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The Repair and Rebinding of *The Pilgrimage of Human Life* at the Bodleian Library



The 17th century binding of the *The Pilgrimage of Human Life*

Introduction

The Bodleian Library's *The Pilgrimage of Human Life*¹ is a medieval illuminated manuscript on parchment, made in England in the early 15th century. The production is clearly of the highest class: the calf-skin parchment is of beautiful quality, and the text is accompanied by twenty fine gilded and coloured miniatures. The book contains the Middle English prose translation of Guillaume de Deguileville's *Pèlerinage de la vie humaine*, an allegorical romance in which the narrator dreams that he sees the New Jerusalem and resolves to travel there. He first requires the pilgrim's staff of hope and satchel of faith, which are presented to him by Grace Dieu, who becomes his guide as he journeys toward his heavenly destination through the hazards of doubt and sin².

The manuscript is one of only two surviving illuminated copies of this text in English, the other being held by the State Library of Victoria in Melbourne. It has been suggested that these two manuscripts shared a common exemplar³. By coincidence, the Australian manuscript underwent conservation work



MS. Laud Misc. 740 folio 2 recto. The opening page of the manuscript with Archbishop Laud's ownership inscription.



The spine with 17th century sewing in place. The black arrows indicate the medieval sewing positions. The red arrows indicate holes which may be the original kettle stitches, or which may have been used for endbands.

and rebinding at the same time as the work I will describe, and though the two conservators were at the time unaware of each other's work, the treatments carried out were remarkably similar⁴.

Description of the book

The manuscript was donated to the Bodleian Library in 1635 by William Laud, Archbishop of Canterbury and Chancellor of Oxford University. The book was acquired by Laud in 1633 in a 17th century pasteboard binding. The loose leather cover is a flesh-split, possibly sheep skin, in the style of a chemise covering. One set of earlier sewing holes is evident, which we may assume to be from the manuscript's first binding. The sewing stations of the 17th century binding were shifted towards the head of the text-block, as is usual with later bindings. The original holes were evenly spaced along the spine as would be expected in the early 15th century when the manuscript was produced⁵.

Why repair was needed

Repair was necessary because the cover was torn through with a large missing area exposing the spine; the sewing supports had broken and the sewing threads had worn away. As the book was handled, the loose leaves rubbed against one another, risking abrasion of the gilding and pigments of the miniatures. In order to prevent such damage, the manuscript had been placed in a restricted category and was unavailable to readers. If readers required access to the text, they would be directed to a black and white microfilm of the manuscript – a poor substitute for the sumptuous colours and textures of the original.



MS. Laud Misc. 740 folio 14 verso. Note the girdle book being held by the bishop illustrating another function of the extended over-cover or chemise. See Szirmai (op. cit., pp234-237).

How the manuscript was chosen and how the work was paid for

The scale of the historic collections at the Bodleian Library means that there is a waiting list for repair and conservation. A donor approached the Development Office of the University with a sum of money which had been raised by friends and relatives in memory of her father Peter Freeman, who had studied at the University and had been particularly interested in English literature, history and music. *The Pilgrimage of Human Life* was selected by the donors from a group of priority projects from Mr Freeman's field of interest. The donation not only paid for the conservation treatment of the illuminated medieval romance, but also for a full-colour digitisation to replace the black and white microfilm.

Specifying the treatment

1: The ethical framework of conservation treatments

The approach of the Bodleian Library Conservation Department when repairing material is based on the ethical guidelines set out by the European Confederation of Conservator-Restorers' Organisations for treatment of cultural heritage material⁶. These guidelines form the basis of the professional standards required for accreditation by the Institute of Conservation⁷, and against which the accredited book conservators working at the Bodleian Library have been assessed.

2: Treatment objectives for this manuscript

The first principle of the guidelines requires that treatments should "respect the aesthetic, historic and spiritual significance and the physical integrity" of the object while enabling it to meet "the requirements of its social use". In the case of the manuscript presented for repair, the 'social use' of the item is that it be fit to be handled, with appropriate advice and care, by researchers and scholars in the library, and to be safe to display in an exhibition⁸. Before treatment, it was not safe for the book to be used in the manner for which it was intended. The treatment chosen needed to make the manuscript safe to handle again, to consider its long-term storage and preservation, and to respect its historical significance.

