



Archives & Records  
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## Preservation & Conservation



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EXPLORED  
DISCOVERED  
FOUND  
DETECTED  
CONNECTED  
ENGAGED  
UNEARTHED  
LEARNED



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# Welcome..



## *Welcome to the Preservation and Conservation issue of ARC Magazine*

Included in this month's issue is a range of articles demonstrating just how varied and exciting the activities of the Preservation and Conservation section are. We have an account of how a rare page of 15th century sheet music was identified through the crowdsourcing power of social media; that digitisation is the latest method of preserving a collection of wax seals which were previously accessed via other, dated formats; how the collection of a business' archives has moved into a new and long-awaited, purpose-built home; and how a DIY project has attempted to make

environmental monitoring more financially accessible for those dexterous with electronics.

A special thanks to Mark Allen of the Preservation and Conservation section for coordinating the issue this month, and thanks to all of the contributors for generously sharing their work with us.

**Adele Clarke**  
ARC Editor

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Acknowledgement: West Yorkshire Archive Service.

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Collectors Accounts, Donaghadee, 1725, repaired with Tengu tissue and cold gelatine paste. Acknowledgement: Zoe Reid, National Archives of Ireland.



# Openinglines

**Andrew Nicoll**, Vice Chair of ARA UK & Ireland Board, outlines the changes and challenges that ARA has experienced and how they have led to a new direction of travel for the future.



"What day is it?" I think that has been my most uttered line beyond "you're on mute", of this past year. I have scribbled a few notes over the past week to prepare for this article, and three words seem to come up again and again: challenge, change and direction.

These three themes have been apparent in my day to day work since last March when we all shifted to the challenge of home working and started to deal with the necessary changes to our daily lives. I don't think anything that we had set out to do over a year ago is going in the same direction we had anticipated, but I'm amazed that even with the constant challenges, the changes and the shift in direction, we are getting somewhere. I stepped back into an ARA Board role in late 2019, to the role of Honorary Secretary. It had been a few years since I'd been involved in the running of the Association, and thought it would be a good chance to help out and get involved. It is fair to say that the last couple of years have also had ARA face a number of challenges, plan for change, and look to our direction; and my work, stepping up to be Vice Chair last year has revolved around those areas.

Last year, ARA had come to a natural point in our planning cycle where our strategic direction was up for review. The Board have worked through a number of sessions, analysed surveys

and feedback from the membership and the sector to provide a new strategic plan for the next few years. It is ambitious and will give us all a sense of common direction. Allied to the strategic plan is the annual operating plan, and working with the Chair, Secretary and CEO, we have produced our direction for the next year, and what we hope to achieve. These documents will be published for the members and sector.

Covid-19 has presented a number of challenges for us. Finances generally have caused worry: from being concerned for our members in a very tough financial world, and making sure that ARA is able to continue with the work it does for members and the sector. We re-budgeted twice last year to make in-year savings, and then had a very honest look at our finances for the year we are in. Thankfully, with the support of members renewing subscriptions, we were almost spot on with our proposed budget, and we can proceed with our plans without fear of belt-tightening.

Our plans will involve change. We've already seen that with our traditional meetings and events moving to digital platforms. I think that this change has had a positive effect in one way – more people are able to engage than ever before, and that is heartening. We

*“the last couple of years have also had ARA face a number of challenges, plan for change, and look to our direction; and my work, stepping up to be Vice Chair last year has revolved around those areas”*

are also looking at various changes to the administration of the Association – all aimed at improving services and trying to manage our financial resources as best as possible.

I'm pleased that with the work the Board and the members are undertaking at the moment, ARA will be well placed to deal with the challenges we face; cope with the changes that are happening regularly; and fully understand the direction we are heading in. I hope I can be forgiven though for not knowing what day it is often!

*“Allied to the strategic plan is the annual operating plan, and working with the Chair, Secretary and CEO, we have produced our direction for the next year, and what we hope to achieve”*

# Professional development news

## Professional development webinars

**Chris Sheridan**, ARA's Head of Professional Standards and Development, takes us through the upcoming Professional Development Webinars



Despite its challenges, 2020 proved to be a record year for ARA professional registration. We saw a 50% increase in the number of enrolled candidates working on their Registered Membership application, and an 18% increase in the number of applications submitted for Foundation, Registered and Fellow status (compared to 2019).

There are good reasons for this. The COVID-19 pandemic reduced the amount of time many spent commuting, freeing up capacity to invest in career development. But we know some members are also looking ahead and thinking about their career. The economy has yet to realise the true economic cost of the pandemic. This may make the UK and Irish job market more competitive, and perhaps more uncertain.

So, reflecting our commitment to supporting our members' careers, we're kicking off 2021 with a new series of professional development webinars, building on the success of the 2020 Wednesday webinars. Whether you're looking to take your career to the next level, thinking about your own CPD, or want to know more about how ARA can support the professional development of your staff and volunteers, we've something to offer.

Details for each webinar are below and attendees are welcome to email questions in advance to [chris.sheridan@archives.org.uk](mailto:chris.sheridan@archives.org.uk).

### WEBINAR 1: DEVELOP YOUR CAREER WITH THE ARA

Date: Wednesday 27th January 2021.

Time: 1pm to 1.15pm

**Description:** This webinar will showcase the different career services and support provided by the ARA. Learn how to get more from your ARA membership, your work experience and your chosen career! We'll also share some insights from other webinars planned in 2021.

**Learning outcomes:** Individuals and managers will gain a better understanding of how ARA membership provides opportunities for personal and professional development, and national recognition through professional registration.

**Joining instructions:** On the date of the webinar simply click here a few minutes before the published start time and select the option 'join on the web'.

### WEBINAR 2: EXPLAINING THE COMPETENCY FRAMEWORK

Date: Wednesday 24th February 2021

Time: 1pm to 1.20pm

**Description:** The ARA's competency framework is an essential career development tool for all those working and volunteering within the archives, conservation and records management sector. It also sets national competency standards in record keeping for the UK and Republic of Ireland. This webinar introduces the ARA's competency framework and explains how it can support professional development across the sector.

**Learning outcomes:** Individuals and managers will gain a deeper understanding of how the framework can support professional development for themselves and their staff.

**Joining instructions:** On the date of the webinar simply click here a few minutes before the published start time and select the option 'join on the web'.

## WEBINAR 3: FOUNDATION MEMBERSHIP OF THE ARA

Date: Wednesday 24th March 2021

Time: 1pm to 1.20pm

**Description:** This webinar introduces Foundation Membership of the ARA. It provides an overview of the process to qualify, from enrolment through to submitting your application.

**Learning outcomes:** Individuals will gain a better understanding of how to develop and submit a successful application.

**Joining instructions:** On the date of the webinar simply click here a few minutes before the published start time and select the option 'join on the web'.

## WEBINAR 4: REGISTERED MEMBERSHIP OF THE ARA

Date: Wednesday 21st April 2021

Time: 1pm to 1.20pm

**Description:** This webinar introduces Registered Membership of the ARA. It provides an overview of the process to qualify, from enrolment through to submitting your application.

### Learning outcomes:

Individuals will gain a better understanding of how to develop and submit a successful application.

**Joining instructions:** On the date of the webinar simply click here a few minutes before the published start time and select the option 'join on the web'.

## WEBINAR 5: FELLOW OF THE ARA

Date: Wednesday 19th May 2021

Time: 1pm to 1.20pm

**Description:** This webinar introduces Fellowship of the ARA. It provides an overview of the process to qualify, from enrolment through to submitting your application.

**Learning outcomes:** Individuals will gain a better understanding of how to develop and submit a successful application.

**Joining instructions:** On the date of the webinar simply click here a few minutes before the published start time and select the option 'join on the web'.

## WEBINAR 6: CPD REVIEW

Date: Wednesday 23rd June 2021

Time: 1pm to 1.20pm

**Description:** All Foundation and Registered Members, and Fellows of the ARA, must continue with their professional development to maintain their professional knowledge and skills. CPD Review is the process through which the ARA invites those members to provide evidence of their ongoing CPD.

**Learning outcomes:** An understanding of the importance of CPD and the CPD Review process.

**Joining instructions:** On the date of the webinar simply click here a few minutes before the published start time and select the option 'join on the web'.

## WEBINAR 7: TOP TIPS WHEN APPLYING FOR PROFESSIONAL REGISTRATION

Date: Wednesday 23rd June 2021

Time: 1pm to 1.15pm

**Description:** This webinar highlights the key areas of advice and guidance that candidates must respond to in order to pass the assessment. We also share insights and feedback from ARA's assessor team.

**Learning outcomes:** Candidates working towards professional registration will gain a deeper understanding of what makes a successful application.

**Joining instructions:** On the date of the webinar simply click here a few minutes before the published start time and select the option 'join on the web'.

More webinar dates will be released soon. If you have any topic suggestions for future webinars, please contact [chris.sheridan@archives.org.uk](mailto:chris.sheridan@archives.org.uk).

## Congratulations to the following members who successfully applied for ARA professional registration in 2020:

### Foundation Member of the ARA (FMARA)

Congratulations to Alyson Brewer FMARA, Ben Barber FMARA, Fran Horner FMARA, Jim Costin FMARA, Suzanne Shouesmith FMARA and Jacob Bickford FMARA.

### Registered Member of the ARA (RMARA)

Congratulations to Lynsey Darby RMARA, Rosemary Everitt RMARA, Laura Earley RMARA, Garth Stewart RMARA, Philippa Mole RMARA, Caroline Walter RMARA, Brett Irwin RMARA, Chloe Anderson-Wheatley RMARA, Gillian Booker RMARA, Jennifer Hunt RMARA, Rachael Jones RMARA, Rachael Muir RMARA and Sean Macmillan RMARA.

### Fellow of the ARA (FARA)

Congratulations to Caroline Sampson FARA, Heather Forbes FARA and Natalie Adams FARA.

### CPD Review

Congratulations to the following Registered Members who successfully completed their CPD Review:

Barbara Neilson RMARA, Deborah Phillips RMARA, Elizabeth Wells RMARA, Hannah Jones RMARA, Heidi McIntosh RMARA, Laura Yeoman RMARA, Louise Ray RMARA, Lyn Crawford RMARA, Natalie Adams FARA, Rachel Cosgrave RMARA.



# Collecting Matters

## Happy hour at the progress bar

**Jo Pugh**, Digital Development Manager at The National Archives (TNA), discusses new and forthcoming developments to help the sector increase its digital capacity and skills.

If ever there was a year for your archive to get digital, 2020 was it. I guess not many of us made a resolution to spend 'less' time with our collections – being locked out of your own reading room is really no fun at all. But now that we're all at the mercy of whatever remote archival provision we ourselves offer (this is rather crudely known in the software world as eating your own dogfood), we have an even more immediate incentive to be giving our digital collections the gourmet treatment. And as even more of our activity and our depositors' activity has been driven online, the importance of flexible and responsive digital preservation has only grown.

