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**The Harry  
Lucas  
letters:  
portrait of  
a Victorian  
business**



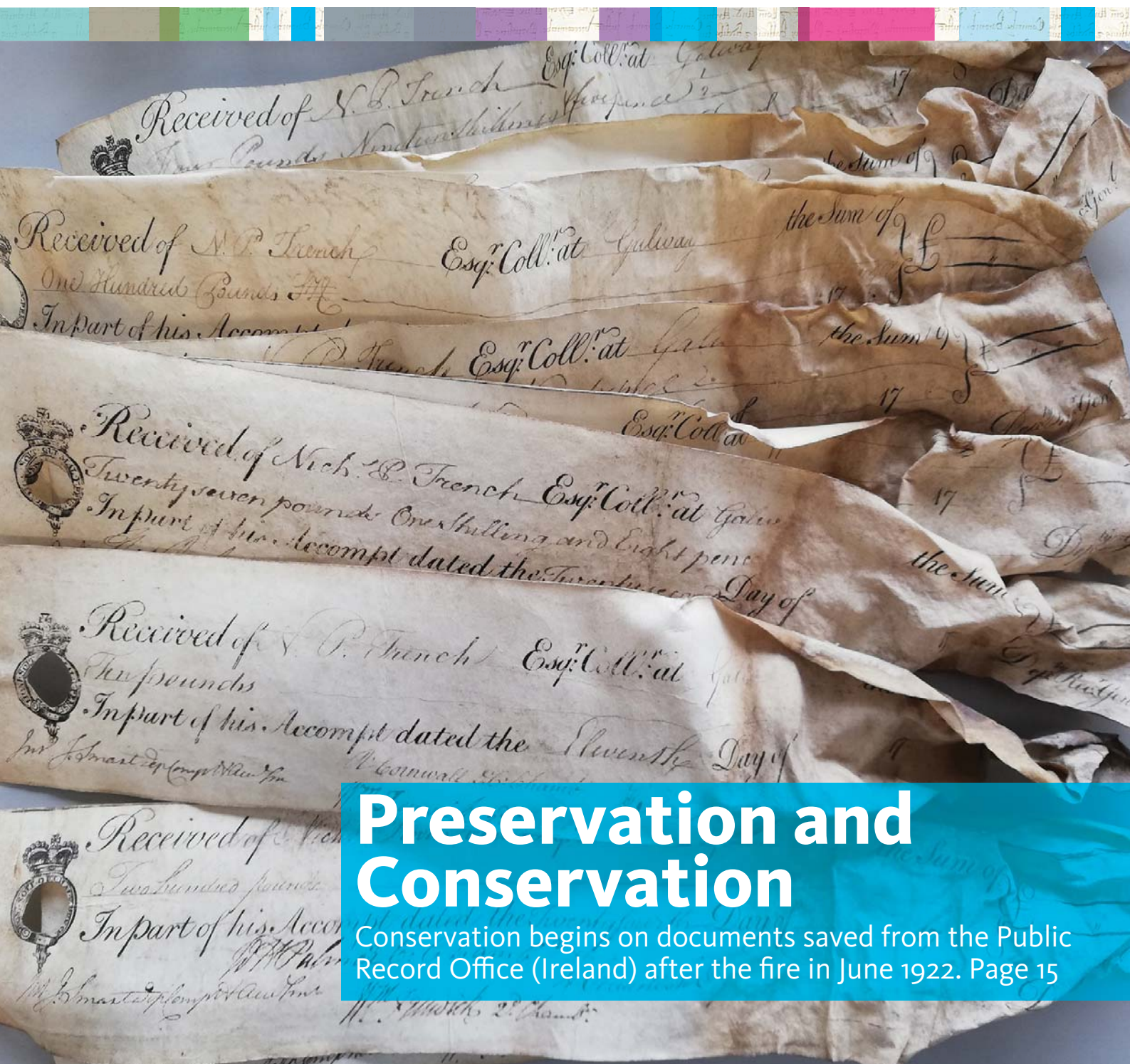
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## Preservation and Conservation

Conservation begins on documents saved from the Public Record Office (Ireland) after the fire in June 1922. Page 15

You are more likely to be eaten  
by a shark than suffer an  
unrecoverable data error using  
**LTO Tape media.**



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## Welcome to ARC Magazine October 2018

Welcome to the October 2018 issue of ARC Magazine. This month's issue is dedicated to showcasing the vast amount of preservation and conservation techniques that are being used across the UK and Ireland today.

This fascinating collection of insights into the everyday lives of conservators has come from the Preservation and Conservation Section. The work that goes into the conservation and preservation of these documents is staggering, and should be celebrated. Editing this issue has taught me so much about the challenges that conservators face, and the obstacles that they are able to overcome to ensure that these collections are able to be enjoyed by future generations.

To find out more about the Preservation and Conservation Section's work, visit: <http://www.archives.org.uk/about/sections-interest-groups/preservation-and-conservation-group-pcg.html>

I would like to take this opportunity to thank everybody who contributed to this edition of ARC Magazine. I'd also like to give a special mention to Mark Allen, who commissioned and coordinated the wide range of high-quality content in this issue.

This has been my first foray into being a joint editor of ARC Magazine, and this issue has been a pleasure to edit. I hope you enjoy this issue as much as I enjoyed working on it!



**Laura Cunningham**  
ARC Editor

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Front cover: Conservation begins on documents saved from the Public Record Office (Ireland) after the fire in June 1922.

### DISCLAIMER

The Archives & Records Association (UK and Ireland) cannot accept responsibility for views expressed by individual contributors to ARC Magazine. It is a medium for informing members of news, information and ideas relevant to the profession, including archive conservation. It is not an official guide to procedures, concepts, materials or products.

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# opening lines

## A Farewell to the old Registration Scheme - RIP

This spring saw the last assessment round for the Registration Scheme as part of the ARA's transition to its new Professional Development Programme. Very many congratulations to the candidates who have successfully achieved their Registered status this time around (for details, see the professional development pages of this edition).



It's time to mark the retirement of the Registration Scheme. It is also time for a well-deserved celebration. The Scheme was undoubtedly one of the most successful services that the ARA and its predecessor – the Society of Archivists – have ever run, making a qualitative difference to members' careers and boosting professional standards over many years. It all started 31 years ago, with members going through a qualification and experience route up until 1996. From that point onwards, candidates compiled a portfolio for assessment, starting in autumn 1999. Since then, 715 candidates have enrolled.

The Scheme could not have operated so effectively without the sterling efforts and leadership of its Registrars, who co-ordinated the assessment rounds, chaired the volunteer sub-committee and oversaw training and moderation for candidates, mentors and assessors. Four Registrars have guided candidates, mentors, assessors and an increasing number of portfolios through the Scheme during this time:

• Sue Garland	1996-2003	65 portfolios
• Mari Takayanagi	2003-2006	68 portfolios
• Sarah Wickham	2006-2010	89 portfolios
• Tricia Phillips	2011-2018	149 portfolios

From 1999-2018, candidates submitted a grand total of 371 portfolios for assessment. The assessors and Registrars maintained a high standard for Registered status throughout, and an overall pass rate of 84.4%. Of the 371 portfolios submitted, 58 were successfully re-submitted after revisions. The Scheme has gained

in popularity over time, and an impressive 22% of all assessments have taken place during the last two years. Sometimes a deadline can be a good thing – the impending closure has undoubtedly helped to focus a number of candidates towards the successful completion of their portfolio.

The assessors have proved to be the unsung heroes of the success of the Scheme as a whole. In total, during the working life of the Scheme, a team of volunteers has completed a staggering 1,220 individual assessments. Apart from the Registrars, who all assessed very large numbers of portfolios as part of their work managing the Scheme, Eleanor Roberts wins the prize for the most assessments completed. She assessed throughout the entire Scheme, carrying out 67 individual assessments herself.

Congratulations are also due to Jacquie Crosby and Elizabeth Oxborrow-Cowan, who take second and third place, and to the other 16 assessors who took on that role for 10 years or more. All 52 assessors deserve our thanks for their commitment to the Scheme. As the assessors' rep on the Registration Scheme sub-committee, I have seen for myself the dedication and passion that they brought to the role. It has also been incredibly rewarding to see the next generation of professionals coming through and to read in their portfolios about the exciting, innovative and professional ways in which they are tackling some of the challenges of the modern-day workplace.

The outgoing Registrar, Tricia Phillips, has guess-timated that around 19,000 volunteer hours have been spent on the Registration Scheme. That's 7,000 hours from the Registrars, 1,500 from the assessors for assessing, 1,500 hours for assessors to attend annual training and moderation, 2,000 hours from committee members helping to run the Scheme and giving training, and a whopping 7,000 hours of guidance from mentors supporting their candidates.

Hats off to all these volunteers for their generosity in supporting professional development within the Society of Archivists, and now ARA. Three cheers!

The Registration Scheme sub-committee has now been wound down, following the completion of the last

# Professional development News

assessment round. My warmest thanks extend to them all for helping to support candidates, assessors and mentors through a couple of particularly busy years, specifically:

Tricia Phillips, Registrar  
Melinda Haunton, Secretary  
Courtney Brucato, Treasurer and Candidates' Rep  
Richard Wragg, Communications Officer  
Kate Jarman, Events Officer  
Barbara Sharp, Mentors' Rep

Many thanks also to all former committee members and particularly the Registrars who have helped to keep the Scheme fresh and relevant to the membership and to fly the flag for high professional standards throughout.

## What next for Registration?

Registration will continue in a new guise as an integral part of the ARA's new Professional Development Programme. Do check out the programme website for the latest information on how to transfer from the old Registration Scheme or how to enrol for the first time:

<https://archivesandrecords.smapply.io/>. Note also, if you are already a Registered member, there are new rules concerning a periodic, light-touch 'review' of all holders of ARA qualifications. If you would like to work towards the new Foundation or Fellowship membership, then you can find out more about them via the same link.

NB: ALL CANDIDATES ON THE OLD REGISTRATION SCHEME WILL NEED TO RE-ENROL THEMSELVES ONTO THE REGISTERED MEMBERSHIP PART OF THE NEW PROFESSIONAL DEVELOPMENT PROGRAMME. You will NOT be transferred automatically, partly as some of our membership information is a little outdated.

Enrolment is free until 1 January 2019. Please contact Chris Sheridan at [cpd@archives.org.uk](mailto:cpd@archives.org.uk) for help or assistance if needed.

We hope that the new Programme will help Registration membership to continue to flourish and grow over the next 20 years, and that the new provision for Foundation and Fellowship will prove just as successful. Watch this space!

**Charlotte Berry**

ARA Board member for Professional Development

Congratulations to Alice Maltby-Kemp FMARA, who has qualified as the ARA's first Foundation Member! In this article I catch up with Alice to learn more about her experience on the professional development programme and what ARA professional recognition means to her.

## - Please describe your current role

I currently work as an Archive Assistant for Worcestershire Archive and Archaeology Service (<http://www.worcestershire.gov.uk/waas>). I received my masters from Aberystwyth University, which I took through distance learning.

## - What does your job involve? What do you enjoy the most about your job?

As an archive assistant in the User Service team I spend a lot of time on public service duty, either in our Original Archive Area or answering enquiries via our online system. I have also had a variety of background projects, including doing the CARN ticket admin, supervising volunteers, research and collections work. I enjoy the variety of tasks and enquiries we get as our collections and customers are so varied.

## - Why did you join the ARA?

I joined the ARA as a student on the distance learning course because I was unsure whether I would be able to continue to work in the sector throughout my studies and wanted to be able to keep up to date with what was happening in the wider profession.

## - What attracted you to Foundation membership?

I was attracted to Foundation membership as a way to show my professional development before finding a qualified post, as I have learned a lot whilst working. I am hoping that FMARA status will highlight to potential employers the value of my 6 years of experience in non-qualified roles both in archives and records management.

## - We advise candidates to undertake a self-assessment of their experience using the competency framework. How useful did you find the self-assessment process?

This experience has taught me a useful approach which I can apply to future tasks regardless of whether they are used in

a formal portfolio. A reflexive approach enhances work activities by making me consider their positive and negative aspects and allow me to learn from the past to enhance similar activities in the future.

**- What is the best advice you can offer to members currently working on their competency portfolios?**

Make sure the learning and progression section doesn't turn into more description of the task, which mine did at first. Say why you did what you did and be clear about what you learned and whether it was a new or existing skill. In each section relate it back to the competency criteria to emphasise where your task fits.

