

Conservation of Archive Material: Handling, Storage and Environment

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National Records of Scotland
Conservation Services Branch

COMMUNITY
ARCHIVES ACTIVITY
DAY

Welcome to this training event which is being run by Scottish council on Archives.

My name is Peter Dickson and I work in the National Records of Scotland as an Archive Conservator, specialising in book conservation..



First a wee bit about the institution known as National Records of Scotland.

The NRS takes under one cover the following recording and record admin bodies. The National Archives of Scotland, Registers of Scotland, Census and Statistics.

NRS currently has In the region of 90,000 linear metres of records stored in four repositories 3 of which are in central Edinburgh sites and one of which, Thomas Thomson House is on the western edge of the city.

This image shows records in one of our stores at TTH

We work closely with the National Register of Archives Scotland to offer support, guidance and advice to private owners of papers throughout Scotland.



Mould and Pest

This slide demonstrates the need for environmental monitoring and good housekeeping

Today, the intention is to provide guidance for Archivists from family, private and community archives who are considering undertaking a limited amount of preservation work or perhaps a re-packaging project on their collections.

This training day will show you how to mitigate the potential for deterioration to your collections by using archival standard packaging, some common sense and a little digital dexterity.

We will discuss the various types and standards of packaging available.

We will also be having a bit of fun with badly folded paper and tightly rolled plans, I'll be showing best practice in how to handle these items which are typical examples of poorly stored archive docs.

National Records of Scotland

Thomas Thomson
House

Conservation Studio



This is our purpose built conservation studio.

The studio is situated in Thomas Thomson House our most recently built repository.

Opened in 1995 its coming up for its 25th anniversary a year come May.

This studio represented a major improvement to the working environment of conservators. Until then we had been struggling in the basement of this building (GRH) with insufficient natural light and cramped working conditions. The studio was designed with input from the conservation team led by Linda Ramsay.

The studio is staffed by a team of nine conservators.

A point worth talking about is the wealth of informative video guides on everything.

We are a team of nine fully trained and qualified conservators and as you can see we work in a bright, spacious and well equipped studio.

So if things were to go wrong during an interventive treatment we have the

experience, the skills and knowledge, the resource, the equipment and the support of colleagues to help avert disaster.

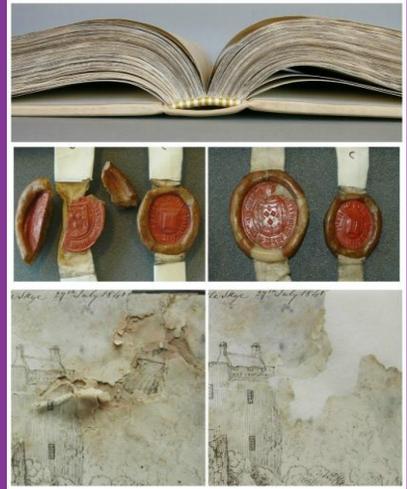
'How to' type videos as shown on social media platforms such as You Tube can provide much useful information.

They don't however provide adequate training in the discipline described and like so many other things in life, these videos make it all look so easy.

The invasive repair techniques which are popular subjects are not so easy to carry out and unintended irreversible damage can be done to original documents.

What an Archive Conservator Does

- Bench Work.
- Casting Seals for Letters patent and commissions.
- Monitoring and Housekeeping.
- Condition Surveys.
- Provide training to Archive Staff.
- Handling of Sensitive Material.
- Cleaning and re-packaging of accessions.
- Conservation support to branches including materials



Bench work;- Carrying out interventive repairs on the collections to fulfil search room requests, also to support the exhibitions and projects undertaken by colleagues.

This can involve book conservation and repair, paper conservation and repair, vellum and parchment repair, repair of maps and plans, repair of seals and Conservation of photographic material.

Every item worked on also has a condition report carried out prior to conservation. Before and after photographs are taken and a report of treatments, materials used, number of items worked on and time spent on the physical conservation.

Casting seals for letters patent and commissions are some of the other tasks and duties preformed by conservators.

Monitoring of our repositories to measure Temperature and Relative Humidity. We are also currently involved with monitoring GRH for Vibration, Dust, and Pests due to on-going works at St. James Quarter.

