

# Hunter New England Health Libraries Collection

## Preservation Needs Assessment 2026



Normann Seward Microscope, Melbourne

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<b>Executive summary</b>	<b>4</b>
<b>Key recommendations</b>	<b>5</b>
<b>Policies and reports</b>	<b>6</b>
<b>Collection</b>	<b>6</b>
Collection Documentation	7
Digitisation	7
Significance	7
<b>Collection Description</b>	<b>7</b>
John Irvine Hunter Collection	8
John Irvine Hunter Notebooks	8
Microscope and Zoology book 1915	8
Medicine book	8
John Irvine Hunter Travel diaries	9
Travel diary 1921 (1)	9
Travel diary 1921 ( 2)	10
Hazel Hunter Scrapbook	11
Memorial plaque made by Raynor Hoff	11
Antiquarian books (John Irvine Hunter collection of 40 books)	12
Lunacy in many lands 1887	12
Heredity in the light of recent research 1910	12
The ancient physician legacy to his country 1790	13
A treatise of theory and practice in midwifery - facts 1974	13
The essays or Councils, Civil or Moral of Francis Bacon 1696	14
Medical and chemical essays 1795	14
Garden of Health 1633	15
Historical books	15
Home handbook of domestic hygiene and rational medicine 1902	16
NSW Department of Public Health Pharmacopeia 1941	16
NSW Department of Public Health Pharmacopeia 1965	17
Historical Objects	17
Electro-convulsive machines, Magneto-electric machine 19th C	18
Davis & Kidder Magnet Machine	19
Basal metabolism machine	19
Obstetrics	21
Microscopes	21
Ophthalmoscopes	23
Baby in a coolamon sculpture	24
Straitjackets and Restraint belts	25
Straitjackets	25
Restraint belts	28
Documents	28

Dr Gardiner Reference Letter for Jessie Paterson	29
Nurse training school registration certificate (1926 )	29
Building plan - Newcastle Hospital for the Insane (1880)	30
New donation	31
<b>Overall Collection concerns</b>	<b>32</b>
<b>Collection Recommendations</b>	<b>32</b>
<b>Handling</b>	<b>34</b>
<b>Recommendations</b>	<b>35</b>
<b>The Building</b>	<b>35</b>
Maintenance	36
Fire suppression	37
<b>Recommendations</b>	<b>37</b>
<b>Environment</b>	<b>37</b>
<b>Temperature and Relative Humidity</b>	<b>38</b>
Temperature	39
Relative Humidity	40
Summary of the findings	42
<b>Recommendations</b>	<b>42</b>
<b>Light and UltraViolet radiation</b>	<b>42</b>
<b>The library</b>	<b>42</b>
<b>The office area</b>	<b>43</b>
Recommendations	44
Collection specific recommendations	44
Dust	45
<b>Recommendations</b>	<b>45</b>
<b>Pests</b>	<b>45</b>
<b>Pest Recommendations</b>	<b>46</b>
<b>Storage</b>	<b>47</b>
Storage furniture	47
Storage enclosures	47
<b>Storage Recommendations</b>	<b>48</b>
<b>Display/exhibitions</b>	<b>49</b>
Display cabinet/s	50
Display program / schedule	50
<b>Display Recommendations</b>	<b>51</b>
<b>Visitor impact</b>	<b>52</b>
<b>Disaster preparedness</b>	<b>52</b>
<b>Recommendation</b>	<b>52</b>
<b>Training needs/skills assessment</b>	<b>53</b>
<b>Prioritised recommendations</b>	<b>53</b>

<b>Short Term Actions</b>	<b>53</b>
<b>Medium Term Actions</b>	<b>54</b>
<b>Long Term Actions</b>	<b>55</b>
<b>Authorship</b>	<b>55</b>
<b>Appendix 1 - Significance table from Significance Assessment</b>	<b>56</b>
<b>Appendix 2 - Floor plan</b>	<b>57</b>
<b>Appendix 3 - AICCM Environmental Guidelines</b>	<b>58</b>
<b>Appendix 4 General Housekeeping</b>	<b>58</b>

## Executive summary

The Hunter New England Health Libraries (HNE Health Libraries) collection at the Calvary Mater Hospital Newcastle was awarded a Preservation Needs Assessment grant from the National Library of Australia as part of the Community Heritage grant program. A comprehensive significance assessment has previously been undertaken by Dr Fiona Starr and in 2025 Tegan Anthes was engaged to undertake the preservation needs assessment of the collection. The site visit was conducted over two days in December 2025.

The Preservation Needs Assessment (PNA) is a process that has been established by the AICCM (Australian Institute for Conservation of Cultural Materials) and endorsed by the National Library of Australia. The PNA includes a detailed assessment of the collection condition, the building, the environment, storage and display of the collection. The PNA report provides recommendations within each of the assessed areas and a prioritised plan at the conclusion provides structured guidance for the preservation of the significant collection.

The significance assessment for the HNE Health Libraries was undertaken by Dr Fiona Starr in early 2025. The significance assessment report clearly establishes the collection as nationally significant with strengths in historical and scientific significance and relevance in social and artistic significance. This significance assessment was referenced during the PNA process to guide and direct conservation assessments and recommendations.

Starr states in the overview of the Significance Assessment -

*Considering the evidence present in this report, the Collection, as a whole is considered to be of national significance primarily for the strength of the John Irvine Hunter material, the numerous examples of rare medical books, the material associated with the Faculty of Medicine at the University of Sydney and several high profile professors and doctors, and the rare and representative objects from the Newcastle Mental Hospital, which played an important role in the development of innovative approaches to mental health care and treatment in Australia.*

The HNE Health Libraries special collection (the Collection) includes sub -collections from specific donors and past owners such as the John Irvine Hunter collection as well as objects and archives from the Newcastle Mental Hospital. The Collection therefore consists of paper based materials, objects, including tools and equipment and textiles. There are very few photographs and artworks. The history and management of the Collection and building was important to understand and therefore a series of emails and discussions occurred prior to and during the site visit with the relevant stakeholders. This contributed to an understanding of the collection, management and potential areas of concern for the collection.

The HNE Health Libraries collection is managed by Cherish MacDonald, Librarian (part time). The Librarian is keen to develop skills and knowledge in collection care

and museum practice methods. The Librarian is eager to instigate preventive conservation practices as there have been limited programs in the past. This report aims to provide recommendations and priorities to support these activities and to develop the skills of all people working with the HNE Health Libraries collection.

The overall condition assessment of the collection has highlighted that the collection is in good condition with some objects in fair to poor condition and this is outlined in detail within the report. Objects are in fair condition due to previous handling, inherent vice or environmental factors. There are many objects that are in good condition however established programs around preventive conservation are highly recommended.

The greatest concern for the HNE Health Libraries collection is the inadequate storage, and lack of preventive conservation knowledge associated with historical collections. This includes risks associated with pests, light and environmental and handling damage. In addition the lack of a complete collection database is a high risk of dissociation, which would be catastrophic.

The following report details all areas of concern and provides clear recommendations to assist with the long term preservation of this collection.

## Key recommendations

The following key recommendations are based on the site visit and the observed needs of the collection and staff within the organisation. These recommendations are specific to this collection, and site.

The following key recommendations are categorised under broad topics which are expanded upon within the report. These key recommendations should be considered priorities for action and resources should be allocated to enable implementation. The preservation priority actions at the conclusion of this report provide longer term strategic recommendations and future planning requirements.

### *Collection documentation and policies*

A collection database and catalogue is essential to establish in the short term. The collection documentation and policies to develop include

- catalogue system - choice of system
- catalogue collection - accession number, documentation and provenance
- collection policy including
  - donation / accession forms
  - loan forms
  - deaccession

### *Digitisation*

The digitisation of the collection during the cataloguing process is a key recommendation. The digitised collection will provide greater access and raise the profile of the collection overall.

### *Storage*

It is critical to improve the current storage methods, storage location and type of storage materials of the HNE Health Libraries collection.

### *Preventive conservation and handling*

The librarian has considerable knowledge and dedication to the Collection however would benefit from preventive conservation and object handling training to ensure that actions align with the preservation of the collection.

### *Pests*

It is highly recommended to implement a pest monitoring program to understand the level of threat from silverfish.

### *Collection Disaster Planning*

Recent flooding and leaks are of great concern and therefore the development of a collection specific Disaster Plan is critical. It is highly recommended to work with a conservator to ensure the disaster plan is collection and site specific.

The implementation of these key recommendations will assist in the preventive care of the collection. The preservation plan at the end of this report further details actions to be undertaken over a short to long term period.

## Policies and reports

*HNEHealth Libraries Strategic plan map - 2021 - 2026* - six priority areas of focus.

*Collection Development policy (HNEHL)* - this policy is for the whole library network and is not specific to the historic collection.

*Collections Offers form* - this is a fillable online form with broad fields for the donor to complete.

*Deselection* - this is a tab within the collection development policy

*Preservation* - this is a tab within the collection development policy

*Collection Disaster Plan* - no current plan

*Integrated pest management plan* - no current plan

## Collection

The HNE Health Libraries collection is owned and managed by Hunter New England Local Health District(HNELHD), which includes the John Hunter Hospital Library, the Cavalry Mater Library and the Tamworth Hospital Library. Together they specialise in the provision of medical and health science information for the staff of the HNELHD. Special collections are a small component of the HNE Libraries collection and these include collections from specific donors and past owners such as the John Irvine Hunter collection as well as objects and archives from the Newcastle Mental

Hospital. The Collection consists of paper based materials, objects, including instruments and equipment, textiles and only a few photographs and artworks.

## Collection Documentation

Collection documentation is the foundation of collection management, and should include a unique identifying number per object, with key historical information captured in a spreadsheet, database or catalogue.

The HNE Libraries special collection is uncatalogued however there is an inventory spreadsheet of 103 objects. This inventory list includes object description, thumbnail image, location reference to box number, ownership, donor and brief condition comment. The objects are not assigned numbers and there is no labelling of the objects. There is no formal database or catalogue and the development of a catalogue is considered a priority for the librarian who is currently researching options.

### Digitisation

The collection is not currently available in a digital format; neither catalogue nor visual records of objects are available publicly. Digitisation of the collection, as a visual record, of the objects, books and textiles is an important aspect of collection documentation and access. There are some examples of comparative collections that are available through Recollect, e-Hive and Dspace. These platforms provide opportunities for the collections to have a broader reach and engagement with the collection. In addition to reducing the risk of dissociation.

## Significance

The significance assessment (SA) report provided a summary table of the objects of highest significance and this is copied in Appendix 1.

The significance assessment (SA) report has comprehensively described the Collection. Many objects are listed in detail with corresponding images. The SA report identified three broad themes: Australian Medical History, Tertiary Medical Education and Mental Health Care within the collection. The SA report highlights the specific significant collections within these broader themes. The significant collections are - The John Irvine Hunter collection, and health care in the Hunter New England region, which includes important donations from prominent medical professionals and equipment associated with the Newcastle Mental Hospital. These sub collections and objects were assessed for the Preservation Needs Assessment and the findings are discussed in detail below.

## Collection Description

The Collection that is the focus of the PNA consists of the John Hunter collection, and historical books, instruments and machines donated by prominent people or

doctors from the relevant hospitals including donations from - Dr Samuel Gardiner, Professor William Walters, Dr Michael Partington, and Dr Larry Roddick.

The preservation needs assessment has grouped collections according to material or object type with the exception of the John Hunter collection. Consequently, the report has the following categories

- John Irvine Hunter Collection
- Historical Books
- Historical Objects
- Historical Textiles
- Historical documents and plans.

## John Irvine Hunter Collection

The John Irvine Hunter collection is a discrete collection consisting of publications, notebooks, scrapbooks and a memorial plaque. This collection is a historically and scientifically significant collection for the HNE Health Libraries Collection.

### John Irvine Hunter Notebooks

#### **Microscope and Zoology book 1915**

This is a small section sewn hard bound volume with blue and red lined pages. The pages are filled with hand inscribed text in a variety of inks with the addition of drawings and watercolour illustrations. The book has been rebound and re-stitched with linen threads, green end papers and new covers. The original spine labelling may have been retained.

The text block is overall in fair condition due to inherent deterioration of the poor quality papers and past handling damage. There is evidence of edge damage, tears, staining, foxing, losses and embrittlement of sections of the text block.

