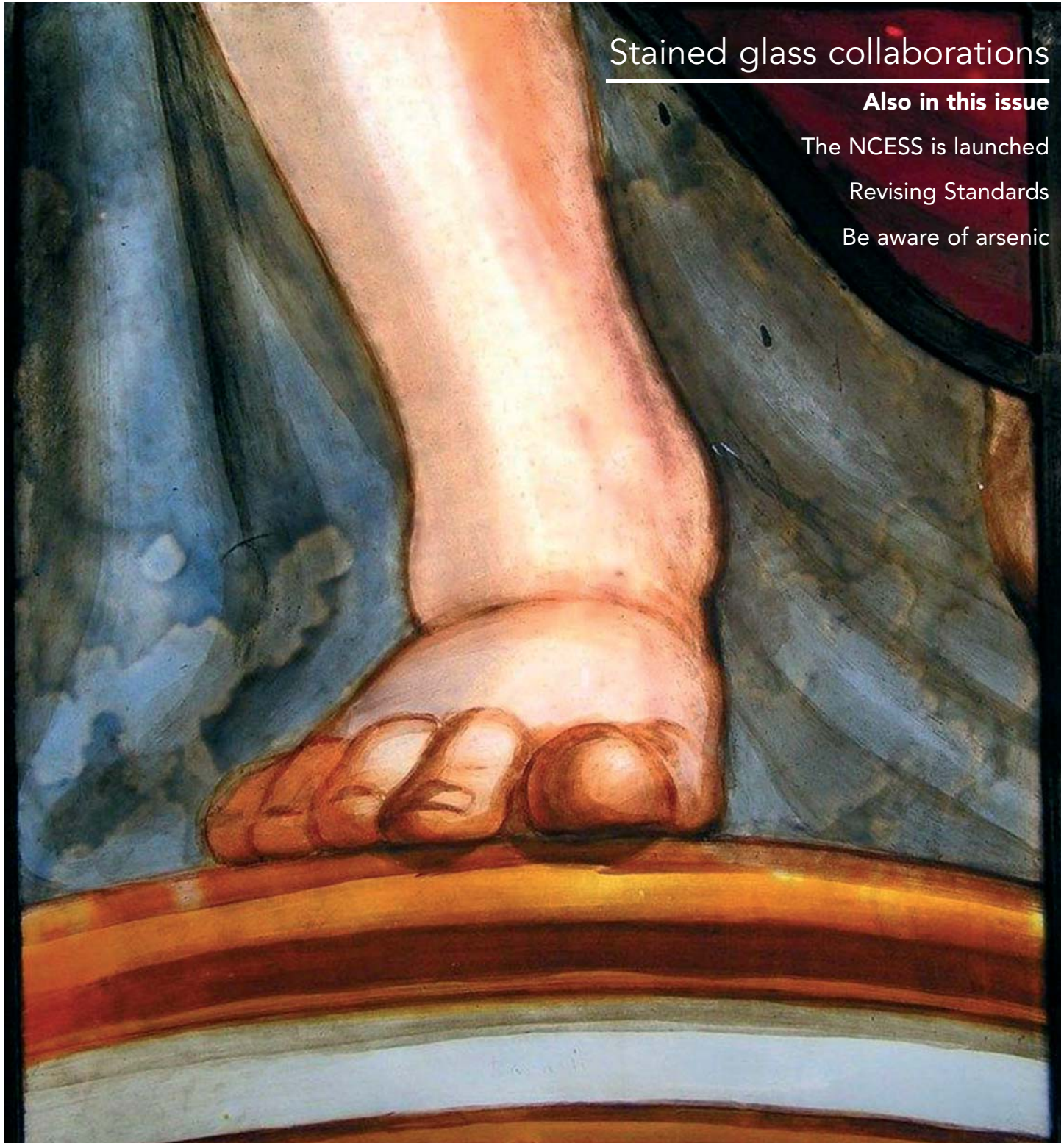


Icon NEWS

THE MAGAZINE OF THE INSTITUTE OF CONSERVATION • MAY 2012 • ISSUE 40



Stained glass collaborations

Also in this issue

The NCESS is launched

Revising Standards

Be aware of arsenic

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Her Majesty Queen Elizabeth II
Conservation Equipment Engineers
Willard Conservation Ltd,
Chichester

MAY 2012

Issue 40



After celebrating our splendid interns in the last issue, it is back to business as usual again now and Icon has certainly been involved in a lot of important business over the past couple of months, giving evidence to the House of Lords about conservation science, supporting the launch of the Heritage Science Forum and leading the launch of a new national training strategy for heritage skills. It is just as well that

we are active in these matters, given our CEO's blistering assessment that we can expect no leadership or help from the Government in heritage matters.

In tune with these developments we have a couple of science items in this issue: how to deal with arsenic in collections and the use to which a welcome Getty grant has been put in equipping West Dean College for enhanced scientific teaching and research. We also explore interesting solutions to paint and enamel loss in stained glass and to restrictively bound volumes of historic newspapers. As well as the serious, we've plenty of lively stories too, even managing a topical nod towards the Olympics!

Lynette Gill, Editor



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Cover photo:

Front view detail of a stained glass panel at New College Oxford after conservation using a local back plate to disguise enamel loss. Image © York Glaziers Trust

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around & about

Icon launches the NCESS

The **National Conservation Education and Skills Strategy** was formally launched by Icon in the impressive surroundings of Clothworkers' Hall in the City of London on 27 April.

The event was attended by a range of professionals from across conservation and the wider cultural heritage sector. They were addressed by Baroness Margaret Sharp, who told the meeting that she was delighted to be asked to speak at the launch of the Strategy, which she saw as a key part of the sustainability agenda for Britain's heritage. She recognised the need for conservation to have skilled and knowledgeable people and this Strategy was setting the framework for this knowledge to be passed on.

'Education and skills are fundamental to the future of the conservation sector. Icon's new Education and Skills Strategy is ambitious, but realistic in its ambitions and with the backing of its different stakeholders provides a route-map by which it may become a reality. I congratulate Icon on taking the initiative and urge its partners to support them wholeheartedly,' she said.

Acknowledging that this was an initiative from the whole sector – and clearly fearing for the future of the Department for Culture Media and Sport and central government's potential for involvement – Baroness Sharp recognised the importance of the private sector businesses that employ so many conservators and urged them to take part in the delivery of the Strategy.

Icon's Chief Executive Alison Richmond described to the meeting the way that the Strategy had been prepared through extensive consultation with employers, educators and funders across the cultural heritage sector. The intention is, she said, that it will now foster collective responsibility, building connections between the built and moveable heritage sectors, the crafts and the conservation profession. The Strategy presents aims and objectives for the entire cultural heritage



© Matt Wreford photography

Baroness Sharp

sector and creates opportunities for us all to work together.

Kenneth Aitchison, who was appointed at the start of the year to deliver the Strategy, explained that the Strategy was an agenda for the next five years to make conservation a sustainable profession. Icon's priorities in the first instance are

- to re-establish the Conservation Technician Qualification, which was also formally relaunched at the same event
- to work on supporting internships or apprenticeships; and
- to undertake robust workforce research.

This gathering and dissemination of labour market intelligence – how many people work as conservators, what are the profession's skills needs now and in the future – will be vital for the sector to truly know where we are now and will give us something to judge future progress against.

The Strategy is available to download at www.icon.org.uk/images/stories/icon%20educationskillsfinalrr.pdf and you can contact Kenneth Aitchison, Icon Skills Strategy Manager, at kaitchison@icon.org.uk

Icon CEO Alison Richmond at the launch



© Matt Wreford photography



© Matt Wreford photography

Conservation inspires!

The latest novel by Peter Carey, twice winner of the Booker Prize, features characters who studied at West Dean College. In *The Chemistry of Tears*, published at the beginning of April by Faber, Carey delves into the mysterious world of automata. Inspired by a real-life major project undertaken by conservator Matthew Read – now Programme Leader for West Dean's full-time programmes in the Conservation of Clocks and related dynamic objects – the novel follows two time-lines showing both the original making and the contemporary reconstruction of a clockwork puzzle.

During the research and writing period of the book, Peter Carey drew on Matthew's experiences for the technical aspects of the making and conserving of an automaton of this scale, complexity and historical importance – and about the day-to-day practice of conservation of artefacts and objects in a museum setting.

Within the novel, the two women who are charged with the conservation, restoration and repair of the one of the Museum's most high-profile projects were both trained at West Dean College in the conservation-restoration of clocks. Matthew Read comments:

'It has been amusing seeing a project I know so well being dismantled and recreated in a fictional setting. Very different from what actually happens – but, of course, that wouldn't be nearly so entertaining to read!'

You can see Matthew Read in action on page 22 and you can see the famous musical automaton – a life-sized silver swan – in action every day at the Bowes Museum in Barnard Castle, Durham. Icon News reported on its conservation in issue 18 (September 2008).



Time to Touch

A tactile clock interactive at Hollytrees Museum

Colchester businessman Bernard Mason had a lifelong passion for researching Colchester clocks. He collected over two hundred locally made clocks and watches which he left to the town in 1979.

A selection of his collection was displayed in Tymperleys Clock Museum until 2010 when the museum closed. In 2011 we decided to display a number of the clocks in Hollytrees Museum which attracts over 35,000 visitors annually, more than four times the number who visited Tymperleys. The higher number of visitors and the open display made the clocks vulnerable to being touched and damaged, particularly clocks with painted and lacquered cases.

The need to protect the clocks but provide access and learning opportunities led to the idea of producing a series of tactile panels for a touch table. We commissioned conservator Alex Schouvaloff to create panels which replicate a design motif on a 1708 long case clock displayed in the gallery.

Four panels show the technical process and different stages involved in creating the decorative lacquered finish. The panels enable visitors to experience the feel and texture of the lacquer work and promote understanding of the object and its conservation. Alongside an audio description they also provide an opportunity for people with a visual impairment to understand and engage with the collection through touch. The panels are displayed with a brass clock dial from the handling collection which can also be touched.

Experiencing the clock collection through touch



© Colchester and Ipswich Museum Service



The clocks themselves on open display

Eight of the long case clocks in the gallery are wound weekly to fill the gallery with the atmospheric sounds of ticking and chiming. This, along with the tactile table, creates an overall sensory experience in which visitors can discover the clock collection.

Ciara Canning Curator of Community History
Colchester and Ipswich Museum Service,

Artificial rockwork and stone

Laid out around 1830 and owned by the Shuttleworth Trust, the Swiss Garden at Old Warden near Biggleswade is an important Regency garden with late 1870s' alterations and additions. Working towards a second round Heritage Lottery Fund bid, a number of conservators are working with the

Dolphin Tazza – an 1830's Austin artificial stone ornament



Grotto and Fernery in the Swiss Garden

architect (Chris Garrard) on a variety of buildings, structures and ornaments. Simon Swann Associates is looking at artificial stone ornament and Pulhamite rockwork, the remit being to prepare condition reports and advice on repair.

Although many ornaments have been replaced, some surviving and collected fragments are by Felix Austin, a sculptor and artificial stone manufacturer who used Parker's Roman cement and early Portland cement to produce ornaments. Some pieces are impressed with his mark and 1830s' dates. In about 1840 he joined with John Seeley, the firm becoming known as Austin & Seeley. The surveys have yielded information on Austin's materials and manufacturing process, providing an insight into the early use of artificial stone and an understanding of its decay.

Pulhamite rockwork is a later 19th century imitative process adopted in gardens and parks for artificial rockscapes. The system comprised masonry with a coating of a render, often coloured with pigments and with visible shell or aggregate inclusions that give the appearance of natural rock, complete with accurate geological detail and provision for planting. The highlight is the Grotto and Fernery, a roughly cruciform building of 1830–33 with brickwork arms (tunnels) intersecting an iron conservatory with a central dome. In the 1870s the tunnels and the central area were covered with artificial (cement based) and natural tufa formed into stalactites and pockets for ferns.

Swann Associates are pleased to have Tom Bardwell (a trainee stone conservator) assisting on the investigation phase of this project. Tom's work has been supported by a Heritage Lottery Fund grant which has allowed him to learn much about Pulhamite artificial rockwork and artificial stone garden ornament, especially that of Felix Austin.

Italian art in Glasgow

A unique exhibition entitled the 'Essence of Beauty: 500 years of Italian Art' opened at Kelvingrove Art Gallery and Museum on 6 April and runs until 12 August 2012. It is a chronological exploration of Glasgow's collection of Italian Art and features masterpieces from the late fourteenth century onwards, displayed together for the first time. Several works in the exhibition are undisputed masterpieces, painted by some of the great names of Italian Renaissance and Baroque painting – Bellini, Titian, Rosa and Botticelli. The inclusion of decorative art and armour, sculpture, Venetian glass and rare ceramics will give visitors an opportunity to understand the range of art being created during the period and provide further context



St Catherine Crowned, c.1520 by Bartolomeo Veneto

for the paintings. A further aim of the exhibition is to emphasise the important roles of the collectors who have given to Glasgow.

A new scholarly catalogue of the collection is also being published and will include short technical notes on each painting written by the Paintings Conservation Team.

A major conservation project has been undertaken by Glasgow Museums to prepare more than forty paintings for the exhibition before it tours to England and the USA. An accompanying audio visual display will reveal the conservation and restoration treatment of one of the paintings.

An exhibition not to be missed!

NTS blues

The National Trust for Scotland is introducing a blue wool dosimeter designed to show visitors to Trust properties how daylight can cause irreversible damage to historic collections on open display. The dosimeters are made in-house by the Trust's workshop technician, Stewart Colquhoun, and printed at Robert Smail's Printing Works, a letterpress business established in Innerleithen in the Borders in 1866, and now in the care of the National Trust for Scotland.

The Trust has produced two versions: one to stand on a flat surface or hang on a wall to record fading in a particular area of a room, and a 'pop-up' dosimeter for staff to demonstrate to visitors the damaging effect of light. The dosimeters, designed with help from colleagues in the National Trust, will also perform their more usual function of helping record levels of light.

The smart new dosimeters were introduced to Trust property staff during the Collections Care Workshops in February and were received with great enthusiasm. The pre-faded 'pop-up' dosimeters have been made so staff can explain to visitors



Photo: John Sinclair © National Trust for Scotland

The 'pop-up' dosimeter

how damaging daylight can be.

'It can be difficult to make clear to visitors why we need to keep blinds drawn on sunny days and people are very surprised when they realise how much fading occurs in a short period of time', says Anna Starkey, the Trust's current Bute/Icon Intern, leading on the roll-out of dosimeters at National Trust for Scotland properties with historic collections on open display.

The dosimeter is partially faded by placing it on a windowsill for one month and visitors can then pull up the tab to reveal the difference between the wool exposed to light and wool which has been protected. The difference after only a month is dramatic and the preventive conservation message is clearly demonstrated for all to see. Trust property guides are keen to use this visual tool to help visitors understand the need for preventive conservation measures and thereby conserve the collections for the enjoyment of future generations of visitors.

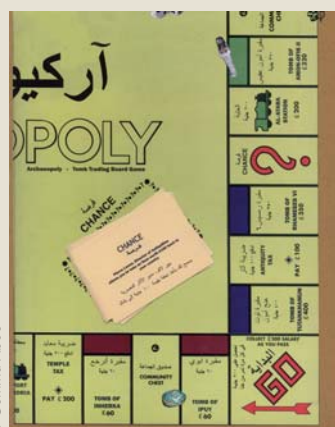
Mel Houston

Conservation inspires!