3: Treatment options for the manuscript

The options for treatment of the manuscript were relatively simple. It was clear that the manuscript would have to be re-sewn, and returned to a bound format. The quality of materials and well-judged techniques of the medieval bookbinder mean that early books which retain their original bindings are usually in excellent condition. Unfortunately it is more common to see books which were re-bound in later periods using methods which have caused severe damage; most notably the heavy glueing and artificial rounding and backing of the spine. Fortunately, in this case, the spine had not suffered from application of hide glue and though now broken down, the later binding had treated the manuscript gently; the quires came apart easily and the parchment was not distorted. The leaves opened and flexed smoothly, and had none of the distortion that is often seen in rebound parchment manuscripts.

The spine folds had suffered a minimal amount of damage from exposure where the spine covering was missing. There was a little tear-back and enlargement of sewing holes, especially those which must once have belonged to an endband and were very close to the head and tail edges of the spine. With

minimal repair to the spine and without needing to relax or straighten the parchment, the volume could be re-sewn and returned to a bound format.

The main question was whether to reuse the 17th century binding or to create a new binding for the manuscript. Following the ethical guidelines described earlier there are several issues to be considered in the decision of how to rebind. The chemise binding is not the original binding of the manuscript; it was added some two hundred years after the book was produced and replaced an earlier binding. Certain elements of the 'new' binding are anachronistic for a 15th century manuscript, notably the positioning of the sewing stations and the use of pasteboards. Various examples of over-cover, referred to in general as 'chemise' bindings, are contemporary with the manuscript, but usually served some sort of protective or functional purpose, while the chemise of the Laud manuscript is poorly executed and seems to be purely decorative.



A chemise binding used for Bodleian Library MS. Wood empt. 23. This 14th century manuscript has a covering of red alum-tawed skin, and a second over-covering with extended edges.

Perhaps the binder is being consciously archaistic, or attempting to imitate an example he has seen elsewhere. These points may be seen as arguments for the provision of a new binding more appropriate to the medieval origins of the manuscript, with a view to respecting its historic integrity rather than repairing an inappropriate later adaptation.



The boards after removal. Loose fragments have been secured and the threads retained.

Ethical decisions are often complex and challenging. There is a compelling case for retaining and repairing the 17th century binding as it has been a part of the manuscript for the majority of its life. Although it is not the first binding of the manuscript, it is a historic one and the one in which it was both obtained by William Laud and donated by him to the Bodleian Library. The only evidence of the original binding is the set of earlier sewing holes. Suggestions of what the original binding would have looked like can only be based on surviving examples from a similar date.

The balance between the two options from an ethical point of view was swung by practical considerations. In order to create a strong and lasting sewing structure which can support the opening and function of the volume without resorting to adhesives and linings, the sewing threads and supports must be of good quality and a suitable thickness. Although alum-tawed thongs were used in the 17th century binding, and may also have been used in the medieval binding, they are less strong than linen cords and are often the first point of breakage across the spine or at the joints. The pasteboards of the later binding are thin and soft, and would not withstand the lacing-in of sewing supports, which would in any case require the piercing of new holes in the pasteboards.

The covering material of the manuscript, a weak suede, has a large missing area as well as ragged edges and wear at pressure points. It would be extremely difficult to re-integrate the cover and provide adequate mechanical protection to the spine. In fact, the historic integrity of the cover and boards would be better retained by their removal from the manuscript and preservation in their current state, which is such that the observer can clearly see how they were attached to the text-block.

Decisions regarding the treatment of library material, especially when it involves significant changes such as rebinding or reformatting of material are made as the result of extensive dialogue between conservation and curatorial staff. The various options available are explored and discussed in the context of accessibility of the text, codicological evidence of previous bindings or formats, the practicalities of handling and use, and the suitability of materials and techniques in terms of stability, durability, and whether they are appropriate to the historical context of the manuscript.

