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Improved access to records in collection



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## Celebrating 60 Years

East Riding Archives



## Preservation & Conservation Special Issue

'A message from Antarctica',  
sculpture by Kyra Clegg, an  
artist inspired by archives

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## The Archives and Records Association (UK & Ireland) has developed its Core Training Programme to ensure high quality, in-demand courses are widely and frequently available

ARA Core Training courses are high quality, affordable and offered regularly across the regions and nations. They focus on the common skills essential to all of us who work with records - from Audience Engagement to E-Records Management. Each course is supported by ARA funds. The first eight courses have now been designed. More will follow.

**Find out more about ARA Core Training and all other training and development opportunities by clicking on the Training link at [www.archives.org.uk](http://www.archives.org.uk) or keep in touch through Twitter @TrainingARA**

### Copyright

This course offers participants practical and relevant training in copyright for archives, and will instil confidence to manage copyright demands in the workplace. Practical workshop sessions, led by copyright experts and archivists with extensive experience in the field, ensure the opportunity for discussion and provision of advice.

### Audience Engagement

This course offers various aspects of audience engagement, from producing an exhibition to running a successful community-based project. A great opportunity to learn from the experiences of colleagues and to start developing some ideas of your own.

### Freedom of Information

This course covers the basic principles of the Freedom of Information Act as well as exploring some practical case studies. Develop your own knowledge about the Act and how to implement it in the workplace.

### Archives and Volunteers

This course covers how best to utilise volunteers in the workplace, from the practicalities of running a volunteer project to the value they can bring to an organisation. This is a great opportunity for anyone interested in maximising the benefits of volunteering to both their organisation and for the individuals involved.

### Digital Preservation

This course will be updated periodically to address the issues archivists face when dealing with born digital material, it will involve case studies and practical first steps. It's a great opportunity to share and receive advice and knowledge about the many aspects of digital preservation.

### Data Protection

This course begins with refresher sessions on the basics of Data Protection. In the afternoon there are opportunities to discuss best practice and raise queries from your own workplace with an expert panel.

### E-records management

This course provides a solid introduction to e-records management for record keepers who are not managing electronic records on a day-to-day basis. This course is a great opportunity to learn about and share best practice on all areas of the rapidly changing field of e-records management.

### New and refurbished Archives Buildings

Whether you are planning a completely new building or hoping to refurbish a part of an existing site this course provides an introduction to the key issues and themes involved in the provision of new and refurbished archives buildings.

The ARA's Core Training programme is supported by Link 51.



**Archives & Records  
Association**  
UK & Ireland



## Welcome to **ARC Magazine** February 2014

### For Auld Lang Syne

As I put the final touches on this issue, the song *Auld Lang Syne* replays my head. It could be because yesterday was the first of January; but it could also be because it is a song for endings and new beginnings. It's a song that toasts past friendships, past memories, and a past life, even as it's moving forward and focusing on the future.

Conservation helps us remember the past but at the same time gives new life to something old and treasured. There are some wonderful articles here—some practical, some reflective—all relevant to those who manage collections. The articles gathered here cover adhesives, pest management, ideal storage and buildings as well as some fascinating narratives about breathing new life (literally) into manuscripts and audio-visual collections.

Our Features and Around the Regions sections take you to Scotland, Yorkshire and Warwickshire, where we discover how past collections are moving into the 21st century. We celebrate an anniversary. We see archives as an inspiration for art.

Finally on the theme of *Auld Lang Syne*, I hope you were all pleasantly surprised by our new design for *ARC Magazine*. Kudos to Tim Baigent, the great designer that ARA has relied on for previous issues; he created

this new look to complement the ARA website and the *Journal of the ARA*. I think you'll agree this new look captures the spirit of moving forward but conveys a genuine feeling of "raising a glass" and honouring what has come before.



**Rose Roberto**  
Editor

**ARC Magazine** is the monthly publication that is published by the Archives & Records Association (UK and Ireland)  
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20 Canon Street  
Taunton  
Somerset  
TA1 1SW  
Tel: 01823 327030

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Send articles/comments to:  
arceditors@archives.org.uk.

ARC Magazine design by Glyder [www.glyder.org](http://www.glyder.org)

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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

Shirley Jones is Head of Conservation at West Yorkshire Archive Service. Currently an instructor on the ARA Conservation Training Course, Shirley also recently served on the ARA Board, contributing to the new CPD scheme for members, currently being piloted.



I was recently impressed by The British Museum's new on-line Merlin database where I was able to read the detailed conservation treatment report of a Michelangelo cartoon, one of over 2,000 viewable conservation reports.

Whether it concerns a priceless masterpiece or a more humble land tax record, conservation documentation records our observations, actions and reflections during the assessment and treatment of collections in our care; it forms records that can eventually become part of the collections about which they were written.

But conservation documentation is not historically part of the public domain in the way for example a catalogue is. I think it should be. The Freedom of Information Act has led to a cultural change, with greater assumptions about openness. In this spirit, The British Museum deems that all information about its collections that belong to the public, should be public (unless exempt) via Merlin, and that conservation documentation is an aid to learning and a promotion of the discipline.

When I began my own conservation record keeping nearly twenty years ago, it was very much with a view to professional posterity; that at some point in the future, my work could be explained if necessary via my records, as well as by physical evidence from the treated documents. Meanwhile, the information technology revolution has continued apace, and with all the powerful resources the internet now provides, it seems that making our records more widely available in the here-and-now may be expected, desirable and certainly possible.

In preparation for a presentation at conference a couple of years ago, I considered this in more detail. How can conservators approach the long term preservation, organisation and access of their records? My more recent visit to Merlin endorsed many of the thoughts I had then, and which I am sure many of us share.

I think that we should commit more to digital technology, whilst proactively organising and planning preservation of our documentation. We should also be reminded of the broader application

and benefit of the records we create, and work towards greater understanding of the impact that well-documented and integrated conservation information has on the quality and depth of knowledge an archive has about its collections.

Conservation records can have meaning as collections for research in their own right; a means by which to chart the work of key professionals in the field perhaps, or changes in approaches to treatments. Of course technology's facility for information sharing, both with fellow conservators and the public, is a major benefit.

But more subtly, I think, if we as conservators are better integrated and embedded into collections and organisations via our records, perhaps this can further advocate the importance of what we do into the psyche of the archives sector – particularly important in these straitened times. In our record keeping at least, this is a period of opportunity and transition. So I think as conservators, we should embrace our inner archivist, and hope that archivists will embrace their inner conservator too.

# Registration Scheme News

## New Enrolments

We welcome the following new candidates to the Registration Scheme and wish them good luck with their progress:

**Emma Hancox**

Assistant Archivist, Wellcome Library

**Rebecca Sheldon**

Archivist, Derbyshire Record Office

**Laura Gould**

Archivist, Lothian Health Services Archive

**Sarah Gerrard**

Records Manager, Hampshire Record Office

**Jon Shepherd**

Sales Consultant, Axiell CALM

## Changes to the Registration Scheme

Last month Jessamy Carlson outlined some of the changes that will affect the Registration Scheme as part of ARA's introduction of a new CPD framework. Over the coming months we'll be working hard to ensure that everybody enrolled on the Scheme understands what is happening. We'll be running workshops, announcements will be made here and any important information will be posted on the ARA website. As ever, we're also happy to answer individual questions and you can contact us at the email addresses given below.

## Contacts:

**General Registration Scheme Enquiries:**

[registrar@archives.org.uk](mailto:registrar@archives.org.uk)

**Registration Scheme Events Enquiries:**

[regschemeevents@archives.org.uk](mailto:regschemeevents@archives.org.uk)

**Registration Scheme Admin and Bursaries:**

[regschemeadmin@archives.org.uk](mailto:regschemeadmin@archives.org.uk)

**Registration Scheme Communications Officer:**

[regschemecomms@archives.org.uk](mailto:regschemecomms@archives.org.uk)

**Registration Scheme Mentor Queries and Advice:**

[regschemeementors@archives.org.uk](mailto:regschemeementors@archives.org.uk)

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## Richard Wragg

Communications Officer, Registration Sub-committee

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# Collecting Matters

As Archive Service Accreditation goes live, we have been getting queries about how the Accreditation Standard interacts with PD5454:2012, though it's been a while since I have been asked why Accreditation doesn't reference PD5454. I hope this means that across the sector colleagues have discovered how the top-level Accreditation Standard is supplemented by detailed guidance, which references the many core standards and recommended documents to support professional practice in archives. This will be updated at least annually to keep the Accreditation Standard current.

If you haven't already done so, I recommend reviewing the guidance, but for this article I particularly want to look at the Collection Care and Conservation section (2.4). This is not only where you find the requirement to work with PD5454:2012, it also encourages the sector to use PAS198: *Specification for managing environmental conditions for cultural collections* if reviewing the storage environment. The scaled guidance indicates pragmatic expectations: larger archive services should be aiming to comply fully with national guidance, while those with small collections should aim for broad compliance, given that they rarely have full control of elements like site selection as PD5454 recommends. This scalability runs through the Accreditation Standard, giving expectations for different sizes and types of archive service, recognising the different circumstances in which they operate.

In general, the approach Accreditation expects is identifying, managing and reducing risk in each archive service, within the context of these national guidance documents and with professional conservation expertise applied to the particular circumstances of the service.

For more information, please see:

<http://www.nationalarchives.gov.uk/archives-sector/archive-service-accreditation.htm>

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**Melinda Haunton, Programme Manager (Accreditation)**

The National Archives

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# Et in Archivia Ego:

## Artists and Archives conference

The recent Scottish Records Association (SRA) conference in Perth, organised in conjunction with the ARA Scotland group, was entitled *Et in Archivia Ego*. This wide-ranging and diverse programme focused around the theme of artists in the archives and engaged attendees and participants—the morning sessions looked at how to research artists in archives, the afternoon sessions showcased how archives have inspired artists' work.