Until 2009 I knew very little about conservation. With a background in illustration I had aspirations to establish myself in the world of publishing, when my career took a turn as I was selected for an amazing Icon/HLF conservation internship at the British Museum and the Petrie Museum of Egyptian Archaeology, University College London. For eighteen months I was thrown in the deep end of learning how to approach conservation of organic materials, which made a fantastic introduction to the profession. I was humbled by the privilege of conserving ephemeral pieces of history and I found the ethical considerations which conservators face very thought provoking. It wasn't long before I began to amalgamate ideas for illustrations inspired by conservation and archaeology. In 2010, the Petrie Museum kindly hosted a three-month solo art exhibition which I titled 'EGYPT [Unclassified]'. I have selected two works to share with you.

Since my introduction to conservation, I continue to be

inspired by the objects I encounter and their stories – be they based on historical fact or imagination. My transition from illustration to conservation has so far been very rewarding, in that they both feed off each other in a thought provoking and smile evoking way.



© Gemma Aboe

'Archaeopoly' was designed to offer a playful way of connecting with archaeology and the questions it throws up.

One such question relates to curatorial selections of objects for conservation and exhibition. Based on the principles of a standard Monopoly board game, ancient Egyptian property (e.g. tombs) or associated treasures are sequenced in

'importance' or 'value' – debatable, perhaps? Who's to say what is less important or valuable?

An even bigger question is one I found myself asking whenever I was presented with an object to conserve. How had the object made its journey to the museum and onto my lab bench? The chance card in the board game thus – in a humorous way – questions the right to take archaeological finds out of Egypt, or any place for that matter: "CHANCE: Pierre Lacau, Director of Antiquities allows you to take an item worth £100 back to your country"



© Gemma Aboe

'Unprovenanced' is a product of new vocabulary I acquired during the internship.

This art work is a one off piece consisting of a nine flattened metal bottle caps collected from streets in the Middle East, over a period of many years. Where and when exactly I can't tell you, hence they are factually labelled 'Unprovenanced'.

Does this make them less valuable or deserving of exhibition, conservation or study? This illustration therefore invites the viewer to question the value of objects labelled 'unprovenanced' and the meaning and consequence of the label itself.

To see more light-hearted and broader themed illustrations from the exhibition, please go to www.gemma-aboe.com
Gemma Aboe



The famous Auzoux Horse, one of the first veterinary teaching aids of its kind, has been restored to its former glory thanks to a €50,000 grant from Pfizer Animal Health

An historic horse

Veterinary heritage may not be in the cultural mainstream when it comes to attracting conservation attention but with the help of a generous grant from Pfizer Animal Health an important artefact has recently been preserved for future generations.

The papier-mâché model dates back to 1846 and is one of the main attractions of the Fragonard Museum at the Alfort National Veterinary School (École nationale vétérinaire d'Alfort – ENVA). It was initially created to allow veterinary students to mimic a dissection without having to use an actual cadaver, an unpleasant and dangerous choice in an era when it was not uncommon for people to die of complications from a simple cut.

The model is labelled and can be completely taken apart, offering a hyper-realistic, precisely detailed overview of a horse's anatomy, comparable to what one might learn through dissection. In addition to papier-mâché, the Auzoux Horse is also made of metal, wood and vegetable fibres, all held together with isinglass. It is built on a 75% scale, weighing 65 kg and standing over one and a half metres tall.

The restoration was begun in mid-November 2011 by a multidisciplinary team of six heritage conservators/restorers, coordinated by Atelier Marchal-Poncelet. The work took four months to complete and was carried out at the Fragonard Museum's workshops in two stages: completion of the restoration of the left side, filling in gaps and fixing discolourations, and restoration of the right side and left forelimb.

The Fragonard Museum is one of the oldest museums in France, withstanding the centuries, revolutions and wars; it holds over 4,200 objects related to animal anatomy and pathology, including more than 400 exquisite plaster casts. Its international renown is partially due to the famous écorché figures by Honoré Fragonard, a cousin of the painter Jean-Honoré Fragonard and the school's first professor of anatomy. These are the museum's treasures, its oldest pieces, and they have been known to European naturalists since the 18th century. Dismissed at the turn of the 20th century as vestiges of a bygone science, they have been re-embraced today as valuable pieces of cultural heritage and rare scientific objects.



Jeremy Uden talking to the Friends of the Pitt Rivers Museum about conservation work on the Tahitian Mourners Costume.

Pitt Rivers news

In Issue 36 last September we brought you news of the Clothworkers Foundation Conservation Fellowship awarded to Jeremy Uden at the Pitt Rivers Museum. Jeremy has now spent over 250 hours working on a Tahitian mourner's costume and it has now been redisplayed in the gallery. In addition to this he has begun a blog charting his journey working on all the objects collected on the 1st and 2nd voyages of Captain Cook. The link to the blog can be found at www.prm.ox.ac.uk/conservation.html.

Congratulations are also due to Head of Conservation Heather Richardson who was one of three joint recipients of the 2011 Michael M. Ames Prize for Innovative Museum Anthropology, awarded by The Council for Museum Anthropology of the American Anthropological Association. The prize recognises the value of the collaborative 'Blackfoot Shirts Project' which brings together historic collections in the United Kingdom with Blackfoot people in Canada and the United States. Under the project five historic hairlock shirts have been lent from the Pitt Rivers Museum collection to two museums in Calgary and Alberta, located in traditional Blackfoot territory.

Heather Richardson with Trina Healy during a Blackfoot shirts handling workshop at the Glenbow Museum Calgary in 2010.



The five shirts are nearly 200 years old and are made from elk and deer hide adorned with porcupine quill embroidery, hide fringe and strands of horse and human hair. They were collected in 1841 by Sir George Simpson, the governor of the Hudson's Bay Company, and have been in the Pitt Rivers Museum since 1893. Blackfoot people are keen to access these materials so they can learn about the skills and techniques used by their ancestors.

Olympic Posters from Munich 1972

Nineteen original Olympic posters from the ill-fated 1972 Munich Olympics are currently on display at Monkwearmouth Station Museum in Sunderland in an exhibition that runs until 3 June.

Poster by Allen Jones, courtesy Monkwearmouth Station Museum, Tyne & Wear Archives & Museums





Poster by Max Bill, courtesy Monkwearmouth Station Museum, Tyne & Wear Archives & Museums



Poster by Oskar Kokoschka, courtesy Monkwearmouth Station Museum, Tyne & Wear Archives & Museums

Since the Stockholm Games of 1912 every Olympic Games has had an official poster. From the early planning for the 1972 Games, the Organising Committee decided that it would produce two series of posters. The first promoted the athletic competitions through high contrast photographs. The second series was of posters commissioned from twenty six contemporary artists to 'represent the intertwining of sports and art worldwide'. Contributors included David Hockney, Serge Poliakoff, Oskar Kokoschka, Allen Jones, Max Bill, Marino Marini, Charles Lapicque, Horst Antes, Shusaku Arakawa, Eduardo Chillida, Piero Dorazio, Josef Albers, R.B. Kitaj and Jan Lenica. The posters were published and proved very popular with the general public, raising over two million Deutschmarks for the Organising Committee.

The forty year old posters, which measure 100cm x 65cm, have undergone careful conservation to repair minor damage. According to Christina Stephenson, Conservation Officer at Tyne & Wear Archives & Museums who undertook the work:

'The posters were in a relatively reasonable condition, but were still in need of conservation to repair and preserve them. Small tears and paper damage were repaired with Japanese paper using wheat starch paste. The posters were then humidified and gradually dried out in a large veneering press'.

Jo Cunningham, manager of Sunderland Museums said:

'These posters are stunning – we're lucky to have them in our collection, as most of them are collectors' items. They have been immaculately repaired'.

The museum housing the exhibition is itself worth a visit. Managed by Tyne & Wear Archives & Museums on behalf of Sunderland City Council, Monkwearmouth Station Museum is an outstanding grade 2* listed 1840s station building commissioned by the famous railway entrepreneur George Hudson. Opening a new Wagon Shed last October – complete with two restored railway Wagons – former MP Chris Mullin dubbed the museum an 'architectural gem'.

professional update

FROM THE CHIEF EXECUTIVE



© Matt Wrieford photography

Promoting conservation science

One of Icon's main roles is to promote the conservation of cultural heritage to the wider world beyond the conservation profession. In 2005–6, Alastair McCapra, our then Chief Executive, gave evidence to the House of Lords Science and Technology Committee enquiry on Science and Heritage. At the time this turned out to be an excellent way of raising the profile of conservation as well as

heritage science.

In March, Icon was invited back to give evidence to a follow-up enquiry to report back on developments since 2006 and on what actions we had taken. The 2005–6 enquiry had found heritage science to be scattered across the cultural landscape, lacking strategic direction especially from the Department of Culture, Media and Sport (DCMS), and liable to fall between the funding stools of arts/humanities and sciences.

At the House of Lords in March, our messages, along with those of the other witnesses, were:

- The joint AHRC/EPSRC funding stream that had been set up for five years in response to the enquiry was working well. It was getting funding to a wide range of research projects that were designed by users as well as researchers and was producing a significant number of high calibre heritage scientists. The downside was that this influx coincided with the worst recession since the 1945 and without jobs these researchers were likely to leave the field or the UK.
- The sector had done a great deal itself, namely developing a National Heritage Science Strategy supported by sound research.
- The nascent Heritage Science Forum would be the vehicle for implementing the strategy.
- DCMS showed little evidence of recognizing the importance of science and heritage and had done little or nothing to support the application of science in the heritage field since the departure of Dr Anita Charlesworth, the Chief Scientific Advisor to the Department.

The Committee had particular concerns about lack of leadership, notably that with no one taking the lead who would advocate for the UK in ensuring that heritage receives

its fair share of research money from Europe? (On this topic Horizon 2020 the 8th Framework for Europe's £80bn budget for innovation and research has no provision for cultural heritage. Icon is campaigning to have this omission rectified. Please see the link on our website.) It was clear from the testimony given by the Minister for Tourism and Heritage, John Penrose MP, that no leadership or support from DCMS would be forthcoming. It is left to us, the cultural heritage sector itself, to take things forward.

The Heritage Science Forum is currently being brought together by Dr. Rowena Banerjee the Forum Co-ordinator. Organisations are being asked to step up and make a financial commitment for three years to ensure the sustainability of the Forum. Icon has already signed up and we hope we are in the vanguard of a long line of cultural heritage organisations which will commit their active support for this driver of change.

Other campaigns

Another way we can promote conservation is by responding to threats to that cultural heritage from whatever quarter. We also know that Icon's voice is strengthened by joining with others and we always try to support campaigns that resonate with our values. These last two months seem to have been particularly busy in this regard. In addition to the Horizon 2020 mentioned above, we have supported the Heritage Alliance's campaign against the budget proposal to withdraw the current zero rate of VAT on approved alterations to listed buildings (see our website) and the campaign to reverse the budget proposal to cap tax relief for major donors. (giveitbackgeorge.org/back-the-campaign). Both of these measures will remove vital funds from cultural heritage at a time when other sources of funding are drying up and we are being told to rely more heavily on philanthropic giving.

Icon's own National Conservation Education and Skills Strategy is already attracting attention and you can read about its launch by Baroness Sharp of Guildford on page 2. Baroness Sharp is the Liberal Democrats' spokesperson on education, science and technology. She chaired the House of Lords' enquiry into Science and Heritage and is a good friend of conservation. We will be targeting the press and government in our marketing campaign. On the same day, the first meeting was held of the NCESS stakeholders group, which will advise and take implementation forward.

Alison Richmond

ICON 2013

Positive Futures in an Uncertain World

Don't forget Icon's next triennial conference to be held at the University of Glasgow. Do put 10–12 April into your diaries and watch out for the call for papers coming out this month.

GOODBYE & THANKS

It is with regret that we understand Icon's Edinburgh-based office has had to close.

On behalf of all the Group Chairs and their committees may I offer our wholehearted thanks to the Edinburgh Staff for their splendid work and support over the last few years.

Francis Downing
Chair of Group Chairs

WINSTON CHURCHILL TRAVELLING FELLOWSHIP

The Chance of a Lifetime!

Have you ever considered applying for a Winston Churchill Travelling Fellowship? Taking time out to research and discuss with others a discipline you are dedicated to can be liberating. The fellowship gives the freedom to think about your subject in some depth away from normal pressures.

Applications for fellowships for travel in 2013 open this month – see web link: www.wcmt.org.uk/. Applications can be made under a number of categories, many of which apply to conservation and related fields and there is also an 'Open' category.

The logo of the Italian Fire Service who responded to the earthquake at L'Aquila



Photo: Fiona Macalister



Photo: Fiona Macalister

The Institute of Archaeology, Prague - badly flooded in 2002

In March I completed a fellowship awarded for five weeks travel in 2011/12. It has been the most wonderful experience visiting organisations and key individuals in the Netherlands, France, Germany, the Czech Republic, Italy, Turkey and the United States of America, with attendance at a conference of the International Committee of the Blue Shield in Seoul,

Philadelphia - home of the earliest fire insurance scheme in the USA



Photo: Fiona Macalister



Hurricane Street, Los Angeles

South Korea, as a direct result of the fellowship and contacts made early on in my travels. Researching various aspects of disaster planning, my main focus has been: sites affected by disasters, organisations involved in training and the development of procedures, international and national collaboration, the format of plans and a little sightseeing. A report of the findings will be available on the WMCT website. The Winston Churchill Memorial Trust encourage you to programme in a little free time to reflect and to ensure the flexibility to take opportunities as they arise.

The deadline for applications is October 2012. It may seem a long way off but draft applications can be worked up through the link on the website from May onwards - which I'd really recommend. Awards will be announced in February 2013. If anyone would like to know more do get in touch. Good Luck!

Fiona Macalister ACR FIIC

Independent Preventive Conservator
fionamacalister@btinternet.com

OTHER DEVELOPMENT OPPORTUNITIES

Don't forget the other sources of support for continuing professional development:

- the Anna Plowden Trust – next deadline 13 June and thereafter 12 September. See www.annaplowdentrust.org.uk
- the Gabo Trust for Sculpture Conservation www.gabotrust.org
- The Clothworkers' Foundation. Apply at least eight weeks ahead of the event. Go to www.clothworkers.co.uk

MOULIN DU VERGER MASTERCLASS

The popular papermaking and bookbinding masterclass at the Moulin du Verger is being supported for its sixth year by Conservation by Design, the conservation storage, equipment and display specialist.

From 17–21 September, Jacques Brejoux (papermaker) and

Christopher Clarkson (bookbinder), two of the leading scholars and craftsmen in their fields, will host a five day residential workshop for just eight delegates at the 16th century paper mill near Angoulême in the Cognac region of France. The workshop will look at the particular qualities required of handmade cover papers based on 16th and 17th century exemplars.

Find out more by contacting Debbie Fraser on 00 44 1234 846 306 or go to www.cxdltd.com/home.aspx?pagename=scholarships. For more details on Moulin Du Verger, log on to www.moulinduverger.com.

UPDATE ON DEVELOPING STANDARDS

European standards

The production line for European conservation standards continues to hum as conservators and scientists gather around Europe to generate, argue over and polish documents which have the potential to affect the care of the European cultural heritage. By the time you read this there will be about a dozen standards already published in this series, all available from the BSI website shop: go to <http://shop.bsigroup.com/> – see the May 2011 Icon News for a list of titles either then published or under development. They cover specialised topics (e.g. measurement of moisture content, heating churches), more widely applicable topics (e.g. condition reporting) and a few generic topics (e.g. terminology). Likely imminent additions cover open storage facilities, sampling materials, measuring humidity in the air, determining drying properties and showcase recommendations. Collections are well covered, as well as buildings and stone. Current work also includes a glossary of damage terms and a glossary of mortars, characterisation of stone, ventilation, exhibition lighting, the characterisation and protection of waterlogged wood, integrated pest management and transport.

This European project is time-consuming, demanding and sometimes contentious but is generally worthwhile. UK conservators and scientists have played an important role, most of them on top of their 'day jobs'. However, after six years, people are beginning to reflect on the way the work is organised and this has led to a recent review of the project's Business Plan. At the annual plenary meeting in April, it was agreed that the drafting needs to be more evenly distributed and to be more focused, to make better use of experts against a background of shrinking finance for travel and intense pressures on everyone's time.

