



International  
Specialised  
Skills  
Institute



# A MASTERS OF BOOK CONSERVATION:

12 months at West Dean College,  
United Kingdom

An International Specialised Skills Institute Fellowship.

**SALLY KILBY**

Sponsored by The George Alexander Foundation

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# 1. ACKNOWLEDGEMENTS

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Sally Kilby would like to thank the following individuals and organisations who generously gave their time and their expertise to assist, advise and guide her throughout her George Alexander Fellowship.

## Awarding Body – International Specialised Skills Institute (ISS Institute)

The ISS Institute plays a pivotal role in creating value and opportunity, encouraging new thinking and early adoption of ideas and practice by investing in individuals.

The overarching aim of the ISS Institute is to support the development of a “Smarter Australia”. The Institute does this via the provision of Fellowships that provide the opportunity for Australians to undertake international skills development and applied research that will have a positive impact on Australian industry and the broader community.

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The Fellow sincerely thanks The George Alexander Foundation for providing funding support for the ISS Institute and for this Fellowship. In 1972, George Alexander AM (1910 - 2008) set up an independent philanthropic Foundation as a way of sharing his wealth and giving back to the community. Today, the main focus of The George Alexander Foundation is access to education for promising young people, particularly students with financial need and those from rural and remote areas.

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The Fellow would like to thank the following individuals for their invaluable time, knowledge and guidance throughout her studies at West Dean College:

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- » Denyl Coughley, Assistant Director, Preservation Services, National Library of Australia
- » Freya Merrell, Book & Paper Conservator, National Library of Australia
- » Rachel Sawicki, Senior Exhibitions Conservator, Cambridge University Library
- » Nicole Gilroy, Head of Book Conservation, Bodleian Libraries
- » Simon Haigh, Book Conservator, Bodleian Libraries

## 2. EXECUTIVE SUMMARY

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Books and library materials are an extraordinarily valuable component of Australia's cultural heritage. Conservation professionals are essential to ensure the continued survival of these important cultural objects, and to facilitate access to their contents. However, over the next decade, Australia will be seeing many experienced book conservators retire from their professional careers, taking with them their not inconsiderable skill sets and professional knowledge. The need for experienced, qualified emerging book conservators is acknowledged amongst collecting institutions in Australia, yet there are no formal training programs in Australia, or indeed, the Southern Hemisphere.

In response to this need, this report outlines the studies undertaken by the Fellow Sally Kilby, at West Dean College in 2018/19, where she completed a Masters in the Conservation of Books and Library Materials over a period of 12 months. It will emphasise the importance of international training for Australian book conservators, the value of international professional networks, and the anticipated benefits for the Australian conservation sector.

As part of her MA studies, the Fellow benefitted from in-depth hands-on training, and undertook conservation treatments on a wide range of books and library materials. She visited several working conservation studios and undertook a six-week work placement at the Bodleian Libraries. She also had the opportunity to undertake a research project on a book conservation subject of her choice, and the resulting research into Don Etherington Japanese tissue hinge repairs culminated in a 12,000-word written thesis. This research will be published in a more formal, accessible format shortly.

As a result of her studies, the Fellow is a firm advocate of formal study for aspiring Australian book conservators. It has demonstrated to her that formal training in the fundamental knowledge of book structures, materials and treatment options is essential to providing ethical, skilled conservation treatments. Given the lack of book conservation training in Australia, it is vital that emerging conservators have the opportunity to attend a training program such as that of the internally renowned West Dean College, and although the cost is currently prohibitive for many, it is hoped that advocacy from recently trained book conservators including this Fellow will assist with attaining greater student funding for future conservators.

## 3. FELLOWSHIP BACKGROUND

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### Fellowship context

Globally, there is a skills shortage of trained book conservators. This shortage was formally identified in the United Kingdom in a 2013 survey which noted that there were significant skills shortages and gaps in interventive conservation training for the book conservation specialism (Aitchison 2013).