The first session's speakers were introduced by Dr Ben Greenman, lecturer at the Glasgow School of Art and Chair of the Scottish Society for Art History. Rose Roberto, from the University of Leeds, gave a general overview of numerous resources for researching artists that are freely available on the Internet or through any public library. She emphasised that good research strategies were as important as choosing the right research tools, and showed how tools such as *Oxford Art Online*, *the Artists Paper Register*, *The WATCH* (Writers, Artists, and Their Copyright Holders) and *Art Researchers' Guide books* (<http://artresearchersguideseries.blogspot.co.uk>) could be best used to find artists, art movements, images and copyright holders. Kirstie Meehan, from National Galleries of Scotland (NGS), developed this topic further by showcasing research undertaken in

preparation of the NGS's John Duncan Fergusson exhibition. She explained how discovering artists' lives and exhibition histories gives vital insight into their work and further understanding of the pieces produced. In addition, Kirstie covered some of the resources available at the NGS's Modern Art Archive, explaining how these can help amateurs and professionals alike to find artists, collectors and art institutions.

Joanna Soden's and Francesca Baseby's papers focused on archives created by artists. Joanna, of the Royal Scottish Academy, spoke about the 'living archives' of the Royal Scottish Academy of Art and Architecture. This material, grown over two hundred years, now forms an organic body of artworks, archives, and associated objects that are a wealth of information for researchers. Francesca Baseby, a PhD Student in Art History at Edinburgh University, talked about her experience using private papers from a private collection. 'These unorthodox collections,' Francesca explained, 'often hold the key to filling in the gaps that exist in public archives.' Drawing on her thesis research, she emphasised persistence and using a soft personal but professional touch when contacting private paper holders. She also shared ways she used Twitter and her blog to build personal connections and get help locating and accessing private archives.

The afternoon session, chaired by Steve Connelly of Perth and Kinross Council Archives, and introduced by Karl Magee, Chair of the Archives and Records Association, Scotland, began with Kate Wheeler introducing the new TNA programme - *Archiving the Arts*, which encourages the use of archives as creative inspiration by supporting preservation of artists' and arts organisations' records. Kate gave key examples of artist interventions as well as what an artists-in-residence could achieve by bringing publicity and 'new life' into archives. The next two speakers were artists. Joanne Soroka, based in Edinburgh, showed pieces from her exhibition *Unmarked Lives*. Her poignant, beautiful tapestries were inspired by research into her own diverse family history. She provided an insight into her work by narrating a very personal journey through Canada, Scotland, Lithuania, the Ukraine and Japan discovering her ancestors' lives. While Joanna demonstrated inspiration drawn from the content of archival material, it was the physical appearance of archives that influenced Hugh Buchanan's watercolours. Hugh's recent *Words and Deeds* and *The Esterhazy*

“Unorthodox collections often hold the key to filling the gaps in existing public archives”

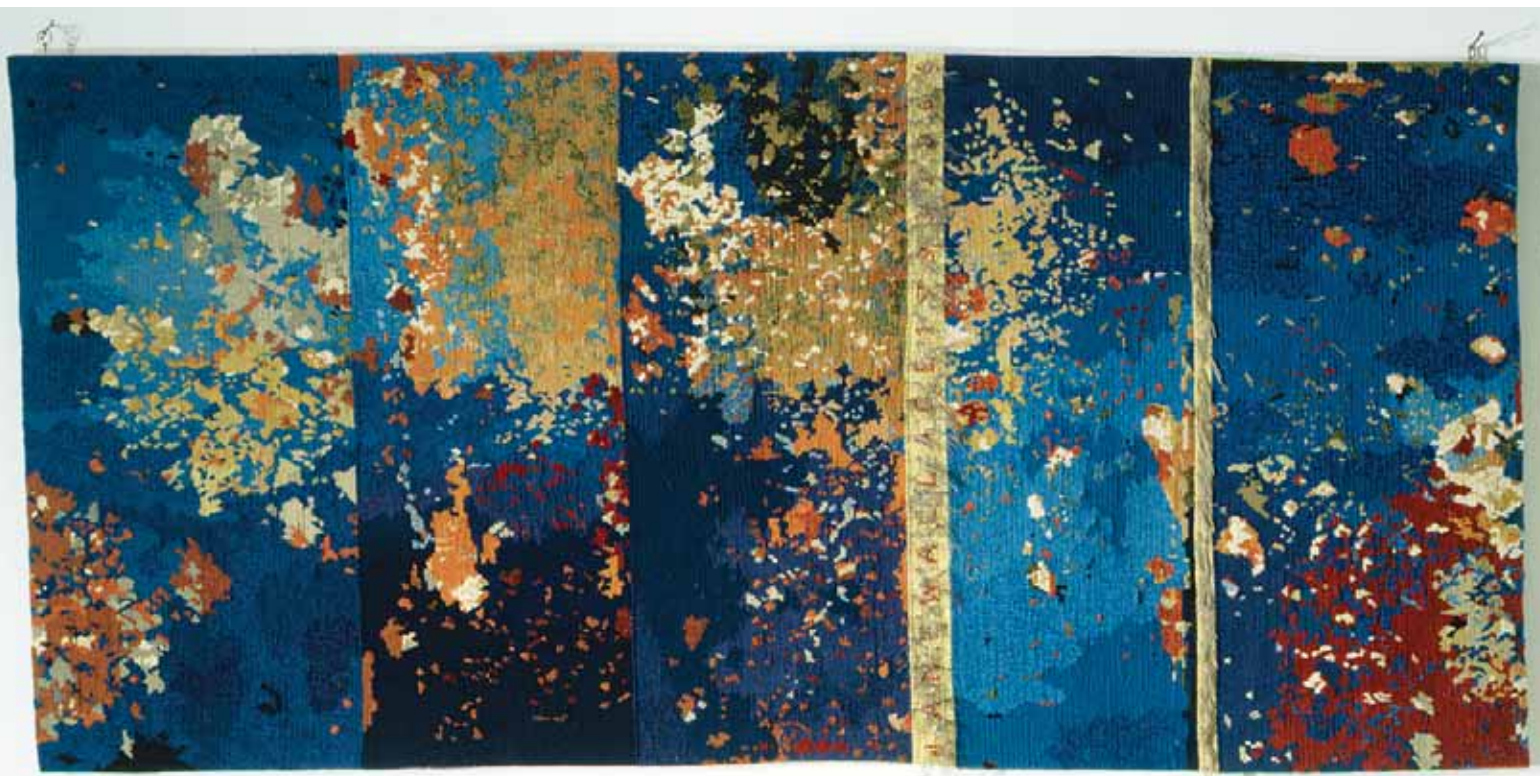
Archive have drawn upon the physicality of archival holdings and his reaction to archives as objects of exquisite beauty – including his vision of archival tape metamorphosing into butterflies!

After Steve Connelly introduced a short film about the work by Perth & Kinross Council Archive's artist-in-residence Kyra Clegg, the programme was completed by two papers highlighting aspects of the 'Glasgow Miracle' (a term sometimes applied to the city's cultural and artistic development in the 1990s). Susannah Waters, from the Glasgow School of Art, showed how a recent project facilitated the exploration of archival sources created by and relating to these activities from



A Message from Antarctica, mixed media, Kyra Clegg ([www.kyclegg.co.uk](http://www.kyclegg.co.uk))  
A message in a bottle thrown overboard from a Perth ship sailing to Australia in 1832 spent 35 years caught in the circumpolar Antarctic current before eventually being found and given to Perth & Kinross Council Archives.





*Steps* (1998), wool, linen and cotton, Joanne Soroka ([www.joannesoroka.co.uk](http://www.joannesoroka.co.uk)). Tapestry inspired by painted and worn steps that lead down to a damp basement in Edinburgh, dedicated to the artist's great-great-great-grandmother who died in the poorhouse in Edinburgh

1970s to the present. Tiffany Boyle and Jessica Carden discussed *Mother Tongue*, a research-led curatorial project which used archives to question the apparent exclusion of certain artists from the historical narrative. This final paper detailed the evolution of the project, experiences of the archive, the materials themselves, and curatorial and textual responses. They concluded by discussing the future ambitions of the project, and this conclusion provided a fascinating close for *Et in Archivia Ego*.

Hopefully the day's events will motivate further collaborative work between artists, archivists and researchers. As many of the speakers showed, these partnerships allow archives to be seen as treasure troves of inspiration for mind, body and soul thereby engaging new audiences.

Papers from the conference should appear in the Scottish Records Association journal, *Scottish Archives*. Further information on SRA can be accessed via the association's website ([www.scottishrecordsassociation.org](http://www.scottishrecordsassociation.org)).

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**Dr Stefanie Metze and Dr Kirsteen Mulhern**

National Records of Scotland

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## ENVIRONMENTAL MONITOR and LOGGER



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# Great Parchment Book project

Great Parchment Book folios

## Introduction

London Metropolitan Archives (LMA) has been involved in a major and a ground-breaking partnership project to digitally reconstruct a severely damaged, but iconic parchment document in its care. The document is the Great Parchment Book of the Honourable The Irish Society, carefully preserved in spite of its parlous state because of its significance to the history of Ulster. We knew from the first that this was an undertaking without a certain result as we were committed to exploring new techniques and technologies; nothing else had any chance of success. However, through a challenging but rewarding collaborative process, not least with the Department of Computer Science and the Centre for Digital Humanities at University College London (UCL), the Great Parchment Book is now accessible online through a dedicated website.

## Project outline

The Great Parchment Book is a major survey, compiled in 1639, of all the estates in Northern Ireland, managed by the City of London through the Irish Society and the City of London livery companies (LMA reference CLA/049/EM/02/018). Damaged in a fire at London's Guildhall in 1786, it had been unavailable to researchers for over 200 years. As part of the commemoration of the 400th anniversary of the building of Derry's city walls in 1613, it was decided to attempt to make the document available as a central point in a planned exhibition. The book represents an important source for the City's role in the colonisation and administration of Ulster and it was hoped that it would reveal key data about landholding and population in 17th century Ulster.

This ambitious project attracted support from several funders, including the National Manuscripts Conservation Trust, the Marc Fitch Fund, the Engineering and Physical Sciences Research Council (EPSRC), a number of livery companies and the Irish Society itself. UCL, Derry Heritage and Museums Service (DHMS), and LMA also provided funds and staff time.

## The project

Traditional conservation alone would not produce sufficient results to make the manuscript accessible or suitable for

Folio secured with magnets







Improved storage

exhibition, the 165 separate parchment membranes being too shrivelled to be returned to a readable state; much of the text visible, but distorted. Following discussions with conservation and imaging experts, it was decided to flatten the parchment sheets as far as possible appropriate to their fragile state, and to use multi-modal digital imaging to gain legibility and enable digital access.

