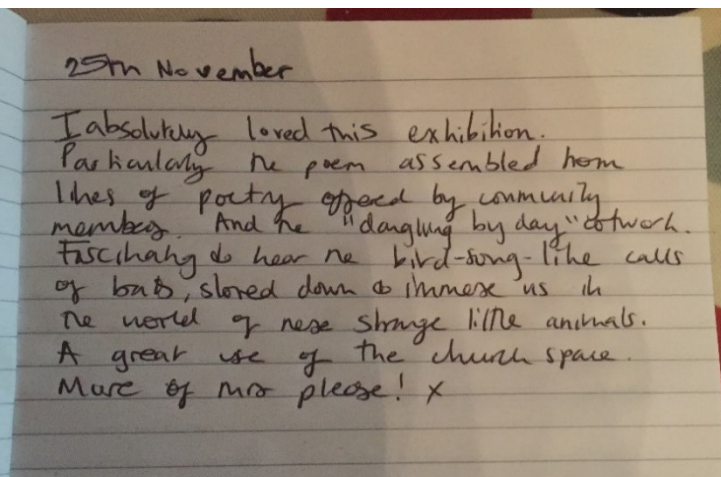
THE CHURCH
 OF ENGLAND



Historic England



NATURAL
 ENGLAND

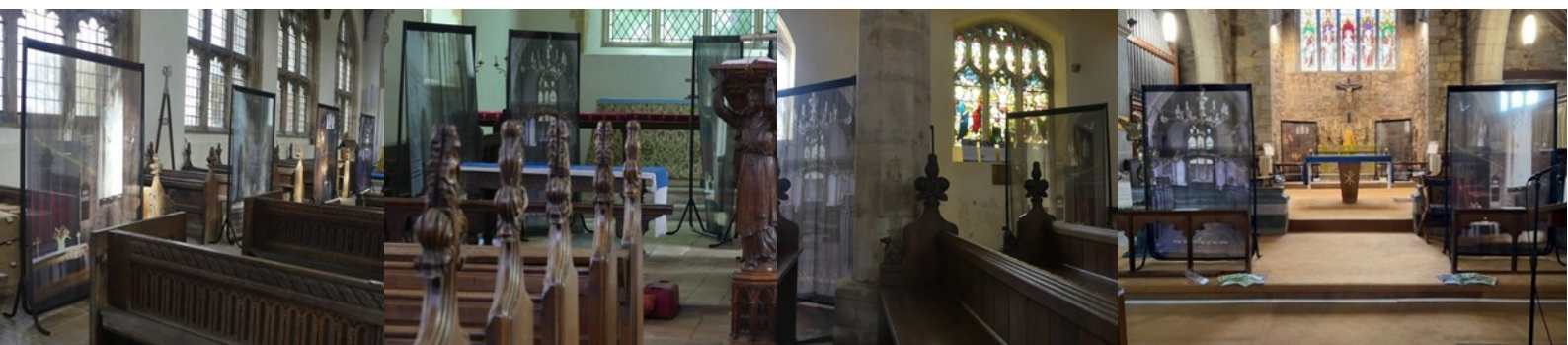


Feedback

The project estimates that some 5,000 people will have seen the artwork on tour during 2022 and 2023 as it travelled 1,700 miles around England. On 20 September 2023 the artwork returned to St Peter's, Wintringham where it remains on permanent display in the chancel. It is available for loan to other churches that would like to host it, with permission from CCT and St Peter's.



L-R: On A Wing And A Prayer on exhibit at St Sampson's, Cricklade, Wiltshire; St Peter's, Wintringham, North Yorkshire; Holy Trinity Church, Tattershall, Lincolnshire; St Margaret's, Saxlingham, Norfolk



L-R: On A Wing And A Prayer on exhibit at St Peter's, Walpole, Norfolk; Botolph's, Banningham, Norfolk; St Mary the Virgin, Dalham, Suffolk; St Paul's, Chacewater, Cornwall

INTERPRETATION WORK

Introduction

The BiC project was relatively unusual in that, as well as having a range of target audiences, it was also producing interpretation from/for a range of different sources – some from the project itself as ‘Bats in Churches’ branded publications; some for project partners; and material for individual churches which could be Bats in Churches branded, or branded to match the church’s existing displays.



L-R: Bats in Churches interpretation in action at Global Birdfair (including branded clothing for staff); Flying to the Future; Walpole St Peter Christmas Fair

Challenges

There was a real challenge with such a wide range of interpretation not to lose key messages, to send out overlapping or contradictory pieces of guidance or to not have the BiC project or its funding acknowledged, especially on external pieces of interpretation such as guide books.

Each partner had its own house style, branding, logos, etc. several which were changed during the project, so that the team had to update interpretation to match. Each partner also had its own approach to writing text or guidance, and this could occasionally work against project aims to keep all interpretation and guidance as simple as possible. The team often worked with people at churches who had detailed knowledge of their church but little experience writing for the public, so contributions had to be sensitively edited.

Main Aims of Interpretation

Use images and photography as much as possible

Use the right format for the audience, many rural church locations for example will still want or need print rather than digital or online

Create only the interpretation that is needed, we do not need a poster for every aspect of work we do

Have interpretation that is easy to create with a small number of simple, usable templates

Interpretation to be flexible and able to be reused in a number of different situations, for example single page case studies used as handouts, in reports, as guidance and on poster displays

Branding

Early on in the project, design company The Point produced the Bats in Churches logo, and a simple, clear branding guide with a range of colours and some suggested layouts for posters, banners, etc.

Out of these we made a series of simple templates for posters, letterheads and presentations which we've used throughout the project. Having the templates has given us a strong, consistent look, and has meant that staff have been able to create posters or other items simply and quickly without having to worry about design or layouts.

The first interpretation produced was a series of posters and displays introducing the project for BiC staff to take to talks, fairs and fetes, and for churches to display while they were having works and surveys. These were designed off brand initially and then branded once that had been finalised.



L-R: Examples of the first project branding; final project branding; alternative branding for schools and children's activities

The first items produced were a range of introductory posters, four sheets introducing bats and churches, recognising the issues, works and surveys, and public engagement, and these stayed in use with minor amendment through to the end of the project.

A range of bat species fact sheets and National Bat Helpline posters for churches were also produced, based mainly on existing BCT posters and information.

Adapting The Branding

While the branding has been useful for most publications, it did not really feel appropriate for interpretation for younger audiences.

For these pieces, such as young people's activity sheets, the team developed a 'diamond' layout with colour and branding in the corners rather than straight across pages. They took the decorative title font from *The Little Church Bat* and used that instead of the more formal fonts in the rest of the branding.

Interpretation Boards and Posters

The project has now produced 11 permanent interpretation boards and a further 12 temporary boards or poster displays, mostly for churches that have had capital works

These have been based on two standard templates, one on a single board and one for multiple posters, and then adapted for each individual church.

The boards are aimed at visitors to the church who may have little or no knowledge of bats or the BiC project so the team worked hard to make the boards as concise, readable and informative as possible. In some cases, this meant heavily editing text supplied by churches. The boards focused on the BiC project work rather than providing general information.



L-R: Single page interpretation for Wellington; design for interpretation board for Compton Martin; interpretation board in situ at Braunston-in-Rutland

Guidance Booklets and Leaflets

The project produced three leaflets as part of the project, one tri fold A4 that was used throughout the project to introduce its work and two A5 folded guidance leaflets, one with 'Help and Advice for Churches' and one on 'Recording Your Church Bats'.

'Recording Your Church Bats' was aimed at all churches that think they have bats or want to record that they do not have bats. The aim was to get as many churches as possible to record some basic bat information, not to overwhelm them with instructions for full or detailed surveys.

'Help and Advice for Churches' was aimed at churches that feel they have a problem and was also for architects, ecologists, Diocesan Advisory Committees (DACs), etc. to give them a starting point when thinking about mitigation.

These were quite complicated to create, especially writing text that would be detailed enough to be helpful but still concise enough for people to read. We also wanted these leaflets to be a legacy for the project so the team had to make sure any information would not become out-of-date in the next 5+ years.



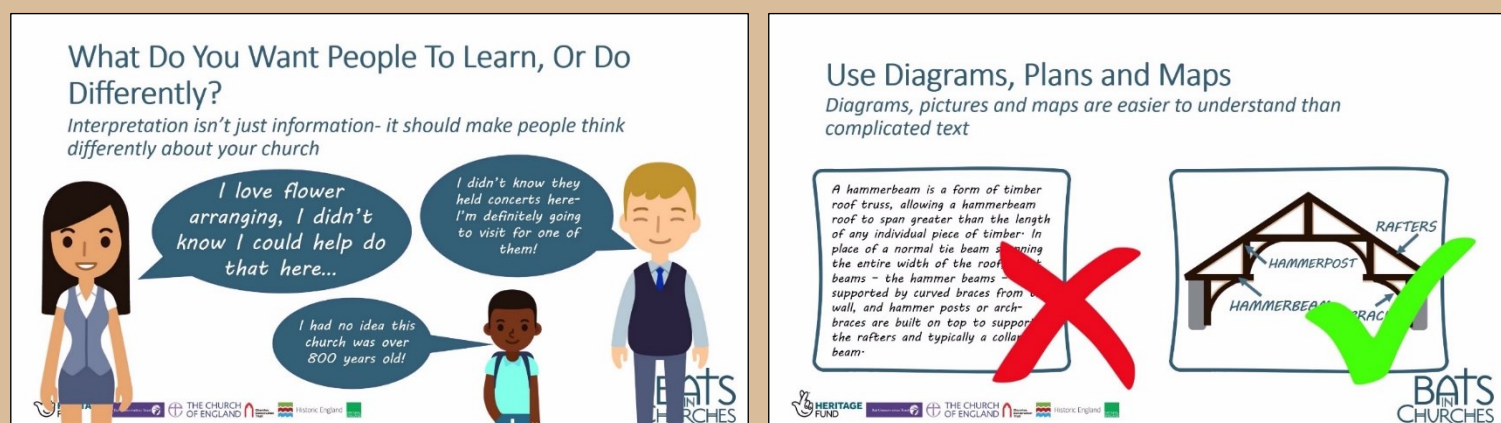
Clip Art and Infographics

Another unexpected output of a changed working schedule in lockdown was the creation of a range of branded clip art – initially bats, moths and churches, followed by church furnishings, cars, survey equipment, streetlights and an entire range of miscellaneous items.

These little pieces of artwork have been used to liven up children's worksheets, for data and infographics on presentations, to make a range of postcards and Christmas cards, for event posters and flyers, and to create a range of animated training videos for the project.

Interpretation training

As part of the public engagement training offer, the project delivered several hour-long training sessions on writing, designing and creating interpretation. This was one of the most popular of the online courses and always well attended with excellent feedback. Writing and delivering the course was also a chance to look at the team's own ways of creating interpretation to make sure they practised what they preached!



Slides from the online interpretation training

Challenges and Lessons Learned

Overall, the interpretation for the project has been a success and has been well received. The project found a good balance between traditional interpretation such as boards and posters, and more contemporary approaches such as animated videos.

Keeping the interpretation work in-house as much as possible has meant the project has been able to stick to clear, key messages about the project and make sure anything that goes out with our logo on has been correct. Changes and updates could be made quickly and easily.

The branding was clean, graphic, appropriate for most interpretation, easy to work with, and created some striking and useful outputs. The team was able to adapt it for a range of audiences from young children to adult professionals.

Clear discussion at the start of each new piece of interpretation to define the need, audience and expected output was important. When someone asks for a 'leaflet' they may not actually want or need a leaflet (i.e. a folded 1/3 A4 piece of print), but would be better with a poster, a full guidance note, or a piece on the website.

The interpretation training was especially useful for all who attended, and this could have been delivered to project and partner staff as well as the general course attendees: something to consider for future work to encourage skills development across the wider team.

There were some teething issues about access to software for creating interpretation. A future recommendation would be ensuring all staff have access to the same software and the brand fonts from the beginning of the project, so everyone is using identical templates.

It may be useful in future to have clearer guidance on which partners needed to be consulted on various pieces of interpretation and when. Sending each individual poster to each partner for feedback would have been excessive, but in some cases the team had to reprint items as partners wanted changes made after an item had been signed-off by others. Defining sign-off permissions for specialist areas at an earlier stage would have avoided the need for a new print run.

A challenge towards the end of the project was the difficulty producing interpretation for churches where capital works were not complete; in some cases this left little (or no) time to produce interpretation. Many project churches had a traditional expectation of interpretation and were interested in boards or posters. It may have been beneficial to have given time to look at other interpretation, for example, digital, audio or bespoke artwork.



MEDIA AND COMMUNICATIONS

The media and communications output of BiC has tackled several major challenges including: raising awareness of the project and its work throughout a five-year period which included the pandemic; supporting the creation of a community of volunteers through promoting citizen science surveys, training, workshops, live and online events; educating target audiences about the issues created by bats in churches, and potential solutions; sharing findings with professional audiences; and tackling negative perceptions around the issue of bats in churches.

To do so a range of channels has been used. A bespoke website was created for the project to host events, blogs, resources and information and to advertise upcoming training and volunteering opportunities, as well as profile project churches and share case studies and successes. A newsletter was also created via Mailchimp, and the project used social media channels Facebook and Twitter to further widen our reach. A YouTube account was created to house video content, including training videos for volunteers, ecologists, church communities and buildings professionals, and online events. Press and media and stakeholder outreach has been an integral part of the CO role throughout the lifetime of BiC.

2019

A big part of the work for the CO during the first year of the project was raising awareness. The issue of bats in churches was on the news agenda for a range of reasons, all negative. From Lord Cormack's private member's Bill and outspoken opposition to the protected status of bats in places of worship to the group created by a vicar's wife to oppose the presence of bats in churches, the rhetoric was very critical and one-sided. An unattributed and unsubstantiated anecdote about a vicar shaking bat faeces out of their hair at the altar was oft-repeated and treated as fact (*source – 'Historic churches are turning into giant 'bat barns' forcing vicars to 'shake faeces out of their hair at the altar', claims Tory peer – Mail Online, 12th of June 2014*), and the news agenda very much pitted bats and church communities against one another, with no coverage given to the opportunities for harmonious co-existence or to the church communities which accepted and even embraced their resident bats. Commentary pieces poked fun at the presence of bats in churches with much joking about 'bats in the belfry'.

Through a targeted campaign the project secured some 36 pieces of external coverage about the project in 2019. Many featured the pilot project church of All Saints in Braunston-in-Rutland, which had been badly affected by bat droppings and urine thanks to a colony of some 600 Soprano Pipistrelles which moved in when a chimney in a nearby cottage collapsed. Norfolk churches, including Thornham, Gayton Thorpe and Deopham, also received widespread publicity in local and regional press.

Overall, coverage ranged from specialist newsletters and local press to national titles including the *The Daily Telegraph*, Fox News Online and BBC One Sunday Morning Live. A selection is listed below. In total a reach of 82,014,210 was achieved through earned media.

Headline	News Outlet	Audience
Bats in Churches project takes off!	Batline	Specialist
Bats in Churches	Diocese of Norwich PCC newsletter	Local
Bat faeces no longer part of services at historic church	Premier	National
Bat droppings no longer impacting church service in England	Fox News Online	National
Can bats and church wardens live in harmony?	Eastern Daily Press	Regional
Bat faeces no longer interrupting Rutland church services	BBC News Online	National
Church success in £5m bat trial	Leicester & Rutland Mercury	Regional

During 2019 the burgeoning digital presence began to garner interest.

Twitter	Website	Queries to Website	Newsletter	Video Content
6,525 (direct reach)	12,900 (indirect reach)	66	1,554 (direct reach)	356 views

2020

The COVID-19 pandemic and lockdowns of 2020 had a dramatic impact on the BiC project, including delaying the beginning of the NBICS and Church Bat Detectives, the citizen science programmes. This also delayed the opportunity to achieve widespread coverage calling for volunteers to take part in the surveys.

The communications focus instead turned to engagement online, and the highly successful BiC LIVE! series of lunchtime webinars was launched. These online events featured a range of speakers and experts and covered topics relating to bats in churches, including 'A Date With A Church', 'Bats and Health', 'Britain's Bat Story', 'Wall Paintings in Churches' and 'Church Roofs', as well as an introduction to the BiC project. All the sessions were posted to

the YouTube channel afterwards and placed on the Events page, alongside virtual bat nights and other video content, for people to watch again at their leisure.

Despite the challenges posed by COVID-19, in 2020 media activity had an indirect reach of 94,236,400. Some highlights included:

Facebook	Twitter	Website	Queries to Website	Newsletter	Video Content
281,592 views	19,834 (direct reach)	20,328 (indirect reach)	83	2,050 (direct reach)	1,782 views

2021

The third year of the project saw two major changes for the BiC communications output; firstly, the launch of the NBiCS and Church Bat Detectives which provided a compelling news hook for a huge amount of media coverage; and, secondly, the departure of original CO lone Bingley on maternity leave. Lone was replaced by Cathy Wallace in September 2021, initially as maternity cover. Following lone's decision not to return to work, Cathy became permanent CO for the project until it concluded in November 2023. The recruitment campaign for a CO proved, surprisingly, of interest to the media with pieces appearing in the *Independent* and *Private Eye*, the latter asserting that the project might be looking for an individual who could 'speak sonar'!

During 2021 the project also began to place papers in respected journals including *Conservation Land Management*, *The Biologist* and *British Island Bats*, reaching specialist audiences and educating them about the project and the wider issues around bats in churches. The year also saw BiC hit national TV for the first time, when EO Rose appeared on *Celebrity Antiques Road Trip* at the project church of St Mary the Virgin in Bromfield, Shropshire. This episode has since been re-broadcast several times, generating a huge amount of exposure for the project.

In addition to continuing to share news and information about the project via social media, we ran a themed week in October to coincide with Bat Week, an 'international celebration of the role of bats in nature' – <https://batweek.org>. Using funding from the British Ecological Society we put together a series of posts sharing up-to-date academic research around the topic of bats in churches, with links to published research for interested parties to find out more. These posts were extremely successful and raised awareness of the existing, freely available research around bats in churches, bats and buildings, and research around cleaning heritage items and church interiors affected by bat damage. The BEC grant also funded a webinar on the topic of 'Bats in Sacred Spaces', which was well attended online, shared widely across social and posted to YouTube for viewers to watch again. Newsletters continued to be sent to subscribers and volunteers on a quarterly basis, sharing

news and information about the project and opportunities for training, and to sign up for the NBiCS and Church Bat Detectives.

In total our media coverage had a reach of 2,963,242 with around half of this attributed to coverage of the NBiCS and CBD and the call for volunteers. This story proved particularly popular with regional BBC radio stations. Coverage highlights and social media stats included:

Facebook	Twitter	Website	Queries to Website	Newsletter	Video Content
7,342,159 views	34,844 (direct reach)	12,606 (indirect reach)	88	2,327 (direct reach)	2,938 views

2022

This was something of a bumper year for BiC media coverage, thanks to the NBiCS and Church Bat Detectives, some successful case studies, and the exciting record of a Grey Long-eared bat roosting in a church in Somerset by a BiC volunteer.

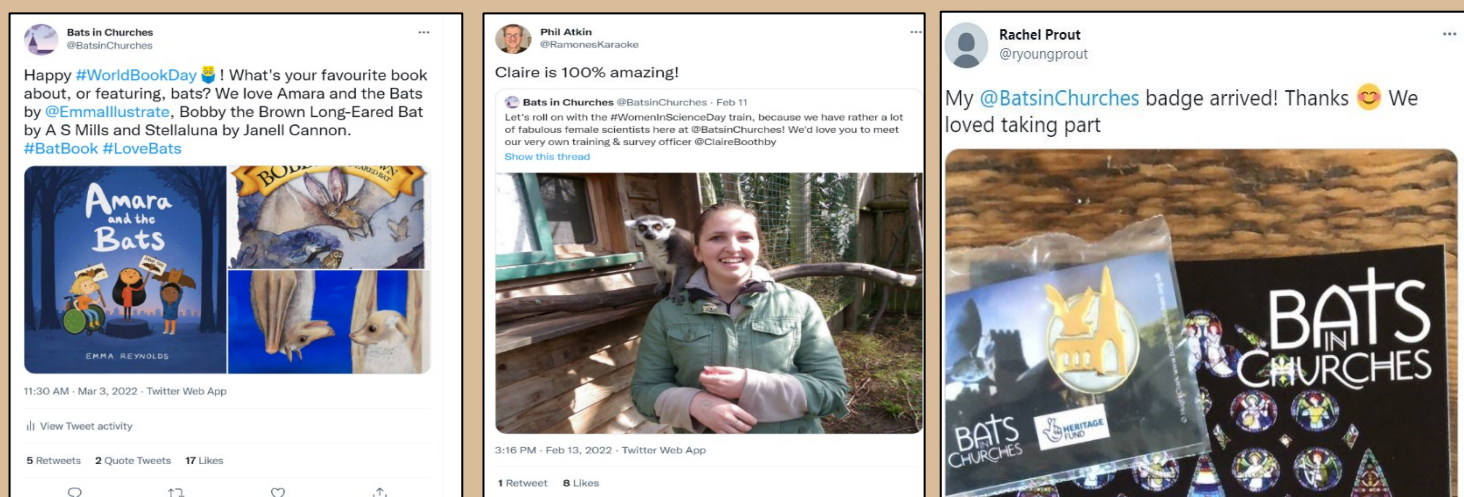
In the first quarter of the year, traditionally a quiet period for project media, the project ran a 'Bats and Creativity' workshop online featuring a professional illustrator hosting a draw-along so attendees could learn to draw a bat. This was also an opportunity to talk about the illustrated children's book *The Little Church Bat*. The webinar was a success and remains hosted online as a valuable resource. Meanwhile EO Honor was interviewed by BBC Radio Sussex on their Sunday Breakfast Show about the project's progress.