The UK has sometimes had to express its views quite strongly. In the case of the packing for transport standard, BS EN 15946:2011, our views did not prevail, and a national foreword is included in the BSI edition to make our position clear. The UK group felt that the standard is over-prescriptive and suggests a 'one size fits all' approach rather than taking a

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Icon conservation internships

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We request that – wherever possible – you use electronic format for enquiries and applications.

Professional Development Manager, Icon
sbradshaw@icon.org.uk

Closing date for applications 5 June 2012

New environmental standard

As mentioned in David Leigh's article above, a new standard for managing environmental conditions for archive, library and museum collections – PAS 198:2012 – has recently been published. It attracted a large number of constructive comments during the public consultation stage last year, many from conservators, which have helped to shape the final version.

PAS 198 addresses the challenge of long-term cultural collection care that does not require excessive use of energy, answering the national museum directors' call for cultural heritage institutions to reduce reliance on fossil fuels while meeting their responsibility to preserve collections. The standard sets out a framework for risk based decision-making, which is intended to support institutions in specifying beneficial environmental conditions for the particular objects in their care.

By pooling the knowledge and experience of collections that

pragmatic view depending on the objects and journeys in question, that it might lead to unnecessarily high costs and that 'the standard should be regarded as a best practice guideline highlighting key factors to consider when taking such decisions'.

Other standards have had strong UK input: the one on general conservation terms and their definitions for instance, BS EN 15898:2011. This document provides the underlying terms for many of the other standards, but is also important for being one of the first attempts to achieve a set of agreed conservation definitions across three European languages (English, German and French). It will doubtless give rise to debate and be refined for years to come. All the participants and countries have learned from comparing the many contrasting concepts and values.

The only European standard being led from the UK – *New sites and buildings intended for the storage and use of collections* – is now being drafted under the leadership of Chris Woods.

British standards

The archival British Standard, BS 5454:2000 has recently been reviewed by the BSI committee responsible, IDT/002/09, which comprises representatives of archive and library institutions and archives professional bodies, chaired by Chris Woods, representing Icon. The work was completed over an extended period, with a full public consultation generating over five hundred comments from conservation, buildings, security and fire experts. The resulting document PD5454:2012 *Guide to the Storage and Exhibition of Archival Materials* is an amalgamation and full revision of BS 5454 and PD 0024. This Published Document will supersede BS 5454:2000 and PD 0024:2001, which will be withdrawn.

A related UK initiative, PAS 198:2012, *Specification for managing environmental conditions for cultural collections*, was published in March. (See article below for details)

The well-established Code of Practice for the cleaning of buildings BS 8221-1:2000, Part 1, *Cleaning of natural stones, brick, terracotta and concrete*, has been extensively revised and is due for publication shortly. Meanwhile, the even earlier Guide to the principles of the conservation of historic buildings, BS 7913:1998, is undergoing thoroughgoing revision to reflect current thinking

Further insights can be found at <http://ecommittees.bsi-global.com/> and entering B/560 Committee in the search box. This provides a list of all currently available standards, earlier documents and presentations on the work and a list of the UK organisations taking part. There is also a link to the CEN/TC346 website. Further details can be obtained from those most directly involved and who helped compile this report: Velson Horie, Chris Woods, Nancy Bell, Maureen Young, Kate Frame, Constantina Vlachou, Freda Matassa and Tim Yates, who is the new Chairman of BSI Committee B/560.

David Leigh Icon Trustee

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Contact Wiebke Morgan – Monday to Thursday – with any questions you have regarding your membership.

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already exist, such as understanding of material science, lifetime and risk assessment, PAS 198 will help judgements to be made about the conditions that will help slow down deterioration and prevent damage. The standard takes into account the complexity of collection objects and the different ways in which they react to pollution, light, relative humidity and temperature.

Work on the standard has also identified a future research agenda aimed at improving the protection of cultural heritage.

The PAS initiative was developed by the British Standards Institution (BSI) in collaboration with The National Archives, with support from Collections Trust, CyMAL and MLA. Additional support towards printing costs was given by The National Trust Scotland, Historic Scotland, National Records for Scotland and Collections Trust.

Nancy Bell, Head of Collection Care at The National Archives, said:

'This publication is a watershed for collection care as it engenders a more mature debate about how we preserve the UK's rich cultural assets, while accepting we have a global responsibility to reduce reliance on fossil fuels. It accepts there isn't a prescriptive, one size fits all solution. This approach is a fantastic example of bringing arts, humanities and science together and using research to answer practical questions.'

Further information about PAS 198 can be found on the BSI website at: <http://shop.bsigroup.com/pas198>.

HERITAGE PORTAL

Icon members are invited to register with a new European web resource which can be found at www.heritageportal.eu. Heritage Portal aims to provide a platform for sharing news and information on European cultural heritage research, conservation, education, and training. As well as the latest news you can discover cultural heritage resources and opportunities available across Europe, including training courses, events, documents and databases. You will also be welcome to contribute material to the Portal.

BENEFITING FROM INVESTMENT

The Archives and Records Association has recently published the results of research it funded into the benefits obtained from the past twenty years of significant capital investment in archives and new archive buildings. Users have been the principal beneficiaries with increased demand and interest generated by the new facilities. However the benefits to the safety and longevity of the collections themselves have also been profound.

An Executive Summary of *Research into the Benefits of Capital Investment in Archives* and the full report can be found on www.archives.org.uk/latest-news/ara-publishes-first-research-into-capital-investment-in-archives.html

ENGLISH HERITAGE NEWS

The English Heritage Archive is the new name for what used to be called the National Monuments Record. EH is the guardian of a remarkable range of data, photographs and other archive items related to the historic environment. One of the most important developments in recent years is the online facilities that have been developed to give round-the-clock access to the material. The archive, based in Swindon, comprises around twelve million items relating to England's historic environment.

You can search the online catalogue at www.englishheritagearchives.org.uk, where you can already view 93,000 images, free of charge and the aim is to add 500,000 more by 2015.

Waterlogged organic artefacts:

Guidelines on their Recovery, Analysis and Conservation by Angela Middleton, Karla Graham, Jennifer Jones, Quita Mould & Penelope Rogers has just been published by English Heritage (EH).

It is reviewed on page 28

The 1995 EH Guidelines on the care of waterlogged archaeological leather by Edwards and Mould have been revisited in the light of new developments in conservation treatments and changes in the planning system for the heritage environment. Other waterlogged organic materials are included in these new guidelines as they present a similar range of issues and require a comparable approach for their recovery, storage and conservation. The publication now covers artefacts which range from minute fibre remains to complete items such as shoes, garments or containers. Environmental remains (ecofacts such as pollen, plant remains and insects and unworked organic materials such as human or animal bone) are not included as they do not merit conservation in the same way as artefacts.

The guidelines are written for anyone working with archaeological waterlogged organic artefacts and cover all stages from project planning and initiation to archive deposition and curation. They are intended to make people aware of the wide variety of objects that may be encountered during archaeological investigations. The overall aim is to ensure that their significance is appreciated, their research potential is fully realised and that they are integrated during the excavation and post-excavation phases. An overview of most waterlogged organic materials is given and good practice for the care of such artefacts is outlined. A bibliography and points of contact are provided for those who require more detailed information.

The guidelines are freely available for download: www.english-heritage.org.uk/publications/waterlogged-organic-artefacts/



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THE INSTITUTE OF CONSERVATION

LIBRARY NEWS



Photo: Matt Wrieford

Conservation Librarians Group

The first meeting of the newly formed Conservation Librarians Group was held in Oxford at Icon's Chantry Library on 19 April. The aim of the group is to establish a supportive and collaborative network for librarians working with conservation resources and collections, thus providing opportunities for sharing and mapping resources, exchanging ideas and knowledge, and promoting the discussion of

new initiatives and hot topics. For further information, please contact Ros Buck, Chantry Librarian at chantrylibrary@icon.org.uk.

Recently received publications

ICOM (International Council of Museums) Lisbon 2011 Abstracts, and Preprints CD, 16th Triennial Conference, Lisbon, 19-23 September 2011, managing editor Janet Bridgland, Critério, Portugal, 2011.

www.icom-cc2011.org/244/triennial-conferences/16th-triennial-conference-lisbon-portugal/

Chantry Library Shelfmark: ICON:Conf/ICOM - 2011

The AIC Guide to Digital Photography and Conservation Documentation (second edition), edited by Warda, J. et al., American Institute for Conservation of Historic and Artistic Works (AIC), 2011, Washington D.C., ISBN: 978-0-9760501-3-1
For more information: www.conservation-us.org/digitalguide
Chantry Library Shelfmark: RP/War

PAS 198: 2012 Specification for managing environmental conditions for cultural collections (BSI Standard)

Museum Studies: an Anthology of Contexts (second edition), edited by Bettina Messias Carbonell, Blackwell Publishing Ltd; John Wiley & Sons Ltd; Chichester, 2012, ISBN: 978-1-4051-7381-0

Securing the Past: Conservation Art, Architecture and Literature by Paul Eggert, Cambridge University Press, Cambridge, 2009, 290pp. ISBN: 978-0-521-72591-0

The Book and Paper Group Annual, (AIC), Vol.30, 2011
Papers presented at the Book and Paper Session, AIC's 39th Annual Meeting, May 31-June 3, 2011, Philadelphia, Pennsylvania

Contents page available for this volume from
chantrylibrary@icon.org.uk

Back issues online from 1982-2002: <http://cool.conservation-us.org/coolaic/sg/bpg/annual/>

The Ephemerist, No.156, Spring 2012

Journal of Paper Conservation (IADA), Vol.13, No.1, 2012

Restaurator, Vol.33, No.1, 2012

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Photocopies

A quick reminder that we supply photocopies of journal articles, chapters from books, and conference papers, which are held in the Chantry Library collection. Icon members can claim **ten free articles** each year, provided either as scanned pages, or in hard copy. Email Ros Buck, Librarian at chantrylibrary@icon.org.uk with your requests, quoting your membership number, or complete and send the copyright form available on the Chantry Library webpages www.chantrylibrary.org.uk (Library Services).

people

INTRODUCING KENNETH AITCHISON



Photo: Matt Wreford

Dr Kenneth Aitchison is **Icon's Skills Strategy Manager**. His job is to deliver Icon's recently launched National Conservation Education and Skills Strategy (NCESS), working with colleagues across the sector to promote and support the Strategy's direction for conservation education in the next five years. Following the Strategy's formal launch at Clothworkers' Hall on 27 April, he will now be making regular updates on progress on particular initiatives on the

Icon website and in the pages of Icon News. The Strategy is available on the website at www.icon.org.uk/index.php?option=com_content&view=article&id=1262&Itemid=124.

Kenneth joined Icon from Landward Research Ltd, a consultancy that he still owns, and until 2010 he worked for the Institute for Archaeologists, where he was the Head of Projects and Professional Development. While his background was originally in archaeology, and he did spend some time working overseas in suitably hot countries, he has spent only one day actively excavating in the past eleven years, and has since become much more of a project manager who focuses on issues that matter to employers and employees in the cultural heritage sector.

One of his areas of expertise is in labour market intelligence; he used his experience of conducting major surveys into employment in archaeology to complete his PhD last year and has just published a book based on his thesis (*Breaking New Ground – how professional archaeology works*, available for the Kindle at www.landward.eu/breaking-new-ground.html). This fits in to one of the priority areas of the NCESS, where he will be using his experience to lead Icon in gathering and circulating up-to-date workforce research to help the sector plan better for the future.

Other immediate priorities have included the re-launching of Icon's Conservation Technician Qualification, which is now accepting candidates, and investigating the potential future migration of that qualification onto the national Qualifications and Credit Framework.

Kenneth will be working from his office in Sheffield and can be contacted on any issues relating to the delivery of the Strategy at kaitchison@icon.org.uk.



Sarah Freeman

QEST TO THE RESCUE

Once again the invaluable Queen Elizabeth Scholarship Trust rides to the rescue of a conservator with a £14,300 award to Sarah Freeman from Derby, who is studying easel painting conservation at the Courtauld Institute of Art. Although Sarah saved hard to undertake the course, the fees and living expenses in London increased at an even greater rate. Winning the QEST Scholarship enables Sarah to give up an evening waitressing job and dedicate her final year to study, which is based on a technical investigation of twenty possible Tudor portraits of Kings and Queens housed at the National Trust's Westwood Manor in Somerset.

QEST is the charitable arm of the Royal Warrant Holders Association. It was established in 1990 to advance education in modern and traditional crafts and trades in the UK. Scholarships of up to £15,000 are open to men and women of all ages and are awarded twice a year. Since 1991, the Trust has awarded £1,603,004 to 242 craftsmen and women aged between 17 and 50+ to develop their skills through study, training and work experience.

Safe Handling of Museum Collections Containing Arsenic

Deborah Cane ACR and Michelle Gayle (Positive Action Trainee Collection Care Assistant) report from Birmingham Museums & Art Gallery

INTRODUCTION

The Collections Care Team at Birmingham Museums and Art Gallery (BMAG) has undertaken research using a hand held XRF (Bruker Tracer VII) analyser to detect arsenic in the Natural History collections. This was carried out with the intention of determining and clarifying a safe working practice during exposure to objects containing arsenic. Work was done during 2010 in conjunction with Birmingham City Laboratory.

The natural history collection at BMAG contains mammals, birds, reptiles, skeletal material, insects, a herbarium and spirit collection. There are over 5,000 birds and 1000 mammals in the collection, which was purchased and donated by four main collectors and dates from the 1860s to the 1920s.

It was not generally understood amongst staff at BMAG that there was a risk associated with working on Natural History collections. Therefore, we needed to assess the instant and cumulative exposure risk, identify the safe level of exposure for handling and what specific Personal Protection Equipment (PPE) was required. The bird collection was prioritised for the project as it is used regularly by researchers, schools loans and curators.

Natural History collections have long suffered the problem of deterioration from insect damage and collectors had tried

many products to aid preservation. In the mid 1700s the preservative qualities of arsenic were realised for these collections (Found and Helwig 1995). In taxidermy one of the most commonly used products was arsenical soap, which was applied to the inside of the specimen skins. It was also known for taxidermists to dissolve arsenic with lime in water and use this to 'water' the fur and feathers; another method was to add arsenic to the 'stuffing' materials as they went into the skin (Marte, Pequignot and David W 2006). Consequently arsenic became widely used as a preservative and pesticide and was not phased out in the United Kingdom until the 1980s.

Although arsenic was widely used in these collections it is not well documented in museum records, partly due to the fact that it was not considered a health risk until fairly recently.

HEALTH & SAFETY ISSUES

Arsenic can be absorbed through the skin, inhalation and ingestion. High level toxicity in the body can result in chronic renal failure, paralysis, coma and death; however it is the long term, low level, cumulative exposure that can lead to fatigue, ulceration of the skin, anaemia, Mee's lines in the nails (white lines which appear down the length of the nail) and may trigger cancers in the major organs (Odegaard and Sadongi 2005), (Sirois 2001).

When considering risks to health it is vital to understand what constitutes a safe exposure level. The Health & Safety Executive (HSE) states that the Occupational Exposure Limit (OEL) for arsenic is 0.1mg/m^3 (Health & Safety Executive 2005). This measure is for airborne pollutants that are considered an inhalation risk, but the HSE does not specify safe levels for absorption which may arise from handling this type of collection.

Trying to compare the recommended levels in the literature search was somewhat confusing as dosages were written in many formats; mg/g, mg/kg, mg/day, μg , $\mu\text{g As/m}^2$, μm^3 , ppm, ppb, mg/L and % .So it is necessary to understand which recommendations are comparable to the work and then be able to compare test results against recommendations.