It was decided in conjunction with the librarian that, after digitisation, the manuscript would be repaired, resewn and bound using wooden boards, and covered with alum-tawed skin. It is impossible to know how the original binding would have looked; however, the aim is to use materials and techniques appropriate to the period rather than to produce a replica of a medieval book.

The treatment of the manuscript

1: Pulling and repair

The manuscript was carefully documented in its existing condition before any work was carried out. In addition to the high resolution digital imaging of the covers and all the leaves, the pattern of sewing and collation of the quires was recorded. The broken sewing was easy to remove, and where necessary threads were cut and removed carefully avoiding further damage to the sewing holes. The thread fragments were retained, and the sewing supports were left attached to the boards. Some remnants of adhesive were left on the spine possibly from the covering material, but this had not penetrated into the parchment and could easily be removed with a spatula.

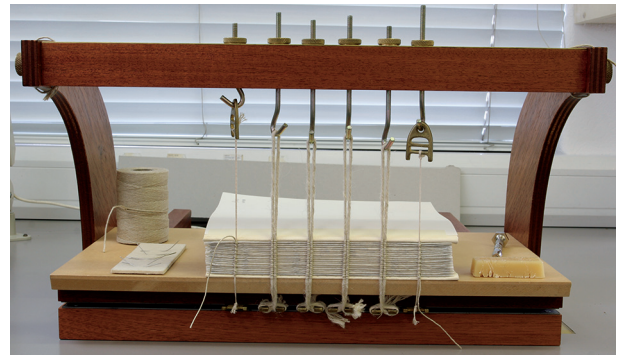
Very little repair or treatment to the parchment was needed. Small repairs to sewing holes were made using calfskin repair parchment. The parchment was cut, sanded and sometimes split to produce repair patches of appropriate thickness and shape. The repairs were sanded down at the edges to produce a scarfed repair, and adhered using gelatine in solution with water.¹⁰ Only sewing holes which were to be re-used were repaired, and the minimal repair meant that little if any extra swell was introduced to the spine of the book.

2: Sewing

We decided to re-use the medieval sewing holes in order to create a symmetrical layout of the spine. The original sewing had left six sets of holes, and two additional stations close to the head and tail of the manuscript may also have belonged to this period. The two outer stations were very close to the edges of the text-block, possibly because of later trimming, and were unsuitable for use. It was decided that the six main sewing stations would be used; the four innermost for the sewing supports, and the two outermost for the kettle stitches and the endband tiedowns. The kettle stitches would be supported with thin linen braid, which gives further structural support to the sewing as well as creating a visually more balanced appearance to the spine after covering.

New endleaves were created at each end of the book. Each endleaf was made up of two calf-parchment bifolia making a four-leaf quire, with an alum-tawed calfskin joint hooked around the quire leaving a short stub. A sewing frame¹¹ was set up with four double 10-cord linen supports and two linen braids to support the kettle stitches. The text-block was sewn all-along using 12/3 linen thread, the thickness of the thread being judged to create enough swell for the gentle natural rounding of the spine. A loose

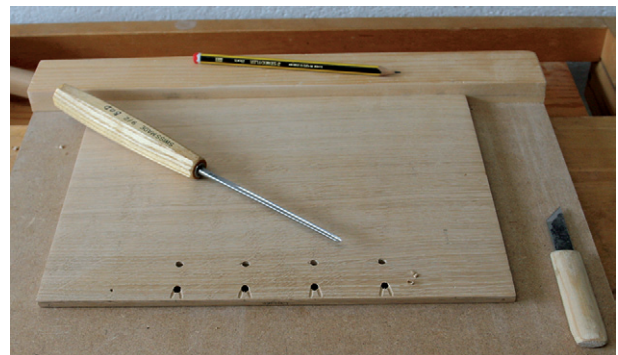
concertina guard of thin Japanese paper was incorporated into the sewing, such that there was a protective layer between the backs of the quires and the covering material without the application of any adhesive. The ends of the concertina guard are tipped to the stub of the alum-tawed joint after the boards are laced on which helps the endleaves to move and function more smoothly with the textblock.