There are two tertiary training institutions for conservators in Australia, and neither offer book conservation as a specialism. Whilst no formalised data exists regarding skills shortages for the Australian conservation sector, the ability to locally train emerging conservators and up-skill existing professionals is close to non-existent, and it is thus not unreasonable to contend that Australia's book conservation situation may be even more grim than in the United Kingdom.

MaryJo Lelyveld, then president of the Australian Institute for the Conservation of Cultural Material (AICCM), noted in 2016 that the conservation profession in Australia will face tough times in future years as the individuals to whom current skills and knowledge are tied retire (Ashley-Smith 2016). On a personal level, the Fellow has found this to be true. As an emerging conservator within the field, it was difficult to attain mentorship from experienced mid-career or senior book conservators. Many book conservators have retired, and training conducted with them must be done outside of working hours and balanced in addition to the normal workload of a conservator. Additionally, whilst the transfer of knowledge from these retired conservators is vital, their high-level treatment knowledge is not able to be transferred unless there are trained professionals capable of receiving and retaining it.

Training undertaken with mid-career conservators is also highly beneficial, but similarly difficult to obtain as these conservators are frequently balancing their own professional role and responsibilities in addition to training requirements. Added to this is the large number of students produced by Australian tertiary institutions with basic conservation qualifications, who seek post-graduate guidance and practical experience. Until the book conservation profession in Australia has been upskilled and expanded, the resources and number of conservators available to teach and advise will continue to be overwhelmed.

It is thus necessary for Australian book conservators to train overseas, and to bring their expertise back to the Australian conservation sector. Without this training and an increase in the number of trained Australian book conservators, there will be no opportunity to progress to a point where training is available within Australia, and the country's bound heritage will be placed at risk of being left bereft of caretakers.

### Fellowship period & methodology

In response to this need, the Fellow undertook a year of postgraduate study at West Dean College in the United Kingdom, completing a Masters in the Conservation of Books and Library Materials. This year involved living on-site at the College in West Sussex, undertaking practical book conservation components, a work placement at the Bodleian Libraries, Oxford, and completing a 12,000-word MA research thesis.

## Fellow's biography

Sally was awarded a Bachelor of Art History and Curatorship (Honours) at the Australian National University in 2013, and an MA in the Conservation of Cultural Materials (paper conservation specialism) at the University of Melbourne in 2017.

She has previously worked as a Book & Paper Conservator in private practice, and at the Department of Parliamentary Services and the National Library of Australia, and as such has a sound professional understanding of the book conservation profession in Australia, and a commitment to ensuring its continuation.

Upon completing her MA at West Dean College in September 2019, Sally commenced work as the Cambridge University Press Conservator at the Cambridge University Library. She anticipates that her upcoming years of work in the United Kingdom will put her newly developed skills into practice and continue to expand her professional network to the benefit of the Australian book conservation sector upon her return.

## 4. FELLOWSHIP LEARNINGS

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### Practical skills development

The practical component of study at West Dean College is internationally renowned, challenging and rewarding. Under the guidance of the Books and Library Materials tutor Mariluz Beltran de Guevara and associate tutors, Lara Meredith and Abigail Bainbridge, the Fellow expanded her knowledge of leather, iron-gall ink and parchment materials, including assessment and conservation treatment options. She also had the opportunity to further develop her bookbindings skills and knowledge of traditional books structures, via short courses with visiting tutors.



*End-of-year exhibition showcasing treatments and bookbinding undertaken by the fellow*

### Leather re-backs

The Fellow undertook several leather re-backing treatments during her time at West Dean. Re-backing treatments are undertaken when the original leather material along the spine of a book has deteriorated to the point where it either can no longer be handled or the joints between the cover and spine are broken and no longer function as intended. In these instances, the original leather may be removed from the spine, and replaced with new, conservation-grade leather materials.

Leatherwork is not commonly practiced in many conservation studios in Australia, not least because of the cost, time and knowledge required. Instead, deteriorating spines might be replaced with another material such as Japanese tissue, or access to the item restricted. Whilst these are sound conservation treatment options, there is an argument that materials should be replaced with like materials for both ethical and aesthetic reasons. Ultimately, the treatment of each book by a conservator is assessed on a case-by-case basis, however it is impossible to consider all options (including the leather re-back) unless the conservator has the skills to undertake such a treatment.