The project's main communications focus for the second quarter was the NBiCS and Church Bat Detectives. The project secured a staggering amount of coverage and had notable success with local BBC radio stations, all of which loved the story and clamoured for interviews with project staff on prestigious Sunday morning breakfast slots. In total, 13 separate regional BBC radio stations covered the story with calls to action for volunteers to sign up. This prompted BBC Radio Essex to request a project church for their popular Essex Quest show.

This was supported with a phenomenal amount of press coverage in local and regional titles. Cathy also ran a targeted campaign promoting the survey to National Park Authorities, resulting in several articles about the survey and calls for volunteers appearing in communications from National Parks to their communities of engaged volunteers. Cathy approached outlets such as Countryfile, BBC Springwatch and ITV Meridian news, all of which initially engaged with the project, but sadly the project was unable to secure any coverage. However, it did get the project on the radar of these prestigious broadcast

platforms, which is a positive outcome. In fact, the Countryfile efforts did come to fruition eventually – of which more below.

A notable aspect of coverage in 2022 was that it clearly demonstrated a real mindset shift around the topic of bats in churches. Even in the first few years of the project's lifetime, the occasional negative article about 'bats in the belfry' would appear, generally repeating the oft-used and unsubstantiated claim of vicars shaking bat faeces from their hair at the altar. However, from 2022 onwards, not one negative article about the issue of bats in churches has appeared. Coverage has been universally positive and with many calls to action for volunteers to get involved.



This mindset shift can be attributed to a number of factors, including an increased interest among the general public in wildlife and conservation following the COVID-19 pandemic. It also reflects the incredible success of the project in engaging hearts and minds, providing clear and concise education around bats and churches, including debunking various myths such as those around bats and health, and the positive ways churches have begun to use their bat populations to engage with new audiences who are keen to learn more about their local wildlife and help out where they can. And it reflects a media strategy that has not shied away from discussing the genuine issues bats create in churches but has done so in a constructive manner, emphasising the positives and presenting clear solutions that are available to church communities.

Following the widespread coverage of the NBiCS and Church Bat Detectives, the team were approached by BBC Songs of Praise requesting to film in a project church for an upcoming episode entitled 'All Creatures Great and Small'. Engagement Officer Rose suggested the church of St Lawrence in Radstone, Northamptonshire and arranged for the project ecologist, churchwarden and volunteers to come along and be interviewed, followed by a bat walk run by the local bat group Nene Valley Bats, which was also filmed for Songs of Praise. The resulting episode aired in November 2022 and has since been repeated several times, offering incredible exposure and positive coverage for the project.

Towards the latter half of the year, as records from the citizen science surveys began to flood in, a project volunteer recorded a rare Grey Long-eared bat in a church in Somerset.

Cathy released the story to local and national media and it proved incredibly popular, taking on a life of its own as news outlets competed with one another to share the news. Cathy even got up at 1am on a Thursday morning to speak live to Colin Murray on BBC 5 Live about the survey and the wider BiC project. The team also shared the story with partners BCT and the Mammal Society, both of which ran it across their channels and social media handles.

The project was also given the opportunity to write a paper for the *Journal of Building Survey, Appraisal and Valuation*. This specialist title has an engaged audience of buildings professionals and was an excellent opportunity to pull together the information and research out there into one place, to raise awareness of the issues surrounding bats for this highly specialist audience. The full 18-page paper was published in a volume in early 2023, with citations, and forms a valuable legacy item for our work with architects and buildings professionals.

Towards the end of 2022 we unveiled *OAWAAP*, the touring community art installation celebrating the long-standing relationship between bats and churches, which offered yet more opportunities for positive coverage across local and regional media.

The project secured so much media coverage across such a wide range of channels in 2022 that it has not been possible to cite circulation figures for each individual story. Of the coverage we have been able to acquire circulation figures for, we secured an indirect reach of 8,554,987. The true figure, however, is more likely to be at least twice this.

Headline	News Outlet	Audience
Call for volunteers to survey for bats this summer	BBC Radio Oxford; Shropshire; Suffolk; Somerset; Bristol; Northants.; Herefordshire; Glos.; Essex; Berks.; Cornwall; Three Counties; Coventry & Warwickshire	Regional
Are you batty about bats?	Lancaster Guardian	Regional
On A Wing And A Prayer! Tattershall's batty installation	Lincolnshire World	Regional
Precious rare bat found in Somerset church	The Independent	National
Bats in Churches	BBC Radio 5 Live	National
Rare long-eared bat found in church	Church Times	Specialist
Rutland bats feature in new children's book	Stamford Mercury	Regional

On social media the project used its channels to promote women working for or with BiC on International Women's Day, featuring BiC staff, ecologists and other women involved in the project. We repeated the themed Bat Week content in October, this time sharing content with a focus on bats in churches which allowed the team to promote the BiC Challenge Badge, *The Little Church Bat*, and the range of online activities and resources for churches to help them use their bats for engagement.

Facebook	Twitter	Website	Queries to Website	Newsletter	Video Contene
54,094 views	21,997 (direct reach)	6,238	65	1,942	2,544

2023

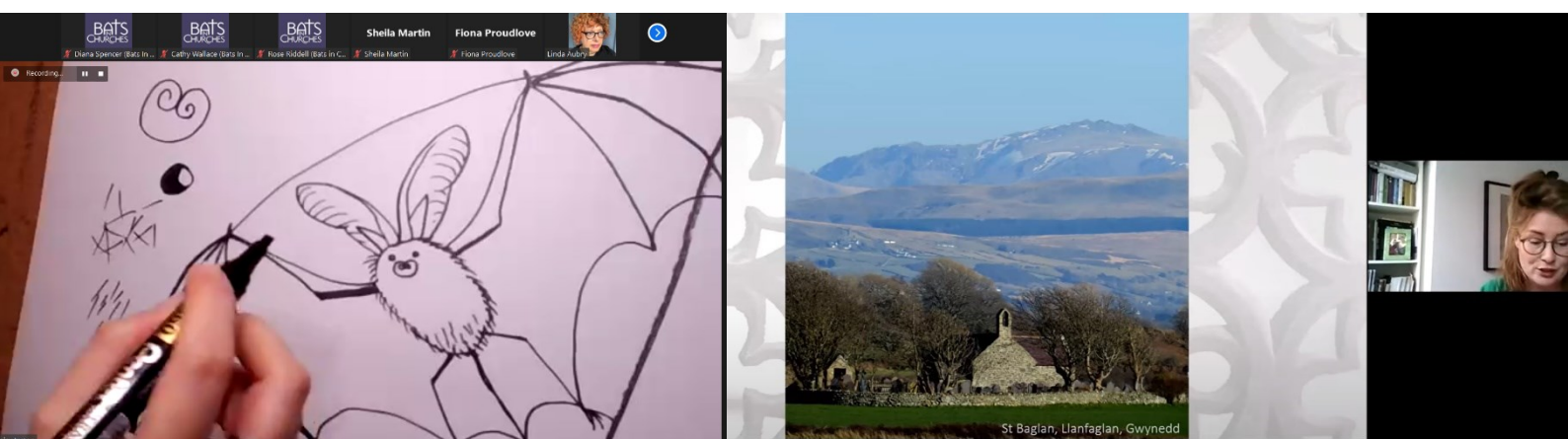
The final year! With no NBiCS and Church Bat Detectives to promote, media and communications in 2023 focused on telling the story of BiC, celebrating successes and ensuring the project's legacy.

The project took the opportunity to promote engagement tools like the BiC Challenge Badge to a more specialised audience. Cathy targeted DAC secretaries across 60 Dioceses with information about the badge, a pre-written newsletter article for inclusion in their comms channels promoting the badge, and a request for them to share the information with their mailing list and across their channels. This was very successful with nearly 20 DAC secretaries confirming they would include the information in their newsletters. Off the back of this the Diocese of Gloucester requested an interview with EO Rose about the project's work with young people. Once this interview appeared on the Diocesan blog, BBC Radio Gloucestershire came calling, asking to interview Rose on their Sunday breakfast programme about the two project churches in Gloucestershire.

The team also ran a third and final season of BiC LIVE!, with four lunchtime sessions focusing on wildlife and heritage issues. These featured a Q&A with award-winning writer Peter Ross, author of *Steeple Chasing; Around Britain By Church*, and a session with the EOs in which they shared successes around local, regional and online engagement. A summary of all the BiC LIVE! episodes for all seasons is given below and all are freely available to watch on the YouTube channel:

Bats in Churches LIVE: Britain's Bat Story
Bats in Churches LIVE: Bats in Sacred Spaces
Bats in Churches LIVE: The Bonus Edition
Bats in Churches LIVE: The Wonders of Church Wall Paintings

Bats in Churches LIVE: Heritage Treasures in English Churches
Bats in Churches LIVE: Bats and Creativity – Learn to Draw Bats
Bats in Churches LIVE: Church Roofs
Bats in Churches LIVE: Bats and Disease
Bats in Churches LIVE: England's Church Buildings – Treasure Houses of History
Bats in Churches LIVE: Finding Common Ground
Bats in Churches LIVE: Wildlife in Churchyards
Bats in Churches LIVE: In Conversation with Award Winning Author Peter Ross
Bats in Churches LIVE: A Date with a Church
Bats in Churches LIVE: Understanding Bats Through Their DNA
Bats in Churches LIVE: The Bats in Churches Project



Stills from BiC LIVE! 'How To Draw A Bat' and BiC LIVE! 'Treasure Houses of History'

As the touring art installation *OAWAAP* has flown around project churches, Cathy released stories to individual local news outlets as well as regional targets to highlight the installation and tell the stories of church communities that have been positively impacted by their bats. The project church of St Peter in Wintringham, North Yorkshire has proved a particularly popular example. This CCT church had just two volunteers caring for it until it took part in a series of bat surveys in June 2022, which attracted volunteers and wildlife lovers from the local community. The church now has an active group of around 30 local people caring for it, which has allowed one of the original two volunteers, who is in her 80s, to step back from her demanding role. The CCT and the church community are delighted that, in their own words, 'the bats brought us back together'.

Cathy also profiled success stories of the project, such as the church of All Saints in Braunston-in-Rutland, one of our pilot churches and flagship successes. The project released a story to the press ahead of a 'Beer & Bats' night at the church in September that was

picked up by local and regional news outlets including Greatest Hits Radio East Midlands, which interviewed Cathy, and the BBC.

As the project drew to a close, the team spent a lot of time working on media and communications around the end of project conference ‘Flying to the Future’. This attracted interest from *The Guardian*, who subsequently visited a project church in Norfolk and published a positive piece about the project with lots of colour and human interest. Countryfile also got in touch, potentially off the back of their interest in the NBiCS and filmed at a project church in Norfolk for an episode first broadcast on 15 October 2023.

Once again, coverage of the project and the wider issue of bats in churches has been universally positive.

The project placed a second paper in *British Islands Bats*, BCT’s journal, profiling some of the smaller-scale and less expensive mitigation measures the project has put in place. Caring for God’s Acre, with whom the team has worked closely over the project’s lifespan, requested an end-of-project piece for their magazine and Heritage Fund have also requested a piece on the project which ran across their channels at the end of October.

The final month of comms and media activity focused on placing end of project roundups in high-value titles, as well as local and regional success stories in the press and on the radio, to ensure the project went out on a high and that its legacy remains easily reached via Google.

Headline	News Outlet	Audience
Bats in Churches engage children with bat conservation	Diocese of Gloucester	Local
On A Wing And A Prayer interview	BBC Radio Norfolk	Regional
St Edmund’s Church in Egleton provides refuge to soprano pipistrelles	Rutland & Stamford Mercury	Regional
Connection between bats and churches explored	Truro Voice	Local

Facebook	Twitter	Website	Queries to Website	Newsletter	Video Content
15,475* (indirect reach)	2,914* (direct reach)	1,532* (indirect reach)	29*	672*	905 views*

(*last figures collected June 2023).



Workstream Three Volunteers and Training

WORKSTREAM THREE: VOLUNTEERS AND TRAINING

Approved Purpose: Church of England and BCT: recruit and train volunteers to create a strong volunteer network to support churches dealing with bats. Training on church heritage cleaning, general bats in churches, and advanced training for volunteer bat roost visitors (VBRV).

Workstream Three was focused on bringing people together and enabling them to support bats, churches and heritage through training and learning. This workstream was challenged by lockdowns in 2020 and 2021 but overcame these through re-timing the cleaning workshops and Volunteer Bat Roost Visitor (VBRV) training towards the end of the project.

An additional output was the creation of a filmed version of the cleaning workshops which will remain available on the project website, greatly increasing its reach, accompanied by printed cleaning guidelines.

BATS IN CHURCHES CLEANING WORKSHOPS



Participants at a cleaning workshop in Braunston-in-Rutland in 2019

The goal of the cleaning workshops was to provide those who look after churches a way to practice conservation cleaning safely, without risk to delicate items. People who care for churches with bats may be inclined to use harsher techniques than usual to tackle bat mess and, despite their best intentions, may damage precious items. The workshops provided attendees with a set of useful ideas and demonstrated the consequences of improper

cleaning or the use of incorrect materials on historical artefacts. The aim is to remove dust and debris without any damage to the fabric.

The workshops provided theoretical and practical instruction that sits alongside our 'Cleaning Guidelines for Churches with Bats' booklet and the 'Bats in Churches Cleaning Guidelines' e-learning videos, which are available at www.batsinchurches.com.

The workshops were delivered by the project's Heritage Advisor, with a local Churches Conservation Trust (CCT) Estate Officer joining the sessions where possible. Eventbrite was used for sign-up management and contact with attendees. A site-specific risk assessment was completed prior to each workshop.

The workshops were a full day event in the first two years of the project, but because of participant feedback they were later reduced to either a morning or afternoon session.

James Routledge, CCT's Estate Officer for the West recalls the following from the workshop that he attended in Wimbish: 'The workshop took place on a Saturday at the local church and started at 10:00am. A larger group of maybe 15 locals arrived and Rachel [Arnold – BiC Heritage Advisor at the time] and I went through the cleaning guidelines in a lecture style answering questions as we went along, we then had lunch (BiC provided), continued to run through the last of the guidance, then showed the group how to put things into action. They were then provided with part cleaning kits, and we finished about 3:00pm. This kind of session has benefits and drawbacks. One of the benefits is the possibility of doing more due to its longer run.

'Rachel did provide a wide range of other pieces of equipment to show the community and we were able to answer a lot of the questions from the group.'

But there were disadvantages to the prolonged duration as well. James observes:

'[It] was far too much for the participants who were definitely a bit bored by the time we had got to the end of the guidelines.'

The pandemic meant a pause to the workshops in 2020. When they were picked up again in 2021 Rachel designed a shorter version, which was adopted by the next BiC Heritage Advisor, Antia Dona Vasquez, when Rachel left in early 2022.

The shorter duration – typically lasting from 10:00 to 12:30 or from 14:00 to 16:30 – seemed to work well for participants. They had a framework that included 45 minutes explanation of the fundamentals of preservation cleaning, less expensive substitutes for conservation materials, how to clean diverse materials and a Q&A session. Additional architectural conservation themes and questions about them were included in the sessions when a CCT Estate Officer was present. Under the guidance of our Heritage Advisor and CCT's officials, the attendees would then practise the cleaning techniques they had just learnt in the church for the remainder of the session.

James attended the Gwennap (Cornwall) workshop in 2023 and gave feedback on the new format:

'The Gwennap workshop was far more sensible in its scope, and it felt like the group were much more engaged with the presentation. Also, the completed cleaning kits, cobwebber, and guidelines were far more positive, and I felt that the community was able to absorb far more of the information.'

The workshops were structured as follows:

- Coffee and tea and introductions.
- Presentation by the instructor, including a short overview of the project.
- What is preventive conservation and what are agents that can cause destruction? When to call a conservator.
- Cleaning log, calendar and conditions care report: the importance of noting down or photographing damage to objects.
- Health and safety
- Risks when cleaning historical materials and where bats are present.
- Basic cleaning techniques and equipment.
- How to clean different materials: wood, metal, stone, fabric, books, tiles, glass.
- Q & A.
- Cleaning practice.



Antia Dona Vasquez leading church based half day workshops at Great Hockham, Norfolk and Whissendine, Rutland

In almost every session, the same questions came up. Some could be answered by the team with direct help, while others fell outside the scope of the project and need to be handled by conservators. Some examples are:

- *How to get the stains out of ledger stones/floor/metal? Bat urine contains high concentrations of uric acid that can corrode metal and damage stone and tile. The 'stains' are really the places where the uric acid has harmed the fabric, making it difficult to offer a straightforward remedy to restore it to its former condition.*

- *Use of Brasso and Pledge. Why is it bad if it makes it shiny? It was emphasised how seriously destructive to surfaces Brasso, Pledge, and other comparable products on the market are. The silicone barrier that is created on top of the wood is where Pledge's shining appearance derives from, but it is not good for the condition of the wood and is not advised for use. For metals alternatives to Brasso, such as Goddard's silver cloth were suggested.*
- *What should protective covers be made of? Advise against covering heritage objects with plastics or other non-breathable materials and consider breathable materials such as cotton. A guide to creating simple pew covers is available on our website.*
- *How to get rid of white bloom on tiles? This is something that a conservator would have to do to get the tiles back to their original state. The only thing that PCCs and cleaners can safely do is document and gently get rid of the salts on the surface of the tiles by brushing with a soft-bristled brush.*
- *Are bats dangerous? The workshop provided information on bats and disease, with the headline that bat droppings are low risk, especially compared to rodent droppings and urine, but that wearing gloves and a mask when cleaning is still advised.*

Short Guidelines Shared at the Start of Cleaning Workshops

Even though objects may seem robust we still need to treat them with a lot of care, so please follow the guidelines below.

- *Please only use lint-free cloths on objects with smooth surfaces. Fold your cloth into the size of your hand and ensure none of the edges are protruding. Use all the parts of your cloth but make sure you fold it over so that you are always dusting with a clean area. Do not press hard as the dust could scratch the surface.*
- *In the case of wooden items wipe in the direction of the grain.*
- *We do not use liquids or sprays as these could damage the surface of our objects. On our more delicate and intricate objects we use a variety of different sized brushes with covered ferules.*
- *The brush should be used with a light movement to lift the dust. We normally use brushing alongside a vacuum, on the lowest suction level, to suck up the dust. Hold the nozzle just above the area you are brushing. A pop sock must be tied at the end of the nozzle to prevent sucking up loose pieces.*
- *For dustier surfaces, a cosmetic sponge can be gently wiped over the object. It acts like a rubber so do not use it on surface decorations.*
- *When using brushes on fabric, always brush in the same direction as the weave or grain.*
- *We will not be using ladders, so we have an extendable long pole with a brush to reach higher. Be aware of your surroundings when using the long pole as you might be standing close to a colleague or another object.*
- *Tiled floors require regular sweeping and surface dirt can be removed with minimal quantities of warm water and a conservation grade detergent or equivalent – Boots Sensitive or Surcare.*
- *Use vacuums to clean up the areas under the objects when we have finished dusting to keep the areas we have been working in clean.*
- *Thank you for your hard work and please do ask if you have any questions!*

Through these workshops, participants were shown how to properly care for various church items, such as metal lecterns, pews, tiled floor, brass plaques and altar cloths. They were also encouraged to learn more about the items, emphasising that the best course of action is to halt and leave anything if they are unsure of its date, significance or how to clean it. It is preferable for an object to be dusty than to be permanently damaged.

At the end of the session participants took home a cleaning kit with some of the same items they had been using to clean during the workshop. The kit included the following:

Unger Pole 1.25 X 3
Unger horsehair brush
Goat brush
Large soft brush
Makeup sponge
Air blower
Cloths
Wooden spatulas

FPP3 Masks
Popsocks – to cover the vacuum nozzle
Gloves M
Gloves L
Renaissance Wax
Cotton buds
Information about the project
Cleaning booklet
Tote bags



Examples of the cleaning kit items given out to churches


The participants were encouraged to go back to their churches, try their new kit out, and to get in touch if they had any questions.

Summary Of Workshops and Attendees

Location	Date	Number of Attendees
Wimbish	12/10/2019	11
Braunston-in-Rutland	09/11/2019	12
Comberton	21/02/2020	8
Hunsdon	18/09/2021	10
Walpole St Peter	07/10/2021	8
Salford	13/10/2021	21
Wood Dalling	07/09/2022	9
Thornham	08/09/2022	3
Low Catton	21/10/2022	6
Wintringham	22/10/2022	12
Whissendine	03/02/2023	7
Rushden	04/02/2023	5
Great Hockham	18/03/2023	9
Brampton	15/04/2023	9
Gwennap	28/04/2023	9
Newton Blossomville	17/06/2023	4
Edgeworth pew wax	10/07/2023	11
Wiggenhall	11/08/2023	14
Graftham	26/08/2023	9
Wellington	16/09/2023	4
	Total	181

Most attendees were people who looked after churches – 43 in 2022, but a few workshops were also attended by bat group volunteers who were interested in helping with church cleans or understanding more about the heritage items – 5 in 2022. Background was not recorded for the early workshops; the questions was added in early 2022 when new Heritage Advisor Antia came into the role. It is probably reasonable to assume the proportion was similar for workshops held prior to this data being captured.