After testing eight hundred birds, the project is able to conclude that 100% of the birds analysed tested positive for

Deborah using the PXRF in the hand held position





Deborah with the air filter from Birmingham City Labs, attached to her face mask.

arsenic, mercury was also detected in a small percentage of the birds and lead was noted on 90% of the feet and beaks, probably due to the use of lead paint. What the PXRF did not tell us was the quantity of arsenic, only that arsenic was present.

A further set of tests were run using a PXRF Turbo (lent by Bruker) with integrated RoHs software. This automatically worked out the PPM of arsenic present. The downside to this is that the software is designed for detecting arsenic in industry, for example in plastics and circuit boards, so the calibration may not be accurate for mounted specimens but it is indicative. Twenty five birds were tested using this methodology giving a range from 90K ppm down to 300ppm (with a variance of 544–29ppm respectively).

As the team did not have a calibration to allow quantitative results it was felt appropriate to have some tests carried out by Birmingham City Laboratories to ascertain the arsenic levels in samples from bird specimens, gloves and masks contaminated through handling. The results helped to produce direct comparisons of the actual exposure risks and the recommended levels, which in turn informed the levels of PPE.

Regulatory Standards		
Inhalation Levels	HSE UK http://www.hse.gov.uk/coshh/ Safe working levels	BCC Labs – Air borne pollutant test
	0.1mg/m ³ (8hr TWA)	<0.01 mg/m ³

This test shows that the air borne pollutants monitored within a working day are below the H&S recommendations; therefore, **a dust mask is sufficient for working with the collections, it is advisable to replace these on a daily basis.**

Absorption (skin) Levels	Defra & Environment Agency UK http://www.environment-agency.gov.uk/ Safe working levels	BCC Labs Gloves – ingestion test
	0.4-0.9 µg/kg body weight per day Cumulative exposure 0.4µg x 75kg (Male) = 30µg per day 0.4 x 50kg (Female) = 20µg per day	18.28µg per day



Testing for arsenic with the PXRF in a static position

The gloves used when handling the specimens were sent to BCC Labs for destructive testing. The resulting exposure level is close to the recommended levels for women. Therefore **it is important that gloves (nitrile NOT cotton) are worn when handling objects containing or suspected of containing arsenic and are disposed of after each session. Lab coats must also be worn and washed or disposable Tyvek suits worn (dependant on the task in hand).**

Ingestion Levels	HPA UK http://www.hpa.org.uk/	BCC Labs Bird samples – ingestion test
	70–180mg (fatal) (10–100ppb) LOAEL (lowest observed adverse effect level)	40 mg/kg (A) 1.6 mg/kg (B)
	MadSci Network site http://www.madsci.org/posts/archives/2001-04/987176844.Me.r.html 400ppm (possible carcinogen) (400mg/kg)	(Bruker Turbo PXRF) 90K ppm down to 300ppm
	World Health Organisation http://who.int 1–2.5mg/kg body weight (1981) Increased risk 2.5 x 75 (Male) = 187.5mg 2.5 x 50 (Female) = 125mg	40 mg/kg (A) 1.6 mg/kg (B) 40 x 75 (Male) = 3000mg 1.6 x 75 (Male) = 120mg 40 x 50 (F) = 2000mg 1.6 x 50 (F) = 80mg

For this test two samples (2cm²) were taken from two different birds and sent for destructive testing at BCC Labs. The data shows that levels in these small samples are high enough to cause health problems if ingested. **Therefore avoid putting gloved hands to mouth, facial contact with the object and no consumption of food or drink when handling objects or while wearing PPE (do not lick the specimen or place in the mouth).**

IN CONCLUSION

The risk from one off/immediate exposure to a mounted bird containing arsenic is relatively low, especially if standard PPE for handling objects is worn (gloves and lab coat); however repeated exposure may allow concentrations to build to a level that are damaging to workers' health. So it is important to ensure that good handling, PPE and Health and Safety procedures are adhered to and that collections are clearly marked as containing arsenic.

It is also important to note that people with reduced immune systems, pregnant women and children are more susceptible to the adverse effects of the build up of arsenic in the body.

This project was targeting the Natural History collections as these are known to have had arsenic used on the objects as a preservative, but arsenic (mercury, lead and pesticides) can potentially be found in many collections:

- Herbarium collections
- Mineral collections
- Decorative Arts collections (pigments, paints, textiles)
- Natural History collections
- Ethnographic collections
- Medical collections

Michelle with the PXRF attached to the laptop and audit log book



Health & Safety sign to warn other workers to keep 3 feet away from the point of radiation

The Health & Safety aspects of the radiation exposure encountered must also be taken into account. The BMAG local rules allow an operative an annual body dose of $192\mu\text{Sv}$ at a dose rate of $2.0\mu\text{Sv/hr}$ and a total of 92 hours exposure for the year. During three months of the 'Bird' work I had reached my annual exposure hours and dose. Therefore it is important to discuss this work with your Radiation Protection Adviser prior to carrying out the work.

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If you have any queries, Deborah Cane can be contacted on: Deborah.Cane@birmingham.gov.uk

A laboratory for West Dean

Science Tutor at West Dean College David Dorning welcomes the addition of valuable analytical capacity

During the lifetime of West Dean College, the teaching on its conservation programmes has evolved significantly, particularly in the area of science. The first courses were established in the early 1970s with close links to the Antiques Trade, and a strong emphasis on restoration practice in the treatment of Clocks, Ceramics and Furniture. Since then, with the addition of the Books and Metals departments, the College has evolved a broader approach to conservation, retaining excellence in practice, but also developing a significant academic profile, with all conservation programmes now validated by the University of Sussex to MA level. The conservation disciplines taught at West Dean have much common ground, and there is considerable advantage in making use of joint learning, particularly in science. A common Graduate and Postgraduate science curriculum has been developed and to complement it the College has recently set up a small analytical laboratory.

The laboratory is a planned development whose aim is to provide a set of tools to introduce students to the practicalities and potential of analytical science in conservation. Although the College already has access to a range of analytical services, provided both by our validating body the University of Sussex, and several other organisations, the provision of an on-site facility has long been our aim. We can now offer students the opportunity to use a range of analytical equipment and understand its potential as an accessible, everyday feature of practical conservation work.

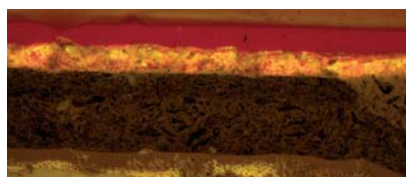
FIRST CHOICE: FTIR

With finite limits on space and finance, our choice of equipment was important. Having acquired a suitable room, FTIR was top of our list as a technique applicable to both organic and inorganic material, so our first acquisition was a second-hand FTIR spectrometer. Initially able to handle samples as KBr pellets, we were able subsequently to acquire an ATR attachment for solid samples, via Norman Billingham, professor of polymer chemistry at the University of Sussex,

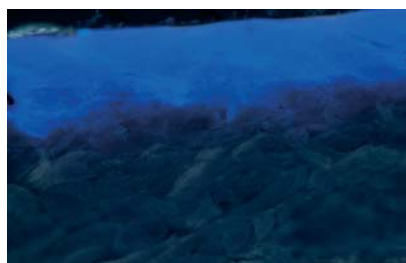
FTIR bench



Fluorescence microscope and image capture software in use



Cross-section of C19th Thai offering bowl taken under blue (420 – 290nm) illumination (image courtesy Tristram Bainbridge)



Cross-section taken under UV illumination showing the penetration of a leather consolidant, marked with a fluorescent dye, into vegetable-tanned leather (image courtesy Anna Johnson)

whose long-term support of science at West Dean has been invaluable. Although not state-of-the-art, the instrument provides very useable spectra, and our collection of data from known materials has provided an accessible starting point for all departments.

GETTY GENEROSITY

The laboratory then received a very significant boost with the award of a grant by the John Paul Getty Jnr Charitable Trust, allowing us to add a high-quality Nikon fluorescence microscope, hand-held Bruker X-ray fluorescence spectrometer, and KonicaMinolta spectrophotometer.

The **Fluorescence microscope** is a versatile conventional instrument with fluorescence capability. Primarily acquired for investigation of decorative surfaces, with analysis and identification of cross-sections from items of furniture, it is now finding an increasing range of applications in standard mode for all departments, with fluorescence and polarised



Matthew Read, Tutor in Conservation of Clocks, using the Bruker XRF spectrometer for analysis of marine chronometers at Greenwich Maritime Museum. The portable XRF was invaluable in identifying these alloys and has led to a far greater understanding of mid-eighteenth century technology

light used for specific identifications. The specification includes a variable light source combined with dedicated excitation cubes, and a digital camera allowing image capture and live view for teaching and demonstrations.

The **Bruker XRF spectrometer**, providing elemental analysis, has applications in all departments. It has been used for investigating materials as diverse as historic metals and alloys, castings, painted surfaces, glass, ceramic glazes, manuscript illuminations, photographic prints and leather tannages. With the development of hand-held instruments which can be used without vacuum, XRF has become relatively standard technology in many conservation departments, making it an ideal technique for semi-quantitative surface elemental analysis of objects of all sizes.

The **KonicaMinolta spectrophotometer**, as a standard tool for surface colour measurement, finds applications in all areas of conservation; from repeat colour matching, to measuring differences due to colour change over time, to evaluating materials after accelerated degradation. Using the industry standard $L^*a^*b^*$ co-ordinate system, this is another instrument with wide appeal where evaluation of colour is critical. It also has the potential to extend its use beyond conservation, in a College where many visual arts are taught.

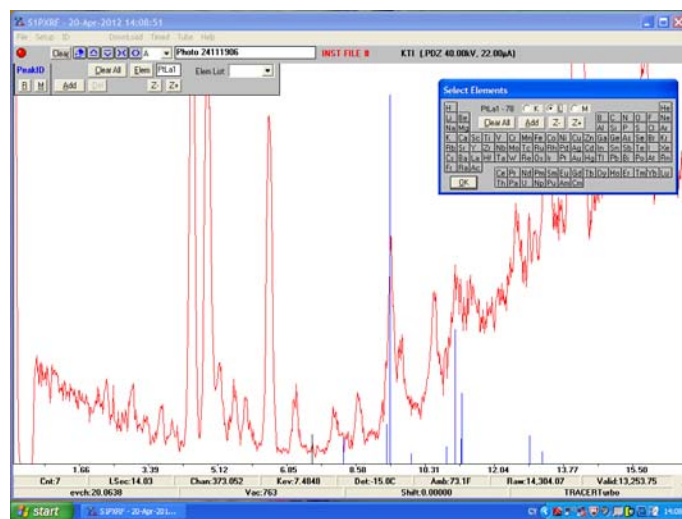
'A SIGNIFICANT STEP FORWARD'

Acquiring this range of instruments has given the College an independent analytical capability, enabling students to actively analyse and examine many common organic and

Colour measurement with the KonicaMinolta spectrophotometer of just-visible fading of a yellow dye quantifies the extent of colour change: $dE^*ab = 4.2$

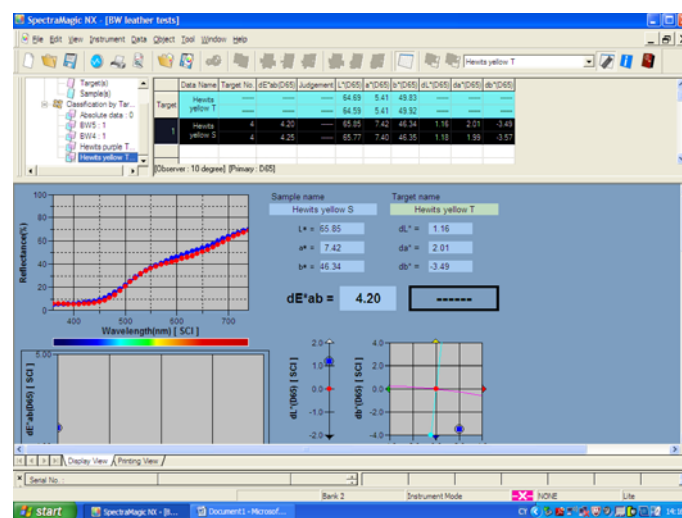


Offset in a photograph album caused by a print on the opposite page. The XRF spectrum of the print's image material shows the presence of platinum



inorganic materials in-house. In addition we now have significant potential for collecting accurate scientific data as part of student MA studies, staff research, and for use by outside conservators. The instruments have been chosen as those most likely to have wide appeal across our subject areas, and which conservators may encounter in their professional working lives.

With the acquisition of these items there is an ongoing process of staff and student training, aimed at making best use of the facility, and building sustainable expertise on-site. Our validated status with the University of Sussex enables us to continue to make use of other, complementary, analytical equipment by arrangement, and gives us access to experienced staff able to help in the gathering and interpretation of data. This is in addition to other longstanding co-operative arrangements we have with heritage organisations allowing the use of analytical equipment. We are indebted to the John Paul Getty Jnr Charitable Trust for their generous grant, which has helped us in this significant step forward.



news from the groups

ARCHAEOLOGY GROUP

'From Context Sheets to Display Cases' 25 June–26 June 2012, Glasgow

In conjunction with the Scotland Group, we are presenting a varied day of talks on the conservation of archaeological material on 25 June at the Charles Wilson Building, Glasgow University. We have what promises to be an interesting day, with talks ranging from non-destructive analysis, to the conservation of Pictish stones, and the excavation of the Great Escape tunnel. June 26 will offer visits to museums in the Glasgow area: a great opportunity to catch up with colleagues visiting for the talks and view current developments in Scottish museums.

Places are limited so, to avoid disappointment, please reserve places with Beth Werrett using the booking form available on the Icon Archaeology Group Events page at www.icon.org.uk. Her contact details are email: beth.werrett@wiltshire.gov.uk or tel: 01249 705522.

Please send cheques, payable to 'Institute of Conservation' to Beth Werrett, Wiltshire Conservation Service, The Wiltshire and Swindon History Centre, Cocklebury Road, Chippenham, Wiltshire. SN15 3QN before June 18 2012.

For additional information please see the Icon Archaeology Group pages at www.icon.org.uk

CERAMICS AND GLASS GROUP

Liverpool 15–16 June 2012

In a field that requires caution in approaches to change it is important to have an event that considers materials issues relating to durability, compatibility and future viability. We have structured a full programme of outstanding speakers and a laser scanning demonstration by conservators from the Liverpool Museums Conservation Centre for this year's conference and AGM.

The two day conference includes two external visits: a conservator led tour of the new Museum of Liverpool on Friday afternoon and a tour of the recently restored and re-opened St George's Hall with its extraordinary Minton Floor on Saturday afternoon. There is a small charge of £3.50 for the visit to St George's Hall. The event, which includes refreshments and lunch, is to take place in the conference centre of the Merseyside Maritime Museum, just across the dock from the Museum of Liverpool. Lunches and refreshments are included in the conference fee, as is a complimentary glass of wine for those who can pre-register on the Thursday evening from 18.00 -19.00 at the Holiday Inn Express in the reception area.

On Friday evening, a dinner has been arranged at the Philharmonic Dining Rooms. This is in addition to the conference fee, available at the very reasonable price of £18.00 which includes a large glass of wine. The dinner must be booked and paid for when booking for the conference.

There are a limited number of places available for this dinner so do not leave your conference booking too late. The Philharmonic Dining Rooms, built in 1898-1900, feature a lavish interior of stained glass, ceramic wall tiles, repousse copper panels, and mosaic floors. The bar is a sparkling tour de force of mosaic craftsmanship. It survived the ravages of WW 2, but the location of the bottle collection in the bar looks set to inflict some damage!

Booking closes on May 25.

Cost: Member £150, Student £75, Non-member £200

Cost (with conference dinner): Member £168, Student £93, Non-member £218

Exciting opportunity!