Storage: Box # 7 - currently wrapped in bubble wrap, secured with adhesive tape and stacked within a standard cardboard box

Recommendations - wrap in archival paper and rehouse in archival box.

#### **Medicine book**

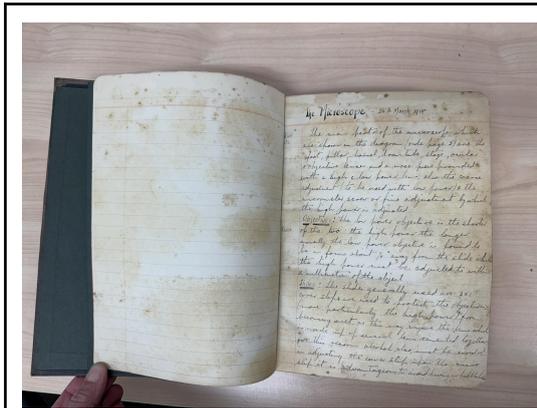
This is a slighter larger than the above notebook however it is similar in construction. It is section sewn hard bound volume with blue and red lined pages. The pages are filled with hand inscribed text in a variety of inks with the addition of drawings and watercolour illustrations. The book has been rebound and re-stitched with linen threads, green end papers and new covers. The spine states "A.E. Mills" and "Medicine".

The text block is overall in fair condition due to inherent deterioration of the poor quality papers and past handling damage. There is evidence of edge damage, tears, staining, foxing, losses and embrittlement of sections of the text block. There are old

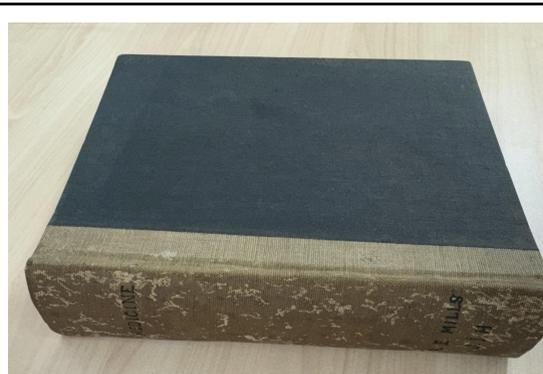
tape stains. This volume also has a page with excessive insect frass and there is evidence of old insect damage along the spine.

Storage: Box # 7 - currently wrapped in bubble wrap, secured with adhesive tape and stacked within a standard cardboard box

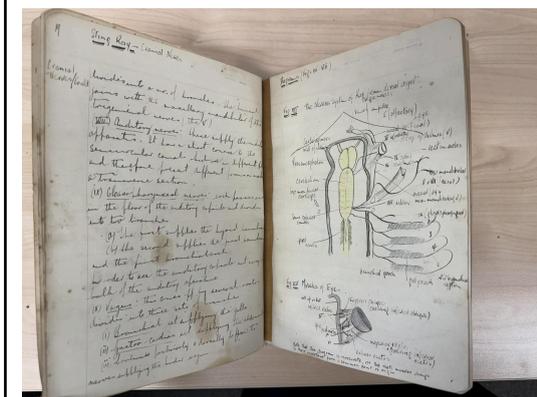
Recommendations - conservation clean and rehouse with archival paper and cotton tying tape and into archival corrugated box.



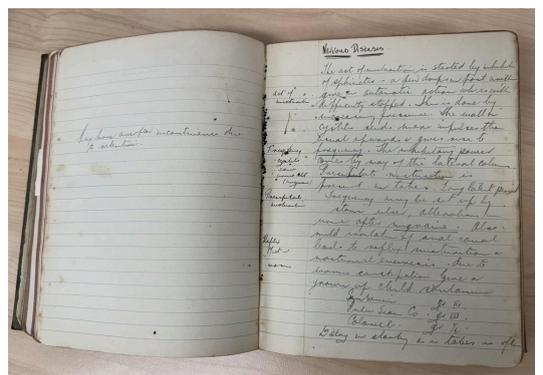
Microscopes and Zoology



Medicine - spine damage



Microscopes and Zoology



Medicine - insect frass

### John Irvine Hunter Travel diaries

#### Travel diary 1921 (1)

This is a quarter bound card cover scrapbook and the text block is section sewn. The scrapbook has a variety of ephemera pasted in and hand written inscriptions in a range of inks. The ephemera includes fold out maps, photographs, pamphlets, newspaper clippings, tickets and cards.

The overall condition is fair due to the poor quality paper stock of the ephemera which is causing acid migration and discolouration of adjacent pages. In addition the scrapbook pages are at risk of damage due to the additional weight of the pasted in components. The text block is in fair condition as the sewing is loose and the above mentioned staining and embrittlement.

Storage: Box # 7 - currently wrapped in bubble wrap, secured with adhesive tape and stacked within a standard cardboard box

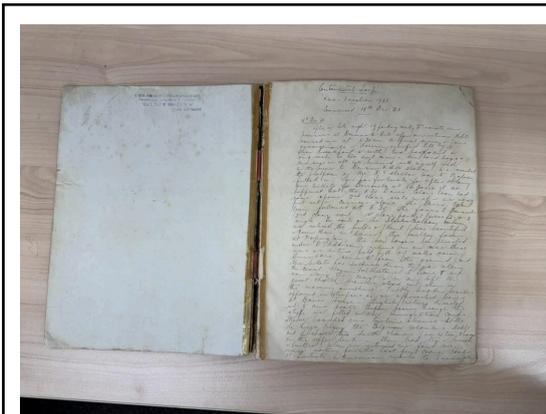
Recommendations - conservation clean, stabilisation and option to re-sew. In addition, rehouse with archival paper and cotton tying tape and into an archival corrugated box.

**Travel diary 1921 ( 2)**

The second travel diary is in similar condition to the above travel diary. The second travel diary has loose pages and loose ephemera that is not secured within the text block.

Storage: Box # 7 - currently wrapped in bubble wrap, secured with adhesive tape and stacked within a standard cardboard box

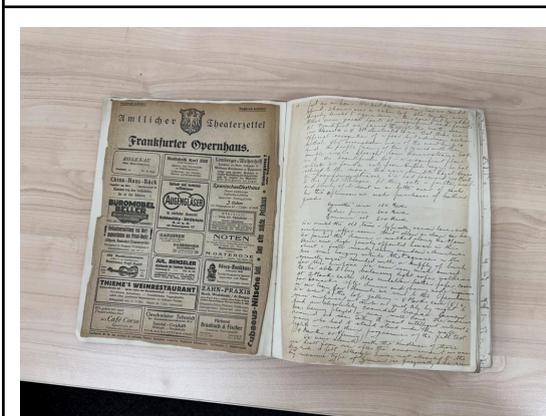
Recommendations: Conservation stabilisation. Loose ephemera to be rehoused into archival sleeves if causing acid migration. And rehouse with archival paper and cotton tying tape and into an archival corrugated box.



Adhesive tape stain in spine



Variety of ephemera



Acid migration from newspaper



Loose ephemera in Diary 2

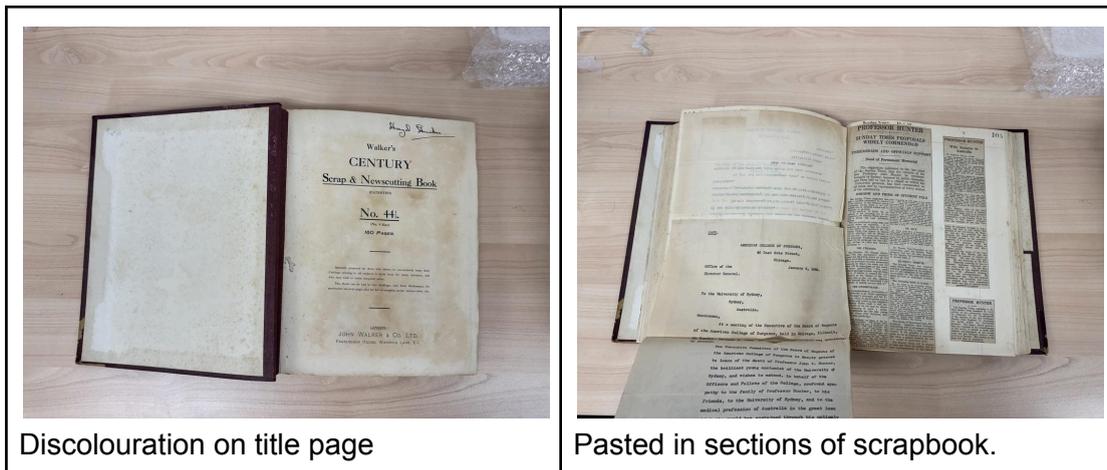
### Hazel Hunter Scrapbook

This scrapbook is cloth bound in burgundy with gilt “cuttings” on the spine. The text is hand written inscriptions along with assorted ephemera including newspaper clippings, typed letters, hand written notes, and other printed material that has been pasted in.

Overall condition is fair due to inherent deterioration and past handling damage. The front cover is loose at the spine edge, and there is minor insect damage internally. The pasted in ephemera is causing staining from acid migration.

Storage: Box # 7 - currently wrapped in bubble wrap, secured with adhesive tape and stacked within a standard cardboard box

Recommendations - Conservation clean. Loose ephemera to be rehoused into archival sleeves if causing acid migration. And rehouse with archival paper and cotton tying tape and into an archival corrugated box.



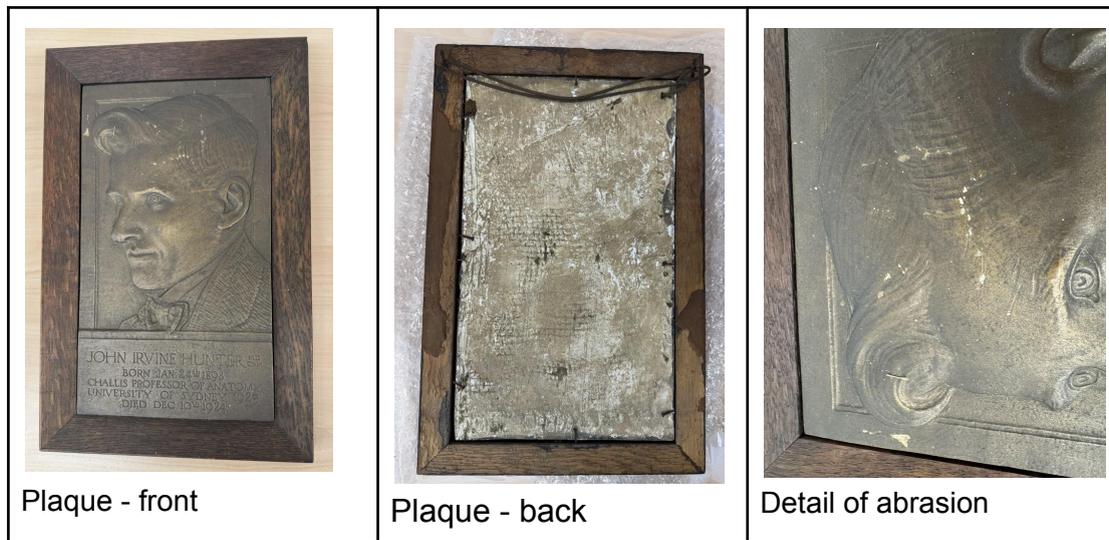
### Memorial plaque made by Raynor Hoff

This is a small plaster relief painted in bronze of John Hunter. Inscribed at the bottom with “*John Irvine Hunter MD Chm, Born Jan 24th 1898 Challis Professor of Anatomy University of Sydney 1923 Died Dec 10th 1924*” The plaster relief is framed with a wooden frame, without glazing or backing. The relief is fixed into the frame with nails and the back of the plaster is rough with gouges. There are hanging loops and thin rope attached to the top edge on the back of the frame for hanging.

The condition is fair to good. There are several abrasions and losses and one gouge on the left side (as viewed) exposing the plaster underneath. There are no major structural issues or damage.

Storage: Box # 17 - currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendation - Conservation clean and conservation stabilisation / treatment for the abrasions and gouge. An archival custom storage box is recommended. It is highly recommended to provide labeling that this is fragile.



Antiquarian books (John Irvine Hunter collection of 40 books)

The inventory spreadsheet lists 27 published books that are identified as part of the John Hunter Collection. A selection from these 27 were assessed as part of the PNA to provide an overview of the condition. The assessment and subsequent recommendations of following 7 books should be used as a guide for other books within the collection. Other books in the collection show similar conditions with the exception of Manual of Practical Anatomy which has old mould stains.