The Fellow undertook a brilliant knife-making and sharpening course with the experienced designer-craftsman Bernard Allen, in preparation for the leather paring that was required throughout the leather re-backs. A skill that is not easily attainable in Australia, the care of tools such as the book conservator's paring knife is vital to good, efficient practice.



*Sharpening a paring knife*

Upon completing this course, the Fellow undertook a reback on a large leather-bound volume. The deteriorated spine material was removed, new endbands were sewn, and a new leather spine applied. Working on such a large, heavy item was a challenge, but one that the Fellow is likely to be faced with in the future, particularly as nineteenth and twentieth century leather has a propensity to deteriorate more quickly than its predecessors.



*Before treatment*



*Before treatment*



*During treatment: the deteriorated leather has been removed from the spine*



*During treatment: new sewn endbands*



*After treatment*



*After treatment*

## Parchment

Undertaking the treatment of parchment/vellum items in a country with a rich history of their use was incredibly valuable to the Fellow's knowledge of book and manuscript materials. Learning about the deterioration process and specialised treatment options required for parchment items from experts with decades of experience was both rewarding and encouraging. Knowledge of parchment conservation is not widespread in Australia, as there is not such a concentration of parchment or vellum materials in library collections. Due to this rarity however, when such an item does require repair, it is often highly significant to the collection, and the conservator responsible for its care needs an in-depth knowledge of how its requirements differ from that of a leather-bound volume.

The Fellow undertook a treatment on an eighteenth-century mathematical textbook, which required considerable paper repair, re-sewing and repair of the

parchment spine. The remaining original sewing structure was recorded prior to disbinding, all paper sections were repaired, and the textblock re-bound using the original sewing holes and a conservation sewing technique. The losses in the spine were replaced with Tyvek (a conservation-grade, durable non-woven material) and toned Japanese tissue. Tears were repaired using a gelatin mousse and lightweight Japanese tissue.

The Fellow had not previously had the opportunity to undertake a conservation treatment on a parchment item, and her knowledge of the material structure and deterioration characteristics was limited. As a result of the treatments she undertook, the tutorials she received at West Dean and a separate, independent course undertaken with conservator Arthur Green, she is now confident in her own knowledge and skills.



*Before treatment*



*Before treatment*



*After treatment*



*During treatment: the textblock has been repaired and resewn, and a Japanese tissue spine lining applied*



*After treatment*

## Iron gall ink

Iron gall ink is present in a large number of manuscript items present in Australian collections, and it presents complex ethical and practical dilemmas for the book and paper conservator. Corrosive by nature and highly sensitive to moisture, the ink is prone to deterioration via cracks and losses of the paper substrate upon which it is applied.

The Fellow had the opportunity to undertake a calcium phytate treatment at West Dean College – a technique that despite having worked with a considerable number of iron gall ink items, she had not previously had the opportunity to utilise.

An eighteenth century 'grocery list' that had been found up a chimney in Chichester was brought to West Dean for treatment. After dry cleaning to remove residual chimney soot, the treatment undertaken required 'bathing' the item in a calcium phytate solution to convert free  $\text{Fe}^{2+}$  and  $\text{Fe}^{3+}$  ions in the ink into iron-phytate complexes (which are unable to cause oxidation) and thus reduce the likelihood of further deterioration as a result of the iron gall ink (Cultural Heritage Agency of the Netherlands 2011). The paper list also received repairs, fills and strengthening of weakened areas with Japanese tissue and wheat starch paste.