A partnership with the UCL established a four year EngD in the Virtual Environments, Imaging and Visualisation programme in September 2010 (jointly funded by the EPSRC and LMA) with the intention of developing software that would enable the manipulation of digital images of the book rather than the object itself. The aim was to make the distorted text legible, and ideally to reconstitute the manuscript digitally.

The practical conservation of the membranes was the essential first step encompassing cleaning, humidification, and tension drying, using magnets placed on top of the parchment above a metal sheet to hold creases open during the drying process. This opened out areas of parchment where the camera could not reach the text.

This was followed by the imaging work carried out by UCL, where a set of images was captured for each page and used to generate a 3D model. These models could be flattened and browsed virtually, allowing the contents of the book to be accessed more easily and without further handling the document. UCL hopes that this will be applicable to similarly damaged material as part best practice computational approaches to digitising highly distorted, fire-damaged, historical documents.

A readable and exploitable version of the text was also prepared, comprising a searchable transcription and glossary of the manuscript. A palaeographer was employed who also encoding



Surface models top and textured with images of text bottom, copyright UCL

appropriate terms using TEI to capture structural and semantic information about the texts enabling comprehensive searching of the document.

The transcript and images (of the folios both in their original state and digitally flattened) are now online on a dedicated website [www.greatparchmentbook.org](http://www.greatparchmentbook.org). The website includes the Blog which followed the progress of the project and continues today (subscribe and look out for continuing developments on digital flattening from UCL.)

The Great Parchment Book is now the highlight of the exhibition in Derry Guildhall curated by DHMS. Entitled *Plantation: Process, people, perspectives*, it features at its heart the digital reconstruction of the book, and one of the damaged folios as a reminder of its damaged state. In the longer term, the digital reconstruction and transcription will provide a lasting resource for those researching the Plantation of Ulster.

**Philippa Smith**

London Metropolitan Archives



# Welcome

## Introduction to our section on preservation and conservation

A few months ago, I was invited to attend an Archives and Records Association Preservation and Conservation Group (PCG) committee meeting. As a conservator within ARA I am conscious of how important the conservation community within the archival sector is to archive conservators. Attending the meeting demonstrated the extent of the role played by the PCG committee within our sector, and how key that role is.

Throughout the meeting I was aware of a consistent determination to support and benefit ARA members. The website is one tool with which the PCG committee would like to offer support - the potential for the PCG web pages is really quite exciting. Proposals included access to resources such as papers and presentations from training events and a contact email address to provide advice and recommendations to both professionals and non-professionals. These ideas are already starting to take effect on the web pages.

The training events that the committee develop and deliver are another example of their commitment to benefit members. Due to the varied range of materials we care for, and the increasingly diverse range of responsibilities our roles encompass, training and CPD are crucial aspects of a conservator's job. Perhaps equally important to conservators, especially lone workers or those working in small departments, is a network of fellow conservators to call on when in need of advice or to compare notes. I found the discussion around the upcoming training event in Norfolk in November, which is going to be on the subject of adhesives, both positive and practical. Comments included thoughtful observations on the demand for training, a desire to run as much training as frequently as possible so as to reach more members, and sensible ideas on how to achieve this within the resources available.

Two other upcoming events were mentioned in a report from the ARA Archive Conservation Training Scheme. Arrangements are underway for the next Lecture Week and Chemistry Week, which look set to be packed full of useful subjects for both students and qualified conservators. As an ex-trainee it is brilliant to hear such a healthy report of the scheme, and intriguing to spot developments since my own training. The focus of the Lecture Week to cover a larger area of modern media than before reflects the shifting ratios of the materials in our collections, and the regular updates to the reading list demonstrate the necessity for up-to-date research. I was also reminded of the PCG lending library, which is a growing resource that is available to all ARA members. If you would like any further information then Deborah Phillips, the current librarian, is the best person to contact. Her details can be found on the PCG contacts page of the website.

Towards the end of the meeting, discussion turned to the invitations to the next PCG committee meeting. Invitations fulfil several aims: they raise the profile of the committee and allow more people to know what is being done and why; they allow members the opportunity to have a say, by giving their own opinions and raising issues that matter to them; and they offer points of contact to members for the future. I also found that the meeting demonstrated to me how worthwhile the work undertaken by the committee is, and how it is possible to get involved. Thank you for inviting me along!

---

**Catherine Dand**

Conservator and member of PCG

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# Using Klucel G to consolidate and repair mould damaged documents

**K**lucel G was introduced into the conservation field in the early 1980s. The K grade of the cellulose ether, also known as hydroxypropyl cellulose (HPC) is favoured by conservators due to its solubility in both water and polar solvents to form a clear liquid or gel. Applied to fragile and mould damaged paper, Klucel G in a 1-2% solution with propan-2-ol will cohere loose fibres, add strength and facilitate further repair (after testing media for solubility).

But thicker gels can also be used to simultaneously apply tissue support, an application found particularly useful during preparation and stabilisation of early 19th century paper land-tax documents for digitisation. A 3% solution applied through a thin tissue such as 5gsm or less, consolidated the paper and adhered a tissue support. Extremely fragmented paper is anchored by the tissue while the gel is applied with a brush, reducing loss and disruption; indeed a very fine tinted tissue such as 2.5gsm can appear almost invisible. Once fully dried in the fume cupboard, the paper can be released from the non-stick surface used such as PTFE cloth, with a flexible spatula.

There are some disadvantages to bear in mind. The necessity for solvent extraction creates capacity and work flow issues while the drying items occupy the fume cupboard. Flammability of the vapour should be also considered in risk assessments. The gel can leave a sheen if applied too thickly - swabbing with the solvent used will reduce this but it can be difficult to remove completely. Finally, subsequent aqueous treatment could re-swell the adhesive and potentially create a slimy surface which may be difficult to handle.

However, Klucel's main advantage here is that it can be applied to fragmented paper which is very difficult to handle otherwise. Indeed, it is not always possible to effectively clean such fragile material completely of mould spores in advance of repair, in which case the gel can help secure them; plus the solvent has a denaturing effect through dehydration. Klucel G can also be used to help separate mould-fused paper layers using the gel to aid working with a thin spatula, applying tissue to the layers as they are lifted.

In all, Klucel G is a useful for stabilising mould damaged documents to enable production of surrogates.

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## Shirley Jones

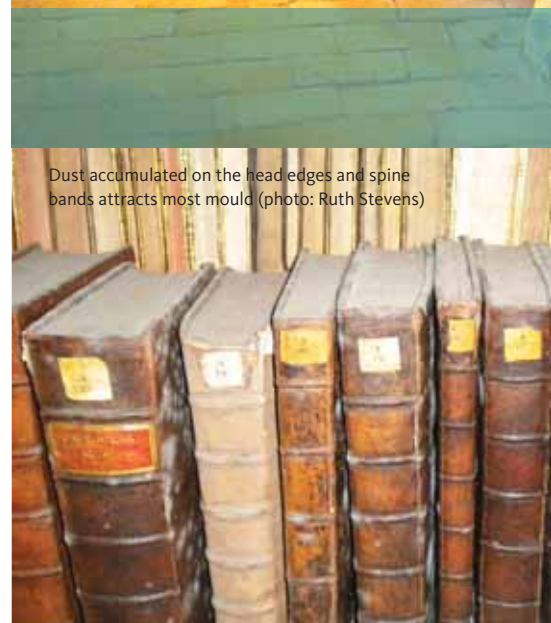
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Local Strengthening of Mould-damaged Manuscripts; Aurelie Martin et al; Journal of Paper Conservation, Vol. 12 (2011), No. 1.

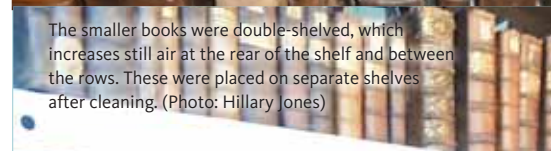
Evaluation of Cellulose Ethers for Conservation; R. L. Feller & M. Wilt; 1990; [http://www.getty.edu/conservation/publications\\_resources/pdf\\_publications/pdf/ethers.pdf](http://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/ethers.pdf) [information about flexibility and long term stability]



Rectorial Library in the wine cellar, before the cleaning project (photo: Ruth Stevens)



Dust accumulated on the head edges and spine bands attracts most mould (photo: Ruth Stevens)



The smaller books were double-shelved, which increases still air at the rear of the shelf and between the rows. These were placed on separate shelves after cleaning. (Photo: Hillary Jones)







Volunteer team (from l to r); David Rigley, Richard Goodenough, Maggie Cameron, Tony Pragnell, Elizabeth McAdams and Roz Waller (photo: Ruth Stevens)

# Mould Attacks!

On a rainy day in April 2013 and by invitation of Crundale Parochial Church Council (Crundale PCC), Ian Watson and I were invited to a room, formally used as a wine cellar, in Kent to see their Rectorial Library. It is a gem of a collection collected by the Rev Richard Foster (rector of Crundale 1698-1729) containing theological material, works on church history, European history, medical topics, geography and science. Not that it looked like a gem at the time. The harsh lighting illuminated two metal shelving units, holding a collection of books covered in mould. We had been warned – but still, it was a shocking sight.

From datalogger charts tracking the environmental conditions over a few years the relative humidity (RH) had been over 65% for months at a time, helping to create a conducive atmosphere for mould to establish a colony. This was exacerbated by an unwitting blockage of an air vent into the cellar, resulting in still air conditions. The bindings and a fair amount of dust and debris provided the ideal place for mould spores to settle and thrive.

As we inspected the books we began to realise the scope of the project ahead. Mould hyphae were flourishing on the spines, sides and head edges of the majority of books. We also noticed that some of the smaller books had started to expand at the fore-edge, an indication of high humidity in the paper and with a potential to cause permanent damage.

By the time of our visit the air flow in the wine cellar had been restored, and we were encouraged to see a small amount of dieback in areas of mould most exposed to the air flow. For us to be able to remove the mould successfully the hyphae needed to be dead (dry and dusty, with an uneven appearance) and good air flow would be one method of achieving this. More fans were recommended to increase the air flow further and a deep clean of the area and exposed shelving was suggested as a way of reducing potential food and resting places for the mould spores.