#### **Lunacy in many lands 1887**

This book is bound in green buckram with new sewing and headbands and most likely has been rebound in the last 20 years. The original title piece has been adhered to the front and spine.

The text block is in excellent condition with the exception of the front title page which is discoloured and embrittled from past covers.

Storage: Box # 11 - The volume is currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendation - rehouse with archival paper and cotton tying tape and into archival corrugated box.

#### **Heredity in the light of recent research 1910**

This volume is a pink cloth full bound small book (~A6). The text block is printed with a few hand inscriptions.

The overall condition is fair to good. The covers have typical wear and tear including abrasions and wear on the spine and cover. The text block is in good condition, with some foxing and discolouration to end papers.

Storage: Box # 12 - currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendations - conservation clean and rehouse with archival paper and cotton tying tape and into archival corrugated box.

### **The ancient physician legacy to his country 1790**

This is a small book that is half bound with brown leather and marbled covers. The text block is section sewn, with chain and laid paper. The text is printed with several hand inscriptions in iron gall ink.

The book is overall in good condition, however it is suspected that it has been rebound. This recent binding is potentially too tight at the spine causing the front cover to pull back and sit partially open. The leather has signs of wear and tear and abrasions. The text block has staining on end papers from rebinding. The remainder of the text block is in good condition, with only minor discolouration at edges.

Storage: Box # 11 - currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendations - conservation clean and rehouse with archival paper and cotton tying tape and into archival corrugated box.



### **A treatise of theory and practice in midwifery - facs 1974**

This is a facsimile, with the original from 1752. It is a dark brown full leather bound volume with gilt motifs and inscription on the spine.

This facsimile is in good condition.

Storage: Box # 12 - currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendations - rehouse with archival paper and cotton tying tape and into archival corrugated box.

### **The essays or Councils, Civil or Moral of Francis Bacon 1696**

This is a full vellum bound volume with new end papers. The original text block is chain and laid paper, with printed text. The text block is section sewn and may have been trimmed at some stage and re-bound.

The overall condition is fair to good condition. The covers are discoloured and soiled from past handling. The text block is discoloured and the front page has tears at the spine edge.

Storage: Box # 11 - currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendations - conservation clean and rehouse with archival paper and cotton tying tape and into archival corrugated box.



### **Medical and chemical essays 1795**

This volume is quarter bound with dark brown leather and marbled covers. The text block is section sewn with wove paper. The text is printed with hand inscriptions in iron gall ink. The volume has been re-backed in the past.

The overall condition is good with minor wear and tear. The spine has abrasions and slight separation at the top edge. The text block has some foxing and the end papers are discoloured.

Storage: Box # 11 - currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendations - rehouse with archival paper and cotton tying tape and into archival corrugated box.



### Garden of Health 1633

This book is a full vellum bound with raised bands. The text block is printed on chain and laid paper, the title page has hand inscriptions in iron gall ink.

Overall in good condition. It is suspected that it has been rebound as the end papers appear new and vellum is very clean. The front title page also has an infill section.

Storage: Box # 12 - currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendations - conservation clean and rehouse with archival paper and cotton tying tape and into archival corrugated box.



### Historical books

The historical book collection includes numerous books on various topics that have been collected and subsequently donated by prominent people in the medical industry or retired doctors of the relevant hospitals. These donors include - Dr

Samuel Gardiner, Professor William Walters, Dr Michael Partington, and Dr Larry Roddick. Some examples are assessed below.

**Home handbook of domestic hygiene and rational medicine 1902**

This is a large full leather bound volume. The title is embossed on the spine and the text block is printed with floral end papers.

The book is in poor condition from excessive use. The covers were detached and have been re-sewn into position with obvious external stitching. This is a home remedy and has not been performed by a bookbinder. The end papers are brittle, there are losses, and tears to the first few pages, however the bulk of the text block is mostly in sound condition.

Storage box #12: currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendations - conservation clean and rehouse with archival paper and cotton tying tape and into archival corrugated box.



Detail of spine

Internal damage

**NSW Department of Public Health Pharmacopeia 1941**

This is a small stitched single section sewn book with card and linen spine. There is a small name plate in leather with a gilt title on the front cover.

The book is in fair to good condition with small areas of water staining, and the sewing is causing localised damage. The pages are brittle and slightly discoloured and there is minor foxing.

Storage box # 11: This was in the main library and recently moved to the office area. It is not in storage enclosures.

Recommendations: conservation clean and rehouse with archival paper and cotton tying tape and into archival corrugated box.

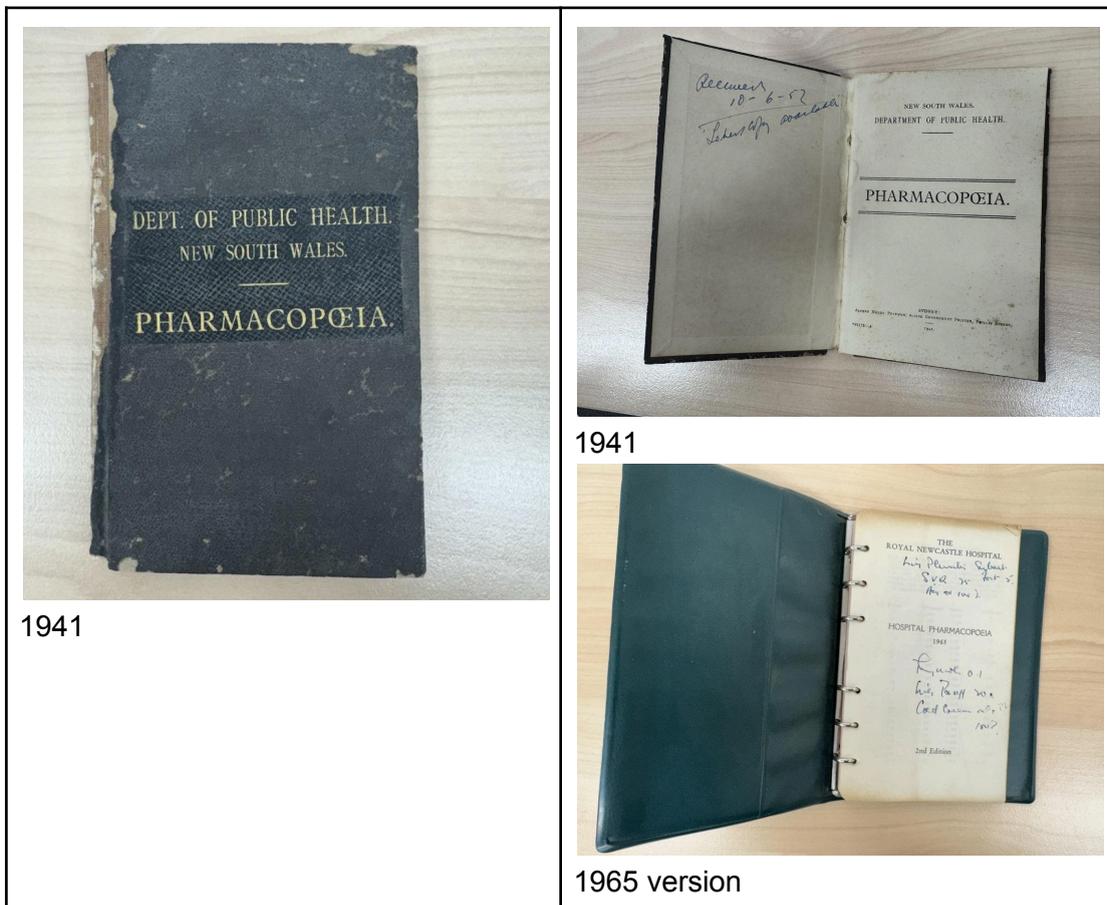
### NSW Department of Public Health Pharmacopeia 1965

The 1965 version is an ~A5 ring binder, with single sheets. The cover is made from dark green PVC with card insert. There are 6 metal rings that bind the loose pages. The text is printed with some areas of hand inscriptions in blue and black ink.

Overall the object is in good condition.

Storage box #11: currently wrapped in bubble wrap, secured with adhesive tape and within a standard cardboard box.

Recommendations - conservation clean and rehouse with archival paper and cotton tying tape and into archival corrugated box. PVC will continue to deteriorate and can cause localised damage. Monitor and consider placement within storage areas.



### Historical Objects

The objects with the HNE Health Libraries historical collection include machines, implements, tools, devices, and other medical related objects. Some objects have provenance to donors such as Dr Samuel Gardiner, Professor William Walters and Dr

John Sippe. The objects are both on display in the library and in storage. Select objects were highlighted in the SA and these are detailed below.

### Electro-convulsive machines, Magneto-electric machine 19th C

There is a collection of Electro convulsive and Magneto electric machines in open storage in the main library. These were assessed as a group with a few specific conditions described below.

The ECT machines include - The Kabtronics ECT 271 F ( 2 machines ) Kabtronics ECT 217 E, ANAX ECT machine, and a Ramsay Coote machine. There is also a machine manufactured by Rogman & Kelame in a wooden box. The age and therefore the components vary between each of the machines. There are some instruction manuals and paper receipts with some objects.

The condition also ranges with concerns such as rust, corrosion, physical damage, loss of components, surface dirt, discolouration, and abrasions. The majority have a layer of dust over the surface.



ECT Machine - Anax



ECT Machines



ECT Machine - Model 271F



Rogman & Kelame Machine

**Storage:** Currently on open storage/display in the main library. The objects sit directly on shelves with no interpretation.

**Recommendations:** Conservation clean and creation of dust jacket. Interpretation panel to be developed to encourage information sharing and engagement with the collection. Long term option for curated display of object collection.

#### Davis & Kidder Magnet Machine

This beautifully made machine was used to treat nervous disorders and was patented in 1854. The machine is within a custom made wooden box. The various components include a winding handle, wheel, handmade plaited rope, gauges, brass cylinders, cords and a large magnet.

The machine is in good condition with minor abrasions, corrosion, distortion and possible loss of components.



**Storage box #3:** Currently wrapped in bubble wrap and stored with other medical implements in a cardboard box.

**Recommendations:** Conservation clean and rehouse into an archival box.

#### Basal metabolism machine

The Basal metabolism machine is constructed of numerous materials and both fixed and moving components that make up the entire machine. The machine itself is fixed

to wheels that enable it to be moved around. The various materials include rubber, metal, enamel, steel, bellows, gauges, gas tank, hoses, electrical cords, and a green cloth cover. There is a photocopy from a publication on Basal Machines, this is in a plastic sleeve which hangs from the machine.

The condition is fair. There is evidence of corrosion and rust on the metal components. The rubber is corroding. Sticky tape has been applied in the past causing localised damage and staining. There is a risk of physical damage due to falling over when moved by staff as it is top heavy. The rubber hose is actively deteriorating. The green dust jacket was draped over the machine during the site visit rather than providing protection against dust.



Basal Metabolic machine with green dust cover.



Chrome and enamel elements - corrosion



Deteriorating rubber hose



Chrome and the bellows

Storage: currently on open storage in the library. The green dust jacket is not in use and is only draped over a section of the machine.

Recommendations: conservation clean, conservation condition report and option for stabilisation of rubber and corrosion.

### Obstetrics

The obstetric implements have all been donated by Emeritus Professor William Allen Willcox Walters AM. The implements are all metal based medical and surgical objects.

They are all in good condition with minor signs of wear and tear.

Storage: They are all wrapped in plastic bubble wrap with printed labels on the outside.

Recommendations: Rehouse in archival boxes with archival enclosures and unique labelling.



### Microscopes

There are three vintage brass microscopes, each within a custom made wooden box. Two were donated by Dr John Sippe, although no further provenance is provided: one made by F. Koristka, Milano and the other Cook, Throughton & Simms, model E, from 1936. The third microscope is manufactured by Normann H. Seward / Optical House / of 457 Bourke Street, Melbourne, VIC.

They are all in fair to good condition, although the 1936 model was not accessed inside the box. The other two have some areas of corrosion, abrasions and scratches. The components are still moving however concerns for storage as pieces need to be in the correct position to ensure no damage occurs while moving in and out of the box.