Feedback



Cleaning Workshop Feedback Form

We'd greatly value your feedback to help us improve the workshop.
NB All responses will be stored securely and anonymised.

Your role within the church:

Please rate each section of the course 1-5 (where 1 is very poor, 3 is neutral and 5 is very good) for content and usefulness.





	Content	Usefulness	Any comments?
Health and safety			
The importance of conservation cleaning			
How to care and clean for both organic & inorganic materials			
Practical sessions			
Overall			

Please rate each of the following 1-5 (where 1 is very poor, 3 is neutral and 5 is very good)

	Score (1-5)	Any comments?
Timings and structure		
Trainers		

Did you feel the amount of information covered was:

☐ Too little
 ☐ About right
 ☐ Too much

Were there any highlights of the workshop that really stood out for you?
(Please describe the content and why you think it was memorable)

Is there any way we could improve the course?
(Please describe anything you would suggest we add to or omit from the course in the future)

How likely are you to put these cleaning techniques into practise?

☐ Definitely
 ☐ I'll try
 ☐ Not sure
 ☐ Not this year, maybe in the future
 ☐ It's not for me





How would you describe the course to a friend?

☐ Yes ☐ No

Would you be happy for us to use an anonymised quote from you in any future promotion?

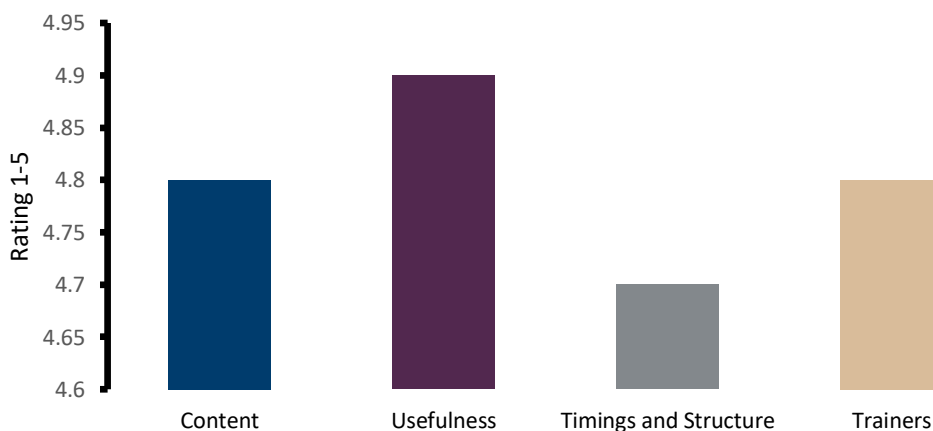
☐ Yes ☐ No

Thank you for joining us for the workshop!

Feedback forms for the cleaning workshops

The attendees were asked to complete a short feedback form to rate from 1-5 (with 5 being the highest score) workshop contents, timing and the trainers, as well as opportunities to suggest highlights and improvements:



Attendees were encouraged to complete feedback forms but only 20 completed forms were submitted, although staff on the team reported that verbal comments were positive. The main cause for the slight drop in the 'Timings and Structure' area is that one person thought it was too long and gave it a 3 (neutral). Overall satisfaction with the workshops was quite high, no average score was less than 4.7 (note values on y-axis here).

Example responses to 'Were there any highlights of the workshop that really stood out for you?'

- *'The prospect of taking the information and guidance back to our own churches. The kit provided, especially the long brush.'* Assistant Curate
- *'Everything.'* Friend of the church
- *'What to use and what not to use for cleaning.'* PCC member
- *'Use of Brasso discouraged. Practical alternatives - Silvercloth, renaissance wax, etc.'* Churchwarden
- *'A very useful and informative morning. Great tips on cheaper alternatives for cleaning products.'* PCC member
- *'Being able to ask about specific problems in our own church. Better understanding of what can be used.'* Churchwarden
- *'Open conversation.'*

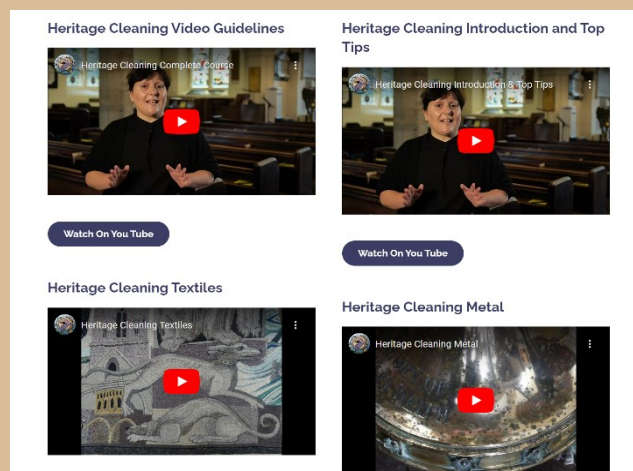
Video Cleaning Guides

The project also produced an e-learning version of the cleaning workshop that is available on the YouTube and via the project webpage. This covers of the content in the workshop and in the cleaning guidelines.

For the cleaning workshop the idea was that the videos would match up with the free booklet 'Cleaning Guidelines for Churches with Bats' and make the information in it easier to understand for people who preferred learning through media other than print.

There were several stages in creating the online learning video. Our Training and Surveys Officer, Claire Boothby, was responsible for finding a filming company who could both film and edit the video. After some research and a tender process, a company was selected that was affordable, had plenty of experience, and was located close to a suitable filming location. It took some time to identify a church that was ideal to film, as it needed to have a wide range of materials/objects to demonstrate cleaning techniques. In the end the filming took place in Kent, in the church of Ightham, which is not part of the project but where the churchwarden is the Training & Conferences Manager for the Bat Conservation Trust (BCT). The connection to one of the partner organisations made it easier to arrange two full days of filming at the site with no interruptions, which took place in late July 2023. This church had all the elements necessary to film in one location, which lowered the costs that would have been associated with multiple locations.

The final video is a tool that can help churches, beyond the scope of the project, to learn how to protect and preserve their historic assets. The video is divided into an introductory video with top cleaning tips, plus several more in-depth videos on cleaning specific materials, and is available combined as a whole course. The set of videos are accessible online via the project's e-learning portal and hosted on the BiC YouTube channel. This additional project output will continue to provide information to support and benefit communities and heritage long after the project has closed. The link to the full session is available at [Heritage Cleaning Guidelines - Bats In Churches](#):



Cleaning Guidelines for Churches with Bats

The team created 'Cleaning Guidelines for Churches with Bats' booklet. The booklet was written by our first Heritage Advisor, Rachel Arnold, with additions and changes by Antia Dona Vasquez and specialist input from partners at CCT. The design of the booklet was by Engagement Officer Diana Spencer.

A first version was printed in 2022 and a version with some minor revisions that came out in 2023 was updated with help from our colleagues at the Church of England (CofE) Cathedral and Church Buildings Division, who provided advice and proofreading.

The booklet covers the following:

1. Preventive cleaning and why it's important

2. Cleaning when a church has bats

3. Health and safety considerations

4. Cleaning guidelines

4.1 Woodwork and timber

4.2 Metals

4.3 Textiles

4.4 Books

4.5 Stone

4.6 Windows and glass

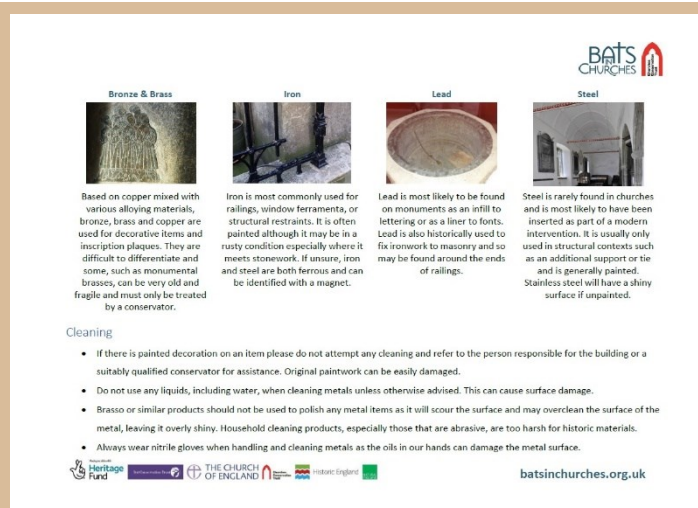
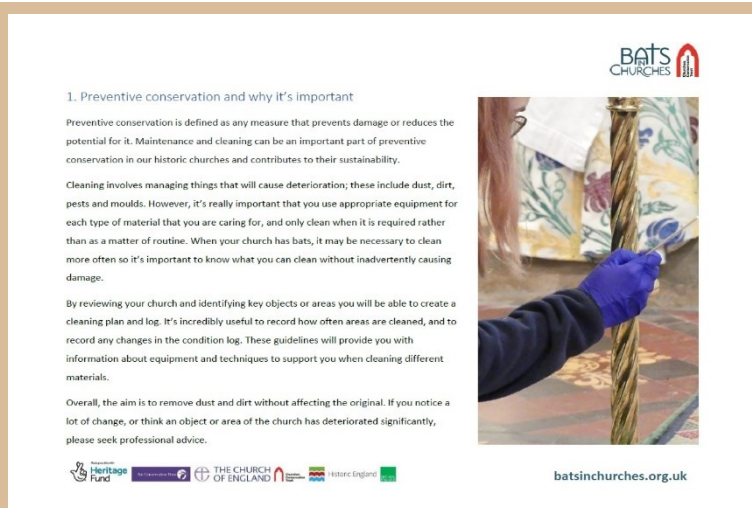
4.7 Tiles and ceramics

5. Equipment list and suggested suppliers

6. Cleaning log and plan template

7. Individual object condition template

8. Suggested cleaning calendar



Example pages taken from the cleaning guidelines booklet.

The guidelines give churches quick access to reference information with brief but clear directions on how to clean while reducing harm to historical artefacts. The layout allows the reader to concentrate on a single material (e.g. metal or wood) and obtain all the details required to handle and clean that material safely without having to read the entire booklet.

The booklet was available as a printed copy to the churches that attended the workshops, and hundreds of copies were given out across the project. It is also available in digital format on the BiC website for other churches and anyone who has an interest.

The booklet contains the information given in the cleaning workshops and in the cleaning workshop e-learning video, and is intended to be kept in the church for immediate reference when cleaning. A hard copy of the guidance was appreciated by those who may be less inclined to go online and watch a video. Through face-to-face workshops, printed guidance and subtitled online videos the project's cleaning advice has been made accessible to a wide audience.

TRAINING FOR BAT VOLUNTEERS

The other element of this workstream was training for general bat volunteers and Volunteer Bat Roost Visitors. VBRVs are specialist volunteers who are already highly trained and make home visits to advise on matters relating to bats as part of the Bat Advice Service, which includes a national helpline to call during peak times of year for bat activity. The service is run by BCT on behalf of Natural England (NE).

Volunteer Bat Roost Visitors are not always comfortable visiting churches because they can be such complex buildings and they may not feel able to give appropriate advice. The project's training was intended to upskill VBRVs who were already experienced, but who

wanted extra skills to give them the confidence to work with churches with bats and feel able to give sound advice.

Due to the specialist nature of this training, and the fact that sessions could not be held during the pandemic year, a total of 36 VBRVs were trained on how to work at churches with bats. This is a relatively low number, but it should be noted that these volunteers are highly specialised and committed and are highly likely to put the training to immediate use.

There was no specific target for number of VBRVs trained but, as part of the project's legacy, another course will be run in 2025, funded by NE and delivered through BCT via the Bat Advice Service contract. This will add to the national capacity of VBRVs who are able to confidently support churches. The training of general bat volunteers under this workstream was to encourage participation BCT's National Bat Monitoring Programme (NBMP).

Working With Churches

Creating a resilient network of fully trained volunteers who can undertake bat surveys and support congregations who have bat roosts at their church is key to the long-term sustainability of providing practical advice and solutions for churches with bats, to help them live together without conflict.

Training focused on 'Working with Churches' for bat workers and volunteers (11 events) and public engagement/reaching new audiences (two events) were delivered live online or in-person at a variety of venues to maximise reach, including regional bat group conferences and BCT's National Bat Conference.

A 'Bat Care Basics' training session was held in 2021, reaching 81 people, to ensure volunteers were familiar with the correct action to take when encountering live grounded bats.

Social media posts and personal contacts increased awareness of our training courses, driving interested stakeholders to use and share these on a wider scale.

Volunteer Bat Roost Visitor Training and Train the Trainers Training

Bat roost visiting is one of the most important activities carried out by volunteer bat workers across England, and recruiting new volunteers and upskilling existing volunteers to become trainers is key to the long-term stability of this network. The project offered training to embed specialist knowledge about working with and surveying churches, increasing the capacity of the network to provide roost visitors to church roosts, record bats, and provide initial help and advice for churches.

The project partnered with specialist trainers from BCT to run three in-person training courses in different regions across England: Coston, Leicestershire in July 2022; Wood Dalling, Norfolk in September 2022 and Compton Martin, Somerset in May 2023. In addition, an online training course for VBRVs was provide at a National Bat Conference (October 2022) and a 'Train the Trainer' course for experienced VBRVs was run in summer 2020.



Example VBRV Training Session

Training and Legacy Officer (TLO) Dr Allyson Walsh officer ran the VBRV workshop based at Compton Martin in 2023. Training lead Richard Crompton of Ecology on Demand was contracted to deliver this in-person training, with expertise from BCT's Bat Helpline staff.

'I have learned a lot more about the layout of churches, where bats are most likely to be found in a church, more about evidence - droppings and urine staining on pews and floors, as well as walls and brass artefacts in churches. I have more sympathy towards those involved with the church as they are all volunteers and under their own stressors, and can appreciate the presence of bats can be distressing.'

Seven participants, including a local VBRV, attended the course, which comprised an afternoon of talks, a practical hands-on survey of the church for bat evidence, and an evening bat emergence survey to explore use of bat detectors, night vision and infra-red video. The team was indebted to the wonderful hosting provided by the local church, especially Jean Luckett, who provided a lecture space adjacent to the church. Jean and several local community members were invited to attend the evening survey of the churchyard, where trainers and trainees taught them about bats (four participants were new to bats) as they counted bats emerging from the church and foraging in the graveyard. In the pleasant warm weather conditions six species were recorded. Feedback indicated trainees learned new methods to use during the search for evidence of bat presence, and one added:

Volunteer Bat Roost Visitor training at Compton Martin, Somerset.
Attendees examine the church, consider access points and how bats might be using the building.

Digital resources for the VBRV course have been updated and an e-learning compendium of training materials prepared for future training. A simplified version of the course material is provided for anyone to view through the project's e-learning portal [eLearning Portal - Bats In Churches](#). The detailed, specialist training is designed to be delivered in person and will be used at the next training session in 2025.

Roost Count and Bat Skills Training – e-Learning for Volunteers and Project Churches

Recording bats, bat access points and activity can help save time, money and effort whenever works or repairs to the church are needed. In addition, many people are fascinated by bats, so knowing more about bats can be a great way to get new people interested in a church building and grounds.

The project led 21 ‘Bats in Churches Study Training Skills’ events online and in person to develop a new cohesive group of volunteers focused on participating in our citizen science National Bats in Churches Study (NBiCS). This training was highly specific to the project’s citizen science study.

Beyond training for participation in the citizen science programme, the project led a further four bat skills training courses for volunteers and church community members, with the broader remit of encouraging people to find out more about the species of bats in their church, to incorporate an annual roost count at their church as a regular event, and to contribute data to the National Bat Monitoring Programme (NBMP).

Initially, the team advertised existing courses being led by the BCT’s NBMP team and volunteers could join those. As the project progressed, it partnered with the NBMP team to develop a version of the course that was more specific to church bat species and church buildings, to support our aim of creating more volunteer capacity at churches.

*‘An interesting and practical training session which has prepared me for my first bat count.’
Volunteer feedback form response.*

A training webinar ‘Making Your Church Roost Count: How to identify and count church bats to help the NBMP’ was held live on 3 May 2023, delivered by BCT staff member Philip Briggs, and hosted by BiC’s TLO Allyson. Over 50 people signed up and 45 participated on the day. The training covers the most common bat species found in churches, how to identify them using a bat detector and your eyes and ears, plus how to arrange and complete a roost count of bats at your local church and contribute this data to the NBMP. The recording of this is available on the BiC YouTube channel, and a link is available from the website to reach this special e-learning offering, which has been viewed 33 times. Feedback indicated 66% of participants felt more confident to identify bats and arrange a roost count, and this translated into pledges of action by several participants:

TRAINING FOR CHURCHES AND BAT GROUPS

The project developed a mix of online e-learning training aimed at volunteers from a church or bat group volunteer community to access and learn about ‘Working with Churches’, ‘Creating and Writing Interpretation’, ‘Working with Volunteers’, ‘Planning and Running Events’, all available on the project website.

E-LEARNING

The e-learning offer was not part of the original project plan but was added after the success of the online training modules. The project has produced e-learning modules, such as 'Bat Identification' and 'Working with Volunteers', which were well received after being developed in lockdown. The idea behind the e-learning tools is to make training available more widely, to go beyond the limits of the project churches and extend past the project lifecycle.



Filming online bat survey training at Thornham, Norfolk

Almost all of the delivered courses, with the exception of the VBRV and train the trainer courses which have a specific practical element are available with subtitles on the Bats in Churches website and You Tube channel.

Simple Bat Surveys For Churches

How to identify bats in your local church, carry out some simple surveys and record your local church bats.



Bat Identification Training • Include Your Church Roost in a National Bat Monitoring Programme

This short e-learning course is for anybody who has bats in their local church and would...



Finding Bat Evidence- A Daytime Survey

Walk through an interior daytime church survey with Philip Parker (ecological consultant) and two volunteers. This...

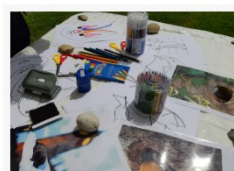
Working With People

Training and guidance on encouraging people to visit your church, running events, and recruiting new volunteers.



Creating and Writing Interpretation Training

This short e-learning course is for anyone who wants to create interpretation, signs, notices, leaflets, guidebooks...



Planning and Running Events Training

This short e-learning course is for anyone who runs events for the public or invited groups...



Working With Volunteers Training

This short e-learning course is for anyone working with, or hoping to recruit volunteers Working With...

BiC e-learning courses

TRAINING COURSE SUMMARY

The table below is a summary of attendance at the courses described above. The lower numbers are from the first year of the project when the team were trialling approaches, then in 2020 a number of training offers were delayed due to the COVID-19 pandemic.

Who Was Trained	2019	2020	2021	2022	2023	Total
Volunteers – NBMP Roost Count	0	0	41	157	308	506
Volunteers – VBRV Bat workers Upskilling	0	4	11	14	7	36
Volunteers - Working with Churches	0	38	87	65	0	190
Volunteers – Public Engagement Skills	0	11	156	13	0	180
Community – Heritage Cleaning	23	8	39	30	81	181

Challenges and Lessons Learned

This workstream went well, but one of the key takeaways related to the length of the cleaning workshops. There was a large amount of information in the course and a full day was overwhelming for some participants. Future projects may wish to consider running half day courses when training volunteers, particularly when they may have limited capacity to attend. The shorter day was more accessible and easier to absorb.

Delivering the training as part of a ‘community clean’ group activity such as at Edgeworth and Wiggenhall, rather labelling it a ‘training course’ may make it more appealing.

Face to face events also presented accessibility difficulties. During COVID-19 lockdowns it was not possible to run any face to face event, but even after COVID-19 measures had been lifted it was often difficult for people to attend workshops in person, due in part to the remote locations of many of the host churches. Although volunteers and trainees were encouraged to claim their travel expenses from the project, many found travel difficult or could not find the time in their other commitments to travel for the of the workshop.

Volunteers will also be more likely to factor in travel time, refreshments etc when deciding to come to an event. Some volunteers may find even less than an hour to an unfamiliar place is too far to travel. For bat survey training travelling late at night may be an issue for some.

Developing a written guide that was available online and could be printed if needed, as well as in hardcopy on request from the project team if at-home printing was not possible, and then later the video workshops and recorded video cleaning guides, has proven extremely effective in disseminating the training from the cleaning workshops. This information is now available to all, with no travel or expenditure required.

This is part of a wider switch to online or remote events and activities, in some ways helped by the pandemic which made people far more comfortable and familiar with online platforms such as Zoom or Teams which may not have been immediately popular before. It is worth noting that for activities such as survey training and cleaning workshops there is no substitute for being able to practice skills on site in a church, with immediate guidance and feedback from an in person instructor.

One of the surprises of the cleaning workshops was how popular the brush on a long extendable pole was – allowing cleaning of bat and other mess from high church walls. People who cared for churches loved this, and at a cost of less than £20 it represented enormous value in terms of church satisfaction. It is worth reflecting on how small, simple forms of assistance can make a significant difference to people on a day-to-day basis.