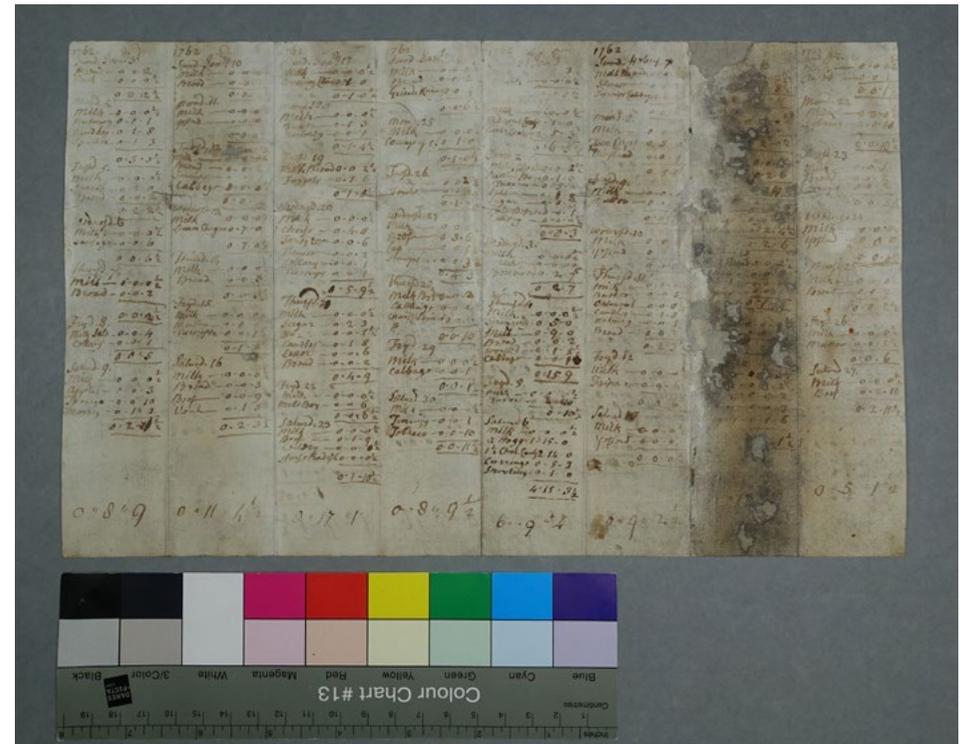
Although options for the treatment of deteriorating iron gall ink items are various, and often less interventive than the calcium-phytate treatment, it was an excellent opportunity for the Fellow to expand her array of conservation treatment options, and to gain a deeper understanding of the pros and cons of each.



*Before treatment*



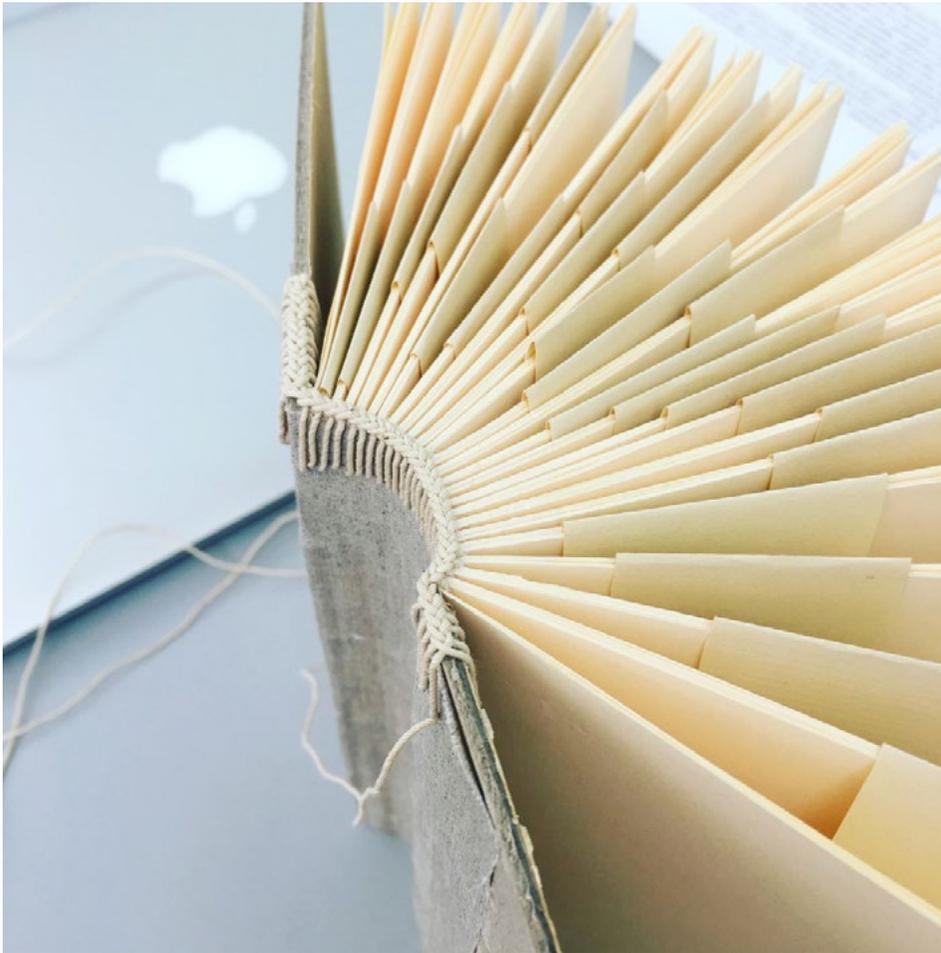
*Placing the grocery list in a calcium phytate solution*