The manuscript after sewing on the frame.

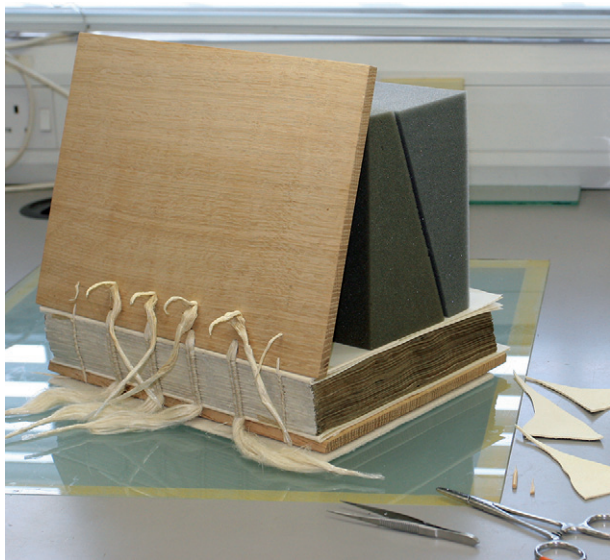
3: Boards

Oak was the most appropriate material from which to construct the boards of a medieval English manuscript. A pair of boards cut from seasoned, quarter-sawn oak were purchased cut slightly oversize and with chamfers cut on the outside faces to form a slightly cushioned shape¹². Wood cut from a quartered log, perpendicular to the tree's rings, has good dimensional stability and is less prone to warping than plain-sawn wood. Although the boards were seasoned they were left for several weeks to stabilize to the conditions in the workshop, and care was taken that after exposing new wood by sanding or planing, there was no unwanted curvature. The boards were finished in the workshop to the exact size, and shaped on the joints to suit the swell of the text block. Holes were drilled to lace in the sewing supports.



Preparation of the boards: holes have been drilled for lacing and the channels are being chiselled out.

The boards were laced over the shoulder of the board through to the inner face, along a short channel and back out to the outer face. Lacing was done open, and was secured using paste¹³ and wedges of alum-tawed skin drawn through the holes as tightly as possible.



One board has been laced on and is left open to dry. Note the alum-tawed wedges to the right of the book for securing the laced-in supports.

Once dry, the excess lacing was cut off flush with the board surface and boards were closed, drawing the book into a gentle round.



The boards have been laced on and the volume closed

The text-block was then pack-sewn in a laying press with 8/3 linen seaming twine to support the opening without the need for linings and adhesives¹⁴.



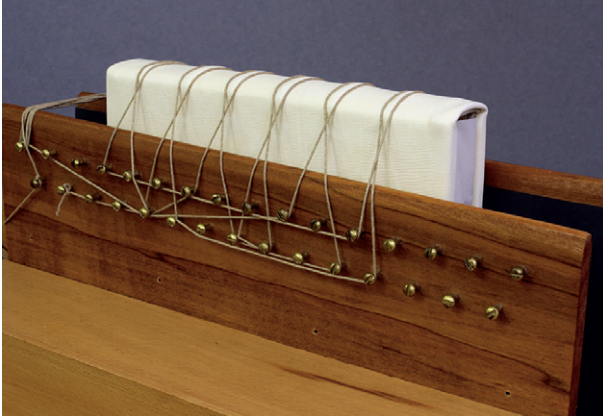
Pack sewing: the left hand station has been packed, the centre is in the process of pack-sewing and the right hand station shows only the threads from the text-block sewing.

Structural endbands were sewn on double supports with back tie-downs using 12/3 linen thread at head and tail, tying down in every quire. The text-block was not evenly cut at the tail edge and there was a larger square at the tail than at the head. The space was filled by using a larger endband core at the tail. The librarian did not want a secondary decorative endband to be sewn, as he felt that the use of colour at the head and tail would distract the eye from the illuminations on the pages. As this is a binding made for conservation purposes, rather than one intended to be decorative in its own right, natural undyed threads were used.