Ideally we would have liked some humidistat controlled radiators installed on a temporary basis



Conservation students Hillary Jones (l) and Nicole Devereux (r) at the book cleaning station (photo: Ruth Stevens)



Two views of Rectorial collection after the removal of the mould outbreak (photos: Ruth Stevens)

to address the high humidity levels, but this was not possible. Based on readings taken on the day, which were below dangerous levels, and the improved air flow we left with some planning to do. Clearly the collection would have to be relocated in the long term, but for now the main concern was to remove the mould from the books as soon as it was practical to do so.

Fortunately we had a couple of months while the hyphae were drying out to organise the cleaning project and for the custodians to raise the funds needed. We were conscious of the problems the Crundale PCC might have in raising funds quickly, being a small village parish. Aware of the high costs of labour in this type of project and the short timescale involved we worked together to bring the costs down to an affordable level. The parish had already established contact with West Dean College near Chichester, so we were able to draft in the fantastic resource of students on the Book and Library Materials course, as well as volunteers from the local area. Accommodation costs were vastly reduced by the generous hospitality of Richard Goodenough and his wife Roz, who put up the student team and me for the duration of the project. The college subsidised the students' food bill, so all in all the cost was minimised to the materials and the labour of one conservator project manager for four days.

Mould spores (containing mycotoxins) may cause ill health, so full personal protective equipment (PPE) was used to reduce this risk. The mould was removed by using HEPA-filtered variable suction vacuum cleaners fitted with soft goat's hair brushes and then the books were cleaned further using smoke sponges and lint-free cloths. The metal shelves were vacuumed, wiped with a mix of water and industrial methylated spirit (IMS) then air dried before replacing the books.

It took three and a half days to clean approximately 950 books, with a student team of five conservators



and seven volunteers. This included photographing each title page to form a digital catalogue of the collection and checking each book against a written catalogue. Some minor conservation work was also achieved at the end of the project to stabilise some of the bindings.

We left the library looking a lot better and more stable than we found it, but concerned about its future. Recently we have learnt the Crundale Rectorial Library has been accepted as a long term loan into the Canterbury Cathedral Library. Although it is a shame that the library will no longer be resident in Crundale, we couldn't wish for a happier ending to the project.

#### Ruth Stevens ACR

Book conservator and director of  
Sussex Conservation Consortium Ltd

#### Acknowledgements

SCC is grateful to Richard Goodenough and Jeremy Robson for taking on the deep clean of the cellar and the continuing monitoring of the situation; volunteers Roz Waller, Elizabeth McAdams, Tony Pragnell, David Rigley, Maggie Cameron, and the student team of Hillary Jones, Rachael Seculer-Faber, Nicole Devereux, Rachel Day and Ben Pointer, organised by Su Fullwood and David Dorning of West Dean College. For more information about the project please visit [www.sussexconservationconsortium.co.uk](http://www.sussexconservationconsortium.co.uk)



# Packaging & Preserving Our Future

Highland Archive Centre, Bught Road, Inverness - 23 August 2013

Last August, I drove north to attend the first training event of its kind at the Highland Archive Centre in Inverness. Having worked there as a conservator between 2009 and 2011, the event provided me with an opportunity to visit my old stomping ground. It was a pleasure to catch up with former colleagues, and to meet the delegates and speakers. The welcome was warm, and the coffee was waiting for us when we arrived.

The event, entitled 'Packaging & Preserving Our Future', focused on the benefits of adopting pro-active collections care initiatives, and outlined the perils of not doing so. The various presentations highlighted the need for preventive conservation measures to be understood and implemented by those who are responsible for looking after historic and culturally significant collections.

The event also provided archivists, conservators and volunteers with an opportunity to look around the archive centre, which was opened in 2009. For local delegates this was an excellent opportunity for them to discover how the services offered by the Highland Archive Centre can be of benefit to them and their organisations. For me, the event provided a good networking opportunity, and a chance to speak to those working in my field about the latest innovations in collections care.

Problem solving is at the heart of what we do as conservators and collections care professionals. Each of the presentations given at this event outlined problems which are typically encountered in museums, libraries and archives. Based on their own experiences of dealing with such problems, the speakers revealed the strategies, procedures and solutions which they have found to work best.

The first speaker, object conservator Jeanette Pearson of Inverness Museum, discussed her methodology for surveying both small and large mixed-object collections. She touched on issues such as designing and planning a useful survey, and talked about the logistics and practicalities associated with implementing such a survey. This presentation was especially relevant to my own work. As Senior Archive Conservator at Cumbria Archive Service, I planned to carry out a Preservation Assessment Survey in each of our record offices. The aim is to enable us to gain an up to date 'snap-shot' of the conservation requirements of the collection. No doubt, Jeanette's hints and tips came to mind for work started in January.

The second speaker was Senior Conservator Richard Aitken of the Highland Archive Centre. His presentation was entitled 'Integrated Pest Management'. He



Highland Archive Centre  
From <http://www.highlandarchives.org.uk/harc.asp>

discussed the various species of insects and pests which can and do cause problems with regard to the preservation of paper and fabric based collections. He showed the delegates photographs of various pests, and described some typical signs of infestation. His message was that insect activity is directly linked to environmental conditions, and that a joined-up approach to monitoring is the best way to minimise risk and spot problems before they get out of hand.

The third speaker was volunteer Mike Galleitch from Fort George Military Museum. He gave an interesting presentation on behalf of the museum manager, about the packaging and relocation work that was carried out in advance of the museum's refurbishment. This was only possible with the help and dedication of a small team of enthusiastic volunteers. (And a borrowed camper van!) The presentation highlighted that careful planning and a dedicated workforce can successfully accomplish seemingly impossible tasks. The volunteers battled with snowy conditions and treacherous staircases, but managed to safely package and relocate thousands of museum objects before the scheduled building work took place. The collection has now been reinstated within the newly refurbished museum. Mike's presentation got me thinking about the current lack of conservation-orientated training, specifically aimed at volunteers who have become involved in a community-led project. His presentation also made me ponder our reliance on such individuals throughout the heritage sector.

Last but not least, conservators Louisa Coles and Brannah Mackenzie, of the Glucksman Conservation Centre in Aberdeen, gave a presentation about how to make a bespoke book cradle from archival quality box-board. In true Blue-Peter style, they talked us through the various steps and produced a 'here's one we made earlier' version. As I work within an archive centre which often displays vulnerable volumes, I found this demonstration to be most helpful. Brannah and Louisa revealed that making this type of cradle is not a speedy process. However, unlike acrylic book cradles, those made from box-board can be deconstructed after use and easily recycled. I particularly liked the way in which the cradle design could be adapted to suit a variety of binding types and spine shapes. The resulting cradle was aesthetically pleasing, unobtrusive, and robust enough to support a moderately heavy volume.

Thanks to Richard, Janet and Fiona for organising this event and for being such welcoming hosts.

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**Shona Hunter**

Senior Archive Conservator,  
Cumbria County Council

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**ARC** magazine

**New editor  
required**

We have a vacancy on the ARC Editorial Board, if you would be interested in joining our team to help, edit, develop and commission copy for ARC then please contact John Chambers on: [execdirect@archives.org.uk](mailto:execdirect@archives.org.uk)







Speaker Antoinette Curtis discussing adhesives for parchment repair

# Understanding Adhesives

On 7 November 2013, Anthony Oliver from PCG, organised a packed programme on adhesives filled with practical information, demonstrations and research results, about using the best adhesive on paper or parchment repairs. The workshop was held at the Norfolk Record Office, The Archive Centre in Norwich. This sums up the day.

## **Session 1: A protein journey, Adhesive choices for recoating and remoistening tissue**

Presented by Antoinette Curtis, Conservator Norfolk Record Office

Antoinette talked about work with colleague Yuki Uchida on using gelatine as an adhesive for parchment repair. Research began for their gelatine poster at the Canadian Conservation Institute Adhesives Symposium in 2011. Their investigation into the different types of gelatine led to an awareness of how to use gelatine as a mousse to allow more control of the adhesive during application of repairs. In 2012 Antoinette began work on the Aylsham Lancaster Manor Court Roll, 1509-1546 (a NMCT funded project). The need to conserve the very thin and fragile parchment roll allowed her to compare gelatine with isinglass as an adhesive for remoistenable tissue. The advantage of using isinglass is it readily hydrates and produces a repair with

low overall tension. They also found that responsibly sourced (farmed through aquaculture) isinglass is of a higher concentration than that sourced from the wild. To prepare the remoistenable tissue, Antoinette used a warm 2% isinglass solution brushed through Berlin tissue on a matte surface. The remoistenable tissue was applied to the parchment in localised areas using hydrated Zorbix, a reusable absorbent blotter on a low-pressure suction table resulting in an almost invisible flexible repair—which has been achieved by a minimal amount of moisture.

## **Session 2: “Investigating the ageing properties of Lascaux 303 HV and 498 HV on paper and leather”**

Presented by Mary French, Book & paper conservator, Cambridge University Library

Lascaux adhesives have been used since the 1970's in textile, leather and art conservation, and then migrated to book and paper conservation. Most people use it as a solvent to set tissue, but there have been no studies on Lascaux's aging properties. Mary tested Lascaux 303 HV, Lascaux 498 HV and EVA as free-standing films and on various substrates—K145 tissue, Bodleian and Vegetable tanned calfskin leather. The results were assessed for colour, chemical structure (via FTIR), pH, solubility (in acetone, Iso-propanol, xylene and toluene), reversibility,

shrinkage temperature and off gassing (AD strips and Oddy test). Aging was carried out at 70 degrees C over 5.5 weeks to equal 3.5 years. Shrinkage tests were carried out using aged samples of new and old leather at Northampton Leather Centre. EVA failed the Oddy test, AD strips and reversibility on leather. 303 HV discoloured the worst at high temperatures and 498 HV failed the silver test.