*After treatment*

## Bookbinding

The Fellow was privileged to undertake bookbinding courses with highly experienced bookbinders and book conservators throughout her year at West Dean College. A highlight was the Coptic binding undertaken with John Mumford, independent book and paper conservator and previous head of book conservation at the British Library. Combined with additional courses including Carolingian and Gothic bindings, the courses furthered the Fellow's understanding of historic book structures, and provided her with an opportunity to develop her bookbinding hand skills.



*Sewing Coptic endbands*



*A completed Coptic binding*

Beyond European book structures, the Fellow was given the opportunity to bind a historic book model of her choice. With Australian collections in mind, the Fellow chose to bind fifteen historic Chinese book models, each representing a development in the history of Chinese bookbinding. These models also included traditional methods of repair undertaken by Chinese conservators, and expanded the Fellow's knowledge of book conservation beyond Western conventions.

## Research

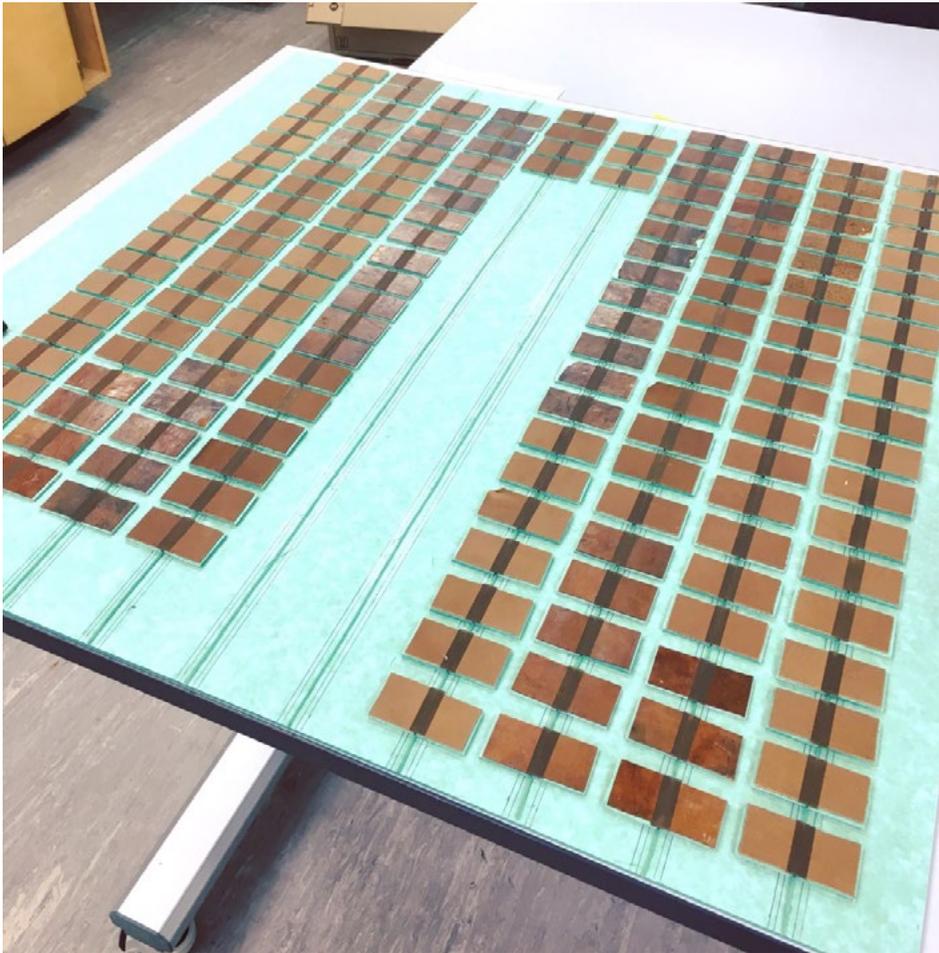
As part of the MA structure at West Dean College, the Fellow had the opportunity to undertake an in-depth research project, culminating in a 12,000 word written thesis. Drawing upon her experience as a Book & Paper Conservator at the National Library of Australia, the Fellow elected to focus her research upon a technique commonly practiced by conservators worldwide, but particularly in Australia – the Don Etherington Japanese tissue hinge repair treatment.