The boards were drilled for the endband cores which were laced into the boards in the same way as the sewing supports, with channels chiselled into the inner face to accommodate the cord.

4: Covering

The manuscript was covered with a full covering of alum-tawed calfskin. The skin was approximately 1mm thick overall, edge-pared, and thinned with a spokeshave where necessary for turn-ins and head-caps, but left full thickness for maximum strength wherever possible. The covering was damped and adhered using wheat-starch paste¹⁵, leaving the spine free of adhesive. An entirely adhesive-free spine has maximum flexibility as it is not restricted by layers of glue or the leather of the covering. The spine was tied up so that the damped leather moulded itself around the sewing supports even though it was not pasted down. Once the covering was complete, the alum-tawed joints which were part of the endleaf construction were put down onto the inner faces of the boards using paste, and a separate parchment board-sheet pasted down on the inside of each board.



Tying up: the skin is damped but pasted only to the boards, the spine is not pasted.

The head and tail of the spine were secured to the covering by sewing through the cover in between the two endband cores with linen thread. This sewing provides the physical attachment of the covering material to the spine, preventing gaping at head and tail when the book is opened, and encouraging the spine leather to flex with the spine rather than behaving as a hollow.



Sewing between the two cores of the end-bands securing the covering material to the spine.

5: Housing

Boxing is the single most effective method of protecting library material at the Bodleian Library. Enclosures provide excellent protection from contaminants as well as buffers against environmental fluctuation. In the case of water leakage, boxed material has often escaped completely undamaged while unboxed material is vulnerable to staining, mould, and severe damage to bindings and parchment. A well-fitting box provides the first line of protection against dust, handling, and bumping against other volumes during transit to the reading rooms.



Tailor-made box incorporating portfolio and pressure flap.

The box also serves a more specific purpose in keeping the volume under pressure. Parchment is a hygroscopic material and a bound parchment manuscript will react to environmental conditions, gaping and distorting if it is not held under pressure. Traditionally, volumes would be kept tightly closed by the use of ties or clasps to fasten the boards in position¹⁶.

The Bodleian conservation department does not usually add ties and clasps to rebound manuscripts. It is difficult to ensure that readers will fasten the ties or clasps properly. If ties and clasps are left unfastened the pressure is not retained on the text-block. An unfastened metal clasp can cause considerable damage by scraping against the edges of the leaves, and a loose tie may damage the pages if it is accidentally trapped between them. Instead of attempting to recreate an appropriate clasp or tie, the Bodleian uses a tailor-made box incorporating a pressure flap which maintains constant pressure on the text-block once the box is closed, while at the same time offering the benefit of physical protection.

Various styles of cloth and board box are made in the library, according to the needs of the volume. The box used for the *The Pilgrimage of Human Life* incorporated both a pressure flap and a portfolio containing the 17th century boards and sewing threads for reference by the reader. The portfolio fits into a slot underneath the book¹⁷.



The finished binding, open.

By coincidence, Shane Carmody, Director of Collections and Access at the State Library of Victoria visited the Bodleian shortly after the project was finished, and was very interested to see the only other illustrated English copy of a text recently conserved by his staff in Melbourne. The fact that both of these manuscripts have now been fully digitised as well as repaired and made available to readers creates new opportunities for research in this field.

The volume can now be returned to the stacks after more than twenty years in the restricted category, and is safe to be used by readers in the way in which it was originally intended. The materials and techniques used in the repair and binding should ensure that the manuscript is safe for another few hundred years yet. But equally, if it were for some reason necessary, the non-adhesive structure would permit the new binding to be removed easily and without damage to the original material.

The reader can see the elements of the previous binding in the box alongside the new one, and if he wishes, read the conservation report and see the digital images taken during conservation. For these reasons, I feel that the treatment of the manuscript fulfilled the ethical guidelines as closely as was possible in this project.