**- What is the best advice would you offer to those members thinking of qualifying as a Foundation member of the ARA?**

If you start by making notes about the new skills you learnt and the positive or negative outcomes of each of your tasks you will already have a starting point for if you decide to create a portfolio. If you then have a look at the competency levels available on the website and at the criteria for different levels, you may be surprised how much you have already done. I was able to complete my portfolio using tasks I had either already done or which were ongoing without needing to take on any extra work except to write up the tasks into the forms.

**- Any other key point you'd like to make on your journey so far.**

Never underestimate the important role your mentor can play. I was able to have several valuable conversations which assisted me in both selecting the competencies for my portfolio and the best way to complete the form after my first draft.

**Chris Sheridan**

CPD Manager

# Newly registered members of the Archives and Records Association

Following the last-ever assessment round of portfolios submitted to the assessors under the old-style Registration Scheme in spring 2018, the successful candidates are confirmed as follows:

**Kiara King**

Archivist, The Ballast Trust

**Ishbel Mackinnon**

Senior Officer, Archives and Local and Family History, Culture Perth and Kinross

**Sarah Palmer-Edwards**

Corporate Information and Knowledge Manager, London Borough of Hackney

**Rebekah Taylor**

Archive Manager, Hillsborough Disaster Archives, IOPC

**Julie Crocker**

Archivist (Access), Royal Archives, Windsor Castle

**Jane Fowler**

Archivist, Faculty of Dance, Trinity Laban Conservatoire of Music and Dance

**Nancy Fulford**

Archivist, T.S. Eliot Collection, Set Copyrights Ltd (T.S. Eliot Estate)

**Karen Stapley**

Curator, Modern Archives and MSS, British Library

The committee would like to congratulate the newly registered members on their success.

We would also like to acknowledge the efforts of the successful candidates' mentors:

**Clare Paterson**

**Alison Rosie**

**Lorraine Screene**

**Cressida Williams**

**Pam Clark**

**Anne Barrett**

**Hayley Whiting**

**Susan Snell**

The committee would like to thank all these mentors for the time and support they have given to their candidates.

**Richard Wragg**

Communications Officer, Registration Scheme Sub-Committee



**SBA ICA**  
 Section on Business Archives  
 Section des Archives du monde des Entreprises

## BOOKING NOW OPEN: BAC CONFERENCE 2018 IN ASSOCIATION WITH SBA ICA

‘Can you believe it...? Business Archives and trust’

This year the Business Archives Council (BAC) conference will be a joint two-day event with the Section on Business Archives of the International Council on Archives (SBA ICA).

It will be held at The National Archives in Kew, London on 14 and 15 November and will be on the critical theme of ‘Trust’.

Over the two days we will explore trust in the record, both paper and digital; trust in the information service and how to operate a trustworthy service; trust in the business, in light of the many recent corporate scandals; and whether trust is different across borders.

Further information about the day's programme, booking and prices is available on the BAC website:

<https://www.businessarchivescouncil.org.uk/activitiesobjectives/conference/>

Bookings will close on 31st October.

Please send any questions to conference organisers at: [BACConference@gmail.com](mailto:BACConference@gmail.com)

# Collecting matters

I work in the Web Archiving team at The National Archives. We run the UK Government Web Archive, an ever-expanding collection of government websites and social media feeds, which stretches back some 22 years. It is one of The National Archives' oldest, largest and most-used digital collections.

Rather unusually for a web archive, ours is “open to the world”. You can visit it at:  
<http://www.nationalarchives.gov.uk/webarchive/>

It's an exciting digital service to provide: by virtue of the technology we use, we are able to capture, present and preserve websites for future generations. The lifespan of a website can be so fleeting that it really brings home how important the act of collecting it is, especially when you consider the question: “how would future generations understand the state today without using its web presence as a source?”

Web archives are not all that different from other types of archive. They may be less tangible but they nonetheless involve faithfully capturing “the thing”, then authentically presenting, contextualising and carrying out preservation actions on it. It is however a (relatively) new area in archives and as such it does present us with unique challenges.

Perhaps the biggest one is providing a service that meets the needs and expectations of our users - something we're committed to!

We'd love to hear what you think of the web archive - so please take a look and let us know! You can reach the team directly via: [webarchive@nationalarchives.gov.uk](mailto:webarchive@nationalarchives.gov.uk)

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**Tom Storrar**

The National Archives (UK)

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Harry Lucas (1855-1929), who worked with his father to build a company which would become a major supplier of lighting and electrical equipment to the motor, marine and aero industries throughout the 20th Century.



Joseph Lucas (1834-1902), founder of Joseph Lucas Industries.

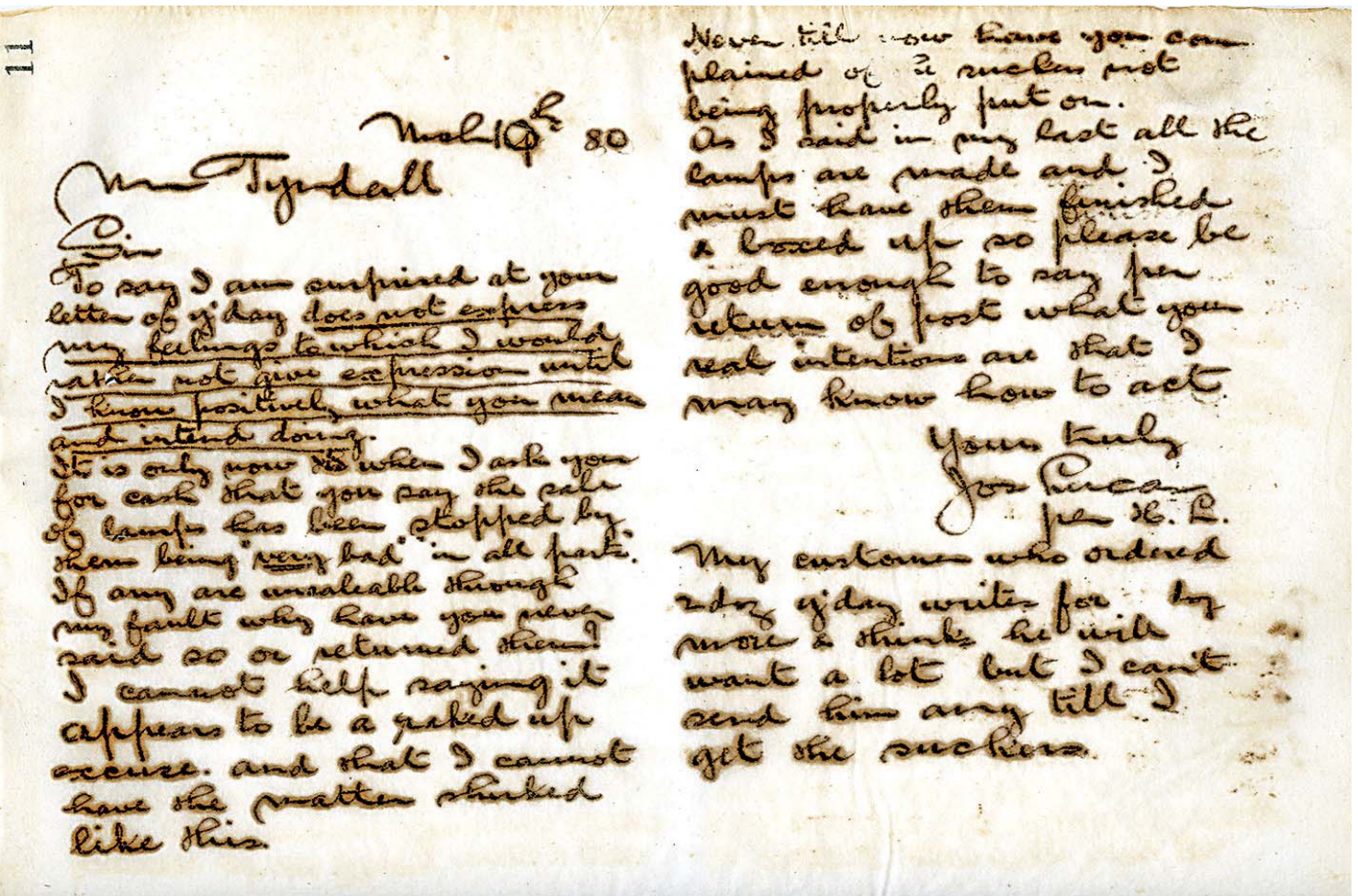
# The Harry Lucas letters: portrait of a Victorian business

I am Cath Mayo, conservator for the British Motor Industry Heritage Trust which is based at the British Motor Museum in Warwickshire. Our conservation studio is a relatively new venture, set up in 2016 to improve the condition of the archive collections by spotting potential problems early on. At the end of 2017 our Lucas archivist came to me with an item she was concerned about. It was a large bound book made up of letters written by Harry Lucas and his father, Joseph.

Joseph Lucas went into trade in the 1860s to support his growing family. He began by selling paraffin oil from a basket skip which he wheeled round the streets of Hockley in Birmingham. He proved to have a talent for trade and within a few years began to make and sell ships lamps, before moving on to cycle lamps and then lighting for motor cars. His eldest son, Harry, had been helping his father in the business since he was 17 and in 1882 they formed a partnership trading as Joseph Lucas & Son, which

became Joseph Lucas Limited in 1897. When Joseph died of typhoid in 1902, Harry took over the business.

The letters appeared to be copies, dated between February 1880 and February 1886, transcribed by hand onto individual sheets and contained in a beautifully bound volume. There were two issues that were causing me to worry about the book. The first problem was that the pages were so incredibly thin that they were pretty much impossible to turn over without tearing. The second problem was that iron gall ink had been used to write the letters. This type of ink has been used for hundreds of years for writing documents and after a certain amount of time and in certain conditions, the ink starts to oxidise and eventually eats through the page it's on. As a result, the words bleed and holes appear. There are ways of slowing down the oxidising process but in this situation, the pages were so thin and fragile it would have been silly to even try it. There were quite a few pages in the book that had been



A transcribed copy of the letter written by Joseph Lucas to Mr Tyndall on 10 March 1880, demanding payment for lamps which had been supplied.

eaten through, so the best thing to do was remove the pages one by one, repair where possible and encapsulate each one to help prevent further damage. It seemed such a shame to have these wonderful insights behind-the-scenes of the Lucas Company that no-one would be able to safely look at; so I got to work carefully removing the pages. At times, it was a very nerve-wracking job as the paper was so thin and even a small breeze would've caused disaster. It took a few weeks to do all the pages, but I got there eventually.

Of course, it was very tempting to read the letters while I was removing them from the book and I must say, some were fascinating to read. Many are from Harry to Joseph, keeping him informed of things going on in the business, while others are addressed to other companies and also clients. Some were quite normal and run-of-the-mill kind of subjects, and others were a little juicier such as people not paying bills, or complaining about defects in supplies. The letter illustrated is signed by Joseph Lucas to a Mr Tyndall who was refusing to pay for some lamps he had



*“There were quite a few pages in the book that had been eaten through, so the best thing to do was remove the pages one by one, repair where possible and encapsulate each one to help prevent further damage.”*

been supplied with on the grounds that he thought they were of bad quality. Things get quite heated between the two of them, as is evidenced by the underlining in the example above. ‘Sir,’ Joseph writes, ‘to say I am surprised at your letter of yesterday does not express my feelings to which I would rather not give expression until I know positively what you mean and intend doing’. He goes on to accuse Tyndall of ‘a faked up excuse’ for not paying. This set of correspondence spans from February to July 1880, when Mr Tyndall finally pays his bill.

I had to keep reminding myself that there were approximately 1000 letters to get through and no time for reading all of them, so I ploughed on and what had been one bound book’s worth of letters eventually became four archive boxes of encapsulated pages. These fascinating letters are now safe from tearing, fingerprints and hopefully further iron gall ink damage. Taking them out of the book not only safeguards their long term future but also makes it possible to digitise them so they will be both safer and more accessible in the future.

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**Catherine Mayo**

British Motor Industry Heritage Trust

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All pictures are copyright of the British Motor Industry Heritage Trust.

# A new approach for the conservation of parchment stationery bindings

As a conservator working for a multitude of archival collections, I am frequently asked to repair parchment stationery<sup>1</sup> bindings. The purpose of this article is to outline an innovative approach for their repair using cross-grained papers and gelatine as the adhesive methods for their repair. The current research into the conservation of parchment<sup>2</sup> focusses on its condition as a text block, rather than a binding material. The techniques outlined are readily adaptable, stable and use adhesives and repair materials similar to the originals.

