

Conservation treatment of textiles in the Springfield Landau at the National Museum of Australia

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ABSTRACT

A prominent object in the exhibition Spirited: Australia's Horse History at the National Museum of Australia (NMA) from September 2014 to March 2015 was a landau horse-drawn carriage ordered from Brewster & Co Carriage Builders, New York, by distinguished pastoralist William Pitt Faithfull for his daughter Florence in 1889. The Landau was the Rolls Royce of its time with a fashionable convertible roof. Prior to the exhibition the textiles and upholstered interior of the carriage required significant conservation treatment after many decades of barn storage and insect and rodent infestation. Through thorough cleaning, the use of equipment specially adapted for the project, experimentation and testing of repair fabrics, adhesives and stitching techniques, optimum medium and long-term conservation solutions were devised and customised to suit the constraints of this project and the quality required of the final result.

KEYWORDS: *Textiles conservation, landau carriage, Springfield station, National Museum of Australia, Beva® 371*

BACKGROUND

In 2004 the National Museum of Australia (NMA) was gifted approximately 1550 objects relating to several generations of inhabitants of the Springfield property near Goulbourn, in the Southern Tablelands of NSW. Springfield was a prosperous merino sheep station, with an impressive residence and stables, established by an ex-soldier named William Pitt Faithfull on land he had been granted in 1827. Pitt Faithfull and his wife Mary Dean's decedents continuously held the residence, built in 1857, until 2004. For many years prior to this, its owners had operated a house museum at the site (Cooper et al, N/D, Springfield Station). The contents of the house museum and stables formed one of the largest and most significant collections ever donated to the NMA. This vast and varied tangible record of five generations of Faithfull and Dean's relatives ranged from a suite of garments dating from the 1730s to the 1960s, to a grand and stately landau horse-drawn carriage dating from 1889 (Cooper et al, N/D, About the Collection). The landau belonged to William's daughter Florence and had been specially customised to be slightly taller than usual so that her father could ride in it while still

wearing his top hat (Cooper *et al*, N/D, Landau Carriage). Although the condition of the costumes was generally quite good due to a favourable environment within the house, the landau was in very poor condition on acquisition due mainly to barn storage and insect and rodent grazing and nesting.

In 2014 The Springfield Landau was selected for display in the exhibition Spirited: Australia's Horse History, as it was exemplary of the role horses had played in Australia's pastoral enterprises (Breen *et al*, 2014, p. 10). Due to the poor condition of the carriage and limited time and staffing resources, it was necessary to develop a realistic approach when developing a treatment plan for the object. The curatorial requirement for the work was that the aesthetic result appropriately reflected the role of the carriage as a symbol of the status of its owners. From a conservation perspective, it was imperative that original features be retained and that measures be taken so that no further damage would be incurred during transport and display. The extremely limited timeframe of less than a month to complete the work meant that it was necessary that the treatment be conducted in situ.

It was important to determine how to achieve maximum benefits in such limited time and thus it was decided that aesthetic consideration and efforts should be concentrated on areas of the interior that would be visible during exhibition. As the Landau would be displayed with its doors closed and the front and proper left side angled towards visitors in the exhibition, only some areas of the interior would be visible through the front and proper left windows; the proper right wall, the padded cushioning of the back seat and side armrest, a large portion of the ceiling and the back wall above seat height. Ultimately, it was proposed that the conservation conducted prior to display would be to clean the exterior and interior of the carriage and conduct repairs to stabilise the textile components. Where full conservation treatment could not be achieved within the timeframe and the repairs would not be visible during the exhibition, some fully reversible methods were used. These methods would also allow for long term stabilisation if required.

LANDAU- INTERIOR CABIN

Description

The landau was a popular and convenient style of carriage, as it could be converted from a closed-top to open-air vehicle. The vehicle top has two leather folding heads, each with its own hinged supports. The heads can be lowered to create an open top vehicle, or locked together to create a secure, closed-body carriage. (The Carriage Museum of America, 2013)



*Landau interior before treatment
- proper right upper rear corner*

The interior of the landau was once very luxurious. The walls, doors, armrests and ceiling of the carriage are upholstered with dark coloured (Navy/green toned) felted wool. Beneath the wool wall fabric, there is a coated cotton (leatherette) lining and webbing supporting material. Padded areas have evidence of horsehair and coir like stuffing and possibly wool or cotton wadding. The seat backs and cushions are upholstered in black leather. One of the seat cushions appears not to be original and all four seat cushions are separately removable. There is a thin forest green decorative braid around the interior panels and seat edges and a thicker trim of similar braid around the door panels and loose seat cushions. There are many intact and missing decorative elements such as tassels and fluffy wool buttons. There is a dark coloured silk gross grain curtain above each door and the back and front windows. The curtains are fixed and immobile.