### Session 3: Using Klucel G to consolidate and repair mould damaged documents

Presented by Shirley Jones, Senior Conservator, West Yorkshire Archive Service, Wakefield

Shirley demonstrated Klucel G (or Cellugel) as a consolidant on newspaper samples. The use of in 1-3% solutions came about as a result of a major digitisation project on thin parchment of Cellugel on Land Tax records. The powder is dissolved in water and Propanl-2-ol. It is a weak adhesive but a good consolidant in dilute form. It should be made up well in advance to give the powder clumps time to disperse throughout the solution. Because of the solvent, COSHH and Risk Assessments should be carried out first, and the use of PPE and a fume hood or local extraction whilst air drying. A 1% solution is brushed on as a consolidant, and a 2-3% solution is used as both a consolidant and weak tissue adherent. Shirley uses Klucel G brushed through 5gsm Kozo tissue for repairs and support or a 3.5gsm off white tissue for areas where text might become obscured by 'white' tissue. This needs five minutes or more to air dry. The solvent also denatures mould and any repairs are reversible with Iso-propanol.

### Session 4: A comparison of the working properties of three non-aqueous adhesives in paper conservation: Lascaux acrylic dispersions, Texicryl and Beva 371

Presented by Richard Hawkes, Artworks Conservation Ltd, Harrogate

Richard briefly mentioned the earlier versions of heat set tissues used in the conservation community, Texicryl 13-002, Archibond and Crompton, before going on to talk about Texicryl 13-076, Beva 371 and Lascaux 303 HV, 498 HV, and 498-20X. He described the pros and cons of using the adhesives either as solvent activated, heat set or contact adhesives. Pros are a low heat set temperature, reversibility and flexibility. Negatives are the use of flammable solvents, possible yellowing and aging and high set temperatures for the non-Lascaux adhesives. The 303 HV and 498 HV can safely be used on tracing/architects plans.



Speaker Shirley Jones

### Session 5: Using acrylic coated tissue for repairing badly damaged parchment. Investigating consolidation of damaged parchment surfaces

Presented by Dominic Wall, Conservator, Suffolk Record Office

Dominic described using acrylic-coated tissue for repairing badly-damaged parchment documents. Through reduced aqueous techniques he aims to reduce iron-gall ink corrosion and increase control. He compared techniques old and new, describing the use of collagen casing and then goldbeaters skin, and thinned sheepskin parchment and Japanese paper.

Dominic described trials of applying misted 1% gelatine solutions to crumbling and powdering iron-gall ink on a vacuum table, and of applying 2% Klucel G in alcohol point-by-point underneath areas of delaminating parchment.

### Karenn Fry, Archive Conservator

The Record Office for Leicestershire, Leicester & Rutland

#### References, further information:

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# Preventive Integrated Pest Management (IPM)



## What is the relationship between IPM and environmental monitoring?

If the environment is humid above 65% relative humidity (rh) mould and insects are likely to be active; IPM has to be as stringent as ever. Above 65%rh softens adhesives making them easy to consume if they are starch or protein based.

## How would one monitor for insect activity?

There are blunder traps, or pheromone traps (if attracting a specific insect), data loggers and handheld thermohygrometer to aid monitoring. Schedule a weekly and monthly monitor of storage, collection and exhibition areas.

## Insects: Is it a safe haven in libraries, archives and museums where they can go undetected?

There are several factors that are more suited to insects rather than collections.

- **High humidity.**  
If the humidity is low the insects dry out and move elsewhere, if the humidity is high, it encourages the wildlife habitation.
- **High temperatures.**  
Between 20°C and 30°C the breeding cycles will multiply, below 20°C slows any activity down.
- **Poor air circulation.**  
Allows dust build up and keeps humid, warm areas constant.
- **Poor housekeeping.**  
Again allows dust build up, which is a source of food.

Below are three common insects found in collections:

### Woodworm Furniture Beetle – *Anobium punctatum*

The larvea cause the damage. Evidence includes small 2mm round exit holes, with frass in the tunnels. Preferred material is sapwood of hardwood, animal glue, and books.



Woodworm, photo by Siga

### Silverfish – *Lepismatidae*

About 10 –15 mm, they will travel in search for food, (damp paper, textiles and animal glue) and remain close by. They hide in cracks during the daytime and become active after dark, preferring 75%rh to breed and multiply.



Silverfish, photo by Jeff Holman

### Biscuit Beetle – *Stegobium paniceum*

The Biscuit Beetle is 3mm and oval, reddish brown in colour has been known since the time of the pharaohs, around 2500 B.C and is worldwide in distribution. Its Latin name is derived from the Latin for bread 'Panis'.



Biscuit Beetle, photo by Malcom Storey

### Pest control

The most effective method of pest control is locating the source of the infestation. Remove all possible sources of food and bedding near the proximity of the infestation.

Some precautions can be taken such as introducing a de-humidifier to decrease the humidity. Lower the temperature storage areas ideally near 16 °C +/-1 °C.

This may have highlighted the need to have the air conditioning serviced and be regularly maintained. Thoroughly clean the infected area and regularly monitor afterwards.

**If this is the situation then specialist advice should be sought by consulting a conservator.**

### An IPM strategy

- A quarantine room should be established as close to the loading bay as possible.
- Ideally new collections are placed in the quarantine room, insect traps are placed around the collection to assess for any possible infestation.
- Any infestation, wrap and seal tightly in plastic.
- Freeze to -30 °C for 5 days or 52 °C for 1 hour.
- Freezing is the usual practice.
- However with large infestations it could be worthwhile consulting a company who have worked within the conservation industry to steadily increase the temperature to 52 °C, whilst keeping the relative humidity (rh) a constant 50-55%rh.

**Once a week** walk round the building with a handheld thermohygrometer taking in situ readings and record on a weekly report, monitoring traps and general wellbeing of the repositories, exhibition space, etc.

**Once a month** download data off the data loggers, (or provide the weekly readings with an average for the month) including the min & max + average data and a pest count in a monthly report to the Collections Manager, Archivist.

**Once a quarter** replace the traps, due to dust / insect build up and / or the pheromone has dissipated into the environment.

Annually review the IPM strategy.

### Conclusion

The management of the building and storage areas with relevance to IPM and environmental monitoring are just as important as the preservation and support packaging that envelope the item / collection.

### Richard Aitken,

Senior Conservator, High Life, Highland Archive Service,  
Highlands, Scotland

This article was based on a recent training day event at the Highland Archive Centre – Inverness with the support from the Archives Records Association Training Committee, to promote and aid Integrated Pest Management.

For more information on images, please see Jeff Holman at [http://en.wikipedia.org/wiki/File:Silverfish\\_enhanced.jpg](http://en.wikipedia.org/wiki/File:Silverfish_enhanced.jpg) (public domain) Bioimages at <http://www.bioimages.org.uk/html/r150908.htm>, and Siga at <http://www.amentsoc.org/insects/glossary/terms/woodworm>