Book boards (also known as the front and back covers) are inherently prone to damage, as they are the most commonly handled aspect of a bound volume. Frequently, this results in the detachment of the book board from the textblock and spine of the book. Historically, repairs to re-attach the board would involve time-consuming, expensive leather re-backs, or a complete replacement of the binding (Roberts 1982). However, in the 1990s conservator Don Etherington popularised a technique whereby a Japanese paper hinge was adhered to the outer and inner joints of a detached book board, thereby replacing the broken 'hinge' (Etherington 1995; Fredericks & Hellman 2001). The Japanese tissue can be toned with conservation-grade acrylics to blend into the leather, and by 2010 it was identified as the most commonly utilised technique for joint repairs within both special and circulating Western book collections (Baker & Dube 2010; Teper & Straw 2011).

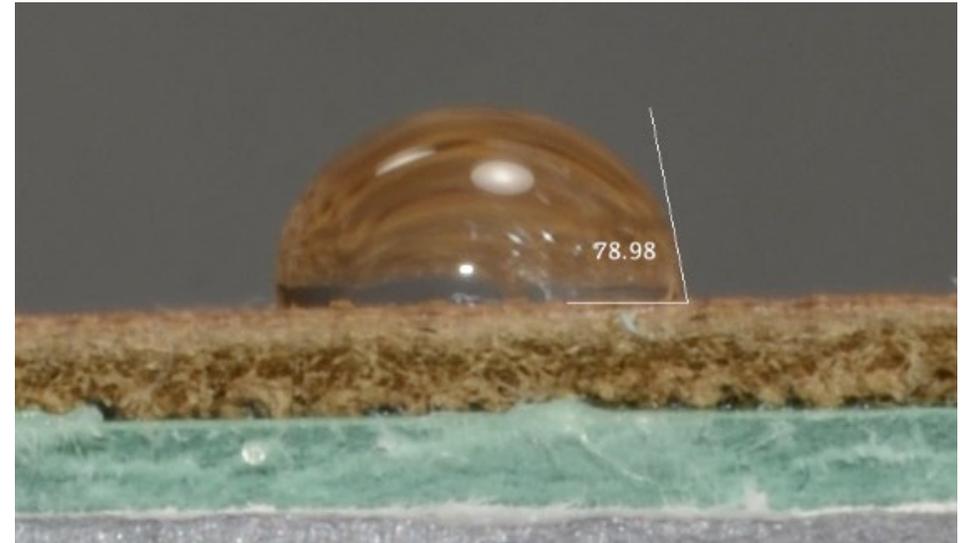
The Fellow has frequently used this technique throughout her conservation practice, however noticed that when applied to certain leather book boards, the hinge did not adhere properly, and often detached within a short time span. It became apparent that those books that the repair failed on had been treated historically with leather dressings. Although the use of leather dressings is no longer common practice, the well-intentioned historic practice of leather dressings assiduously applied by librarians and collections care staff was designed to lubricate and prolong the life of leather bindings. Unfortunately, it also contributed to leather deterioration – overuse results in oxidation and stiffening of leather that is intended to be flexible, tacky surfaces attract dust and dirt to items that were intended to be protected from external causes of deterioration, and the chemical change to the surface of the leather has had implications for conservation treatments including the adhesion efficacy of Etherington repairs.