Workstream Four National Bats In Churches Study

WORKSTREAM FOUR: NATIONAL BATS IN CHURCHES STUDY

Approved Purpose: BCT led: 'Church Bat Detectives', also known as 'The Bats in Churches Study': three level volunteer programme - i) simple survey engaging 500 participants at 500 churches, ii) train 700 volunteers to undertake in-depth surveys at a representative selection of 700 nationwide churches, iii) count church bat roosts through BCT's National Bat Monitoring Programme.

This workstream engaged citizen scientists across the country to help us understand how bats use churches in England and, importantly, how many churches have bats using the interior. There was no specific data on this prior to the project so it was important to be able to give a number with some confidence to help inform future management approaches.

There were some challenges in the early stages of the project as COVID-19 meant two seasons of potential surveys were missed, but a big promotional push in 2022 meant the target was met.

As well as providing new and useful data, which will be published post-project in a peer reviewed journal, the study was also a great opportunity to get people engaged with bats and with their local church, with some volunteers signing up to carry out surveys at several sites and across multiple years.

SUMMARY

78% of pre-reformation churches house bats

The results of the survey predict around half of Anglican churches house bats in the church interior. This equates to over 8,000 churches across England. The percentage increases to 78.4% \pm 2.9 (SE) when only looking at churches built before the Reformation.

(We used the church age categories in the Church Heritage Record which give broad times for the original building. The main difference came between churches in categories before 1540 compared to churches built afterwards.)

Increased positivity towards bats when they're using a church

Positivity towards bats is substantially higher in churches that have known bat roosts. In most cases (>90%) the presence of bats has no effect on worship, weddings, funerals or Sunday schools.

Churches are likely to house multiple bat species

The survey found three bat species on average using each church. In addition, most types of bats in England will use churches, with at least 12 of our 18 bat species recorded.

Bats use churches more in agricultural landscapes

The data showed that churches are particularly important for bats in agricultural areas with large areas of arable land, which is likely due to fewer roosting opportunities.

Bats are particularly sensitive to lighting the west of a church

Lighting has long been known to negatively impact bats. The findings indicate, for the first time, that churches with lighting to the west were less likely to house bats in the church interior.



SUMMARY RECOMMENDATIONS

Increase roosting opportunities in agricultural landscapes

In highly agricultural areas providing alternative roosting opportunities would enhance the landscape for bats. This could include bat box placement in the local area and engagement with the wider community about bats and the importance of buildings such as barns and loft spaces, and the conservation of natural features such as the protection of established trees. Further advice about bat friendly farming practices can be found on the Bat Conservation Trust (BCT) website: www.bats.org.uk/our-work/landscapes-for-bats/bats-and-agriculture

Assume a church has bats, particularly the older ones

The scale of use of these buildings by bats means that it is better to assume bat presence, especially in older churches. This protects not just the bats but also those caring for these places of worship, as it helps them avoid unknowingly committing a wildlife crime and avoids costly delays if bats are found during works. It is advised that churches should utilise

the free National Bat Helpline in the planning stages of any repairs or building works <https://www.bats.org.uk/advice>. Further information on bats and building works can be found on the Historic England (HE) website: <https://historicengland.org.uk/advice/technical-advice/buildings/building-works-and-bats/>

Know your bats

It can be useful to understand whether a church houses bats, and to know as much as possible about their use of the building. This provides a head start if any works are needed. It also provides an engagement opportunity to involve the local community to help monitor the bats. The project has produced a leaflet to help: <https://batsinchurches.org.uk/i-care-for-a-church/>

Provide additional and ongoing support to churches with bats

While only around 10% of church representatives felt negatively towards bats, these concerns, given the scale of bats use of churches, could still affect many church buildings and those caring for them. It is important to find solutions and offer support to these churches.

The BiC project website (www.batsinchurches.org.uk) has information and resources for churches with bats, including information on trialled mitigation works, where to go for help, a detailed booklet and video on sensitive cleaning for historic church interiors as well as many other useful resources.

Lighting to the west

More research is needed into why lighting the west side of churches can be so detrimental for bats, but bats should be considered when changing or replacing external lights. Reducing external light could help towards net zero aims. For more advice around bats and lighting the free National Bat Helpline can be contacted for information.



THE STUDY

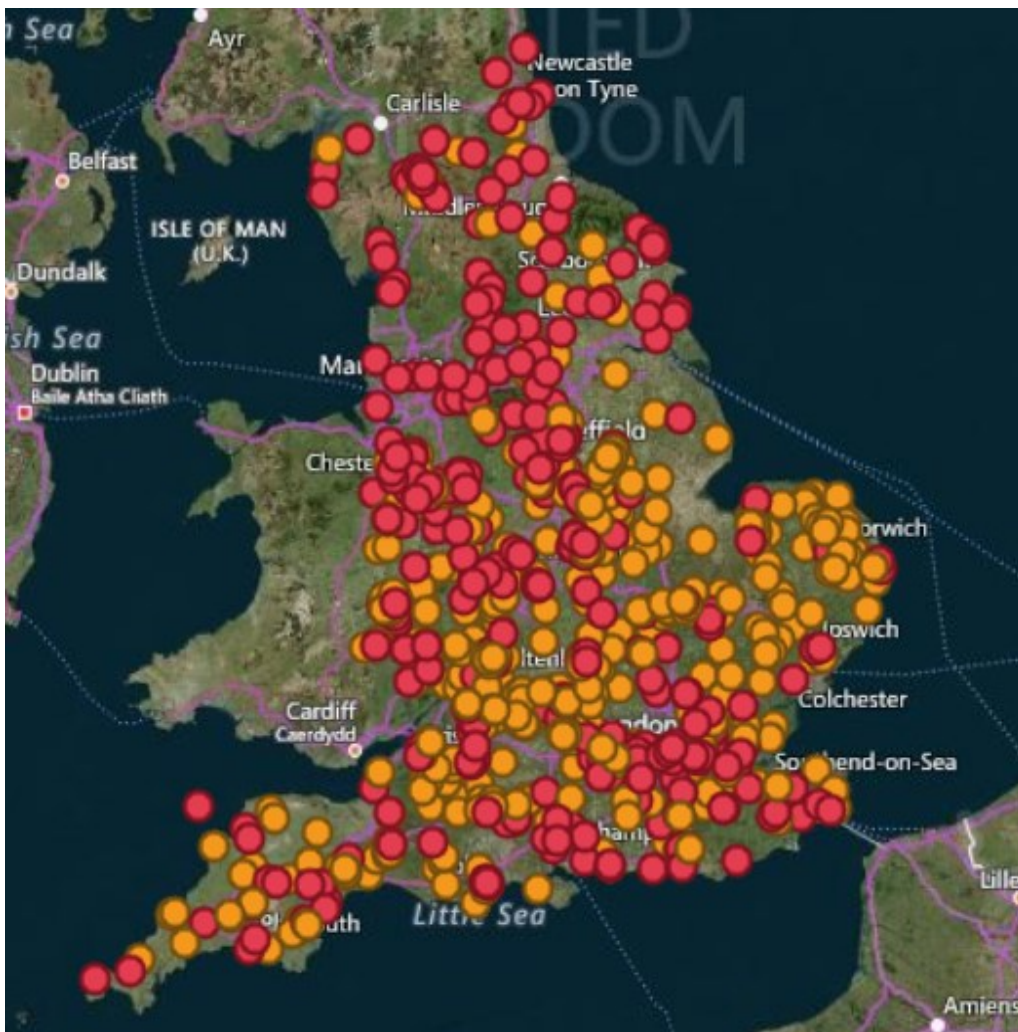
Bats in Churches carried out a citizen science study across England, together with 387 volunteer surveyors, in the summer months (June–August) of 2019–2022. This consisted of two surveys:

National Bats in Churches Study (NBiCS), which were the priority surveys. Volunteers could select their church from a random sample of 1,200 churches (stratified to take into consideration original church age as detailed in the Church Heritage Record [CHR]).

Church Bat Detectives (CBD), which could be carried out at any church across England, except for those in NBiCS and around 100 churches that the project was already working with closely.

In total, 753 churches were surveyed (350 NBiCS and 403 CBD), with a good spread across England.

WHAT WAS DONE



For CBD, surveys consisted of a one-off visit to a church to look for evidence of bats, particularly bat droppings and urine. A church representative was also asked to fill in a questionnaire to understand more about their experiences and perspectives around bats use of churches.

With NBiCS, further work was carried out to learn which species of bats, if any, were using the building. Bat calls were recorded by placing an ultrasonic recording device (a Peersonic bat recorder) in the church for two nights alongside collecting up to three vials of bat droppings for DNA analysis.

Map of churches surveyed between 2019 and 2022. Orange represents churches where bats were found and red where no bat evidence was recorded

ANALYSIS

Sound analysis consisted of two steps, including an initial classification using Tadarida and Sonobat and a second process of manual verification of sound files by BCT.

Bat droppings were sent to Swift Ecology for DNA analysis to identify bats to species level.

The statistical analysis was carried out by the statistician Steve Langton on behalf of the BiC project.

EXTENT OF BATS USE OF CHURCHES

HALF OF ALL ANGLICAN CHURCHES HOUSE BATS

The models suggest that around half of Anglican churches have bats in the interior, which equates to 8,147–9,772 churches.

The true number of churches used by bats could be even higher, as the surveys focused only on the summer season and did not take into consideration bats using roof voids, external features or areas of the tower inaccessible or out of bounds for safety reasons within our methodology.

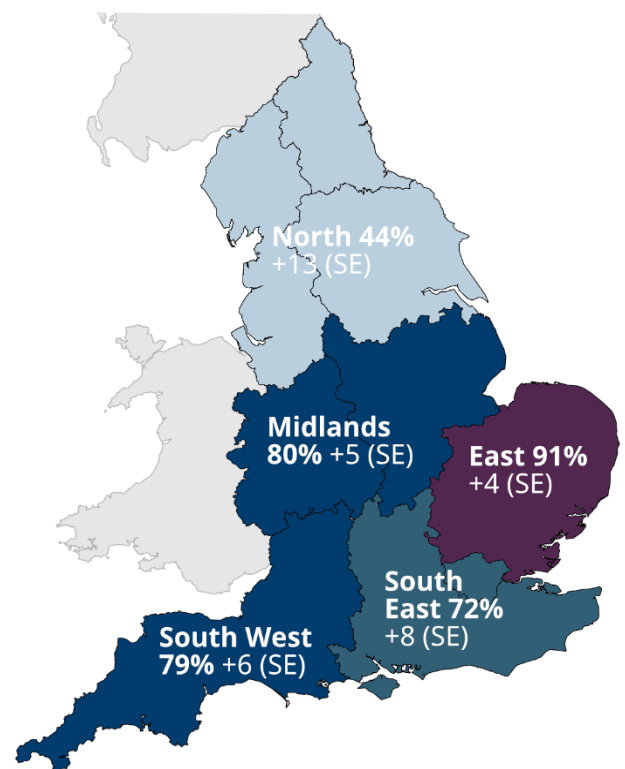
Bats are found in 78% of older churches

When older churches (those originating from before the Reformation within the Church Heritage Record) are looked at, it is estimated that $78.4\% \pm 2.9$ (SE) house bats in the church interior. In contrast, those built after that time are estimated to only have bats in $31.2\% \pm 3.4$ (SE) of cases.

This is as expected. Churches built in the medieval period are older and tend to have more gaps and holes, giving bats easy access to the building interior. They often have features such as beautiful and intricate timber roofs with lots of timber joints and crevices for roosting bats. There is a link between church age and rurality, with older churches built in more rural areas.

THE EAST IS THE MOST BATTY

All regions have a high percentage of churches with bats, but the East of England has the highest. The models indicate that over 90% of churches built before the Reformation in the East of England could house bats.



The mean percentage of pre-Reformation churches with bats in the main interior per region with the standard error

At least 12 species use churches

The NBiCS surveys recorded at least 12 of England's 18 resident bat species in churches. The findings include some rare species such as two records of Grey Long-eared bat in Devon and Somerset, which is classed as endangered in England, and several churches with Barbastelle, which is classed as vulnerable.

CHURCHES ARE LIKELY HOME TO MULTIPLE SPECIES OF BAT

On average it was found that three bat species use a church, but half a dozen churches had six or more species in one building!

TOP FIVE MOST FREQUENTLY RECORDED BAT SPECIES IN CHURCHES



1. COMMON PIPISTRELLE

Occur in ~35% / 5,422–6,994 churches in England

Distribution: Widespread Throughout England

Findings from the model: They are more likely to be found in the older churches and particularly rely on church roosts more in arable landscapes. External church lighting can inhibit their use of churches, particularly lighting to the west side of the church.

2. BROWN LONG-EARED BAT

Occur in ~31% / 4,810–6,406 churches in England

Distribution: Widespread Throughout England

Findings from the model: They are more likely to be found in churches with large areas of arable or improved grassland surrounding the church. They are also more likely to be in churches used less frequently and where there are hedgerows with features such as mature trees and ditches close by. They are found less frequently in churches with lighting to the west.

3. SOPRANO PIPISTRELLE

Occur in ~18% / 2,642–3,897 churches in England

Distribution: Widespread Throughout England

Findings from the model: They are more likely to be found in the older churches in more arable landscapes. They are found less frequently in churches with external lighting to the west side of the church.

4. SEROTINE

Occur in ~11% / 1,399–2,390 churches in England

Distribution: Mainly found in South of England

Findings from the model: They are highly associated with foraging over pasture and also arable landscapes and are more likely to use churches with large areas of surrounding arable land.

5. NATTERER'S BAT

Occur in ~6% / 614–1,396 churches in England

Distribution: Throughout England but the UK population is of international importance

Findings from the model: Unfortunately, the survey was unable to model the factors affecting their use of churches. Natterer's bats are strongly associated with churches, other older buildings and barns. Previous research suggests they could be particularly vulnerable to disturbance of a church roost.

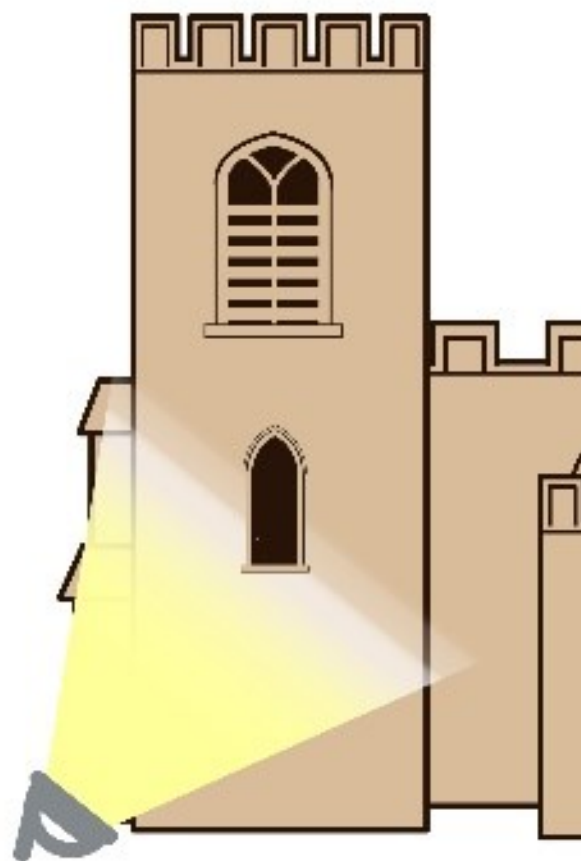


PUTTING A SPOTLIGHT ON BATS USE OF CHURCHES

The Bats and Artificial Lighting at Night (Institution of Lighting Professionals 2023) details the negative impacts artificial light can have on bats when emerging from roosts, commuting, and foraging behaviour. Research from Rydell *et al.* (2017) found a correlation between artificial lighting around churches and loss of church bat roosts.

LIGHTING THE WEST SIDE OF THE CHURCH

Unexpectedly, the survey found a very specific negative relationship with lighting, with Common and Soprano Pipistrelles and Brown Long-eared bats being found less in churches lit to the west. The importance of the aspect of lighting hasn't been previously explored and more work needs to be carried out to understand why this is. It is suggested that, as churches often follow a similar orientation with the chancel in the east, that lights to the west often light the tower and which could be particularly detrimental. Other thoughts are that the sun sets in the west and this could inhibit bats leaving the building or affect orientation.

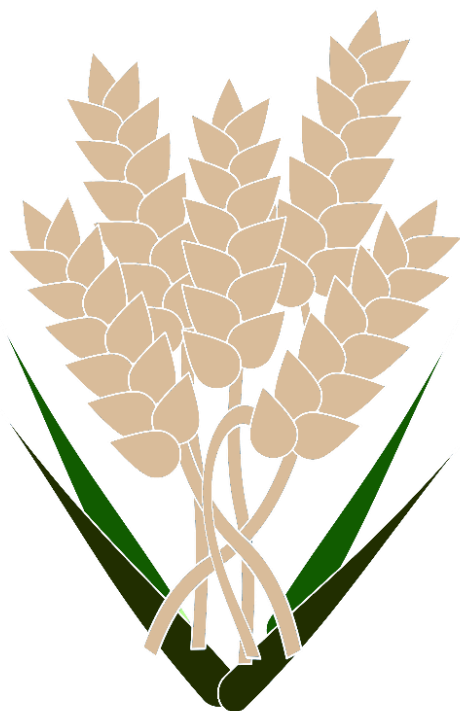


IMPLICATIONS AND RECOMMENDATIONS

There is a free National Bat Helpline (www.bats.org.uk/our-work/national-bat-helpline) for churches to get advice before installing new or different lighting on any aspect, and especially to the west of the church. Church and bat guidance should work together and work with net zero targets, to save churches money on electricity, reduce their carbon footprint and to avoid accidentally disturbing or harming the bats using the church (for more details see: www.churchofengland.org/resources/churchcare/net-zero-carbon-church).

ROLE OF RURALITY AND FARMED LANDSCAPES ON BATS USE OF CHURCHES

Bats were more likely to be found in churches where there was more arable land in the surrounding landscape. For the two most frequently recorded species, Brown Long-eared bat and Common Pipistrelle, there's also a positive relationship with



improved grassland or pasture. With a greater proportion of improved grassland in the area bats were more likely to be found in churches.

IMPLICATIONS

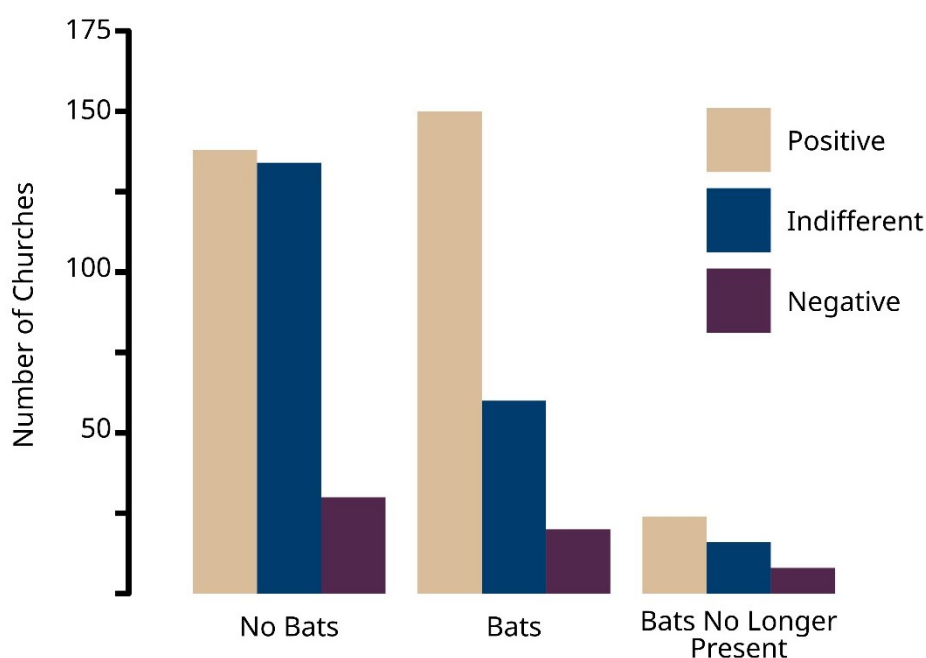
The findings suggest that churches are particularly important for bats in open agricultural landscapes. The reason for this is likely to be lack of alternative roosting sites. Common Pipistrelles are less likely to be recorded in churches in more built-up areas, which are places with more roosting opportunities. There is a reliance on old church buildings in rural areas for bats, where congregation numbers can sometimes be low, with small numbers of volunteers. It is important that the church and bat worlds continue to work together to support and help church communities with bats.

CHURCH PERSPECTIVES

Churches with bats are more positive about them

It is encouraging that most church representatives felt positively about the bats. Surprisingly, bat presence in a church increased positivity towards these mammals in most cases! It is also encouraging that over 90% of churches with known roosts say that the bats do not affect worship or other activities such as weddings, funeral, and Sunday Schools.