Figure 3

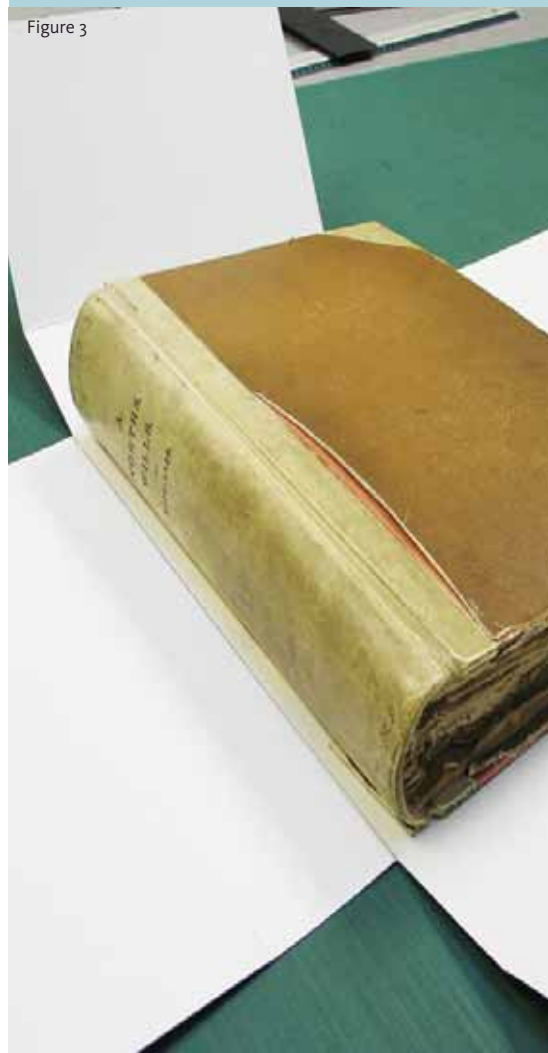


Figure 1

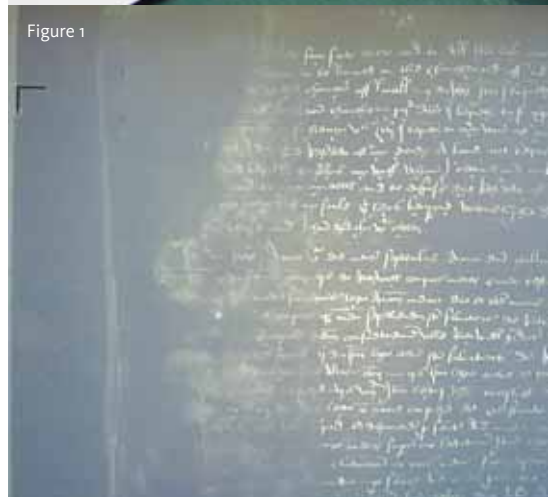
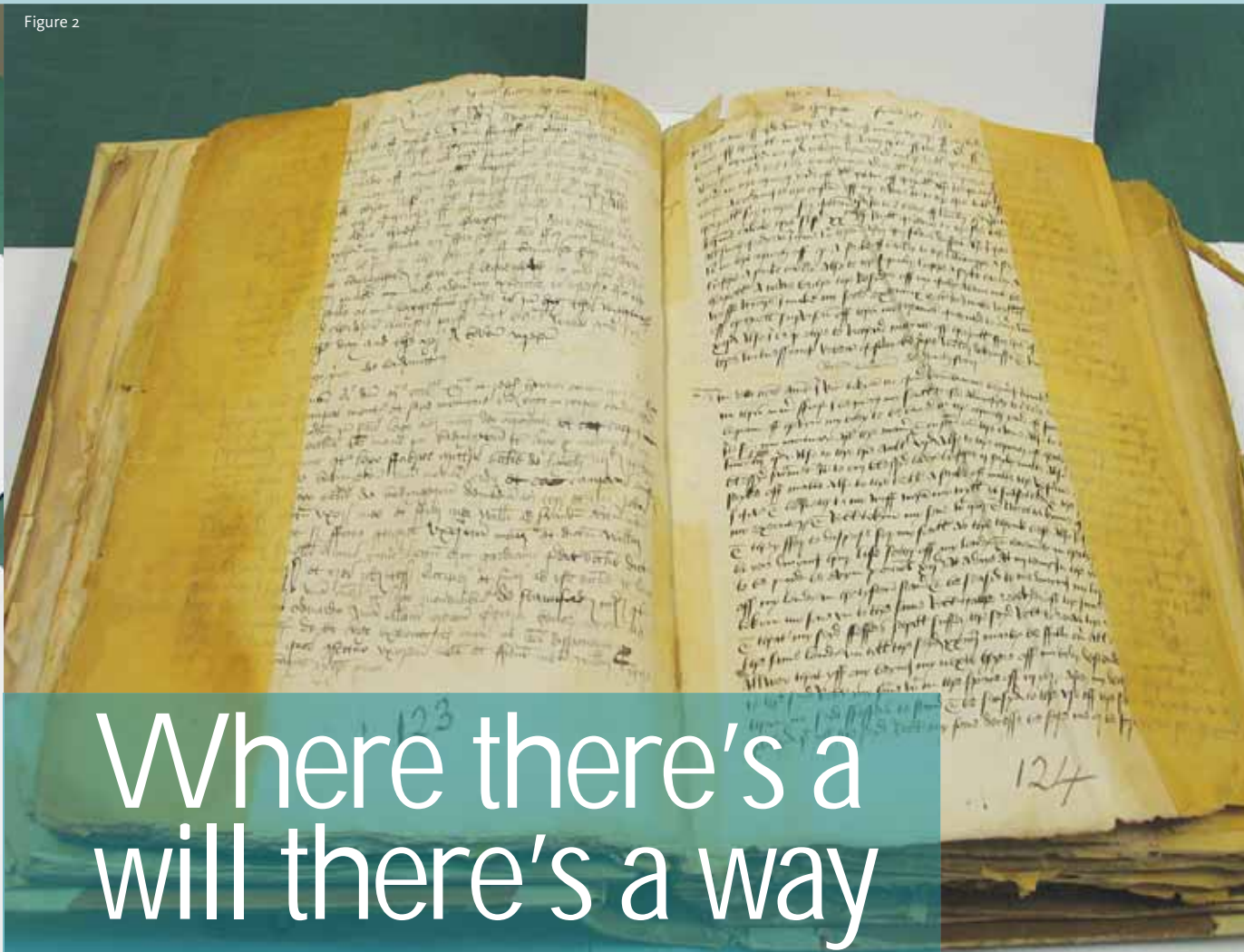


Figure 6





Figure 2



# Where there's a will there's a way

## The treatment of 16th Century wills

The Northamptonshire Record Office holds probate records for the Archdeaconry of Northampton, the Consistory Court of Peterborough and the later Court of Probate for both areas. A popular resource for both family historians and those studying social and geographical history, the records' dates cover 1469 – 1941 and include wills and inventories. In an attempt to preserve these original documents, previous conservation work and microfilming was done. Unfortunately, the quality of the microfilm images was poor, resulting in the original volumes still being requested although now extremely fragile.

The Record Office staff would ultimately like to digitise the wills collection. However, in their current condition, the digitised images would be just as poor as the microfilm images. (See Figure 1). Simply rehousing or repairing individual pages of the volumes would not be appropriate for long-term stability and would only be a 'first aid' solution. Interventive conservation work was seen as the way to enable high quality digital images to be produced.

The first volume of Northampton wills was chosen to investigate the options for treatment and to act as a case study to assess appropriate treatments and carry out sensitivity tests for the other volumes (See Figure 2).

### Project Assessment

The early wills collection (1510-1724) consists of 27 volumes, each containing over 500 wills. The collection has had its original bindings removed and a replacement binding added. The current bindings were in good condition with minor abrasions and slight delaminating to the cover (See Figure 3). However the binding has allowed the paper, an early rag paper with varying Iron gall ink recipes, to become weak.

The bindings hold folios of approximately 10 wills per gathering, joined together by a pamphlet stitch. The text blocks suffer from losses along all edges, occasional with central losses too. There was also evidence of tide lines and the surface had a powdery feel. The ink was actually in a stable condition, which was remarkable after some water damage.

Previous repair work had been carried out using a transparent paper and flour paste. (See Figure 4) Some pages have the repair adhered over all; however the majority is located along the edges presumably to protect the sides when readers turned pages. Unfortunately, over time, the transparent paper has become brittle and discoloured. This has, in turn, caused the wills, themselves to become acidic. During this project, we asked questions about the ethics of removing the previous bindings and repairs, such as: What is the historical context of the bindings? Will removal of the repairs cause further damage? How stable is the ink? Will further conservation treatments cause detrimental damage? How will the bindings and index pages be documented?

The answers to these questions were that the previous conservation work was causing severe physical damage to the text and if it remained in place, would destabilise the longevity of the object as a whole. Because the binding still allowed the pages to be exposed and didn't provide protection to the wills' edges, further damage was inevitable. We concluded that the bindings were not contemporary to the wills, or vital for the wills to remain bound within them.

### Project Work

Our work began with a scalpel to carefully cut away the text block from the cover. Doing so revealed leather lining straps and a thick crunchy coating of animal adhesive. After the binding was removed, it was necessary to soften the animal adhesive to loosen the straps to separate the folios. A methyl cellulose poultice was utilized to limit the amount of moisture migrating into the text block (See Figure 5). The volume was then closely monitored as the adhesive softened enough to remove the straps and separate the folios.

The wills were then immersed in water to remove the old repairs. A spatula was slid between the old repair and each will whilst in the water, which aided separating them. A significant amount of discolouration and tide line were removed, and once dry the paper substrate appeared a lot lighter. The powdery surface became more stable.

The will's fragile condition required extra support through lining. So, using a dryish wheat starch paste, a sheet of Tenjugo Japanese paper was affixed onto the will with polyester sheets. However, the edges remained exposed and required protection. Using a similar weighted Japanese paper, an outline of the edges required were scored out of the paper using a mattress needle (See Figure 6). The Japanese paper was attached with a dryish wheat starch paste and matched up to the document. Then it was placed in the nipping press until it dried. Afterwards, the wills were sorted



Figure 4



Figure 5

into their original order and sewn with Bookbinders thread through their original holes before being housed in four flap archival folders.

Depending on the thickness of the folios one or two were placed into a folder, labelled and stacked into an archival box. The Index and binding also underwent remedial conservation treatment. The index was housed in an archival folder and bespoke archival box for the binding.

This necessary interventive treatment improved the physical and aesthetic quality of the object, making future use of it digitally and physically possible.

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**Natasha Trenwith**

Northamptonshire Archives

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# Groundbreaking Collaborative Storage Scheme Launched

Members of the National Conservation Service (NCS) may be familiar with a proposed initiative, first raised in 2011, to operate a collaborative purchasing consortium for high quality storage (PD5454:2012) at a single low price for members of the consortium regardless of the quantity of shelf space required or the length of rental period needed. The initiative has been led by the NCS's Director Chris Woods, who consulted with 50 institutions and attended supplier presentations back in late 2011 and again in early 2012. The final supplier chosen was Restore Plc, the largest UK storage business, at the ex-USAF/RAF air-force base at Upper Heyford, Oxfordshire. After over a year of development, the first of the storage buildings were completed in July 2013 and the following September NCS sent invitations to an open day.

The storage facility is within an English Heritage-scheduled monument and re-uses massive hangars (called Hardened Aircraft Shelters) constructed from two-foot thick super-hardened concrete that formerly housed nuclear armed F1-11 fighter bombers during the Cold War. Re-use entailed protecting and preserving all the historic features of the site and buildings and approval from English Heritage and the Secretary of State for the Environment.

Each shelter (there are 56 at the site and 7 within the extra-secure compound chosen by NCS) can house up to 3,000 cubic metres of archives and other heritage materials (about 28 kilometres of standard archive boxes). In addition to extra high security at the site, the

area is a flood-free zone on a plateau, with clean air and no local fire risks. The NCS shelter fit-out has been specified by NCS, with extra sealing to minimise air and moisture infiltration. The massive structure ensures very slow rates of temperature change and the sealing reduces RH change. In addition air conditioning and desiccant unit have been installed as backup for any period of high humidity or excess temperature or cold. The first of the NCS shelters is designed to hold the environment for 'mixed traditional archive materials' as recommended in PD5454 (13-20 °C and 35-60% RH). Our next step at the site will be to develop cold storage facilities, on a similar consortium service model, for photograph and magnetic media storage.

Restore manages the site and the building, including input, location control and retrievals. NCS's role, as suggested by the initial consortium contributors, is to advise archivists on their collection needs at the site

and to monitor pests and environment on their behalf. NCS has a contract with Restore that allows NCS to stop the archives' rental payments if standards are not maintained. Restore is required to pay NCS to monitor the service quality and report back to the institutions, advising Restore staff whenever adjustments are required to meet the specifications.

The aim of what is now called the 'NCS Collaborative Storage Scheme' is for numbers of archives and other institutions, coming into and out of the store, collectively to constitute a large and long-term demand sufficient to justify a very low price that would not be available to them if they operated as individual clients. Restore managers and shareholders recognised that this business model, although unique in the storage sector, would work over time and have invested the substantial sums necessary to fit out the first of these shelters (Restore operates 10 other storage shelters at the site for their normal modern records commercial

Empty shelters awaiting conversion





Collections start arriving inside the new shelter

customers, to a slightly lower specification but at a higher price).

Since the consultation period, 66 institutions across the UK have expressed an interest in moving collections to the site. For many the price is so low that it makes sense to move their material from other remote storage companies into the NCS scheme. For others, with sub-standard stores, it represents a first time opportunity to improve conditions for their collections while in some cases also saving money.