To help with this transition, TNA launched Plugged In Powered Up: [www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/plugged-in-powered-up/](http://www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/plugged-in-powered-up/), a digital capacity building strategy for the sector, in 2019. Our digital preservation training Novice to Know-How: [www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/plugged-in-powered-up/novice-to-know-how/](http://www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/plugged-in-powered-up/novice-to-know-how/), has been one of Plugged In Powered Up's most popular and successful outcomes so far, with over 1000 users worldwide. For 2021, we have commissioned a new set of Novice to Know-How modules, this time focused on understanding and developing access capacity for digital records. We are aiming to launch these online by April. Alongside these lessons, our step-by-step digital preservation workflows: [www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/plugged-in-powered-up/digital-preservation-workflows/](http://www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/plugged-in-powered-up/digital-preservation-workflows/) support you in turning theory into practice.

For those needing to make the case for specific preservation activities or preservation generally, Digital Archives Graphical Risk Assessment Model (DiAGRAM) is an experimental tool produced by the University of Warwick and colleagues at TNA. DiAGRAM can help archives identify the most significant actions to reduce the risk to their digital collections and track progress over time. You can find out more here: [www.nationalarchives.shinyapps.io/DiAGRAM/](http://www.nationalarchives.shinyapps.io/DiAGRAM/)

Embarking on this work can sometimes feel like a lonely journey, particularly at the moment. For this reason, we

*“As well as supporting the current workforce, TNA is committed to ensuring that everyone entering the profession feels they have the digital skills they need”*

have just recruited our second cohort of mentees in our peer mentoring programme, and I'm very grateful to those archive professionals who have volunteered their time to support colleagues who are starting digital projects. If you are interested in the programme you can see more here: [www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/plugged-in-powered-up/peer-mentoring/](http://www.nationalarchives.gov.uk/archives-sector/projects-and-programmes/plugged-in-powered-up/peer-mentoring/). Meanwhile the Digital Archives Learning Exchange (DALE) continues live on YouTube, with upcoming sessions focusing on practical digital preservation (including making the most of DiAGRAM) and the full range of digital resources now available to the wider heritage sector. More information about existing and upcoming resources can be found here: [www.nationalarchives.gov.uk/archives-sector/networks-and-collaboration/digital-archives-learning-exchange/](http://www.nationalarchives.gov.uk/archives-sector/networks-and-collaboration/digital-archives-learning-exchange/)

As well as supporting the current workforce, TNA is committed to ensuring that everyone entering the profession feels they have the digital skills they need. The new apprenticeship standard for archives will be published in the spring and incorporates the full spectrum of contemporary archiving practice – in all its hybrid technicolour. We will continue to work with the Archives and Records Association UK & Ireland to ensure that all our professional frameworks and standards do the same.

In the meantime, does anyone know if you can 3D print beer? I'm just asking for a friend.





Moulds in storage. Acknowledgement: TNA, Crown copyright

# Unsealing collections: from drawer to discovery

**Amy Sampson**, Associate Preventive Conservator at The National Archives UK (TNA), shares a unique preservation and digitisation project that has provided access to a large collection of moulds of wax seals.

The National Archives (TNA) is the custodian of 1000 years of history and among the records in its care is a vast, and underexplored, collection of historic wax seals. In recent years though, a variety of projects exploring the condition, materiality and preservation of seals have helped to renew interest in them.

One such project has utilised a collection of plaster and silicone rubber moulds taken from our wax seals. Held by the Collection Care department, at around 8000 items it is the largest collection of its type in the UK. These moulds date from the 19th Century onward and were manufactured to cast replicas, which could then be handled and studied by researchers with no risk to the original.

The collection had been extensively used, but moulding and casting fell out of practice in the early 2000s.

Information about its production and content was sparse, held mainly as incomplete handwritten notes, or in the memories of those who had worked on it. As those

“Given the visual nature of seals, the idea we repeatedly returned to was to digitally image them and make them available in Discovery”

Volunteer Rebekah Harbord retouching a seal. Acknowledgement: TNA, Crown copyright



colleagues retired, it was clear that if the collection was to retain its significance and be utilised in the future then something must be done. So Collection Care began a cataloguing project, to create a record of this resource for those interested in seals research.

Collaborating with colleagues from the Collection Expertise & Engagement and Cataloguing departments ensured that the data captured would be useful. Together, we looked at what information to record - how to draw connections between mould and original document; how to ensure relevance to existing research resources; and how to produce something compatible with Discovery, our online catalogue, should we want to unify the two in the future.

What to do with the moulds once cataloguing was completed became our next objective. Given the visual nature of seals, the idea we repeatedly returned to was to digitally image them and make them available in Discovery. We then had two problems to resolve. Firstly, finding an appropriate imaging method. Secondly, the digitisation of objects for presentation

in Discovery had never been attempted before, so could this ambition be realised? Various digitisation methods were explored, including photography, 3D scanning and reflectance transformation imaging, but ultimately rejected as either time-consuming, resource-intensive or requiring a level of expertise we didn't have.

The solution to use a flat-bed scanner proved highly effective. The best result was achieved when images were converted to greyscale. They were scanned at 800dpi (a significantly higher resolution than TNA's standard 400dpi for digitisation) and as the image is compressed for display in Discovery, this ensured it retained a high degree of quality. The images were then retouched using Photoshop. The mould is a negative impression, so they needed to be inverted; brightness and contrast adjusted to give the best "read"; and any discolouration interfering with the image was removed.

With the digitisation method established, delivering an output of 8000 images and related metadata became





*At around 8000 items it is the largest collection of its type in the UK*



The end product - PRO 23/161, House of the Holy Sepulchre, Warwickshire, 1534. Acknowledgement: TNA, Crown copyright



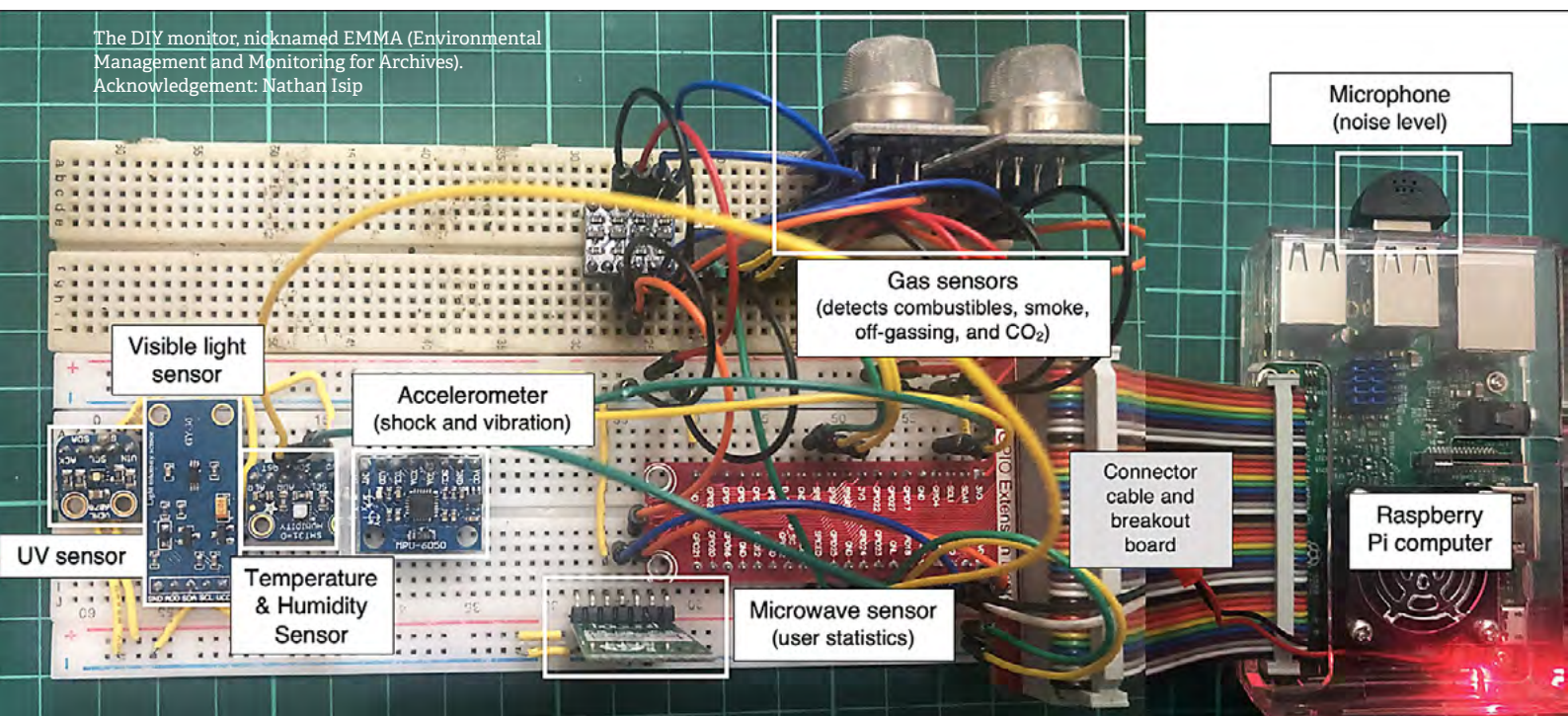
our next problem to solve. Volunteers had transcribed the cataloguing information, so we decided to continue working with them on the digitisation. It would ensure we had time and space to guarantee that the work was of high quality, it kept costs low, and it would also be the first digitisation project at TNA to be undertaken by volunteers.

A dedicated team have executed every step of the digitisation process. The first 600 images went 'live' in 2017 as record series PRO 23, and since then over 7000 moulds have been scanned. There are now 5500 images available in Discovery and we are adding to this number all the time. Each mould is described in its own catalogue entry, providing information about the original impression. The terms used are fully searchable and integrate with TNA's existing seal research resources. The entries also provide a hyperlink to the parent document entry, so users can access the original. Alongside this are high-resolution images, which can be expanded to view small details, such as heraldic devices or text, and are downloadable as PDFs.

As well as demonstrating the breadth and variety of our wax seals collection, and providing a wealth of seal images to examine, PRO 23 is web-based and globally accessible. It can assist researchers in making new identifications and confirming ideas, and is also a resource for those interested in architecture, heraldry, fashion, weapons, armour and many other things besides. Furthermore, in some cases, the mould is now the only surviving record of the seal.

The investigation and conservation of seals at TNA continue to generate innovative projects. They have brought skilled individuals together, working collaboratively on improved understanding and access to the collection. PRO 23 is an entry point into our vast seals collection and allows TNA to take a more holistic approach to preservation of the historic wax seals in our care.

The DIY monitor, nicknamed EMMA (Environmental Management and Monitoring for Archives).  
Acknowledgement: Nathan Isip



# Lessons in making DIY environmental monitors

**Jonathan Isip**, of the University of the Philippines School of Library and Information Studies (UPSLIS), presents the lessons learned from a project to build from scratch an adaptable and affordable environmental monitor.

The lockdowns of the last year may have taken you away from your collections, unable to monitor their condition or make any interventions. Maybe you do have monitoring devices in place but cannot collect and export the data, or maybe you don't have the budget to get temperature, humidity, light, and other monitors in the first place? I had the latter in mind when I decided to try making DIY monitors for under £100. The goal was to create a versatile monitor that was customisable to work in different areas, like collection stores and reading rooms, by adding or removing sensors as desired.