Bar chart showing opinions around bats where they are known and not known to use the building. *Of the 236 church representatives who filled in the questionnaires, where known roosts were present, 62% felt positively towards the bats and a further 28% felt indifferent or neutral*



FACTORS AFFECTING OPINIONS ON BATS

While only a small proportion of church representatives felt negatively towards bats, this nevertheless equates to hundreds of church representatives across England, so it is important that the correct support is provided for these communities. Factors which negatively affect opinions of bats are:

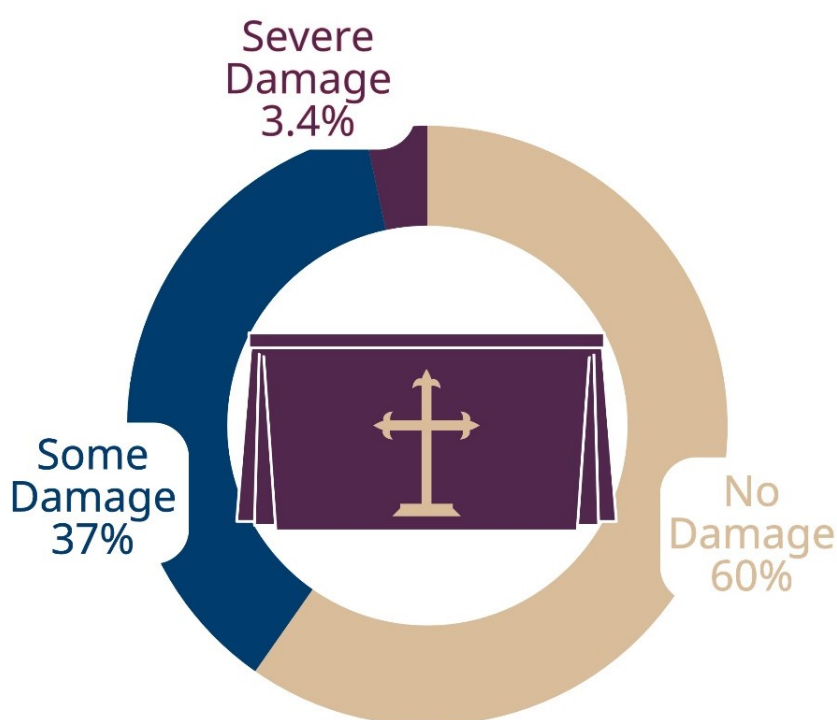
- large accumulations of bat droppings creating a cleaning burden
- perceived severe damage in church thought to be caused by bats
- health concerns
- reduction of the activities in the church when it occurs.

There is, however, more positivity around bats by those churches already undertaking work to connect with nature, such as Eco Church.

DAMAGE AND HERITAGE CONSERVATION

When asked, most churches with bats did not feel that there was any damage to the church as a result of their presence, but where they did, this was a factor which negatively impacted opinions towards the bats. The questionnaire results are a subjective measure of damage, but it does indicate the way people feel. The area of the church most noted as damaged is also the most sacred, the chancel, and, particularly, the altar.

A pie chart to show the opinions on damage to the altar from churches with known roosts. A majority of 60% perceived no damage and only 3.4% perceived severe damage



IMPACTS AND RECOMMENDATIONS

Churches with roosting bats tended to be more positive about them. The responses closely follow a report from BCT in 1995 which also indicated a largely positive perception of bats.

The project has also found that the bats can be a huge engagement asset for churches! In contrast, the perception of damage and the burden of large accumulations of droppings is something some churches need help with.

Information and resources are available on our website to help with engagement events and to provide help and support for churches with bats: <https://batsinchurches.org.uk>.

LIMITATIONS

Churches were able to refuse to take part in our surveys, and not all churches provided results for the questionnaire. However, on exploring the data it seemed that most churches opting out were more modern churches which were less likely to house bats. The main reason church contacts gave for not taking part was that they didn't think bats used the building and therefore did not see value in the survey.

METHODOLOGICAL STUDY

In 2021 seven volunteers took part in a further study to test the survey methodology. They visited churches three times over the season, using multiple recording devices and extending the time the devices were in the church. The findings from all churches showed consistently the same results over the three visits around whether bats were using the building and, in all but one church, all of the same species were recorded in all visits. The findings indicated that the methodology worked well. The project would like to say a huge thank you to those volunteers and churches that took part in this additional work.

FUTURE SURVEYS

Over the years of surveys, the project has run many tutor-led training events. These included 'Working With Churches' sessions and training on how to survey a church for bats and even take part in the National Bat Monitoring Programme Roost Count for anyone who knows of a church bat roost. Some of this training has been recorded and is available on the website: <https://batsinchurches.org.uk/elearning-portal/>

A positive outcome is that since the surveys began, 38 new Church Roost Count sites have been created (figure current at September 2023). Many of these were churches surveyed for the Bats in Churches Study! Hopefully, the data will continue to be available on the number of bats in these church roosts to understand the changes over time and to feed into population trends.

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Photo credits

Thank you to Hugh Clark and Dave Short/ www.bats.org.uk for the bat images.

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Workstream Five Partnership and Evaluation



WORKSTREAM FIVE: PARTNERSHIP AND EVALUATION

Approved Purpose: Partnership: Evaluate the project and share knowledge gained at: Models of Success demonstration days, final symposium/end of project conference, published case studies and a new website. Collaborate with the Beautiful Burial Ground project, National Trust, Ride and Stride, CCT cleaning programmes.

This workstream focused on how the project shared the knowledge gained with stakeholders, including sector professionals, and how the website was developed to be a versatile tool for delivery and project legacy. The project also collaborated with partners to deliver workshops and events, and worked closely with the external evaluator to monitor project progress across the delivery phase.

The published case studies and Churches Conservation Trust (CCT) cleaning programme element were moved to other workstreams. The case studies sit in the workstreams they relate to, primarily Workstreams One and Two, while the cleaning workshops sit in Workstream Three: Volunteers and Training, as their purpose is to train volunteers in cleaning heritage items safely. All case studies are published on the website www.batsinchurches.org.uk.

DEMONSTRATION DAYS: ECOLOGISTS AND HISTORIC BUILDING SPECIALISTS

Training professional ecologists and historic building specialists in new techniques and building knowledge to improve their advice to church congregations is key to the long-term sustainability of providing practical advice and solutions for churches and bats to help them live together without conflict. The project held a range of workshops for professionals in sectors relevant to its works, generally ecologists, architects and building surveyors, and other specialists with an interest in churches or historic buildings.

Architects' and Surveyors' Best Practice Knowledge Sharing Meetings

Bat awareness is essential for architects and surveyors working with historic church buildings, even if they don't think they have bats. In most cases the fabric, makeup and even the purpose of old buildings will have altered in the years they've been standing, and one unintended consequence of their complexity, whether original or acquired, is that they can be extremely appealing to bats. With church alterations and refurbishments on the rise due to a push to reach net zero carbon, and to help bring church buildings into better condition, it is important that bats are factored in when decisions to design for the future are made.

The project led three forums to share knowledge among architects and surveyors. These explored bat ecology and use of churches, and a variety of techniques for bat mitigation. Some include isolating the bats from high-risk areas within the churches through roof voids, tower spaces, rafter boxes and external bat boxes. Others include simple cost-efficient solutions such as sails, trays and covers.

The project has generated over 25 in depth case studies and developed guidance materials published online to freely download. A selection of cases was shared in detail with a strong focus on what worked well, what didn't, and lessons learned. All meetings were targeted at architects and surveyors already immersed in the project, so that discussions could be open and frank. The final forum was open to a wider audience, with the Training and Legacy Officer (TLO) advertising the event to multiple societies and groups to invite architects and surveyors to learn from the project case studies.

The final architects' and surveyors' forum was held as a webinar on 26 October 2023 with 89 people registered and 45 attending online.

'It was useful to hear some case studies showing that it is possible for church congregations and bats to share a building successfully.' Alison Riggs, Diocese of Oxford.

'I thought the forum was well organised and presented. I particularly liked the variety of case studies and the candidness of the presenting architects/ecologist.' James Hetherington of Peridot SDC Ltd.

Ecologists' Best Practice Knowledge Sharing Meetings

Conservation evidence is important in guiding decisions taken by ecologists working with bats in rural England's historic churches. In small numbers, bats often go unnoticed, but when they roost in large numbers a conflict can arise between the wildlife, the church community and the priceless artefacts housed inside. With church alterations and refurbishments on the rise due to a push to reach net zero carbon, and to help put church buildings in better condition, it is key that bats are factored in when decisions to design for the future are made.

The project led four ecologists' forums to share knowledge and explore a variety of techniques for bat mitigation (an initial introductory forum to welcome BiC ecologists was held in 2019, but the project was not in a position to share knowledge at that point). These included those approaches mentioned above, as well as simple cost-efficient solutions such as sails, trays and covers. Again, a wide range of case studies was made available as presentations during the forums, with Q&A sessions, and as written summaries and full reports; all available on the project website.

The forums were an opportunity to discuss cases in detail, go into precise costs, materials, schedules, etc. and openly discuss any successes/challenges and recommendations with peers. The initial forums were targeted at ecologists actively working on bats in churches sites to help ensure consistency and share best practice, but the final forum was advertised more widely to ecologists outside the project by promotion via the Chartered Institute of

Ecology and Environmental Management (CIEEM) and social media. An additional workshop was led by TLO Allyson Walsh and project ecologist Barry Collins at the Bat Conservation Trust (BCT) National Bat Conference on 17 September 2023. This shared BiC case studies and 'Working With Churches' training to an audience of 30 in person/20+ online.

The final ecologists' forum was held as a webinar on 26 October 2023, with 193 people registered and 100 attending live, with others opting to watch the recording later. The overall conclusion made by several ecologists presenting case studies was that making changes to the internal roof void/space appeared to be accepted by bats quite quickly; however, if changes to access points were made this was not accepted well by any species of bats, in several cases, causing the bats to vacate the roost site, sometimes taking years to return.

In feedback, the 24 respondents to our questionnaire gave the webinar an average 4.8* rating..

'Very useful for all aspects of managing a church mitigation project with some occasionally enlightening information re bat roosting behaviour from some of the monitoring results.' Denbeigh Vaughan, Landsker Ecology

*'Very Interesting. The case studies **provided a real insight into the difficult issue of managing people and wildlife.***' Jo Best, Arun District Council.

*'Dear Allyson, I have just watched the Zoom presentation re: Bats in Churches and would like to thank you, and the other speakers, for compiling **an extremely useful series of ideas, insights, and mitigation examples.** Both professionally and as a VBRV, I am increasingly being asked to visit churches and am pleased to have some insight into the problems and solutions other bat workers are experiencing.*

'Kind regards, David. David Worley, member of Glos. Bat Group.

'It has been a real pleasure working with you all on this project and it was great to see how the other project ecologists have been getting along. I know that all our team have learnt a lot more about bats and churches through being involved in the project over the last four years. Best wishes, Alison Barnett, Senior Consultant, Mortimer Ecology.

A month after the forum it was heartening to hear that people were still accessing the recording, with the project receiving this email on 19 November:

Hi Allyson

*Hope you are well, Just finished watching this forum. **Absolutely marvellous, what a fantastic and fascinating project to be involved in.** Particularly liked the public engagement stuff and changing peoples' perspectives and opinions on bats.' The turn out at that one church was absolutely phenomenal. Hope there's plans in place to carry on this work in some way.*

Best wishes, Steve

A summary of our events to train professionals and specialist volunteers is shown in Appendix 1.

WEBSITE

The BiC website fulfilled two functions over the lifetime and legacy of the project.

During the first four years, the website was primarily designed to showcase and promote the planned work of the project, recruit volunteers for our citizen science and training programmes, and promote project events and activities.

The site was designed by BoldLight <https://boldlight.co.uk> using the existing 'Twilight' branding and a range of stock photos. The site was mostly navigated via a map of project churches, with a page on each church briefly summarising the issues, church, community and planned interventions. These pages were regularly updated throughout the project with more information as various interventions were carried out, and images of project churches and works taking place were added.

Alongside this was an Events page for promoting both project and individual church events and a news/blog page for general project updates. There was an easy sign-up form for the newsletter mailing list and links to the project's various social media accounts.

The website for the National Bats in Churches Study (NBiCS) and Church Bat Detectives was hosted on a satellite site at <https://batsinchurches.bats.org.uk/> managed by BCT. This allowed for all collection of volunteer data to be held and managed by BCT using their General Data Protection Regulation policies, rather than being managed by the project.



Examples of user focused navigation on the BiC website

Legacy Website

Over the final year of the project, the website underwent a comprehensive redesign in preparation for the transition to a legacy site. The focus on the project churches, the NBiCS surveys, and volunteering and project events was replaced with a user-focused archive of advice and resources.

Navigation was based on the needs of the user with sections for Parochial Church Councils (PCCs) and churchwardens ('I Care For A Church'), ecologists, architects and other professionals ('I'm A Professional, Architect Or Ecologist'), for bat groups ('I'm A Bat Worker Or Bat Group') alongside Case Studies and Resources.

There are also dedicated sections for the major legacy resources (*The Little Church Bat*, BiC Challenge Badge, *On A Wing And A Prayer* [OAWAAP] BiC LIVE! videos) and the e-learning courses.

This layout means that many resources are linked from several sections, making them much easier to find than if they were only listed in, for example, a single resources section.

Accessibility

The website was designed to have a simple layout and high level of accessibility from the start. There was a full accessibility audit in 2022 which made some simple recommendations to remove some text from images onto a plain background, to give full written descriptions for images and photos, and to make the menus more easily navigable by keyboard users.

The general accessibility of the website has been increased by adding both print and video versions of the cleaning guidelines, print and video e-learning, subtitled and audio narrated animations, and by adding subtitles to the BiC LIVE! and e-learning videos.

Resources and Guidelines

All the project's digital resources and outputs have been made available via the website.

The 'Recording Your Church Bats' and 'Help and Advice For Churches' leaflets are available as downloadable pdfs, as are the BiC Challenge Badge resources.

Each project church has a case study pdf available from that church's page on the website. Churches with heritage or capital spend have a case study and fact sheet with a budget and the contractors used. Some selected churches have longer case study narratives which explore an interesting aspect of successful or unsuccessful mitigation in more detail. These case studies are designed to provide examples, guidance and inspiration for churches looking to carry out works, including some estimated costs, and the ability to contact contractors to ask more detailed questions and ideally will be used as a follow up to the 'Help and Advice For Churches' leaflet. These are available from both the individual church page and the combined resources section. Examples of these are shown in the Workstream One section of this report.

The cleaning guidelines can be accessed from the 'I Care For A Church' section as well as via e-learning.

Future Use of the Website

The website moved over to being hosted by CCT for a period of eight years when the project ended in November 2023. The domain names of batsinchurches.org.uk and batsinchurches.org will also be retained for this period.

Some members of project staff will still have administrative access and will be able to add further reports, update guidance and point to new sources of funding as required. These are members of the team who are remaining in partnership organisations in different roles.

If there is a second phase of the BiC project then the website and domain will be available for their use, but regardless of the outcome of a future bid to Heritage Fund the resources will remain available for at least another eight years.

COLLABORATIONS

The project collaborated with various partners and stakeholders across its delivery phase as part of this workstream. A number of the BiC LIVE! episodes were collaborations, including with Friends of Friendless Churches, BCT, Caring for God's Acre (CfGA) and Dorset Wildlife Trust (see Workstream Two). The three live bat nights held during lockdown were collaborations with the Norfolk Bats in Churches Project, and most of the bat walks and talks the project held in the Norfolk area were in association with the Norfolk Bats in Churches Project. Other bat events around the country were delivered with the support of local bat groups, for instance the 'Beer and Bats' event at Braunston (see Workstream Two) was delivered in collaboration with Leicestershire & Rutland Bat Group, who will continue to support and monitor the church post project.

Elsewhere, the team collaborated with CfGA on webinars and at churchyards delivering workshops, or with project partners on specific events that benefited from expertise from within their organisation. The project has also been featured in CfGA's *Lythgate* magazine, which offered an 800 word double page spread to report on the work of the BiC project. Some examples of collaborative events are shown below.

Bat Conservation Trust

The project collaborated with BCT to offer a course on the 9 and 13 November 2023 – 'Bats for Heritage Professionals' – with a tailored element specifically for people associated with church buildings. This customised half-day training course was paid for by the project but delivered by BCT's bats in buildings specialist Jo Ferguson.

Delegates included professionals from Historic England, CCT and a range of people from Church of England (CofE), including Building Support Officers. The course was for 20 people at a time and was booked out immediately for two dates. There was a waiting list, and a recording of the training was shared with people on the waiting list as well as delegates. The

recording was made available for a month after the event so it could be watched again or viewed by people unable to make the live sessions.



Community clean and bat watch at Wighenhall

The Churches Conservation Trust

The project collaborated widely with our partners at CCT with one example being a community cleaning event held at the CCT church at Wighenhall in Norfolk in August 2023. The project team worked with CCT and Phil Parker of the Norfolk Bats in Churches Project to organise a community clean and bat walk to try to get more volunteers for the church. Fourteen people attended the cleaning workshop and 21 attended the bat walk, with at least two people signing up for future involvement with the church. This was significant as the church had been struggling to find volunteers to support it. Images show local people chatting and cleaning during the workshop and then gathering for a talk about bats in the evening before heading outside to see some in action.

The project funded bat boxes in the churchyard to try to attract bats to use them instead of the church interior. Monitoring has shown that the boxes were used in the first season, which is an excellent result.

Caring for God's Acre

Biodiversity Workshop Gwennap, Cornwall, 2022

Participants at the Biodiversity Workshop at Gwennap



In partnership with CfGA's Beautiful Burial Grounds (BBG) initiative, the project held a biodiversity workshop focusing on the flora in the churchyard of St Wenappa, Gwennap, Cornwall. There were 18 attendees from the local community, and the event was led by Dr Colin French and Ian Bennellick, the CfGA recorders for East and West Cornwall. The event was very well received, and those who care for the church particularly appreciated the management recommendations to help the church maximise biodiversity into the future. Around 80 species were recorded by participants.

Biodiversity Workshop, Wimbish, Essex, 2022

A second workshop in partnership with CfGA was held at Wimbish church in May 2022. This was the team's second event with Wimbish, who were keen to engage with the project around wildlife. The CfGA event attracted 20 local people who spent the day learning to record flora in the churchyard. The bat walk and talk attracted 56 people and was run in collaboration with Essex Bat Group. Our contact at Wimbish PCC said:

Fran Meadows of the PCC said:

*'We have been very privileged to have both the bat evening and the Caring for God's Acre session in recent weeks, both of which have been informative and greatly enjoyed. **The bat evening attracted a different audience to our usual congregation/supporters which was really encouraging and the CfGA session was just enthralling.** We appreciate that we have had excellent tutors who are extremely knowledgeable and passionate about their chosen field.'*

Beautiful Burial Grounds, Peakirk, Cambridgeshire, 2021



Bat walk and churchyard flora at Peakirk

In summer 2021 members of the BiC team attended a collaborative event at St Pega's church in Peakirk, Cambridgeshire with the BBG project, run by CfGA. People from the local community spent an enjoyable morning learning about the history of churchyards and their importance as undisturbed areas to local wildlife. They learnt how to assess the variety of

plants in different areas and looked at how these were affected by different maintenance regimes.

The project team gave a talk about the bats at the church and the mitigation work it was carrying out to exclude them from the body of the church while still allowing them roosting space in a custom-made bat box.

Dioceses

The team took part in a range of activities in collaboration with Dioceses. A nice example was when the whole team joined with church volunteers and the Diocesan Advisory Committee (DAC) Secretary for a pew wax at St Mary's church in Edgeworth, Gloucestershire in July 2023.

This church is cared for by two elderly volunteers who wanted a cleaning workshop but could not get anyone else locally to attend. The church is extremely remote and rural, and many of the houses there are second homes so there is little volunteer capacity. The team were pleased to have a representative from the DAC along to get involved in cleaning this beautiful little church and everyone there learned how to carefully clean and wax the pews with a heritage grade wax. Tea and biscuits were provided, there were some useful conversations across the pews, and as a 'thank you' the churchwarden offered everyone a jar of honey from his bees. The church was gleaming at the end of the session, demonstrating a lovely example of what can be achieved through collaboration.