If your archives or repository needs storage and want to join or find out more about the scheme, please visit [www.ncs.org.uk](http://www.ncs.org.uk) or email Chris Woods at [enquiries@ncs.org.uk](mailto:enquiries@ncs.org.uk). Initially someone from Restore will have a conversation with your institution about your requirements, then will arrange a visit to see how your material is currently stored and to discuss packaging needs and removals issues.

NCS is also opening a new conservation studio, alongside spaces being fitted out for archivists to work on their collections at the site and next to new digitisation facilities.

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### Chris Woods

National Conservation Service

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The records of an engineering firm that pioneered the manufacture of steam engines and turbines for electricity generation are being catalogued in a project that aims to highlight the importance of the company and its innovations.

Warwickshire County Record Office has received £50,000 to catalogue and conserve the archive of Rugby-based company Willans & Robinson and its successors at the same site, including present day occupants Alstom. The funding comes from two main sources, the National Cataloguing Grants Scheme, and the National Manuscripts Conservation Trust in recognition of the exceptional historical importance of this business archive that is not widely known about.

Historian Stathis Arapostathis, Lecturer in the History of Science and Technology at the University of Athens, said: 'Study of this collection will profit the history of electricity and electrification of Britain as well as the mechanical engineering industry. The Willans and Robinson archive will provide very important material for the industrial history of Britain.'

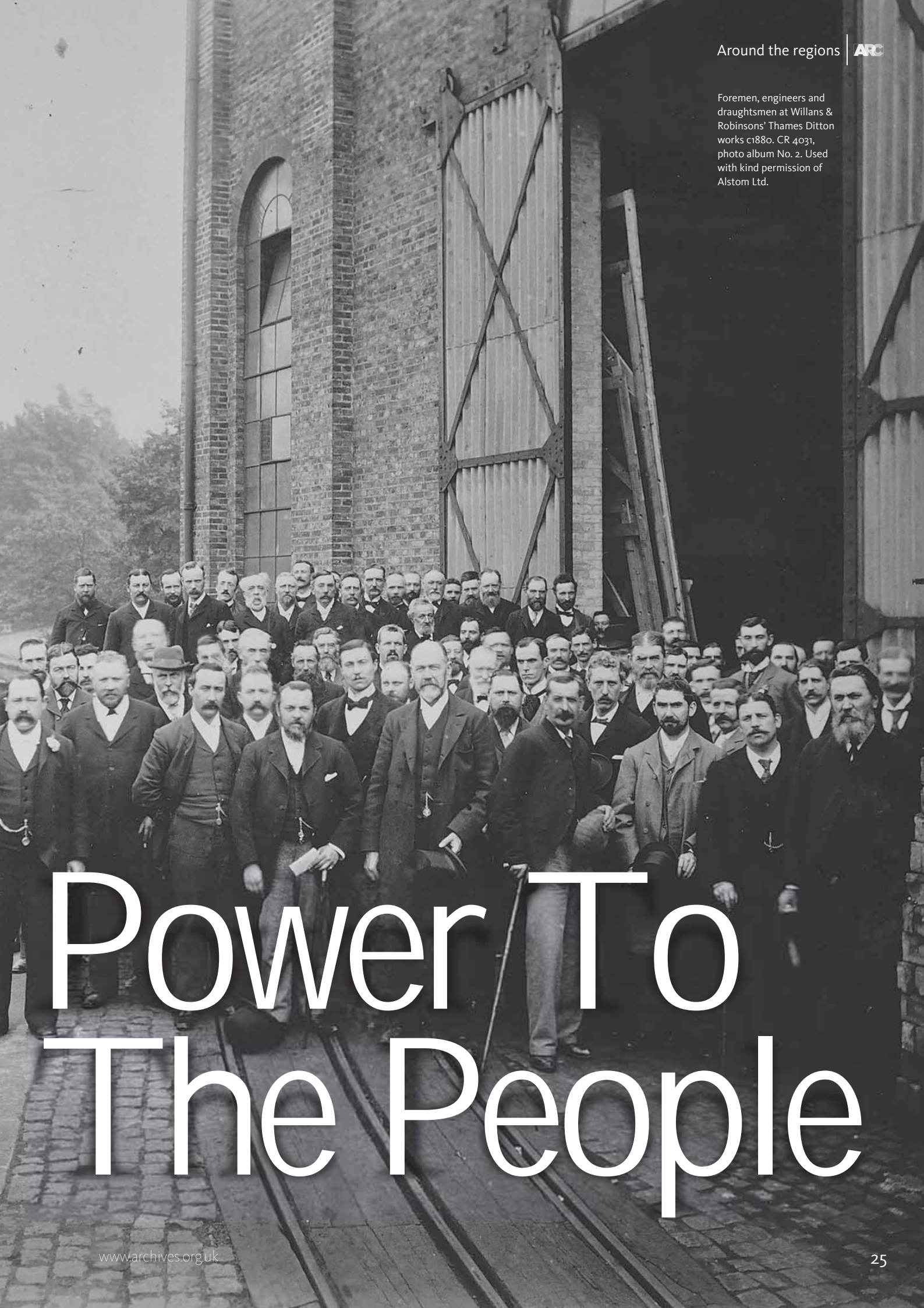
Mark Ryder, Head of Localities and Community Safety at Warwickshire County Council added: 'We are pleased to support this project which will benefit greatly from Warwickshire residents' enthusiasm, expertise and interest in their local industrial history. This project also highlights Warwickshire's long history and success in attracting and supporting creative industries such as engineering.'

The firm began as a partnership between Peter Willans and Mark Robinson in 1880 at Thames Ditton in Surrey and manufactured high-speed steam engines using Willans' design for river launches.

Willans invented the central-valve steam engine that was crucial to the firm's initial success and his name was



Foremen, engineers and draughtsmen at Willans & Robinsons' Thames Ditton works c1880. CR 4031, photo album No. 2. Used with kind permission of Alstom Ltd.



# Power To The People





Visit by the American Mechanical Engineer's Society to Willans & Robinsons' Victoria Works, Rugby c1900. CR 4031, photo album No. 4. Used with kind permission of Alstom Ltd.

subsequently used to describe the 'Willans line' – a straight line that results when steam flow is plotted against output on a graph. He died in 1892 after an accident caused by his horse bolting.

Limitations at the Thames Ditton site and the need for more room as the company expanded its portfolio led to the company moving to Rugby in 1897. It was attracted there because of its central location in the UK and a workforce skilled in manufacturing and power generation because of the railway industry. Good railway access at Rugby also meant that transporting raw material into the factory and finished goods out was straightforward.

By 1892 Willans' engines were driving almost 70% of the turbines generating Britain's overall electricity output but despite this success and pioneering developments in steam electric locomotives, motorcar parts production, boiler manufacture and steam turbines, the firm struggled with controlling its finances. This led to being taken over by Dick, Kerr and Company Ltd. in 1917, which then became part of English Electric a year later. English

Electric came under the ownership of GEC in 1968, which also ran British Thomson-Houston, another engineering company that had a large site at Rugby. The Willans site now hosts the thermal power division for Alstom, so steam turbine design and manufacture continues there to this day.

The collection, deposited in 2006 and known as the Willans Works Archive, refers mostly to the Rugby site, but also has important material relating to Thames Ditton. The records cover the period from the 1870s to the 1990s and include an extensive photographic archive which volunteers have already made great progress with by indexing and promoting through talks. Local volunteers are also supporting the project with research into the fascinating apprenticeship records that start in 1893. One of the apprentices was Geoffrey de Havilland, who went on to become a famous aircraft engineer and aviation trailblazer. The company was the first

engineering firm to start in Rugby and was one of the town's biggest employers with nearly 1,000 people working there. The site is still important for local employment and one of the aims of the project is to show the impact on Rugby and its social history.

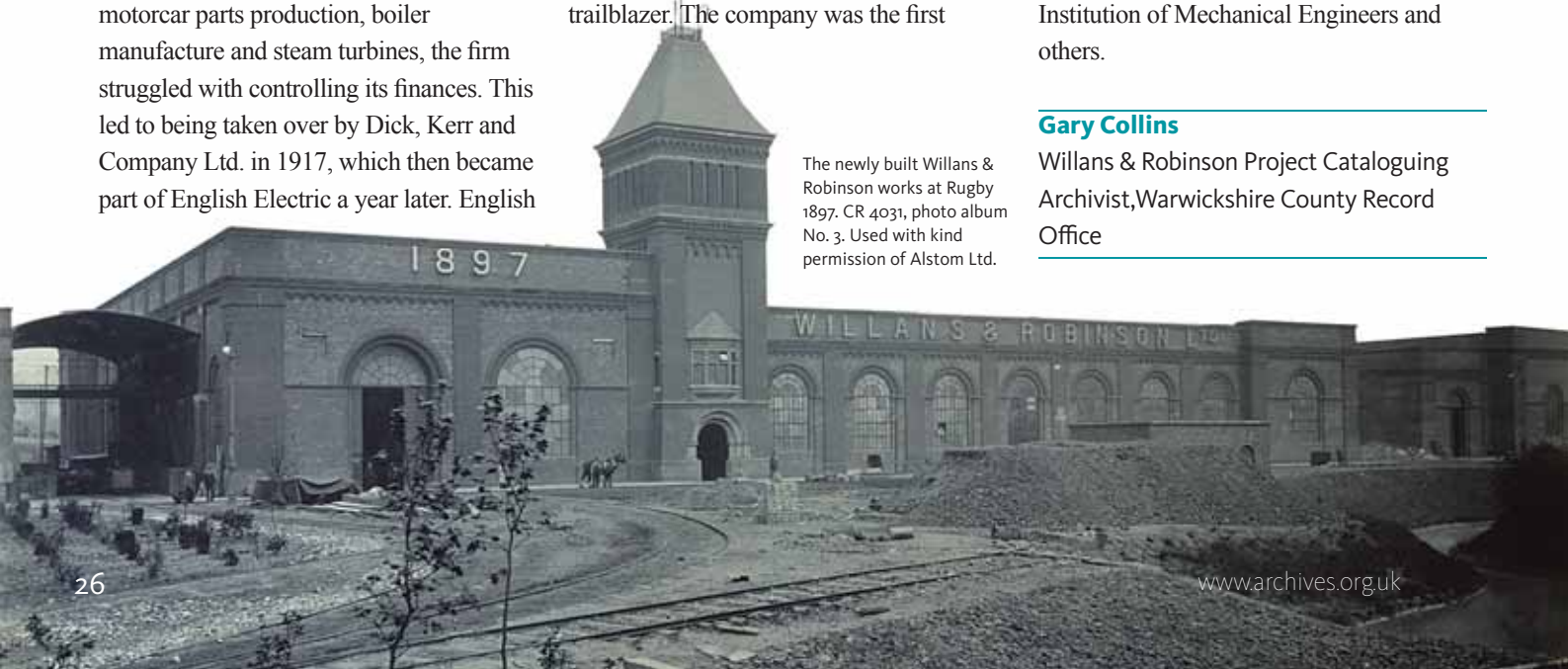
A blog will keep people up to date with any discoveries and on the progress of the £3,000 fundraising appeal to complete the repackaging and essential conservation work, which is another area where volunteers are assisting.