Do you want to be more involved with Icon? Meet new people and forge new contacts? At our next AGM we will be looking for a new secretary and student graduate representative. If you are interested in possibly filling either one of these roles or require further information please email me kswales82@gmail.com

Kathleen Swales

PHOTOGRAPHIC MATERIALS GROUP

The Photographic Materials Group has recently developed its web presence. On the group's web pages on the Icon website you can now find:

- Information about your committee members, their remits and contact details.
- A news and events section where you will be able to keep up-to-date about events organised by Icon PhMG and others. Are you organising an event? Please send us details and we'll add it to our listings.
- A resources section which provides links to the websites of organisations, research groups and information sources of interest to those involved in the conservation of photographic materials. This will be updated on an ongoing basis, so again, if you know of a particularly useful website that we haven't listed, then please let us know.

What else would you like to see on our website? Please get in touch with either **Louisa Coles**: l.j.coles@abdn.ac.uk or **Saya Miles**: smilesconservation@gmail.com

In addition to our main website, we now also have a twitter page and Facebook page. Here we will share information about newsworthy happenings and events in the world of photographic materials and beyond, but we also hope these sites will provide a greater opportunity for interaction between our members. Together they will provide a space to share best practice, seek support for interesting challenges, or share news of your events and activities.

Facebook: <https://www.facebook.com/ICONPhMG>

Twitter: <https://twitter.com/#!/ICONPhMG>

Events

Finally, we also have a number of events in the pipeline for this year and next.

As part of our 'Let's Talk Photography' series, the Group is very excited to announce an evening event at The Photographers' Gallery on 19 July from 5.30–8pm. The event includes a tour of the newly-opened Gallery with a curator, and a lecture from visiting conservator Yoko Shiraiwa who has been working on photographic materials damaged in the Japanese tsunami. We believe this is the first time a conservator will have spoken about the tsunami in the UK so we are very grateful to Yoko for coming to talk to us.

We are very lucky to be able to offer the event at a reasonable cost thanks to the generosity of The Photographers' Gallery. For Icon members the price will be £5 for the talk or £7 for the talk and tour. For non-members the cost is £12 or £15 respectively.

Places are limited so please register in advance contacting Sarah Allen at sarahallenconserve@gmail.com or on 07960 587 014.

STONE AND WALL PAINTINGS GROUP

Committee

It is with some sadness but also the utmost appreciation that we can announce that, after twenty two years of dedicated service, David Odgers has decided it is time to step down from the Stone and Wall Paintings Group Committee. David has made an extraordinary contribution to the Group, and Icon generally, at all times being an exemplary ambassador and guiding presence for the many Committee members who have been fortunate enough to serve with him over this time. David has guided the Committee through a period of great transition, to ensure that the Group and Icon have continued to actively contribute to and represent our members' interests and those of the field of Architectural Conservation. Jez Fry has been appointed as the new Co-Chair with Richard, who will remain in post during this time to ensure that the Group continues to build on the achievements made by David. On behalf of the Stone and Wall Paintings Group we would like to express our heartfelt thanks and gratitude to David for his considerable commitment and contribution, and wish him every enjoyment of his new found spare time!

The new committee line-up is as follows:

Co-Chairs:	Richard Lithgow Jez Fry
Treasurer:	Peter Martindale
Secretary:	Sarah Pinchin
News Editor:	Clara Willett
Web Editor:	Berenice Humphreys
Ordinary members:	Simon Swann Vicki Roulinson Lynne Humphries Caroline Babington

Upcoming events

Professional Standards seminar

Along with the Historic Interiors Group, we will be holding a one day accreditation seminar in London on Tuesday 29 May. This event is intended for those who are considering or who are in the process of applying for PACR accreditation. It will be chaired by David Odgers and speakers include Martin Holden, Helen Hughes, Mark Perry, John Burbidge and Susan Bradshaw. More details can be found on the Events page of the Icon website. There is a small fee and early registration is encouraged since places are limited.

Problem Stones 2

After the success of the first conference held in 2007, the Group are organising a second day conference on the deterioration and conservation of some of the more awkward stones. The conference will be held in November, with the date and venue to be confirmed shortly. If you would like to present a paper or have a particular stone that you would like discussed, then please contact Clara Willett at clara.willett@english-heritage.org.uk

TEXTILE GROUP

The Textile Group AGM was held at the recent Forum (reviewed on page 29). A number of Committee members stood down and thanks were given to Roisin Morris for her work on the Group's web pages; Poppy Singer for dealing so ably with the finances; Alison Fairhurst for her commitment to editing papers and finally to Maria Jordan who has held everything together and been a very able and successful chair over the past three years.

New committee members were welcomed. Kate Orfeur (Historic Royal Palaces) takes over as Treasurer and Susana Hunter (Victoria and Albert Museum) will work on Events. Sophie Downes, formerly the student representative on the Committee, takes over as Web Editor and Zoë Lanceley joins us as student representative. Since the meeting we are delighted to announce that Debbie Phipps (Freelance Textile Conservator) has agreed to take on the role of Chair of the Textile Group.

It was announced at the Forum that we are planning a tapestry symposium to be held at the Dovecot Studios, Edinburgh on 21 September 2012. This is to coincide with the centenary exhibition of the Dovecot. The title of the symposium is '**A Woven Alliance: tapestry yesterday, today and for tomorrow**' and is designed to be fairly all-encompassing. The one day symposium will be followed by a visit to Stirling Castle the next day to see the reweaving of a set of Medieval tapestries 'The Hunt of the Unicorn'. Please see the Textile Group web pages for the call for papers and further information about this event which will go out shortly, as well as information about other events organised by the Textile Group.

Graduate Voice

A NON-ADHESIVE BINDING FOR HISTORICAL NEWSPAPERS

Case-study of the treatment of the *Waterford Mirror* 1805–1806

by Élodie Lévêque

Historical background

The National Library of Ireland (NLI) recently acquired two volumes of the *Waterford Mirror* containing rare issues from 1805 and 1806. In 1801, *The Waterford Mirror and Munster Packet* newspaper was first printed by John Bull and from 1805 continued as *The Waterford Mirror* until 1843. It was first set up for electioneering purposes to promote the interests of Sir John Newport* and printed three times a week. The history of the Irish press starts in Dublin in the second half of the 17th Century with very short-life newspapers. During the first half of the 18th century, the press developed and about one hundred and fifty titles were produced in Dublin. At the beginning of the 19th century, newspapers were established in the larger provincial towns, like Waterford, where the first mention of printing press activity dates to 1729. Few copies of these newspapers exist today and the information contained within is greatly important for studies of the local and national activities of the 18th and 19th centuries.

As a long-time participant in the NEWSPLAN project, the National Library of Ireland preserves newspapers through a microfilming programme that protects hardcopy holdings while making the content readily available to the public on microfilm. Prior to microfilming, the volumes were prioritised for conservation treatment due to their inappropriate binding structures which prevented easy opening and concealed text

Before treatment



Before (r) and after (l) washing

in the gutters. The condition of the volumes was too poor to allow safe handling or microfilming, and the first and last pages had extensive dirt deposits which obscured the text. It was therefore necessary to find an appropriate, quick, and reversible method for the paper repairs and re-binding.

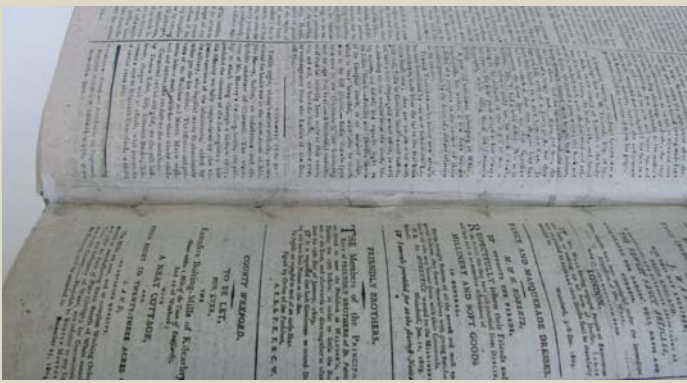
Examination of the newspapers

In the 19th century binding newspaper issues together at the end of each year was common practice in libraries. Binding newspapers into large volumes maintained the sequence of the issues, prevented loss or theft of single issues and facilitated space-efficient vertical storage.

Within the NLI's extensive newspaper collection are volumes very similar to *The Waterford Mirror* bindings: a single folio made of rag paper within an economical binding. The front and back millboards are covered with marbled paper and the spine with leather. There are no spine linings and the leather is glued directly onto the spine-folds of the newspapers. In some cases, the volumes are stitched together to create larger sections and then sewn onto cords, which severely restricts the opening. There are no endbands.

The Waterford Mirror newspapers were bound in two separate volumes of sixty five pages and one hundred pages respectively. The restrictive binding structure was the main conservation issue. Eight deep saw-marks were found along the spine where lengths of cord had been inserted and directly glued to the spine-folds with no sewing or stitching. The glue had penetrated approximately 1cm into the folds of the paper, concealing the text along the gutter. The glue was very strong, stiff and dry, and the opening of the volumes was severely restricted. The volumes lacked any covering material, but the second volume had pieces of damaged leather glued directly to the spine, indicating the absence of spine linings. As the spacing of the saw-marks corresponded on both spines, and the issue numbers of the second volume follows directly on from the issue numbers of the first, the two volumes were possibly bound together in the past. The original binding possibly broke into two distinct parts due to weak sewing, the stiffness of the spine, and the thickness of the volume.

The newspapers are printed with black carbon ink on a cream hand-made laid rag paper. Each issue is made of a single sheet folded in the middle and measures approximately 480 x 305mm (probably a trimmed super Royal format) when folded. The paper was extremely soft, possibly un-sized, and slightly discoloured. There was extensive surface dirt on the first and last pages. Each issue was folded in the middle prior to



Sawmarks in the sections

binding. The ink was abraded, making the text illegible in some areas. Only fragments remain of the two first and two last pages of each volume, and several pages had significant losses and tears.

Treatment of the textblock

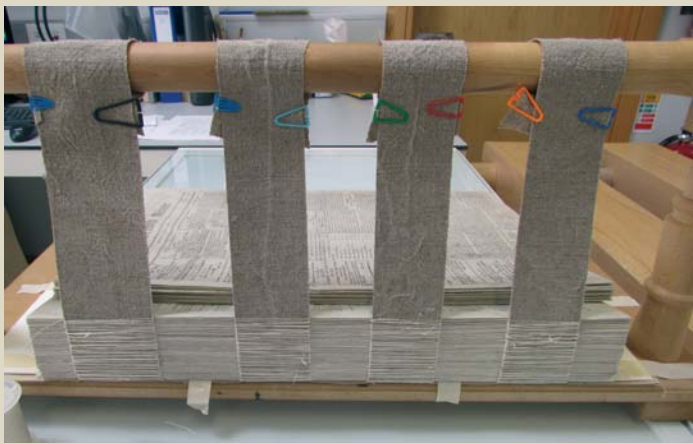
Surface cleaning was a very satisfactory step, and this also helped to considerably improve the clarity of the text. Each sheet was separated using 2% methyl-cellulose poultice applied locally at the spine, and the entire textblock was washed in deionised water and calcium hydroxide. In order to make the treatment more time-effective, the thick textblock was separated into five lots for washing, resizing and paper repairs.

The spine-folds of the sheets were locally repaired with Japanese Kozo paper and diluted wheat starch paste. On the first volume, the losses and tears were unfilled and strengthened individually. This step took almost four days to complete so it became necessary to find a faster approach for the second volume. The treatment was therefore standardised by the use of pre-cut 2cm strips of lightweight Japanese paper which were adhered along the whole length of each spine-fold. The use of a thin Kozo paper was necessary to avoid excessive swelling at the spine for rebinding. The full-length repair gave the sheet more flexibility when opened and an even strength for the new sewing.

The repairs were pressed by layering the pages sandwiched between blotting paper and Bondina® strips. This standardised repair method was much faster than localised repair, requiring only two days for one hundred pages.

Non-adhesive binding solution

Binding into volumes has been frequently used for organising and storing newspaper issues. However, volumes of



Supports attached to the sewing frame and sewing

newspapers are difficult to handle due to their large format and weight. The vertical storage of large volumes can cause the text block to pull away from the binding, and the paper can tear along the spine-folds. Incoming newspapers are no longer bound by the NLI, and are now routinely stored flat in archival boxes.

Therefore instead of choosing a traditional library-style binding, a flexible paper binding was found to be a more satisfactory treatment solution. This option keeps the original sequence of the issues along with any duplicates it contained and also reflects the history of the volumes. It was also decided to keep the current division of the volumes, as rebinding a hundred and sixty five issues together in one volume carried the risk of convex-curving at the spine which can result in paper damage along the foredge. Such a large volume would also be difficult to handle and store.

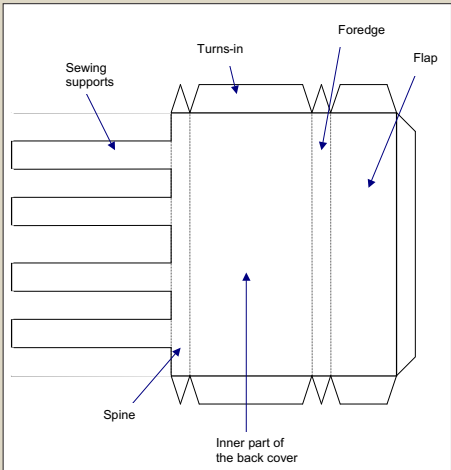
The rebinding had to be time-effective, provide reversible protection against poor handling, be secure enough to avoid losses in the future, and had to facilitate ease of opening. The bookbinder Carmencho Arregui's *Cross Structure Binding Protective* was used as a base and modified where necessary.

Cover description

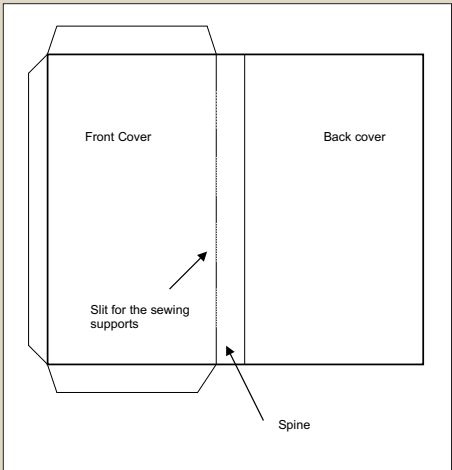
A *Super Imperial* 200gsm unbleached handmade paper was chosen to make the cover and the sewing supports. Instead of making new holes, the original saw-marks, now strengthened with Japanese paper, were reused.