Norman H Steward microscope within box



Norman H Steward microscope



F. Koristka, Milano Microscope



Dust and damage to the F. Koristka, Milano Microscope

Storage: Koristka has recently been returned from display and was within a cardboard box with no additional wrapping. The 1936 model is in a plastic tub under the front library desk. The Steward model was wrapped in bubble wrap and stored with other implements in a cardboard box.

Recommendations - Remove bubble wrap from Steward model. They all require a conservation clean and rehouse into a custom modified archival box to limit damage.

### Ophthalmoscopes

There are two ophthalmoscopes in the collection.

1. British made - small box. This has two main pieces inside. The condition is fair with signs of abrasions, losses, and corrosion. The case is distorted and doesn't close properly.
2. MW Partington. This ophthalmoscope has MWP on the case and MW Partington on the main eye piece. This is in fair to good condition. There are abrasions, corrosion, and rust. The velvet lining of the case is deteriorating. The case itself is also distorted making return of implements difficult.

Storage: Box #16. They are both wrapped in bubble wrap and stored with other implements in a cardboard box.

Recommendations: Remove bubble wrap. Conservation clean and rehouse into a custom modified archival box to limit damage.



### Baby in a coolamon sculpture

This is a carved sculpture of a baby resting inside a coolamon. This was created by Ruben Jangala, Alice Springs in 1993. The artwork was purchased from Outback Art. The carving has been exposed to fire to create a blackened surface. The surface of the sculpture is not smooth and the carving marks are evident. This is the style of the work and not a concern.

The sculpture is in fair to good condition. The wood has minor abrasions and scratches, with more scratches evident on the base. There are fine cracks in the base running length ways with two small holes. There are minor abrasions to the face of the work which is most likely from inappropriate past handling practices.



Baby in coolamon



Base - note hole and splits in wood



Detail of minor abrasion



Detail of minor abrasions

Storage: Box #18. The coolamon is wrapped in bubble wrap and stored in a dedicated cardboard box. There is no additional padding or support to prevent movement within the standard cardboard box.

Recommendations: Remove bubble wrap. Conservation clean and rehouse into a custom modified archival box to limit damage. Monitoring the cracks and holes on the base is recommended.

## Straitjackets and Restraint belts

### Straitjackets

There are four straitjackets in the collection, each is individual with slight variations in cloth, stitching and details of design. One is on open display in the library and the other three are in a drawer behind the front desk at the library entrance. There are no numbers associated with the jackets so I have simply numbered according to access.

Number One - Long design front and back in super heavy white canvas. Pockets have frayed edges. Large eyelets at back for securing closed. A cord has been used in the top two eyelets. This cord is not expected to be original. This straitjacket is displayed on a torso mannequin with centre pole and three supporting legs. The mannequin is covered in a fabric and the legs are chrome.

The condition of the straitjacket is fair. The straitjacket has been on display for more than 10 years and has evidence of surface dirt and dust, and light damage. There are loose threads and stains. The mannequin is rusty and deteriorating with structural losses.





Number two - Long design front only, natural edging, heavy canvas natural colour. Condition is good- appears to have been used, there is soiling and minor wear and tear. There is also an ink stain at the back top left.

Number three - Long design front only, white edging, heavy canvas natural colour. There is "2" in ink in the internal top left of the straitjacket. The condition is good to fair. This straitjacket appears to have been used, there is soiling and minor wear and tear.

Number four - White super heavy canvas, long design front and back, with internal and external belts in the same fabric. " F3 " inked top right on back. The condition is good.





Number 3 - front view



Number 3 - back view



Number 4 - front view



Number 4 - back view

Storage - Three straitjackets (#2-4) are folded into the drawer behind the front desk of the library. There is some tissue paper which is ad hoc and crumpled in the drawer and there has been a previous attempt to interleave throughout the drawer. Some tissue was noted to have insect damage.

Recommendations - Conservation clean all four straitjackets. The one on display should be removed and an alternative straitjacket should be selected for display. Interpretation should be provided alongside the straitjackets which may include some research into the various designs and use. All four should have dedicated large textile storage boxes that enable the jacket to be completely flat with minimal folding and crumpling. The areas of folding should be supported with tissue padding out the jackets.

### Restraint belts

The restraint belt is a wide leather belt with multiple thin leather belt attachments, with hand sewn elements and metal buckles.

The condition is fair. The leather is thick and stiff with age and deterioration. The leather has abrasion, scratches, warping, distortion, tears, staining and desiccation. The buckles are discoloured and there are areas of uniform rusting, plus corrosion. There is no labelling or interpretation.

Storage - There is no specific storage for the restraint belt. It is currently sitting on top of storage boxes that contain the rest of the collection. This is located under desks in the library office area.

Recommendations - Conservation cleaning and option for stabilisation. It is recommended to improve storage by wrapping in archival tissue and rehousing into archival storage boxes.



### Documents

A few select documents and plans were highlighted in the SA for their significance. These include a reference letter from Dr Gardiner, the 1880 building plan, and a 1926 Nurses certificate. The collection does contain other documents however for the purpose of this preservation needs assessment these were the only paper documents assessed.

### Dr Gardiner Reference Letter for Jessie Paterson

This is a single typed document on Dr Gardiners' letterhead paper, providing a letter of reference for Jessie Paterson, 8 August 1930. Dr Gardiner has signed in the lower half of the letter.

The condition is poor with adhesive tape over many folds which has discoloured to a dark brown/ yellow. There are tears, folds and areas of loss.

Storage - unknown.

Recommendations: the letter should be stored in an archival sleeve and folder. Conservation treatment is recommended to remove the tape, reduce the stains and repair as required.

### Nurse training school registration certificate (1926 )

The Newcastle mental hospital paper certificate has been lined onto a light weight brown card/paper and cut into shape for framing purposes. The certificate has been removed from the frame and is resting in a plastic brochure upright display box. The media includes the printed certificate, typed filled in information and handwritten signatures.

The certificate is in fair condition. The paper has been partially cut through at fold points to fit into frame, these are now held together by the brown paper backing. The certificate has substantial light damage which has caused yellowing, embrittlement, discolouration, staining and fading. The paper has soiling, staining and surface dirt.

Storage: Open display in the main library.



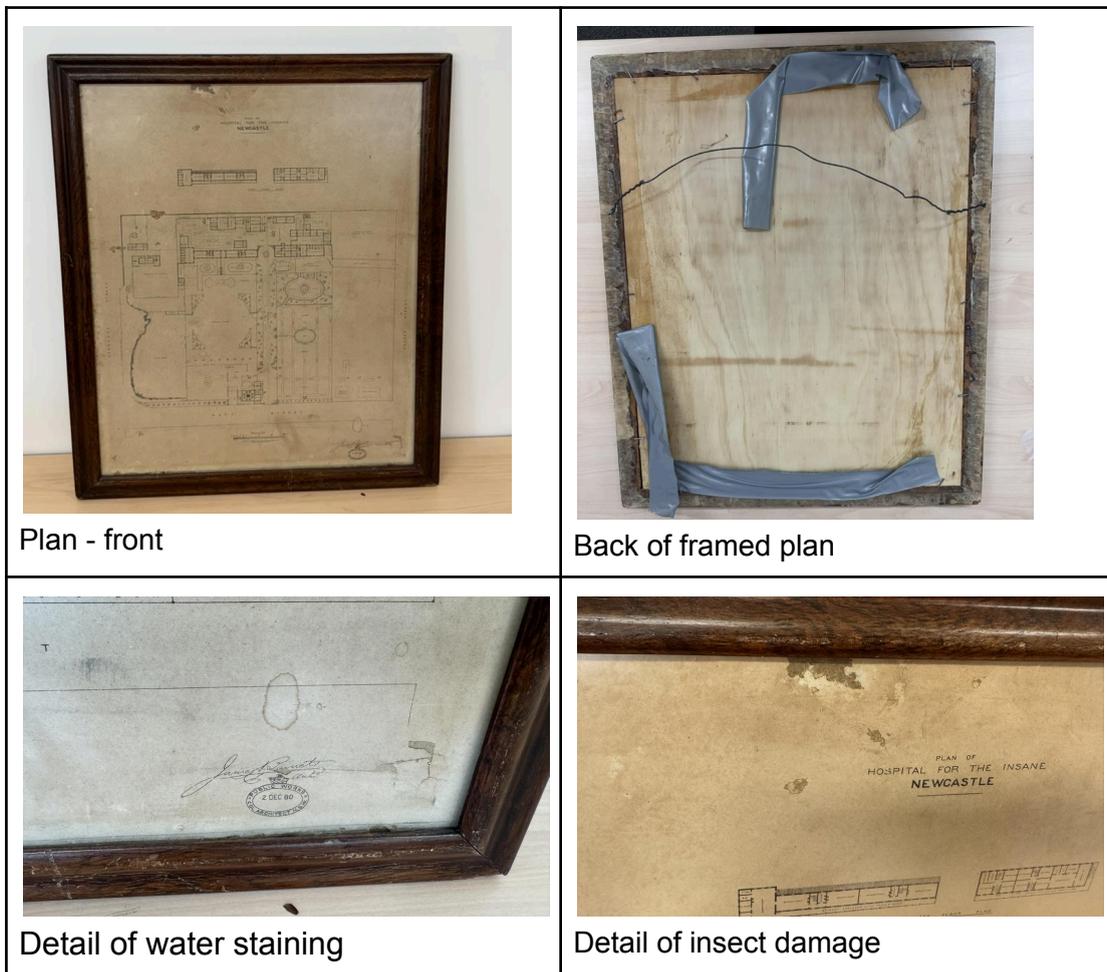
Recommendations: It is highly recommended to remove the certificate from display and store in archival sleeve. The certificate is also recommended for conservation treatment and archival storage.

Note - The certificate was removed during the site visit upon the recommendation of the consultant and placed into a plastic sleeve and into storage.

### Building plan - Newcastle Hospital for the Insane (1880)

This is an original plan of Newcastle Hospital for the Insane and was produced in 1880. The plan has been framed with a wooden frame with glass glazing without a spacer between the glazing and the plan. Consequently, the plan is directly pushing on the glazing. The plan is most likely adhered to an auxiliary cardboard support. The final backboard is a heavy piece of ply or other wooden product which has been nailed into place and gaffer tape used to seal the edges. This tape has deteriorated and is falling off.

The plan is in fair condition. The plan has deteriorated from exposure to light and is discoloured and brittle. There is insect damage and holes/losses from past inappropriate handling. In addition to stains, tears and losses.



**Storage:** The plan is with the remainder of the collection sitting on the desk. There is no wrapping or covering.

**Recommendations:** It is recommended to remove the plan from the frame to provide better access and assessment. Conservation stabilisation is recommended which may include repair and deacidification. It is recommended to digitise the plan and

re-frame a digital copy for access. The original plan should be rehoused into an archival folder and kept flat.