Condition

Although the landau was once a very luxurious carriage with a convertible roof, it was no longer able to be opened due to the condition of the external leather lining. Before treatment, the interior cabin was in poor condition with significant grazing and nesting by insects and rodents throughout. There were many accretions and drifts of storage dirt and debris including lining materials, rodent faeces, insect frass, insect casings and card and plant materials stuck to the wool.



*Landau interior before treatment
- proper left upper rear corner*

The wool upholstery (which was still fairly well tensioned) and lining materials (hessian, horsehair, coir, coated cotton leatherette) exhibited many tears, holes and losses. There were significant losses on the fore seat and back seat arm supports and to all the side wall panels at the elbow line. The back end ceiling panel was significantly damaged, particularly the back proper left corner. Remnants of tassels, upholstery materials and card were used as nesting materials behind the wool in the recesses of coir and horsehair.

The leatherette wall lining, which was visible through the losses in the wool fabric, had become hard and brittle. The sections of leatherette in the wall cavity on either sides of the back seat had torn along their top securing edge and lay crumpled and creased in the base of the wall cavity beside the seat armrests. Some decorative elements were intact and others exhibited varying levels of damage or loss. Three of the curtains were in relatively good condition; however, the fourth curtain, above the proper right door, was largely missing, with only the section surrounding the rod remaining. (Bussenschutt, 2014)

PREVIOUS TREATMENT

Pest treatment, external and preliminary internal clean, removal of curtain fixtures

Following acquisition of the Landau, it was isolated and treated with Permethrin insecticide. This was to treat pre-existing insect activity and is also part of integrated pest management at the NMA. In early 2014, Objects Conservator Chloe Bussenschutt conducted thorough external cleaning and preliminary brush vacuuming, mechanical removal of dirt, rodent faeces, rodent nests, insect casings and frass from interior surfaces along with collecting, bagging and

labelling damaged/detached textile components retrieved from rodent nests.

Curtain fixtures were unscrewed and they, together with the seat cushions, were removed and labelled for separate treatment.

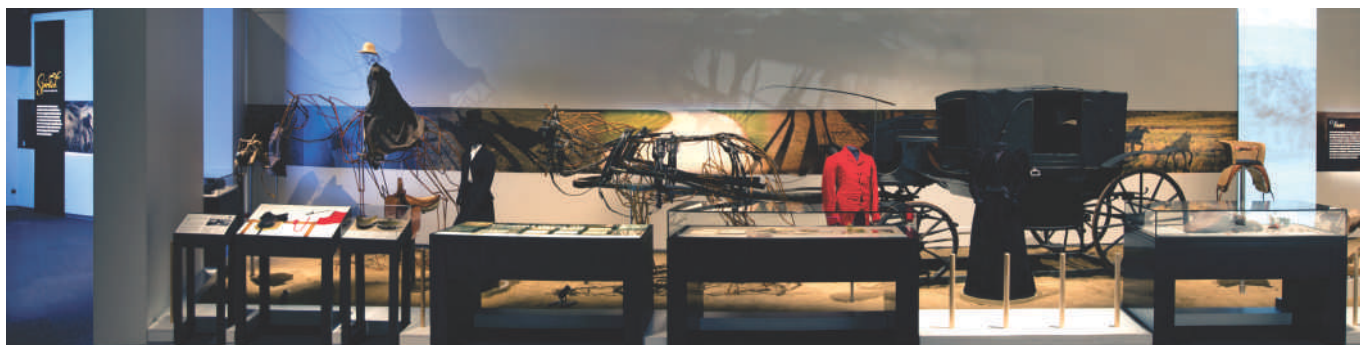
REPAIR MATERIALS

Selection and Preparation

The loose material collected and retained during the preliminary cleaning of the Landau included fragments of original fabric from the walls and ceiling, many of these were deemed suitable for use as repair fabric for small areas of loss.

For the larger areas of loss, new complementary fabric was required. Following research into a suitable supplier, samples were obtained from UK company, AW Hainsworth®. The fabric selected as being the best match to the original present in the Landau was 100% wool 390 gsm (Piece number: 0921115-1-31039/30S-0/2191). As an exact colour match was not available, Rifle Green Doeskin and Black fabrics were nominated. These colours could be toned with fabric dyes to achieve a better match to the original. A number of test fabric sample strips were dyed using Deka Universal silk paints applied with a brush and heat set with a hot iron.