The box incorporates a book-plate acknowledging the generous donations in memory of Peter Freeman

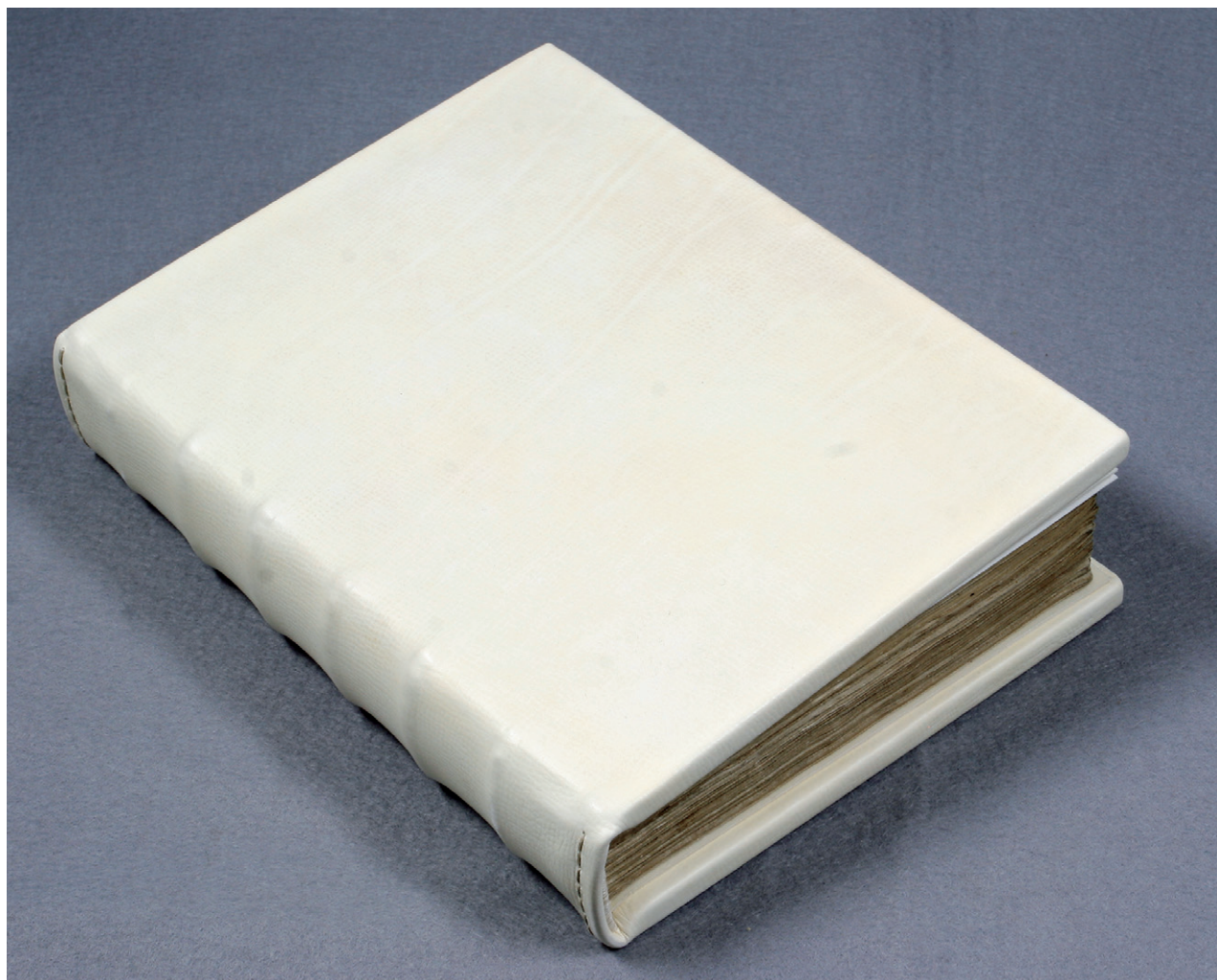
which enabled this work to be carried out. Donations of this kind help the library to carry out important work on its collections, as well as bringing additional benefits such as digitisation. In this way we are not only preserving books as historic objects but as continuing sources of scholarly research.