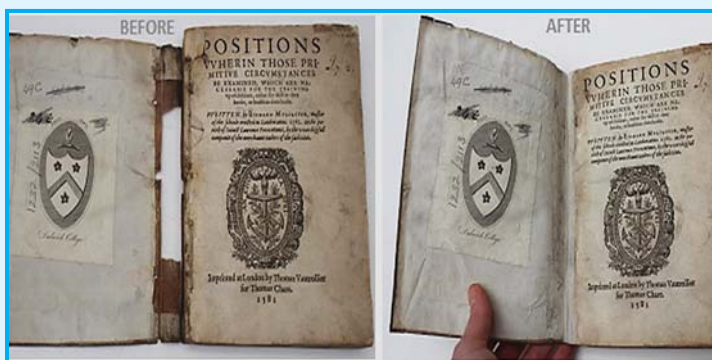
## Parchment as a covering material

Parchment is the untanned skin of sheep, goats or calves that is limed, washed and stretch dried. Kept dry, it can last for centuries. As it is untanned it is susceptible to physical distortion during changes of temperature and humidity.<sup>3</sup> Undyed, it is a cream, generally semi-opaque, matt covering material, that is relatively inflexible when compared to leather. Modern parchment appears thicker, stiffer, and handles differently to historic examples. During binding, the skins are heavily-wetted which affects the collagen-structure of the skin, gelatinising it. The resultant gelatinisation varies, depending on the skin, its manufacture, and the technique of the binder. Areas of severe gelatinisation appear transparent and horny.

Many different structures make use of parchment as a covering material, from the spring back, with its heavy tapes, “clowthings”, and separate, rigid spine pieces; to more simple bindings such as laced, parchment-covered cases. Common features are high quality paper used for the text blocks, and all-



Dulwich College Archive, Mulcaster, "Positions Wherein Those Primitive Circumstances Be Examined..." 1581, front cover and spine before and after repair  
With kind permission of the Governors of Dulwich College



Dulwich College Archive, Mulcaster, "Positions Wherein Those Primitive Circumstances Be Examined..." 1581, inside front cover and title page before and after conservation  
With kind permission of the Governors of Dulwich College



Westminster School Archive, "Town Boy Ledger, 1815-1862", detail of headcap before and after repair  
By kind permission of the Governing Body of Westminster School

along sewing<sup>4</sup>. The variety is endless, and binders are resourceful folk, making it essential to record the codicological evidence.

### Common damages

There are a number of typical damages. They frequently have a high degree of surface dirt, attributable to the use of oil lamps, air pollution, and many decades of handling. Sometimes there is warping of the boards due to unsupported or vertical storage, crushed head caps and corners and lost or partially detached binding parts. The joints are often split. There is frequently damage to the text blocks such as tears, losses, tidelines and staining. It is crucial to understand why these damages have occurred and not to replicate the errors of the past. Weaknesses may be due to poor quality materials, such as red-rotted leather or mull, or inherently weak board attachments. Some of the bindings are enormous and have heavy brass furniture, including fore edge clasps. If they have been stored vertically there is little chance that the binding will not suffer distortion and damage.

### Conservation approach

The first step is to record their structure and document their appearance. Bindings are engineered structures that are required to move whilst protecting and displaying their contents. The purpose of repair varies as some are being prepared for exhibition or digitisation, but generally it is to enable safe handling. An overriding consideration is to keep all original binding elements<sup>5</sup> where feasible. This can become complicated if there have been earlier repairs, but by prioritising the function of the working parts and removing degraded materials an effective balance between form and function is maintained<sup>6</sup>. Aesthetically, repairs using conservation grade materials, should not distract from the original materials but also be perceptible, following the precepts of archival repair<sup>7</sup>.

### Repair technique

The removal of loose surface dirt enables the successful adherence of repairs, improves the clarity of the text, and removes acidic deposits. If red-rotted leather overbands are present, they are consolidated using Klucel G in isopropyl alcohol. Paper repairs are performed using western handmade and Japanese papers<sup>8</sup>. Sewing is repaired where broken, over the original threads and using the existing supports<sup>9</sup> after the spines are cleaned of old adhesive.



Westminster School Archive, "Town Boy Ledger, 1862-1884", before and after conservation treatment. By kind permission of the Governing Body of Westminster School



Middle Temple Archive, "Minutes of the Proceedings of the Library", spine before and after treatment. By kind permission of the Masters of the Bench of the Honourable Society of the Middle Temple



Middle Temple Archive, "Minutes of the Proceedings of the Library", tail edge before and after treatment. By kind permission of the Masters of the Bench of the Honourable Society of the Middle Temple

Poor-quality, degraded "clowthings" are replaced with archival leather or aerolinen depending on the original materials<sup>10</sup>. Spine linings are integral to the function of the binding<sup>11</sup> and where damaged, are replaced with handmade paper. Layers of thin millboard wrapped in handmade paper are used for new spring back spine pieces. Cotton blotter is used to reform losses in corners and caps, as a lightweight, easily mouldable repair material.

Instead of using modern parchment<sup>12</sup>, splits and losses in the parchment are repaired from the verso using cross-grained handmade paper and acrylic-toned<sup>13</sup> Japanese paper. This material is durable, flexible, and dimensionally stable which is critical given the potential for physical distortion over time. If external support is needed, gampi paper toned with acrylic inks is used. The adhesive used to cross-grain the laminated repair material is type-B gelatine. It has an excellent tack and can be used both warm, and cold as a mousse. It is a proteinaceous adhesive that moves with the skin with changes of temperature and humidity<sup>14</sup>. The resulting repairs are stable and move well within the repaired binding.

### Ann-Marie Miller

<sup>1</sup> Stationery bindings have been historically used for the recording of accounts and administrative data. The term is descriptive and implies a binding produced for everyday usage. These bindings are working books, produced relatively cheaply when compared to their leather-bound counterparts. For further information see <http://www.ligatus.org.uk/lob/concept/3045>.

<sup>2</sup> Such as that provided by the EU Improved Damage Assessment of Parchment, see [www.idap-parchment.dk](http://www.idap-parchment.dk) and [http://www.cyfronet.krakow.pl/~ncbratas/pdf/full\\_larsen.pdf](http://www.cyfronet.krakow.pl/~ncbratas/pdf/full_larsen.pdf) for a description of the project.

<sup>3</sup> As a binding covering material, it has been dyed green since the eighteenth century, mainly for use on legal tracts.

<sup>4</sup> This variety includes limp structures that are without boards and the robust sewing with supports which are then laced into the covers. They can have lacings of parchment strips or alum-tawed skins and overbands of tanned-leather which are functional, locking the layers

of the bindings together. "Tackets" can also be used, which are stitches through the various parts of the binding structure to secure them, as secondary method in addition to laced sewing supports, often over the primary sewing from the inside of the text block, all the way to the outer covering material. These are often made of "Cat-gut" which is actually a dampened and twisted thin strip of parchment formed under tension. Sewing can be on tapes made from tawed-skin, leather, parchment, cords or even braided textiles.

<sup>5</sup> For a discussion of minimum intervention and how it can be interpreted within book conservation, see Marzò, <https://thebookandpapergathering.org/2016/12/08/minimal-intervention-equals-major-attention/>

<sup>6</sup> The balance of repairs of both the binding and text block need to be flexible and strong, but not stronger than the original, as the original material will then be the weakest point in the structure.

<sup>7</sup> A. D. Baynes-Cope, "Ethics and the conservation of archival documents", *Journal of the Society of Archivists* Vol. 9, Issue. 4, 1988

<sup>8</sup> Both Zin Shofu wheat starch paste and type B bovine gelatine are used depending on the media.

<sup>9</sup> Split tapes are replaced using conservation grade materials, such as parchment, linen tapes or Aerolinen.

<sup>10</sup> Aerolinen is occasionally backed with Japanese papers such as Sekishu to provide stiffness if that is useful to the recreation of the binding. Gelatine is used as the adhesive.

<sup>11</sup> Conroy, Tom, "The Movement of the Book Spine", *AIC Book and Paper Group Annual*, Volume 6, 1987, <https://cool.conervation-us.org/coolaic/sg/bpg/annual/v06/bp06-01.html>

<sup>12</sup> If modern parchment is used, great care should be taken to match the part of the skin that the piece is taken from to that of the original binding. This can be done by examination of the pore and follicle patterns on the skin.

<sup>13</sup> The Japanese papers are toned either using a brush and diluted mixed pigments or with acrylic inks depending on the opacity of the colour required. This is done before the lamination with the handmade paper and the adhesive used is gelatine.

<sup>14</sup> As an added advantage Type-B bovine gelatine has been shown to inhibit the movement of iron 2+ ions in iron gall ink degradation. For recommended adhesives and further advice on iron gall ink see [https://irongallink.org/igi\\_index.html](https://irongallink.org/igi_index.html). and Gulik, Robien van, "Treatment of Iron Gall Inks - Methods and Questions," in: *Iron-gall Ink Corrosion, Proceedings European Workshop on Iron-gall Ink Corrosion*, Rotterdam 1997.

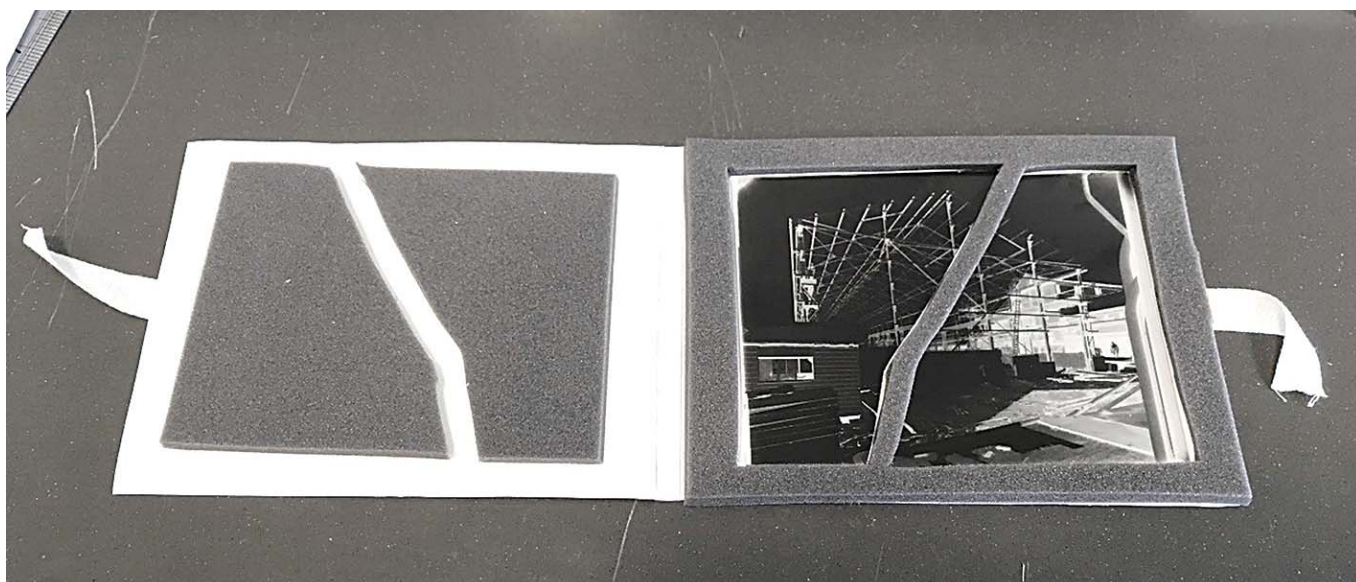
# Glamorgan's Blood preserved on glass

Glamorgan's Blood is a Wellcome Trust Research Resources Award funded project, which focusses on the cataloguing and conservation of the National Coal Board collection at the Glamorgan Archives. The collection is comprised of a variety of material relating to the South Wales coalfield, including rolled maps and plans, volumes and photographic material.

While the majority of the glass plate negatives simply need cleaning prior to digitisation, some display more extensive conservation issues. A number of the plates are broken or have lifting or highly damaged emulsion. These issues will require more supportive housing solutions or more intensive conservation treatment.