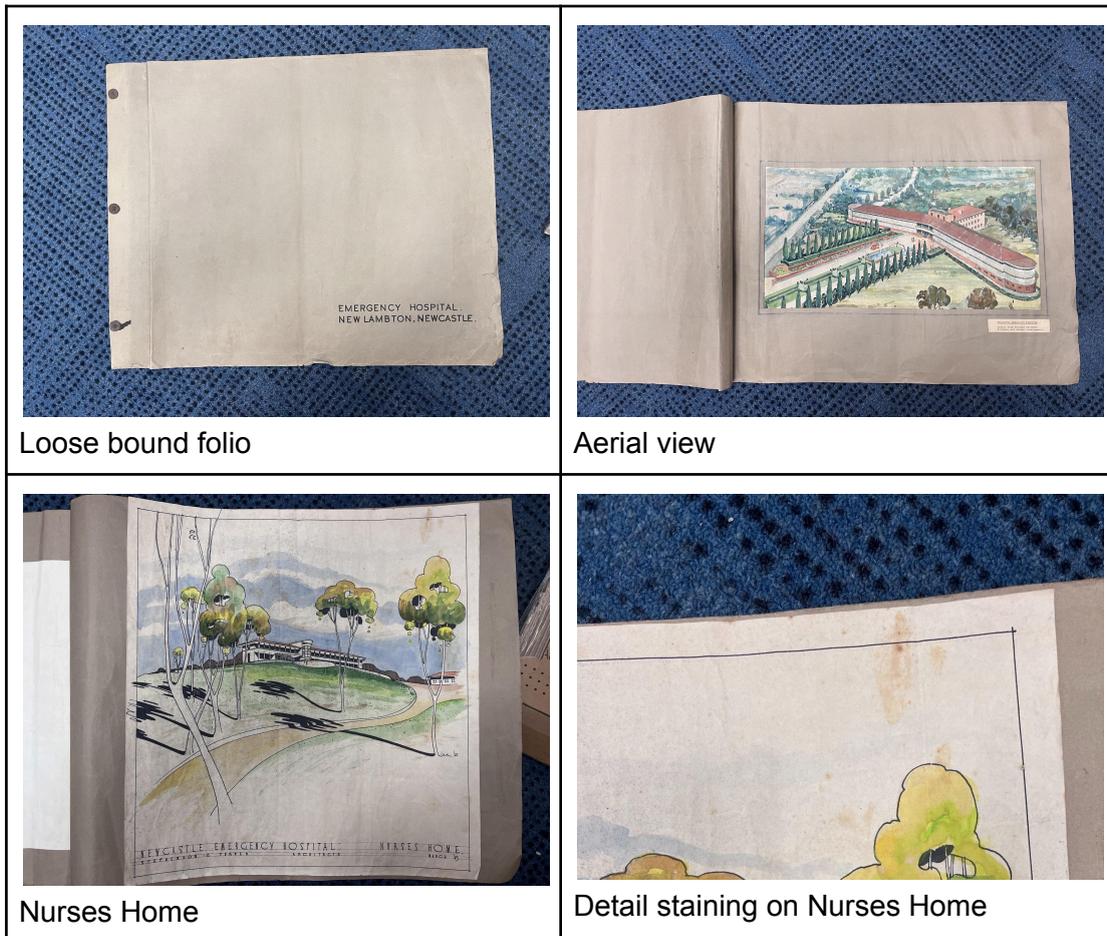
## New donation

A recent donation of two watercolours depicting the Newcastle Emergency building was accepted. These are believed to be significant and were briefly included in the assessment.

The watercolours are bound in a loose folder with metal fasteners at the spine edge. The Aerial view is pasted onto the support paper and the Nurse's Home is loose in the folder. The Nurses home is signed J.A.R. Stephenson and Turner Architects and dated 1943, the aerial view is signed J.H.M and is undated.

Condition - Both watercolours are in fair condition with foxing, staining and discolouration. The Nurse's home also has creasing, folds, and mould stains.

Recommendations: The watercolours are recommended for conservation stabilisation which may include cleaning and deacidification. It is recommended to digitise the watercolours and originals should be rehoused into an archival folder and kept flat.



## Overall Collection concerns

The overall condition is fair with some books and objects in good condition. The concerns are directly connected to the previous use, handling, display and environmental conditions. In addition to the lack of accurate documentation and labelling.

### Condition

The main condition concerns are past wear and tear, insect damage and light damage. Some previous use of adhesive tape and inappropriate packaging, papers and handling has caused staining, tears, losses and damage. The fair to poor condition objects are vulnerable to further damage.

### Other conditions noted

- Bacteriological book has sticky tape and brittle pages.
- Spine damage was noted on several books
- Acidic and embrittled pages was apparent

### Dissociation

The lack of a complete catalogue or database of the entire collection is of concern. The lack of a unique identifying number per object and associated labelling is of concern. A collection audit and investment in establishing provenance is highly recommended.

### Interpretation

The ECT machines are not interpreted in any way and are static on the library shelves. The cords and components are bundled up and there is no order to the placement on the shelves. The lack of interpretation reduces the potential interaction with the collection.

### Environmental damage

The past long term display in the Gardiner library has caused light damage. This is evident as fading, yellowing and discoloration of objects.

### Pests

There are concerns for silverfish and cockroaches. A live silverfish was noted during the site visit and books and tissue interleaving have obvious insect damage.

## Collection Recommendations

### Collection catalogue

It is imperative that the collection is thoroughly documented and each object assigned a unique identification number. There are several options available which the Librarian has been researching including Vernon and e-Hive.

### Collection digitisation

In combination with cataloguing the collection it is highly recommended to undertake a digitisation project. It is important however to develop protocols around digital capture to ensure that collections are not damaged during the digitisation process.

### Interpretation

It is highly recommended to develop interpretation panels that showcase the collection to visitors to the library. These panels should include the significant objects and the stories behind these collections.

### Conservation Cleaning and Storage

The following table summarises the recommendations for each object.

Object	Conservation clean	Conservation Treatment	Archival enclosure	Archival Box
Microscope and Zoology 1915			✓	✓
Medicine book	✓		✓	✓
John Hunter Travel diary 1921	✓	✓	✓	✓
John Hunter Travel diary 1921- 2	✓	✓	✓	✓
Hazel Hunter Scrapbook	✓	✓	✓	✓
Memorial plaque made by Raynor Hoff	✓	✓	✓	✓
Lunacy in many lands (1887)			✓	✓
Heredity in the light of recent research 1910	✓		✓	✓
The ancient physician legacy to his country ( 1790)	✓		✓	✓
A treatise of theory and practice in midwifery (1752, facs 1974)			✓	✓
The essays or Councils, Civil or Moral of Francis Bacon (1696)	✓		✓	✓
Medical and chemical essays (1795)			✓	✓
Garden of health - 1633	✓		✓	✓
NSW Department of Public Health Pharmacopeia 1941			✓	✓
NSW Department of Public Health Pharmacopeia 1965	✓		✓	✓

Home handbook of domestic hygiene and rational medicine JH Kellogg 1902	✓		✓	✓
Electro-convulsive machines, Magneto-electric machine 19th C	✓			
Davis Kidder	✓		✓	✓
Basal Metabolic Machine	✓	✓		
Obstetric instruments	✓		✓	✓
Microscopes	✓		✓	✓
Ophthalmoscopes	✓		✓	✓
Baby in Coolamon	✓		✓	✓
Straitjackets	✓		✓	✓
Restraint belts	✓		✓	✓
Dr Gardiner reference letter	✓	✓	✓	✓
Building Plan 1880	✓	✓	✓	✓
Nurse Training certificate	✓	✓	✓	✓
Watercolours	✓	✓	✓	✓

## Handling

Unfortunately historical objects are easily damaged through handling; scratches, tears, stains, losses and breakages can easily occur. Historical objects have areas of vulnerability and require a considered approach to ensure that damage does not occur.

The librarian is careful and considerate however there are no handling guidelines and vulnerable objects are at risk. Nitrile gloves are available however it is not clear when and with which objects they are used. The conservation profession advises the use of Nitrile gloves when handling silverware, metals and photographic collections.

The inventory spreadsheet included a field for “action taken” and in this column the majority of objects, including books, were noted as *“wiped with tee tree “* and some also include *“to remove mould patches”* This is not advised and should not be continued. This handling approach and use of chemicals is of concern.

During the site visit the librarian noted that some objects had been moved within the library without consultation. This is a concern due to potential handling damage, and this can lead to dissociation, loss and damage.

## Recommendations

Handling guidelines should be developed across all material types within the collection. These handling guidelines should include handling of the various collection materials and introduce staff to the additional supplies required.

## The Building

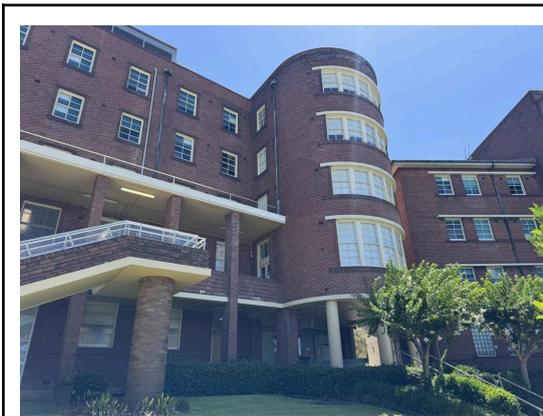
The collection is located in the library on Level 4, of the Mental Health Administration Building, Calvary Mater Hospital, Waratah, Newcastle. The site has several buildings that service the Calvary Mater Hospital. The Mental Health Administration building is located behind the main hospital building and is connected to adjacent buildings with walkways and bridges.

The history of the building is briefly commented on the Calvary Care website -

From humble beginnings, the hospital first commenced as a 34-bed hospital in a single building known as Enmore Hall situated on Edith Street, Waratah. In 1927, through a 10,000 pound donation from Mr W Longworth, a children's block was built at the rear of the existing hospital. Then almost a decade later, at a cost of 78,000 pounds, raised by the local community, a new Mater Hospital was built and officially opened on 7 April 1935. This grand building was three storeys high with accommodation for 32 private and 60 public patients.

[www.calvarycare.org.au/news-and-events/news/calvary-mater-newcastle-turns-100](http://www.calvarycare.org.au/news-and-events/news/calvary-mater-newcastle-turns-100)

The building is constructed in red brick, cement, wooden sash windows, and the library section has a new corrugated iron roof. The library interior has green marbled floor, painted brick or rendered/plastered walls and plastered concertina ceiling. The office area is carpeted with a false ceiling. A floor plan is located in Appendix 2.



Main administration building



North side view of library



Roof of library and Administration building. (Screenshot from Google Earth 12 December 2025)

## Maintenance

The maintenance of all buildings is undertaken by Honeywell on an as needed basis.

Several leaks have occurred in the library in the past year. Early in 2025 a leak occurred above the library shelves in the main library. This has resulted in these shelves remaining empty to prevent further damage. The cause of the leak is

unknown however it did occur during a large rain event. The second leak was in the corner of the office area. This did not affect collection as these desks were empty.

Inspection to the exterior of the building indicated that the roof above has an angled section down to a potential box gutter or flatter area. This is potentially aligning with the leak area.

## Security

The security across the site varies according to the use of the building and if public access is required. The location of the library is in a secured section of the administration building, which is secured with both alarms and the swipe passes. The building is only open during office hours, Monday to Friday and relevant staff have swipe card access to the library during these times. Access by non library staff is monitored at the library entrance by staff at the front desk.

## Fire suppression

All buildings are fitted with smoke detectors, alarms and there are sprinklers and fire extinguishers throughout the site. The buildings are also fitted with fire doors.

All HNELHD staff attend mandatory yearly fire safety training, including a live demonstration on extinguisher use.

The local Fire and Rescue has not visited the site to undertake a pre-incident inspection and they are not familiar with the collection nor the site. Current response time is around 10mins.

## Recommendations

Contact the local Fire and Rescue team to request a site visit to undertake a pre-incident inspection. The safety of staff and the public onsite is the first priority, however once this has been determined then the fire response team can look to reduce damage to the collection.

## Environment

The environmental conditions surrounding an object directly influence the rate of deterioration. It is critical to understand the conditions surrounding collections and allow for modifications to be made to ensure that the collections are preserved into the future. The environmental conditions of concern are temperature and relative humidity; light and Ultraviolet radiation; pests and the levels of dust or mould within the environment. All these should be recorded and monitored and preventive measures instigated when required.

## Temperature and Relative Humidity

The environment in the library is controlled with an air conditioning system that operates 24 / 7. This system is generic across the building and isolation is not possible. The AC is set for human comfort and control is limited to temperature only.

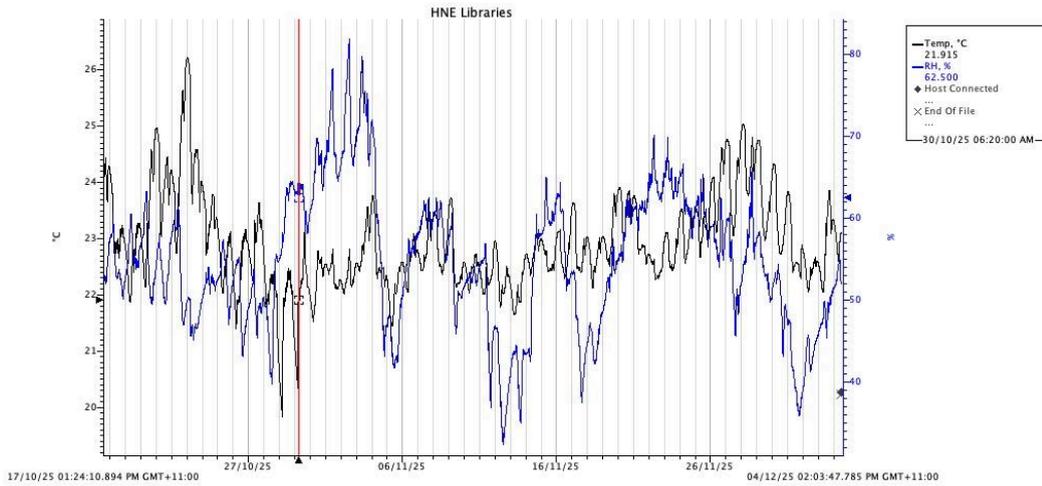
The environmental conditions that collections are stored and displayed impact on the longevity of the collections. The *Environmental Guidelines* established by the AICCM (Australian Institute for Conservation of Cultural Materials) recommend between 15°C to 25°C and 40% to 60% relative humidity for a temperate climate (Newcastle is considered temperate).(Appendix 3)

As part of the preservation needs assessment process, recording and analysing the environmental conditions can provide guidance for recommendations and insightful information about potential past damage. For this assessment both onsite spot tests and data logging devices were implemented. An Elsec® Environmental monitor enabled onsite spot tests and a HOBO® data logger was in place onsite for ~6 weeks to record data in three locations. The table below highlights the temperature and relative humidity(RH) taken during the site visit.