The cover/board was made of two distinct parts; the first part provides a support for the sewing and protects the foredge of the volume. The sewing supports were cut into the

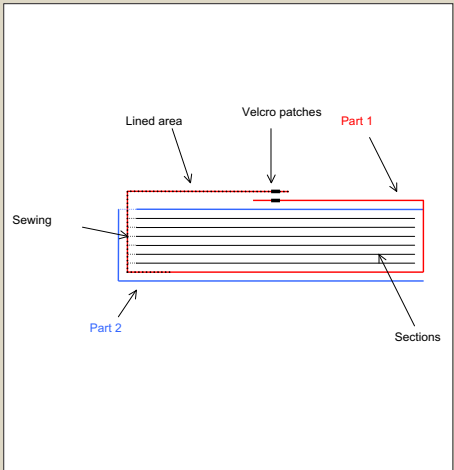
Part one: sewing support + back cover + flap

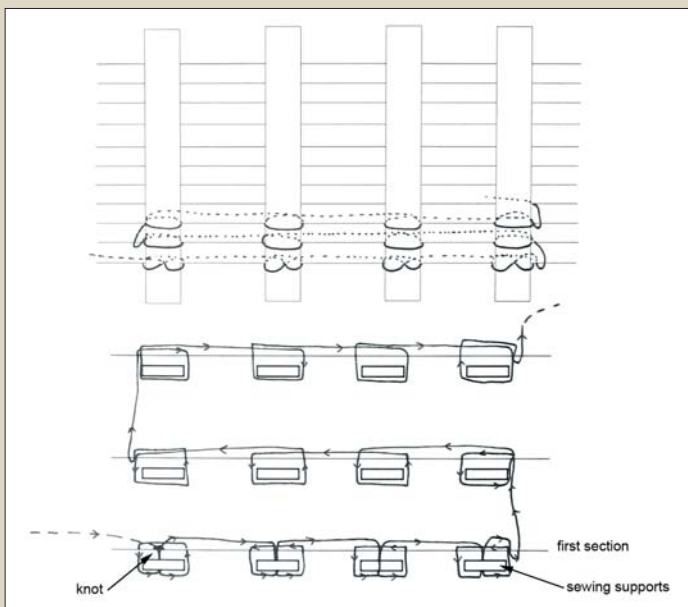


Part two: front cover



Assembly of the two cover parts





Sewing system

cover/board, corresponding to the original saw-marks in the spine. The sewing area was then lined with unbleached linen fabric to give more strength. This solution allows disbinding without damaging the text-block, by simply cutting the sewing and therefore eliminates the use of solvent or heat for possible future treatments.

The second part of the cover/board protects the sewing, forms the front board, and protects the foredge as it extends beyond the folio's dimensions.

The two boards are assembled by passing the sewing supports of the first cover through the second via slits along the spine fold. Both covers are then adhered together, which gives a stronger and stiffer support to the large textblock, which also aids safe handling.

Sewing of the textblock

The pages were sewn onto four supports, matching the original spaces between the saw-marks in the spine-folds. As the paper was very soft and could absorb the swell of the sewing thread, sewing through each single sheet was considered. Instead of using a kettle stitch to stabilise the textblock sewing, the new endleaves were restrained by sewing through the middle of the sewing supports. This was more secure for the fragile and soft paper folds. The rest of the textblock is sewn around the supports only.

The sewing system, shown above, was adopted. This can cause increased swelling due to the varying thicknesses of the thread in each section, however, the system prevents tear-back in the centre of the spine-folds.

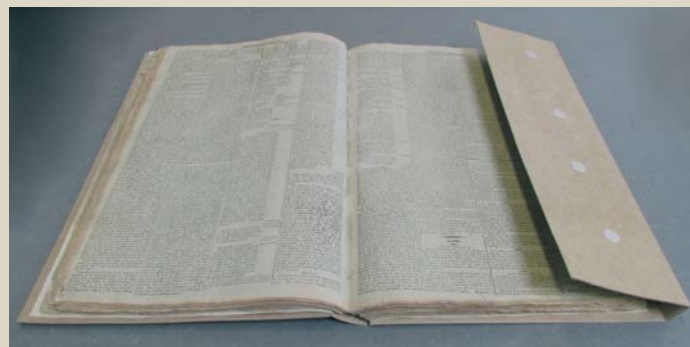
Attaching the extended sewing supported to the foredge flap with stick-on Velcro® patches, prevented the thick adhesive-free spine from developing any convex distortion, and will help prevent future damage to the foredge. After treatment, the book opened completely, and the text was clearly visible in the gutters of the sections.

Conclusion

Repairing damage to the spine-folds of a textblock is a very demanding and lengthy task. In this case-study, the standardised repair system adopted for the newspapers turned out to be a very fast and effective way to stabilise the paper sheets.



After treatment



Opening after treatment

A library cloth binding would not have been suitable for large single folios. As these items are not going to be regularly accessed after microfilming, a paper binding was found to be a cost-effective, fast and satisfactory solution which maintained the original structure idea. The two volumes are now stored horizontally on the library shelves in an archival box. The structure described in this article can also be adapted for other conservation projects depending on the items' conservation needs.

*Politician born in Waterford, 24 October 1756. He was created a baronet in 1789. In 1802 he entered Parliament as member for his native city, and acted in concert with the Whigs, until 1832. After the passage of the Reform Bill he was appointed Comptroller of the Exchequer; from which office he retired in 1839. He died at Newpark, near Waterford, 9 February 1843. 'A Compendium of Irish Biography, 1878'.

Acknowledgements

I would especially like to thank Louise O'Connor (NLI) for entrusting me with this amazing project and for her advice and expertise; Justin Furlong, Acquisitions (NLI) for the information provided and Rachel Sawicki, Chester Beatty Library for her help.

Supplies

Archival-type paper for cover and flyleaves: Griffen Mill, Ballyhaunis, Co. Mayo, Ireland.

Japanese Paper: Masumi Corporation, Tokyo.

Self Adhesive Velcro® Coins: Conservation By Design Ltd, UK.

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reviews

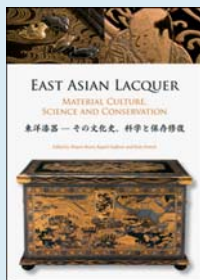
BOOKS

EAST ASIAN LACQUER: MATERIAL CULTURE, SCIENCE AND CONSERVATION

Edited by Shayne Rivers, Rupert Faulkner and Boris Pretzel

Archetype Publications 2011
ISBN: 978-1-904982-60-9

This is a very useful book for anyone interested in Oriental lacquer. In effect, it is a well presented and expanded set of post-prints of the 'Crossing Borders' conference held at the Victoria and Albert Museum in October 2009, which was itself inspired by the Mazarin Chest conservation project. Included is a Japanese translation by way of a pdf file on disk.



The Mazarin Chest is not only the most important Japanese export lacquer object in the UK but has also stimulated hugely valuable research and further dialogue between East and West in the field of lacquer conservation. This was sorely needed. Historically, lacquer has been poorly treated by Western restorers and conservators, with little understanding of its significance or of its properties. Hopefully, the days of a quick spit and French polish are behind us.

The book is split into three sections: art and social history, materials science and treatment practice – the three pillars of conservation. In all, there are twenty-one papers. Many relate in some way directly or indirectly to the Mazarin Chest. Others discuss different objects, primarily wooden, but there are papers on Japanese armour and the problems associated with lacquer applied to metal or hide, in addition to a very useful paper from Marianne Webb on the autofluorescence of lacquer.

The first paper is a thoughtful essay by Christine M.E. Guth on the tactile qualities of lacquer and the fact that 'museumisation' has set up boundaries between viewer and object which are artificial and run counter to their full appreciation. Usually one must rely on (often partial) sight alone. I am not pretending to encourage a sudden rush to facilitate the stroking of delicate and precious artifacts but it is rewarding to see movement towards a more tactile display of handling objects and facsimiles.

There is plenty in the early papers to stimulate the detective mind of the art and social historian, particularly Julia Hutt's cleverly illustrated discussion of 'how many Mazarin Chests' were there?' You will have to read the book to find out. Monika Bincsik's

fascinating research into various historic sales of lacquer ware illustrate how prized it has been, despite her use of a rather cheeky quote from Voltaire that 'the Asiatics have never excelled in any of the arts' and that 'true taste has been confined to certain countries in Europe'. Indeed, in a Paris sale of 1745 a 'cabinet with domed lid' fetched 1,400 livres. Two Claude Lorraine landscapes fetched 2,301 livres in the same sale.

Brenda Keneghan's paper is the first to delve into the materials science and testing of urushi. In no way meaning to denigrate the research, it illustrates the difficulties of constructing meaningful tests and replicating true ageing processes with accelerated ageing techniques. It was impossible to produce the exact micro-crack patterns found on the Mazarin Chest, which was the primary purpose of the research. The secondary purpose was to assess to what extent the urushi-gatamé (very thinly applied lacquer, removed from all surfaces, left only within the micro-cracks) technique might help consolidate a light aged lacquer surface. This is the first of many papers that, quite rightly, seek to justify the urushi treatments chosen for the Chest itself, choices which were bound to raise eyebrows amongst some members of the Western conservation community. I must declare my hand and state that I am in favour (in principle, certainly not always) of the use of lacquer on lacquer objects as part of the conservation treatment.

Although most usually black, lacquer comes in many colours, and it is comforting to find Catherine Coueignoux's paper which addresses the possible colour change in blue, red and yellow lacquers which might be induced by an urushi-gatamé or suri urushi (thin wholesale lacquer coat) technique. It was also found that Paraloid B72 could be an effective consolidant for powdering lacquer surfaces without worrying levels of colour change or increase of gloss.

Arlen Heginbotham and Michael Schilling's paper on the various additives found in Japanese urushi pieces is fascinating. They admit that analysis can sometimes be inconclusive and then perhaps only state the presence of a material and not when and how it got there, but there is still sound evidence to suggest historic admixtures of Thitsi lacquer, wood oil, various drying oils, Persimmon juice and benzoin and shellac, which one would certainly not expect as part of anything other than a later applied coating.

The final two papers, written by Yoshihiko Yamashita and Shayne Rivers, who carried out most of the work to the Mazarin Chest itself, are primarily a discussion of its initial condition, followed by its actual treatment and as such offer a strong conclusion to the book. There is very useful supporting evidence as to appropriate solvent choices for both diluting and removing lacquer (for

the urushi-gatamé technique) allied to a strong image to show what mess can be made (to a test sample) if lacquer is clumsily applied and then cured. You do not see the true horror until after curing.

I did tire slightly of being told what lacquer is and the fact that it degrades in light, but slight repetition is likely in a set of papers where each writer needs to introduce the subject. I admit also to some disappointment when I heard that this was in essence a set of postprints and not a completely new work on the subject. Nonetheless, my disappointment was dispelled when I started reading. This is a proper hardback book with decent paper and good illustrations. There is a stimulating mix of art and social historical comment and research, scientific analysis and explanation, exposition of practical treatment choices and regimes, all written by known experts in their field. I thoroughly recommend it.

Alex Schouvaloff

Senior Lecturer London Metropolitan University

Lecturer City & Guilds of London Art School
Private Practice: www.decorative-art-services.co.uk

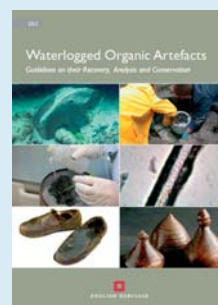
WATERLOGGED ORGANIC ARTEFACTS: GUIDELINES ON THEIR RECOVERY, ANALYSIS AND CONSERVATION

Angela Karsten [Middleton], Karla Graham, Jennifer Jones, Quita Mould, Penelope Rogers

English Heritage March 2012

Product Code 51748. Available as a free download from

www.english-heritage.org.uk/publications/waterlogged-organic-artefacts/



As someone with a soft spot for the old *Guidelines for the Care of Waterlogged Archaeological Leather* (English Heritage Scientific and Technical Publications Guideline 4), I had anticipated its update with mixed

feelings, fearing that its brevity and accessible style would be lost. The length of the old guidelines was four pages compared to thirty one pages for the new – but in fact they are a pleasure to read, packed with interesting information, engagingly written with plenty of illustrations and tables.

There are good reasons for this increase in size. First, the guidelines now encompass all types of wet organic materials and therefore offer a complete package. Secondly, as the guidelines apply to English Heritage funded projects, particularly *The Management of Research Projects in the Historic*

Environment (MoRPHE), more space is given to explaining the process to be followed. 'A typical project will often proceed through a number of stages ... and the role of conservation and finds specialists is described broadly in relation to these.'

English Heritage's role, amongst other things, is to provide expert advice on matters relating to the historic environment and its conservation. In this case it aims to set standards for processing archaeological organic materials in order to maximise the benefits to education, research and display. Led by its conservation team at Portsmouth, English Heritage's consultation on this subject seems to have been very wide indeed, judging by the guide-lines' impressive list of contributors.

The beginning is slightly disjointed, with a certain amount of repetition in the Preface and Introduction, both on page 3. On the same page the question posed by section 1.2 'What can waterlogged organic artefacts tell us?' is answered in a mere twenty five words without any reference to page 4, which has no heading but deals with this topic more fully. But these minor detractors are far out-weighed by the merits of the rest which follow in logical and orderly fashion. Starting with project planning, the condition of waterlogged materials and how they should be lifted and processed on site, the focus moves to recording, examination, analysis and conservation.

There is an excellent balance of information interspersed with case studies and specialists' views giving the text an airy quality. In addition, this publication conveys the rarity of organic artefacts, the thrill of their discovery and the fascinating techniques used to study and preserve them. Among its intended audience, described as 'anyone planning for or working with waterlogged organic artefacts, including archaeological curators, archaeologists and specialists', these guidelines will surely be welcome. It is worth its weight in gold.

Esther Cameron DPhil, FSA
Honorary Research Associate
Institute of Archaeology, Oxford University

CONFERENCES

TAKING THE ROUGH WITH THE SMOOTH
Icon Textile Group Annual Forum
Victoria & Albert Museum London
16 April 2012

.....
Treating textiles with decorated surfaces was the agenda of this year's textile conservators' Forum: *Taking the Rough with the Smooth: Issues and Solutions for Decorated Surfaces*. It was a very well attended conference with many familiar faces present but good to see some new ones too.

The day opened with a presentation from **Leanne Tonkin** (The People's History Museum), which highlighted the challenges that arise when faced with modern acrylic on a painted banner, an increasingly important issue. She focussed on a treatment for consolidating the paint without swelling the acrylic with the use of white spirit.

Miriam McLeod (National Museums Scotland) followed with a discussion on the use of Funori, Japanese seaweed, to consolidate an Indian Jain painting in order to secure the powdery paint while maintaining the matte surface. This dovetailed well with **Rachel Phelan's** paper, which also focused on the conservation of a Jain painting, in this case consolidated with a solution of Bermocoll® applied using a nebuliser. It was then lined using a method commonly practised in paper conservation.

We were also treated to a snapshot of **Dinah Eastop's** continued work on the sample books, part of the Board of Trade Design Register held at the National Archives in London. Dinah's research has focussed on widening access to this exceptional resource, while keeping handling to a minimum. With the use of polynomial texture mapping, a computer programme that allows the user to interact with the image by changing the scale and lighting, these resources are hoped to reach a wider audience. Haptic technology, a tactical feedback technology, has also been explored enabling the user to feel the samples virtually.

Kysnia Marko, Rachel Langley and Philippa Sanders (National Trust) discussed the ongoing treatment of a large 16th century appliqué wall hanging from Hardwick Hall. They explained the use of a specialised modular table, which has been developed to enable treatment of an object too vulnerable to roll, allowing access to the centre of hanging. They also described public engagement opportunities through the use of a time-lapse film and postings on Facebook.

As **Vivian Lochhead**, the chair, so succinctly concluded, the day emphasised the importance of collaborative work across all areas of expertise, the ingenuity of many conservators and the need to use technology and social networking services to raise the profile of conservation.

Jessica Burgess
Textile Conservator
Textile Conservation Ltd

THE STATE OF THE ARTS: EARLY TEXTILES AND THEIR STUDY
Kings College London 28 January 2012

.....
This workshop was jointly held by the Early Textiles Study Group (ETSG) and the Centre for Hellenic Studies at King's College, London. The introductory text read 'After agriculture, textiles have been the most

important form of production in all societies from the Neolithic to the Industrial Revolution. In recent years, many new discoveries have been made of textiles and clothing, fragmentary and complete, of prehistoric, ancient and medieval date. This workshop aims to introduce research into this wealth of material to specialists in other areas and the public at large'.

Margarita Gleba gave an excellent introductory talk at this very well attended meeting. The speakers that followed presented on specific projects and areas of research or took a broader view, looking at the history and development of the study of textiles, leading up to current practices and concerns. These were Lisa Monnas, Jane Bridgeman, Elena Phipps, Hero Granger-Taylor, John Peter Wild, Sophie Desrosiers and Lise Bender Jørgensen. Some themes which emerged included the current perceived poor status of textiles, how this is reflected within our education system and museums, and the lack of accessibility of archaeological and historic textile collections and thoughts on how this might be improved.