MODELS OF SUCCESS – KNOWLEDGE SHARING

The project engaged in a wide variety of knowledge sharing in the form of sessions/workshops/events/talks. The BiC LIVE! series included a strong knowledge sharing element, as did the professional forums detailed in this section of the report. The project team gave talks or delivered some form of knowledge sharing at the following:

Birdfair (2019 and 2023)

London Natural History Society

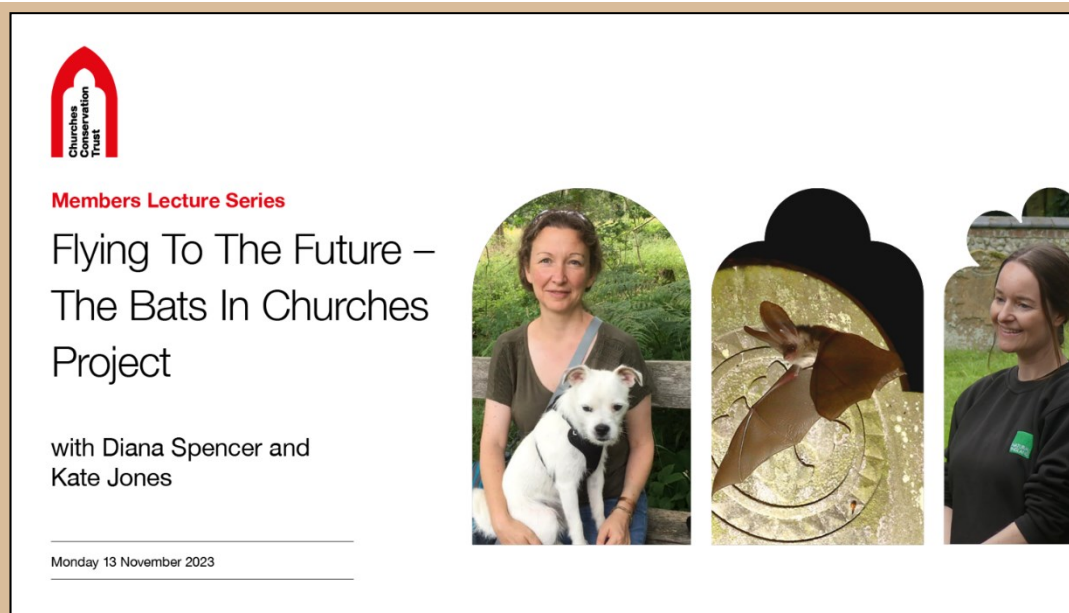
Caring for God's Acre (multiple)

International Bat Conference (2021)

<i>National Bat Conference (multiple)</i>	<i>Ecclesiastical Architects and Surveyors Association</i>
<i>North Regional Bat Conference (multiple)</i>	<i>Diocesan Staff Events (multiple)</i>
<i>South West Bat Conference (multiple)</i>	<i>Mammal Conference</i>
<i>Midlands Bat Conference (multiple)</i>	<i>Churches Conservation Trust Members Lecture</i>
<i>South England Bat Conference (multiple)</i>	<i>Church House Organ Committee</i>
<i>Devon Bat Conference</i>	<i>Church House - Stained Glass Committee (multiple)</i>
<i>East England Bat Conference (multiple)</i>	<i>Winchester Cathedral</i>
<i>Cambridge Conservation Initiative - Online Earth Optimism Event</i>	<i>University of York</i>
<i>Historic Religious Building Alliance</i>	<i>Altrincham Natural History Society</i>
<i>Places of Worship Forum - Historic England</i>	<i>Regional Bat Groups (multiple)</i>

These talks or workshops were tailored to match the interests of the audience and so did vary, but all focused on explaining the project's work and educating people about the best approaches to managing bats at churches. Illustrative examples are given below.

The Churches Conservation Trust Members' Lecture



Two members of the team gave the CCT monthly members' lecture in November 2023, taking the opportunity to celebrate the success of the partnership and share all that had been learned. The lecture covered all the project's workstreams but emphasised our heritage protection work and featured objects that may be of particular interest to CCT members. Around 80 people attended the online event live and the recording is available to watch for all CCT members. After the lecture the CCT got in touch with some feedback:

'I just wanted to say that we had such a great turnout for the lecture and have subsequently received so many lovely comments. Thank you again for delivering such a compelling lecture.'

Ecclesiastical Architects and Surveyors Association Training Event

The BiC team arranged an event with the Ecclesiastical Architects and Surveyors Association (EASA) to train and knowledge share with sector specialists. Rachel Arnold, BiC Heritage Advisor (2019–2021), introduced the project and its work, outlined the processes and timing issues involved with conservation projects where bats are present, and looked at examples of other mitigation measures introduced during the early phases of the project, explaining different approaches adopted. Claire Boothby, BiC Training and Survey Officer, talked about the bat species likely to be found in churches and their typical roosting locations. Case studies of recent BiC projects were presented by three EASA members Robert Shaw, Matthew Stevens and Nicholas Warns, followed by a Q&A.

	<p>I attended the online Ecclesiastical Architects and Surveyors Association Bats in Churches meeting last week and it really was very good indeed. Rachel and Claire wowed the architects and had very cleverly got three of them to present case studies to their peers. This was yet another example of really good public engagement; I was very impressed and very proud of the BiC team. One to flag to NLHF I think, with trumpets!</p> <p>I look forward to our next SG.</p> <p>All good wishes,</p> <p><i>Diana</i></p> <p>Mrs Diana Evans</p> <p>Head of Places of Worship Strategy Policy and Evidence Group Historic England</p>
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Opening slide from the successful EASA training session

National Bat Conference 2023

In September 2023 members of the BiC team attended the BCT National Bat Conference at Nottingham University. A hybrid in person/online workshop was led by TLO Allyson Walsh and project ecologist Barry Collins. This session shared project case studies and the 'Working With Churches' training with bat ecologists and bat group members with an interest in engaging with their local churches, reaching over 40 participants.

Talks were also presented by BiC Project Manager (PM) Kate Jones of Natural England (NE) (whole project overview) and Claire Boothby of BCT (BiC citizen science survey results). The conference was attended by over 200 people, and a special souvenir programme was shared with a three-page article on the 'Bats in Churches Project – A Beacon of Hope for the Future'.



Programme and feedback from the National Bat Conference 2023

FLYING TO THE FUTURE

More than 70 stakeholders attended the 'Flying to the Future' conference to celebrate the conclusion and legacy of the BiC project. The venue was in Paddington and, appropriately, was at St Mary Magdalene church, a large, beautiful church that has benefited from HF funding as part of an extensive renovation programme.

Delegates included representatives from all the partner organisations and Heritage FundNLHF, church communities, ecologists, architects, bat groups, heritage professionals and volunteers.





The touring artwork *OAWAAP* was on display, with its accompanying soundscape playing during the lunch and networking sessions. There were displays of case studies, a film showing project activity, a display of cleaning kits and advice, and a copy of *The Little Church Bat* book for all attendees.

Over lunch there was an option to explore the stunning crypt beneath the church that has been restored with help from Heritage Fund.

Talks across the day highlighted some of the successes of the project including:

Capital works. The project has worked with numerous churches on ambitious mitigation solutions to physically separate bats from the church community space, dramatically reducing the cleaning burden caused by bat droppings and urine inside the church, protecting heritage items and, in several cases, saving churches from closure.

Engagement and community buy-in. Bats in Churches has helped church communities engage with a wider audience through their bats, turning bats into a living asset that draws in a whole new section of the community. Delegates heard about the church of St Peter in Wintringham, North Yorkshire which was ‘brought together by bats’ and now has an active group helping care for it and its grounds and wildlife.

Citizen science. The volunteer-led surveys of more than 700 churches across England updated data previously gathered in the 1990s, providing vital insights and data that has shaped the recommendations of the project. The full results are to be published in a peer-reviewed journal.

Softer approaches that have led to success. From canopies to covers to vacuum cleaners, some of the most successful interventions have been low-cost to protect church heritage and provide real, immediate benefits for churches and their communities.

At the conference, representatives from the BiC project delivered their recommendations for the project’s legacy which included:

Small maintenance grants for churches to help with their bats. Many of BiC’s successful interventions have been softer, low-cost measures such as equipment and help with

cleaning. The project recommended a grant scheme that would allow churches to access small sums of money to help with such interventions.

More bat awareness for churches. Churches are advised to get to know their bats, make contact and develop relationships with their local bat group, and consider bat walks and events to attract a new audience to the church.

More church awareness for bat workers. Ecologists, bat workers and volunteers are advised to consider helping out at their local church, surveying churches for BCT's National Bat Monitoring Programme and familiarising themselves with church procedures such as faculty.

'Bats in Churches is a project which truly demonstrates the value of The National Lottery Heritage Fund.'

'By supporting this partnership, led by Natural England, partners have been able to work together to help churches across England to protect historic interiors with their precious monuments, woodwork and floors, whilst also allowing resident and threatened bat populations to remain and ultimately thrive.'

'Historic churches and their churchyards provide vital habitats for our natural heritage and it is brilliant that the learning from this project will help many more churches and historic buildings to enable nature and people to live happily in close proximity in future.'

Drew Bennellick, Head of Landscape, Seas & Nature at HF

The programme also gave time to hear from the people who care for churches, with three representatives from PCCs giving speeches about the challenges they faced and what has worked well for them.

The session closed with a sermon reflecting on creation and theology from the Venerable Vernon Ross, Archdeacon of Westmorland and Furness, who sits on the BiC project's governance board. Some highlights from Vernon's warm and sincere speech are given below and felt like a fitting end to the conference.

'The Christian tradition is clear that the earth is The Lord's, that humankind is part of creation, but that we have a call to care for it and nurture it. That creation has value and worth in its own right.

That life on earth, fauna or flora, is not a commodity that is there to be exploited but a gift to be valued Ultimately, how I care for creation and my fellow human is as much an act of worship as singing a hymn or saying a prayer I would like conservationists to see faith communities as allies in conservation and not enemies. I hope that Bats in Churches has shown, at the very least, that faith groups are part of the solution to nature conservation and combatting climate change, and not part of the problem.

'What I would want to say to Anglicans is, don't treat conservationists as potential enemies or a nuisance, but as people who can give us some useful expertise so that we can care better for the creation that we are called to nurture. That the fifth mark of mission, which is caring for creation, actually matters and is not a fringe activity for a few particularly keen members of the congregation.

'Bats are a protected species, churches are beautiful, sacred spaces – the challenge here is offering sanctuary to creatures whose habitat has been degraded by humans and protecting these special places for community and worship at the same time. Through partnership, education and working together.'

The event was an outstanding success and contributed to increased media attention in the final months of the project. It was also an opportunity to network and gauge interest in a bid for future working together, with some useful and positive conversations taking place between stakeholders and partners.

EVALUATION

Introduction

The initial project budget allowed £40,000 for evaluation. The project's agreed purposes encompass both natural and social sciences, and for the project evaluation it was decided to focus of the social sciences, in particular the impact of project engagement on shifting attitudes towards bats in church communities. This decision was made because the success of mitigation interventions is both longer term than the project's timescale and analysed in the final reports of project ecologists.

Appointment

Manning the evaluation contract would typically have been the role of the PM, but as an Engagement Officer on the team had considerable experience of evaluation, they wrote the tender with the support of the CofE's Research and Statistics team.

Recruitment of the consultant was planned through NE as the lead partner; however, as there were some limitations to the NE system, including the inability to ask candidates supplementary questions or to interview them, the partners felt that, for this type of contract, these elements were important in order to appoint with confidence and so the CofE's procurement system was used in this instance.

Six candidates were interviewed. It was a unanimous decision to appoint a consortium of Twenty Degrees and Arcadis, led by Alun Hughes, who has proved to be highly effective.

Process and working with the evaluators

The evaluators held a session with the whole BiC team, and one of the key outcomes of this was that contacts in the project churches would be interviewed every year to track any shift in attitude towards bats. Twenty of the 108 churches were chosen to have annual in-depth interviews, while the remainder were asked to fill in a questionnaire. Other key outcomes of the initial session were that the evaluation metrics were developed and agreed, and the deliverables were re-affirmed.

A BiC progress tracker was designed to hold the project's quantitative data, covering the wide diversity of activity. This fed into the evaluator's quantitative analysis for each annual report and the final report.

Annual reports were produced by Twenty Degrees in 2020, 2021 and 2022, and a final report in 2023. These were presented to the team and to the project steering group. Each member of the BiC project team was interviewed annually and asked about their perspective on how the project was progressing. Each annual report had a particular in-depth focus, reflecting the breadth of the project and the focus of the annual activities.

The first report, in 2020, focused on project management. This was because there had been project management issues which, for a time, appeared to threaten the future of the project. The evaluators participated in the sessions run by external consultants to get the project back on track. The 2020 report also reported on the first interviews with church community stakeholders. Since members of the project team had made initial contact with churches and the project was beginning, a positive shift of attitude was recorded.

The second report, in 2021, interviewed professional ecologists for their perspective. Mitigation was being installed, albeit interrupted by COVID-19 and these interviews gave the ecologists the opportunity to share their experiences of working with church architects and PCCs. A nuanced picture emerged of attitudes in the project churches, with some disappointment that major mitigation was not planned at every site.

The 2022 report focused on the BiC citizen science survey in its final year, noting its success after falling behind during the pandemic year.

However, all aspects of project activity were covered in the reports. The evaluators were given access to a file on the project's SharePoint site and attended a variety of project events including school and cleaning workshops. Each report tracked progress against targets and agreed purposes and made recommendations.

Summing Up

The evaluation was a major part of the project. The appointment of Twenty Degrees was a success and managing this contract was straightforward throughout. They meticulously carried out what they had promised, delivered to time and, most importantly, really entered the spirit of the project and understood it, leading to an excellent working relationship. The quality of analysis and data that they produced was high and their reports are excellent.

Lessons Learned

A good appointment is key – the BiC group agreed that the flexibility to interview prospective contractors helped to secure the best person for the role. This was a benefit of working through the partnership.

Final Evaluation Report

A final report was produced by the external evaluators in November 2023. Inevitably, the external evaluators' report does contain substantial crossover with this report, but effort has been made to make them different in emphasis; for instance the external evaluation report is more strongly focused on feedback from churches.

The report was positive throughout and provided some useful detail from interviews recorded as part of a longitudinal study of people who care for project churches. It

summarised the annual reports produced in 2020, 2021 and 2022 and gave final figures (at time of writing) for all the project's targets. A key paragraph from the conclusion is quoted below:

The programme largely achieved what it set out to do. Most outputs were achieved or exceeded. There was strong progress towards all outcomes identified in the programme logic model. The findings identified examples of human/heritage–bat conflict transformed through capital mitigation projects, measures to protect artefacts or particular areas of church buildings, and education (engagement).

*The BiC programme created space and time for dialogue and explanation, ensuring all sides of the debate had an opportunity to be heard and their perspective understood. In the most effective examples, increased knowledge and understanding developed into sympathy and ultimately empathy. This created an environment in which practical solutions could be developed for the benefit of church heritage, people and bats. The findings suggested greater chances of conflict transformation success where professionals (ecologists and church architects) had key attributes, which were characterised as the **right team**:*

- *Empathy for the position of others*
 - *Worked in a timely manner*
 - *Collaborated with others to achieve affordable, practical solutions.*
-

The report made over 30 recommendations, including recommending that the national, strategic model used by BiC be used for future HF projects. It placed much emphasis on having the right team in place and acknowledged that, although the BiC national model had been effective, this could in part be attributed to a particularly skilled and experienced team; therefore a robust recruitment criterion is suggested for future works.

The full report is available on the project website and can be found on the 'Resources and Reports' pages.





Handover Actions, Governance and Legacy

HANDOVER ACTIONS, GOVERNANCE AND LEGACY

INTRODUCTION

The successfully delivered project has a few minor outstanding actions. Where there are works to complete these are due to delays caused by the pandemic, delays caused by environmental conditions or, in the case of the Norfolk churches, delays caused by contractor issues. In this small number of cases post-project work has been agreed to as it will ensure the mitigation is fully functioning (e.g. some light blocking of bat access points at Chacewater, Cornwall is planned in spring 2024). In cases such as this, the works are minor but critical to the long-term success of our work and it would have been reputationally damaging to step away at the final hurdle.

This section also reflects on lessons learned, and risks and issues from the delivery phase and post-project. The final part of this section of the report explains the project's legacy offerings and ambitions for future partnership working.

HANDOVER ACTIONS

Due to delays at some of the project's Norfolk sites, several churches still require post-project monitoring under the terms of their licence. Each of these sites is listed below, but all the Norfolk BiC sites are managed by Philip Parker Associates who will carry out the monitoring under contract in 2024.

Two other churches, at Radstone and Chacewater, are having minor amendments made to their existing mitigation. In both cases the architects and ecologists associated with the site have agreed that these small changes will likely make a significant difference to the effectiveness of the works the project has undertaken.

A schedule of works has been agreed for all post-project activities and contracts are in place. The BiC Finance Officer (FO) will remain in role until February 2024 and will be moving to a new but similar role within Natural England (NE) after that, so will be available for processing payments for these activities.

Item Outstanding	Owner	Reason for Transfer/Change	Other Comments/Supporting Evidence
<i>Post-project monitoring at Dunston church, Norfolk</i>	<i>Philip Parker Associates</i>	<i>Incomplete due to pandemic years delay. To be carried out in Q1-3 2024</i>	<i>This is a statutory requirement under the licence</i>
<i>Post-project monitoring at Thornham church, Norfolk</i>	<i>Philip Parker Associates</i>	<i>Incomplete due to pandemic years delay. To be carried out in Q1-3 2024</i>	<i>This is a statutory requirement under the licence</i>

<i>Post-project monitoring at Guestwick church, Norfolk</i>	<i>Philip Parker Associates</i>	<i>Incomplete due to pandemic years delay. To be carried out in Q1-3 2024</i>	<i>This is a statutory requirement under the licence</i>
<i>Post-project monitoring at Gayton Thorpe church, Norfolk</i>	<i>Philip Parker Associates</i>	<i>Incomplete due to pandemic years delay. To be carried out in Q1-3 2024</i>	<i>This is a statutory requirement under the licence</i>
<i>Post-project monitoring at Great Hockham church, Norfolk</i>	<i>Philip Parker Associates</i>	<i>Incomplete due to pandemic years delay. To be carried out in Q1-3 2024</i>	<i>This is a statutory requirement under the licence</i>
<i>Post-project monitoring at Toftrees church, Norfolk</i>	<i>Philip Parker Associates</i>	<i>Incomplete due to pandemic years delay. To be carried out in Q1-3 2024</i>	<i>This is a statutory requirement under the licence</i>
<i>Final blocking at Chacewater, Cornwall</i>	<i>Burton Reid Associates</i>	<i>To block an access point and ensure success of the mitigation works. Works need to be done in spring to minimise disturbance to bats</i>	<i>Agreed schedule of works to take place in spring 2024</i>
<i>West Grinstead environmental monitoring report</i>	<i>Tobit Curtis Associates</i>	<i>Work was delayed due to church issue with heating systems that prevented accurate monitoring of humidity in specified conservation area</i>	<i>Schedule of works provided. Report will be issued to the church in December 2023</i>
<i>Radstone church, Northamptonshire, final works.</i>	<i>Bernwood Ecology</i>	<i>Adaptation of the roof of chancel to encourage bat use of mitigation. A large sum was spent on the chancel roof void, but it is little used. This work will add 'bat dormers' to the roof to facilitate access</i>	<i>Schedule of works agreed for spring 2024. NEWLS are in touch with Bernwood regarding this work and are supportive of it going ahead to improve outcomes for bats at this site</i>

All other planned works have been completed, and benefits realised, within the project lifecycle. There are various post-project activities taking place that are not a part of the delivery phase and these are detailed in the 'Legacy' section of this report.

RISKS AND ISSUES

While there were several risks and issues across the project lifecycle, the final year and project end saw very few of either. Once a longstanding issue with a contractor (see 'Major Issue' below) was resolved in October 2022 there were no further high-risk items. In the same year the project also began a strong recovery trajectory after the delays caused by

COVID-19 and began to deliver events and push its citizen science programme to the point that the risk of an extension being needed could be removed from the register.

Risks that sat on the register for most of the project were those around negative press coverage and accidental breaches of the licence by project contractors. A licence breach did occur in late 2020 but was a result of a contractor trying to 'catch up' with pandemic delays and moving to the next section of roof work without ecological supervision. The case was investigated by the licence holder and a report submitted to Natural England Wildlife Licensing Services (NEWLS) who decided to take no action in this. It was determined that no wildlife was harmed by the breach and the project covered the extra cost of the investigation by the ecologist.

During 2020 and 2021 there was a suite of risks and issues on the register relating to COVID-19, but by the end of 2022 all of these items were closed.

Major Issue: Works not completed by contractor at multiple sites - alternative solution delivered

Starting in 2020, multiple issues with one contractor (including failure to deliver on time, lack of documentation/paperwork, licensing issues, lack of invoicing, etc.) who held a contract for seven churches with major capital works, caused significant additional work for the BiC team. The scale of the issues meant that this also had to involve the NEWLS team, NE's Complex Casework Team, the project's Senior Responsible Officer (SRO) and Directors, and NE Legal. Eventually, with legal advice, and after considerable remedial discussions and associated unsuccessful mediation, to avoid the expense and time of a legal dispute, the contract was terminated in July 2022 on a no-fault basis.

Once the contract was terminated, it took some time before data was handed over to the project and this caused further delays before a new contractor could be appointed. The lack of invoicing after the termination by the original contractor also caused complications for project financial management, but this was eventually resolved with NE underwriting any outstanding claims, enabling the project to spend the amount on works to help churches with bats.

Lessons Learned

Changes in project management led to some delay in resolving the issues with the contractor, and complications resulting from pandemic lockdowns also had implications. Equally, putting a significant number of capital works churches in a single lot, under one large contract with a small contractor, was a risk at the start of the project. Letting individual sites would have caused more work at the start of the project, but would have ensured that the issues outlined above would not have materialised to the extent they did. Our recommendation on this point is to keep contracts smaller where possible to avoid an 'all eggs in one basket' situation that could make ending a contract more challenging.

Limited continuing risks at project closure

Now that the project has successfully completed there is minimal risk. There is a theoretical risk that NEWLS will consider the mitigation works at a church to have failed for bats. The hypothetical worst-case scenario would be an order from NEWLS to remove the mitigation from the church. This concept has been worrying to the partnership but is unlikely to be realised. It would require one of the few churches still under the Bats in Churches Class Licence (BiCCL) to show that bats had left the church completely or had suffered a sustained and significant drop in numbers over multiple years. At the time of project closure none of the project churches have lost their bat populations and, while there have been some dips in peak counts post-mitigation, there are none that have suggested that an extreme response like removing mitigation works would be appropriate. A sum of money has been ringfenced post-project to support any church that could end up in this position, however unlikely. Once the licences have expired the legacy group will allocate this money to help project churches with management and maintenance.

CHALLENGES AND LESSONS LEARNED

Some of the chapters in earlier sections of this report have offered lessons learned for their work area. This section of the report summarises these from across the workstreams and offers some detail and recommendations for those considered most significant.