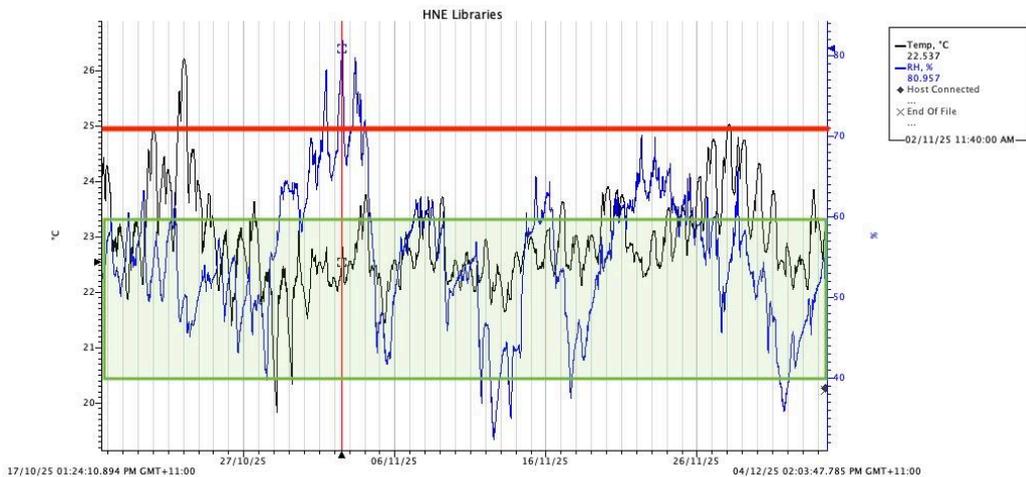
Location	Temperature	Relative Humidity
Main library		
central location 12pm	23°C	50%
rear north corner	23.5°C	49%
strait jacket	23°C	50%
Office area		
10am	23°C	53%
2pm	23.3°C	49%
External conditions ( BOM data)		
9am	20.1°C	54%
3pm	25°C	46%

The data that is available from the Bureau of Meteorology is limited to data points at 9am and 3pm each day. These points can be used as a comparison to determine the building's capacity for buffering and the impact that the AC system has on the internal conditions.

The graph below is data taken from a HOBO® data logger that was positioned in the office area. The blue line plots the relative humidity and the black line is the temperature over this period.



Graph 1 - 17th October to 4th December.



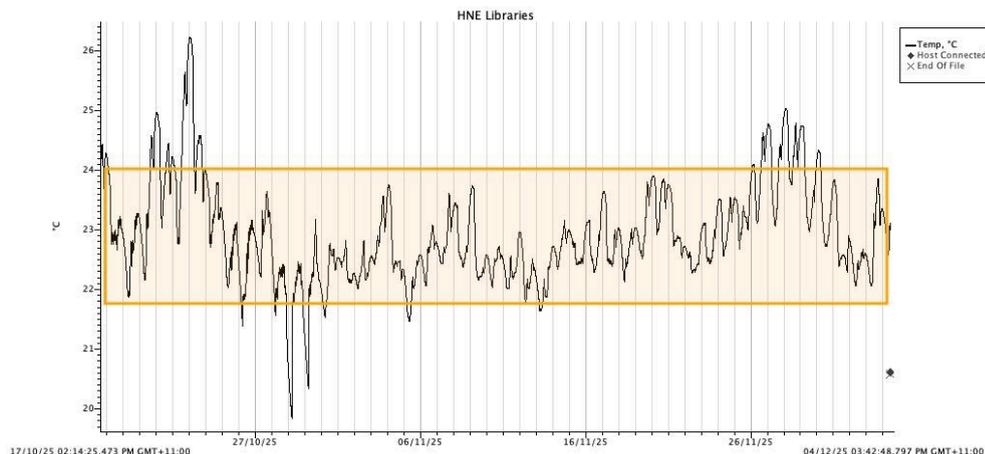
Graph 2 - Environmental bands highlighted.

Graph 2 highlights the uppermost temperature as recommended by AICCM in a red line. The green band is the relative humidity range from AICCM environmental guidelines.

The data graphs provide insight into areas for further investigation due to the potential concern for heritage collections. These include the temperature spike on 23rd October, the high relative humidity in early November followed by the subsequent drop in RH.

### Temperature

The temperature is controlled by the AC system and this is reflected in the graph below.



Graph 3 - The recommended temperature range highlighted in orange.

Graph 3 shows the temperature during the period of monitoring, with the orange band highlighting the central range over this period. This graph provides a clear illustration of the consistency of the temperature. The breach in the band on the 23 October is discussed below, and the low troughs are still within the AICCM recommended range and therefore are not of concern.

The temperature spike indicated in the graph on 23rd October is at 1am in the morning. The data from BOM indicates that 22nd October was excessively hot with temperatures at 3pm 35.4°C with a high of 36.6°C for the 24 hour period. These conditions are reflected, although lower, in the internal temperature and the resulting spike. This indicates that the building and air conditioning do provide a mild buffer in temperature when compared to the external conditions. It would be worthwhile monitoring the conditions over summer to determine the capacity of the AC and building to buffer over several days of high temperatures.

### Relative Humidity

In addition to analysis of the temperature it is important to understand the RH over a period of time. The multi day high relative humidity conditions in early November are documented in the table below.

Table 1 : Comparison of internal and external conditions between 1 and 3 November.

Date	external Temp	internal Temp	external RH peak (3pm data)	internal RH
1st Nov	19.7°C	22°C	89% (81% at 3pm)	78.5%
2nd Nov	19.6°C	23°C	91% (83% at 3pm)	82%
3rd Nov	19.6°C	23°C	93% (82% at 3pm)	80%

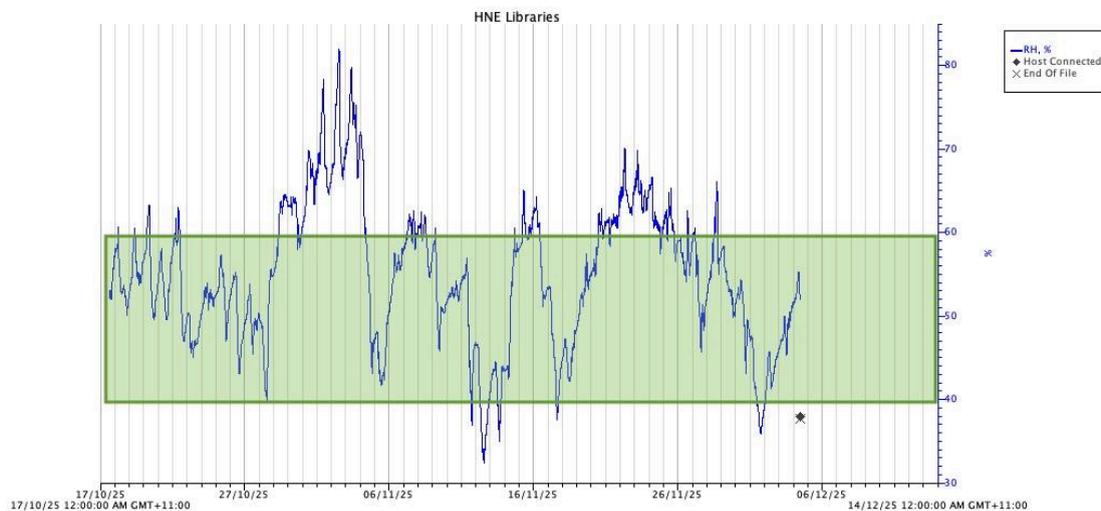
The external high relative humidity is reflected in the internal conditions. While the RH does not reach the external extremes the conditions are still beyond the recommended range. The comparison between external and internal relative

humidity conditions suggest that the AC and building offer less buffering capacity for relative humidity.

The significant drop in RH in the graph on the 3rd November from 73% RH (23°C) at midnight to 43% RH (22°C) by 7pm the following day, indicates the minimal impact that the AC has on buffering the external RH conditions. The external conditions dropped faster, to 34%RH by 3pm, but the internal conditions followed within several hours. Table 2 provides data points during this period.

Table 2 : Comparison of internal and external RH conditions between 4 and 5th November.

Date	Time	external	internal
4th Nov	1am		73%
4th Nov	9am	57%	60%
4th Nov	3pm	34%	54%
	7pm		43%
5th Nov	9am	40%	42%



Graph 4 - Relative humidity only with AICCM recommended range in green

Graph 4 illustrates the relative humidity and the breaches beyond the recommended range. The highest peaks have been briefly discussed above, in addition, the duration of the breach and additional breach days must be considered. Short term spikes within a 2 hour period are acceptable and do not cause adverse change in heritage objects. Longer term high relative humidity can cause changes within heritage materials.

### Summary of the findings

The graphs indicate that the library and office spaces are mostly within range however this is only when the external conditions are mild. External high RH impacts the conditions within the library and this should be taken into consideration.

### *Concerns*

The high relative humidity that was recorded is of concern for all heritage collections. Accelerated aging, mould growth and deterioration of heritage collections is apparent in high relative humidity environments. Paper, textiles and organic materials are susceptible to mould growth, distortion and staining. Metals are susceptible to corrosion and rust and wooden artefacts will swell, split and warp.

Mould is considered a risk when relative humidity is at 65% and above. The data highlights that the RH is above 65% for a period of 3 - 4 days which is a concern for heritage materials and mould growth.

### Recommendations

It is recommended to purchase a data logger to monitor the conditions. Monitoring the temperature and relative humidity within a space provides detailed information on the conditions that the collection is stored. This information is intrinsic in establishing recommendations for the modification of the storage enclosures, furniture and / or location within the building.

The collection is currently stored in cardboard boxes on the floor. The carpet may become humid with excessive days over 65% RH which increases the risk of mould growth within the boxes. Storage improvements by lifting the boxes from the floor and allowing air flow beneath will reduce this risk.

## Light and UltraViolet radiation

All light is harmful to objects, exposure to light causes fading of dyes, colour changes, embrittlement of paper, leather and plastics, and accelerated deterioration. It is therefore imperative to protect objects from prolonged exposure to light.

The HNE Health Library collections are exposed to light in the main library and to a lesser extent in storage. The library is illuminated with both artificial and natural lights. The level of lighting varies according to location within the library and this is expanded upon below.

### The library

The library space is a long rectangle room running south east to northwest. There are windows on both the eastern and western sides of the main library. The windows are double hung sash windows with distorted glazing and no window furnishings. Direct sun and ambient natural light penetrate the library from these windows. The room is also illuminated with 5 rows of tube lighting. These are expected to be LED tubes that have replaced fluorescent.

The lights are activated when staff are onsite which is Monday to Friday 8am to 6pm.

**The office area**

The office is an open plan area adjacent to the main library. There are sash windows along the southwest and southeast walls, with distorted glazing and blinds. There are three rows of tube lighting within the office space, which is fixed into the false ceiling. The majority of the collection in the office area is protected from light exposure due to the enclosures and storage of the collection. The boxes and current location under desks provides physical protection of the collection from exposure to light.

The table below records the light and UV at various locations in both the library and office area.