Elena Phipps, who worked at the Metropolitan Museum, New York for thirty four years (now retired) gave an overview of the role of the textile conservator and the importance of a thorough understanding, by conservators, of the textiles in their care. She also discussed her involvement in the Antonio Ratti Textile Centre and Reference Library, where the Metropolitan Museum's textile collections are newly stored. As part of the project an image database has been created so that the entire collection is available to view online, there are study rooms to examine the textiles themselves and a library. Elena looked at ways in which conservation has contributed to the accessibility, visibility and safety of the objects and also emphasized the crucial importance of publishing research in order to further disseminate information.

In an interesting discussion at the end of the day, the question was raised of how textiles can be made more available and visible, whilst recognising that long-term conservation and preservation concerns are increasingly understood as being of great importance. The huge benefits of the availability of images on-line was highlighted, as well as the importance of including archaeological textiles, with good interpretations, in museum displays to give the public a comprehensive view of the past, as well as attracting visitor attention. On a positive note, an increasing interest in archaeological and historic textiles is apparent and although this is not reflected in the number of permanent teaching or academic positions available or ease of access to the textiles themselves, opportunities for funding within Europe have



From the great chamber at Apethorpe Hall (Northamptonshire), during restoration: the 1620s cast lion mask (l) and the 1740s hand-modelled version (r)

increased and there are a number of exciting research-led projects currently underway, such as at the Danish National Research Foundation's Centre for Textile Research (CTR) at the University of Copenhagen.

Anna Harrison, Senior Organic Artefacts Conservator, The British Museum

I would like to thank Pippa Cruickshank and Sherry Doyal, The British Museum, London and Frances Pritchard, The Whitworth Art Gallery, Manchester.

CONSERVATION OF HISTORIC ARCHITECTURAL PLASTERWORK

Day Two of a two day event
Icon Stone and Wall Paintings Group
Bristol 9 March 2012

David Odgers was Chair for this second day of a two day conference. (Day One was held in September 2011 – see review in Icon News issue 38.) The Mansion House at Clifton Down in Bristol was one of the best venues the Group has used, which contributed to a friendly and informal atmosphere. (The ladies powder room even included a chaise longue!).

John Stewart and **Alison Henry** (English Heritage EH)

John Stewart described the aims of the present volume on 'Mortars, Renders and Plasters' from the EH Practical Building Series; a significant and timely update from the first volume some twenty five years ago. Alison Henry expanded upon the significant changes that have been made, in particular an account of the nature of fat lime mortars (with and without pozzolana additions), the range of hydraulic limes and cement.

Claire Gapper

The outstanding range of decorative plaster work ceilings in Apethorpe Hall (Northants) dating from the 1620s and 1740s were described by Dr Claire Gapper who completed a thesis on London plasterers in the 16th and early 17th centuries. As a result of research she was able to identify the plasterer responsible for the 1620s ceilings at Apethorpe as Edward Stanion. Claire's thesis can be consulted online at: www.clairegapper.info/index.html.

Simon Swann (Simon Swann Conservation)
Simon showed a number of examples of

plaster conservation to illustrate his talk which reviewed conservation techniques. It was a very frank (and courageous) account, describing both successes as well as unwelcome difficulties.

Alan Flood (E I Flood Plastercraft)

Very much from the angle of the skilled practitioner, which he is as a result of fifty years' experience, Alan described a variety of projects, which he and his brothers have undertaken, ranging from work on a newly built Buddhist temple to Tesco; sprinkled with entertaining anecdotes. This hands on approach is well illustrated in his recollection regarding mature lime. Mature lime is important in cast work to avoid shrinkage his father explained to him, and mature lime putty can be distinguished from newly slaked lime by sense of smell.

Ian Bristow

Ian Bristow's pedigree is well known to those in the field, and this well researched paper discussed the use of exterior renders used between 1780 and 1860, focussing on London. It was a time of much experimentation with renders based on lime, hydraulic lime, early cements and oil mastics. The atmosphere in London and sooty deposits from fires meant that buildings became dirty very quickly, the result being that many were painted.

Emma Norris (Humphries and Jones)

The Poulett Chapel in the parish church of Hinton St George (Somerset) contains, amongst others, an elaborate monument to the first and second Lord Pouletts decorated with scagliola. By chance it was recorded by Lorenzo Medici when he visited England in 1660s, and is the earliest recorded scagliola monument in the country. The programme of practical conservation is facing up to issues including damage from water ingress and rusting iron fixings.

René Rice

A seventeenth century fire damaged ceiling in Totnes, where René is currently working, was the subject of this paper. Part of the ceiling had been knocked down by the fire brigade to deal with burning above the ceiling and below the floorboards of the room above. A few fragments were rescued and are being incorporated into the repair work to the ceiling which includes securing

vulnerable original plaster and undertaking the restoration of lost areas with flatwork, run corning, cast ornament and freehand modelling.

Douglas Carpenter

Two examples of decorative plaster conservation undertaken by Cliveden Conservation were described by Douglas Carpenter; two friezes at Chirk Castle (C17) and St Michaels Mount (late C16 / first half C17). At Chirk Castle the condition of the decorative frieze was such that it had to be taken down section by section, treated and relocated. Pieces of wood were used as armatures for guns and spears portrayed in the hunting scenes from St Michaels Mount.

The SWP committee thanks all those who supported this conference, in particular the conference organisers Berenice Humphries, Vicki Roulinson and Simon Swann, and David Odgers for managing the day as chair.

Peter Martindale

The Manners family badge, a peacock.





Practising the correct use of the box strapping equipment



The group assesses the relative merits of the packing materials

COURSE

CRATES AND COLLECTIONS CARE: PRESERVATION FOCUS FOR BOOK MOVES AND STORAGE COURSE **Icon Book and Paper Group Co-operative Training Register (CTR) 2012 course programme**

The Ogilvie Vaile studio, Birmingham
Museums and Art Gallery
23 February 2012

With participants travelling from as far as Edinburgh and Kent, the Crates and Collections Care course, presented by **Caroline Bendix**, drew conservators from all corners of the UK to Birmingham to discover and review issues surrounding the movement and storage of collections. For this latest Book and Paper Group CTR course, the delegates represented an encouragingly diverse cross-section of the Book and Paper Group and other conservation backgrounds, with several participants in private practice as well as institutional members from both national and regional organisations. Many were currently involved in book move projects, making the course timely and especially relevant to their working roles. Caroline Bendix delivered a comprehensive programme on the subject combining both theoretical sessions interspersed with practical demonstrations and exercises to give all participants the opportunity to put her methods and advice to the test.

The day started with an overview of the mechanics of packing and moving book collections, based around the tools needed – physical and metaphorical – to evaluate and accomplish both the process and the procedures for any move, large or small. Using her extensive experience and a case study as an example, Caroline took us through the necessary considerations for planning and executing a successful relocation project. This was geared specifically towards book moves but the information could be extrapolated to the movement of other collections too. The session highlighted important

considerations, for example the need for hidden risks to be assessed such as floor loading, the organisation of equipment and manpower and the assessment of collections prior to packing and handling. The theoretical knowledge we gained was then immediately reinforced by a lively practical session covering packing, wrapping and crating, using books from the art library at the Museum. This saw participants enthusiastically wielding the strapping equipment and assessing the most effective and economic methods for packing, wrapping and crating, in terms of materials, manpower, time and, most importantly, the care of the collection.

The next three sessions moved on to wider environmental concerns connected to the storage of collections, starting with a presentation on moulds and pests and the

effect environmental conditions had in controlling them. Here we learnt how library and archive materials could be ranked in accordance to their vulnerability to attack and how this could be used as a rough measure for humidity issues within the affected collection. A practical session involving matching damage to pests and mould consolidated this very well, using some incredible examples of damaged items that Caroline had collected – a sort of grim cabinet of pest curiosities.

The next presentation on effective housekeeping and the nature and prevention of dust highlighted how timely, non-interventive measures can prevent or minimise the need for costly and potentially damaging wholesale cleaning of collections. We learned how screening and protection both on an individual and at a collections

Matching the creature to the damage with Caroline's 'grim cabinet of pest curiosities'





Crates packing: Working out the most effective and economic way to line a crate.... And succeeding!



level could minimise the deleterious effect of dust as well as practical measures for both temporary and permanent screening and storage issues.

The final session was concerned with methods for improving storage and shelving for book collections as a very cost-effective means of prolonging their life. It was again reinforced to the group that timely intervention to solve issues was imperative to prevent costly solutions from being necessary. The course concluded with a series of slides showing a storage and shelving 'rogues gallery': the negative outcomes of poor storage decisions and the effects of not addressing simple preservation issues being illustrated very clearly. It gave us the spur we all sometimes need to respond to poor environments and storage as we come across it and not wait until it arrives on our benches as a repair.

An extra bonus to this course was a visit to the conservation studios of the Collections Department of the Birmingham Museums and Art Gallery where the Staffordshire Hoard is currently undergoing treatment. Here conservators Deborah Magnoler and Cymbeline Storey showed the Crates course delegates aspects of the collection currently being conserved and explained their treatment approach. This was literally a golden end to an energetic, informative and good-humoured training day.

The CTR committee would like to thank Caroline Bendix warmly for her very well-received presentations and comprehensive overview of the subject. We would also like to thank Louise Vaile, Deborah Cane and all at Birmingham Museums and Art Gallery, who allowed us to use their facilities at the museum for this course and for allowing us to have the opportunity of seeing their work on the Staffordshire Hoard project in action.

Victoria Stevens ACR

TALK

THE ROYAL COLLECTION: BACK TO FRONT. MARKS, LABELS AND SEALS ON THE BACKS OF PAINTINGS

Icon Paintings Group

London 14 February 2012

Continuing the Paintings Group's occasional series of talks, **Christopher Stevens**, an accustomed Icon speaker, shared with the Group his discoveries and those of others, of marks, labels and seals and other diverting

and historically pertinent finds on the backs of paintings and selected decorative works of art. As Superintendent of the Royal Collection, based at Hampton Court Palace, one of his varied roles is to prepare objects and paintings for exhibition. This involves close scrutiny and appraisal of the whole object, including areas normally concealed to the viewer. This process can yield information which augments our knowledge and appreciation of an object, provides clues as to its date and ownership and reveals evidence of events in history to which it bore witness.

Stevens began by describing the genesis of the Royal Collection's inventorial system, which was instituted by Robert Peak at the wish of Henry Prince of Wales (1603–1612). It was subsequently Charles I (1600–1649) who created the post of Surveyor of Pictures, first held by Abraham Van der Doort in 1625. His tasks were to care for the paintings, prevent damage 'soe much as in him lyeth' and record location, giving him access to galleries and chambers across Whitehall and other houses of resort. It was a heavy burden of responsibility. In 1640, he misplaced one of the collection's miniatures and was told he was not up to the job. Van der Doort was so distraught as to commit suicide. The inventory of 1639 can be found at the Ashmolean Museum. Notable entries include a record of the procurement, location and provenance of Caravaggio's 'Calling of Saints Peter and Andrew', 1602–4, described as a group of 'halfe figures soe big as ye life' and 'Portrait of a Lady in a Turban', c.1530–1535, a painting of the Italian School listed as damaged by quicksilver on its journey from Mantua.

Stevens next showed a number of slides which illustrated the practice of branding early inventory marks on the backs of panels and of stretchers, where 'HP' stood for Henry Prince and 'CR' for Charles Rex, the latter of which Stevens has described in other European collections. The maker's mark of the Antwerp Guild, three towers and a hand print was also shown branded onto panels.

The reverse of Marco d'Oggiono's painted panel 'The Infant Christ and Saint John Embracing', c.1500–30 harboured a surprise of a different sort, a trompe l'oeil painting of a lightbox. Whether both sides were intended to be viewed or not, damage and abrasion to the trompe l'oeil surface demonstrates that a value judgement was made long ago.

Examples of highly decorative wax seals from the collection imprinted with the

reigning Monarch's arms included that of Henrietta Maria, where an elaborate knotted rope border enclosed a shield with the arms of Charles I. This was found on the back of Domenico Puligo's painting 'Portrait of a Lady' c.1520. The arms of William and Mary were also shown on the base of two covered Chinese ginger jars, c.1640.

Whilst close inspection of the reverse of a painting can sometimes add to our understanding of its painted surface, it may also provide clues to the life of the composite parts, prior to their being assembled in the current form. The wooden panel support of 'Rabbi with a Cap' in the Style of Rembrandt, 1635, displayed several labels but additionally bore a large inset mark of a handle or bracket on the left side, suggesting it may once have been part of a working door.

A variety of labels such as exhibition labels, Colourmans' trade labels and those hand-written by owners and conservation or curatorial staff, were shown, in order to highlight their value as tools of varied use. They can support or render less firm postulations about date; they can provide instruction by imparting information about the owners and their lives; they may record where artwork travelled and mark historical events to which it was subject. On the backboard of Sir John Lavery's portrait of HRH Prince of Wales, 1913, amongst the brief hand-written notes detailing conservation of the frame and support, reference is made to the checking of wedges and glazing after the Israeli bomb blast in August 1994. 'Pieta', c.1520–30, attributed to Gerard David and Workshop was stolen in 1969. A photograph, kept with the now recovered painting, has a hand-written note on the back stating that the image is that of the stolen painting and giving the date and location of the theft. This is initialled ER, which may stand for Elizabeth Regina, Queen Elizabeth II. The note was later added to in different coloured ink and in the same handwriting recording the date of the painting's return, the sentence given to the thief and the unfortunate demise of his wife from a heart attack when she was taken to Aylesbury Police Station.

The 'History of Alexander Series' tapestry, dating from the early 18th century, was Steven's next object of discussion. For years, side pleats of the tapestry have been hidden, along which colour has remained vivid and unfaded by years of light exposure. These enable the viewer to see passages of the work just as the artist saw them at the moment of creation. An examination of identity marks on Delft earthenware served to conclude a most interesting and informative evening.

Angelina Barros D'Sa
Paintings Group

in practice

Conservation Techniques: Loss of Enamel

by Joy Bunclark ACR of Canterbury Cathedral

INTRODUCTION

One of the problems facing stained glass conservators is the loss of paint and enamel. When large areas or indeed intermittent spots of enamel are missing, the eye is drawn to these areas, detracting from the image or in worse cases rendering the image illegible. This is particularly significant when the image in question carries written or heraldic information.

There are several ways to restore its legibility, and this article explores the ways in which this problem was dealt with in the case of two projects at the Cathedral Studios, Canterbury and one at the York Glaziers Trust.