There were some challenges that kept occurring in our dealings with churches, particularly around communication. Key issues are considered here, and an overview of all lessons learned is given in the tables below.

Contacting Churches

A surprise to the project team was that it is not possible to contact churches directly through the Church of England (CofE). There had been an assumption that a national database of contacts would exist, but this is not the case. Churches can be contacted through their Diocese in some cases, but the ability to communicate to a group of churches is very limited. The CofE can put broad messages up on Diocesan communications boards, but it is not guaranteed they will be seen and passed on to parish churches.

For churches within the project this was seldom an issue, although in a few cases contact was lost with churches when personnel changed. The real challenge related to the citizen science surveys. The project wanted to send out a message through CofE to let churches know they might be contacted by a local volunteer about the survey and that this was part of a CofE project. The team did receive some support from our CofE partners on this, for which we were grateful, but, as explained above, the message was not able to be universally delivered. The project took steps to overcome this, as detailed below, but there is a lesson here on making assumptions about organisational structures and being ready to adapt when expected channels of communication are not available.

Learning about CofE communications structures also helped the project to better understand how churches operate and how independently managed parish churches are, which benefited conversations and relationships with the people who care for project churches.

When project officers lost contact with churches, another lesson about how parish churches operate was learned. Churches are almost entirely run by volunteers who sit on the Parochial Church Council (PCC). Although it is not always the case, these volunteers are often retired as they have more time to give, but this time is finite. In some cases, members of the PCC who we had been in contact with moved away, left the PCC or, in one case, the church had been forced to close. Sometimes, when the contact left there was no handover of email addresses or introductions to the new contact, and it made it difficult for the Engagement Officers (EOs) to understand what was happening and to get in touch about events or support. The Diocese could help in some cases but not always, and even when a new contact was reached it was not always the case that they had the same interest in the project as the previous post holder (and even if they did they might not have the capacity to engage with it). This was the case at a handful of project churches, including one where the only person on the PCC who was positive about bats left the group and the remainder rejected any further work with BiC.

The lesson here is that, when dealing with groups or organisations working on a voluntary basis, there should be some expectation or allowance for changes in capacity and enthusiasm for collaborative working. Although collaborative agreements were signed at churches with major works this was not the case for all sites and continued engagement was often reliant on a single PCC member.

The project discussed cases like this with Heritage Fund (HF) monitors and it was agreed in some cases that as every effort had been made to contact the church over a sustained period it was reasonable to step away and focus efforts elsewhere. This meant that some churches had multiple BiC events while others who stepped away from the project had none.

Procurement & Contracts

Reflection on the project's procurement approaches in the early years of the project suggests that a preferable approach would have been to offer the contracts as smaller lots and in two phases.

The first round of procurement for works at the major capital works sites divided the churches into regional lots and so contractors were obliged to bid for management of the group. There were some practical elements to this approach as the project had to deal with fewer people and contracts, but the size of the contracts made them slow to put through NE's systems and excluded smaller ecological firms or ecologists who were not prepared to travel long distances.

Further, the contracts were drawn up for both Activity 1 (survey of site and creation of a Bat Management Plan [BMP]) and Activity 2 (implementation of the BMP). Since Activity 1 informed the scope and costs of Activity 2, the agreed costs submitted at tendering stage were subject to significant variance as they had been based on broad estimates. In some cases, the actual costs were more than 50% higher than initially agreed and this meant a slow process as the contract change notes required a higher level of sign-off and evidence to demonstrate why the estimated and actual costs were so different. Letting Activity 1, determining the right management plan for the church, then inviting tenders for that plan would have been a less onerous approach.

In the second tranche of procurement, in 2021, for 25 churches to have a BMP only, the project welcomed tenders for work at single sites and subsequently attracted a wider range of ecologists who had the capacity to take on single churches. This led to greater competition and the opportunity for more ecologists to work on BiC sites and get experience working on complex church roost sites. The benefit of this is that there are now more ecologists with relevant experience who will be available to help churches in the future. For similar projects this approach is recommended.

As touched on above in 'Major Issues', the letting of large contracts and multiple sites also meant that when there was an issue it had a negative impact on a large proportion of the project's activities. Again, experience here suggests that multiple, smaller contracts might be helpful for a project of this type.

Cross- Sector Working and Partnerships

The challenge of conflicting views on our governance bodies was an issue in the early part of the delivery phase. This was not unexpected as the project sought to resolve human/wildlife conflict and partners came from different backgrounds on the issue. Through improved reporting, increased clarity at meetings and lots of listening to each other, an increasing consensus was achieved over time. Although everyone in the partnership was coming from different areas, common goals began to emerge and there was an increasing sense of joined up working from around 2021 onwards. In fact, as time went on, it was apparent that the partnership was becoming a strong one and that, in many ways, the differences were becoming strengths, bringing expertise and perspectives that enabled a deep and nuanced understanding of the issues being addressed.

Working collaboratively across five partners could have been risky and, indeed, appeared to be so in the beginning. In the end, however, this went extremely well and contributed to the success of the partnership. The simple lesson here is – don't be afraid of a big multi-sector partnership – it can work well when everyone feels included and listened to.

Budget Planning

Some variation in predicted spending was due to the pandemic changing the way the project operated, but some issues in the capital costs budget line were related to a considerable underestimate of the cost of professional fees. This led to the need to re-profile some key budget lines mid-project.

By working closely with HF and the partners, the Project Manager (PM) and FO were able to reach a consensus and re-balance various lines to suit the needs of the project once delivery was underway. The professional fees line was predicted to be overspent by around £100K and so funds were moved from inflation and contingency to counter this. This was caused by an initial poor understanding of how much professional supervision time would be required during the works, and the development phase failed to account for architect's time, which was a significant expense. This was likely due to the development team's lack of familiarity with church related construction projects (not a focus of NE prior to this project). A recommendation for future projects would be to consult with partners who have

experience of a particular activity and consider workshopping the proposed processes to highlight any aspects that have been missed.

Several other lines were variously underspent or overspent and the exercise (agreed with HF) made smaller adjustments (mainly below £10K) to ensure the budget was fit for purpose for the remainder of the project. Overall, this was an aspect of the project that went well, despite the oversight on professional fees. Having a confident and experienced FO in place helped keep the budget in check and made the re-profiling a relatively straightforward exercise. Again, there is a lesson here about ensuring the right team is in place to deliver the best project outcomes.

Citizen Science: In-house Management

As mentioned previously, there was a point in the delivery phase when it seemed that the project would fail to meet its target to survey 700 churches through its citizen science programme. Aside from the impact of the pandemic it emerged that, while the volunteers were very keen, many of them were having difficulty getting a response from churches. The volunteers would send an email, using a project template, explaining the survey, and asking to meet someone from the church. In many cases they received no reply and, in some cases, an outright refusal. Given how far behind target the project was on this element, this was a serious concern.

In October 2021 an opportunity was seen to bring things back on track. The PM had a conversation with BCT about an underspend in the specialist time budget, a separate conversation with the Surveys and Training Officer in which they reflected that, with hindsight, it may be better to manage the surveys in-house, and a further conversation with the project SRO about options to extend the project to meet the target. An idea presented itself and the PM added an option to the October governance board agenda to suggest the use of the underspend to bring in an extra person over the winter months to contact churches directly and match them to a local volunteer. The board approved this approach, which was run past HF and signed-off.

Recruitment took place in November and a person was in post by late December. The new appointment was placed at BCT, who had good links to bat volunteers, but worked closely with the project's Communications Officer (CO), who had a CofE email address which was used to contact churches about the survey and offer them a match with a local volunteer.



This approach also allowed the team to book in a date for the survey and plan the delivery of equipment. The response from churches and volunteers was really strong, to the point where the project needed to purchase additional detection equipment to meet demand over summer 2022.

The outcome was that the project exceeded its target and did not require an extension, and many people were engaged and given the opportunity to learn more about churches and bats. A further benefit of exceeding the target before the project ended was that the team had time to develop a peer-reviewed paper on the survey results, which will be published in an open access format in early 2024 and will form another important element of project legacy.

Creativity

Some of the unplanned outputs that have proved useful in helping the project reach its audience have come from responding to in-team creative suggestions. Examples include the *The Little Church Bat* picture book, *On A Wing And A Prayer (OAWAAP)* artwork and the BiC Challenge Badge. The approach of the PM and the project's governance bodies was to see these ideas as opportunities, explore and cost them, then give the team some free rein to develop them once approved.

There is a lesson here about the benefits of encouraging creativity and innovation, having the flexibility in the programme to accept and take forward new ideas, and being open to suggestions that can help achieve project objectives and offer additional benefits.

Empowering Churches: A Gentle Approach

Empowering churches to manage their bats and make the most of them via bat walks was a major success of the project. Education and understanding helped to put the power into the hands of the church, but needed to be done sensitively. The project worked with the church at every stage and did not try to impose a view or a particular course of action – everything was collaborative. Although not every church responded to this, many did, and there were some positive outcomes as a result.

Approaching a challenging topic softly, listening openly and educating gently while acknowledging the issues was key to many of our success stories. Once churches came to understand and accept their bats they often became an asset, bringing new people to the church and offering a new source of funding through putting on bat nights. Modelling the soft, listening approach when engaging on a new and potentially controversial topic is recommended for future work.

Covid-19

The project's response to the pandemic was an excellent demonstration of how to manage through change and uncertainty.

Being externally funded and widely geographically spread gave the team a surprising stability in the pandemic: they were already set up to work from home; no one felt like they would be furloughed or put on part-time working; they had a clear set of aims; and so they

were able to keep going. Despite lockdown the team were able to collaborate online, and they took opportunities offered to adapt and be creative to continue to meet project objectives. There was an element of shared adversity that appeared to increase bonds across the team and saw them reach out and support each other, which had long-term benefits for their working relationship.

There were some minor operational struggles coming out of the pandemic – CofE advice to staff was different to NE's, which was different to contractors etc. meaning different members of the team had different restrictions on travel and engagement. In future it may be helpful to consider alignment of policies across the partnership and a combined piece of guidance agreed for the cross-partnership team. Whilst hopefully a one-off situation, there is a lesson here about the importance of collaborative working, particularly between partners at governance and project board level.

The Right Team

The project's external evaluators put emphasis on the importance of the right team in place. The project certainly engaged a talented team of people and part of the success of the team's work related to selecting people with a range of additional skills beyond the core role description; for example, Rose Riddell was an experienced environmental educator and Diana Spencer had software and design skills. This saved the project money and led to innovation.

Other considerations when recruiting might include the role description for a FO. For this project, and likely for similar HF funded projects, it was immensely useful having an FO with good interpersonal skills. In this role, the FO is often dealing with a community or individual volunteers and these interactions benefit from being smooth and amicable, leading to better relationships with stakeholders. A robust selection criterion at recruitment is recommended.

Project Management And Governance

After a successful development project led by NE, the initial project management had some limitations. The change in NE's PM and SRO in December 2020 made a significant positive difference to various elements of day-to-day project management as well as to forward planning and project legacy work.

Having a dedicated and inspiring PM at the appropriate grade in NE meant that the project was efficiently and well managed, thus giving confidence to all partners which was reflected in the strong partnership that developed (see later section – 'Governance and Management Arrangements'). A key lesson learnt from this is ensuring the right PM is in post, with an appropriate level of project management skills and experience, and good interpersonal skills. Testing robustly for these criteria at the recruitment stage is recommended.

Colander Churches – Understanding When To Stop And Consider Options

St John the Baptist, Cold Overton, Leicestershire

This church had rafter boxes and several rounds of blocking up to exclude bats from the body of the church. Despite the best efforts of the ecologist, the willingness of the church and the efforts of local contractors, bats continued to find a way in.

Cold Overton is a good example of what the team came to term ‘colander churches’ – buildings with so many small holes and cracks that it is practically impossible to keep the bats out. Part of the reason long-term efforts to block fail in churches such as these is the shifting nature of ancient buildings. Changes in seasons and variations in temperature can cause wood to expand and contract, and these shifts create tiny new openings which creatures the size of bats are able to use to access the interior.

The outcome at Cold Overton was particularly sad as the village does not have a community space and had removed pews in the nave and installed a kitchen with HF funding to provide a space for activities – the bat mess interfered with this in the summer months and made the space difficult to keep clean and use safely.

The project offered the church funding for a professional deep clean, bought the church a gazebo to provide a sheltered area free of bat droppings, and purchased a lightweight, long reaching cordless hoover and long brush on an extendable pole to help make the cleaning lighter work. The project ecologist, EO and PM met with Rudy Ike, the committed and supportive churchwarden to reflect on the works and confirm that we did not feel we could continue to attempt to exclude the bats.

It was a difficult conversation to have, but recognising when to stop is an important lesson. Every church is different, each roost is different, and it was not immediately apparent how difficult it would be to exclude the bats. However, as the project understood more, made repeated attempts, and saw similar outcomes at a handful of other churches, the decision to switch to protective and cleaning support often emerged as the more practical way forwards.



WORKED WELL

Relating To	Lessons Learned (hat Went Well/Badly/Was Lacking)	Cause	Response	Recommendations for Future
Capital Work	Worked Well: Checklists, information and discussion prior to work being carried out.	Documents produced in response to initial issue with understanding processes at sites.	Continued to roll this approach out across all our capital works sites.	Ensure all involved know the legal implications and what each other's role is to ensure effective collaboration.
Finance	Worked Well: Development phase – budget build for delivery bid.	Aside from the capital budget, see 'Procurement' above, the rest of the budget was well built as a result of close consultation with the delivery team/partners at early stage.	Well-built and proactively managed budget.	Finance Officer discussion with project staff on the delivery tasks promoted better understanding of work and costs.
Finance	Worked Well: Identified finance contacts in each partner organisation (both development and delivery).	Finance Officer took the initiative and built good relationships with all the partners' finance departments at an early stage.	Smooth interactions and effective inter-organisational working on finance/claims.	Identify finance contacts for all partner organisations – who are or will be familiar with the project.
Finance	Worked Well: Budget review and amendment	The budget needed to be reviewed as outlined, see 'Procurement' above, due to unknowns during the development stage budget build.	The budget was reviewed and amended with the support of HF and partners to better serve the project objectives.	A good relationship with HF monitors, as well as evidence of careful budget management on the part of the project helped to create conditions that supported a budget re-profile and some helpful flexibility from HF.

Relating To	Lessons Learned (What Went Well/Badly/Was Lacking)	Cause	Response	Recommendations for Future
Professional Engagement	Worked Well: Sharing lessons learned.	Workshops for sector professionals.	More workshops held to keep specialist contractors aware of progress across the project.	Share lessons widely to ensure best practice across all delivery areas.
Training/ Engagement	Worked Well: Virtual training/information in place of face-to-face. This included 'Working With Churches' and online learning videos about how to record bats at a church. The cleaning workshops were added to the online offer in the last few months of the project to improve our legacy offer.	COVID-19 national lockdowns.	Impact – reached wider and larger audience, well received.	Some training is best face to face, but virtual training worked really well, reaching a larger and more diverse audience. Consider virtual options when planning engagement.
Engagement	Worked Well: <i>The Little Church Bat</i> picture book was not in the original plan but turned into a great engagement tool.	Engagement Officers presented an idea they had for a picture book about the project's work, based on a real-life example.	PM and steering group supported the idea. Finance Officer helped to find some budget to develop it and all partners inputted.	Encourage collaborative creativity on the team.

Relating To	Lessons Learned (What Went Well/Badly/Was Lacking)	Cause	Response	Recommendations for Future
Engagement	<p>Worked Well:</p> <p><i>On A Wing And A Prayer</i> was not in the delivery plan but an idea from a volunteer and an EO led to an interactive, touring engagement opportunity.</p>	Volunteer concept to make a visual artwork relating to the project.	Embracing this relatively low-cost idea and trialling the artwork in a few locations demonstrated its appeal and resulted in a national tour. Useful tool for getting local media attention.	Be open to opportunities to collaborate and engage. Don't be afraid to take some small risks on creative ideas.
Engagement	<p>Worked Well:</p> <p>BiC LIVE! sessions held online. Huge increase in reach and good legacy offering through recording the sessions.</p>	COVID-19 – this was another response to the restrictions of the pandemic that led to extra outputs and benefits.	Team arranged live online sessions with a variety of specialists and stakeholders, and advertised the sessions widely via social media and our existing mailing list/partner contacts.	Consider using online approach in future project work to increase reach and improve legacy offering. Many BiC LIVE! sessions have been viewed hundreds of times.
Engagement	<p>Worked Well:</p> <p>Schools and Challenge Badge activities</p>	Activity plan required a large amount of outreach and community events, not always able to be run directly by or in churches.	Utilising existing staff experience in outdoor education to make flexible activities that can be used by any group in a number of difference ways.	Schools pack and challenge badge allowed churches to reach out to community groups and groups to run independent activities at their local church

Relating To	Lessons Learned (What Went Well/Badly/Was Lacking)	Cause	Response	Recommendations for Future
NBiCS/ Citizen Science Work	Worked Well: Employing additional resources to target churches and volunteers for surveys.	COVID-19 caused delays to the citizen science programme and some churches did not respond to volunteer emails.	Additional staff time to match up churches with volunteers for summer surveys which meant that there was no project extension required. Use of CofE email address to contact churches about the surveys.	Take a flexible approach to management of workstreams and be open to adapting and bringing in additional resources to meet targets.
NBiCS/ Citizen Science Work	Worked Well: Online volunteer 'mingles' and sessions offering tips and the opportunity to share experiences.	Team set up sessions to give volunteers the opportunity to share experiences and compare notes – these worked very well.	Evolutionary and flexible solution found.	Recommendation to offer these to volunteers in other projects – a social and leaning opportunity. Also ensured consistency nationally.
NBiCS/ Citizen Science Work	Worked Well: Employing additional resources to target churches and volunteers for surveys.	COVID-19 caused delays to the citizen science programme and some churches did not respond to volunteer emails.	Additional staff time to match up churches with volunteers for summer surveys which meant that there was no project extension required. Use of CofE email address to contact churches about the surveys.	Take a flexible approach to management of workstreams and be open to adapting and bringing in additional resources to meet targets.

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BADLY/LACKING

Relating To	Lessons Learned (What Went Well/Badly/Was Lacking)	Cause	Response	Recommendations for Future
NE Process/ Guidance	<p>Badly/Lacking:</p> <p>Following the government guidance on use of contractors after first COVID-19 lockdown it took NE some time to issue its own guidance. Partners each had their own guidance, and it was difficult to balance this to give our contractors clear guidance. Contractors were waiting for permission to start from NE.</p> <p>Also access to the church was determined by local rules or capacity restrictions relating to COVID-19.</p>	COVID-19 and use of contractors. Could have caused delays to seasonal work and potential for suppliers to lay off staff.	Finance Officer worked to pull together guidance across partner organisations.	Natural England should aim to deliver corporate guidance around the same time as government guidance should a similar situation occur.
Capital Work	<p>Badly/Lacking:</p> <p>No join up between church, architect and ecologist at some sites. It wasn't clear who reported to whom.</p>	Wasn't clear who was to project manage the capital work. Also, what the legal role was for the ecologist and those who are named on the BiCCL. This caused confusion at sites and could have delayed works	Team produced a checklist and reporting structure to ensure everyone working on a capital works site understood their role.	Ensure checklist is in place from the beginning of any future projects.

Relating To	Lessons Learned (What Went Well/Badly/Was Lacking)	Cause	Response	Recommendations for Future
		.		
Finance	<p>Badly/Lacking:</p> <p>Development budget build for delivery bid was not sufficient.</p>	<p>Costs of some activities were not known (e.g. architect costs were c. £100K, which was not budgeted for, redundancy was not allowed for and needed to be added after the bid was in – this was due to differences in approach to redundancy across the partnerships’ various staff contracts. The additional costs for ecologist supervision of contractors were not costed for as the budget managers were not aware of this BiCCL requirement, so not enough in professional fees).</p>	<p>Budget revision part way through the project. Early agreement to use more capital for architects and professional fees and use some contingency. Later, a full re-profile in 2021.</p>	<p>Work to identify as many costs as possible into budget from the outset. Acknowledge this is a challenge with novel projects, and so build in flexibility and permissions to respond to need once delivery commences.</p>
Procurement	<p>Badly/Lacking:</p> <p>First batch of church ecologist contracts needed to be more specific (e.g. Activity 2 BiCCL site</p>	<p>Lack of understanding of new licencing process during development stage</p>	<p>The BiCCL annual returns should be sent to NE as required, with a copy sent to the project team to ensure that the</p>	<p>Tender specification should have been more specific about what information and data was required by the project, and how often.</p>

Relating To	Lessons Learned (What Went Well/Badly/Was Lacking)	Cause	Response	Recommendations for Future
	registrations and annual returns were sent to NE not to the team).		project saw the detail contained in them. This caused an issue when a contractor failed to apply for a BiCCL ahead of works.	
Procurement	<p>Badly/Lacking:</p> <p>First batch of church ecologist contracts should have been split into two – Activity 1 (BMP) and Activity 2 (capital works). Costs became very high in some cases (e.g. £100K tender increased to £151,000K, which entailed significant internal approvals to make the change). Carrying out Activity 1 informed the cost of Activity 2 so tendering for both together led to serious inaccuracies.</p>	Without knowing what capital work is required the ecologist costs could not be anticipated. Once known, the costs for the ecologist surveys and supervision amounted to more than 50% of the original tender in most cases.	For those over 50% a justification document had to be written for approval by Natural England before the contract variation could be done. A significant amount of time was required to get these contracts right. This led to some delays which is an issue when the work is seasonal.	Only tender for work that is required and costs are understood – don't try to plan for the unknown.
Procurement	<p>Badly/Lacking:</p> <p>First batch of church ecologist contracts – engagement with the</p>	The contract says the supplier to report to the PM – no timeline indicated.		More robust reporting periods to be built into the tender specification.