Location	Light – lux	Ultra violet	Type
<b>Main library</b>			
Front area	650	5	directly under light bank
Centre	510	66	artificial and ambient natural
Shelves facing NE	2100	470	natural and artificial
Shelves facing SE	1200	470	natural and artificial
Straitjacket	1100	450	facing the NE window
Straitjacket	500	450	shadow side
ECT on shelves	500	350	artificial and ambient natural
Nurses certificate	180	360	in shadow of above shelf
Basal machine	1300	685	natural light 12pm
Basal machine	650	450	shadow side
<b>Office</b>			
Storage area	600	10	natural and artificial
dDesks	800	10	directly under light bank

**Concerns**

Paper, colour photographs, textile, natural products and plastics are generally the most vulnerable to light and UV exposure. The extended time on display and exposure to light and UV is causing deterioration of these significant objects. The straitjacket is a highly significant object that has been on display for at least 10 years, this exposure has caused deterioration of this object. The rubber components of the Basal machine have deteriorated and this is in part to the light and UV exposure. The Nurses certificate has discoloured and become brittle due to exposure to light and UV.

Ultraviolet light increases the deterioration and causes yellowing and weakening of organic materials. The UV data recorded in the main library is of serious concern. The windows do not provide any protection or blocking of UV and therefore any objects that are exposed to light from the windows are also exposed to the UV.

### Recommendations

Some general recommendations regarding light levels are as follows:

Collections can be categorised according to their sensitivity to light, and recommendations made accordingly.

Sensitive materials < 50 lux	Moderate Materials 100 lux	Insensitive materials 200 Lux
Paper	Oil Paintings	Unpainted: ceramics
textiles	Wood	Glass
watercolours	Parchment	metal objects
dyed leather	raw hide	stone objects
feathers	fur	
photographs	bone / ivory	
some plastics	horn	
rubber components	painted : ceramics	
prints	: glass	
pastels	: metal	
drawings	: stone	
<b>Total 150,000 lux hours</b>	<b>Total 300,000 lux hours</b>	<b>Total 450,000 lux hours</b>

The total lux hours is a broad estimation of when the object begins to reach a discernible deterioration due to light. For example, the lux hours for the sensitive object is equivalent to 250 days at 12 hours per day at 50 lux. ( 250 x 12 x 50 = 150,000) This equation can be used to determine how long an object can be on display before a notable change has occurred. Therefore if the lux was higher, then the time on display must be reduced. For example a sensitive object displayed at 100lux will reach the notable change in 125 days at 12hours exposure per day. (Thomson “ The Museum Environment” 1987)

### Collection specific recommendations

The extended length of display, permanent or semi-permanent exhibitions are causing light damage to the collection and vulnerable objects should be rotated from display.

The table above should be used as a guide to determine the length of time works on paper, textiles and other vulnerable materials are on display within the Library.

The straitjacket should be removed from display. There are three other straitjackets that can be rotated for display purposes. The duration, light and UV exposure should be recorded in the database to monitor conditions and exposure levels.

The nurse certificate should be removed from display ( this was removed during the site visit).

It is recommended to record the data of light exposure and length of time on display for significant objects. This should be used to guide long term exposure and accepted rates of deterioration. Consultation with a conservator can assist with this process.

## Dust

Dust is an abrasive, an attractant to pests and is conducive to mould growth. Pollutants include sea air and potential off gassing from poor quality materials, exposure to pollutants cause colour changes, corrosion and acidic degradation.

Dust ingress occurs through doors, windows and AC systems and visitors also contribute to dust build up. In addition, the deterioration of the building itself creates dust. The paint, the fixtures and fittings, the display cases, the plaster ceilings all break down to create dust.

The objects on open display within the library all have a fine layer of dust. The straitjacket and the ECT machines on shelves all have dust over the surface. The Basal Machine has considerable dust on all horizontal surfaces.

The collection that is in storage has a fine layer of dust. This collection has been wrapped in bubble wrap from the previous location without cleaning. Some books and implements have obvious dust while others are cleaner.

The librarian is concerned about the levels of dust on the collections. The library staff undertake some cleaning and Calvary Mater cleaning staff undertake general cleaning. The level of cleaning is standard vacuuming, cleaning kitchen and wiping surfaces.

### Recommendations

The cleaning of objects on display is highly recommended, however this should be with guidance from a conservator. Over cleaning, the use of inappropriate chemicals and brushes can cause harmful and irreversible damage. The objects on display should be cleaned and then a cleaning schedule established. The cleaning schedule can also be implemented with guidance from a conservator.

The general cleaning of the library should be checked by the Librarian to ensure that cleaners are not cleaning the objects on display. Appendix 4 provides general cleaning guidelines.

## Pests

Pests can have a detrimental impact on all organic collections. Pest damage includes soiling, staining and complete loss of the object. Pests ingress can occur with donations, collection movement, access under doors and windows and accidental transfer within boxes or collections.

Pest activity can often go undetected for some time and unfortunately this results in catastrophic damage. Past pest activity was noted on and in several books and during the site visit, both consultants (SA and PNA ) spotted live silverfish.



The librarian is not aware of the current pest control actions, however there is an assumption that the library / hospital would have standard pest control measures in place. There are no pest mitigation measures that are specific to the collection; such as monitoring, isolation or trapping.

The current location of the collection on the floor of the office is conducive to pest activity. The collection is simply within cardboard boxes on the floor of the office, there is a kitchen and external doors are not far from the office.

The relocation of the collection from the John Hunter library did not include inspection or monitoring for pests.

### Pest Recommendations

The HNE Health Libraries site has not experienced any major pest damage however it is critical that an Integrated Pest Management (IPM) program is implemented. An IPM focuses on the library collection and reduces the threat and impact of pest related damage. The key areas in an IPM are

- *Prevention*
  - seal cracks under doors and windows
  - no food/water sources near collection materials
  - new material isolated and inspected
  - good housekeeping.
- *Monitoring*
  - observe and check collection
  - use of blunder traps
- *Identification* – when insects/droppings found
  - identify pest and exposed collection
  - Isolate collection
- *Eradication*
  - use low oxygen or freezing
  - no fumigation

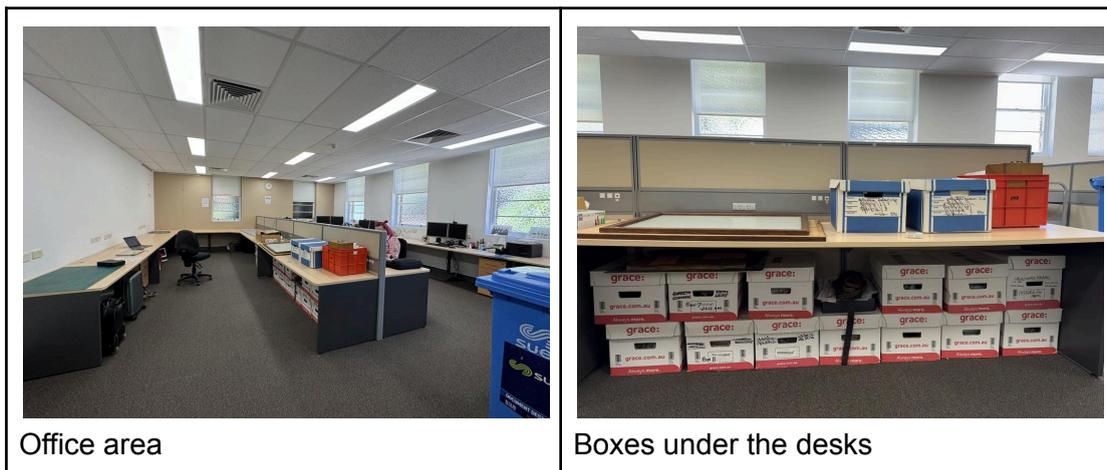
## Storage

There is no dedicated storage room or location for the HNE Health Libraries Historical Collection, rather it is stored in standard removal boxes on the floor under desks in the office section of the library. There are ~20 boxes stacked two high under office desks and another small number of boxes stored under the front desk of the library.

The objects, books and instruments with the boxes are all wrapped individually in bubble wrap and secured with sticky tape.

The boxes are numbered and a list of objects is taped on the top of the box. Generally, books are grouped together as are instruments and objects within a given box.

The straightjackets are stored in a large drawer behind the main reception desk for the library.



## Storage furniture

There is no storage furniture such as compactus or shelving units that is dedicated to the storage of the majority of collection. The desks above the collection are for use by researchers or staff which occurs on occasion.

The straitjackets are stored in drawers constructed of melamine or laminate boards, with the interior lining of white. The drawers are the lower section of a cabinetry shelving system that includes shelves, desks and the drawers. This cabinet is fixed into the wall between the foyer of the library and a small kitchen room.

## Storage enclosures

The enclosures / packaging of the collection is limited to bubble wrap and adhesive tape around each object. The collection was wrapped in bubble wrap for transport from the Mater and this has not been removed.

There are no archival envelopes or archival barrier paper wrapping. The straitjackets are loosely interleaved with tissue. It is not clear if this tissue is archival or standard.



Books wrapped in bubble wrap

Instruments wrapped in bubble wrap



Straitjacket drawers

Loose interleaving of straitjacket

## Storage Recommendations

Archival storage is highly recommended and is the first fundamental step in preservation of the collection. In addition to the purchase of archival materials it is recommended that -

- all adhesive tape should be removed
- all bubble wrap should be removed

- all books are recommended to be wrapped in archival bond paper
- all metal objects are recommended to be wrapped in tissue / calico
- all wooden objects are recommended to be wrapped in tissue / calico
- all composite objects are recommended to be wrapped in tissue / calico

The storage location requires immediate improvement. The placement on the floor places the collection at greater risk of flood damage, higher relative humidity and mould and easier access for pests.

Dedicated storage racking to store the collection is highly recommended.

As part of the storage project each object must be correctly labelled and identified to ensure provenance and critical information is retained.

## Display/exhibitions

The display of the HNE Health Libraries collection is limited to select objects including one straitjacket, the ECT machines and the Basal Metabolic machine. There are other medical related objects on display in the library foyer however these are not owned or managed by the HNE Health Libraries.

The displays are in three locations across the library, with minimal labelling and without curation or interpretation. The straitjacket is at the foyer end of the first row of the library, the ECT machines are in the third row on shelving and the Basal Metabolic machine is in the north corner.



Straitjacket on display



ECT machines on shelves in library



Basal Metabolic Machine at end of row

Close up of Basal Metabolic Machine as found during site visit.

## Display cabinet/s

There are no display cabinets in use for these collections, with the exception of standard library shelving for the ECT machines. The ECT machines are positioned randomly on the library shelves. On display with these objects are other medical equipment including two versions of the Chiron MK3 (alarm for bedwetting), and other unidentified machines.

The straitjacket is positioned on a mannequin on open display. The mannequin is in poor condition. The legs are corroded with rust spots as is the internal workings of the torso. The felt covering of the torso is also deteriorating.

The Basal Metabolic Machine is supported by the original stand and wheels system designed for the machine.

There are other enclosed glass display cabinets in use for external collections.

## Display program / schedule

The length of time an object is on display directly influences particular elements of deterioration - such as light damage, exposure to temperature and relative humidity and physical damage from visitors.

Discussions with staff indicated that the straitjacket has been on display for at least 10 years. The ECT machines have recently moved from the Mater Hospital to this

location, however they were also on display at the Mater. The Basal Metabolic Machine has been on display for numerous years.

### *Concerns*

There are several concerns with display of the collection

- length of time on display
- lack of documentation and recording of length of display
- lack of interpretation and curation
- exposure to dust, physical damage and environmental conditions.

## Display Recommendations

### *Time on display*

The length of display is dependent on the materials present in the object. Display for longer than the recommended period will result in irreversible damage to the collection. The lighting section of this report provides recommendations regarding the exposure lengths for different material types. The most vulnerable are the organic materials. The straitjacket is the most vulnerable and decisions should be made regarding the length of display. Options to consider are

1. This straitjacket has already been exposed to light for a long period of time and therefore this object could be considered as a sacrifice. The other three straitjackets therefore are to be closely managed with exposure to light.
2. Remove the current straitjacket from display and replace it with one of the others. Ensuring that documentation and labelling is accurate to keep track of length of display and light exposure

### *Documentation*

Develop a system to record the length of display and light exposure. This may be within the catalogue or some other recording system.

### *Interpretation and curation*

It is recommended to develop signage and information panels that engage visitors with the collection on display. Each object can have a short blurb about the history and use of the object and this can be enhanced with images and quotes from diaries or documents within the collection.

### *Lighting*

The natural lighting and high UV exposure is a risk for organic materials. The ultraviolet light that is penetrating through the glass windows is unacceptable. Installation of block out blinds or some placing the straitjacket into a display case with UV inhibiting glazing is recommended.