Under the supervision of David Dorning (MA ACR, Science Tutor) and Mariluz Beltran de Guevara (ACR, Books Conservation Subject Leader) the Fellow undertook research in which she assessed the efficacy of three separate commonly used adhesives on leather surfaces with a variety of applied leather dressings, and compared these results against the recorded polarities of the leather surfaces.

Historic and newly dressed leather sample surfaces were polarity tested using a water droplet contact angle test and placed within a relative range of polarity. Japanese tissue hinges replicating the Etherington repair were applied to over 600 leather samples using 100% EVACON-R, 100% Wheat starch pate, 100% Lascaux 498 (heat-set, solvent-set and wet application) and 50:50 mixtures thereof. Once applied and set, the replica-Etherington samples were shear tensile tested using the newly purchased, industry-standard Zwick ZOO5 tensometer. Effective adhesives were identified, as well as surface polarities that are unlikely to meet success when subject to the Etherington treatment.



*samples ready and waiting for tensometer testing*



*contact angle measurements for polarity readings*



*samples were tensile tested in a Zwick Z005 tensometer*

The outcomes of this research have provided practical guidelines for book conservators undertaking Etherington repairs on dressed leather boards. An efficient, accessible means by which to determine the surface polarity of non-deteriorated leather was identified and recommendations for adhesive choice issued. It is anticipated that this research will be published in a conservation journal to further disseminate the research results beyond the longer, written thesis. For Australian conservators, who frequently

utilise the technique, it is hoped that the research outcomes will reduce the number of Etherington repairs unsuccessfully applied to dressed leather boards, benefitting the both the book and the conservator.

Undertaking such an in-depth research project was a highlight of the Fellow's year at West Dean College, as such research is often underfunded (or not funded at all) within conservation teams in both Australia and the wider, global conservation profession. The research allowed the Fellow to delve deeper into a technique that she had a considerable professional interest in and has provided her with a tangible output that will improve her professional standing upon publication.

## Networking & international best practice

### Work placement

The Fellow was fortunate to undertake a work placement at the Bodleian Library as part of her West Dean studies, in January-February 2019. During this placement she was able to observe the structure and workflow of the Book & Paper conservation studio, as well as explore alternative treatment options and undertake book conservation treatments.

She spent a considerable portion of this time repairing split joints on leather-bound books from the historic Duke Humphries library – a project which spurred the Fellow's May 2019 conference presentation 'Sustainability in Practice at the Bodleian Libraries' at the Emerging Conservator Conference held at West Dean College.

In addition to this, the Fellow was able to spend time with many of the Bodleian conservators, gaining an understanding of their photography processes, preventive conservation activities, use of gels in paper conservation and re-housing of loose material in fascicles. It will be a brilliant and highly beneficial six weeks for the Fellow and experiencing conservation in one of the most renowned conservation studios in the profession was a privilege and a delight.