Why DIY? The cost of technology has dropped over the years, and many affordable sensor options have become available. We are now able to choose which factors we want to measure and so develop a better appreciation for environmental monitoring when forced to make compromises on different sensors' cost, accuracy, and ease of use.

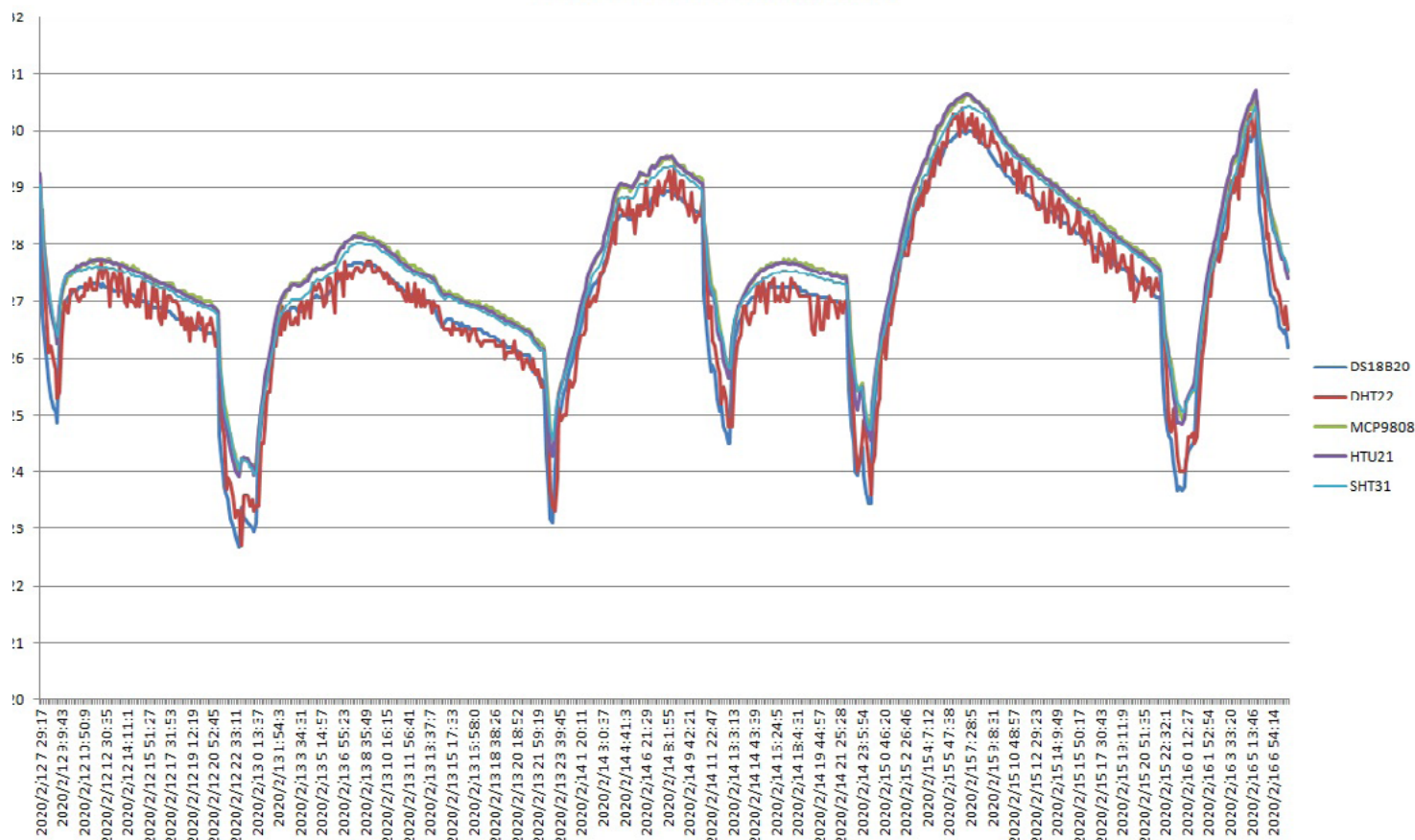
Accurate enough sensors are easily found in online marketplaces. After all, we are monitoring seasonal or

drastic changes, not microsecond temperature fluctuations of many decimals of a degree Celsius! I prioritised the availability of components, to make sure that other people could easily replicate this project. Additional benefits of commonly available sensors are that any problems have already been documented and code is readily available. A Raspberry Pi (RPi) computer was used as the sensor interface for this same reason. It also allowed for additional

“*The goal was to create a versatile monitor that was customisable to work in different areas, like collection stores and reading rooms*”



Temperature Readings (deg C)



Not all sensors are created equal. Some may have really good specifications on paper but are wildly inaccurate when tested. Acknowledgement: Nathan Isip.

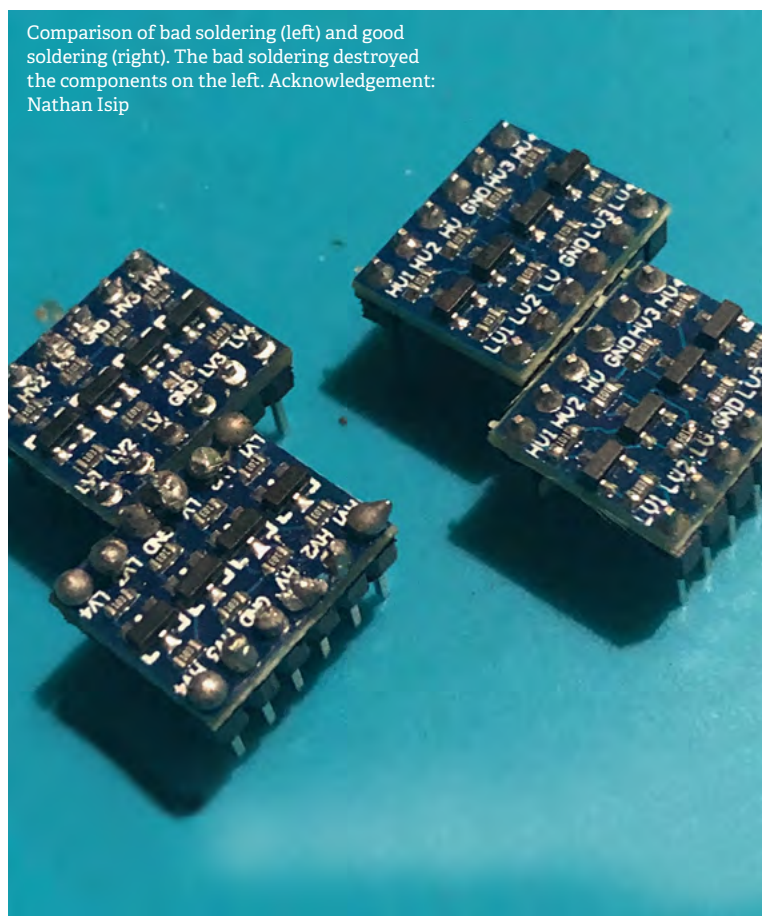
features that a standalone monitor may not have, such as customising the included sensors, automatically uploading data online, or automating things like controlling lights or raising window blinds. The unit, once put together, also fits nicely within a small box.

The project had three main challenges: selection of components, assembly, and software development.

A monitor's datasheets may claim accuracy and reliability, but testing may prove otherwise. I investigated multiple different sensors for each parameter to decide which was best to use. I also found limits to what cheaply made sensors can measure, such as only being able to measure sound intensity, with a microphone, rather than sound pressure. I had to discard some factors, such as eVOC concentration, because the appropriate sensor didn't pass this testing phase.

Of course, I had to first assemble everything before I could do the testing. One thing to keep in mind is that while the total cost of components was under £100, you must also budget for the assembly equipment. My cheap soldering iron did not have temperature regulation and so burnt out the temperature and humidity sensor. It took several destroyed components before I decided to buy a soldering station. This alone doubled the cost of the project, but may be workable if you are making multiple monitors. Using a breadboard to connect all the sensors to the RPi meant

Comparison of bad soldering (left) and good soldering (right). The bad soldering destroyed the components on the left. Acknowledgement: Nathan Isip



**“***Having access to an environmental monitor is always better than not, so this low-cost DIY option would be great for institutions with small budgets but great enthusiasm***”**

less soldering, but some of it was necessary as most sensors do not come with connector pins already attached.

While the wiring was simple, with only four wires per sensor, actually connecting them proved confusing to people with no background in electronics. I tested the assembly process on people with different electronics experience and one person almost shorted out the Raspberry Pi!

Once everything was properly wired, I still needed to write the software to make it work. This involved a lot of debugging for each sensor, and there was the issue of timing and scheduling regular measurements. Since all sensors communicated with the computer in the same way, we couldn't have sensors working simultaneously. Python isn't that good with multi-threaded, time-dependent functions that have to check each other's state. Or at least I'm not good at coding for it! This is probably why you don't see commercial monitors that combine too many sensors, especially sensors that require different timings. This was particularly a problem for the temperature, humidity, and light sensors where I wanted frequent measurements. The code works for the first few hours but then starts failing to make measurements. This is a hardware limitation that can be corrected in time with good code. I am currently in the process of refining said code, which can be found as pre-alpha in GitHub at [github.com/archivistnathan/Emma/tree/testdev](https://github.com/archivistnathan/Emma/tree/testdev).

I still consider the project a success in making a proof-of-concept DIY environmental monitor. It confirmed the availability of necessary sensors and identified the minimum skill requirements for building the monitor. This would be a good project to work on with volunteers that have a hobbyist electronics background. Having access to an environmental monitor is always better than not, so this low-cost DIY option would be great for institutions with small budgets but great enthusiasm. Just remember that data logging is pointless if we don't respond to the root causes!

# A new home for the Electrical Supply Board (ESB) Archives

**Deirdre McParland**, Senior Archivist at ESB Archives, celebrates the conclusion of a project to create a purpose-built archive space for the company's rich history.

From humble beginnings, ESB Archives was established in 1991. The archives department was based in a building not fit for purpose and prone to fluctuating temperatures and humidity throughout the year. Similar to many archives, we had also run out of space. Many of our collections were inaccessible and archival value remained unknown. There was no dedicated reading room for researchers.

Over a period of more than twenty years there were many attempts at securing a permanent home for ESB Archives. Following much planning and surveying sites, and benchmarking other archives in Ireland and the UK, the plans for a new purpose-built archive were approved and finalised in 2015. A new site adjacent to an existing ESB site on the outskirts of Dublin city was chosen. Following this ESB, for the first time, employed archivists to manage the collections and project manage the archive move.

Our initial brief at this time was to develop a digital platform on [www.esbarchives.ie](http://www.esbarchives.ie) and leverage the content of our archives, so the backlog of accessions remained on the back burner for the first few years. Once construction of our new archives building began in the summer of 2018, we sprinted into action and prioritized appraising the collections.

Following a detailed survey, a project management plan was put into action. Weekly and monthly progress reports ensured that all of our teams were aligned with individual goals. Motivational bribery in the form of archive cake also helped team spirit!