The project will also note Willans & Robinson archive material held elsewhere.

Warwickshire County Council is leading the project with support from Warwickshire Industrial Archaeology Society, Friends of the Warwickshire County Record Office, Rugby Local History Research Group, Rugby Family History Group, the Institution of Mechanical Engineers and others.

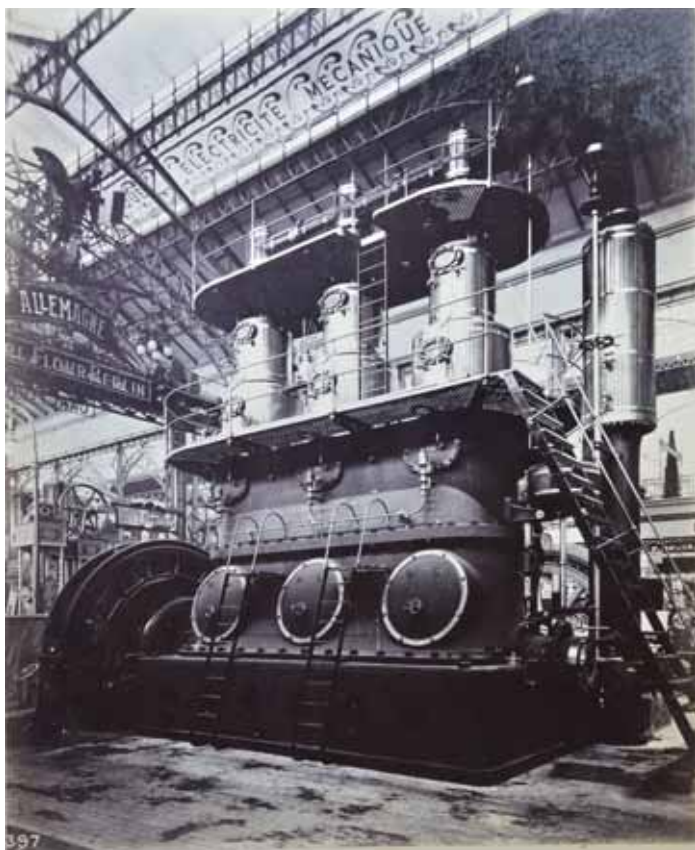
### Gary Collins

Willans & Robinson Project Cataloguing Archivist, Warwickshire County Record Office

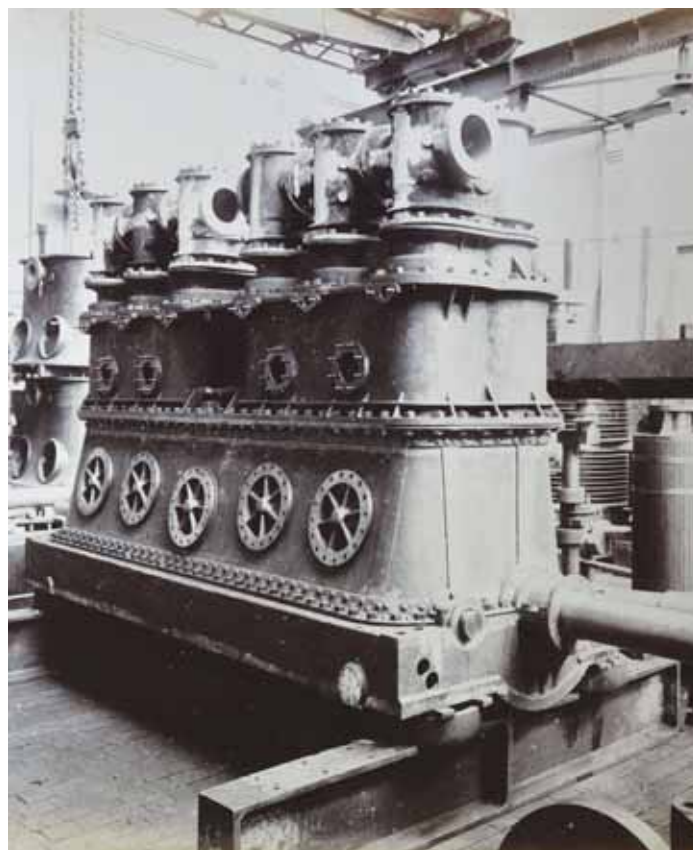


The newly built Willans & Robinson works at Rugby 1897. CR 4031, photo album No. 3. Used with kind permission of Alstom Ltd.





Willans & Robinson engine on display in the Mechanical Engineering section of the Paris World Exhibition 1900. CR 4031, photo album No. 4. Used with kind permission of Alstom Ltd.



A prototype hybrid Heilmann steam-electric locomotive engine developed in 1897 for testing on the French railways. CR 4031, photo album No. 2. Used with kind permission of Alstom Ltd.



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**John Chambers**

Chief Executive

Archives and Records Association

# Celebrating 60 Years

Photo courtesy of the  
East Riding Archives and  
Local Studies Service

## A diamond anniversary for the East Riding Archives and Local Studies Service, 1953-2013

**E**ast Riding Archives and Local Studies celebrated its 60th anniversary with an event at the Treasure House in Beverley on 18 November 2013. Frequent users of the archive joined past and current staff along with invited guests to mark 60 years of access to local history and heritage. They also launched East Riding's Explore Your Archive campaign.

Under the first County Archivist, Norman Higson, the office began as the East Riding County Record Office in 1953. In its infancy the collection was largely composed of official council records as well as the records of the Court of Quarter Sessions, militia, school boards, commissioners of sewers, turnpike trusts as well as Hedon and Beverley boroughs. By January 1955 the office was also formally recognised as a repository for manorial records. Soon after the office opened many private collections were deposited. One of the earliest and, to date, largest the office has received are the family papers of the Chichester-Constables of Burton Constable Hall.

Accommodated initially in two small strongrooms and three other rooms in County Hall, which were soon overflowing, by September 1954 the first purpose-adapted premises were provided in the building on the corner of Cross Street. Within just 12 months over 3000 documents were retrieved for staff and students. In his first report as county archivist Mr Higson foresaw that 'These visits and queries will increase as more material becomes available and the resources better known'. By 1960 the office was buzzing with visits from renowned academics such as the Elizabethan historian, A L Rowse, and the English Civil War historian, C V Wedgwood, as well as international researchers. The office became a Diocesan Record Office in 1967.

In 1974 the service was renamed Humberside County Record Office and soon after, became responsible for the records of the former East Riding Registry of Deeds (some 4,000 registers and indexes dating from 1708). The public searchroom then moved into the former Registry building.

Moves to create a purpose-built archive building were first aired under Keith Holt (County Archivist from 1974 to 1998) and put to the Heritage Lottery Fund in May 1999. As a temporary measure, in April 2000, the service moved its public facility to a converted chapel in Beverley. The successful Heritage Lottery funded bid led to the building of the Treasure House, and since 2007 it has been the pinnacle of this service, offering environmentally controlled storage to protect the documents for future generations, something that could only have been dreamed about in 1953.

Today the present archives manager is Ian Mason who praises his former colleagues.

‘Due to their hard work, patience and dedication, this service has gone from strength to strength and continues to dedicate itself to guardianship of the region’s records. It’s a pleasure to hold this event as an opportunity to thank all the staff who have dedicated themselves to building up the collections and helping people use them over the 60 years.’

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**Joanna Larter**

East Riding Archives and Local Studies Service

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## Calling all colleagues!

ARC is always seeking articles reflecting the issues that matter to you most. We would love to publish pieces that reveal the sector’s opinion and showcase successful best practice.

If you would like to send something for inclusion in the magazine, please send articles to [arceditors@archives.org.uk](mailto:arceditors@archives.org.uk), or write and let us know what you’d like to read about. Guidelines for articles for ARC can be found on the Association’s website: [www.archives.org.uk](http://www.archives.org.uk).



## Historic Scottish photographs online

East Dunbartonshire Leisure & Culture Trust (EDLCT) has published part of its unique Local Studies Photograph Collection online, making it more accessible to researchers and the public.

The historic collection, which contains images of East Dunbartonshire dating from the early seventeenth century through to the mid-1990’s, has been published by EDLCT online through a brand new photo library website, [www.edlcimages.co.uk](http://www.edlcimages.co.uk), which features over 5000 digitised images, offering a fascinating insight into key people, places and events from across East Dunbartonshire’s rich and vibrant history.

As part of the project, all of the physical photographs to be published online were scanned to digital format by heritage digitisation specialist TownsWeb Archiving Ltd, whose staff also transcribed each photograph’s captions and other metadata. The digital photo library was then catalogued and added to a dedicated archive website

using TownsWeb Archiving’s PastView digital collections management platform. On the archive website visitors can browse the photo library, which is completely free to access, as well as search the library for specific images using keywords.

‘This Photographic Collection truly is an invaluable window to East Dunbartonshire’s past’ said Janice Miller, Information & Archives Officer at EDLCT, speaking on the significance of the project.

‘The digitised photo library represents a really important resource for genealogists and academic researchers tracing East Dunbartonshire’s heritage, as well as for the present day people of East Dunbartonshire looking to explore their county’s history.’

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**Ryan Kyle**

TownsWeb Archiving

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# From beetles to The Beatles



Entomology Products (pages 71-75)



Phonograph Record Storage Sleeves (Page 27)

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