The best match to the original was achieved by using one coat of Ultramarine (35-51) and one coat of Tefbraun (35-85) on the green fabric. Once dyed, the repair fabric had a more vibrant appearance than the original and therefore, to replicate a more aged and faded quality, a white Derwent artist's pastel was powdered, then brushed onto the fabric.



The restored Landau in its final display

Black and dark green cotton thread, consistent with the original threads observed in the Landau, were also selected for use where existing seams allowed for fabric repairs to be stitched in place.

TESTING

Solubility testing

Prior to aqueous cleaning all textile components underwent solubility testing with deionised water.

Adhesives testing

As many of the fabric repairs would have to be inserted and manipulated into place before they were adhered, it was decided that a heat-activated adhesive would provide the greatest flexibility of application. Lascaux® and Beva® 371 were identified as possibilities and a series of tests were conducted. In each instance the preparations were painted onto the fabric and allowed to dry. Adhesive activation was achieved with a heated spatula. Beva® 371 40% stock from tin and Beva® 371 film were selected over Lascaux 50:50 as stronger adhesion was achieved during testing.

Workspace preparation

A work platform clamped to steel framed support tables and travelling through the interior cabin of the carriage was necessary to avoid disturbing the friable and worn interior cavity of the Landau. This alleviated the need for any weight bearing on the object and provided a safe and secure surface from which conservators could access the area and work. Additional lighting was required due to working in a small, dark and confined space. This was achieved by using photographic lights angled towards the interior, rechargeable light wands and caps with LED lights.



Landau interior after treatment - proper upper rear corner (area most visible during exhibition)

A polyethylene plastic sheet was placed over the entire carriage as a dust cover. Conservators wore appropriate personal protective equipment such as steel cap boots, overalls and dusts-masks during the initial phases of cleaning. A safe work method statement was created, which specified that tasks should be varied periodically so that the potential for fatigue and strain due to the awkward work space could be managed.

CLEANING

Brush vacuum

A recently acquired custom vacuum stand designed to accommodate a Nil Fisk (Hepa filter) vacuum has vastly improved ergonomics for staff. The vacuum sits on a small, circular base with wheels. A rim on the base prevents the vacuum from moving. Attached to the back of the base there is an armature, which extends vertically before bending at a right angle and extending horizontally. Fixed to the armature is the vacuum cleaner hose via Velcro® straps. The upright and perpendicular frames are both adjustable and this allows for extension over the work area. The operator is not required to support any of the weight of the equipment and can easily manipulate a mini vac hose and nozzle fitted to the vacuum. In the case of the Springfield Landau, it was possible to sit the vacuum stand on the floor outside the vehicle and extend the frame into the interior cabin. To thoroughly clean the front surface of all fabrics, adjustable suction was set to low/medium and an extra-long nozzle and a small brush-head was used. Due to areas of loss and fabric detachment, back surfaces and cavities behind the fabric lining were also brush vacuumed where possible.

Aqueous clean

Due to the surface staining, an aqueous clean of textile components was necessary. Deionised water applied via microfiber cloths (Enjo brand) in a dabbing motion was used. The cloths were cleaned regularly as they became discoloured by dirt.

Humidification of leatherette wall lining

A humidification chamber was created using polyethylene plastic sheeting, dampened blotter and Reemay® placed on either side of the dehydrated leatherette.

This was monitored and periodically the leatherette was checked for malleability and was eased back into its original position. The process was a slow but a successful one.

FABRIC REPAIRS

Repair to Leatherette

Due to losses and the contraction of its surface coating, the relaxed leatherette did not extend all the way up to the wooden framework to which it was originally secured. Therefore, Stabiltex prepared with Beva® 371 40% stock from tin was adhered to the reverse top edge of the leatherette using a heated spatula. The Stabiltex was fed into the cavity of the wall and up and over the supporting wooden framework. It was secured back to itself through the activation of the adhesive with the heated spatula. This proved effective to hold the lining taut in its original position.

Woollen Fabric Repairs

An order of application for the wool repairs was devised with consideration of how each repair would affect access points for further repairs. The areas that would be visible during display were also considered when devising a methodology for the work. As the back proper right upper corner would be the most visible during exhibition, work started in this area followed by the ceiling, proper right front corner, seat side panels, proper right back then front armrests and temporary stabilisation repairs to the back proper left corner.

The fabric of the back wall was entirely detached from the ceiling and proper right wall at the proper right rear upper corner. As there were many holes in the area of back wall fabric adjacent to the rear proper right corner a large piece of new, toned, repair fabric, which could sit behind the majority of the holes, was prepared by using thread anchors stitched and tied along one edge.