There were many joyful moments throughout the project. As we ploughed through previously unopened boxes we discovered some significant collections, including a record series belonging to the Chief Accountant dating right back



“The transfer of our archives by a specialized removal company began in June 2019 with an average transfer of 1200 boxes a day over a 10-day period”

to 1929, offering a bird's eye view of decision-making processes over a fifty-year period. Another notable discovery was previously unseen photographic albums of major projects, with descriptions (the archivist's dream)!

To ensure that all collections were boxed and preserved securely during transit to their new home, we re-housed thousands of documents, photographs and glass plate negatives from their original storage into archive standard, acid free sleeves, folders and boxes. We also took this opportunity to merge previously scattered collections, further enhancing the intellectual control of our collection and supporting future cataloguing priorities.

The transfer of our archives by a specialized removal company began in June 2019 with an average transfer of 1200 boxes a day over a 10-day period, averaging out at two deliveries a day.

Throughout the project, as much as possible, we managed other workflows, research enquiries, delivering specialized talks and curating exhibitions. Internally, we continued to communicate and engage with the rest of the company on the project, utilizing our internal digital platforms.

Our team moved into our new home at the end of July 2019 and the archive was officially opened in January 2020.



Accessions room in old archives building. Acknowledgement: ESB Archives



Exterior view of ESB Archives. Acknowledgement: ESB Archives



Exterior View of Back of ESB Archives showing solar panels and green roof insulation  
Acknowledgement: ESB Archives



The project brief called for a high-quality design offering a stable environment utilising low-energy passive design. Bearing the change of archive building standards from British Standard (BS) 5454 to BS EN 16893 during this time, we ensured our architect was aware of this and few adjustments to the original brief were required.

Our archive includes three repositories; accessions, isolation, cataloguing and digitising rooms; staff offices; a reading room; and exhibition and meeting spaces. It has achieved a Building Energy Rating (BER) A1 rating and Building Research Establishment Environmental Assessment Method (BREEAM) Excellent rating. Electricity is the primary source of energy for heating and cooling. Solar panels installed over the staff accommodation supplement the building's energy requirements. A green roof adds insulation to the repository to protect it from weather extremes. It also slows down rainwater leaving the roof as part of a sustainable urban drainage scheme.

Before COVID-19 we used our reading rooms to inspire, welcome and provide specialised workshops and seminars to teams throughout ESB. Knowing, sharing and understanding where we have come from is the platform to motivate, inspire and instill a sense of pride in us all and to our customers.

While we have been working from home we have focused on cataloguing our digital collections. We continue to deliver our specialised workshops to both the company and the public through online platforms. We facilitate researchers as much as possible online and on occasion we have returned to the archives when essential.

Our new archive space was a collaborative project and involved the expertise of a talented project team in ESB including architects, engineers, planners, surveyors to name a few. Our new archive underlines ESB's longstanding commitment to preserving its heritage and ensures the continued preservation and access of our archives for generations to come.

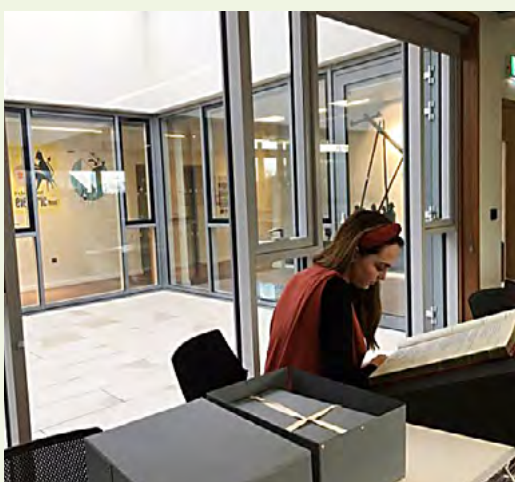
Before COVID-19 we had been delighted to welcome our archive colleagues to our new space and share our experience of all aspects of the project. We very much look forward to returning to our beautiful home when safe to do so.



Appraisal day's clothing.  
Acknowledgement: ESB Archives.



First day of moving the collections.  
Acknowledgement: ESB Archives.



Interior view of reading room.  
Acknowledgement: ESB Archives.



Interior view of main repository  
Acknowledgement: ESB Archives



Reading room set up for specialised talk for ESB staff.  
Acknowledgement: ESB Archives.



# It all started with a tweet!

**Katie Proctor**, of the West Yorkshire Archive Service, describes how social media outreach resulted in the identification and conservation of a rare piece of 15th century sheet music.

Back in April 2019 the team from the Leeds office of the West Yorkshire Archive Service came across a document in a box described as the Whitby Abbey Coucher Book, c.1450. Peeping out of the degraded binding was some music presumed by the team to be quite early. Thinking it would make a great tweet for their campaign #searchroomdiaries they took a quick snap and posted it on social media.

The post had quite a response but the best reaction came in an email from Dr Lisa Colton, Reader of Musicology at the University of Huddersfield;

"As musicologists of pre-reformation music, we are always excited about new discoveries. It's quite typical for music to be very fragmentary, and as such the significance of your document should not be underestimated."

In the following days the team heard from Susan Harrison, English Heritage Curator for Whitby Abbey, and Jason Stoessel, Senior Lecturer at the University of New England, one of Australia's leading experts on music before 1700. They were keen to do further research on the music page as it may have been an early example of 15th Century English Poliphony, from a choir book that belonged to Whitby Abbey. Dr Colton managed to gain funding from the Music and Letters Trust to pay for conservation work, which would allow further research.

Before any conservation work began, very detailed notes and photographs were taken of the binding's original structure. The parchment folios inside the binding are transcripts of documents mainly relating to Whitby Abbey, from original documents dating from 1293 to c.1460. They include a valuation survey of lands, rents, and tithes held by the Abbey c.1460; transcripts of an Inspecimus charter of Henry VI to the Abbey reciting previous grants (dated 3 December 1445); and a list of the Kings of England from Egbert to Edward IV. The parchment wrapper itself is a re-used papal bull, written in iron gall ink.

A mock-up of the binding and its sewing was made to aid our understanding of the binding's construction and how the paper liners were attached, and therefore how they may have been damaged by being incorporated into the cover. The mock up would also be useful in re-binding the volume once the conservation and imaging had taken place.



The tweet sent out by the Leeds Archive team as part of the #searchroomdiaries campaign. Acknowledgement: West Yorkshire Archive Service

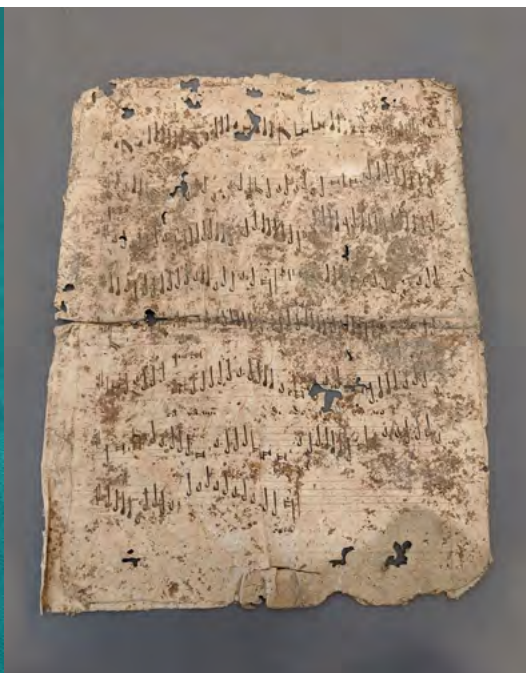


Detail of the sewing in one of the parchment folios. Acknowledgement: West Yorkshire Archive Service

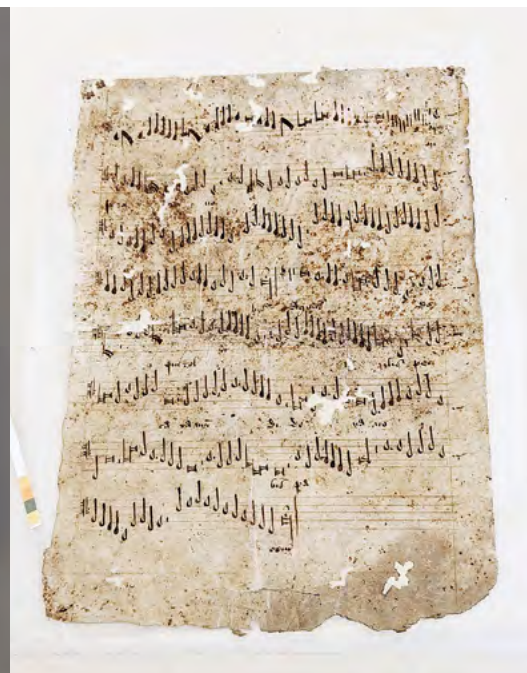
“After the cleaning treatment, another social media post revealed that people could already pick out some new ‘squiggles’!”



The Whitby Coucher book. Acknowledgement: West Yorkshire Archive Service



The music page prior to wet treatment. Acknowledgement: West Yorkshire Archive Service



The music page post wet treatment. Acknowledgement: West Yorkshire Archive Service

Once the sewing was removed, the paper liners were inspected and we found three pieces of paper were used as the liners. One of these was the music page. The other two were manuscript pages stuck together. It was unclear whether these pages had been purposefully stuck together, or because of water damage. It was obvious, however, that extensive water damage had caused the paper to become very dirty, soft and extremely fragile.

The paper's pH was tested and read about 4-5, meaning it was acidic. The Iron Gall Ink was tested and showed positive signs of both Iron II and Iron III ions, which could accelerate further the degradation of the paper structure.

The conservation funding allowed us to focus on treatment of the paper lining pages, particularly the music page. Tests showed that water would soften the gritty and flaky dirt on the surface of the paper. Microscopic examination of the inks showed these to be stable and sound, with little evidence of Iron Gall Ink degradation. To introduce water to a document written in iron gall ink is something we usually avoid because of the potential acceleration and migration of the iron ions into the paper. However, the music could not be read without cleaning the pages of the gritty surface deposits.

So, the decision was made to wash the paper in a solution of water, calcium bicarbonate and calcium phytate before rinsing in water, then repairing and sizing to increase the strength and durability of the paper. Washing the paper would aid removal of the gritty surface deposit, and would help to wash away some of the iron ions that had migrated into the paper. The calcium bicarbonate would neutralise the acidity in the paper and leave an alkaline buffer, and the calcium phytate would chelate the iron ions. Repairs were made with a sympathetic Japanese paper and a very thin Japanese tissue, and the paper sized with gelatine. This wet treatment of the pages, particularly the music page, resulted in a much clearer view of their content.

The wet treatment also allowed me to separate the two manuscript pages that had become stuck together, revealing that one of these pages was double sided. These were cleaned and images sent to a colleague to decipher the Latin and ascertain if the manuscript pages have any relation to the music.

After the cleaning treatment, another social media post revealed that people could already pick out some new 'squiggles'! Imaging has been done of the music page and it is now in the hands of the researchers. We look forward to hearing what they discover.