R. Burchell and 'Aber' Tirpentwys Colliery



Broken glass plate negative in new housing



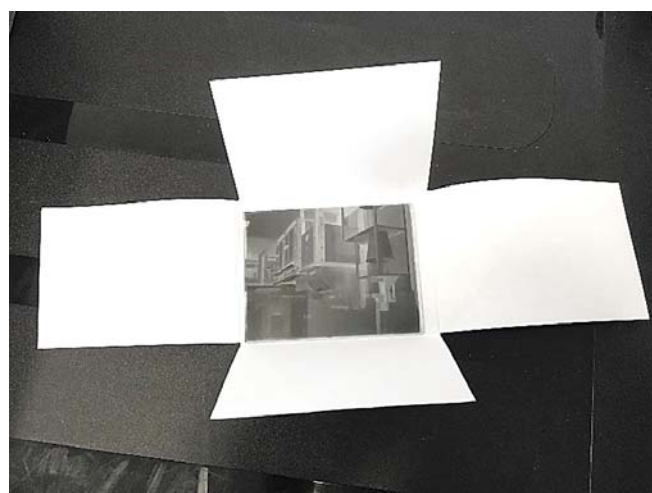
Plastazote tray insert



Glassine envelope



Folders for housing broken glass plate negatives



Folder for housing glass plate negative

To clean the plates, first an air-puffer is used to remove loose dust and dirt on both the emulsion side and the glass side. By using the air-puffer tool, the emulsion side of the plate can be cleaned without risk of abrasion. Next, cotton wool buds wrapped in fine tissue and dipped in a solution of water and ethanol (50:50) are used to remove dirt and grease from the glass side of the plates.

A final wipe, using a dry cotton wool bud, removes any streaks.

The cleaned plates are then re-housed in folders made from material up to PAT (Photographic Activity Test) standards. We use different sized folders for the varying plate formats to ensure a good fit. The original packaging

**“Broken glass plate negatives require housing which both supports the fragments but also keeps them separate to ensure the delicate emulsion is not damaged through abrasion between the glass shards.”**

for these items was glassine envelopes, which is a type of highly calendared paper often used for the storage of photographic negatives. Glassine is an inappropriate storage material as it yellows over time and can damage the photographic emulsion.

Once cleaned, the plates are scanned and a positive image is created. This will then be added to the Glamorgan Archives catalogue.

Broken glass plate negatives require housing, which both supports the fragments but also keeps them separate to ensure the delicate emulsion is not damaged through abrasion between the glass shards. The new housing incorporates cushioning plastazote foam within an unbuffered card enclosure. This new enclosure allows the negative to be safely stored and, if necessary, viewed without removing the individual shards. This simple housing solution can provide either temporary or long term storage, allowing for further repair treatment to be carried out in the future.

These folders must be stored horizontally in archival boxes to avoid movement of the shards. To ensure they are fully protected inside the boxes, more plastazote is used to make stackable tray inserts. The boxes are then stored on stationary shelving to limit unnecessary movement further.

The broken negatives will also be scanned and digitised, reducing the need for handling while at the same time ensuring public access to these wonderful images.

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**Stephanie Jamieson**

Glamorgan Archives

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Photos by permission of Glamorgan Archives.

# Conservation begins on documents saved from the Public Record Office (Ireland) after the fire in June 1922

The ‘Salv’ed Documents’ was a collection of brown paper parcels of material that was salvaged after the fire that destroyed the Public Record Office, Ireland on 30 June 1922. These parcels had never been opened before. Whilst there was a brief description of the contents on the parcel labels, the documents inside had not been accessible to archivists, historians or researchers.

A Condition Assessment Survey was carried out in 2017. The aim of the project was to close the knowledge gap of what was in the parcels, to quantify the extent of the material and to determine the condition and historical significance of the documents.

Between August and December, the project team assessed, documented and photographed the 378 items inside the parcels which ranged in dates from the 14th to the early 20th centuries. The items were assessed in terms of stability and how easy they were to open out,



Protecting the vellum with small squares of blotters and using neodymium magnets wrapped in felt and plastic to hold the receipt in place whilst it air dries in shape.



Three receipts housed in archival papers and held in place with Mylar strips.



Common Plea: Outlawries from 1741-1743, approx. 100 vellum leaves, which are charred, scorched and fused together as a result of the fire. This roll was given a condition grade of 5.

unfold or unroll the documents and read them. However, a considerable proportion of the parchment documents was distorted and fused to other leaves of parchment due to the heat of the fire.

After the survey was completed, funding was made available to carry out the next phase of work, which was to clean the material that had been given a Grade 1 condition rating. These documents required less complicated conservation treatments and could be made available to archivists and researchers.

The 16-week project began in early 2018 and its objectives were to clean the archival material using conservation methods and provide long-term storage to protect the documents by housing them in archival-standard packing.

### Cleaning of the documents

All the material was initially cleaned using a Nilfisk® 4 HEPA filter vacuum cleaner with an adapted brush, as small granules of dirt and soot were found embedded throughout the bundles. Documents were then cleaned using a combination of hand-held brushes, smoke sponges



Cleaning the top layer of soot and debris from a bundle of 1883 Writs of Summons, Law Exchequer.

*“The use of smoke sponges after vacuuming was excellent at cleaning the surface and lightening the overall tone of both the paper and the parchment.”*

(vulcanised rubber) and plastic erasers. The use of smoke sponges after vacuuming was excellent at cleaning the surface and lightening the overall tone of both the paper and the parchment. Mars Staedtler® plastic erasers in grated form were used on certain areas to remove dark areas of dirt and charring stains, again with very successful results.

PPE was worn when evidence of historic mould was visible and these items were cleaned in the air filtration cupboard with positive results. The project successfully met the target of cleaning the contents of the 28 parcels which had been given a condition rating of Grade 1.



Receipts from the Revenue Exchequer, Collectors Account Dublin Port April 1818, before conservation.

“To reduce the distortion and make the hard section soft again, the receipts were placed in a Perspex chamber and moisture was introduced using the ultra-sonic humidifier.”

#### Conservation treatments on the Grade 1 documents

The majority of the documents are stable and can be handled now that they are housed in archival folders and boxes. For some of the badly damaged paper documents, housing in Mylar offers an adequate solution, providing both protection and stability when accessed.

Material from seven parcels required additional conservation treatments. These included light humidification and flattening of distorted areas as well as minor repair to physical damage or scorched areas. This treatment work is currently being carried out. Due to the heat of the fire, these vellum receipts from Dublin Port 1818 had distorted and become hard along the right-hand side.

To reduce the distortion and make the hard section soft again, the receipts were placed in a Perspex chamber and moisture was introduced using the ultra-sonic humidifier. This machine changes water into a cool fog and after 6–10 minutes, the receipts were flexible enough to open out. They were then placed on Paraprint L60® material over a metal worktop and held in place with neodymium magnets to air-dry under tension. The results were excellent.

Three receipts were then housed in Heritage wood-free paper folders and held in place with non-adhesive Mylar mounting strips, 1.5cm x4 cm. This means that they can be easily removed if necessary. Housing three receipts in a paper enclosure is also a security measure.

Once this work is completed, the material can be passed to the archivist for detailed listing. All these items belong to the former collections of the PRO(I) and using Herbert Wood's Guide to the Records Deposited in the Public Record Office of Ireland (1919), archivists will be able to find the historic collection reference codes for the material.

The project supervisor is Zoë Reid, Senior Conservator, National Archives of Ireland, and the survey and Grade 1 cleaning work was carried out by Rebecca de Bút (project conservator), Heather Courtney (project assistant and photographer, Condition Assessment Survey) and Jenny Greiner (project assistant, Grade 1 Cleaning). This work would not have been possible without the generous funding of the Irish Manuscript Commission (IMC).

**Zoe Reid**

National Archives of Ireland

# Conservation of a 19th century faculty of engineering volume

In 2017 the conservation unit at Sheffield Archives worked on a small group of printed 19th century faculty engineering volumes.

The volumes had been bound in full reverse calf leather, in the spring back ledger style, popular from the mid-19th century onwards.

The covering leather was badly damaged and had deteriorated significantly, with severe fragmentation, brittleness and red rot throughout.

In addition, boards had become loose and were badly damaged. The spring back spine was also badly damaged and the functionality of the original spine lost. Leather “clothings” on the spine were loose and lifting off.

The text block/spine was severely misshapen due to the way it was originally bound, and also because multi loose inserts have been either adhered onto folios at a later date, or have been inserted throughout the volumes at random points. This created an additional strain on the binding, leading to a situation where the original spring back style was not providing the functionality to protect the text block as it once had.

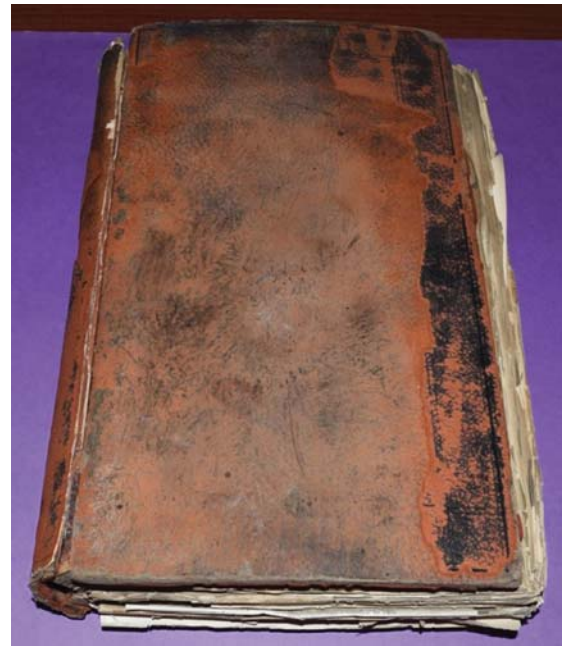
The text block of each volume was made up of poor quality machine made papers (lined), folded and made into sections then sewn onto tapes. Written information included use of pen/ink, printed and typescript material plus pencil notations. There was extensive tear damage throughout text block, plus surface and ingrained dirt.

Because the original binding style had broken down due to the structure of each volume it was decided that the volumes be rebound in the library style with a hollow back. All loose inserts would be removed and preservation packaged separately. This would significantly reduce the “swell” of the spine and enable the bindings to become less stressed when being handled and consulted and prolong their long term longevity.

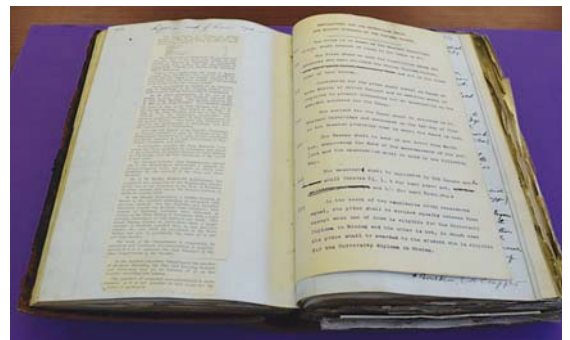
**Antony and Sarah Oliver**

Sheffield Libraries, Archives and Information

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Volume originally bound in leather



Open view showing damage to text block



Flange inserted into new “split” board with hollow back



Conserved volume showing new cloth joint and endpapers



Conserved volume with loose packaged items in new bespoke box

Penallt Roll of Honour before it was removed from glass bottle. Howard Humphries, Gwent Archives



# Message in a bottle

The Penallt Roll of Honour - dated 1921 - was found inside a bottle that was discovered when the Penallt war memorial was being renovated in 2014. It was hoped that this piece of paper would hold some information about the young men from the village that had lost their lives during the Great War, as no names were engraved on the war memorial itself.

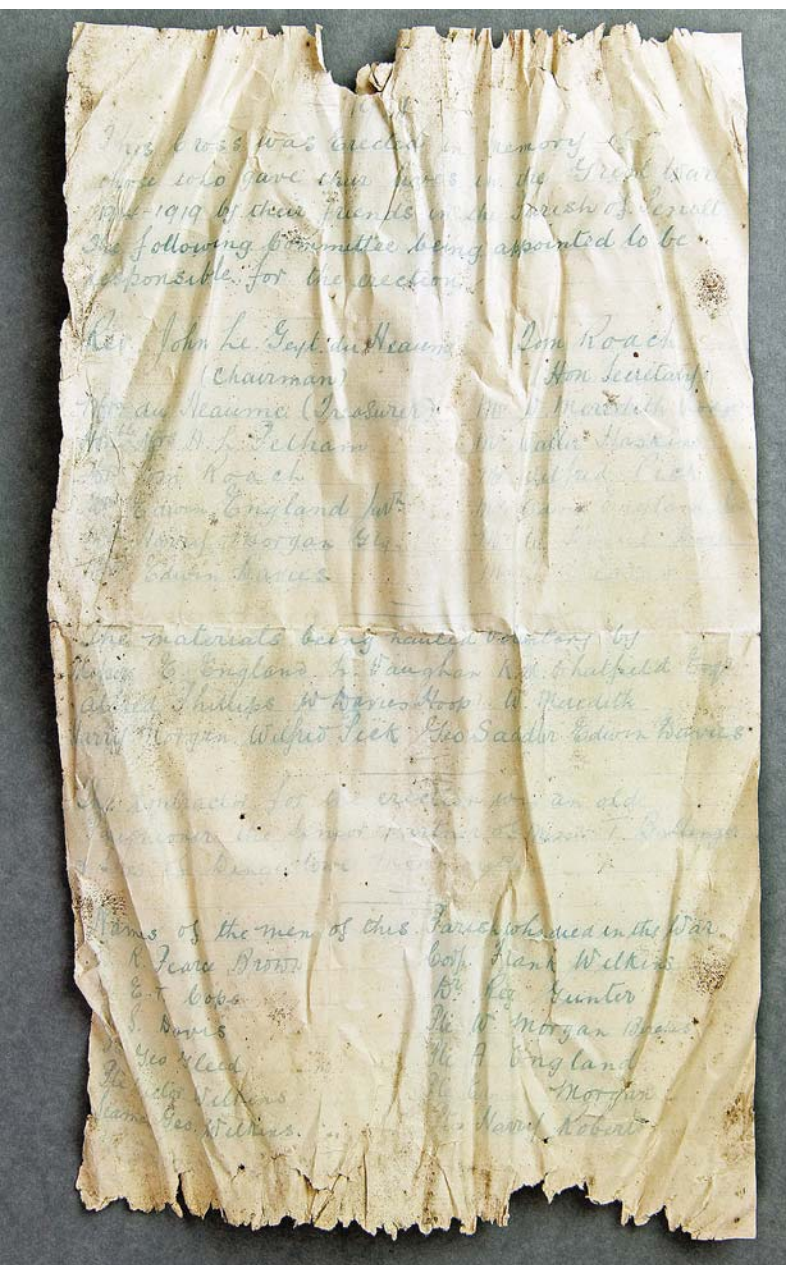
**W**hen the green glass bottle arrived at Gwent Archives it was covered in concrete and ‘pearly’ light reflective salts that came off easily when touched. Dust, dirt and the ‘pearly’ substance could also be seen inside the bottle, as well as the piece of paper.