Appendix: materials and suppliers

Parchment repair was carried out using split and sanded calfskin repair parchment from William Cowley, parchment makers. Parchment endleaf material and alum-tawed joint and covering skins were also purchased from William Cowley.

Parchment repairs were adhered using a 7% by weight solution of food grade gelatine in purified water. We purify tap water used for conservation purposes in order to remove organic and metallic impurities. The method currently used is reverse osmosis, which is achieved using a Milli-RO 5+ water system from Millipore. Calcium hydroxide solution is then added to the water to bring the pH to neutral.

Linen sewing threads were purchased most recently (in 1996) from Barbour Campbell Threads Limited. Linen sewing cords and braids were also purchased from Barbour Campbell in 1985, some of which were a special making jointly purchased with other institutions. Some of these materials may no longer be available to purchase.



The finished binding.

Paste used in the binding was pure wheat-starch from VWR International, cooked to a thick consistency in purified water (approximately 30g to 300ml water).

Quarter-sawn oak boards were prepared by Bernard Allen, furniture maker, from a 180-year old oak, felled by high winds on the battle field of Montgomery.

William Cowley Parchment Works
97 Caldecote Street
Newport Pagnell
Buckinghamshire
MK16 0DB

Millipore
Units 3&5
The Courtyards
Hatters Lane
Watford
Herts
WD18 8YH

Barbour Campbell Threads Limited
472 Thurmaston Boulevard
Leicester
LE4 9LN

VWR International
Hunter Boulevard
Magna Park
Lutterworth
Leicestershire
LE17 4XN

Bernard Allen
Winllan House
Llansantffraid
Powys
SY22 6TN

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Notes

1. Shelfmark MS. Laud Misc. 740
2. Henry, A. *The Pilgrimage of the Lyfe of the Manhode* (Early English Text Society no. 288 vol. 1) Oxford University Press (1985) p. xv
3. Maddocks, H "Me thowhte as I slepte that I was a pilgrime": Text and Illustration in Deguilleville's "Pilgrimages" in the State Library of Victoria *The La Trobe Journal*, No. 51&52 (1993).
4. Cox, I. The Rebinding of the 'Pilgrimage of the Lyfe of the Manhode' and the 'Pilgrimage of the Sowle' *The La Trobe Journal*, No.81(Autumn 2008) State Library of Victoria Foundation.
5. Szirmai, J.A. *The Archaeology of Medieval Bookbinding* (1999) p.181
6. See www.ecco-eu.org/about-e.c.c.o./professional-guidelines.html
7. The Institute of Conservation, ICON, is the lead voice for the conservation of cultural heritage in the UK. See www.icon.org.uk
8. A condition of Archbishop Laud's bequest forbids the book from leaving the premises of the library and so it will only ever be exhibited here in Oxford.
9. Szirmai (1999) pp.164-5, 234-6
10. For a detailed description of parchment repair see Cains, A. Repair treatments for vellum manuscripts, *The Paper Conservator* 7 (1982-3) pp.15-23. For details of adhesives see appendix.
11. I used a Clarkson Mark III fixed cantilever sewing frame, as described by Clarkson C. in *Thoughts on Sewing Frame Design for the Book Conservator*, *The Paper Conservator* 19 (1995) pp.41-54
12. The Bodleian is fortunate to have an association with a master furniture maker who is able to supply wood for book boards which is well cut and seasoned, and to prepare the boards with basic shaping to be finished in the workshop.
13. See appendix for details
14. Pack sewing, or arch-sewing is described by Franck, P. A lost link in the technique of bookbinding and how I found it. (1941) Gaylordsville, Conn: Printed at Hawthorne House
15. See appendix for details
16. Cockerell (1953) p.259-60 states that "All books written or printed on vellum should have clasps", but goes on to acknowledge the problem of catching and damage to adjacent books on the shelf.
17. The design was taken from Brown, M. et. al. *Boxes for the Protection of Rare Books: Their Design and Construction*, (Library of Congress) Washington, 1982