*The Fellow undertook book and paper treatments at the Bodleian Library during her work placement*

## Site visits

As part of the MA studies at West Dean College and the six-week work placement at the Bodleian Libraries, the Fellow had the opportunity to visit the following collections, institutions and conservation studios:

### **National Museum of the Royal Navy Library, Portsmouth**

Students were given a tour of storage facilities, and the opportunity to examine collection items, both paper and bound

### **Chichester Cathedral**

Students were given access to the Cathedral library, and the opportunity to examine historic bindings

### **British Library Conservation Studio**

Students were taken on a tour of the Book and Paper conservation studio, followed by access to the Anglo-Saxon exhibition and the bound items displayed within

### **Pitt Rivers Museum and Conservation Studio, Oxford**

The Fellow was given a tour of conservation facilities and an overview of conservation requirements for the historic collection

### **The Ashmolean Paper Conservation Studio, Oxford**

The Fellow visited the paper conservation studio, and was treated to a tour of work underway and an overview of the exhibition tasks required of conservators

### **Temple Bookbinders, Oxfordshire**

The Fellow was given a tour of the commercial bindery, and met with the paper conservator working collectively with the binders

### **Royal Bindery, Windsor Castle**

The Fellow visited the bindery and was given an overview of work undertaken by apprentices participating in the current bookbinder's apprenticeship scheme

### **Oxford Conservation Consortium Studio, Oxford**

The Fellow was given a tour of the Consortium's studio, and an overview of the work they undertake to service Oxford Colleges

### **Austrian National Library Conservation Studio, Vienna**

Students were taken on a tour of the conservation studio at the Library, and then of the historic library hall



*Temple Bookbinders, Oxford*



*Pitt Rivers Museum, Oxford*



*Duke Humphreys Library, Oxford*



*Austrian National Library*

## 5. PERSONAL, PROFESSIONAL AND SECTORAL IMPACT

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The professional benefits of the Fellow's year at West Dean are numerous. She was able to develop skills and confidence under the tutelage of highly skilled professionals, develop knowledge of materials not commonly addressed in Australian conservation training, and develop a truly international network of fellow conservators. She has already presented a paper at a 2019 emerging conservators conference, and the research undertaken on Etherington repairs throughout her West Dean studies will be disseminated via formal publication.

Having chosen to remain in the United Kingdom to undertake work at Cambridge University Library, the Fellow is conscious that with every new opportunity she undertakes she is building a skill set that will be highly beneficial to the Australian conservation sector upon her return. She will have had the opportunity to put into practice her newly gained skills and knowledge in a rich environment for conservation, learning and working with highly regarded senior conservators. Her international professional network will be stronger and further reaching, and her understanding of the role of a book conservator internationally sound.

To have a confident, experienced mid-career conservator return to Australia with an understanding of the challenges faced by emerging conservators cannot be discounted, and the Fellow anticipates utilising the opportunities afforded to her over the coming years to benefit the Australian conservation sector upon her return.

## 6. RECOMMENDATIONS AND CONSIDERATIONS

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The training opportunities afforded, and the knowledge gained by the Fellow throughout her time at West Dean College has emphasised to her that hands-on, skills-based training is essential for emerging book conservators. Whilst this model may not be viable within Australian tertiary institutions, it is crucial that future generations of book conservators have this opportunity to obtain and develop the fundamental building blocks of their career. The cost of travelling to study overseas in a private institution can be prohibitive, particularly if the Australian government study loan is not available. Given that this training is unattainable in Australia – or elsewhere in the South Pacific region – the Fellow recommends student loan packages be available for study of this kind. Until conservation training is financially attainable for all, the field will continue to struggle with diversity and retention of skills and knowledge.

For those conservators who have undertaken study in Australia and built their practical skills via hard-won on-the-job training, the Australian conservation industry can be wonderfully collegiate, but also isolated. Visits to international conservation studios and conferences not only provides closer links and networks to ensure that best practice is applied to Australian collections, but gives conservators the opportunity and space to learn, be creative and forward-thinking with their conservation practice and workflow structure. The Fellow recommends an increased emphasis within the Australian conservation community upon collaboration with international colleagues, and where possible and financially viable, attendance at international conferences, courses and studio visits.

Increased government funding for overseas conservation study would lay the groundwork for developing extensive international networks for emerging and mid-career conservators. It would enable the Australian book conservation sector to ensure the retention of knowledge (that gained from retiring conservators) and equip the profession with a new generation of qualified, well connected, well trained book conservators capable of passing on their knowledge and connections to future generations of conservators.

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