Looking through the glass we could see the paper document had been folded twice and rolled up before being put inside. The document was not visible enough to ascertain its exact condition as a whole, but we could see that the outside edge of the paper was slightly crumpled and had minute tears and losses: this was possibly due to the fact the bottle was placed upside down in the concrete base of the war memorial.

After the bottle and paper had their initial assessment, three treatment options were put forward. The first

was decided against as the paper would be left inside the bottle. This was considered unacceptable as the information possibly contained within could never be accessed. The second option was to clean the outside and inside of the neck of the bottle as much as possible, then carefully remove the paper through the bottle neck. This was the preferred option as both the information on the paper could be accessed and the bottle would be kept intact. It was decided that the third option may have to be employed if the second did not work. This would involve cutting the bottle open with a glass cutter to retrieve the paper inside. Although not ideal, it was considered necessary if the paper could not be retrieved by any other means.

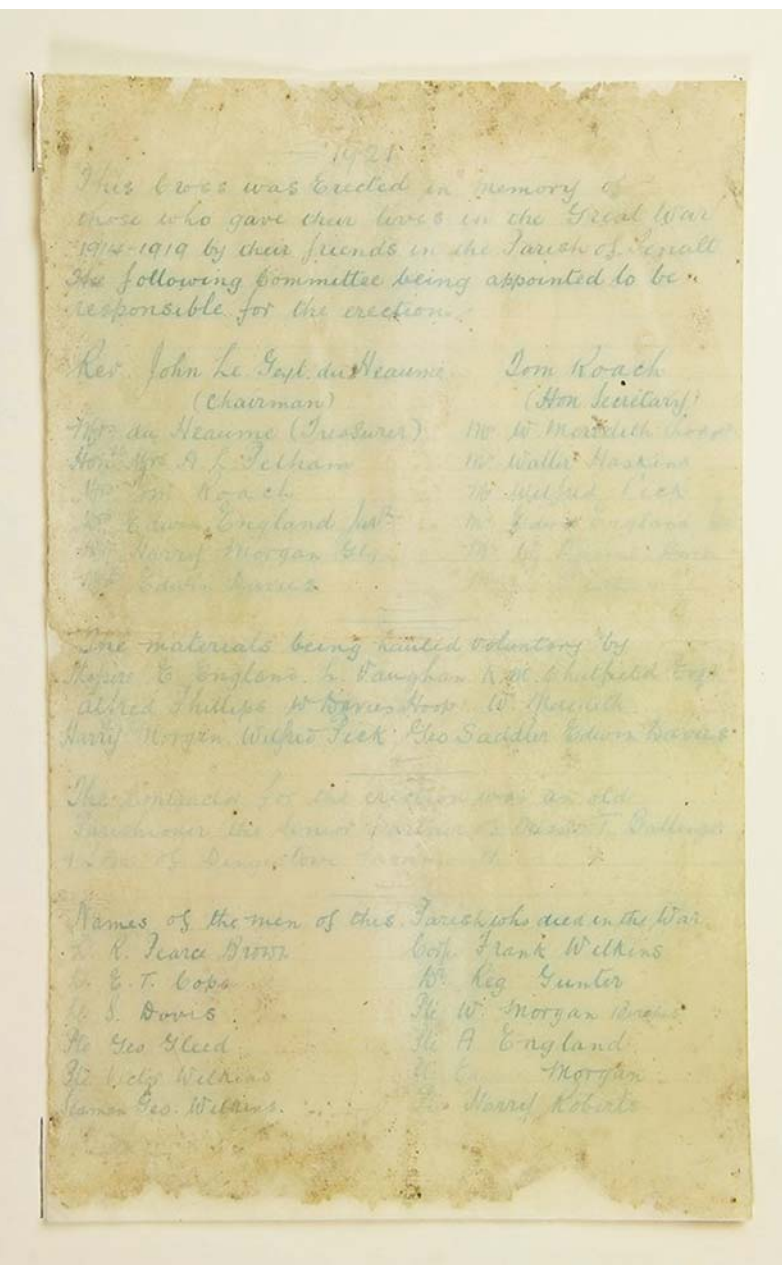
After the outside of the bottle and the neck were cleaned using a soft brush and dry cotton bud we attempted



Penallt Roll of Honour before conservation treatment.  
Howard Humphries, Gwent Archives

to remove the paper by attaching Groomstick eraser (pH neutral, permanently tacky, natural rubber used for archival cleaning) to the ends of two small metal spatulas. One spatula was placed inside the roll of paper and one placed outside. The spatula on the inside of the roll was turned clockwise to tighten the roll. The spatula on the outside was used to anchor the paper to stop it unfurling. The roll had to be made small enough to fit through the bottle's neck; this was no easy task and tweezers had to be employed to retrieve it.

After a lot of painstaking work we were rewarded with the information we had been hoping for and more! Although the ink had run due to moisture penetration the blue text was still clearly visible. The text includes a list of committee members who coordinated the fundraising and building of the memorial, the contractors and the



Penallt Roll of Honour after conservation treatment  
Howard Humphries, Gwent Archives

men who volunteered to haul the stone for the memorial as well as the names of the men of Penallt who lost their lives in the Great War, they are: Lt. R. Pearce Brown, Lt. E.T. Cope, Lt. S. Davies, Pte. W. Morgan, Pte. A. England, Pte. E. Morgan and Pte. Harry Roberts, Pte. Geo. Gleed, Pte. Victor Wilkins, Seaman Geo. Wilkins, Corp. Frank Wilkins, and Driver Reg. Gunter.

After the document was freed from its bottle we could assess its physical materials and condition more thoroughly. The light cream/white laid paper has eight chain lines head to tail (which can be seen by shining a light through the paper.) Three neatly cut edges and one uneven edge (left) suggest that the paper was torn from a book. The paper was ruled in a light blue ink but does not have a margin. The text was written by one hand in a blue, water soluble ink.

*“As well as the running ink, moisture penetration was also responsible for some mould growth on the front and back of the paper and for causing the fibres to become soft.”*

As well as the running ink, moisture penetration was also responsible for some mould growth on the front and back of the paper and for causing the fibres to become soft. There was some black surface and ingrained dirt present, although the majority of the document was quite clean.

The document was cleaned with a soft brush to remove surface dirt. A Mars Plastic eraser was used on the stronger areas of the paper to remove the more ingrained dirt. The document was then placed into a humidity chamber that was filled with cold steam using an ultrasonic humidifier to carefully hydrate the paper fibres. When the paper had sufficiently relaxed it was placed between blotters and boards and put in a large press overnight to sufficiently flatten it. The blotters were changed regularly to prevent mould growth.

Thin Japanese tissue was adhered to the back of the paper to support the weak fibres with a conservation adhesive made up with alcohol that was brushed through the tissue. Alcohol was used as the activating agent instead of water, as no negative effects were observed when the inks were tested. A heavier Japanese paper infill was needled out to the shape of the missing areas. After teasing out the long paper fibres it was adhered to the front of the paper. The document was then placed between blotters and boards, and put in a press overnight. When fully dry the excess paper and tissue were trimmed down. The document was digitised and a four flap folder was made using archival, pH neutral card and polyester strips for the document to be housed in, and the bottle was placed in an archival, pH neutral foam lined box.

Although this was quite an unusual project to take on the conservation studio at Gwent Archives are very pleased with the results of the treatment plan; both the Roll of Honour and bottle are stable, fully accessible and can be kept together as part of the collection at the Archive.

**Rhiannon Griffiths**

Gwent Archives

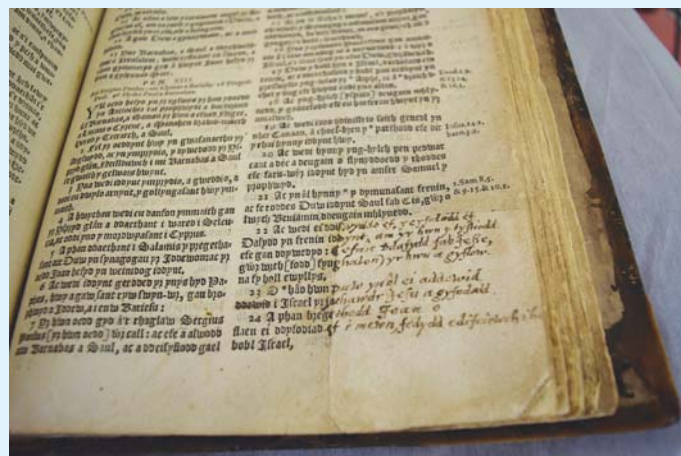
# Before and after

Passing through the archive conservation studio, we see many different archive materials such as documents, books, maps, parchment and seals. Few of these items demonstrate such a comparatively marked positive change in appearance than a football poster which came in to the Flintshire Record Office recently.

The poster (see photograph) is advertising a Welsh National League Grand Match at Holly Bush Ground, Cefn y Bedd in 1927. The teams were Oak Alyn Rovers v. Llandudno. Admission was 6d but for ladies, 3d! It was part of an accession of records of Penyffordd Cricket Club, which has now been catalogued as D/DM/1831/5/1.

Active conservation work can achieve miraculous increases to legibility, safe production and protection.

The thin, crumpled paper has been cleaned and washed with fragments being realigned. The fragments were then



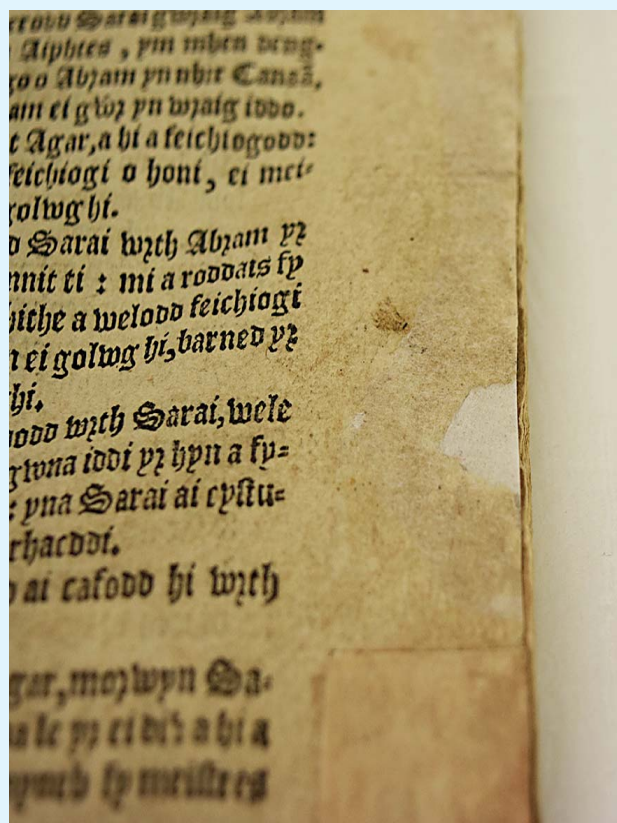
Original repair

lined with a 28gsm Japanese paper using wheat starch as the adhesive. Use of these materials has extended the life expectancy far into the future.