Tweet posted after the music page had been cleaned showing detail previously unseen. Acknowledgement: West Yorkshire Archive Service

For further updates on this project, or to share comments please follow West Yorkshire Archive Service's twitter feed @wyorksarchives and look out for #WhitbyMusic.



# Tweeting all over the world: Explore Your Archive launch week 2020

**Victoria Stevens**, of Library and Archive Conservation and Preservation Ltd., wraps up the Preservation and Conservation Section's participation in the launch of the #ExploreYourArchive social media campaign.

The Preservation and Conservation Section were the new kids on the ARA social media block this year, as relative latecomers to the Twitter scene. It was therefore very timely that our emergence onto the Twitter stage should coincide with the launch of the #ExploreYourArchive initiative, giving us some great impetus to develop our presence.

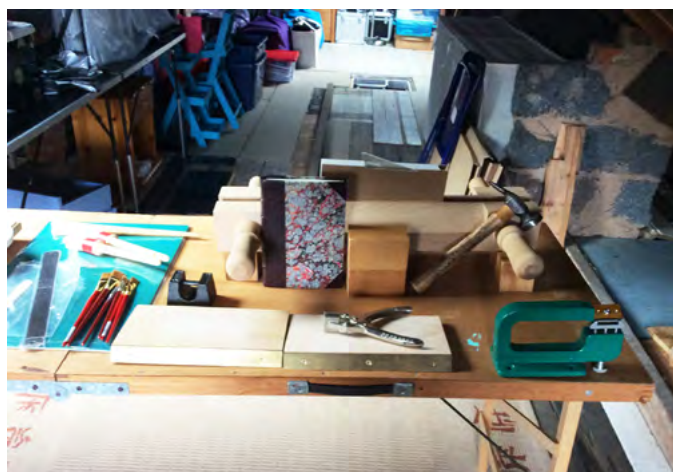
The #ExploreYourArchive launch week took the form of a series of nine themed days where archivists and curators could share the hidden gems in their archive collections. The topics included communication, science, education and light, to name but a few. Each day between 21 and 29 November 2020 the Preservation and Conservation Group shared some great content based on committee members' collections and experiences.

The week started with 'communication', and we shared a fabulous picture of our conservation (conversation?) committee, including our co-opted member for feline affairs, Pascoe. For day two the theme was home, and our Chair, Antony Oliver of Sheffield Archives, shared the pop-up studio he had created in his attic to allow him to keep his conservation skills honed during lockdown.

Other notable days included day six, with the theme of 'science'. Our post that day showed the strange items archivists and conservators have to contend with, in this case a bag of oil in the Parliamentary Archives. This slippery customer formed part of the evidence presented to a 1978 Select Committee on Science & Technology



The Preservation and Conservation 'conversation' committee, featuring our special advisor on the conservation and care of fur and feathers in archive collections, Pascoe. Acknowledgement: The Preservation and Conservation Section committee

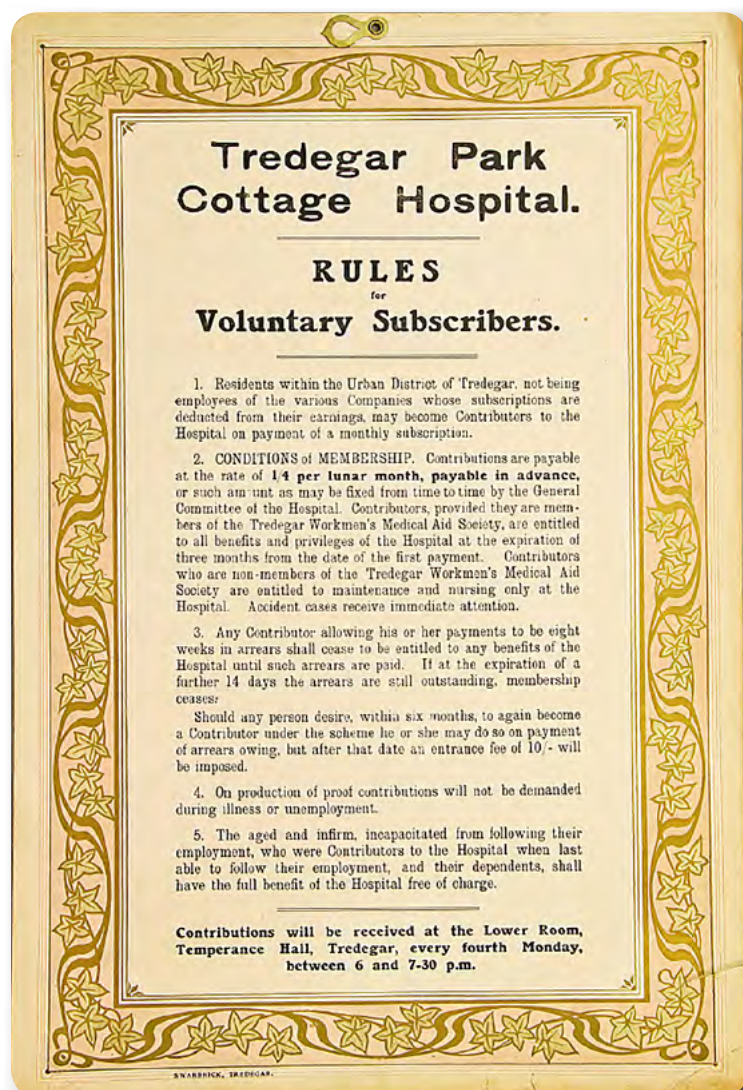


The Chair's Lair: Antony Oliver's pop-up studio in his home during lockdown. Acknowledgement: Antony Oliver.



A bag of oil presented as evidence at a Select Committee on Science and Technology, General Purposes Sub-Committee Session 1977-1978. Ref. HC/CP/4417. Acknowledgement: With kind permission of the Parliamentary Archives.





Rules poster from the Tredegar Park Cottage Hospital, one of the models used by Aneurin Bevan and his government to found the NHS. Acknowledgement: With kind permission of Gwent Archives/Gwent Archifau.

“  
The #ExploreYourArchive launch week took the form of a series of nine themed days where archivists and curators could share the hidden gems in their archive collections”

in their inquiry into a maritime disaster off the Norfolk coast. In this, the oil tanker Eleni V was cut in two by another vessel and capsized, spilling 3000 tonnes of oil into the sea and devastating the local fishing industry and maritime ecology. The wreck was later blown up by the military in an extreme measure to solve the problem. The bag remains a sticky conservation and preservation challenge for our colleagues at the Parliamentary Archives!

Day eight was themed 'health', and thanks to Gwent Archives we highlighted the beginning of the National Health Service and its links to Aneurin Bevan and Tredegar, where the cottage hospital ran a subscription health service from 1904. This is seen by many to be the model Bevan used for the NHS, and the rest, as they say, is history.

Day nine, the final day, was the theme of 'light' and how else could conservators recognise this subject apart from a gallery of our light monitors? Although a candidate for our Twitter colleagues DullMuseumSnaps, they are incredibly important and trusty tools in any conservator's bag of preservation equipment and we showed them off to great advantage.

The nine days of #ExploreYourArchive not only allowed us to contribute to the conservation and archive community here in the UK but also send our stories across the world, with an increase in followers and likes from a huge variety of organisations and individuals. It also enabled us to share to our followers some great and often funny examples of collections and material from other participants, and was a very informative, inclusive and unifying initiative.

We hope to build upon this great start in our group's Twitter journey, and are looking to recruit a Social Media Officer to the committee to keep the momentum going.

The committee light loggers come in all shapes, sizes and vintages but are all key preservation tools. Acknowledgement: The Preservation and Conservation Section committee.





# Teaching bookbinding in the virtual age

**Elizabeth Stettler**, conservation technician at the West Yorkshire Archive Service, recounts the experience of planning and delivering a practical bookbinding event online.

This past year we have all been forced to get used to meetings via video chat and collaborating on our computers. Why not teach a workshop virtually as well? On the 2 December 2020, the conservation team at the West Yorkshire Archive Service, with the help of our intrepid outreach staff, taught our first bookbinding workshop via Zoom. By sharing our story we hope to inspire others to give virtual teaching a try.

Bookbinding workshops and other hands-on events have long been a staple offering to those crafty patrons of the West Yorkshire History Centre in Wakefield. The History Centre is home to our conservation studio and thus we are well set up for hosting and providing materials. Sadly yet understandably, the COVID-19 pandemic has made these face-to-face workshops impossible.

While working from home during the long difficult months of this past year, the conservation team spent time trying out different bookbinding styles to keep our hands busy. One of these was the long stitch binding which requires no glue. As text sections are sewn together, they are simultaneously sewn to the cover. With such a simple design, all the supplies needed are a cover, a text block, thread, and a needle. The perfect binding for a virtual workshop.

During these isolating times we thought it would be a wonderful thing to offer people; a little slice of time to use their hands, learn something new, find pride in accomplishment, meet new people, and socialise.

Kits were prepared and posted to participants in advance with materials cut, folded, and holes pre-punched. A step by step instruction document was also included for those who learn best by reading. During the workshop, attendees would follow a demonstration to sew their own notebook together using the thread and needle provided in the kit. The only item they would need to provide was a pair of scissors to cut the thread after sewing.

Examples of some notebooks successfully sewn during the practice session. Acknowledgement: Elizabeth Stettler, West Yorkshire Archive Service



Sewing in progress. Acknowledgement: Elizabeth Stettler, West Yorkshire Archive Service



A spine view of the long stitch binding style. Acknowledgement: Elizabeth Stettler, West Yorkshire Archive Service



“Bookbinding workshops and other hands-on events have long been a staple offering to those crafty patrons of the West Yorkshire History Centre in Wakefield”

To test whether this workshop was indeed a good idea, or even possible, we enlisted the help of our colleagues. We held a practice session where staff volunteers sewed together their books at home via Zoom. A good time was had by all and several lessons were learned. For example, it became immediately clear that the instructor needed thread of a contrasting colour to the paper, to make the sewing process easier to see on screen. Positioning the camera for an overhead view of a well-lit work surface was found to be ideal for showing the sewing steps. However, starting and ending with the camera on the instructor's face created a warmer, more personal environment. Practicing moving the camera helped prevent motion sickness in the audience! Additionally, inviting interruptions and questions at any point helped overcome the passive virtual environment, encouraging people who may have been reluctant to speak up if they were struggling.

Having refined our methods, we were ready to go live. Two people ran the workshop, one to instruct and one to keep an eye on the technical side of things. One and a half hours were scheduled to complete the class and all participants finished well within that time. Successful notebooks were sewn by all and everyone had a lot of fun! There is nothing more satisfying as a teacher than to see all students engrossed in their work, and this is no less rewarding via a computer screen.

Due to the popularity and triumph of the first live class, we have another sold out class scheduled in January. We hope to expand our virtual offerings not only for craft workshops but beyond conservation. People surely miss doing hands on activities and are looking to fill all of their extra time at home with something engaging. Participants may not be local to our area but now have an opportunity to take part from wherever they are. One attendee told us she grew up in Wakefield but has since moved away and hopes to come visit our new building when it is safe to do so. We also have several people attending our next workshop from abroad, which helps build a wider audience for our archives.