Condition Surveys We undertake Condition Surveys, which are essential for identifying and mitigating any problems prior to collections coming into our archive storage.

Exhibition Preparation, We provide conservation support to exhibitions. This can involve commissioning cradles for exhibits, checking light levels, condition reports before and after. making exhibits presentable. Mounting the exhibition to the spec agreed with the exhibition designers.

We provide regular training events for staff, and engage with the wider Archive and Conservation world and associated societies.

Handling of sensitive material, involves cleaning and repackaging (always in suitable archival quality packaging) of sensitive accessions.

Conservation support to braches includes supply of archival standard materials and the procurement of suitable preservation tools.

Monitoring movement due to potential vibration caused by construction works on three different sites close to our 18th century purpose built archive.



As we have seen the duties of an archive conservator are many and varied.

Here we are measuring the amount of movement in relation to the vibration caused by the massive construction site on our eastern boundary. Works are also on-going on the Northern boundary.

I currently have four movement sensors sited round GRH. There is one behind you on the frame of the Raeburn painting.

We conduct surveys, carry out monitoring of a range of potentially harmful environmental conditions and problems which can include Temperature, Relative Humidity, Light, noise, vibration, movement, dust and pests.

Personal
Protective
Equipment
Must also be taken
Seriously.
Disaster Response
must be taken
seriously.



Personal Protective Equipment should be kept on hand.

We keep a stock of Tyvek onesies and disposable lab coats, nitrile gloves, dust masks, respirators, eye protection, steel toecap boots, high viz vests and hard hats.

I would suggest that you at least keep some nitrile gloves, eye protection, dust mask and lab coat. The rest of the equipment we keep is for disaster response.

Disaster recovery and call out is part of our job.

A deeply unpleasant task.

Less glamorous part of the job.

Dealing with records left on the floor adjacent to a leaky soil pipe.



More deeply unpleasant work.

The caption says it all really.

What's happening here is these volumes which were damaged, damp, mouldy and had traces suspected of being number 2 in origin.

Here the volumes are being wrapped in cling film before being deep frozen.

Our next move was to dry the volumes out, clean of loose dirt with a soft brush, further cleaning as required with a chemical sponge and then de-nature any mould using Industrial Methylated Spirits.

A
Good
Example



Of
Bad
Storage

An unusual location for the storage of records.

As you can see the boxes on the floor are in a rather disgusting state.

This is wrong on several levels.

Not only are they vulnerable just by being on the floor, they are also vulnerable from badly aimed toilet emissions including leaks from the soil pipe.

They are also in close proximity to an external wall.

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Declaration of Arbroath.

Letter from the barons and freeholders
and the whole community of the
Kingdom of Scotland to Pope John XXII,

Dated at Arbroath, 6 April 1320



The next few slides will show some of my personal favourites from our collections.

This is perhaps the most famous document we hold. The Declaration of Arbroath.

The Declaration will be 700 years old next year and was recently awarded a place in the
UNESCO Memory of the World' register.

Itemised account book of the
Royal Household
1534-1535



I love this image of a Unicorn taken from an itemised book of accounts of the Royal Household.

This Unicorn is the full cream version with spiral horn, the goats beard and the cloven hoofs.

The Ledger Of Andrew Halyburton

1497 – 1503



The Ledger of Andrew Halyburton is one of the oldest medieval ledger bindings in Scotland.

This volume was bound sometime in the mid to late 15th century, when the evolution of Vellum Bindings led to the development of the Ledger Binding.

The conservation of this volume was limited to removing unsuitable repairs and cleaning.

Andrew Halyburton Ledger Facsimile

**produced to learn
more about the techniques
used in the Halyburton Ledger.**



There was a lot to learn about the Halyburton Ledger.

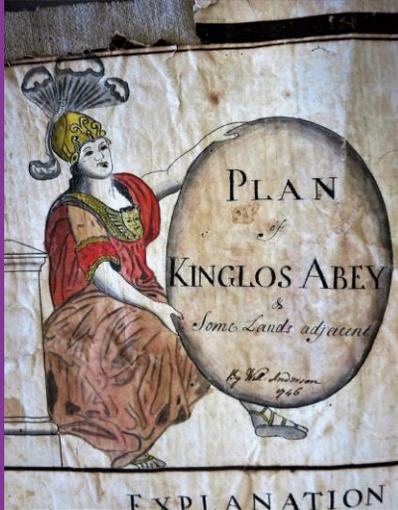
Producing this facsimile was an excellent way to discover what the binding had to show and tell us.