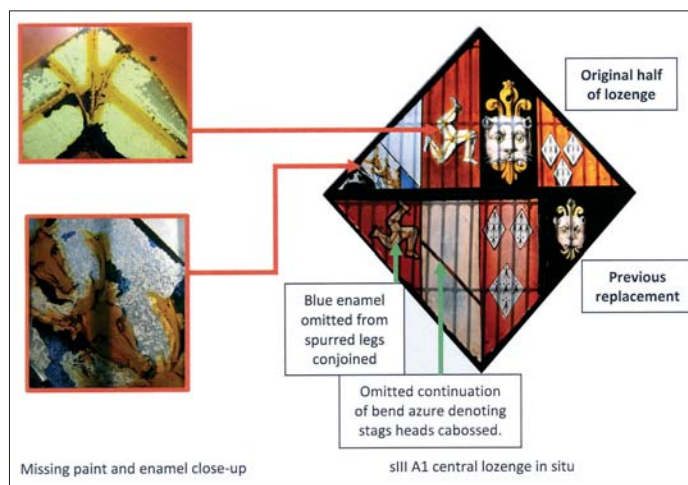
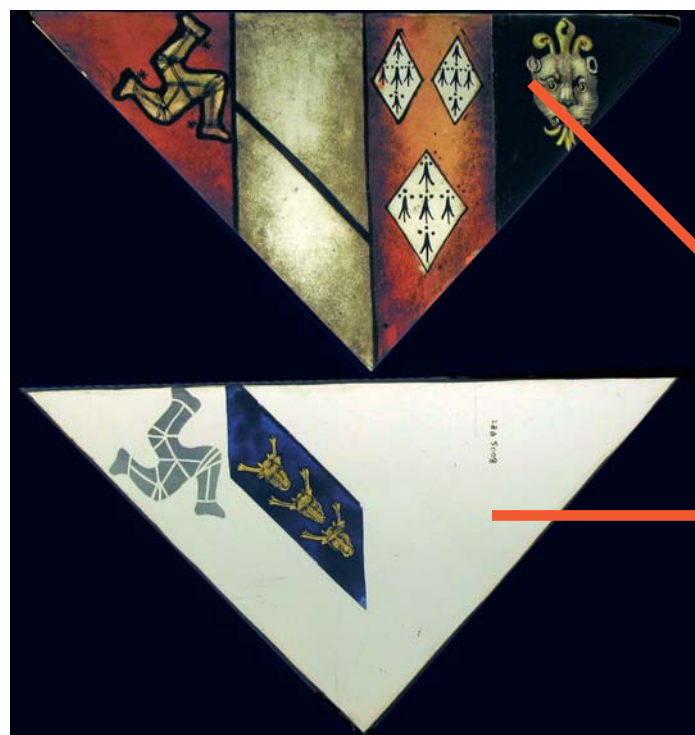
Project One: St. Pancras Church, Chichester, West Sussex

The Cathedral Studios, Canterbury

The project involved two heraldic panels dating to 1749–50. One of these, sIII A1, shows the arms of Mary Countess of Derby, who contributed towards the building of the church.

The glass was painted largely in warm browns with blue enamels and sanguine. The brown paint had suffered some

The previous replacement shown (above) and the new back plate (below)



The central lozenge of panel sIII A1

losses overall but was stable. The enamel had flaked off quite extensively, exposing a rough glass surface. There were several glass fractures and one small missing fragment from each panel. The lead matrix remained the original with many fractured solder joints.

Under magnification, thin fibres could be seen on the surface of sIII A1, as though the window had been previously 'cleaned' by a cloth. Unfortunately, this action probably assisted in removing loose enamel.

Previous conservation

In sIII A1 three pieces of glass had been replaced in situ, including half of the central lozenge. Here, the glass and paint had been poorly matched and it was precariously ill-fitting. Heraldic devices had been partly omitted or misunderstood.

Current conservation: painted back plates

The main concern was to restore clarity to the coat of arms; visually to 'correct' the images of both the original and replacement halves of the lozenge of sIII A1, with minimal intervention to the glass or lead. The correct heraldry was researched and verified.

The replacement and back plate together



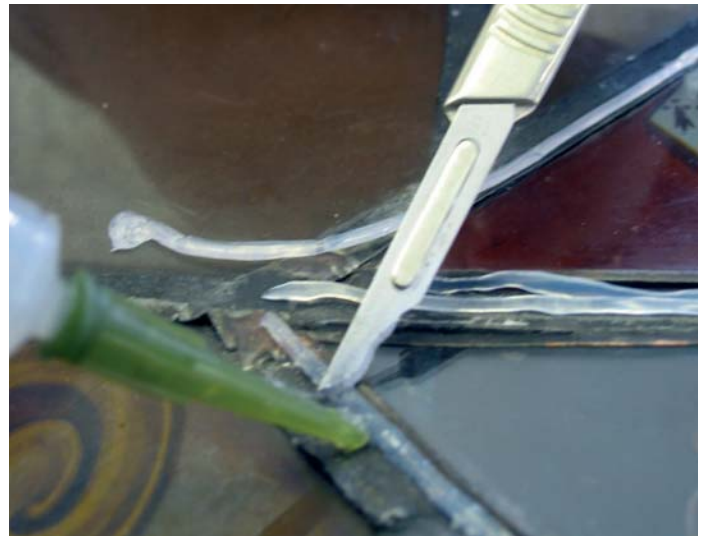


The reverse after attachment of the back plates

Dental wax moulds were taken from the back of the historic glass. These were used to make impressions in a kiln bed of powdered whiting. 1.3mm float glass plates were fired in the impressions. Distorting them to follow the contours of the historic glass would prevent pressure points between the two layers as well as give a subtler surface. The plates were painted to reproduce the areas of missing paint or enamel. They were edged with copper foil tape that was then tinned and blackened. The plates were attached to the back of the panels by soldering at existing solder joints. Lengths of Silirub® acid-free clear silicone 'strings' were formed via a syringe. Once cured, the strings were attached along the edge of each plate with fresh silicone to ensure a good seal, thus preventing the invasion of the interspace by small insects.

Result

The overall result was successful, as the aim to restore visual legibility was achieved in a reversible way. From the back, the blue enamel appeared quite vivid, although through protective glazing and from normal viewing distance the outer surface is hardly visible. The overall conservation treatment of



Attaching the silicone 'strings' to the panel

the panels will ensure the long-term preservation and stability of the glass.

Project Two: Little Easton Parish Church, Essex

The Cathedral Studios, Canterbury

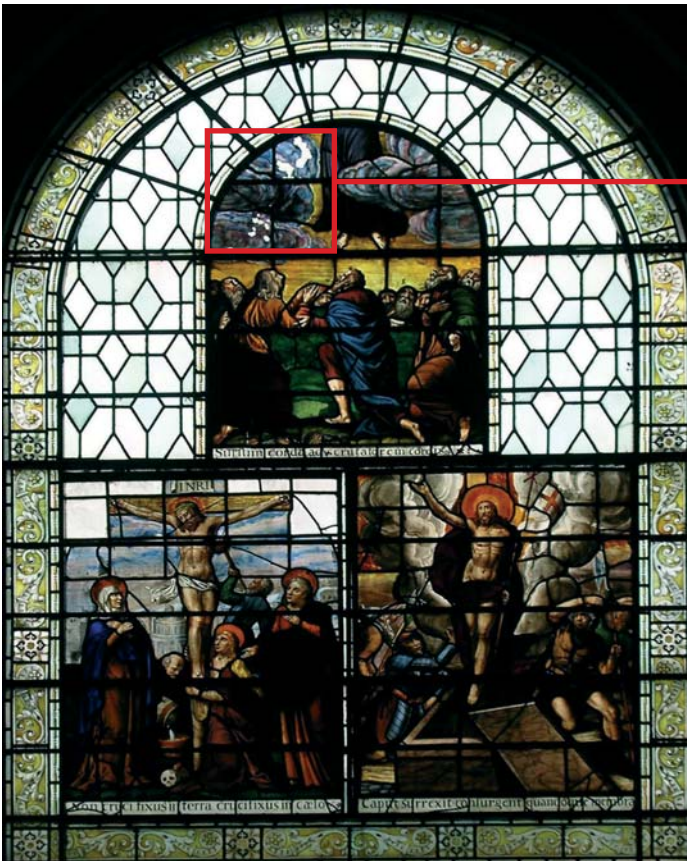
Two windows, sIII and sIV, were made up of several 17th century stained glass panels that had been reordered to fit this space in the late 19th/early 20th century by incorporating new border glass. Depicting Biblical scenes, the 17th century glass was painted in brown paint and blue and purple enamels. It had suffered extensive loss of paint and enamel.

To stabilize the flaking enamel for safe handling and removal, cyclododecan® was applied on site. After it had sublimed in the studio the enamel was consolidated with Paraloid® B72.

Panel sIV 7 had two pieces with extensively missing enamel. Dental wax and plaster moulds were used to kiln-form 1.3mm float glass plates, which were painted to recreate the missing enamel. They were then attached in the same way as for the



The Chichester heraldic panel, sIII A1, before conservation on the left and after conservation on the right



The Essex project. Left the sIV full widow before conservation. On the right, the highlighted panel (sIV7) depicts *The Ascension* in reflected light and shows missing and flaking enamel

Chichester panels. This time 'Rhodorsil CAF 33® (black) silicone was used to create the 'strings'. Black silicone was chosen this time to reduce the visibility of the copper-foiled edges of the plates through the glass.

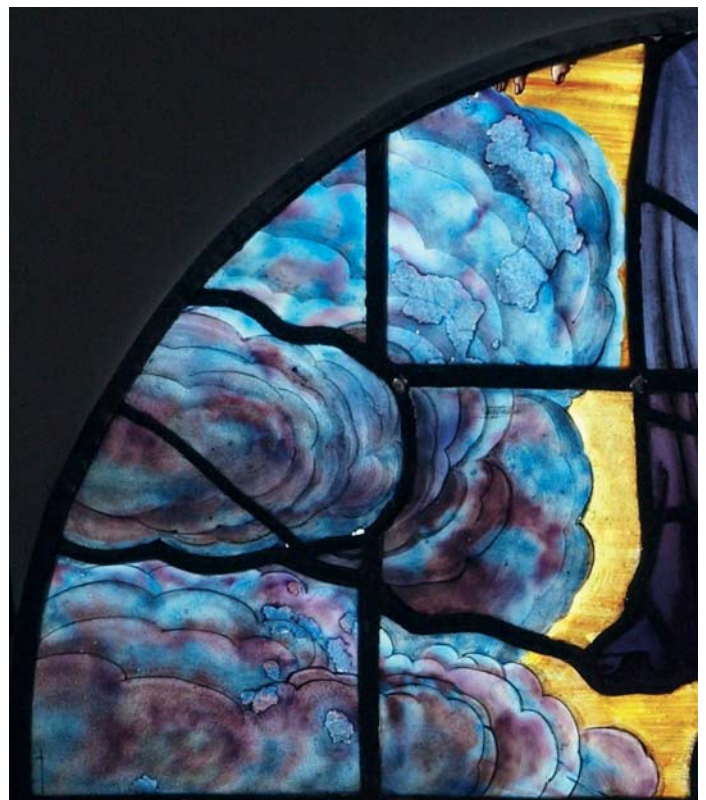
Panel sIII 4, *The Crucifixion*, had a large piece of glass with a small area of missing enamel near the edge. In this case, I was reluctant to create a full-size back plate, favouring a more discreet solution. Here, a small, 'localised' back plate was made. It was cut slightly larger than the area to cover, to

compensate for parallax when viewed in situ. After painting it was copper foiled and attached by solder to the adjacent lead. A 'string' of clear silicone was attached to seal around it. See images on page 36.

Result

The areas of missing enamel were well disguised, the visual impact of the loss greatly reduced.

Left *The Ascension* sIV 7 before conservation and right after conservation





Detail of slll 4 *The Crucifixion* before conservation



After conservation: missing enamel with local back plate

Project Three: New College, Oxford

York Glaziers Trust

The idea of localised painted back plates was further developed and adapted by Rachel Thomas to suit another project. Here, blue enamel loss occurred in several small lacunae that were grouped over three areas on a large piece of glass. 1.3mm float glass was cut to follow the shapes of the two general areas of missing enamel, and painted. The plates were edged with trimmed copper foil and suspended above the back surface of the glass on a network of blackened copper wire that had been shaped, where possible, to follow paint lines. The copper wires were attached to the surrounding leads by solder. One small 'medallion' of painted glass can be seen near to the edge of the glass, attached by solder.

In this case, the back plates were not sealed around the edges but a gap of 2–3mm was maintained between the new and historic glass by small cushions of cured silicone that had been previously applied to the plate. This would allow space for any dust or insects to pass through without getting trapped and built up. In the Chichester and Little Easton panels, the plates were moulded to fit the contours of the original glass, and so they did have the potential for build-up if they had not been sealed. This adaptation demonstrates another successful result, as the missing areas of enamel are much less visible.

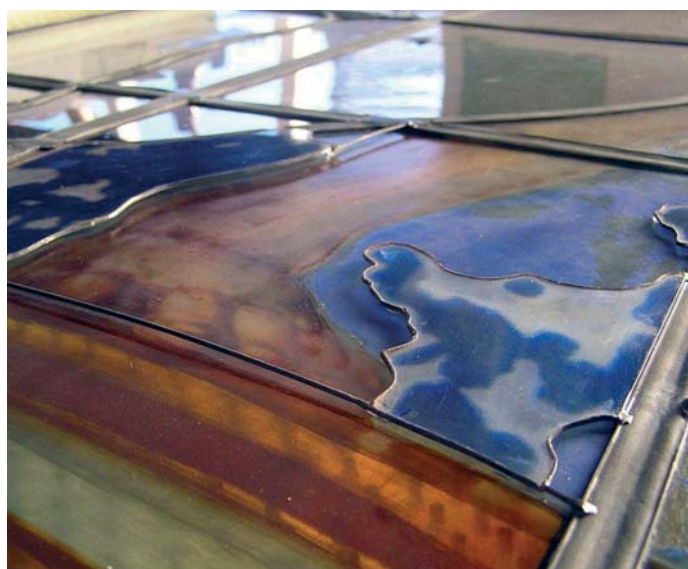
CONCLUSIONS

These methods work particularly well for the Little Easton and New College windows, as their bold, vivid colours and painting styles allow the dark edging of the plates and the wires to carry out their functional roles without being conspicuous from a normal viewing distance. These 'mini-structures' may not be as successful for windows with lighter coloured or more transparent glass.

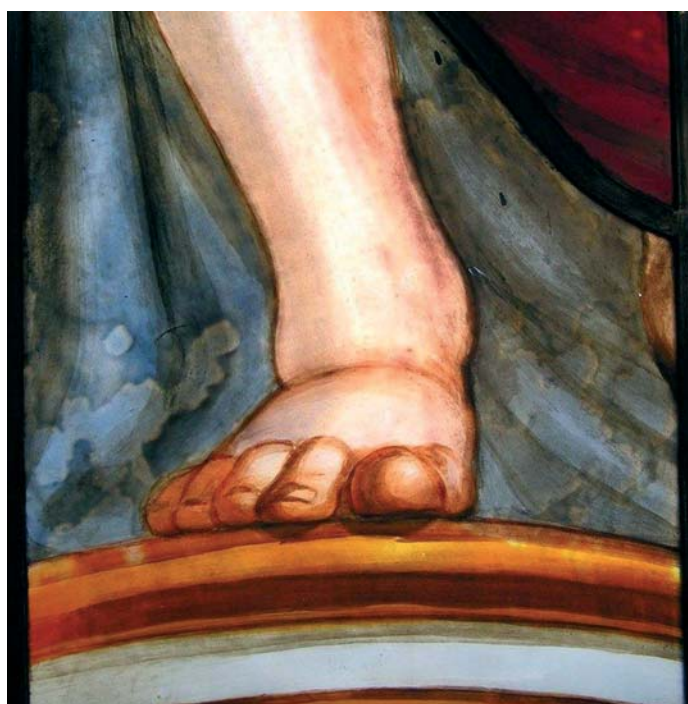
I think that the greatest merit in these applications is that they are non-invasive and fully reversible. The only permanent changes to the panels are the solder joints. These methods have the potential to be further developed, although the key is to adapt the basic principles according to the individual circumstances and requirements of each case. Furthermore, all of the windows featured here were returned to their locations with protective glazing. These plating methods may not have been suitable for unprotected glass. Extra care also has to be taken in lifting and transporting the panels, so as not to disturb the silicone seals or to put pressure on the plates until they are safely reinstalled.

The development of these techniques has been a collaborative effort amongst colleagues, both within the

Cathedral Studios and between our conservators and the York Glaziers'. I would like to emphasize the benefits and value to be found in the sharing of information and ideas amongst studios.



The Oxford project: reverse after conservation above and the front after conservation below





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Barocci, Federico, The Institution of the Eucharist (1603), The Fitzwilliam Museum, Cambridge, United Kingdom. Work glazed with Optium Museum Acrylic.
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