Relating To	Lessons Learned (What Went Well/Badly/Was Lacking)	Cause	Response	Recommendations for Future
	PM. Harder to enforce regular reporting from contractors.			
Procurement	Badly/Lacking: First batch of church ecologist contracts – ownership of data and paperwork.	No specific detail to show that NE owns the data (survey results and reports) in the main body of the contract – more clarity to help contractors understand data ownership.		More specific detail to be included in the main body of the contract to make the obligations of the contractors as clear as possible.
Project Management	Badly/Lacking: Project Manager with not enough experience of complex projects or report writing was employed at the start of the delivery phase.	Poor recruitment practice?	New PM employed at a higher level of experience.	All projects differ. However, try to anticipate the complexities of the projects before they start and ensure that an adequately experienced PM is in post. Natural England has since introduced new standards for project management in the organisation.

GOVERNANCE AND MANAGEMENT ARRANGEMENTS

The project was managed through a governance board and a steering group. The governance board was composed of senior posts in the partnership organisations and met quarterly. The PM brought a summary of the previous quarter's work to the board and brought larger scale questions or options for their decision as needed. The steering group, which gave advice on day-to-day matters concerning the direction of project activities and providing steer as needed, was also made up of representatives from the partnership organisations. The PM, and often various members of the team, reported to the steering group every month.

The PM provided everyday leadership of the delivery team, was responsible for holding team meetings, 1-2-1 catch up sessions, collecting progress data, compiling appropriate reporting documents (progress, risks and issues, budget updates, etc.) and arranging the meetings and agendas for the steering group and governance board. Beyond this, the PM and members of the team also met our HF monitors quarterly, presenting progress updates and discussing any changes or issues.

As covered elsewhere in this report, there were some issues in the first year of the project relating to the PM in role at the time that meant meetings were missed and progress was not communicated to any of the governance bodies. This led to difficulty in decision-making as there was insufficient information to inform them. These issues were resolved shortly after the appointment of a new PM in November 2020 after which regular meetings took place and normal channels of communication were in place. By 2023 the steering group in particular repeatedly remarked on how well the group had come to work together and the general positive feeling that had come to characterise the partnership.

Governance Board Members

Chair: Mel Hughes, Natural England; replaced by Rob Cameron, Natural England in October 2022

Jen Heathcote – Historic England

Sarah Robinson OBE – The Churches Conservation Trust

Venerable Archdeacon Vernon Ross – Church of England

Kit Stoner – Bat Conservation Trust

Steering Group Members

Chair: Jill Hobbs, Natural England (from January 2021)

Joseph Elders – Church of England; replaced by David Knight, Church of England in July 2023

Diana Evans – Historic England

Sarah Robinson OBE – The Churches Conservation Trust

Lisa Worledge – Bat Conservation Trust

The project also had a dedicated legacy planning group, which was formed in spring 2021. This group included members of both the governance board and the steering group, and was attended by members of NEWLS who contributed to discussions regarding the BiCCL and post-project monitoring of capital works sites.

FLYING TO THE FUTURE: THE BATS IN CHURCHES LEGACY

The BiC legacy offer is broad, and elements of the project will be active or available for years into the future, including our website, *The Little Church Bat* and the BiC Challenge Badge. The BiCCL will continue and training for Volunteer Bat Roost Visitors (VBRVs) will be offered in future years under a contractual agreement between BCT and NE.

The post-project BiC legacy group will meet annually to review post-project activity and maintain partnership connections. The first meeting, to establish terms of reference, is scheduled for 10 January 2024, and ongoing annual meetings will be in April each year, starting in April 2024.

Website

The BiC website contains: every ecologist report and a full set of case studies; cleaning guidelines; links to e-learning and training videos; links to every BiC LIVE! session and a range of downloadable activities to support churches holding fundraising events. The website will remain accessible and managed by CCT for at least the next eight years.

Bats in Churches Class Licence

The BiCCL will continue to be a wildlife licensing option for registered consultants, as NE believes the flexibility it offers can be useful to church communities. The majority of the sites registered under the class licence to date have involved damage caused by bats and, due to the scale of the proposed impacts, a high level of survey effort was required to ensure a thorough understanding of how bats were using the building. However, general maintenance is also a purpose under the licence, and going forwards it is considered likely there will be an increase in site registrations under this purpose. Natural England are therefore amending the BiCCL so that a reduced survey effort can be accepted if appropriately justified and if NEWLS are satisfied that this is proportionate to the proposed impacts. The NEWLS has recently successfully issued the first site registration for a church not associated with the BiC project, demonstrating that it is fit for ongoing use.

Bat Advice Service – Bats in Churches Elements

As part of the project legacy, it was agreed that NE would incorporate some additional elements into the Bat Advice Service contract between NE and BCT. This contract is for provision of the Bat Advice Service which it is NE's statutory obligation to deliver, with the BiC activities added to enhance the offer to places of worship beyond the statutory service. The following additional activities have been written into the contract which was completed in July 2023 and are fully funded by NE:

1. The provision of a training course for experienced VBRVs to give them the skills and confidence to make visits at churches and places of worship. The course, to be held in the first year post-project 2024–2025, will be held in person and will train 20 participants.

2. There are several BiC churches where the BiCCL runs beyond the end of the project. These sites will require some management post-project. Based on a maximum of three days a year, a BCT manager will liaise with ecological contractors and NEWLS to ensure that monitoring work has gone ahead and that licence returns have been submitted on time. At selected sites the project legacy partnership has requested short evaluation surveys to be sent out annually. The nominated manager at BCT will send these surveys to the relevant church contacts and report back to the project legacy group, which will meet annually.

3. Presence/absence surveys for places of worship

Deliver up to 15 presence/absence surveys at churches to help churches understand their position with regard to the presence of bats. This service could be promoted through the new Bats in Churches Advisor at BCT, funded through the CofE's 'Buildings for Mission' grants.

4. Enhanced data sharing for churches

The following activities aim to improve understanding of bat roosts at places of worship and lead to better outcomes for bats when works need to take place:

Data collected by Bat Advice Service VBRVs to be shared with the Church Heritage Record (CHR) database via an annual report that can be uploaded to the CHR site.

Sharing of roost report data ahead of quarterly Diocesan Advisory Committee meetings, where churches with bats are on the list for consideration in building or maintenance works.

5. Bat Advice Service - attendance at annual BiC meetings

Bats in Churches project partners (Natural England, Bat Conservation Trust, Church of England, The Churches Conservation Trust and Historic England) have committed to having an annual meeting to help facilitate the long-term legacy of the project. This activity allows for a representative of the Bat Advice Service to attend the annual meeting to facilitate consideration of the bat, heritage and people aspects of the project legacy. Reporting on the above activities at these meetings is to reassure partners that BiC legacy work is being carried out. The first of these meetings will take place on 10 January 2024, the remainder will be in April, annually. All dates to be confirmed at the inaugural meeting.

Buildings for Mission: Bats in Churches Advisor

The project worked with BCT to put together a successful bid for a Bats in Churches Advisor at BCT for two years, starting in early 2024. The bid was to the CofE's 'Buildings for Mission' project and BCT received confirmation it had been successful in mid-November 2023. This role will continue to support churches post-project and will trial offering small grants to help with heritage maintenance in exchange for carrying out nature-based activities at the church.

The Little Church Bat

The Little Church Bat picture book is available to buy online at various retailers: [The Little Church Bat by Rose Riddell, Diana Spencer | Waterstones](#). All proceeds post-project will go to support CCT who have been transferred the rights to the book to allow them to continue to benefit from sales.

Where are BiC's Published Outputs?

Most of the project's written outputs are available on the website www.batsinchurches.org.uk. This website should remain functional until at least 2030. Some material is on the YouTube channel [Bats in Churches - YouTube](#), other material remains on the NE managed SharePoint for long-term storage (25 years from project end date) and some materials have been passed to partner organisations entirely. The following table summarises the locations for all the project's legacy items.

<i>Item</i>	<i>Location</i>
Bats in Churches website	Hosted by CCT
Ecologist reports on capital works sites	Website
Case studies – all churches inc. factsheets	Website
Downloadable activities for fundraising	Website
Cleaning guidelines (downloadable)	Website
E-learning portal	Website
'Recording Your Church Bats' guidance	Website
VBRV training for churches	BCT
BiCCL training for ecologists	Natural England
BiC LIVE!	BiC YouTube Channel
Statements of Significance	Held by churches. Appropriate extracts transferred to Church Heritage Record*
<i>The Little Church Bat</i>	Rights held by CCT, to be used to raise funds to protect churches
Physical events resources (e.g. display boards and printed activities)	Shared with bat groups who have supported the project to assist future events
BiC Challenge Badge	Now operated by BCT
<i>On A Wing And A Prayer</i> artwork	Final home at Wintringham CCT church in North Yorkshire
All BiC project records	Held on NE SharePoint for 25 years

*The project has not published full versions of the Statements of Significance it has produced. Advice suggests that some details could lead to thefts so only edited versions have been publicly shared.



BEYOND BATS IN CHURCHES

In the final year of the project the team began to develop a concept for supporting churches into the future.

The project trialled micro grants to help with cleaning and heritage protection at a small number of churches and observations suggested that, in terms of value for money, the return on these small sums (£500) was high, resulting in satisfaction amongst those who cared for the church. The grants were for the church to spend as needed, so could be used, for example, to purchase a lightweight cordless vacuum cleaner to reduce the labour of cleaning bat mess or to pay for a one-off professional clean to get the church back on top of cleaning or perhaps on protective measures such as pew covers. These interventions caused no disruption to the church, required very little capacity to undertake and had an immediate positive effect. The churches felt that the burden of cleaning up after the bats was being recognised, which was psychologically important to them. While the capital works carried out were effective in some cases they were often expensive, disruptive, required capacity and commitment from the PCC, and were clearly not suitable for every church with bats.

At the same time, the project began to see the results of the engagement programme, and how by learning more about their bats, and even using them as a natural asset to draw people to the church, people caring for churches had shown a marked shift in attitude towards the bats in their building. The core of the project's delivery phase helpfully coincided with shifts in public perceptions of nature, the 'Attenborough effect' that followed the screening of Blue Planet II alongside a growing awareness of climate change likely supported the efforts to get churches engaging positively with their bats, as well as increasing the appeal of activities such as bat walks to the general community.

This led to the development of a proposal to HF that would build on lessons learnt from the BiC project, teasing out the elements of BiC that had been particularly effective for people, nature and heritage and trialling them at a larger scale to deliver wider benefits for community, heritage protection and species recovery.

1 Funding

The core part of the bid is for a community grant pot that the project would distribute to churches to support them with cleaning and heritage protection in exchange for carrying out nature-positive activities. The fine detail of the administration would be decided during the development stage, but the concept is something quite small and agile.

Micro grants of £1,000 or less that would be easy to apply for through a simple form, based on an existing BiC partnership template, with criteria around heritage value and number/species of bats. The grants would be given for the kind of softer interventions that the BiC project has found to be beneficial – the provision of protective covers and catch trays, lightweight vacuum cleaners, heritage cleaning kits, specialist brushes and professional cleaning services.

HF has confirmed that at this grant scale it would be acceptable for the reporting from the church to be minimal – perhaps a picture of what the grant has paid for, an image of

whatever activity they have carried out and a few brief lines of narrative. Bats in Churches has a list of recommendations for cleaning, protection and other interventions and equally leaves behind a range of materials to help churches carry out community events, most of which can easily be downloaded from our website and are designed to be printed out on a domestic printer. There would also have to be capacity in the project, through BCT as partners, to link churches with local bat groups to hold a bat walk or talk for the community.

This workstream is about enabling churches and communities to live alongside their bats in a nature positive way, but with financial support that also protects cultural heritage. The micro grants might provide a good model for future funding and an aim would be to test and demonstrate its suitability for wider use to support natural and cultural heritage.



2 Engagement

Engagement outcomes from BiC have been significant. What evidence shows is that ***far fewer churches are anti-bat than we thought at the start of the project, suggesting that it might be a loud minority that are fiercely against them.*** Support has been received from many churches on this point, including around CofE's Fifth Mark of Mission which calls on Anglicans to care for all God's Creation.

The project found that nature can be a real draw to bring people in the community into the church space – this can make a difference to churches that want to apply for general funding but are struggling to demonstrate significant use due to low congregation numbers.

Bat events and nature events have led to churches with low to single figure congregations seeing 100+ people come to the building, discovering heritage they didn't know was there. Some of these new attendees have volunteered and ***become involved in the care of the building or in developing the churchyard for biodiversity,*** and this will be encouraged by the proposed project. The existing partnership are also keen to widen the group by formally bringing in Caring for God's Acre (CfGA) who could support nature education and activities at project churches. Caring for God's Acre have collaborated with BiC on many occasions and would be an excellent and natural partner to the work. They have recently confirmed they would be pleased to be a part of this proposed project and have joined calls with the wider partnership.

As above, the project would provide guidance and materials to help churches undertake nature positive activities such as planting for bats and other wildlife friendly initiatives, for example Plantlife's 'No Mow May' campaign – this is aligned with CofE's net zero policy

which includes managing churchyards for carbon retention through natural growing and not cutting back. This could be supported with a well-designed piece of interpretation that explains how ‘management for wildlife’ is taking place at project churches. Bats in Churches has existing interpretation templates that could be used for this purpose and has a list of interpretation printers and makers who have provided excellent value for the project – this would represent a huge saving on development of materials and sourcing suppliers that a completely new project would need to give time to. The delivery of guidance would be undertaken by new partners CfGA, with support from BCT on bat-themed activities. This workstream should be community focused and would also look to engage underserved communities and other faith groups.

Schools

The BiC project has a fully developed schools programme that could also be extended to help with engagement and education around bats and heritage. The schools programme has had consistently excellent feedback and is aligned with primary schools curriculum. So far BiC has run the sessions for 800 children. The materials for the session can fit in to a handheld basket, the script is written and could be passed directly to a new project officer or could be delivered by the existing BiC EO as a sub-contractor. It is proposed the programme be expanded to include urban schools and the exploration of urban heritage (e.g. urban cemeteries or other faith buildings) to reach a wider audience.

3 Building Capacity, Sharing Knowledge

The project could build in capacity for advising churches that are undergoing renovation (e.g. those working with an HF grant). Churches are on HF’s new priority list and so it is anticipated that more churches than usual might be carrying out works in the next 10 years. Retaining expertise from BiC will make the renovation process easier for PCCs and stop each church from having to carry out its own research and learning as part of the renovation process – expertise and lessons learned can be provided.

Since BiC has found that between 45% and 55% of Anglican churches have bats using the interior, it is highly likely that these churches will encounter issues with bats. By providing up-to-date advice and a point of contact, the project could encourage early engagement with ecologists, encourage churches to prepare for projects by making their own observations of how bats use the church (helpful for ecologists and licence applications) and lead to better outcomes for bats, churches and communities.

This outline is being worked up by the partners post-project with the intention of submitting an expression of interest to Heritage Fund in January 2024.

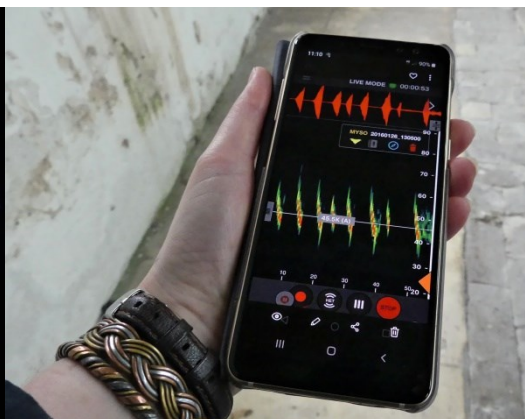


FINAL RECOMMENDATIONS FOR CHURCHES

- If you think you may have bats, consider a simple presence/absence survey well ahead of any planned works. You could contact a local ecologist, a local bat group, or call the Bat Advice Service for advice.
- Know your bats! If you know you have bats take some time to get to know about them. When do they arrive? When is the mess most intense? Which part of the church do they use? Can you see where they are exiting and entering the building? All this information will be extremely useful if you need to carry out any works which could impact the roost. A downloadable guide to help you do this is available on the website.
- Consider engaging with a local bat group or ecologist who may be able to offer support.
- Consider running a bat walk/talk or similar nature themed event to bring new members of the community to the church. Use it to fundraise or to encourage local people to volunteer to help look after the church. Material to support events like these can be downloaded from the website.

FOR BAT WORKERS

- Considering getting involved at a local church with bats if you haven't already.
 - Get to know how the Church of England works, such as faculty and other permissions, PCC members are volunteers and only have so much time to give.
- Could you take on a local church as part of the National Bat Monitoring Programme?
 - Try our 'Working With Churches' e-learning module on the website.





FOR FUNDERS

- Consider funding for surveys and development works, even for smaller projects – the project has identified a gap here that can stop works going ahead. The cost of pre-works ecological surveys required to get a roofing or bat mitigation project off the ground are often not covered by funders and can be high. Covering these expenses would help more projects go ahead to protect and renovate churches and help bats.
- More flexibility with timescales if possible – the nature of working with bats makes defined timescales unrealistic in many cases. If funders could consider seasonal variations when working on natural heritage projects, and adjust spending deadlines to suit these, it could lead to higher rate of success for projects of this type.
- Funding for repeatable or maintenance activities such as professional cleans to help churches with a special event.
- Consider funding less ‘glamorous’ projects such as regular smaller payments over a longer period to help sustain churches that need help maintaining heritage.

FOR THE PARTNERSHIP

- Natural England/NEWLS may wish to consider offering BiCCL training again in a couple of years to increase the number of ecologists who are well-prepared to work with churches. Recommend offering a course in 2025, updated as necessary to include any changes.
- Church of England should look to embed as much learning as possible into their core guidance and everyday practice. The more information and signposting provided, the better prepared churches with bats will be, should issue arise.
- A partner could take on the school’s programme – highly effective, well received, curriculum aligned. All the development has been done – it’s ready to go and could be continued at relatively low cost, depending on scale. The school’s programme could also be a part of the proposed new HF bid.
- All partner organisations should continue to encourage positive narratives about living alongside bats where it is reasonably possible to do so.
- Continue to work together on a bid for a new partnership project to help churches with heritage protection and biodiversity, and to engage with communities around wildlife and local heritage

CONCLUSION

The Bats in Churches partnership has been a remarkable success. It has delivered all its project objectives and more besides. One of its most striking outcomes is the way the partners have grown together and, in doing so, have become more than the sum of their parts. Collaboration across sectors has led to a project that has delivered a broad range of outputs and benefits to stakeholders, from schoolchildren to sector professionals to churchwardens.

The work of the project means there is a better understanding of how bats use churches, how to use mitigation to help churches and protect heritage, and through extensive engagement we know that more people now have a positive view of bats. The project leaves a wealth of expert advice and informative material behind it that will remain accessible and continue to support churches with bats for many years to come.

Despite the adversity of the pandemic the project thrived in lockdown and found new and innovative ways to succeed. A talented team and an increasingly committed steering group showed resilience, creativity and adaptability, allowing the project to deliver effectively in extraordinary conditions.

The final words here of thanks. Thanks to a wonderful and passionate team, thanks to a united steering group and a supportive governance board. Thanks to the architects and ecologists who collaborated so well. Thanks to the dedicated people who care for our churches, and the equally dedicated bat volunteers. Thanks to every stakeholder who participated. Final and deepest thanks go to Heritage Fund and to all the lottery players who have made this possible. Thank you for supporting Bats in Churches and helping us to deliver so much for heritage, bats and people.



APPENDIX 1

Training for professionals and specialist volunteers

Dates of key training events and attendance

15/05/21 Bat Care Basics (81)

13/05/23 VBRV Workshop (7)

23/07/22 VBRV Training Coston Church (7)

03/09/22 VBRV Training Wood Dalling Church (7)

13/05/23 VBRV Training Compton Martin Church (7)

30 /10/21 VBRV Online Training at NBC (11)

25/09/20 VBRV Train the Trainer (4)

23/03/21 Ecologists' Best Practice (35)

07/04/22 Ecologists' Best Practice (15)

20/04/23 Ecologists' Best Practice (19)

26/10/23 Ecologists' Best Practice (100) – 193 registered

20/05/21 Architects' Best Practice (9)

23/09/21 Architects' Best Practice EASA (48)

17/10/23 Architects' Best Practice (45) – 89 registered

13/01/22, 17/01/22, 24/02/22 Bats in Traditional Buildings Training for Heritage Professionals (29)

07/11/23 Bats in Traditional Buildings, Training for Heritage Professionals (20)

15/05/21 NBMP Make Your Church Roost Count (41)

02/03/22 NBMP and Bat Calls (263)

27/05/22 NBMP Make Your Church Roost Count (17)

13/05/23 NBMP Make Your Church Roost Count (45)

01-02/11/23 BiCCL Training (7)

9/11/23 Bats for Heritage Professionals (20)

13/11/23 Bats for Heritage Professionals (20)