There is obviously a demand and desire for virtual practical classes. If you have been thinking of offering an online course, we encourage you to go for it!

#### Top Tips:

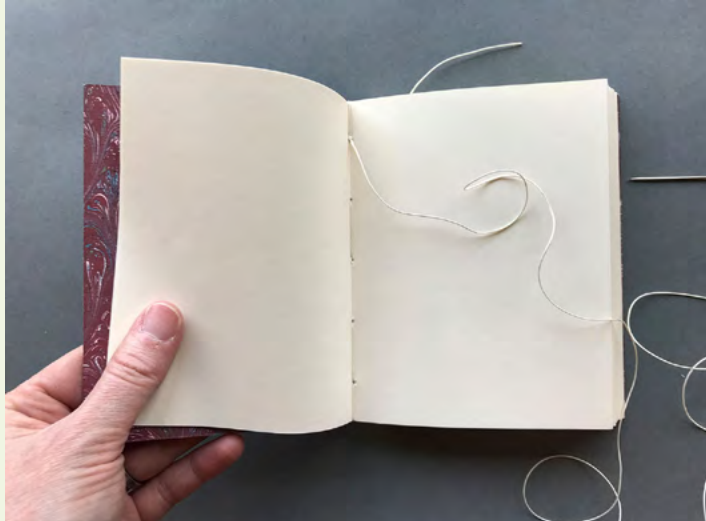
- Practice! Test out the equipment setup and technology as well as your kits.
- Keep the class size small. It is more difficult to give personal attention via Zoom than it is face to face.
- Keep the task simple. Something short and manageable will keep people's attention and ensure success.
- Allow plenty of time for preparation. It always takes longer than you think.

One of the long stitch notebooks mid-sew.  
Acknowledgement:  
Elizabeth Stettler,  
West Yorkshire  
Archive Service

The long stitch workshop bookbinding kit  
Acknowledgement:  
Elizabeth Stettler,  
West Yorkshire  
Archive Service

Conservation technician Elizabeth Stettler teaching live on Zoom.  
Acknowledgement:  
Elizabeth Stettler,  
West Yorkshire  
Archive Service

During the workshop the camera was positioned overhead.  
Acknowledgement:  
Elizabeth Stettler,  
West Yorkshire  
Archive Service





# A first step into virtual training: the parchment and stationery bindings series

**Fay Humphreys**, Training Officer for the Section for Preservation and Conservation, reflects on the opportunities and successes of the section's first delivery of online training events.

One of the many unfortunate consequences of the COVID-19 pandemic was the suspension of all ARA in-person training events. Faced with a now virtual world, as joint training officers for the Section for Preservation and Conservation, Annie Starkey and I had to reassess how we could deliver events in these novel times.

For our first virtual training events, a theme of parchment and stationery bindings emerged among our three enthusiastic speakers. Each talk focused on different styles of parchment bindings and so we chose a format of a weekly talk followed by a dedicated panel discussion, allowing us to explore the topic in depth. Although they would be delivered virtually, all talks covered practical treatments.

With our theme and speakers lined up, all that was left was to work out how we would run the series. Following advice from others who had already managed online events, we decided to split the duties with Annie running the administrative elements and myself as host. After a trial run getting to grips with the technicalities of providing a virtual training session online, we were ready to go.

Our series began with Ann-Marie Miller, of Codex Conservation, presenting 'Make, Mend & Do...The Conservation of Four 18th Century Parchment Stationery Bindings' on 12 August. This gave an overview of the conservation of the Wine Accounts from Middle Temple Archive, with the bindings described and placed in their historical context. Ann-Marie explored the issues encountered with physical variations within the bindings and the impact on their conservation treatment.

After a successful first event, the next was Victoria Stevens of Library and Archive Conservation and Preservation Ltd. presenting 'Dispatches from Fleet Street: Conserving the Perkins Bacon Delivery Books' on 19 August. These 11 volumes from that collection, held at the Royal Philatelic Society of London, were the only ones to survive in their original mid-19th Century binding structures, and we heard about the challenges, considerations and techniques used in their conservation.

For our final talk we were excited to host our first international speaker, made possible by this new online approach. Katherine Beaty, of Harvard Library's Weissman Preservation Center, presented the 'Tacketed Stationery Bindings of the Harvard Business School



Preparing the second lining of aerolinen, applied with paste between the supports. Acknowledgement: Victoria Stevens, with the permission of Royal Philatelic Society of London



RPSL Letter Book No 8, 1852, before treatment  
Acknowledgement: Victoria Stevens, with the permission of Royal Philatelic Society of London

RPSL Letter Book No 8, 1852, after treatment. Acknowledgement: Victoria Stevens, with the permission of Royal Philatelic Society of London



Front Board before treatment. Middle Temple Archive, MT7WBA.246.  
Acknowledgement: Masters of the Bench of the Honourable Society of the Middle Temple.



Board before treatment. Middle Temple Archive, MT7WBA.246.  
Acknowledgement: Masters of the Bench of the Honourable Society of the Middle Temple.



Inside Back Board, after treatment. Middle Temple Archive, MT7WBA.246. Acknowledgement: Masters of the Bench of the Honourable Society of the Middle Temple.







Examples of tacketed stationery bindings in the Harvard Business Medici Collection. Acknowledgement: K.Beaty, Harvard Business Medici Collection.

Medici Collection and their Conservation' on the 26 August. To illustrate the key features and associated terminology of Italian tacketed stationery bindings used from as early as the 14th Century, Katherine shared with us the Medici collection and explained their approach to conservation of these working account books.

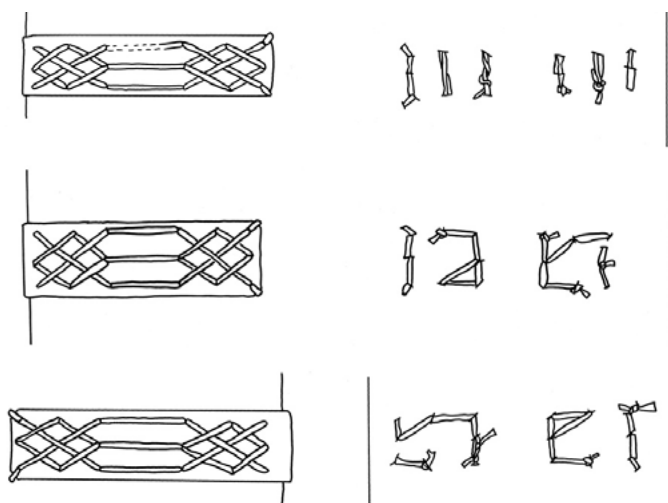
The final event in the series was a Q&A Panel Discussion with our speakers on 4 September. This was an opportunity to discuss the presentations and the wider topic of parchment and stationery bindings. In the hour-long session we explored different aspects of bindings and their conservation, including their historical

*“We aimed to create a friendly, open and informal environment that would allow everyone to share their techniques and experiences”*

context, repair methods, adhesives and useful resources and suppliers. We aimed to create a friendly, open and informal environment that would allow everyone to share their techniques and experiences in order to learn from each other.

To continue in the spirit of that, here is a selection of highlights from our three speakers throughout the series:

- When working with a collection of parchment bindings it is useful to have a range of repair options that can be adapted as necessary.
- It is worthwhile to create a book model to understand the binding structure and aid conservation treatment.
- Ann-Marie has developed a repair for parchment covers using cross-grained laminated handmade paper and Japanese paper applied with gelatin.



Diagrams of the tacketed binding lacing patterns. Acknowledgement: K.Beaty, Harvard Business Medici Collection.



Humidification of parchment with Gore-tex, Tekwipe and Mylar L-sleeves.  
Acknowledgement: K.Beaty, Harvard Business Medici Collection.

- For localised humidification of limp parchment bindings, Katherine created small pockets using a polyester sheet welded on two sides and formed around a corner or edge with Gore-Tex.
- Victoria has had success dyeing her parchment with Roda dyes and a spirit alcohol base, allowing better penetration and workability compared to an aqueous solution.
- To treat planar distortion, it can be helpful to use minimal moisture and use weight and time as much as possible to achieve the desired results.
- It is beneficial to have flexibility with what adhesives you use and how you use them. Key points to be aware of include considering the location on the binding and how it will move; allowing plenty of drying time; and controlling the moisture content.
- Katherine has been using a high molecular weight fish gelatin rather than bovine gelatin as an effective adhesive, particularly for limp bindings.
- A useful resource is the dedicated Parchment Bookbinding webpage available on the AIC Book Conservation Wiki ([www.conservation-wiki.com/wiki/BPG\\_Parchment\\_Bookbinding](http://www.conservation-wiki.com/wiki/BPG_Parchment_Bookbinding))
- Our Q&A discussion ended on the unexpected journey Katherine had in tracing the lacing patterns of the tacketed bindings. A reminder for us all to keep our eyes open in a project - you never know what you might discover!

The three talks and associated resources are all available to view on our Section pages on the ARA website, under Conservation Videos. ([www.archives.org.uk/about/sections-interest-groups/preservation-and-conservation-group-pcg/conservation-videos.html](http://www.archives.org.uk/about/sections-interest-groups/preservation-and-conservation-group-pcg/conservation-videos.html))

# The Creative North Devon project: a celebration of craft

**Deborah Phillips**, Senior Archive Conservator at the South West Heritage Trust, introduces two significant craftspeople of Devon's past, William Richard Lethaby and William Frederick Rock, whose collected records are being preserved by the trust.

The South West Heritage Trust, based in the Devon Conservation Studio, have been commissioned by the Museum of Barnstaple and North Devon and by the North Devon Athenaeum, to take on the preservation and conservation of two wonderful collections. Each collection will be surveyed, and then preservation, digitisation and re-boxing will take place over the next few years.

The first collection is that of William Richard Lethaby (18 January 1857 – 17 July 1931), an English architect and architectural historian whose ideas were highly influential on the late Arts and Crafts and early Modern movements in architecture, and in the fields of Conservation and Art Education.

Lethaby was born in Barnstaple, Devon, the son of a fiercely Liberal craftsman and lay preacher. After an early apprenticeship with a local





Lethaby's Soane Medallion winning drawings. Acknowledgement: Naomi Ayre, North Devon Athenaeum

architect he found work in London in 1879 as Chief Clerk to architect Richard Norman Shaw.

In 1901 Lethaby was appointed the first Professor of Design at the Royal College of Art. This, coupled with his appointments as Principal of the Central School of Arts and Crafts in 1902 and as Surveyor of Westminster Abbey in 1906 meant that he was increasingly devoted to the academic study of the theory and history of architecture and design.

More information about William Lethaby may be found here: <http://talesfromthearchives.wordpress.com/2017/01/18/william-richard-lethaby/>

The second collection is that of William Frederick Rock, founder of the Barnstable Literary and Scientific Institute.