‘Before and after’ photographs are used to dramatic effect



Initial from first translation of the New Testament in Welsh



Juxtaposition of old and new repair William Morgan Bible

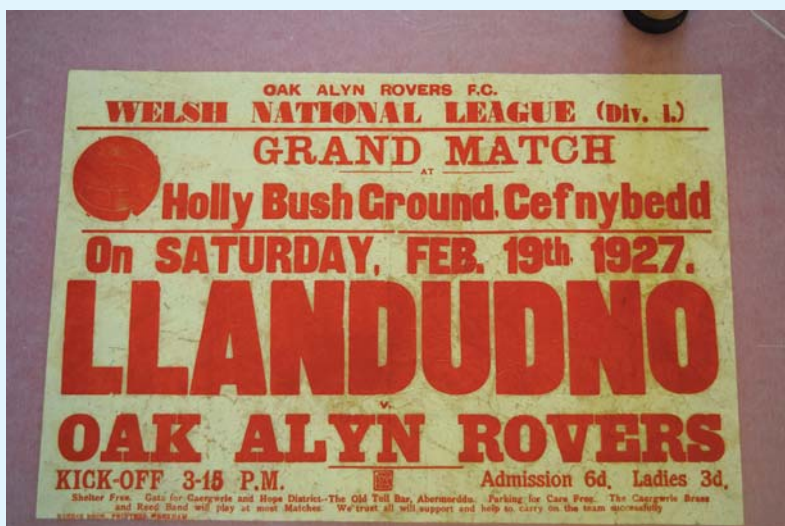
when explaining the benefits of conservation to the general public, but more often the physical change is not so remarkable. Indeed, conservation is best when the work is almost indiscernible. Change, in terms of the physical change of the archives in our charge, is not always a good thing.



The poster before conservation



During conservation, fragments are pieced together



The poster after conservation

“‘Before and after’ photographs are used to dramatic effect when explaining the benefits of conservation to the general public, but more often the physical change is not so remarkable. Indeed, conservation is best when the work is almost indiscernible.”

Subtle differences can alter the impact of our work. Lighter Japanese tissues will blend in to the original paper and can be almost invisible. It can be most satisfying when an item is returned to the strong room upon which it is necessary to have to indicate the repaired area. However, one of the requirements of archive conservation is that any repair undertaken is obvious and cannot be confused with the original substrate.

Last month I was fortunate enough to work on some early printed books, amongst them were the William Morgan Bible and the first translation of the New Testament in Welsh from the St Asaph Cathedral collection. All had various problems to overcome: the Bible had been repaired several times throughout its long life and the binding re-backed in the 20th century with many pages having been repaired at that time.

Many new repairs to edge tears were carried out using a 5gsm tissue coated with a 20% wheat starch solution. Japanese paper was traced out to fit exactly into the missing areas using a needle and it was decided not to tone the repair paper.

The repairs, old and new, have become part of the story of the book passing through time: the ‘before and after’, coming together in one unique object.

**Mark Allen**

Flintshire Record Office

Photos by permission of Flintshire Record Office.

## Creating a healthy and beautiful archive: the conservation and preservation project at the Boots UK archive

2019 will mark the 170th anniversary of one of Britain’s most well-known and trusted health and beauty retailers, Boots UK archive. As a business it regularly draws upon the strength of this heritage, and has accumulated a wealth of archival material that spans this long history.

The archive contains a range of materials and formats each with their own preservation challenges. An official archive has been present in a purpose built repository on the Boots site in Nottingham since 2000, which has mainly supported the needs of the business in that time.

The archive received a Research Resources grant from the Wellcome Trust in 2014 that allowed for the complete re-

Although the business dates back 170 years, there are many older documents relating to property such as this parchment deed (dating back to 1773) with fragile wax seal which required a very large box!

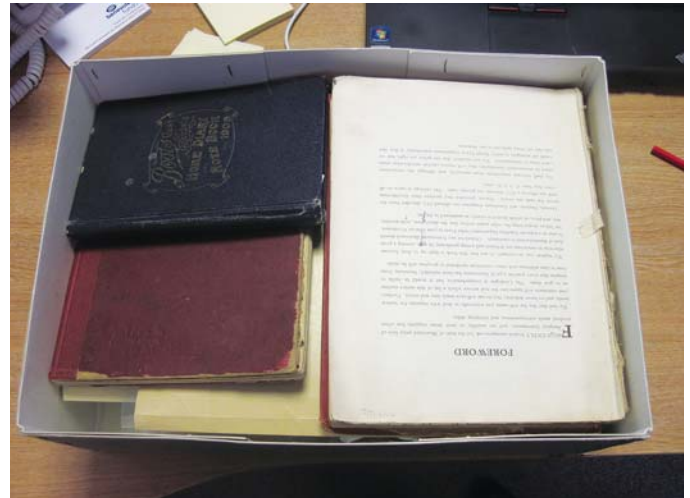


cataloguing of the collection, with the aim of opening up the archive to wider audiences, such as academics, through an online catalogue.

After an initial scoping preservation audit and survey by an independent conservator in 2014, the company archivist applied for a second grant from the Wellcome Trust



The plan chest space available to use as a workspace in January 2018. V. Haddock



A typical box full of books and files. V. Haddock



A box can be transformed by using simple folders to separate out objects with clear and consistent labelling making access so much easier. V. Haddock



It can be simple solutions such as padding out empty space to ensure a large fragile volume is kept safely in place in its box. V. Haddock



A typical 'Y' box of oversized items, requiring rearranging, labelling and sometimes custom made boxes and folders. V. Haddock



Creating individual folders for fragile items can help in their preservation, alongside padding the box to ensure they are not damaged further in transit between the store and the reading room. V. Haddock



Making a custom box to house mood boards for the 17 cosmetics range. V. Haddock



Part of the project was finding simple but effective ways to store unusual items such as these product labels. V. Haddock



Rehousing some of the hundreds of rolls of store plans. V. Haddock

which was successfully awarded in 2016. This led to my appointment in the post of project conservator in January 2017 for two years.

It was an ambitious project aiming to rehouse the entire paper based collection of approximately 5000 boxes of

*“To any newly graduated emerging conservator who might be starting out on a project such as this – try not to get overwhelmed by the scale of the project, break it down into smaller goals and trust what you know to focus your efforts and skills where the collection requires it most.”*

archival material, working in parallel with the project archivist. Although the basic outdated catalogue and part of the new catalogue on Calm were available, the information captured didn't help me identify where to focus the project, in particular in relation to how best to maximise fixed budget, and to prioritise my time. This was a challenging project for a newly qualified conservator, made more complex by the fact that I was the first and only conservator to have ever worked in this environment, and so also had the responsibility of creating various guidelines, such as on object handling. In addition, I was responsible for establishing longer term preservation measures such as environmental monitoring and forming forward thinking solutions on how to best store and preserve a wide range of formats and conditions.

There is much more that could be said about the wide scope of this project that could easily make another few articles! But I would like to pass on some of the things I have learnt to other conservators or archives about to work on similar projects.

To any newly graduated emerging conservator who might be starting out on a project such as this – try not to get overwhelmed by the scale of the project, break it down into smaller goals and trust what you know to focus your efforts and skills where the collection requires it most. Use your creativity to enhance your abilities in problem solving and adaptability such as where you need to get the most out of a fixed budget or timescale with quick and efficient solutions but without compromising on quality or ethics. During this

**“***The archive now ‘feels good’ as well, as it is so much easier to access with neatly labelled and easy to identify items aided by a clear, consistent, and detailed catalogue.* **”**

project it made more sense to focus my efforts on the more challenging and fragile items that required more specialist skills. Therefore it is worthwhile making the most of any opportunity to engage volunteers and other members of staff to support you throughout and beyond the project. Create detailed guidelines and plans for the rationale behind why you are doing things in a certain way and record everything you’ve done, and can’t do, as well. Reach out to other conservators in the region, old classmates or even through a professional body if you are working alone, and use this time to hone your skills in self time management, experience controlling a budget and decision making.

To archives that might be looking to appoint, or without access to, a conservator, there are lots of fantastic resources available online including blogs, publications and articles and courses you can attend. You can always contact your local conservator or look on the ARA or ICON websites for advice to really get an understanding of what you can do to make a real difference to the long term preservation of your collections.

It has been a great opportunity to work in this business archive context, especially one with such a long standing reputation like Boots, as these are places that rarely get an opportunity for a full time conservation post. Although there is still much to do, a substantial portion of the collection itself is now in a much ‘healthier’ position by implementing positive changes. The rows of roller racking and the items inside have vastly improved with lots of lovely ordered acid free boxes and folders. The archive now ‘feels good’ as well as it is so much easier to access with neatly labelled and easy to identify items aided by a clear, consistent, and detailed catalogue.

I would like to thank all of the staff and volunteers at the Boots archive for taking on board the conservation and preservation advice that I am so passionate about.

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**Victoria Haddock**

Boots UK Corporate Records and Archives

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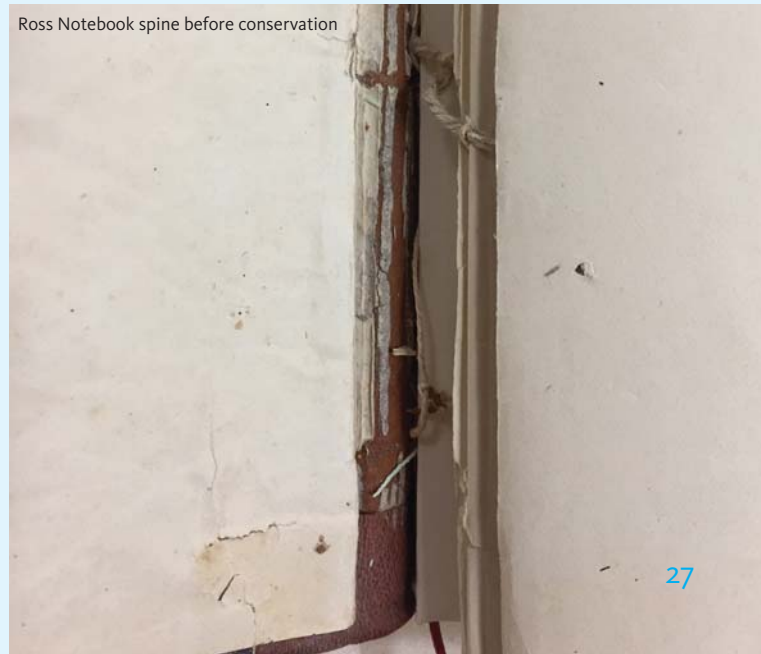
## Recent conservation projects at the London School of Hygiene & Tropical Medicine

This year, the London School of Hygiene & Tropical Medicine Archive Service undertook two projects with the National Conservation Service (NCS) to conserve significant and often-used items from our collections.

**T**he first project was the conservation of the Ross Notebook. This is a scientific ‘field’ notebook belonging to Sir Ronald Ross, written during 1895-1898 when the author was working in India. It contains dated diary entries recording his research, including the epic discovery in 1897 of the mosquito transmission of malaria, alongside correspondence and other preserved inserts. This discovery of the transmission of malaria was so significant that it later earned Sir Ronald Ross the Nobel Prize for Medicine in 1902.

Due to its iconic status, the notebook is often requested for display. Visitors, VIPs and students of tropical

Ross Notebook spine before conservation





Red rot damage to Student Register

medicine are fascinated to see Ross's original notes and diagrams.

Due to its frequent use, conservator Lucy Gosnay from the NCS examined the notebook and saw that the interleaved inserts were causing damage to the binding. In order to preserve the original order and look of the notebook, Lucy inserted discrete compensation guards into the text block, thereby making more space for the inserts. She also widened the binding by inserting a matching leather strip, maintaining its original look. The text block was cleaned, and any damaged areas repaired with Japanese tissue and wheat starch paste. The notebook was finally re-housed in a custom-made box. After conservation had taken place, the notebook was fully digitised at the NCS conservation studios. The Ross Notebook is now in great condition, ready to be admired by new generations of students and visitors to the School.