### *Cleaning*

A cleaning schedule should be implemented to dust the shelves and display cabinets. Removing dust and dirt build up will prevent staining and deterioration of objects. Vacuuming the floors is the most appropriate way to remove the dust and dirt

build up. The shelves may be dusted with micro fibre cloths and objects should be cleaned on an individual assessed basis.

Avoid using polishes, commercial cleaners or sprays. If necessary the cloth can be dampened to collect more dust. Ensure that the surface is completely dry before returning objects to display positions.

## Visitor impact

The collection is only accessible for staff and tertiary students of the HNE LHD. The collection is not open to the general public and is also not currently available online. The librarian is interested in digitising the collection to make it more broadly accessible, however this is not a current priority.

The visitation to the library as a whole is recorded through an automatic counter at the entrance to the library. The month of November was 1026 visitors (including library staff).

A statement from the SA supports the value of digitising the collection and the creation of physical onsite displays -

*The HNE Health Libraries historical collection, while currently not well known publicly, has great potential as a research resource for professional and academic researchers, and it also offers opportunities for small displays for the enjoyment of visitors to the library, and online digital exhibitions or catalogues of the collection material to provide enjoyment and information for a wider audience.*

The risk of theft or physical damage to collections is unlikely but possible. Some objects have been moved within the library without consultation and this can lead to dissociation, loss and damage.

## Disaster preparedness

A collection orientated disaster plan is a guiding document to assist staff and volunteers in the preparation, response and recovery for incidents that occur within the building that affect the collection. A collection disaster plan should be site and collection orientated and be developed to operate specifically with the collection, volunteers and resources available.

The HNE Health Libraries does not have a collection related disaster plan. This is a serious concern due to recent past flooding and water leaks that affected the library.

## Recommendation

It is highly recommended to work with a conservator to develop a disaster plan that is collection and site specific. The difficulties related to the resources and capacity to respond need to be highlighted within the disaster response plan and strategies

developed that are achievable. In addition to ensuring that significant objects are incorporated and response and salvage techniques are relevant.

## Training needs/skills assessment

The librarian and library staff bring many skills and relevant experience to their roles with the collection at HNE Health Library, however the staff would benefit from the following training topics

- Collection care and preventive conservation – understanding the principles of deterioration and mitigation strategies
- Collection handling - the specifics of handling historic collections and the issues related with vulnerable and/ hazardous materials
- Collection cleaning - how to clean a variety of material type
- Disaster planning – developing and writing a disaster plan for the collection

## Prioritised recommendations

<b>Short Term Actions</b>
<p>Collection management</p> <ul style="list-style-type: none"> <li>● Determine catalogue system                             <ul style="list-style-type: none"> <li>○ begin to catalogue collection</li> </ul> </li> <li>● Develop donation form</li> <li>● Research digitisation options</li> </ul>
<p>Storage</p> <ul style="list-style-type: none"> <li>● Remove bubble wrap</li> <li>● Replace with archival paper and cotton tying tape                             <ul style="list-style-type: none"> <li>○ Label objects</li> </ul> </li> <li>● Lift boxes from floor</li> <li>● Investigate long term storage location</li> </ul>
<p>Display</p> <ul style="list-style-type: none"> <li>● Research objects on display</li> <li>● Develop interpretation panels</li> <li>● Undertake cleaning of collection on display after training</li> </ul>
<p>Training</p> <ul style="list-style-type: none"> <li>○ Apply for funding for training in                             <ul style="list-style-type: none"> <li>○ Preventive conservation</li> <li>○ Collection Handling</li> <li>○ Collection cleaning</li> </ul> </li> </ul>
<p>Pests</p> <ul style="list-style-type: none"> <li>● Purchase blunder traps to monitor pest activity</li> <li>● Discuss pest program with Hospitals pest contractor</li> </ul>

Apply for funding for

- Conservation treatment of significant objects
- Archival products for storage
- Training as above
- Conservator to assist with development of Disaster plan and Integrated Pest Management plan
- Digitisation project
- Purchase of data logger

## Medium Term Actions

### Collection management

- Continue with cataloguing and documentation
- Disaster preparedness plan developed with conservator
- Integrated pest management plan developed with conservator
- Implement digitisation project

### Training

- Attend training in preventive conservation
- Attend training in collection handling and cleaning

### Collection

- Conservation of significant objects
- Develop cleaning program from training

### Display

- Launch display area for collection with interpretation panels
- Develop rotating schedule of objects for the display area
- Consider placement of light sensitive objects

### Storage improvements

- Continue rehousing project to move collection into archival storage materials
- Move collection into dedicated storage area

### Environment and pests

- Install data loggers to monitor temperature and relative humidity.
- Establish a schedule to monitor the data
- Install pheromone based traps according to previous monitoring.

## Long Term Actions

### Environment

- Interpret the data to make informed decisions about collection locations and modifications to climate control.
- 

### Collection management

- Update policies regarding the management of the collection
  - donations
  - loans
  - preservation policy
  - disaster plan

## Authorship

The report was written by Tegan Anthes Collection Preservation with the kind assistance of Cherish McDonald, Librarian at Hunter New England Health Libraries. The dedication and interest in the process that Cherish shared with me over the course of the site visit and numerous emails was invaluable. Cherish provided insight and intimate knowledge of the collection which was crucial for the assessment and subsequent development of the report.

## Appendix 1 - Significance table from Significance Assessment

	Primary significance criteria				Comparative significance criteria			
	Historical	Artistic/ aesthetic	Scientific/ research	Social/ spiritual	Provenance	Rarity	Completeness/ condition	Interpretive capacity
John Irvine Hunter notebooks	X	X	X		X	X	X	X
John Irvine Hunter scrapbook/diaries	X	X	X		X	X	X	X
Hazel Hunter scrapbook	X	X	X	X	X	X	X	X
John Irvine Hunter memorial plaque	X	X		X	X	X	X	X
John Irvine Hunter books	X	X	X		X	X	X	X
<i>The Ancient physician's legacy to his country (1790s)</i>	X		X		X	X	X	X
<i>Lunacy in Many Lands (1887)</i>	X		X		X	X	X	X
<i>A Treatise of the theory and practice of midwifery (1752, facs.1974)</i>	X		X		X	X	X	X
<i>Baby in a coolamon sculpture</i>	X	X		X	X	X	X	X
<i>The essays or Councils, Civil and Moral of Francis Bacon (1696)</i>	X		X			X	X	X
<i>Medical and Chemical Essays (1795)</i>	X		X			X	X	X
Ophthalmoscope, Theodore Hamblin, London, owned by Dr Partington	X	X	X		X	X	X	X
Basal Metabolism Testing Machine			X			X	X	X
magneto-electric machine, late 19thC	X		X		X	X	X	X
magneto-electric machine, Rodman & Kelaher, early 20thC	X		X		X	X	X	X
Straitjackets, Newcastle Mental Hospital	X		X	X	X	X	X	X
Restraint belt, Newcastle Mental Hospital	X		X	X	X	X	X	X
ECT machines, Newcastle Mental Hospital	X		X	X	X	X	X	X
Building plan, Newcastle Hospital for the Insane (1880)	X	X	X		X	X	X	X
Training School Registration Certificate, 1926, Newcastle Mental Hospital	X		X		X	X	X	X

## Appendix 2 - Floor plan

## Appendix 3 - AICCM Environmental Guidelines

Copied from AICCM webpage

(<https://aiccm.org.au/conservation/environmental-guidelines/>)

Accessed on 12 December 2025.

AICCM Environmental Guidelines (2022)		
Climate type	Temperature range	Relative Humidity range
Temperate	15 – 25 °C	40 – 60 %RH
		50 ±10 %RH
Humid	15 – 25 °C	45 – 65 %RH
		55 ±10 %RH

**Provisions**

- Stable diurnal drift in temperature and relative humidity within the deadbands is the optimal outcome.
- Multiple short-term fluctuations of 5 to 10% relative humidity that are longer in duration than 2 hours should be investigated and addressed.
- Unstable temperature, such as rapid increases or multiple short-term fluctuations of more than 4 degrees Celsius, should be investigated and addressed.
- Temperature and relative humidity parameters for preservation of cultural materials will differ according to their material, construction, and condition. Constant conditions maintained within the parameters described above are generally acceptable for most objects in stable condition.

## Appendix 4 General Housekeeping

Some general museum guidelines below regarding housekeeping practices.

**Vacuuuming** – This should be done on a regular basis. The timing of the schedule is dependant on the visitor impact and the library building. The vacuum should have a HEPA filter fitted and have adjustable suction. The vacuuming should be over all floors, carpets, lino and wooden floors, skirting, window sills, behind and underneath furniture. And if there are padded furniture for visitors seating this can also be vacuumed. Vacuuming removes the dust where as sweeping can allow dust to re-settle in another location.

**Wet cleaning** – Display cabinet and surfaces (**not objects**) can be wiped down with a micro fibre cloth. If required the cloth can be dampened with water. Cloth should be regularly replaced and turned to prevent distribution of dust and dirt that accumulates within the cloth. The cloths can then be washed in a mild detergent. Mopping is possible in areas with lino or wooden floors.

**Prevention** – Dust, dirt and debris can be prevented from entering museum spaces by implementing door mats, ensuring that doors and windows are properly sealed and keeping doors closed between museum spaces and thoroughfares. If dust is an issue in your museum then installed closed display cabinet can further reduce the dust on objects.

## Appendix Light and Ultraviolet Radiation

Different light levels are recommended for different types of material, depending upon its sensitivity to light damage. Organic material (such as paper, textiles and books) is more sensitive to light damage than inorganic material (e.g. metal and ceramics), along with paintings on canvas (which are between the two). For this reason there are limited light levels recommended for these materials. It must be remembered, however, that **all** light causes damage and light damage is cumulative and irreversible. While it is important to remove ultraviolet radiation (not part of visible light) from all light sources as it causes the most damage, the remaining light will still cause damage.

Light levels are measured in units of lux (lumens per square metre), while UV is measured in microwatts per lumen. The maximum amount of UV for all material is 75  $\mu\text{w}$ /lumen (the standard amount emitted by an incandescent light bulb) but it is preferable to eliminate all UV.

The maximum level of light for paper, textiles, leather etc is 50 lux, while paintings and furniture can be exposed to levels as high as 200 lux. (remembering that all exposure is causing damage). While the conservation profession has established these guidelines, it is also useful to address light levels within a collection using the 'light hours' concept. This concept allows for different levels of light falling on collection materials for different lengths of time with the total amount of light damage being calculated. This means the custodian of the collection is able to decide how to use the 'light hours' of an object or collection – low light levels over an extended period of time, or higher light levels over a shorter period of time. It offers a little flexibility when it comes to the vexed issue of light and collections.

## **Materials for the construction of the case**

The materials used in the construction of the case are critical in the preservation of the artefacts on display. All materials used must be inert, and archival when in contact with the object. Certain products can off-gas harmful pollutants that will deteriorate the objects on display. Products that can have adverse affect on objects include: paints, varnishes, wood, carpets, padding, fabrics, adhesives, plastics, paper board products and gaskets.

Wood products should be avoided, as wood generates volatile acids that cause deterioration of most artefacts. The most harmful are: oak, sweet chestnut, birch, teak, western red cedar, and douglas fir. Some wood is more acceptable (such as pine, poplar and aspen) but all surfaces must be covered with a barrier film to reduce off-gasing. Composite woods such as MDF and plywood are only acceptable when phenol-formaldehyde is used in production(this is confirmed by the MSDS of the product in use).

### **Recommendations**

Anodised aluminium, coated steel, uncoated Perspex, and glass are highly recommended in case construction.

Options for barrier films include active films that absorb the harmful gases and passive films that only provide a barrier. Active films include Marvel seal® and Moistop® and a barrier film would be archival polyester. In all applications it is critical that the entire surface of the wood is covered, with films overlapping and attached with an aluminium barrier tape.

The wood can be painted to reduce the emissions, but this will not completely protect against off-gasing. The only recommended paints are acrylics and water-based polyurethanes.

Gaskets and caulking for sealing the case are recommended to be acrylic, polyethylene foam, neutral cure silicone caulk or Teflon.

Adhesives used within the case should be restricted to acrylics, BEVA-371, EVA hot glue and 3m polyester double-sided tapes.