Born in 1802 William Frederick Rock was the son of Henry and Prudence Rock. Henry Rock was a shoemaker in Barnstaple High Street who became a freeman of the borough and thus able to vote at the parliamentary elections. It was through this position that Henry and William came into contact with William Busk, a parliamentary contestant who briefly stayed



Digital scanning of the drawings. Acknowledgement: Gary Kraggs, North Devon Record Office.





with the family. He took an interest in William and was able to present him to Christ's Hospital's London Bluecoat School.

On his return from school, Rock was offered a job at a bank in Bideford, but it was an occupation that did not suit him. Getting into trouble several times for writing poetry and verse at work, he resigned and went to London where another ex-parliamentary candidate for Barnstaple, Alderman Atkins, offered him a job at his bank. Later on, Rock left the bank and went to work with printer and inventor Thomas de la Rue where Rock made enough money to set up a printing business with his brothers and future brother-in-law. The business prospered and Rock became a wealthy man, but with no wife or children to support he decided to give generously to his birthplace.

He founded the Literary and Scientific Institution in 1845 and the North Devon Athenaeum in 1888. He also financed the purchase of land for Rock Park in Barnstaple and set up a Convalescent Home in Mortehoe. William Frederick Rock died on February 8th, 1890 at his home in Blackheath, leaving a large collection to his Athenaeum.

The Barnstaple Literary and Scientific Institute had first and second class reading rooms, a library, classrooms and the beginnings of a museum. Rock was the Institution's main benefactor. In addition to the lease of the building, fixtures and fittings he provided the first 600 books for

the library. This continued, and by 1870 the library housed 7,000 volumes. Often Rock would send crates of the latest books ensuring that members kept up with the latest scientific and artistic thinking.

Rock's £100 a year gift allowed him to nominate free members from those he felt deserved the opportunity but hadn't the funds to pay. Edward Capern, the postman poet, was one who benefited in this way. Although it was sometimes difficult to find 100 candidates, Rock continued this contribution, even when his business premises and stock burned down in 1859, putting him under severe financial pressure.

More information about William Rock and his Institute can be found at [talesfromthearchives.wordpress.com/2018/03/02/10-facts-about-william-frederick-rock/](https://talesfromthearchives.wordpress.com/2018/03/02/10-facts-about-william-frederick-rock/) and [northdevonathenaeum.org.uk/barnstaple-literary-scientific-institute/](http://northdevonathenaeum.org.uk/barnstaple-literary-scientific-institute/)

The fine history of arts, crafts and industry exemplified by these men in the ancient Borough of Barnstaple, North Devon, in the 19th and 20th Centuries, must be celebrated today and the preservation of their records will ensure their legacies endure.

With thanks to Naomi Ayre, Librarian at the North Devon Athenaeum, Gary Knaggs, Archivist at North Devon Record Office and Alison Mills, Museum Manager at the Museum of Barnstaple and North Devon.



# Cold gelatine paste: revisiting an adhesive option for paper documents

**Zoë Reid**, Senior Conservator at the National Archives of Ireland, experiments with cold gelatine paste to repair 18th century financial documents.

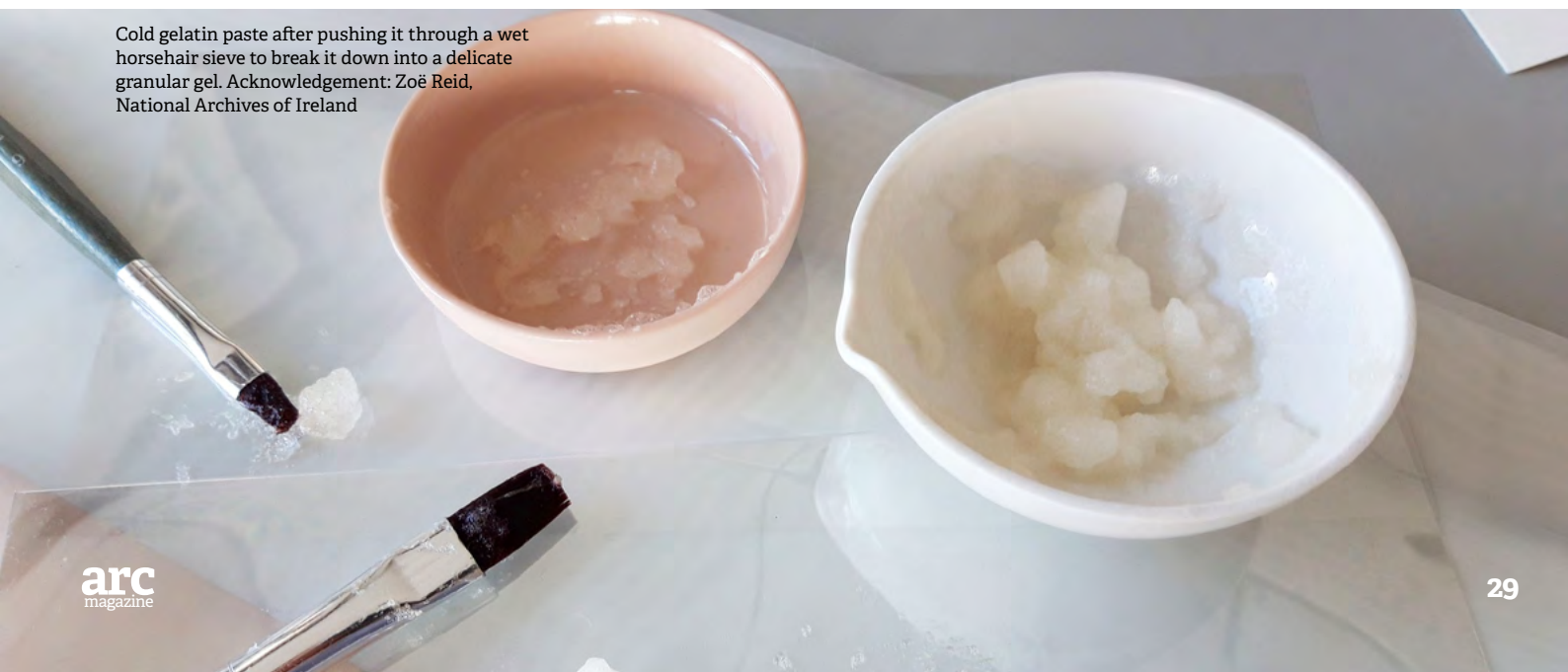
Documents that arrive at the conservation bench have many elements that must be considered when selecting treatment options. Often that is the fun part of our job, finding solutions, drawing on our knowledge and the experience of others. Before I begin to work on a collection, references and articles are checked, notes are made, and plans come together. These were the steps that I took when I started working on a series of account books, which were part of a large project to conserve documents retrieved from building rubble in the 1920s. During the 18th Century, each district or port in Ireland had a Commissioner of Revenue. They collected money on behalf of the government from Quit and Crown Rents, Customs and Excise, and Hearth money taxes, and submitted documentation to the office of the Revenue Exchequer each quarter.

These documents related to Donaghadee, Co. Down, and included end of year accounts for 1725 which required cleaning and repair to ensure researchers could use them. These manuscript accounts were written in iron gall ink. It is well established that gelatine is the preferred adhesive

“*This remoistenable tissue works well on small areas of damage, however one document presented large areas of damage that required support and repair*”

to use when applying any repair tissue over text drafted with this ink type. Sheets of remoistenable 3% gelatine, previously made up in the studio, were on hand to use. This remoistenable tissue works well on small areas of damage, however one document presented large areas of damage that required support and repair. I was looking for an efficient solution to this, as it was not the only document in the collection that would need a larger repair.

Cold gelatin paste after pushing it through a wet horsehair sieve to break it down into a delicate granular gel. Acknowledgement: Zoë Reid, National Archives of Ireland



*from Darts beyond the Seas together with the July 1725, 6*

| Month day 1725 |    | Value  |    | Crown |   | Shilling |    | Penny |    | Additional Duty |   |
|----------------|----|--|----|-------|---|----------|----|-------|----|-----------------|---|
| 1              | 20 | Ellin of Portpatrick Robert Adam Mast. for Portpatrick | 10 | 00    | 0 | 25       | 00 | 0     | 13 | 03              | 1 |
| 2              | 21 | Three Barrells of Gunpowder                            | 01 | 00    | 0 | 12       | 00 | 0     | 01 | 13              | 0 |
| 3              | 22 | Ellin of Portpatrick Robert Adam Mast. for Portpatrick | 14 | 00    | 0 | 05       | 08 | 0     | 06 | 00              | 0 |
| 4              | 23 | Seven Barrells of Gunpowder                            | 01 | 00    | 0 | 02       | 00 | 0     | 14 | 13              | 4 |
| 5              | 24 | Endavour of Greenock John Gray Mast. for Greenock      | 00 | 10    | 0 | 00       | 10 | 0     | 01 | 00              | 0 |
| 6              | 25 | Six Baggis March 28th for Wine March 28th for Wine     | 00 | 12    | 0 | 00       | 12 | 0     | 00 | 12              | 0 |
| 7              | 26 | Statutable at Sea here to the March                    | 00 | 05    | 0 | 00       | 05 | 0     | 00 | 05              | 0 |
| 8              | 27 | March 27th 1725  | 00 | 04    | 0 | 00       | 04 | 0     | 00 | 04              | 0 |
| 9              | 28 | March 28th 1725  | 00 | 12    | 0 | 00       | 12 | 0     | 00 | 12              | 0 |
| 10             | 29 | March 29th 1725  | 00 | 10    | 0 | 00       | 10 | 0     | 00 | 10              | 0 |
| 11             | 30 | March 30th 1725  | 00 | 02    | 0 | 00       | 02 | 0     | 00 | 02              | 0 |
| 12             | 31 | March 31st 1725  | 00 | 01    | 0 | 00       | 01 | 0     | 00 | 01              | 0 |
| 13             | 1  | March 1st 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 14             | 2  | March 2nd 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 15             | 3  | March 3rd 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 16             | 4  | March 4th 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 17             | 5  | March 5th 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 18             | 6  | March 6th 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 19             | 7  | March 7th 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 20             | 8  | March 8th 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 21             | 9  | March 9th 1726   | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 22             | 10 | March 10th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 23             | 11 | March 11th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 24             | 12 | March 12th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 25             | 13 | March 13th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 26             | 14 | March 14th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 27             | 15 | March 15th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 28             | 16 | March 16th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 29             | 17 | March 17th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 30             | 18 | March 18th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 31             | 19 | March 19th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 32             | 20 | March 20th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 33             | 21 | March 21st 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 34             | 22 | March 22nd 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 35             | 23 | March 23rd 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 36             | 24 | March 24th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 37             | 25 | March 25th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 38             | 26 | March 26th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 39             | 27 | March 27th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 40             | 28 | March 28th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 41             | 29 | March 29th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 42             | 30 | March 30th 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |
| 43             | 31 | March 31st 1726  | 00 | 00    | 0 | 00       | 00 | 0     | 00 | 00              | 0 |

*Total produce of this Majesty's Revenue arising from the foregoing Branches amounts to the sum of £1000 15 10 and five pence four farthings one penny the farthing*

*13th March 1726*

*14th March 1726*

*15th March 1726*

*16th March 1726*

*17th March 1726*

*18th March 1726*

*19th March 1726*

*20th March 1726*

*21st March 1726*

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*26th March 1726*

*27th March 1726*

*28th March 1726*

*29th March 1726*

*30th March 1726*

*31st March 1726*

Collectors Accounts, Donaghadee, 1725, repaired with Tengu tissue and cold gelatine paste. Acknowledgement: Zoë Reid, National Archives of Ireland.