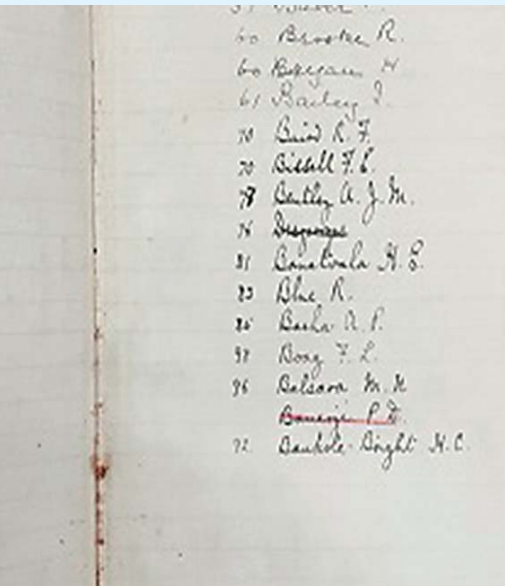
The second project was the conservation and digitisation of the School's early student registers. These eight registers are an important part of the London School of Hygiene & Tropical Medicine's history. The School was created by Sir Patrick Manson with the mission to further the understanding of tropical diseases and opened in 1899 at the Albert Docks in London. The registers offer a listing of the first students attending the School, and offer insight into their lives, such as their destination after graduation. The volumes range in date



Red rot dust found in archive box



Detail of red rot damage



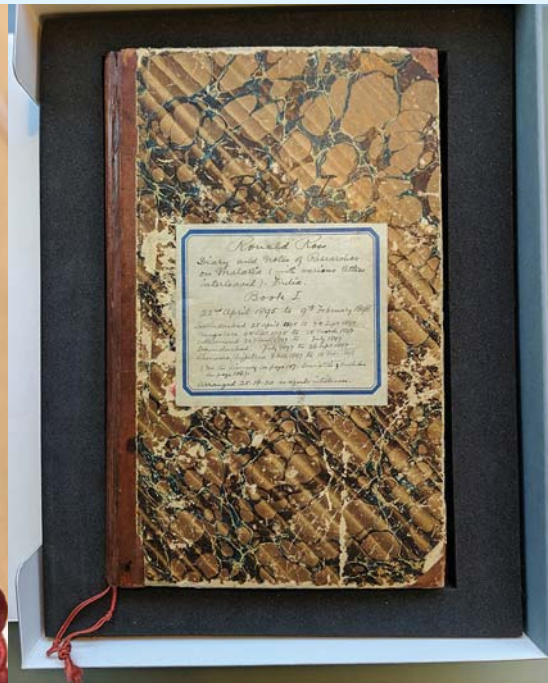
Red rot damage inside register



Newly inserted compensation guards



Ross Notebook with inserts before conservation



“Alongside the conservation of the physical items, the digitisation of each page of these volumes will allow us to offer access through surrogates to a larger number of remote researchers while preserving the originals.”

between 1899 and 1923. Although the text blocks were in good condition, the major problem with the registers was extensive red-rot, which was degrading the binding and spreading dust to the text block. The conservators were able to stabilise, consolidate and treat the covers, making them more robust. Each volume was then rehoused in a custom-made box. After conservation, the volumes were fully digitised. The registers are now once more providing unique information for alumni, family historians and genealogists.

The two projects completed by the National Conservation Service have significantly improved the longevity of important items in our collections. The conservators were able to preserve the original look and feel of the material, which was important to the archives team. Alongside the conservation of the physical items, the digitisation of each page of these volumes will allow us to offer access through surrogates to a larger number of remote researchers while preserving the originals.

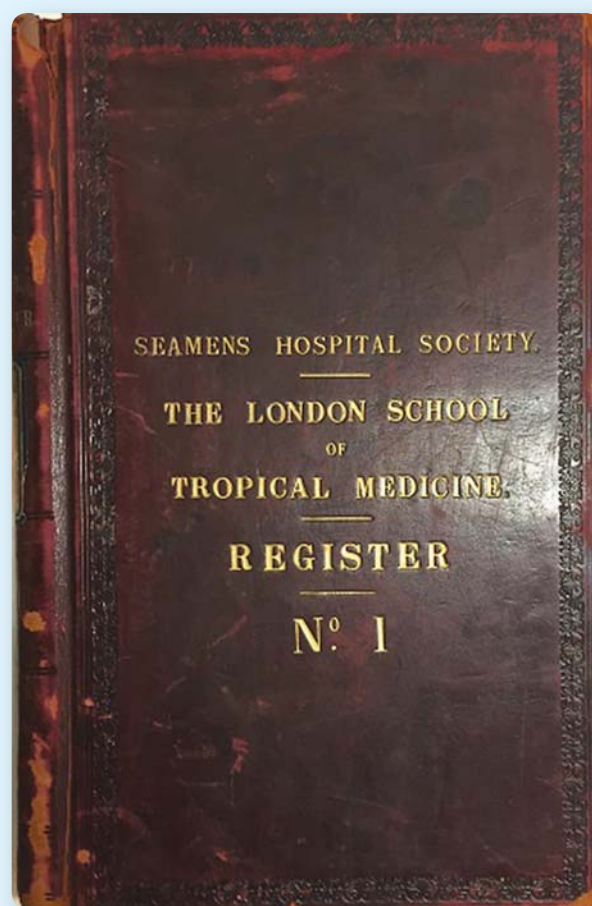
It is exciting to see the end result of the conservation process, but what happens as a result of conservation is also important: it is wonderful to have such integral pieces of our collection back with us, once again available to our researchers and visitors. These two projects allow for greater access to our collections, whether remotely through the use of the digitised images, or in person as a researcher or at one of our many events, and we are thrilled to have new life breathed into such important volumes within our collections.

For more information about the archives at the London School of Hygiene & Tropical Medicine please contact [archives@lshtm.ac.uk](mailto:archives@lshtm.ac.uk)

**Alison Forsey**

London School of Hygiene & Tropical Medicine

Images courtesy of National Conservation Service.



Student register cover

## ENVIRONMENTAL MONITOR and LOGGER

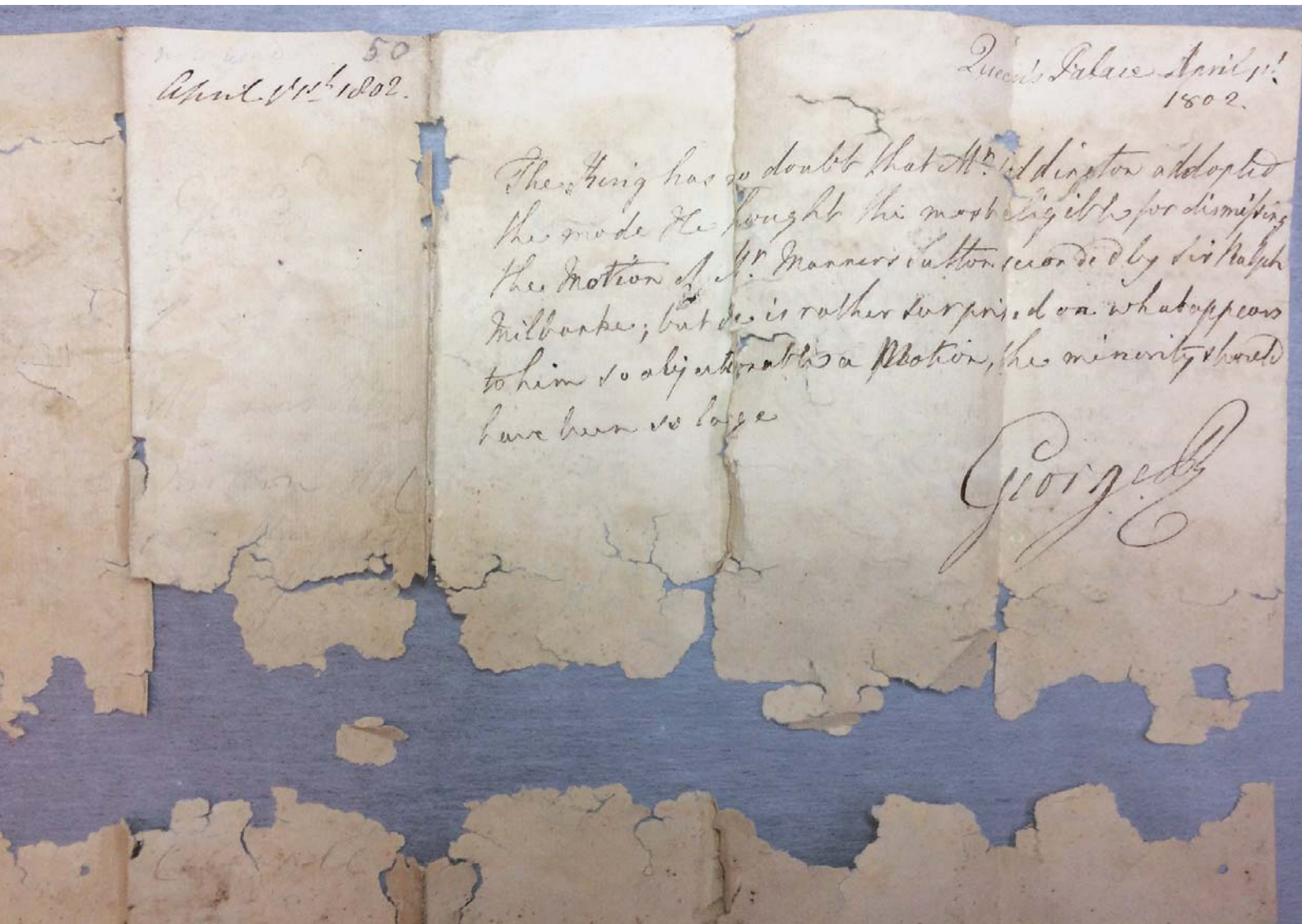
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A letter from April 1802 from George III to Henry Addington commenting on Mr Manners Sutton's motion

## The Sidmouth conservation project

In April work began on conserving the political correspondence of Henry Addington, First Viscount Sidmouth, which is held at the Devon Heritage Centre. Addington was prominent in public affairs from 1789-1824 in several senior parliamentary roles, as Speaker of the House of Commons, Prime Minister (1801 - 1804), Lord President of the Council (1805) and Home Secretary (1812 - 1822).

**T**he collection of 10,000 letters comprises correspondence to and from significant people during a turbulent period of British history that included the Napoleonic Wars, Catholic emancipation, growing opposition to the slave trade, Luddism, the Cato Street conspiracy, and the Peterloo massacre. This project has been made possible by a grant from the National Manuscripts Conservation Trust and a donation from the Friends of Devon's Archives. The South West Heritage Trust is very grateful for this support.

A conservation survey previously undertaken with the help of volunteers revealed the items most urgently requiring conservation treatment. Folders of correspondence were marked 'unfit for production' owing to the soft and fragile nature of the paper, which has typically split, become damaged along the fold lines, or weaker and degraded from previous storage in a damp environment before being deposited at the Heritage Centre. The damage is scattered throughout the collection, but unfortunately many of the royal letters, including those signed by George III, are

have done most properly & discreetly, in communicating  
the circumstance for the consideration of His Majesty's  
Cabinet, & His Physicians.

It be proper for me, to form any opinion as to the ne-  
cessity, propriety, or impropriety, of introducing the  
Doctors Willis, a Dr. Symonds, or any person in  
that professional line to My Father.

My earnest wish must ever be,  
that whatever is done, may be that, that is best &  
most conducive to The King's safety, and the perfect  
re-establishment of His health, which as a dutiful  
and affectionate son, and as a subject, I must do  
so ardently wish and pray for.

I am ever,

My dearest Edward,

Yours affectionately,  
Friend and Brother,

signed,

George P.

Carlton House

Feb'y 21<sup>st</sup> 1804

have done most properly & discreetly, in communicating  
the circumstance for the consideration of His Majesty's  
Cabinet, & His Physicians.

As to myself, I cannot now express  
it be proper for me, to form any opinion as to the ne-  
cessity, propriety, or impropriety, of introducing the  
Doctors Willis, a Dr. Symonds, or any person in  
that professional line to My Father.

My earnest wish must ever be,  
that whatever is done, may be that, that is best &  
most conducive to The King's safety, and the perfect  
re-establishment of His health, which as a dutiful  
and affectionate son, and as a subject, I must do  
so ardently wish and pray for.

I am ever,

My dearest Edward,

Yours affectionately,  
Friend and Brother,

signed,

George P.

Carlton House

Feb'y 21<sup>st</sup> 1804

Before and after conservation  
of a letter from the Prince of  
Wales to the Duke of Kent (21  
February 1804) upon receiving  
copies of confidential papers and  
refusing to sign his name or form  
any opinion on the necessity  
or propriety of introducing  
physicians to his father, George  
III.