Many conservation bindings are based on elements of this style.

Use of archival standard materials. Here a vellum lining is pasted to the leather cover and prevents any acidic tannins from leaching into the book block.

The sewing supports, tacketing and lacing are also of vellum.

This is essentially a non adhesive binding, the only adhesive used here is paste to laminate the two cover materials together.



I found this before and after of conservation work in the camera we use to take such images.

The image shows the section of a map the whole of which has been conserved.

This area interested me due to the sighting of a small creature hiding in the feathered helmet.



Here is the previous image blown up enough to see the small creature, apparently a lion hiding in the feathered helmet.

BS EN 16893 :2018

Conservation of Cultural Heritage- Specifications for location, construction and modification of buildings or rooms intended for the storage or use of heritage collections.

BS4971 :2017

Conservation and the Care of Archive and Library Collections.

Paper, parchment;-

15c / 55-60% rh

Photos;-

5c / 20-35% rh



Re-packaging.

It is essential that temperature and relative humidity are controlled and kept within the limits laid out in

BS EN 16893 :2018

Conservation of Cultural Heritage- Specifications for location, construction and modification of buildings or rooms intended for the storage or use of heritage collections.

BS4971:2017 Conservation and Care of Archive and Library Collection.

Ranges vary according to specific need and BS EN 16893:2018 recommends an Environmental Strategy and gives no specifics but a generally between 16 - 20°C and 40- 60% RH for a wide range of archival formats of medium sensitivity can be recommended. Out with these ranges there are consequences to long term preservation.

Standards recommend for photographic media lower temperatures 15-18°C and between 30 - 50%RH

**Secure store and parchment 13-19°C and between 40-50%RH not to exceed 55% RH
“Keep cool dark and dry and steady temperature is always good”**

All records benefit from efficient packaging

Wrapped or boxed books and boxed documents limit the effect of environmental changes and restrict light.

Archival packaging is the standard to aim for. Acid free is the next best option.

Common types of packaging available from suppliers of conservation materials are:-

1. Four flap enclosures.
2. Guardees.
3. Gusseted wallet.
4. Clam shell box.
5. Bundle slips.

Some other items which serve to protect your collection.

1. Brass or otherwise non ferrous and not plastic paper clips.
2. Unbleached cotton tape.
3. 2B pencils.
4. Vinyl eraser.

Always make the packaging fit the object. For example please do not try to force a book into a slightly small box.

Also don't over fill document boxes.

Fragile items given further stability by storing in polyester sleeves. Do not seal all round, air circulation. **Static!**

For ease of use a polyester sleeve open on two sides is an option. Its far less footery getting fragile manuscripts in.

Please DO NOT use any of these. Calling it archival quality does not mean it necessarily is....

Sellotape. It is the tool of the Devil!, Very acidic with inappropriate, tacky adhesive.

Rubber bands, Off gassing. Perishes, shrinks and sticks.

Plastic/**PVC** non-archival sleeves or containers, Off gassing

Sticky photo albums, Its never good to introduce adhesives to archive photographs / docs.

Any fasteners that can corrode. Staples and paper clips are generally steel and will corrode/rust quickly where RH is higher than the recommended level.

Please DO use these.

Packaging is obviously an important part of archival storage. Not only does it keep relevant docs together and in a dust free environment. It also provides a buffer to any temp and RH variations.

Archive boxes come in standard size and can also be custom made which is a skilled process. Customs can be ordered for NRS for a small fee.

Archival materials are specifically developed for purpose.

Acid free materials are just that. They are free from acids which may harm your archival collection but may have traces of other harmful by-products of the manufacturing process.

Archival standard Kraft, wrapping paper.

Archival standard Manila,

Archival gusseted wallets and guardees, various sizes available.

Archival box board, available in various weights.

Acid free cartridge paper, available in variety of weights.

Cotton tape for tying bundles and books with detached boards.

Bundle slips for use with cotton tape. Allows referencing.