In 2008, Vanessa Charles and the conservation team at Dundee University published a short article on the use of cold gelatine as a paste when conserving an extensive collection of iron gall ink manuscripts. This method would allow me to use gelatine, with slightly heavier tissue and in larger sections.

A supply of Gelatine – Type B (bovine with a minimum bloom of 200) was available in our studio. The recipe for a 3% gelatine solution began with weighing six grams of gelatine granules into a beaker with a 500 ml capacity. In a separate container, 200 ml of filtered water was measured out. The water was added to the beaker of gelatine granules and stirred with a glass rod. Without agitating further, the gelatine granules were allowed to sit for at least one hour, during which they began to swell and expand. The beaker was then placed on a hot plate and heated to 40 degrees. The solution was stirred occasionally until all the granules had melted and the colour was uniform. The beaker was then removed from the hot plate and left to cool for a couple of hours at room temperature until the gelatine had set. The gelatine was prepared one day, then stored in the fridge overnight and made into the adhesive gel the following day.

Finally, this method involved repeatedly pushing the cold gelatine through a wet horsehair sieve. I used a small bamboo tool and found that this created many air bubbles and resulted in a foamy substance. It did not look like the paste that I was aiming to use. However, passing the cold solid gelatine through the sieve only once broke it down

into a delicate granular gel. I found that by spreading this gel on a piece of Mylar and working it with a small paste brush, the grains would break down further, creating a gel that could then be applied onto the repair tissue.

For the repairs on this document, I selected the repair tissue Tengu 7.3 gsm (toned), taken from a roll. Using a fine wet brush to cut the tissue to the size needed for the repair ensured a feathered edge. The cold adhesive gel was pasted onto the tissue, lifted, and placed over the area of damage. The tissue was smoothed with a Japanese brush to ensure excellent adhesion to the document, and a piece of saatafil mesh was added as a protective barrier.

The cold gelatine gel can also be brushed through the thin tissue. Care should be taken not to leave an excess of adhesive on the paper, however, as when it dries it can look 'shiny'. Any adhesive residue can be reduced by blotting or removing with a damp cotton swab.

I discovered that the solid gel lasted up to two weeks if stored in a closed container in the refrigerator. So, rather than sieve all of the gel in one go, I found that I could gauge the amount that I might use in a repair session.

Applying tissue to both sides of the document ensured a strengthening of the damaged areas, and the lightness of the tissue meant that the text was still easily readable. I hadn't used this paste in a while but was pleased with the results.



# The Creative North Devon project:

## Brannam Pottery and Shapland and Petter furniture makers

**Deborah Phillips**, Senior Archive Conservator at the South West Heritage Trust (SWHT), describes a conservation and digitisation project preserving the history of manufacturing in Devon.

The Museum of Barnstable and North Devon, and the North Devon Athenaeum, have commissioned preservation and conservation work for two significant collections: the records of Brannam Pottery of Barnstaple, and of furniture manufacturers Shapland and Petter.

These collections had been kept in the Museum of Barnstaple in dark, dry conditions, but were in urgent need of being brought up to a clean and usable condition. I was aware of both collections for most of my 30 year career in Devon Archives, knowing that the day would come when finance and circumstance would be right for their preservation. The recent new Long Bridge Wing extension to the Museum of Barnstaple and North Devon has enabled financial support for new collaborative projects. We at the SWHT, based in the Devon Conservation Studio, were commissioned to take on the preservation and conservation of both collections. Once treated, both collections will be returned to the North Devon Record Office for storage to British Standard conditions.

The Brannam Letter Book is a moderately sized volume of individual letters in a style popular in the 19th and early 20th century. At that time, single sheet documents were either bound tight into a spine and fixed with adhesive, as these letters have been, or prepared in the 'guard and file' style where each letter would be attached to a plain paper hinge. Both methods of housing single sheet documents have long ceased being common practice.



Museum of North Devon and Barnstaple. Acknowledgement: Museum of North Devon and Barnstaple.



Display of Brannam pottery  
Acknowledgement: Deborah Phillips, SWHT and Devon History Centre (DHC)



Brannam Pottery Building.  
Acknowledgement: Museum of North Devon and Barnstaple

The letters are not the original correspondence, but are copies made by a technique of the period, which required the original letter ink to be moistened and pressed onto tissue and oiled papers. This website describes the evolution of this process: [www.officemuseum.com/copy\\_machines.htm](http://www.officemuseum.com/copy_machines.htm)



Brannam Letter Book. Acknowledgement: Deborah Phillips, SWHT and DHC



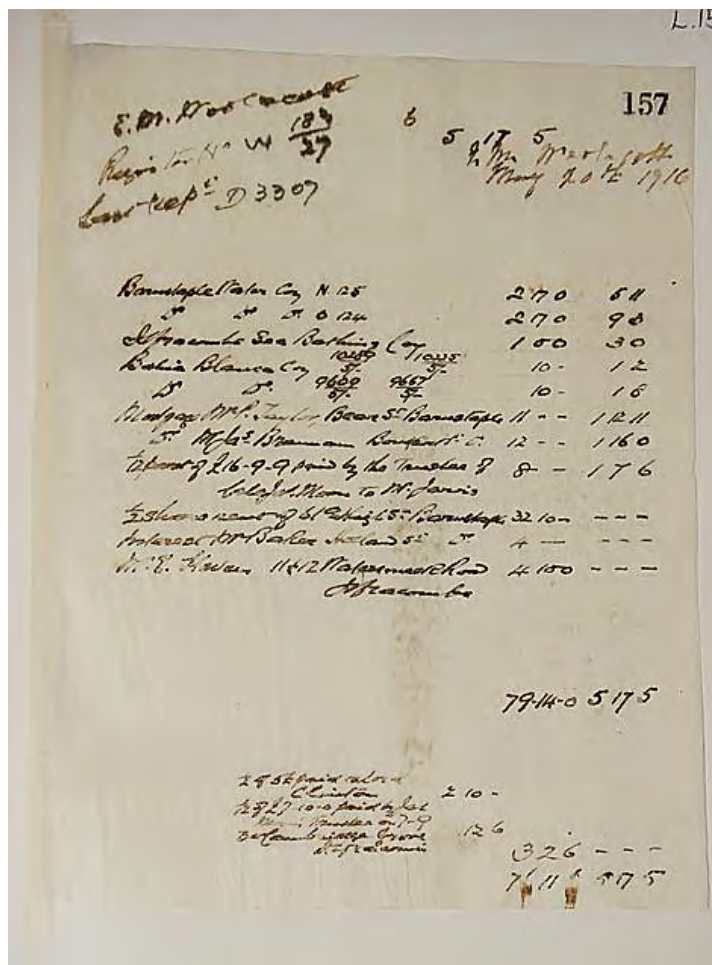
Glass plate negatives in their drawers, in transit .  
Acknowledgment: Gary Knaggs, North Devon Record Office



On the conservation studio workbench. Acknowledgement:  
Deborah Phillips, SWHT and DHC

These letters are particularly vulnerable due to the fragility of the tissue copies, and because the originals no longer exist. The chance of damage and even theft may be greater than usual in the current format.

We proposed use of a modern technique of mounting single documents into archival blank books known as 'fascicules'. In this method, individual letters are mounted via a fine strip of



Brannam Letter Book, sample page. Acknowledgement: Deborah Phillips, SWHT and DHC



Glass plate negatives in their drawers, in transit. Acknowledgment: Gary Knaggs, North Devon Record Office

Japanese paper performing as a hinge, and the corresponding reference number is applied to the support page. These books, when presented in the searchroom, will be recognisable to the staff and indicate to the researcher that they are being shown a particularly valuable item from the collection. This helps with the security of the letters, and has the additional advantage of reducing handling of the original, as the recto and verso of each letter may be





Completed archive boxes and glass plate packaging. Acknowledgement: Deborah Phillips, SWHT and DHC.

**“We proposed use of a modern technique of mounting single documents into archival blank books known as ‘fascicules’”**

viewed by gently allowing the letter to turn on its hinge.

This technique delivers an added benefit for letters that are too fragile to treat for acidity, as each letter is laid onto an alkaline-buffered support page, inhibiting the progress of high acidity in both the paper and ink.

This practice came into use at the Bodleian Library in Oxford, developed by Christopher Clarkson. Conservators in Devon have been using this technique for some decades, in particular to replace the damaging Guard and File method of housing single sheet documents. Recent collections treated with this method are the Correspondence of Prime Minister Henry Addington, First Viscount Sidmouth and the Exeter City Archive Early Letters. For more information concerning the method, see:

A. Honey, “Housing Single-sheet Material: The Development of the Fascicule System at the Bodleian Library”, *The Paper Conservator*, vol. 18 (1994), pp. 40-48. ([www.tandfonline.com/doi/abs/10.1080/03094227.2004.9638645?src=recsys](http://www.tandfonline.com/doi/abs/10.1080/03094227.2004.9638645?src=recsys)).

Shapland and Petter furniture makers were respected, and indeed cherished, employers in Barnstaple supplying furniture and, later, doors to British and overseas customers. In the 19th century items were initially advertised and sold via catalogues and sample furniture placed in the new department stores in metropolitan centres, both in Britain and internationally. The founders emulated the style of the Arts and Crafts movement, but without the handmade ethos of William Morris, making their furniture accessible to a greater breadth of customers through automated industrial methods.

Because they used photography to reference furniture for their catalogues and visual archive, we have a comprehensive collection of images, mostly large glass plate size. Of more than 500 examples, remarkably few are broken. The recent preservation and repackaging work will enable the images to be prepared for digitisation, and those broken plates to be virtually re-joined.

The glass plate negatives were still housed in the drawers of a large piece of furniture in the museum, and this furniture was moved via lift and delivered to the conservation studio in Exeter for the cleaning and repackaging. The photographs are an extremely heavy set of glass negative which need to be stored on their edges in upright specialist boxes. Many decades of dust and detritus were painstakingly removed before the plates were prepared for wrapping in photographic archival paper and placed in made to measure boxes.

Shapland and Petter continued production through the 20th century, employing as many as 900 staff. Many former employees look back with satisfaction at the work they achieved, and will surely celebrate the ongoing preservation of the organisation's records. For a personal account of Shapland and Petter's 20th century operations, visit: [www.northdevonmovingimage.org.uk/world-of-work---russell-maynard.html](http://www.northdevonmovingimage.org.uk/world-of-work---russell-maynard.html)

For more information about Brannam Pottery of Barnstaple go to <https://jbrannan.pagesperso-orange.fr/pottery.htm>

EXPLORED  
DISCOVERED  
FOUND  
DETECTED  
CONNECTED  
ENGAGED  
UNEARTHED  
LEARNED



CONNECTED  
ENGAGED  
UNEARTHED

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