Applying Japanese tissue along a tear in one of the letters of the Sidmouth collection

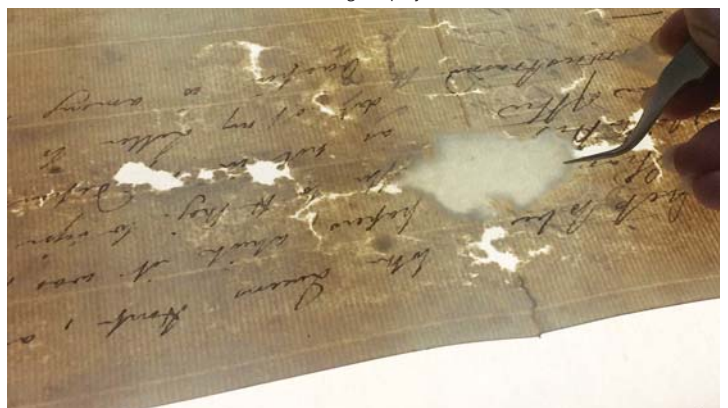
“Relatively dry and traditional methods of preservation are being employed, such as the application of high quality Japanese papers and starch paste.”

among those most fragile to handle and therefore unavailable to the public. Written by the king, his royal relations, personal physicians and ministers, and relating to periods of recurrent mental illness and the Regency crisis, the conservation of these papers is a high priority.

The security of the more valuable letters in the collection is being increased by hinging them within archival books, known as fascicules. The bindings consist of blank, archival quality paper sheets with



Conservation materials and tools used during the project



Infilling one of the larger losses

“The security of the more valuable letters in the collection is being increased by hinging them within archival books, known as fascicules.”

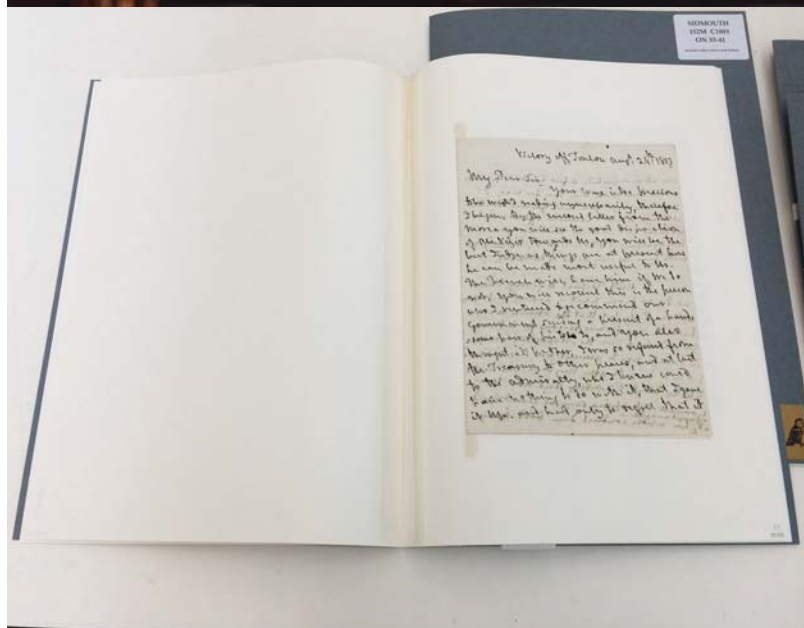
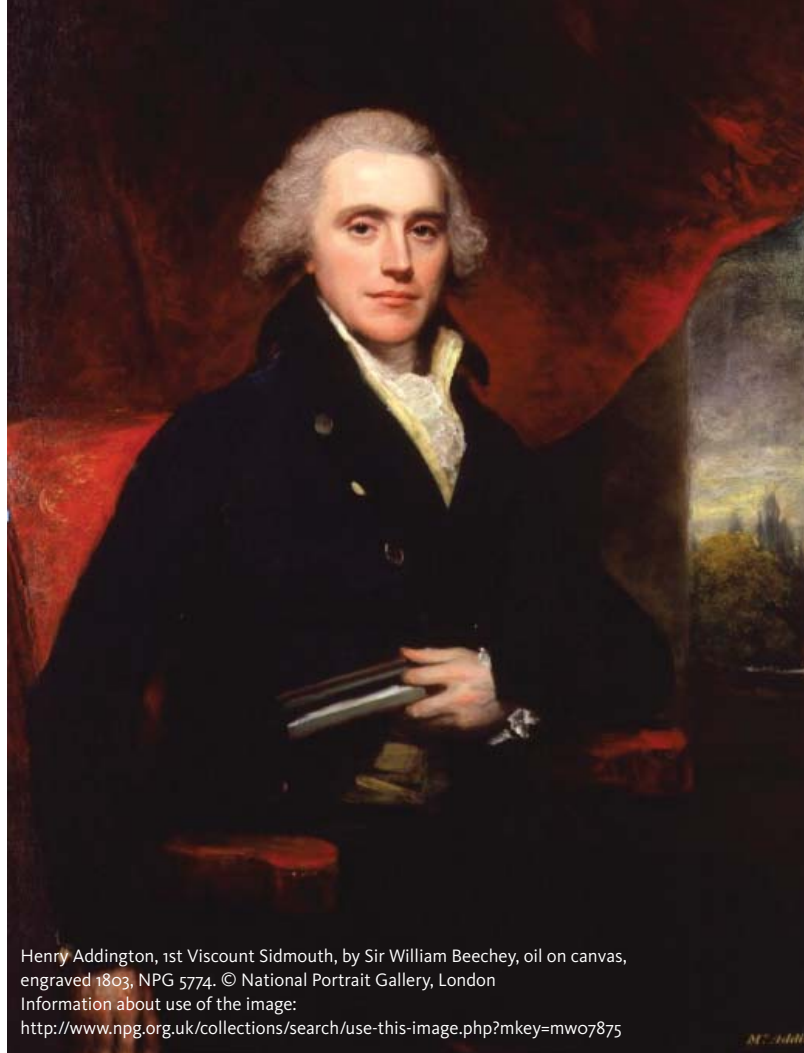
guards between each page as compensation. Individual letters are mounted by a thin strip of medium weight Japanese paper and a corresponding reference or accession number is written on the page. An additional benefit of this method is that less handling occurs as they are easily turned over on their hinge. Letters written by other famous names, notably Lord Nelson, the Prince Regent (later King George IV), and William Pitt the Younger are also being rehoused in fascicules. Most of the papers are handmade rag fibre papers with iron gall ink and often feature gilt edges and wax seals. Relatively dry and traditional methods of preservation are being employed, such as the application of high quality Japanese papers and starch paste. Any surface dirt is removed with a soft brush or a Dri-Chem ‘smoke’ sponge. When the paper is particularly soft, the letters have been consolidated with a Klucel G (hydroxypropyl cellulose) solution, and fine kozo fibre tissue (5gsm) applied to the original for further stability. Larger losses are infilled over a lightbox using a paper of matching thickness and grain direction to the surrounding paper. Letters with lesser damage of tears or losses that could worsen with handling are also being fully assessed, treated, rehoused in acid-free folders within archival boxes and relabelled. Improving the labelling and storage of the collection should also make it easier for the search room staff to find the items requested.

Interest in this collection has increased over the past few years, and this project will enable full access to an invaluable resource that provides great insight into the individuals and perspectives of politicians, members of the royal family, abolitionists, and naval and military heroes of the early nineteenth century. It is a real privilege to work on such an important collection.

**Rebecca Dabnor**

South West Heritage Trust

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A letter within a fascicule from Lord Nelson to Henry Addington, written from the Victory off Toulon (24 August 1803) relating to the capture of Sicily and Sardinia by the French, and the state of some of the ships in his fleet.





# Crowdsourcing conservation

Over the past two years, the Centre for Research Collections (CRC) at the University of Edinburgh has been developing innovative ways to carry out conservation work and engage with the student population.

In February 2017, we held our first ever conservation crowdsourcing event. Over a two-day period, with the help of 24 participants, we aimed to rehouse 136 boxes of manuscripts from the Laing collection in acid-free folders and boxes. Laing's collection of charters and other papers is the university's most important manuscript collection. Highlights of the collections include letters by kings and queens of Scotland and England, poems in the hand of Robert Burns and early manuscripts in Gaelic and Middle Scots. The collection was in poor condition due to its housing in unsuitable upright boxes and folders. It was difficult to access and there was a risk of further damage every time it was handled.

The benefits of crowdsourcing this work are twofold. Firstly, it drastically reduces the amount of time needed to rehouse the collection. It was estimated that it would take a conservator nine weeks to rehouse the material, whereas we hoped to complete this work in just two days.

Secondly, we can significantly increase the number of people who can gain quality conservation experience at the CRC. There is a high demand for volunteer experience in conservation, but we are unable to offer this to everyone due to lack of space and staff time. This way we were able to offer a useful experience to a larger number of people. We also saw this as an opportunity to educate participants on the role of conservation, and the best method of rehousing archival documents as well as promoting conservation activity at the CRC.

Working with the collection manager, the risks around using this approach were discussed and mitigated. We also talked to conservators from the National Library of Scotland, who host similar events with large numbers of volunteers. They described their experience and gave invaluable advice on setting up this type of programme. Each day consisted of a training session in the morning, followed by practical work. In the afternoon, attendees



Volunteers at the crowdsourcing event



Boxes before rehousing



Boxes after rehousing

*“It was estimated that it would take a conservator nine weeks to rehouse the material, whereas we hoped to complete this work in just two days.”*

were joined by staff members from the CRC who talked to them about their roles, and gave advice on how to get into a career in heritage.

Overall we thought that the event was a big success. One attendee commented “a huge thank you for providing me with the opportunity to take part in such an interesting and inspiring event, I honestly took so much from it and I will keep looking for any future events with you”. It was well attended and we also had students travelling from Northumbria and Lincoln University to take part. By the end of the event, we had rehoused 110 out of the 136 boxes. To complete the rehousing of the collection, we held another half-day event with participants who attended the first event, and had expressed an interest in doing similar work at the CRC.

Although the use of volunteers can never replace the work of a trained conservator, we believe that this event was a positive first step to stabilise the collection. It is hoped that this work will help to secure further funding to carry out interventive repair of the collection in the future. Thanks to the success of the event, we have several more sessions based on this model coming up over the next year. For top tips on putting on this type of event, please see our blog <https://bit.ly/2y5VKWc>.

**Emily Hick**

University of Edinburgh

# Major document restoration project in France

Harwell has recently been involved in the largest document restoration contract in its history. After intense thunderstorms overwhelmed drains and flooded the basement of a French government department in Paris, water saturated the bottom two shelves of holdings, with over 10,000 boxes of highly confidential and sensitive records involved.

**K**athryn Rodgers, Harwell’s managing director, was rapidly contacted by senior staff at the French head-office of Polygon Group to provide advice on the recovery of the documents. ‘Our advice was to arrange immediate stabilisation through freezing to prevent further deterioration,’ Kathryn comments. ‘As always in these situations, time is of the essence, but high temperatures and soaring relative humidity made rapid response even more critical. Given the scale of the damage and possible overall costs, there was some hesitation on how to proceed, but we made it very clear how the damage would deteriorate through mould growth, adhesions and ink migration and therefore the cost of restoration would increase if the documents were left unstable.’

Harwell/Kathryn Rodgers



*“The triage process was complex as dry material had collapsed onto saturated material, and space was extremely restricted but the methodology was effective in extracting the records, listing them, and also barcoding as they were crated for transfer, so that records could be retrieved where needed.”*



Harwell/Kathryn Rodgers



Harwell/Kathryn Rodgers

This advice was followed and over 10 days 10,500 boxes packed onto 300 pallets were transferred to a freezer store. The triage process was complex as dry material had collapsed onto saturated material, and space was extremely restricted. But the methodology was effective in extracting the records, listing them, and also barcoding as they were crated for transfer so that records could be retrieved where needed. Additionally, equipment was installed to control the environment and minimise secondary damage through the triage and recovery process.

Although the department made an emergency decision to authorise the recovery process, the restoration project was put to tender and after several months the bid was successful, with the total project valued at almost €1 million.

Ashley Simmons, Harwell operations manager, has been involved with the deployment of the fleet of dryers to France whilst maintaining adequate capacity in the UK. ‘We have moved two of our larger dryers to France for 9 months whilst this project is ongoing, and have designed and commissioned an entirely new vacuum dryer. This new vessel, named McKenzie after Harwell’s late founder Ken McKenzie, has been fitted with specialist monitoring equipment so that we can track drying and exhaust rates from the UK. We have also trained French technicians in the processes we use in the UK.’

A project of this scale is any archivist’s worst nightmare and underpins the need for an emergency plan that can contend with such extremes. The value in ensuring the relative humidity and temperature are controlled early on is also clear, as minimal mould growth occurred as a result of the kit installation.

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**Emma Dadson**

Harwell Restoration

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