Beva® film was applied along one long and one short edge of the repair fabric. This was rolled and inserted behind the detached section of back wall fabric. Once in place it was unravelled flat and a heated spatula was used to activate the adhesive through a layer of silicon release in front of the original fabric.

For the small holes, cleaned pieces of original fabric salvaged from rodent nesting materials were used as repair patches.

The perimeter of the front surface of each piece was painted with Beva® 371 40% stock and these were inserted through adjacent holes to those being repaired, then they were pulled into place with anchoring threads.

As there was an empty cavity behind the ceiling fabric, to activate the adhesive with a heated spatula (through silicon release film), it was necessary to devise a way to apply pressure from the back of the repairs. For this a long, flat aluminium rod was bent into a curve and one end was covered with Parsilk. This rod was inserted through a detached area of fabric and pressed against the reverse of the repairs.

When it was determined that the detached areas of fabric along the edges of the ceiling and walls were no longer required as access points for central small repairs, new, toned repair fabric was tensioned and tacked into place using the wooden framework. The edge adjoining the detached section was secured with a combination Beva® 371 stock and film, activated with a heated spatula through silicon release. The opposite edge of the repair, which was tucked behind the braid trim, was secured with cotton thread stitches.

The stitches were tied off and the knot was reinforced with EVA adhesive so that it would not loosen over time. The large sections of loss at the base of the back proper right corner were then repaired with large panels of toned fabric which were tucked behind the original fabric and adhered using the same method as previous repairs.

Upholstery Repairs

The diamond tufted side cushion on the front proper right seat had been almost entirely destroyed by rodents and so a replica was constructed (the visual impact of not replacing this missing element was considered too great). The coir and horse hair wadding was removed and isolated, as the infestation had rendered it unusable. A black Parsilk cushion filled with polyester wadding was inserted in its place; A cushion rather than loose wadding was chosen so that this alteration would be obvious and easily reversible.

The replacement diamond tufted cushion was inserted behind the elements of the original that remained and these were adhered via the same methods as used throughout. Original buttons that had been salvaged were reinstated. Replacement armrests were achieved via a similar method.

Long term temporary stabilisation

The final area of the interior that required stabilisation was the very badly damaged back proper left corner. As this area would not be visible during the exhibition, and timeframes did not allow for full treatment, temporary reversible measures were utilised. To clearly show that these areas were intended as medium term stabilisation, untuned black 100% wool 390 gsm fabric was chosen.

A square of fabric was used to encapsulate the damaged areas of ceiling fabric and this was secured in place with cotton thread stitches through existing holes (where possible) and furniture tacks into the wooden framework. Large panels of black fabric were inserted into the areas of loss in the wall panels and these were again stitched into place with cotton thread.

Project finalisation

The proper right door curtain, which had been almost entirely eaten by rodents, was encapsulated in Parsilk and a replica tab was attached at the base to give it an appearance which was sympathetic to the other curtains. All of the curtains and seat cushions were returned to their original position; the work bench was dismantled and removed.

INSTALLATION

After the completion of the treatment, the Springfield Landau, which had been fitted onto a custom support and transportation frame, was loaded into an enclosed truck for delivery and installation into the Museum's temporary exhibition gallery at Acton.

CONCLUSION

The project to treat the textile components of the Springfield Landau involved managing the expectations of stakeholders and the affirming of the importance of applying conservation principles of repair. By overcoming time constraints, the practical difficulties associated with working in a 3- dimensional upholstered vehicle, confined space, and Work Health and Safety concerns, a successful treatment was undertaken and delivered within the tight timeframe.

The damaged textile components of the carriage were successfully stabilised with a combination of reconstructed upholstered woollen seat panels, infilled losses in the ceiling and walls and temporary encapsulation of damaged areas, which would not be visible during the exhibition. Ultimately, the Landau was a proud addition to the Spirited exhibition, displayed alongside William Pitt Faithfull's treasured top hat.

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MATERIAL

A W Hainsworth & Sons Ltd, Spring Valley Mills, Stanningley, Pudsey, West Yorkshire, LS28 6DW United Kingdom.
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AUTHOR BIOGRAPHIES

Carmela Mollica is a Textile Conservator at the National Gallery of Australia having graduated from the CCAE (now University of Canberra) in 1986 with a Bachelor of Applied Science in the Conservation of Cultural Materials. Prior to joining the NGA Carmela was the Senior Paper and Textile Conservator at the NMA. She also worked at the AWM, and as a private conservator. She has also taught Museum Practice at CIT.

Kerryn Wagg studied a Bachelor in the Conservation of Cultural Heritage at the University of Canberra and is currently a Paper and Textiles Conservator at the National Museum of Australia. She has worked in museums and galleries in Canberra for more than ten years in a variety of roles.